

DALBO®

MAXIROLL GREENLINE Lift 300



EN
MAXIROLL GREENLINE Lift 300
Serial no.: 103 - XXX

MADE IN **D**ENMARK

MAXIROLL GREENLINE Lift

Type 300

Congratulations on the purchase of your new MAXIROLL GREENLINE Lift. For **safety reasons** and to achieve optimum performance from the product, please read the User Guide **before use**.

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Your MAXIROLL GREENLINE Lift has:

Type no.: _____ Serial no.: _____
Month of manufacture: _____ Net weight kg: _____

If contacting the manufacturer regarding spare parts or service, please state type and serial number.

EU DECLARATION OF CONFORMITY

DALBO A/S
DK-7183 Randbøl

declares herewith that the above machine is manufactured in accordance with the provisions of directive 2006/42 EC, which replaced directive 98/37/EC and change directives 91/368/EEC, 93/44/EEC and 93/68/EEC on harmonisation of member state legislation concerning health and safety requirements related to the construction and manufacture of machines.



This machine corresponds to the safety requirements in the European Safety

Guidelines. DALBO A/S

Date: _____

Alessio Riulini, CEO

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Safety



This symbol appears in the instruction manual each time there is a safety warning concerning your safety, the safety of others or functionality of the machine. All safety instructions must be observed and made available to all users of the machine.

General

- Ensure you are familiar with all aspects of the machine before use
- There are safety stickers on the machine containing important instructions for the safety of yourself and others, and correct use of the machine.
- Do not carry passengers during operation or transport.
- Ensure there are no personnel within the machine's working radius before operating. Operate machine only from inside the tractor.
- When the machine is in its transport position, check that the steps (accessory) are folded up and locked.
- Before leaving the tractor or making adjustments, performing maintenance or repairs on the machine, fully lower to ground, apply tractor handbrake, switch engine off and remove ignition key to secure the machine against accidental operation.
- Remember to secure support leg, top arm and lift arm with split rings.
- Never leave driver's seat whilst machine is moving.
- Always adapt speed to conditions.
- Do not use machine unless all safety devices are in place. Defective safety devices must be replaced immediately.

Hydraulics

- Lower machine fully for any repair work on the hydraulic system. Relieve hydraulic pressure, switch engine off and remove ignition key.
- Clean hydraulic connections thoroughly before reconnecting. When connecting hydraulic hoses to tractor hydraulics, ensure they are not under pressure.
- It can be difficult to completely depressurise hydraulic systems with pilot-controlled non-return valves. Hold a cloth around the fittings/part to be removed to catch any oil.
- Bleed the hydraulic system thoroughly after any repairs.
- Check hydraulic hoses regularly for defects such as cracks, splits, crimps, wear or breaks. Defective hoses must be replaced immediately.
- Avoid spilling oil on the ground. If oil is spilt, collect and deliver to a destruction point.
- Clean hands thoroughly after contact with oil and grease. Change oil-stained clothing immediately. Hydraulic oil can be harmful to the skin.
- Hydraulic oil released under high pressure can penetrate the skin and cause severe injury. In the event of injury, seek medical help immediately.

Assembly

- Danger of crushing! Ensure no personnel are between implement and tractor, or between the parts to be connected.

Maintenance and repair

- Ensure machine is adequately supported for all repair and maintenance work. Ensure tractor and machine are properly braked, engine stopped and ignition key removed.
- Tighten all screw connections after a few hours use. Check all screw connections regularly and tighten as required. Check all split pins and bolts to avoid mechanical failure.
- Dispose of oil, grease and filters in accordance with local environmental protection rules.

Road transport

- All safety and warning precautions mandatory by law must be fitted and tested before transporting the machine on public roads. The driver is responsible for correct lighting and warning signs in accordance with traffic regulations.
- Check with local traffic authorities whether transport on public roads is allowed given the machine's dimensions.
- When transporting, ensure permitted total weight for tractor is not exceeded and that loading on tractor front axle is not less than 20% of tractor net weight. If this is the case, use weights on tractor front.

Correct use

- Correct use of the machine includes observing the manufacturer's operating, maintenance and repair instructions, and that original spare parts are always used.
- The machine may only be used, maintained or repaired by personnel familiar with it and who are aware of the risks that can be involved.
- The manufacturer cannot be held liable for injury or damage arising from modifications made to the machine performed without prior permission from the manufacturer. Neither can the manufacturer be held liable for injury or damage arising from incorrect use. Such liability rests solely with the user.
- Do not add extra weight to the machine.

Technical data

MAXIROLL GREENLINE Lift 300

Table 1.

Width (cm)	300
Min. HP/KW (recommended)	Min. 85/62
Accessories	
Levelling bar (kg)	80
Harrow section with crackerboard (kg)	445
Harrow section (kg)	300
Grass sowing system	-
Sowing wheel (kg)	95-120
Ladder (kg)	32
Light (kg)	13

How to use this manual

The sequence of subject matter in this manual can seem illogical. Please refer to the table of contents for page numbers for individual items.

The manual is divided into 5 main sections:

- Safety
- Starting routine and running
- Accessories
- Maintenance
- Repairs

The following symbols represent:



Points which are important to functionality and service life.



Points relevant to safety.

Delivery

The machine is delivered complete on a trailer.

Always use a rig with straps attached to the marked areas and ensure machine is balanced when lifting.

Check drum for damage upon receipt. Check hydraulic hoses for damage (optional accessory).

Limitations to use

The following describes what the machine can and cannot be used for:

- Can only be used for levelling, aeration and sowing on agricultural land under cultivation. Fields on which the machine is used must be in a good state of agricultural maintenance, i.e. without major unevenness or potholes.
- Can also be used for the maintenance of grass areas, golf courses, sports pitches, parks and other areas where a level surface is required.
- The machine can only be used towed behind an agricultural tractor, and must be connected to the rear 3-point hitch.
- Max. speed when in use is 6-8 kph. Speed must always be adapted to suit the terrain.

Any other use of the machine which does not meet the above conditions will be considered as unauthorised use, and invalidate the guarantee.

Uses

The MAXIROLL GREENLINE Lift is a simple, strong roller, designed particularly for rolling and care of grassed areas. If supplied with a steel roller, a higher net weight a thus more effective rolling can be achieved by filling the roller with water.

The MAXIROLL GREENLINE Lift is a single-jointed roller, to which integrated equipment such as: Harrow, levelling bar, crackerboard and grass-sowing equipment can be mounted.

Fig. 1



MAXIROLL GREENLINE Lift 300

The levelling bar is mainly used for levelling molehills etc., to avoid soil and other materials getting into silage for example. The harrow aerates the soil by removing old grass from the roots. It can also be used for levelling molehills or to prepare soil for sowing/maintaining grass.

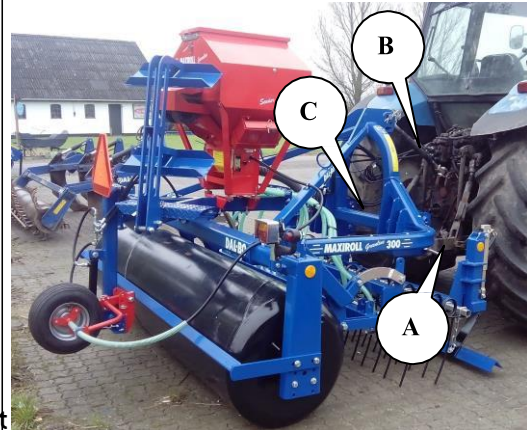
Connecting and disconnecting

Connecting



1. The machine is connected to the tractor lift arms (A).
2. Connect the top arm (B).
3. Raise the support leg (C).

Fig. 2



- Remember to secure using split pin.
- Remember to raise and secure the support leg using pin and split pin.
- If tractor towbar is too long, it can collide with the roller support leg. Avoid by shortening or removing tractor towbar.

Hydraulics

Maxiroll Greenline Lift requires a double acting hydraulic coupling as standard. The hydraulic hoses from the coupling go to the sowing wheel [accessory].

Check hydraulic hoses for crimping

Disconnection

MAXIROLL GREENLINE Lift must be in transport or operating position before disconnection.

Lower the support leg until level with the bottom edge of the roller [horizontal]. Lower lift arms until support leg/machine are in contact with the ground. When lift arms and top arm are relieved of the weight, they can be disconnected and the hydraulic hoses disconnected when depressurised.

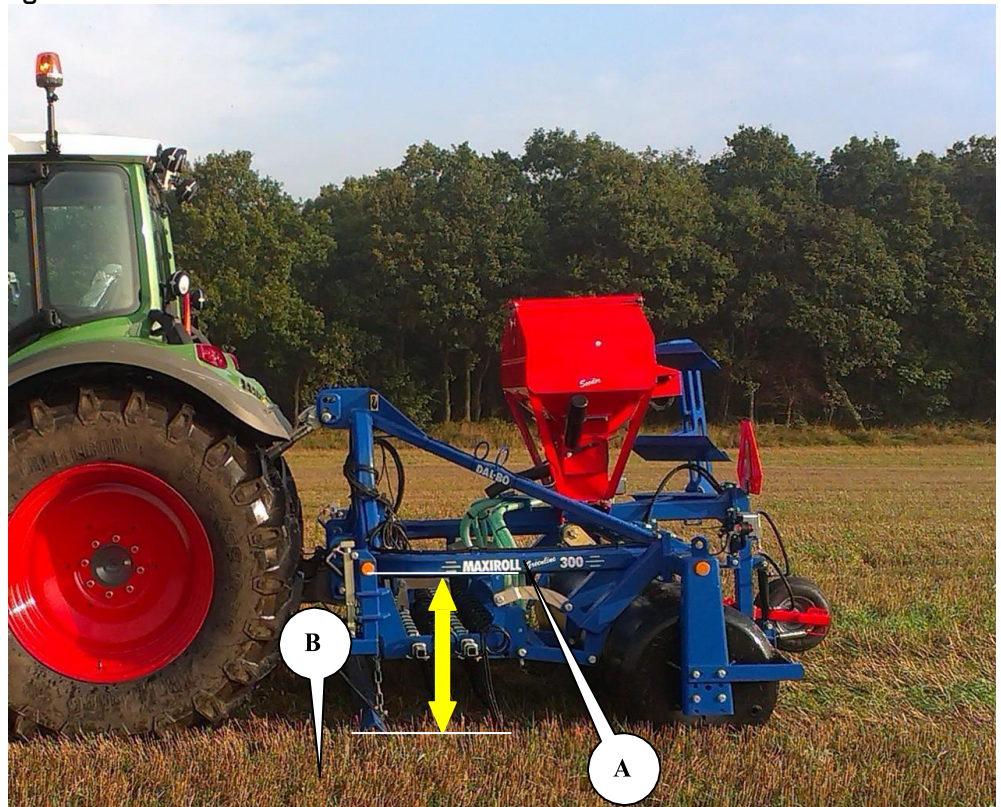
Setting up

MAXIROLL GREENLINE Lift is supplied with factory settings, but fine adjustment will always be required before use. Numerous adjustment options make the MAXIROLL GREENLINE Lift more flexible and ensure maximum use.

Adjusting drawbar height

To achieve uniform rolling, the tube (A, Fig. 3) on the frame must be parallel with the ground (B). The optimum position can be achieved by adjustment.

Fig. 3



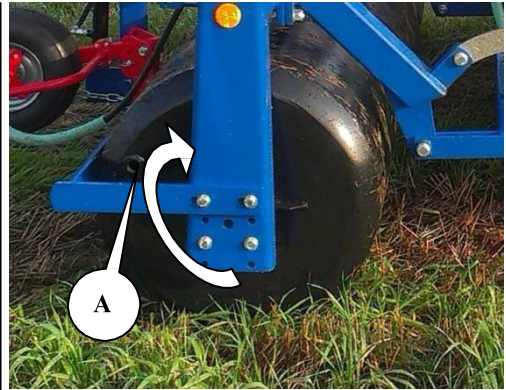
Incorrect drawbar height will cause uneven operation, as the roller will tilt forward digging the front row of the harrow into the ground.

Filling water

Turn roller until plug (A) is at top.

Turn roller until plug is at an angle relative to the ground to achieve desired level of water if a full roller is not required.

Fig. 4



Drain water before winter if no antifreeze is added to avoid invalidating the guarantee!

Draining water

There are plugs for filling/draining at each end of the roller. Turn roller until plug is at bottom. Remove plugs using a 17 mm Allen key. [Special key included, Item no. 37716 is included].



Water will drain faster if plug in opposite end is removed.



Fig. 5

Operation

Correct operation is vital for optimum use of the machine. This applies to working in the field and for safety. Always ensure you are fully familiar with all safety aspects of the machine.

Working position

Tractor must be parked when preparing working position.



Some of the following adjustment options can also refer to accessories for MAXIROLL GREENLINE Lift.

Harrow section

Adjust working depth of the harrow section (A & B) using the top arm (C).

Fig. 6

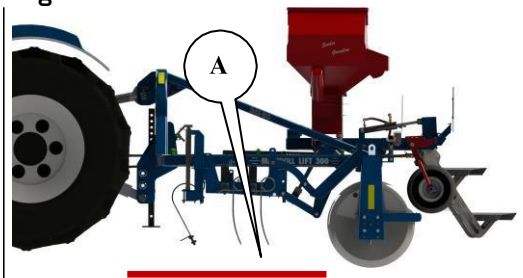


Fig. 7

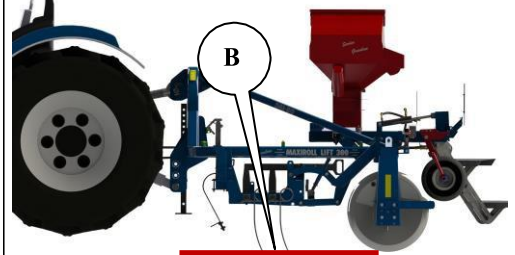
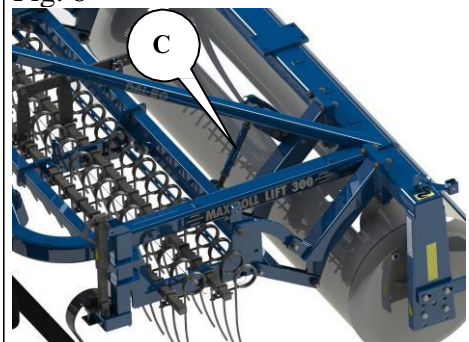


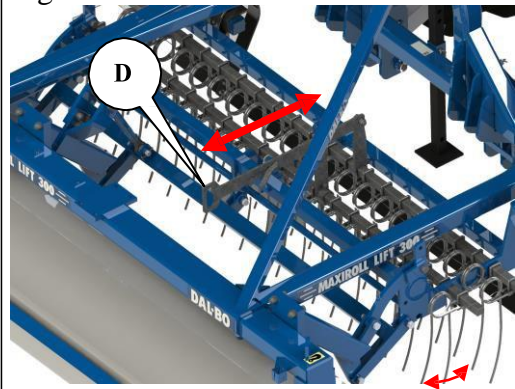
Fig. 8



Harrow section

To adjust the angle of operation of the harrow section, push handle (D) forwards or backwards to the desired position.

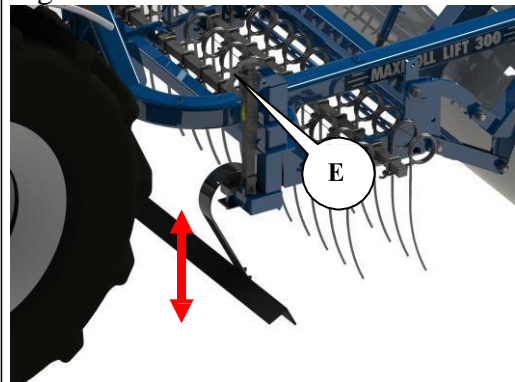
Fig. 9



Levelling board

If a levelling bar is fitted, height can be adjusted at position (E).

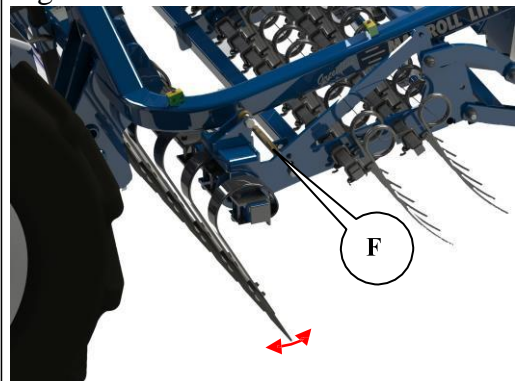
Fig. 10



Crackerboard

Adjust angle at position (F).

Fig. 11



Steps

Using the pin pos. (I) the steps can be folded up pos. (G) or down pos. (H) – see figs. 12 & 13.

Fig. 12



Fig. 13

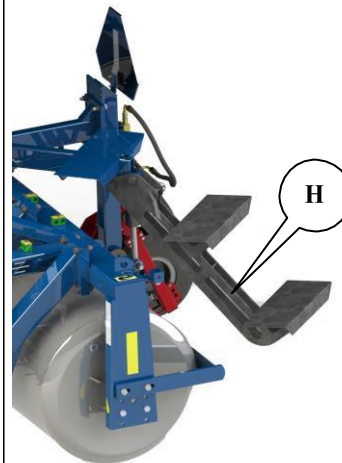
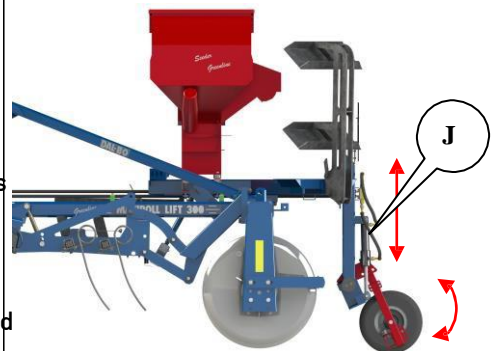


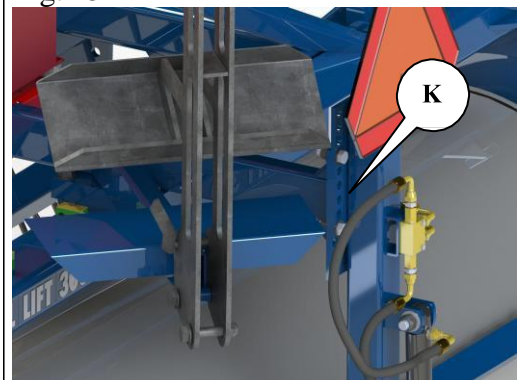
Fig. 14



Sowing wheel

If sowing equipment is fitted (accessory), there will be castor wheel included that can either run on the roller or the ground. Adjust height of the wheel bracket (K) before use. The bracket has a series of holes for height adjustment. When cylinder (J) is retracted (short), the sowing wheel should be lifted free of the ground. When the cylinder is extended (long), the wheel should be pressing lightly on the ground.

Fig. 15



Transport position

Tractor must be parked when preparing transport position.

The steps (accessory) must be folded up for road transport, fig. 13 (H).
If harrow (accessory) is fitted, ensure it is in top position - fig. 6.

Operating speed

An operating speed of 6-8 kph is recommended, but always operate according to conditions.

Power

Power requirement will depend on soil type, terrain and speed.

Troubleshooting

Table 2.

Fault	Cause	Remedy
<i>Hydraulics not working (sowing wheel).</i>	<ul style="list-style-type: none"> • Hoses not in coupling. 	<ul style="list-style-type: none"> • Fit hydraulic hoses correctly in tractor coupling.
	<ul style="list-style-type: none"> • Pilot operated non-return valve defective. 	<ul style="list-style-type: none"> • Remove valve and clean parts. • Replace valve. (see "maintenance and repair")
	<ul style="list-style-type: none"> • Hydraulic cylinder defective. 	<ul style="list-style-type: none"> • Replace defective gasket.

Accessories

MAXIROLL GREENLINE Lift can be fitted with a range of accessories to suit requirements.

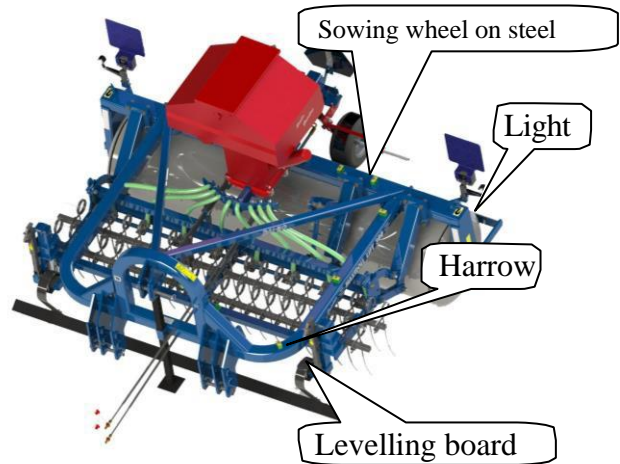
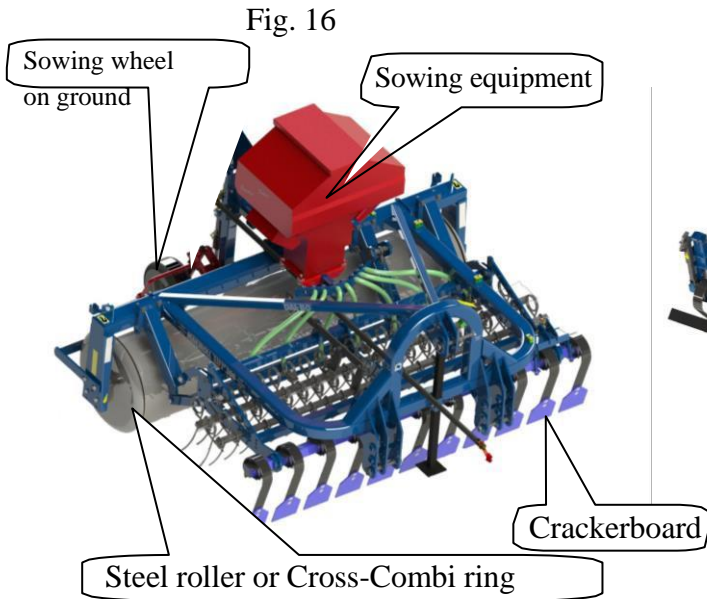


Fig. 17

Levelling board

The advantage of the levelling bar is that it is mounted directly on the harrow section, allowing it to follow the ground contours.

Fig. 18



Power

Table 3. Levelling bar power requirement in HP:

Model	300
Min. HP	10



By moving the minimum amount of soil, fuel consumption is reduced significantly along with wear and tear.

Crackerboard

The crackerboard is a flexible unit with a range of uses. At a depth setting of 5 cm, the vibrating effect of the teeth will crush clumps. The CB tines are pretensioned to prevent vibration during operation. When used over black soil, the bar will plane the surface to a perfect flat sowing bed.

Table 5. Crackerboard power requirement in HP:

Model	300
Min. HP	20

Harrow section

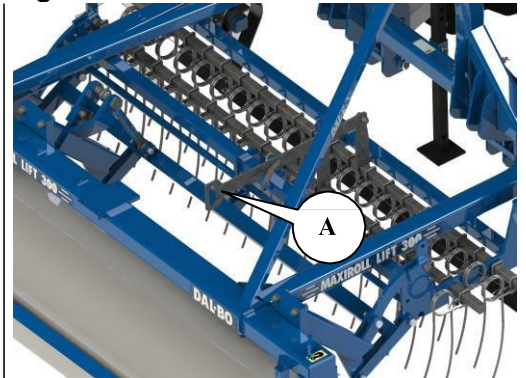
Adjusting angle of tines

Harrow depth is mechanically adjustable. The angle of the harrow section is adjusted manually on the handle (A).

The angle set will be retained regardless of depth, as the tines are mounted in a parallelogram.

Harrow angle plays a major role in performance.

Fig. 19



Operation

Adjust harrow depth as required. Depth is adjusted manually on handle (A).

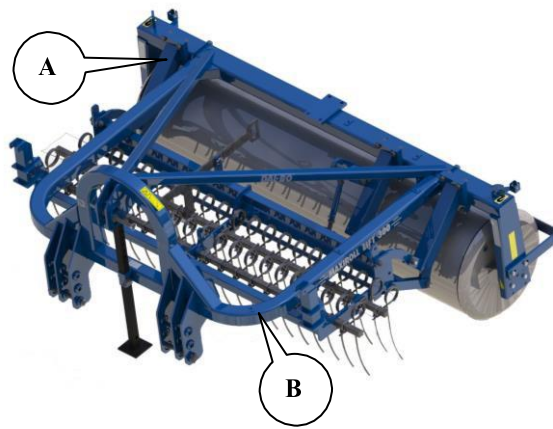
Retrofitting

The harrow can be factory-fitted, or supplied at a later date if required. A crane or other lifting device will be required for retrofitting.

Mounting

Fig. 20

Fit forward-acting arms (A) first. Push harrow frame (B) under main frame and secure on arms. (A)
For more details, see spare parts drawing.



Maintenance

Good maintenance ensures long service life and optimum use. Grease nipples are fitted where wear is heaviest.



Lubrication

Tighten all screw connections after first working day. Check all split pins and bolts to avoid mechanical failure. Check hydraulic system for leaks.

Fig. 21

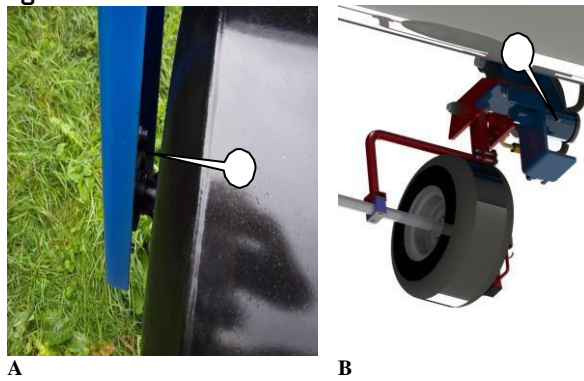


Table 5.

Lubrication points	Number of nipples	Lubrication intervals, hours	Illustration
Flange bearings	2	50	A
Articulated joint for sowing wheel (accessory)	1	25	B

Lubricate all lubrication points at least once annually.

Adjustment

Sowing wheel (accessory)

Lubricate and adjust wheel bearings at least once annually. Check tyre pressures (see recommended pressure on tyre).

Adjustment and lubrication of wheel bearings

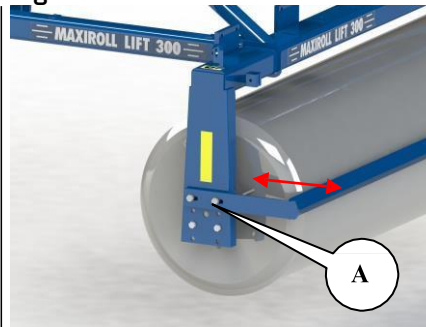
1. Remove hub caps.
2. Remove split pin.
3. Tighten castle nut 1/6th of a turn until hole aligns with axle. Turn wheel, check for resistance. A little play should be detected in the hub housing when rocking wheel from side to side. If play is excessive, repeat process.
4. Replace split pin
5. Fill hub cap ³/₄ full with grease. Replace.

Scraper

Adjust scrapers as required, approx. 5-10 mm from roller.

1. Slacken bolts (A). Scraper can be pushed closer to roller.
2. Retighten bolts. Scraper must not be in direct contact with roller.

Fig. 22



Hydraulics



Check all hydraulic hoses for wear or cracks. Check all hoses for crimping.

Lubricate exposed rams with oil or pressure-resistant grease to avoid rust forming when storing for long periods. Remember to remove before use.

Replacement and repairs



Safety is vital for **all** repair work on the machine. Always observe the following points, plus those under Safety First in the instruction manual.



When replacing cylinders, always fill new cylinder with oil before pressurising system. We recommend fitting cylinder to frame first, fill with oil, before completing fitting at top.



Never perform maintenance unless the machine is lowered onto the ground, the tractor brake is applied, the engine switched off and ignition key removed to prevent accidental start and injury.



Particular attention must be paid to safety when repairing hydraulics. Before commencing work, depressurise hydraulic system and support part being worked on.



Always ensure hydraulic system is bled after repairs and before use to prevent mechanical breakdown and injury to person.

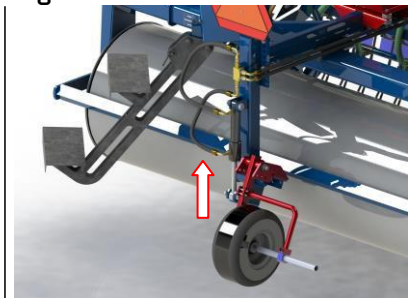
Hydraulics

Replacement of cylinder for extending and retracting sowing wheel (accessory)

Always lower the machine to the ground for any repair work.

1. Depressurise cylinders (retract). **Check there is no pressure in the cylinder.**
2. Disconnect hoses.
3. Slacken screws. Cylinder will now be free.
4. Fit new or repaired cylinder and tighten screws.
5. Connect hoses. Check there is no danger of hoses being ripped or crimped after fitting.

Fig. 23





Activate extend/retract cylinders after fitting until they show a little movement. Reverse cylinders until they return to start position. Move cylinders backwards and forward several times.



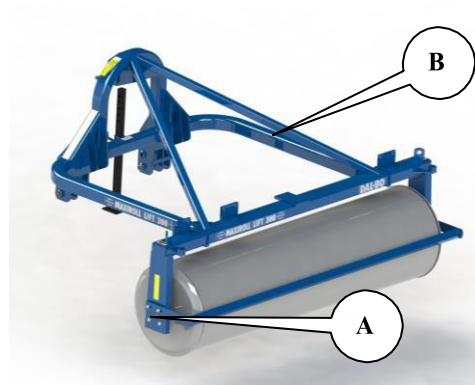
Ensure no personnel are within the extension radius of the side sections.

Removing steel roller

Repairs must be performed with the machine connected to a tractor, resting on a level surface, fully extended with the roller resting on the ground.

1. Slacken bolts (A)
2. Lift frame (B) carefully with tractor.
3. The rollers can now be extracted from the frame.

Fig. 24



Mounting

1. Raise frame (B) to transport position.
2. Push roller into place in centre of main frame.
3. Lower frame (B) carefully until aligned with bolt holes.
4. Fit bolts (A) and tighten.



Ensure no personnel are within the machine's extension radius when activating hydraulics.

Scrapping



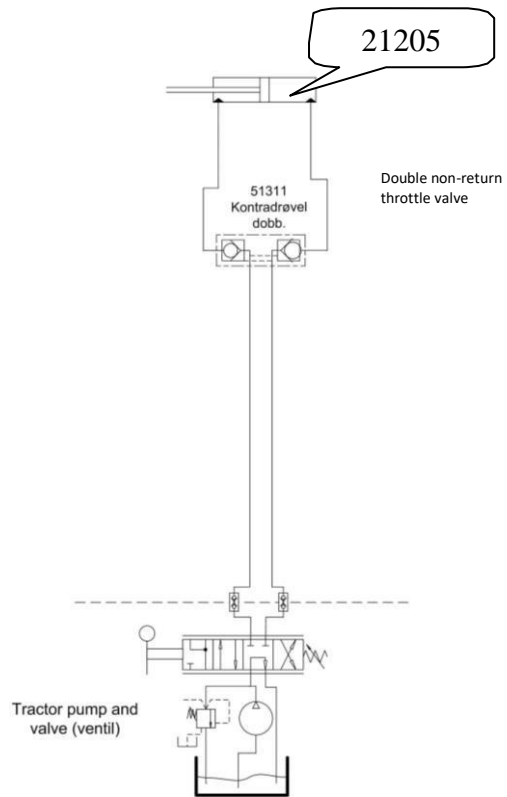
Machine must be lowered. It is essential that all cylinders (accessories) are depressurised.

Disconnect hydraulic hoses and cylinders and drain oil. Collect oil in container to avoid pollution. Send oil and hoses for destruction.

All iron used in the machine can be recycled.

Hydraulics diagram

Fig. 25



Spare parts