

**DALBO®**

# MAXICUT



EN  
920

Series no: 101163-XXXXXX

MADE IN **D**ENMARK



# MAXICUT

## Type 920

Congratulations on your new MAXICUT. For **safety reasons** and to achieve the best possible use out of your machine, you should read through the user instructions carefully **before taking the machine into use**.

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### Your MAXICUT has:

Type no.: \_\_\_\_\_ Serial no.: \_\_\_\_\_  
Month of manufacture: \_\_\_\_\_ Tare weight in kg: \_\_\_\_\_

When enquiring about spare parts or servicing, we kindly ask that you always provide the type number and serial number. At the back you will find a list of spare parts, which helps give an overview of the individual parts.

## EU DECLARATION OF CONFORMITY

**DALBO A/S**  
**DK-7183 Randbøl**  
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hereby declares that the aforementioned machine is manufactured in accordance with the stipulations in Directive 2006/42/EF, which replaces the Directive 98/37/EF and the amending Directives 91/368/EØF, 93/44/EØF and 93/68/EØF on a mutual approach for member state legislation on machinery for health and safety requirements in connection with the construction and manufacture of machinery.

**CE**

This machine complies with the safety requirements of the European safety guidelines.

DALBO A/S

Date: \_\_\_\_\_

Alessio Riulini, CEO

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## Safety



You will see this symbol in the instruction manual each time advice is given about your safety, the safety of other users, or the functional safety of the machine. All safety instructions must be observed and made available to all users of the machine.

### General

- Before starting work, the user must be familiar with all parts of the machine.
- Safety markings have been placed on the machine, which contain important instructions about your own and others' safety, and the correct use of the machine.
- There must be no passengers on the machine, either during work or transportation.
- When operating MAXICUT, ensure that there are no people within the machine's reach. The machine may only be operated from inside the tractor.
- When the MAXICUT 920 is in transport position, it is important that the side sections are lowered in the transport hooks before driving on public roads. Likewise, this secures the control levers against accidental operation.
- Before leaving the tractor, performing any adjustments, maintenance or repairs to MAXICUT, unfold the machine and lower it to the ground or, secure it in transport mode, put the brakes on the tractor, turn off the engine and remove the ignition key so that the machine is secured against accidental starting.
- Never leave the driver's seat while the machine is driving.
- The driving speed must always be adjusted to the conditions.
- Only use the machine if all safety devices have been mounted. Defective safety devices must be replaced immediately.

## Hydraulics

- Prior to any repair work on the hydraulics unit, the machine's undercarriage must be lowered, the pressure must be removed from the unit, the engine must be switched off and the ignition key must be removed.
- Hydraulic connections must be cleaned thoroughly before connecting. When connecting the hydraulic hoses to the tractor's hydraulics, ensure that the pressure has been removed from the hydraulic system.
- After repairs on the hydraulic system have been completed, all air must be thoroughly removed from the system.
- Check the hydraulic hoses regularly for defects such as tears, cracks, wear or damage. Defective hoses must be replaced immediately.
- Avoid spilling oil on the ground. If this should happen anyway, it should be collected and sent for destruction.
- Clean hands thoroughly after skin contact with oil and grease. Change out of oil-soaked clothing immediately, as this can be harmful to the skin.
- Hydraulic oil that flies out under high pressure can penetrate through the skin and cause serious injuries. Seek professional medical assistance immediately in the event of any injury.

## Installation

- There is a risk of crushing when carrying out installation. People must not be positioned between the machinery and the tractor or between the parts that are being connected.

## Maintenance and repair

- The machine must be properly supported while undertaking all repair and maintenance work, the tractor and machine must have brakes properly activated, the engine must have been turned off and the ignition key removed.
- Tighten all screw fittings after a few hours of use. All screw fittings must be checked at regular intervals and tightened when necessary. Check cotter pins and bolts to avoid breakdowns.
- Oil, grease and filters shall be disposed of in accordance with the applicable environmental legislation.

## Driving on roads

- When driving on public roads, all safety arrangements and warnings required by law must be installed and tested. The driver is responsible for the correct use of lights and traffic signs in accordance with the applicable traffic laws.
- With regard to the dimensions of the machinery, the driver must enquire with the traffic authorities to ensure that it may be transported on public roads.

- When transporting the machine, care must be taken not to exceed the total weight and axle load of the tractor and that the load on the front axle is not less than 20 per cent of the tractor's overall weight. In that case, use the front weight of the tractor.

### **Correct use**

- Correct use of the machine also includes compliance with the manufacturer's operating, maintenance and repair instructions, as well as the exclusive use of original spare parts.
- MAXICUT may only be used, maintained and repaired by people who are familiar with the machine and who are aware of the dangers that can arise.
- The manufacturer is not liable for damage that results from changes to the machine carried out without the manufacturer's prior permission. Furthermore, the manufacturer is not liable for any damage that results from incorrect use. Responsibility for this rests solely with the user.
- No extra weight may be installed on the MAXICUT.



## Technical data

MAXICUT 920	Ground machine	The plate equipment	Saw equipment 500L tank
Working width [cm]	920	920	920
HP [recommended min]	300	50–100	-
Sections [pieces]	3	3	3
Wheels	700/40-22.5	700/40-22.5	700/40-22.5
<b>Weight in kg:</b>			
Without water approx.	10,000	1380	565
With water approx.	12,300	-	-
<b>Hydraulic requirements:</b>			
Double-acting	3	1	-
Single-acting	-	-	1
Unpressurised return	-	-	1
<b>Transport:</b>			
Width [meters]	3	3	3
Height [meters]	2.51	2.51	3.51
Length [meters]	8.5	8.5	8.5



## How to read the instruction manual

It is possible that the order in which the topics are listed does not appear as logical. Please refer to the table of contents, where the titles for the relevant topics can be found.

The main points in the instruction manual are divided into 5 key sections:

- Safety
- Getting Started and Driving
- Extra equipment
- Maintenance
- Repairs

The following symbols are used in the instruction manual for:

	Points that are especially important for the functionality as well as the lifetime of the machine.
	Points that are relevant to safety.

### Delivery

MAXICUT is delivered completely assembled via platform truck.

If MAXICUT needs to be lifted, it is recommended to use straps with the main frame so that the machine is balanced.

## Description of the machine

MAXICUT is a powerful, knife-drum, designed specifically to drive through crops with long, strong stems. Here the remaining organic residue is cut so that the decay starts faster. The drums are designed as watertight containers, which can be filled with water as needed to increase the machine's weight.

The machine is delivered from the factory without water in the containers.

The knife drums are constructed so that the individual sections can move independently of each other, while being suspended like a pendulum.

Hydraulic weight distribution is installed on the machine so the pressure will be the same over the entire working width.

By default, there are strong bearings.

Fig. 1



MAXICUT 920 in work mode

MAXICUT's intended purpose is harvesting, for example, corn, sunflower or rape seed. The machine's total weight and the nature of the soil play a large part here. The machine is most effective when the knife-drum is completely filled with water and the soil is completely dry.



**The containers must not be filled with water or a liquid with a density less than 1.15 g/cm<sup>3</sup>. This avoids overloading the machine's hydraulic and welded frames.**

The speed of the machine must be high to be effective, with speeds over 15 km/hour, preferably 15–20 km/hour where one will find the knife-drums at their best across the stubble and plant remains. Run over the field twice if you wish to do any further work on the field.



**The machine is constructed so sturdily that it can tolerate high loads. Nevertheless, it is always necessary to adjust the driving speed to the conditions, i.e. reduce driving speed, for example, when the ground is uneven.**

## Limitations in the use of the machine

The following describes what the machine may/must not be used for:

- The machine may only be used for tilling organic plant material in agricultural areas that have been cultivated. Those areas to be tilled must have been subject to normal agricultural maintenance, i.e. without significant bumps or holes. Any rocks in the field must be collected from the normal scope of the area. The area must be reasonably drained.
- The plant material must not be any stiffer than corn stalks.
- The machine may only be used after first being attached to an agricultural tractor, by way of connection to the rear 3-point hitch.
- The machine can work at a maximum speed of 20 km/h. The speed shall however always be adjusted to the nature of the area. This means, for example, that transverse crops must be driven over at a much lower speed to avoid extreme pressure on the machine.

Any other use of the machine, which does not fulfil the aforementioned conditions, will be considered as unauthorised use, and will therefore be in breach of the manufacturer's warranty.

## Connecting and disconnecting

### Connecting

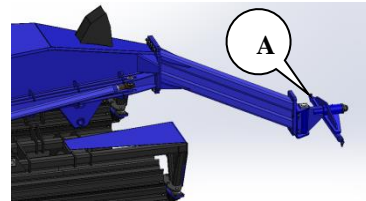
The MAXICUT 920 can be fitted with 2 different types of features.

One feature designed for installing in the tractor's three-point suspension; the height adjusting via the suspension.

The machine can also be fitted with a hydraulic feature that adjusts the height via hydraulics, as well as hydro-clips. This feature is installed in the drawbar

MAXICUT with lift feature. The machine is connected to the tractor's lift arms and is secured with ball joints and splitters (A)

Fig.2



MAXICUT with hydraulic pull. The machine is installed in the tractor's drawbar and the plinth is secured with a split (B) or lock device if there is a ball hitch.



Remember to secure the connection with ball joints and linchpins.


### Hydraulics

By default, the MAXICUT 920 requires three double-acting hydraulic jacks.

Hose markings

Cylinder name	Colour	Outlet	Function
Timing belt cylinder and hydraulic pull if installed	Yellow	Double-acting	Lift the MAXICUT up on the wheels and down into working mode.
Hydraulics Weight distribution, as well as lift to transport position	Red	Double-acting	Raises the side frames up/down.
Unfolding and folding, as well as support legs	Blue	Double-acting	Folds the side frames in and out. With the help of ball valves, the support leg can be raised and lowered.

The yellow and red hydraulic system is equipped with pilot-operated check valves. This results in a supply of pressure in one of the hoses to enable the cylinders to move. The cylinders, therefore, do not move if the tractor's lever is shifted to the on position.

	Furthermore, the timing belt cannot be lowered if the tractor's motor is switched off.
---	--

If the plate equipment is installed on the machine, 1 extra double-acting hydraulic outlet is required to adjust this.

Hose markings

Cylinder name	Colour	Outlet	Function
the plate equipment	Green	Double-acting	For lifting and adjusting the plate equipment

If saw equipment is installed on the machine, 1 extra single-acting hydraulic outlet and 1 pressure-free return are required. For hydraulic fan.

Hose markings

Cylinder name	Colour	Outlet	Function
Saw equipment	White (Green )	Single-acting	For the hydraulic fan
		Unpressurised re- turn	



## Disconnecting


The machine must be collapsed and lowered on solid ground when disconnected from the tractor.

Remove the hydraulic hoses and the machine is released from the tractor.

Fig.3



	Make sure the hydraulic hoses have not been crushed.
	<b>Always disconnect the machine on a flat surface to ensure maximum stability.</b>

	Remember to release the pressure from the connecting hoses to the hydraulic system before disconnecting the hoses.
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## Settings

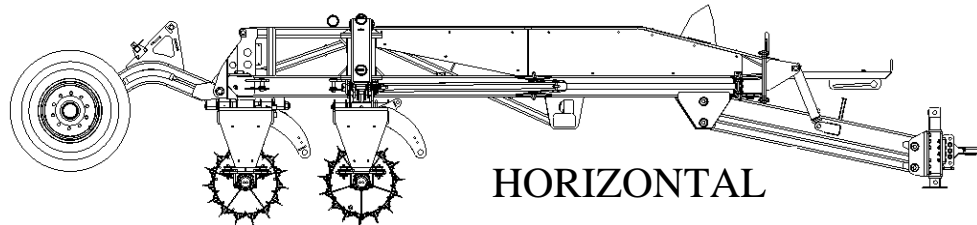
MAXICUT is incredibly easy to work with. The machine's design makes it very easy to set. It is always necessary to check the incline of the frame before use to ensure optimum use of the machine.

## Tensile adjustment

To achieve uniform cutting of crops and unnecessary load of the machine, the main frame should be horizontal or slightly tilted over the ground surface. The main frame and knife drums will then also be horizontal in relation to each other.

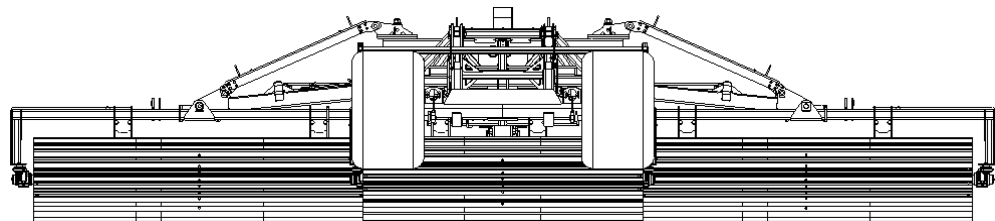
Here you can see the MAXICUT 920 at work. The main frame is horizontal while the individual knife sections have the opportunity to move.

Fig. 4



Properly adjusted feature results in a uniform packing/cultivation of the field, as the drum will pack evenly on each of the 3 sections. The 3 knife sections are pendulum suspended and can move in relation to the slope of the ground.

Fig. 5



An incorrectly installed feature can cause unnecessary load to the machine and lead to a breakdown. In particular, a pull installed too high (the main frame is tilted backwards), as this places a lot of weight on the middle knife section.

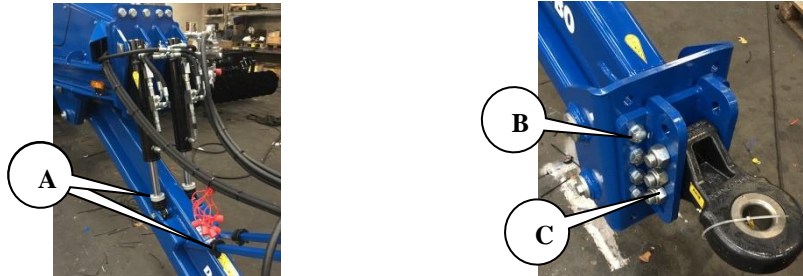


**It is important to make sure that the main frame is horizontal or slanting a little forward.**

If the pull leans backwards, the tractor's lift arm is too far up. If the pull leans forwards, the tractor's lift arm should be raised.

If the machine is installed with hydraulic pull, there are various adjustment options. It is possible to adjust the cylinders (A) as there are different thicknesses of hydroclips with the machine. It is also possible to move the feature up and down in 2 different flange plates (B and C).

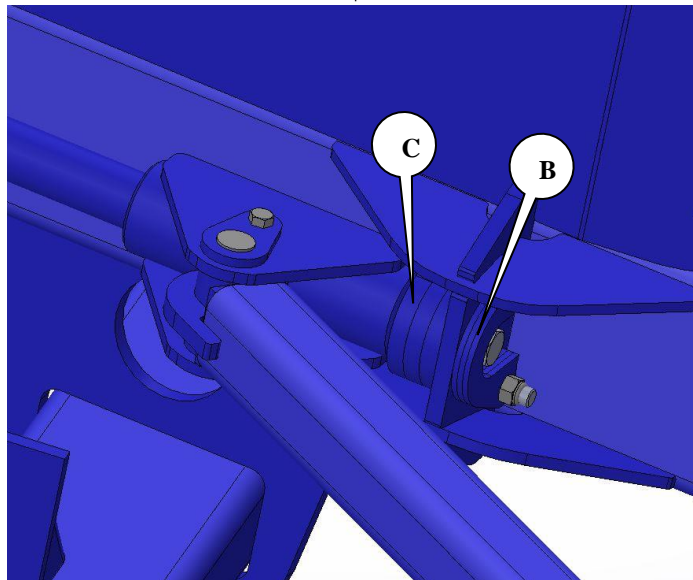
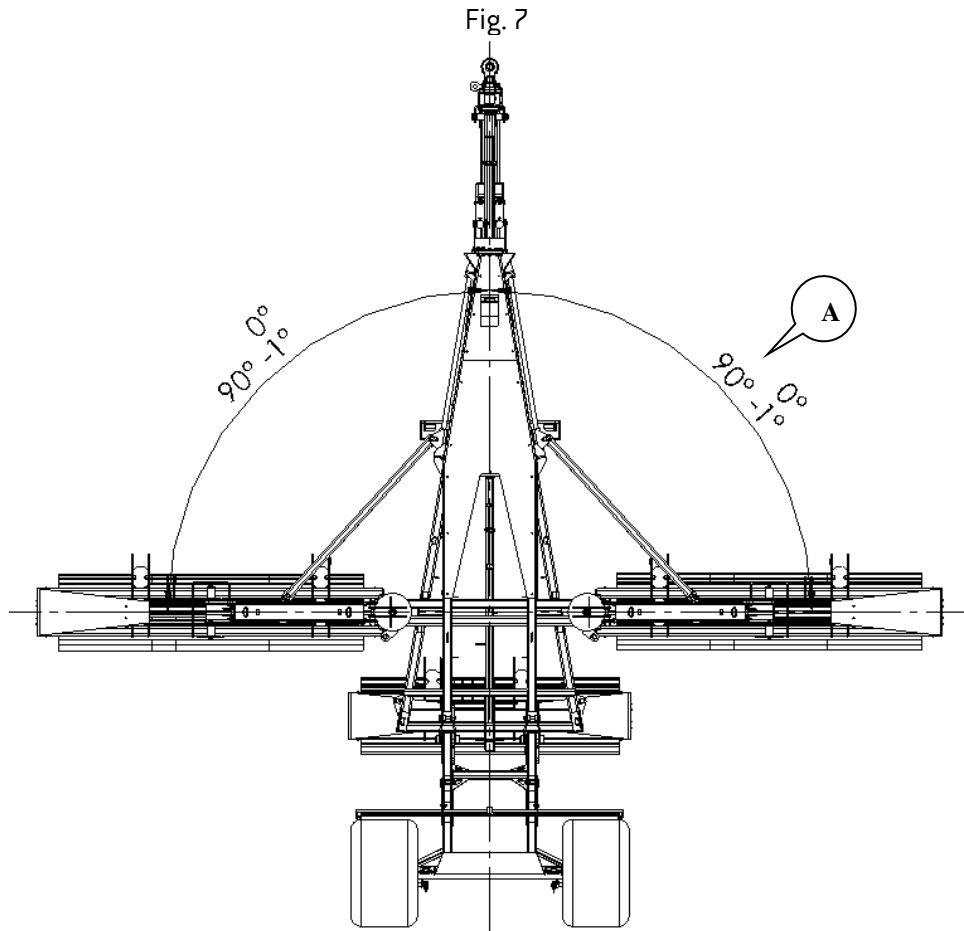
Fig. 6



### Adjusting the side frames

The side frames must run perpendicular to the direction of travel (A). This can be adjusted via spacer discs that are bolted onto (B) where the top rods fit (C). It is important that the angle is 90 degrees or slightly under so as not to damage the machine or fold the cylinders.





It is important to make sure that the top rods are set against the spacers and that the angle is 90 degrees or slightly under so as not to damage the machine or unfold the cylinders.

## Driving and operating

Proper operation is important in order to get optimal performance from your MAXICUT. This applies not only to working in the field but also in terms of safety. It is therefore crucial that you have thoroughly read the safety precautions that cover the machine.

### Unfolding and folding

Unfolding and folding are conducted with the tractor in park.



**Before unfolding, ensure that no person is positioned near the machine.**

#### Unfolding

- 1 The machine is raised as high as possible with the timing belt and pull (hose marked with: yellow), after which the side frames are lifted free of the transport latches with the lifting cylinders (hose marked with: red) and are folded out with the folding cylinders (hoses marked with: blue).

Fig. 8



**If additional equipment is fitted on the machine, it is important that this is completely lowered before the machine is started or unfolded.**

- 2 The machine is lowered and the timing belt is tilted up in the air (hose marked with: yellow)  
Timing belt and hydraulic pull are followed by automatic lifting and lowering.

Fig. 9



- 3 Press the large cylinders on the side frames (the hoses are marked with: Red), so a pressure of approx. 45 bars is achieved. This can be read on the manometer. Once the desired pressure has been reached, the hydraulic lever in question is set to float position. The hydraulic weight distribution is now activated and work can be started.

Fig. 10





It is extremely important that the hydraulic lever that goes to the hydraulic weight distribution of the machine is in float position during work in the ground so as not to damage the hydraulic system (the large cylinder lifting the side frames. The hose marked with: Red)



Before the rolling is initiated, the pull must be horizontal.



When turning the machine on the headland, the machine must be lifted up onto the timing belt to avoid unnecessary twisting in the machine's frame construction. An easier curve speed can be used with the machine in the ground.

### Folding

The timing belt is lowered down to the ground and the knife roller is lifted off the ground.

From here, the side sections can be raised to the maximum height and folded together.

When the side sections are fully folded down, they are lowered into the transport locking device.




If additional equipment is fitted on the machine, it is **IMPORTANT** that this is completely lowered before the machine is folded. Otherwise the machine could be damaged.



When driving the machine in transport position, it is important to ensure the side sections are located in the transport hooks. Otherwise, this may cause personal injury or damage to the machine.

Turning in the field or headland

When one turns in the headlands and fails to raise the machine up on the timing belt, it is important to jump 1 to 2 pulls over. That means one must drive in every second or third pull to protect the machine and, in particular, bearings and rubber dampers.

	<b>It is recommended driving in every third pull if one fails to raise the machine in the headlands.</b>
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	<b>It is important to jump 1 to 2 pulls over so as not to damage bearings and rubber dampers.</b>
---	---

**Driving speed**

It is recommended that the machine be driven at 15–20 km/h, but driving should always be done according to conditions.

If the speed is increased, wear will also increase, especially under dry conditions. At the same time, there is a danger that the knife drum will start throwing soil material and rocks.

**Power**

The power requirement is very dependent on the type of soil and terrain as well as the speed.

**Guide for power requirements in HP**

Model	Standard machine 920	Machine with the plate equipment installed
<b>HP min.</b>	300	350–400

**Tire pressure**

The tables below show the load, speed and tire pressure in relation to each other at the different tire combinations.

**700/40-22,5 Alliance**

700/40-22.5	24.00DC	700	1170	510	3486	16PR	2	4510	3830	3220	2900	6370	5410	4550	4100
						166A8↻	2.2	4760	4050	3400	3060	6730	5720	4810	4330
						162B↻	2.6	5250	4460	3750	3380	7420	6310	5300	4770
						154A8○	3.6	7510	6380	5360	4830	8900	7570	6360	5720

## Troubleshooting

Problem	Cause	Trouble-shooting
The central section is pressing too much	- The pull is too strong	- Adjust the pull to horizontal or with a little tilt forward (see "Tensile adjustment")
	- Too little or no pressure in the hydraulic weight distribution	- Adjust the pressure in the hydraulic system for hydraulic weight distribution (Hose marked with: Red)
The side sections are pressing too much	- The pull is too weak	- Adjust the pull and central section (see "Tensile adjustment")
	- The timing belt touches the ground	- Lift the timing belt further up
	- Pressure too high in the hydraulic weight distribution system	- Adjust the pressure in the hydraulic system for hydraulic weight distribution (Hose marked with: Red)
The blades are not cutting enough	- The drum is not heavy enough	- Fill the containers with more water
	- The field/ground is too wet	- Wait until the field is drier
	- The knives are worn	- Change out the knives with new ones
Vibrations in the machine	- Soil on parts of the knife sections	- Clean the soil from the blades so that they are balanced
Side frames run skewed	- Incorrectly set top bars	- Set the top bars so that the side frames are perpendicular to the direction of travel
The pressure drops Manometer	- The operation lever is not in float position	- Adjust the pressure on the weight distribution and put the operation lever in float position
	- Pilot controlled non-return valve is defective - The cylinder seal kit is leaky	- Set the weight distribution to 45 bars and put the operation lever in float position. Then keep the machine parked for 1/2 hour. If the pressure has fallen, it is possible that the pilot-controlled non-return valve is defective or there may be dirt in the valve (Clean the valve and rinse the parts)

## Extra equipment

It is possible to equip the MAXICUT 920 with different types of extra equipment if necessary.

- Wave plates with different widths (wave heights) and design
- Grass drums (Smooth steel drums for grass areas)
- Mole planks (Primarily in combination with Grass Drums)
- Saw equipment for post-tilling or grass care

### Wave plates



**EXTREMELY IMPORTANT: The plate sections must be fully lowered before being folded with the machine. Otherwise the machine and the plates could be damaged.**

The wave plates have two primary functions:

1. To cut the stumps/stems that lie across the direction of travel and therefore may not be cut off by the large rollers/drum.
2. To mix a bit of soil in with the stump to remove the stump faster. This also means that the large drum mixes more soil into the stump. Thus there is loose soil to work with.

The plates are available in different widths and wave designs, depending upon the conditions under which they operate.

Fig. 11



**Power**

The power requirement for driving with wave plates depends a lot upon the soil type, the working depth and the forward speed.

Power requirements in [HP] wave plates

Model	920
<b>Wave plates power requirements [ HP min. ]</b>	50–100

**Hose markings**

Hose markings

Cylinder name	Colour	Outlet	Function
Extra equipment	Green	Double-acting	For lifting and adjusting the extra equipment

**Driving and operating**

It is important that you have lowered all 3 plate sections completely before folding the machine as these will otherwise go against each other and the main frame underneath and unfold.

The wave plates are spring-installed and therefore flexible if they encounter resistance in the ground.

The maximum pressure that can be over the wave plates is factory pre-set. That means that even if one sets full pressure from the tractor, it will be regulated such that only the pre-set pressure is put on the wave plates.

The sections are fitted with hydraulic weight distribution so that the pressure is evenly distributed between the 3 sections. This causes the system to be set to float position after the system has been pressurised to activate the hydraulic wall distribution.

The system also allows the individual section to go further if, for example, one should encounter an obstacle.



**It is strongly recommended to have the plate sections' hydraulic lever in float position during work in the field. For optimal work in the field and so as not to damage the hydraulic system (Hose marked with: Green).**

When turning in the field or for sharp turns, all the plate sections must be lifted off the ground so as not to damage the plates.

This causes a workflow as follows (only for extra equipment)

0. Verify that the sections are completely lowered and the machine is unfolded and lowered to the ground.
1. Pressure is put on the plates, after which the lever is put into float position.

If the machine is raised up on the timing belt during turning as recommended, the plates are lifted off the ground and one doesn't need to do anything else. If one turns sharply or does not raise the machine on to the timing belt during turning, then one must raise the wave plates before turning.

2. When turning or in sharp curves, the wave plates are lifted off the ground by the hydraulics.
3. Pressure is put on the plates, after which the lever is put into float position.



**EXTREMELY IMPORTANT: The plate sections must be fully lowered before being folded with the machine. Otherwise the machine and the plates could be damaged.**

### Retrofitting

The plates can be installed at the factory, but it can also be delivered later if the need arises. For retrofitting, a crane, truck or similar auxiliary equipment will be required.

When ordering plates for retrofitting, installation instructions will be provided for assembly of plate sections and hydraulics.



It is important to ventilate the system thoroughly after installation, in order to prevent personal injury. Therefore, the depth adjusting cylinders are fully moved into the outer positions a few times.



It must be verified that the plates are sufficiently tight and not loose on the shaft before starting.



## Grass drums

There is an option to equip the machine with smooth steel drums (grass drums) as extra equipment so that one can switch between a knife drum and a grass drum. These can be used for care of grass areas and regular rolling on areas in which there is no risk of soil/sand erosion.

Fig. 12



### Power

When the machine is fitted with grass drums, the power decreases the need relative to the standard machine. This is because the smooth drums are easier to pull and the forward speed is lower.

The power requirement is very dependent on the type of soil and terrain as well as the speed.

Guiding power requirement [ hp ] (without levelling)

Model	MAXICUT 920 with Grass drums
<b>Power requirement in [ HP ]</b>	190–220


### Driving and operating

Once the grass drums are installed, it is recommended that the machine be driven at 6–10 km/h, but driving should always be done according to conditions.

Operation of the ground machine does not change when installing smooth drums (see driving and operating).

**Installation**

When replacing drums, a crane, truck or similar lifting equipment will be required. It is recommended that the drums be emptied of any water before disassembly. This is done both to facilitate the handling of the drums after disassembly, but also to secure them against frost. This applies both to the smooth grass drums and the knife drums.

	<b>Before folding, ensure that no person is positioned near the machine.</b>
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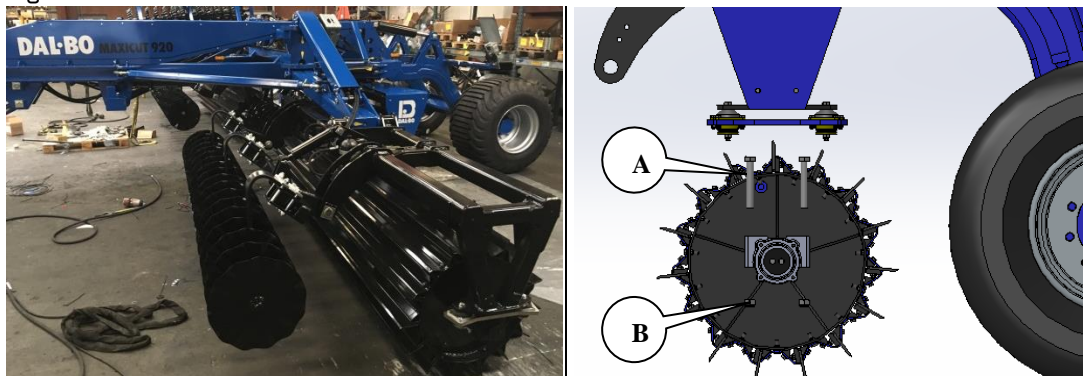


	All maintenance and repair work on MAXICUT must be conducted only when the machine is lowered to the ground or, is set in transport mode, the tractor break is set, the engine is switched off and the ignition key is removed, so that the machine cannot move or start accidentally.
---	--

Fig. 13



1. When changing the drums, the machine must be folded and lowered to the ground. The drums/machines can be used to lower the pallets to make them easier to handle when disassembled.
2. When all sections are on the ground, loosen bolts A and nuts B on all the bearings to release the containers.
3. The machine is lifted up onto the timing belt and the 3 containers can now be removed.
4. When the new containers are to be installed, use the same procedure.
  - a. One can also install them with the help of a crane
5. It is easiest to install the centre container first and then the 2 sides.
6. The supplied scrapers for the smooth drums are bolted onto the machine approx. 10 mm from the drum.

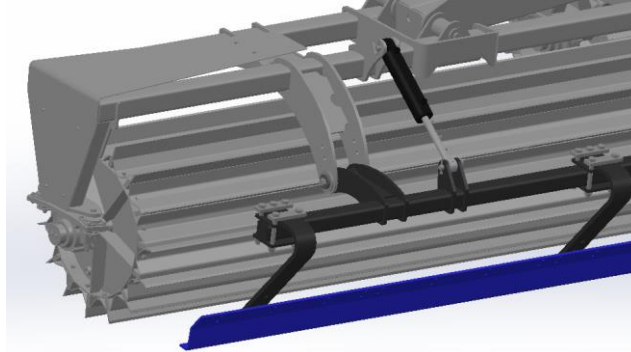
	<b>It is important to "disassemble" the smooth drum scrapers when reinstalling knife drums.</b>
---	---

	<b>If the drums are stored somewhere with the possibility of frost, it is important that they are emptied of water. This must be done to secure the drums against frost. Damages incurred due to frost are not covered by the warranty.</b>
---	---

**Mole planks**

It is possible to equip the machine with mole planks, which are mainly intended to even out mole holes and other uneven grass areas. The mole plank is therefore mainly intended to be used in combination with the grass drums.

Fig. 14



**Power**

The power requirement for driving with mole planks depends a lot upon the soil type, the forward speed as well as the unevenness of the grass areas.

Power requirements in [HP] mole planks

Model	920
<b>Mole planks power requirements [ HP min. ]</b>	20-40

**Driving and operating**

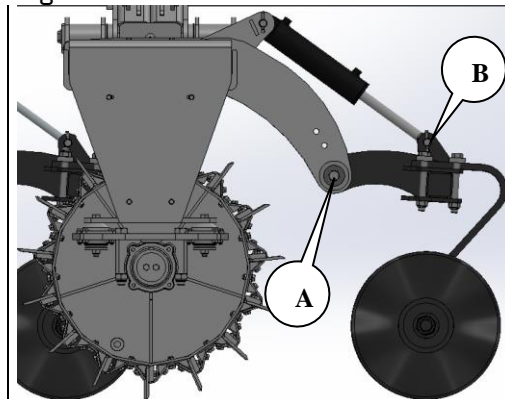
The mole planks can be adjusted in terms of how hard they are pushed into the ground via hydraulics (Hydraulic hose marked with: Green).

**Installation/Retrofitting**

If no plates are installed on the machine, follow-up installation guidelines will accompany the mole planks or be changed in the following way.

1. The machine must be folded out, lowered to the ground and the tractor stopped.
2. If plates are installed, remove these first. This is done by supporting the plate frames and then removing the nails A and B.
3. The mole plank is installed in the same way.

Fig. 15



**Saw equipment**

It is possible to equip the machine with saw equipment as an option. The saw equipment can be used for subsequent crops or care of grass areas.

It is possible to install saw equipment separately or in combination with one of the other possible options.  
 The saw equipment is installed with a hydraulic fan and has 16 outlets distributed over the working width.

Fig. 16




**Hose markings**

Hose markings

Cylinder name	Colour	Outlet	Function
Saw equipment	White (Green )	Single-acting	For the hydraulic fan
		Unpressurised re- turn	

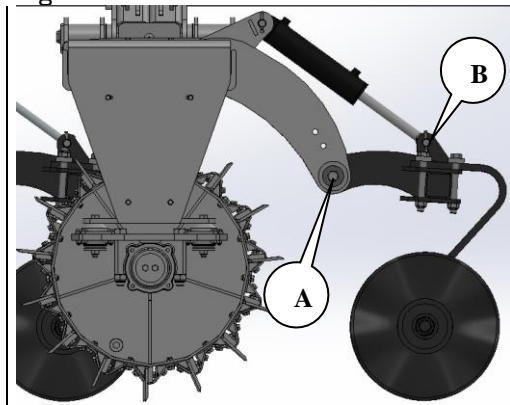
The hoses can be labelled with different colours depending on whether other optional equipment is installed. If other extra equipment is installed, the hoses will be marked with white and, if the saw equipment is installed alone, it will be marked with green.

	It is important to use a pressure-free return to prevent damage to the hydraulic fan.
---	---

## Driving and operating

1. When filling the saw machine, use the ladder up to the platform.
2. After use, place the ladder (A) in the transport position and ensure that the transport latch (B) has been locked so that the ladder does not flap out while driving or transporting.

Fig. 17



It is important that the ladder up to the platform is in the transport position and that the transport latch has been locked in all types of driving with the machine. If not, personal injury and damage to the machine may occur.

A separate instructional book is provided for this purpose, where you can find information about how the computer works and how to set the machine and other relevant information about the computer and equipment.

## Retrofitting

The saw equipment can be installed from the factory, but can also be retrofitted if the need arises.

For retrofitting, a crane, truck or similar auxiliary equipment will be required.

When ordering saw equipment for retrofitting, installation instructions will be provided for the installation of hoses, fittings, frames and hydraulics.

## Maintenance

Good maintenance ensures a long life for the MAXICUT and therefore optimal use of the machine. Grease fittings have therefore been installed in places where wear is greatest.



All screw connections must be tightened after the first day of work. Cotter pins and bolts should be checked to avoid breakdowns. The hydraulic system should also be checked to ensure it is air-tight.

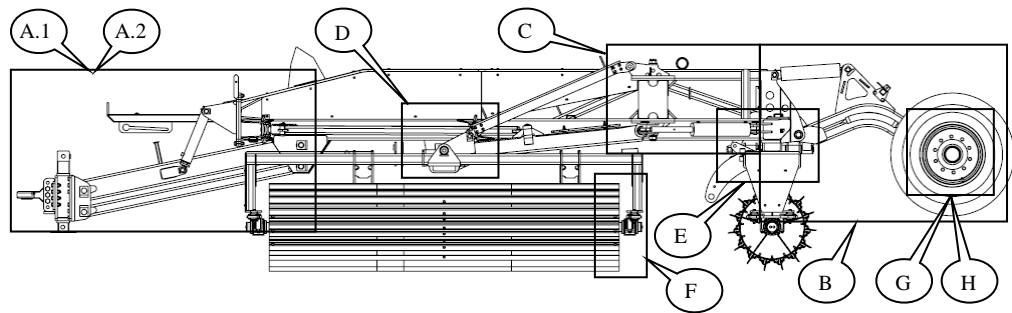
### Lubrication

It is important that the machine is lubricated at the specified intervals to prevent unnecessary wear on moving parts.

In the lubrication table, when it is written, for example, 3 x 2 means that there are 3 lubrication tubes on each side of the machine. Thus, 6 lubrication points at this location.

The lubrication points are specified on the following page.

Fig. 18

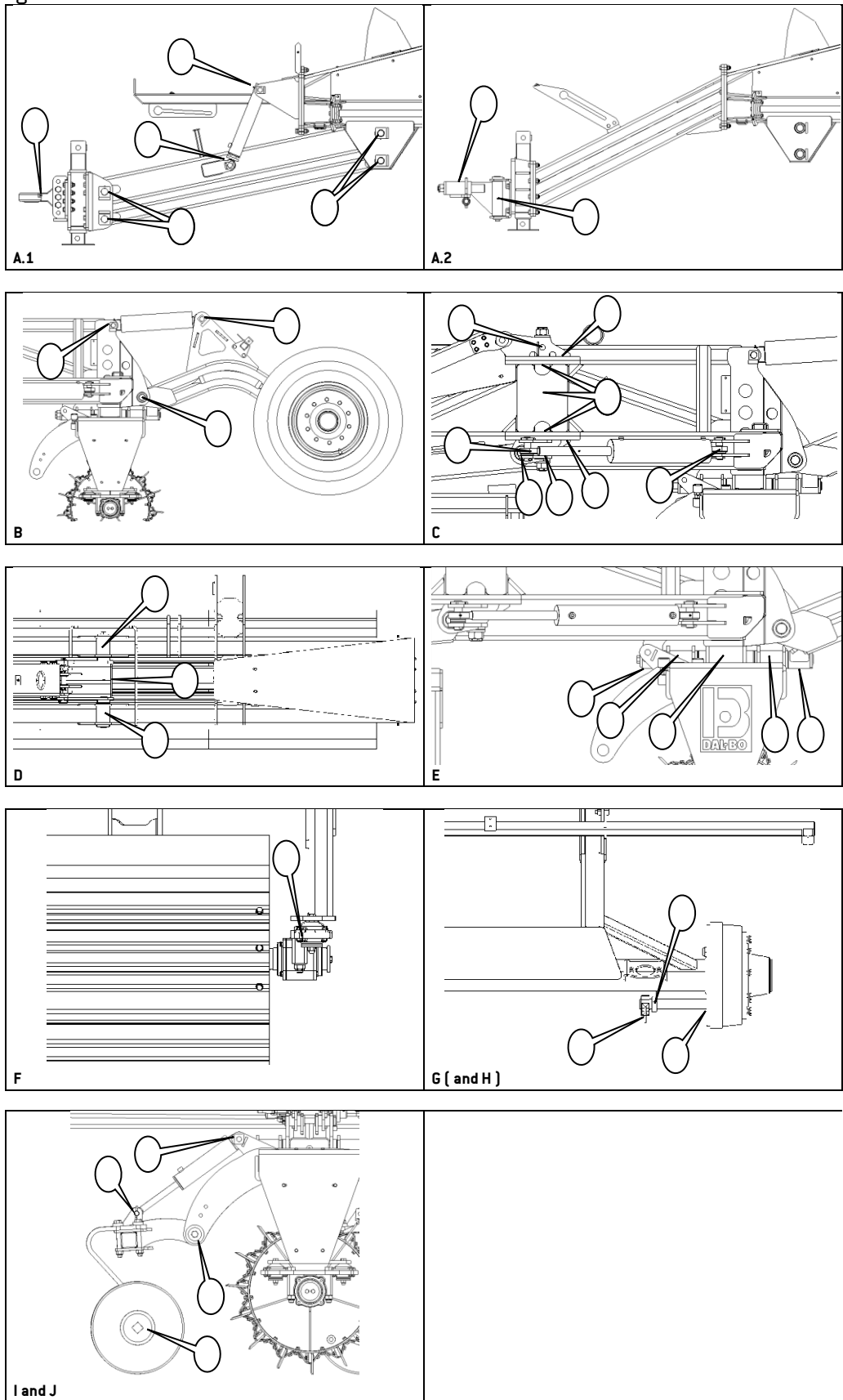


Lubrication points	Number of nuts	Lubrication interval hours	Images
Pull - Hydraulics	10	8	A.1
Pull - Lift feature	2	8	A.2
Timing belt with cylinders	3 X 2	8	B
Swivel stool top and bottom	10 X 2	8	C
Mobile frame sides	3 X 2	8	D
Mobile frame centre	5	8	E
Bearings	1 X 6	50	F
Break covers	3 X 2	8	G
Wheel bearings	2	200	H
Wave plate section side (Extra equipment)	7 X 2	8	I
Wave plate section centre (Extra equipment)	6	8	J



All lubrication points should be greased at least once a year.

Fig. 19



## Adjustments

### Wheels

The wheel bearing must be lubricated and adjusted once a year. Also make sure you have the correct tyre pressure (see tyres).

Adjustments and lubrication of wheel bearings

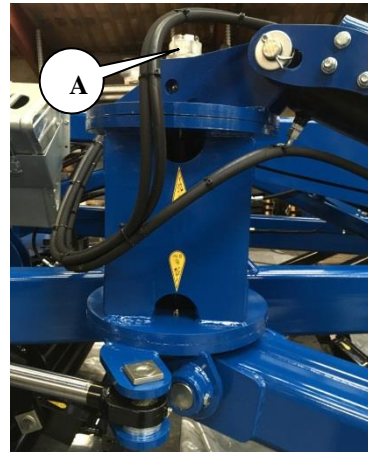
1. Hub cap is removed.
2. The cotter is removed.
3. The castellated nut is tightened with a 1/6 turn, so that the hole is aligned with the shaft. The wheel is spun around and there should be no resistance. Only a little bit of slack should be felt in the hub housing when the wheel is moved from side to side. If there is too much slack, repeat the process.
4. The cotter is installed.
5. The hub cap is filled  $\frac{3}{4}$  with grease and fitted.

### Swivel stool

The swivel stools must be checked for wear at regular intervals. If they are not clamped together, tighten them to prevent unnecessary wear and tear on the machine.

1. The cotter pin is knocked out.
2. The crown nut (A) is tightened until the plates are firmly against each other.
3. The cotter pin is installed again and the swivel stools are lubricated until grease comes out along the edge.

Fig. 20



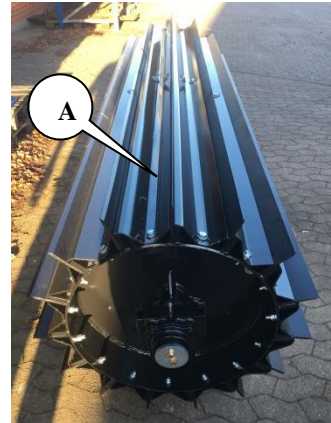
It is important for the swivel stools to be clamped together. Otherwise damage, breakdown or inappropriate wear and tear could occur on the frames and swivel stools.



## Worn out parts

The factory blades are fitted with a protective plate (A) between each to protect the bolts and containers. The blades can be replaced as necessary, with 3 to 4 knives installed per row of every one of the 3 roller bearings. (3 on the middle section and 4 on the 2 side sections)

Fig. 21



## Knife drums



**The containers must be protected against frost deformation/bursting. This can be done by storing the machine in a frost-free environment or by emptying the drums of water before cold weather. Failure to do this can lead to a risk of the drums being destroyed. It is also possible to add antifreeze to the water in the drums. Follow the recommended mixing ratio from the manufacturer of the antifreeze.**

## Hydraulics



All hydraulic hoses must be checked for wear or damage. Ensure the hoses are not subjected to any crushing.



If left parked for longer periods of time, protruding plunger rods should be greased with oil or pressure grease, in order to avoid the build-up of rust on the plunger rod. Remember to remove it again before use.

## Replacements and repairs



Safety is crucial regarding **all** repair work on MAXICUT. The following items must therefore be observed at all times, as well as the items under safety at the beginning of the instruction manual.



All maintenance and repair work on MAXICUT must be conducted only when the machine is lowered to the ground or, is set in transport mode, the tractor has the break on, the engine is switched off and the ignition key is removed, so that the machine cannot move or start accidentally.



For all repair work on the hydraulics, always pay close attention to safety. Before the work is started, release the pressure in the hydraulics system and, if necessary, support the part.



Once the repair work on the hydraulics system is complete, the system must always be vented before use to prevent mechanical breakdown and personal injury.

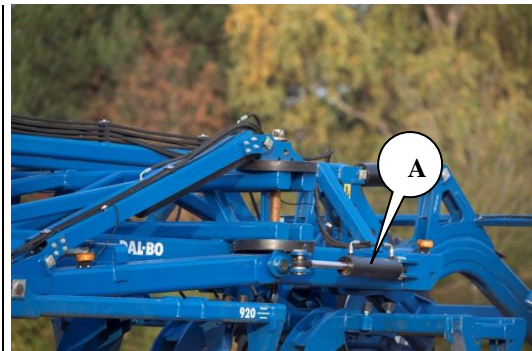
### Hydraulics

The repair of the hydraulic system on the MAXICUT is done either in the collapsed or transport position, resting on solid surfaces.

#### Changing out the cylinders for unfolding and folding the side sections

1. The pressure is taken off the cylinders (A).
2. The hoses are removed.
3. Cotter pins and nails are removed, and then the cylinder is free.
4. The new or repaired cylinder is installed. Remember to secure the nail in the nail stop and secure the nails with cotter pins.
5. The hoses are installed. After installation, ensure that there is no risk of tearing or clamping the hoses.

Fig. 22



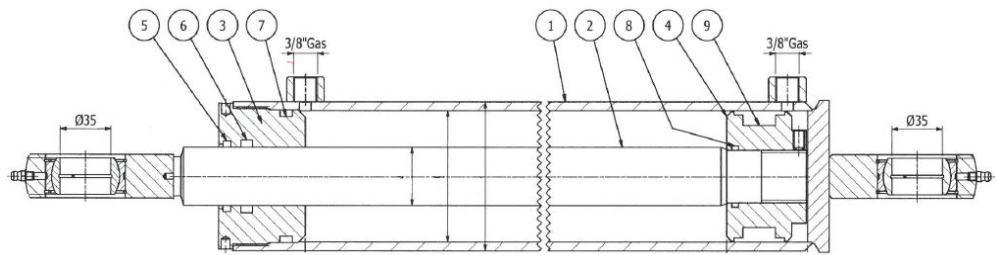
After installation, activate the cylinders again. The cylinders are activated both ways and are fully sealed in both outer positions. This must be done in order to ventilate the system with the cylinder.



There must never be persons within the operating radius.

#### Changing out the cylinders for unfolding and folding the side sections

Fig. 23



1. The cylinder is emptied of oil by moving the piston carefully back and forth.
2. Move the piston in the middle position, then unscrew the end cap (pos. 3) from the cylinder tube (pos. 1). A special tool must be used to remove the cap. If the cap is stuck, it may help to warm up the front of the cap. When the cap is unscrewed from the cylinder tube, pull the piston towards the cap. The piston rod can then be removed from the cylinder tube.
3. The locknut that is holding the sleeve (pos. 4) is disassembled.
4. The sleeve (pos. 4) is removed from the piston rod.
5. The cap (pos. 3) is removed from the piston rod.
6. Disassemble the seals and sleeves in the cap (pos. 5+6+7+8+9).
7. All parts are checked for chips, burrs etc. Check for rust around the scraper ring (pos. 5) in the cap. If this is the case remove it.

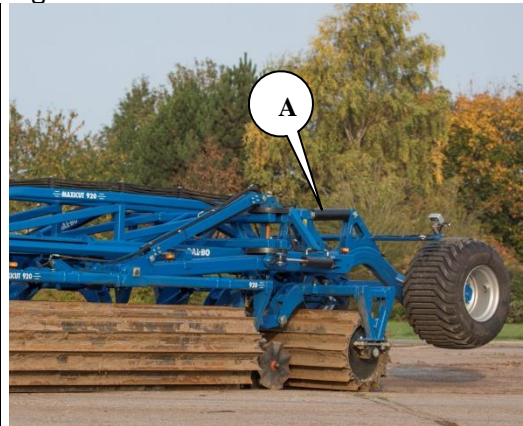
#### Installation

1. New seals (pos. 5+6+7+8+9) are fitted in the cap and the sleeve. Be sure to turn the sleeves correctly.
2. The thread on the cap (pos. 3) and the cylinder casing must be lubricated with oil.
3. The cap (pos. 3) is installed on the piston rod.
4. The sleeve (pos. 4) is installed and the lock nut is screwed and **secured with Loctite**. Make sure the thread is absolutely clean and free of oil and other impurities before using Loctite. **Do not fill the oil within 12 hours of using Loctite.**
5. Lubricate the outermost seal on the part of the sleeve in contact with the cylinder tube and the cylinder tube internally with oil and push the piston into the central position.
6. The cap is installed on the cylinder tube and tightened.

**Changing the timing belt-cylinder**

1. The timing belt is lowered on solid surfaces and the pressure is taken off the timing belt-cylinder.
2. The hoses are installed on the cylinder.
3. The cylinder is supported.
4. Cotter pins and nails are removed, and then the cylinder is free.
5. The new or repaired cylinder is installed. Remember to secure the nail in the nail stop and secure the nails with cotter pins.
6. The hoses are installed. After installation, ensure that there is no risk of tearing or clamping the hoses.

Fig. 24



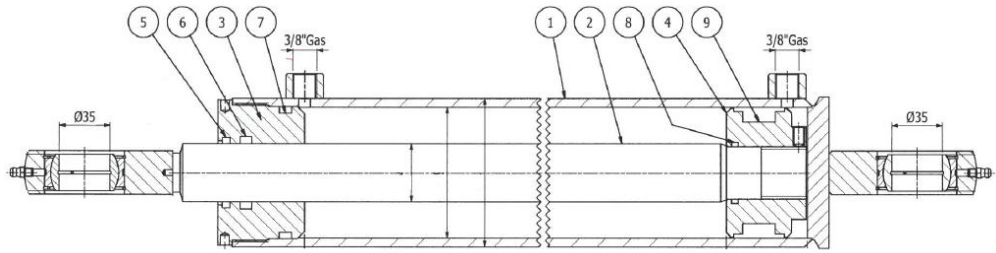
After installation, activate the cylinders again. The cylinders are activated both ways and are fully sealed in both outer positions. This must be done in order to ventilate the system with the cylinder.



There must never be persons within the operating radius.

## Change the gaskets on the timing belt-cylinder

Fig. 25



1. The cylinder is emptied of oil by moving the piston carefully back and forth.
2. Move the piston in the middle position, then unscrew the end cap (pos. 3) from the cylinder tube (pos. 1). A special tool must be used to remove the cap. If the cap is stuck, it may help to warm up the front of the cap. When the cap is unscrewed from the cylinder tube, pull the piston towards the cap. The piston rod can then be removed from the cylinder tube (pos. 1).
3. The lock nut (pos. 10) that is holding the sleeve (pos. 4) is disassembled.
4. The sleeve (pos. 4) is removed from the piston rod (pos. 2).
5. The cap (pos. 3) is removed from the piston rod (pos. 2).
6. The seals in the cap (pos. 5+6+7+8+9) as well as the sleeve are removed.
7. All parts are checked for chips, burrs etc. Check for rust around the scraper ring (pos. 5) in the cap. If this is the case remove it.

### Installation


1. New seals (pos. 5+6+7+8+9) are fitted in the cap and the sleeve.
2. The thread on the cap (pos. 3) and the cylinder tube (pos. 1) are lubricated with oil.
3. The cap (pos. 3) is installed on the piston rod.
4. The sleeve (pos. 4) is installed and the lock nut is screwed and **secured with Loctite**. Make sure the thread is absolutely clean and free of oil and other impurities before using Loctite. **Do not fill the oil within 12 hours of using Loctite.**
5. Lubricate the outermost seal on the part of the sleeve in contact with the cylinder tube and the cylinder tube internally with oil and push the piston into the central position.
6. The cap is installed on the cylinder tube and tightened.


**Changing the cylinder to raising and lowering the side sections**

1. The pressure is taken off the cylinders (A). **Ensure that no pressure is displayed on the pressure gauge.**
2. Ensure that the limiter-rail over the cylinder is not clogged.
3. The hoses are removed.
4. Cotter pins and nails are removed, and then the cylinder is free.
5. The new or repaired cylinder is installed. Remember to secure the nail in the nail stop and secure the nails with cotter pins.
6. The hoses are installed. After installation, ensure that there is no risk of tearing or clamping the hoses.

Fig. 26

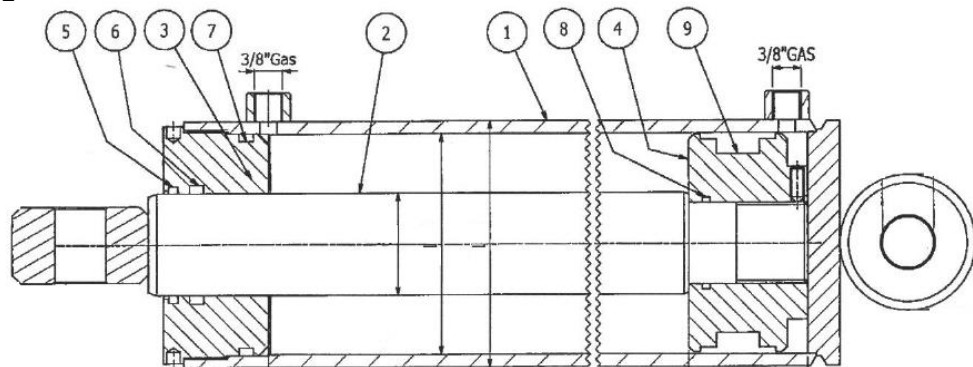


	<p>After installation, activate the cylinders again. The cylinders are activated both ways and are fully sealed in both outer positions. This must be done in order to ventilate the system with the cylinder.</p>
--	--

	<p>There must never be persons within the operating radius.</p>
---	---

## Changing the cylinder gasket for raising and lowering the side sections

Fig. 27



1. The cylinder is emptied of oil by moving the piston carefully back and forth.
2. Move the piston in the middle position, then unscrew the end cap (pos. 3) from the cylinder tube (pos. 1). A special tool must be used to remove the cap. If the cap is stuck, it may help to warm up the front of the cap. When the cap is unscrewed from the cylinder tube, pull the piston towards the cap. The piston rod can then be removed from the cylinder tube.
3. The locknut that is holding the sleeve (pos. 4) is disassembled.
4. The sleeve (pos. 4) is removed from the piston rod.
5. The cap (pos. 3) is removed from the piston rod.
6. Disassemble the seals and sleeves in the cap (pos. 5+6+7+8+9).
7. All parts are checked for chips, burrs etc. Check for rust around the scraper ring (pos. 5) in the cap. If this is the case remove it.

### Installation

1. New seals (pos. 5+6+7+8+9) are fitted in the cap and the sleeve. Be sure to turn the sleeves correctly.
2. The thread on the cap (pos. 3) and the cylinder casing must be lubricated with oil.
3. The cap (pos. 3) is installed on the piston rod.
4. The sleeve (pos. 4) is installed and the lock nut is screwed and **secured with Loctite**. Make sure the thread is absolutely clean and free of oil and other impurities before using Loctite. **Do not fill the oil within 12 hours of using Loctite.**
5. Lubricate the outermost seal on the part of the sleeve in contact with the cylinder tube and the cylinder tube internally with oil and push the piston into the central position.
6. The cap is installed on the cylinder tube and tightened.

**Change cylinders for hydraulic pull**



By replacing the cylinders with hydraulic pull. MUST keep the machine collapsed and lowered without strain on the pull.

1. The pull is supported.
2. The pressure is taken off the cylinders (A).
3. The hoses are removed.
4. Cotter pins and nails are removed, and then the cylinder is free.
5. The new or repaired cylinder is installed. Remember to secure the nail in the nail stop and secure the nails with cotter pins.
6. The hoses are installed. After installation, ensure that there is no risk of tearing or clamping the hoses.

Fig. 28



After installation, activate the cylinders again. The cylinders are activated both ways and are fully sealed in both outer positions. This must be done in order to ventilate the system with the cylinder.

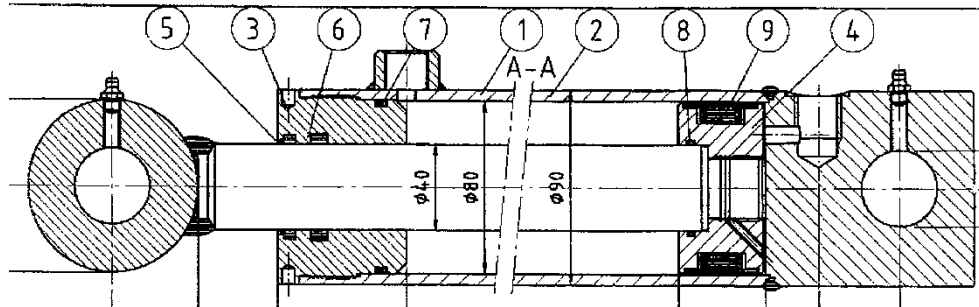


There must never be persons within the operating radius.



## Replacement of the gaskets for hydraulic pull

Fig. 29



1. The cylinder is emptied of oil by moving the piston carefully back and forth.
2. Move the piston in the middle position, then unscrew the end cap (pos. 3) from the cylinder tube (pos. 1). A special tool must be used to remove the cap. If the cap is stuck, it may help to warm up the front of the cap. When the cap is unscrewed from the cylinder tube, pull the piston towards the cap. The piston rod can then be removed from the cylinder tube.
3. The locknut that is holding the sleeve (pos. 4) is disassembled.
4. The sleeve (pos. 4) is removed from the piston rod.
5. The cap (pos. 3) is removed from the piston rod.
6. Disassemble the seals and sleeves in the cap (pos. 5+6+7+8+9).
7. All parts are checked for chips, burrs etc. Check for rust around the scraper ring (pos. 5) in the cap. If this is the case remove it.

### Installation

1. New seals (pos. 5+6+7+8+9) are fitted in the cap and the sleeve. Be sure to turn the sleeves correctly.
2. The thread on the cap (pos. 3) and the cylinder casing must be lubricated with oil.
3. The cap (pos. 3) is installed on the piston rod.
4. The sleeve (pos. 4) is installed and the lock nut is screwed and **secured with Loctite**. Make sure the thread is absolutely clean and free of oil and other impurities before using Loctite. **Do not fill the oil within 12 hours of using Loctite.**
5. Lubricate the outermost seal on the part of the sleeve in contact with the cylinder tube and the cylinder tube internally with oil and push the piston into the central position.
6. The cap is installed on the cylinder tube and tightened.

## Uninstalling/installing of wheels

For uninstalling wheels, the timing belt is lifted off the ground. The wheels will thus be free of the ground. The wheel nuts are removed and the wheel can be replaced. After installing the new wheel, screw the nuts on and tighten with a "firm hand". Next, lower the wheels so that they are touching the ground and tighten the nuts with 300 Nm.



It is important that the wheel nuts and wheel surfaces are clean, otherwise the wheel nuts may loosen.



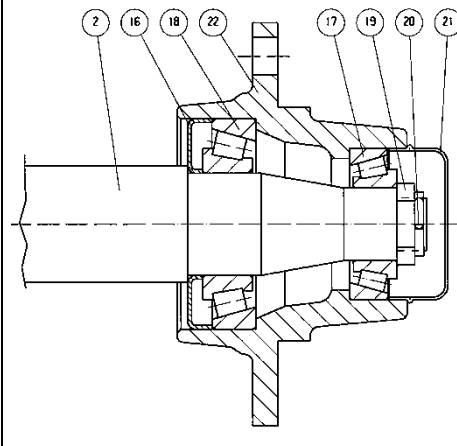
**Wheel nuts MUST BE TIGHTENED AFTER a few kilometers of driving.**

### Replacing the bearings

1. The hub cap pos. 21 is removed.
2. The cotter pos. 20 is removed.
3. The castellated nuts pos. 19 are removed.
4. The hub cap can now be removed from the axle.
5. The bearing pos. 17+18 are removed.
6. The sealant ring pos. 16 is removed.

Fig. 30

FL55-6



### Installation

1. The outer rings of the bearings pos. 17 + 18 are installed in the hub casing pos. 22.
2. The sealant ring pos. 16 is installed.
3. The inner bearing ring pos. 18 is installed on the shaft pos. 2 and the shaft is installed in the hub casing.
4. The inner bearing ring pos. 17 is installed on the shaft pos. 2.
5. The castellated nut is screwed onto the shaft pos. 2, while the hub casing pos. 22 is rotated. The castellated nut is tightened to the slowly rotating hub casing. Then loosen the castellated nut a quarter turn or until the hub casing turns around easily.
6. The splitter pos. 20 is installed.
7. The hub cap pos. 21 is filled halfway with ball bearing grease and the hub cap is installed.

## Disassembly of the knife drum

The repair is performed on a flat surface with MAXICUT connected to a tractor and unfolded with all 3 knife drums resting on the ground. It would be a great help to have a crane or something similar available for both the disassembly and installation.

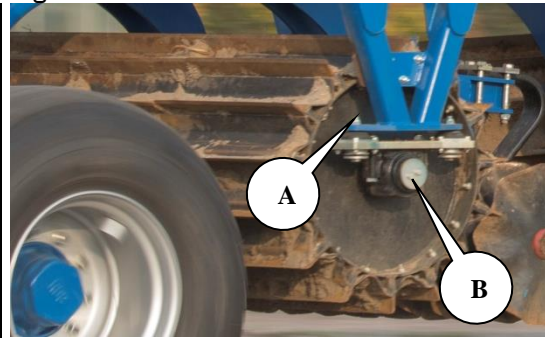
### Replacing the bearings on the knife drum



If no crane is available, both axles on the side sections must be removed to prevent the drum overturning.

1. All 3 sections must touch the ground first!
2. The bolts (A) are loosened on both ends of the container.
3. The timing belt cylinder is activated and MAXICUT is lifted up on the wheels.
4. The bearing can now be pulled out when the bolt (B) is removed.

Fig. 31



### Installation of the bearings

1. The bearing is pushed in over the shaft. The two 12 mm bolts **are secured with loctite** and tightened together with the large washer.
2. The timing belt cylinder is activated and the frame is lowered towards the bearing. Bolt (A) is installed and tightened.



There must be no persons within the operating radius when/if the hydraulic system is activated.

### Replacement of the knife



If no crane is available, both axles on the side sections must be removed to prevent the drum overturning.

Fig. 32

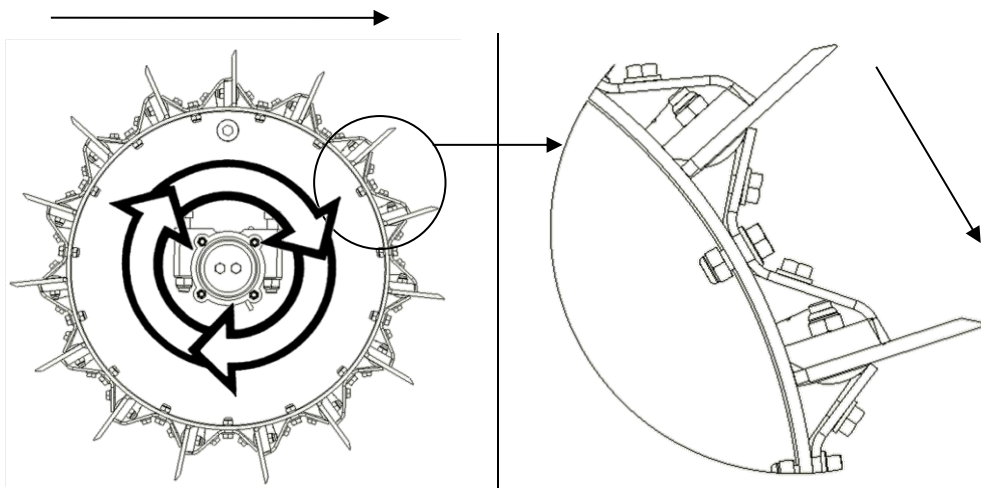
1. The machine is folded out in work position.
2. Soil remaining [A] in between the knife blades must be cleaned/removed.
3. The protective plate is removed between the blades to get to the knife bolts.
4. The blades can now be de-bolted and removed.



### Installation of the blades

1. The blade is installed with the new carriage bolts and are used according to the sketch below. The arrow points forward in the direction of driving.
2. It is important to install the knives so that they rest on the knife supports and have the screed positioned as shown in the picture below.
3. Finally, the protective plates are installed between the blades.

Fig. 33



There must be no persons within the operating radius when/if the hydraulic system is activated.

## Disposal



MAXICUT must be unfolded. It is crucial to release the pressure from **all** the cylinders.



With disassembly/dismounting, attention should be directed towards the weight on the part in question. It is therefore **important** that this part is supported or lifted up, so there is no risk of crashing/rolling over.

Hydraulic hoses and cylinders must be disconnected and any residual oil emptied out. The oil must be collected to avoid pollution. Oil and hoses must be sent for destruction.

All iron in the machinery can be sent for recycling.

## Warranty

DALBO A/S provides a 1 year warranty on all new machines sold by an authorised DALBO dealer. The warranty is valid for 1 year calculated from the delivery date to the end user.

**The warranty covers fixing material and production faults.**

The warranty is void in the following situations:

- **The machine was used for other purposes than what is written in the user manual.**
- **The machine has been misused, or treated with excessive force.**
- **Absence of Maintenance.**
- **External accidents, weather, falling objects and the like.**
- **Transportation damage.**
- **Unprofessional repairs took place.**
- **The machine's construction was altered without DALBO A/S's written permission.**
- **No original spare parts were used.**

DALBO A/S shall in no way be liable for consequential damages, loss of income or operational losses due to errors. DALBO A/S also cannot be held responsible for hourly labour costs in addition to those which may have been reasonably required for the repair or replacement of warranty parts.

DALBO A/S is not responsible for the following expenses:

- **Installing the machine.**
- **Costs of normal maintenance, cleaning, lubrication and replacement of worn out parts.**
- **Transportation of the machine to and from the repair workshop.**
- **The dealer's costs such as transportation of person or parts to and from the machine and/or repair workshop.**

The following conditions are essential for the warranty:

- **The warranty is void if the dealer has not readied the machine, as well as instructed the user in the use of the machine.**

## Hydraulics diagram for MAXICUT