

DALBO®

CULTILIFT



EN
300/500/600/700/800 cm
Serial no.: 00100 – XXXX

MADE IN **D**ENMARK

CULTILIFT

Type 500/600/800 cm

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

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This product 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. A spare parts list is included at the back of this manual.

EU DECLARATION OF COMPLIANCE

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/ECC, 93/44/ECC and 93/68/ECC on harmonisation of member state legislation concerning health and safety requirements related to the construction and manufacture of machines.

CE

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.
- Before leaving the tractor or making adjustments, performing maintenance or repairs on the machine, fully machine lower to the ground, apply tractor handbrake, switch engine off and remove ignition key to prevent accidental operation.
- Remember to secure top arm and lift arm (if relevant) 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

- Ensure there are no personnel within the machine's working radius when activating the hydraulic system to avoid danger of crushing.
- 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.
- 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 or fully extended 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

CULTILIFT			
Model/working width (cm)	500	600	800
HP (recommended)	100	125	170
Gross weight kg:	2225	2500	2975
Transport width (cm)	300	300	300
Tines (no.)	63	75	100

Delivery

CULTILIFT is delivered complete on a trailer or towed by a tractor. The machine can be partially dismantled if exported.

If lifting the machine, we recommend the use of straps on the mid-section and draw-bar to maintain balance.

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 main sections:

- Safety
- Starting routine and running
- Maintenance
- Repairs

The following symbols represent:



Points which are important to functionality and service life.



Points relevant to safety.

Uses

CULTILIFT is a 4-bulld, lift-suspended sowing harrow with three working units connected to the tractor's three-point lift.

The machine is designed to run smoothly over the field, and its roller cage helps ensure uniform cultivation depth.

Fig. 1



CULTILIFT has a spring-suspended levelling board at the front to even out irregularities and crush clods. The board's cultivation depth is mechanically adjustable via cranks.

4 rows of tines represent the second working unit. The tines are spaced 8 cm apart. The 4-bulld harrow construction ensures high quality, smooth cultivation.

The roller cage is the final unit, used for adjusting the depth of the harrow, compression and fine-crumbling of the soil structure. The overall effect leaves the field with minimum evaporation.

Connecting and disconnecting

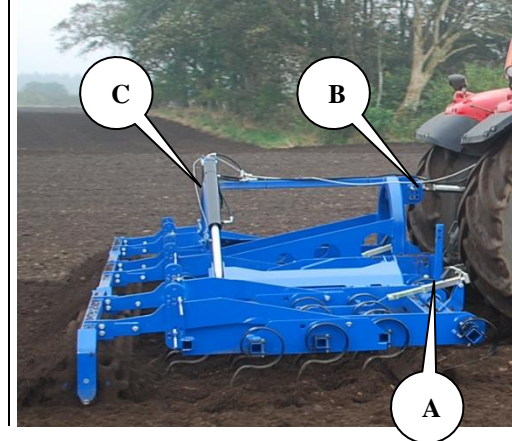
Connecting

1. Connect the tractor lift arms (A).
2. Connect the top arm (B).

Remember to secure with a split pin.

3. Secure the lock cable in the tractor cabin
4. Fit hydraulic hoses.

Fig. 2



Hydraulics

A double action outlet is required to connect CULTILIFT.

Hose markings

Function	Colour
Extension/retraction of side sections	Black



Check hydraulic hoses for crimping.



Check that the machine is fully retracted and locks (C) engaged before road transport, fig. 2 .



Adjust main frame to horizontal. See section on adjustment.

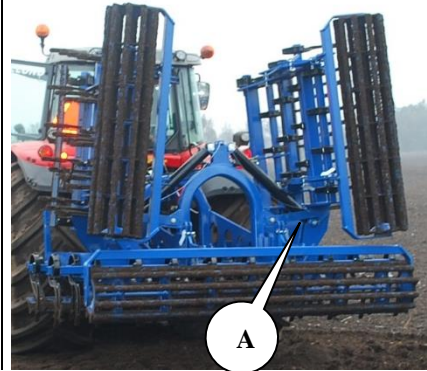
Disconnection



CULTILIFT can be disconnected when extended or retracted.

Remember to depressurise hoses before disconnecting them.

Fig. 3



Check side section safety hooks are locked before disconnection [A] fig. 3.

Place the machine on a firm, flat surface. Lower the lift arms and disconnect the machine.

Setting up

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

Basic setting



The main frame (A) must be horizontal when working to achieve optimum results.

Release the top arm (B) and adjust the length until the main frame is horizontal when lowered.

Remember that the wing nuts have opposite thread when tightening.

Use one of the oblong holes (A) in the top arm bracket for better performance in rolling terrain.

Fig. 4

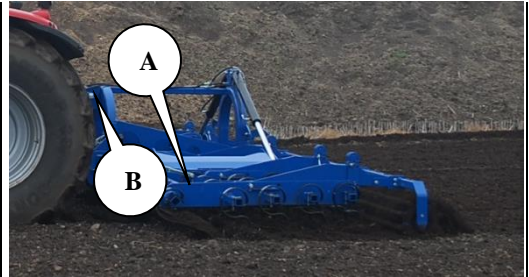
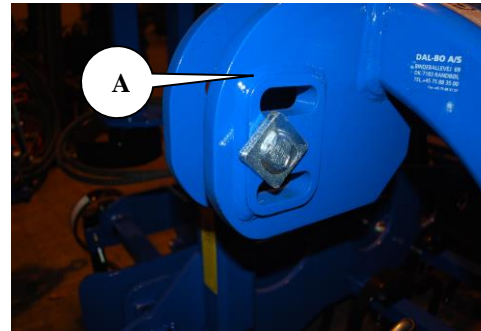


Fig. 5

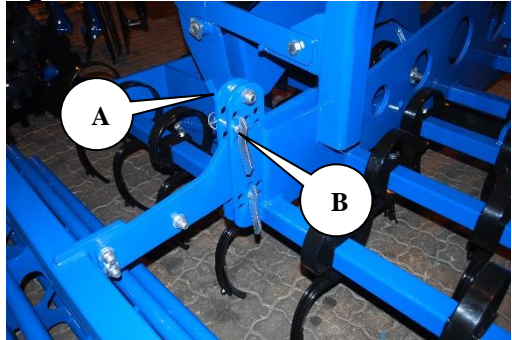


Working depth

Depth is controlled by the plates (A), by using the different pins (B).

The harrow must either be suspended by the lift arms or stand on the ground for adjustment of depth, depending on what is to be adjusted.

Fig. 6



When adjusting depth, it may be necessary to adjust the top arm (B) fig. 4, to keep the main frame horizontal.

Always comply with the safety instructions when adjusting working depth.

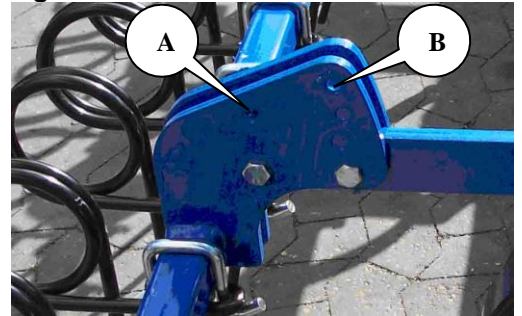


Adjusting post-harrower

Depending on working depth and soil conditions, the post-harrower (optional extra) between the last row of harrow tines and the roller cage must be adjusted.

The post-harrower can be vertically adjusted using the holes (A). It can also be angled using the holes (B), for less aggressive cultivation.

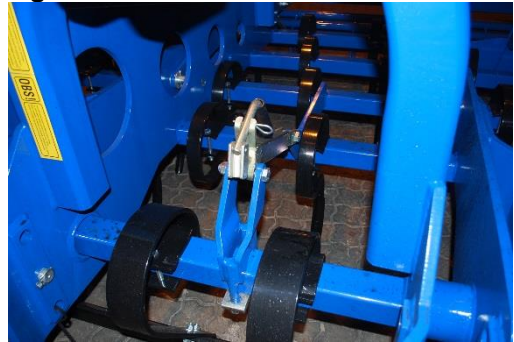
Fig. 7



Adjusting the spring-suspended levelling board

The front working unit, the levelling board, can be mechanically adjusted using cranks. Depth is indicated on a numerical scale on each crank.

Fig. 8



The board is intended to work as a dozer blade, to avoid dragging large amounts of accumulated soil. This increases fuel economy and saves wear on the tractor and machine.

Operation

Correct operation is vital for optimum use. This applies to working in the field and for safety.

We recommend that the final pass is made at a slight angle to the following direction of sowing. This achieves a uniform finish.



Adjustment of the main frame to keep it horizontal may be necessary after adjusting depth.

Extending and retracting



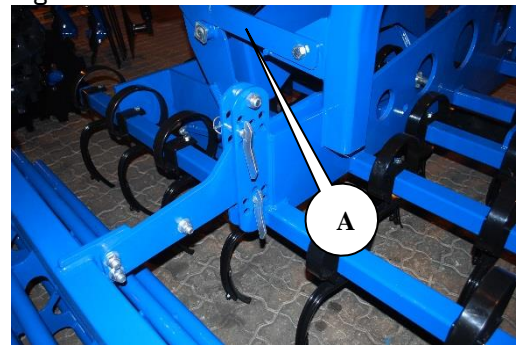
The machine must be parked on a level surface for extending and retracting. This is important for safety reasons, and to ensure the transportation locks engage.

Extension

Before activating the hydraulics handle (black) for extension or retraction, release the transportation lock (A) mechanically using the cable. The hydraulics can then be activated to extend the harrow.

When the side sections are fully extended, set the hydraulic handle (black) to flow position.

Fig. 9

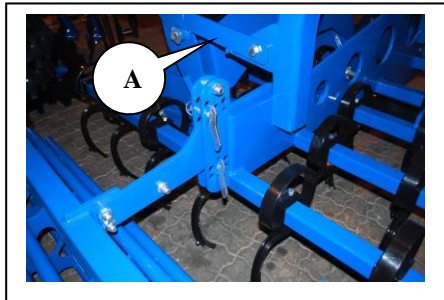


Set the hydraulic handle to neutral when working in the field. This will lock CULTILIFT in position across its full width, giving the best possible levelling and compression effect.

Retraction

Check that the automatic transportation lock (A) is engaged with the side sections after retraction.

Fig. 10





When transporting on public highways, always check that the harrow is fully retracted and locks engaged.

Operating speed

To achieve optimum cultivation, a speed of between 8 and 12 km/h is required. **But always work according to the conditions.**

Please note that wear increases significantly in line with the speed. The tines can also be damaged if operating at excessive speeds in unfavourable conditions.



Wear will increase significantly at high speeds, particularly under dry conditions.

Maintenance

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



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



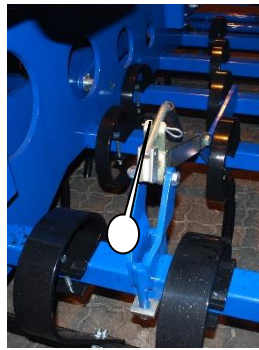
All maintenance and repair work can only be performed when the machine is lowered to the ground, the tractor is braked, engine stopped and ignition key removed to prevent accidental start and crushing.

Lubrication

Fig. 12



A



B

Lubrication points	Lubrication interval, hours	Nipples quantity	Illustration
Bearings	50	6	A
Cranks on levelling board	50	3	B



Lubricate all lubrication points at least once annually.

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.

Tips

The tips of the tines are reversible and must be turned before wear occurs on the tine.

Replacement and repairs



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



All maintenance and repair work can only be performed when the machine is lowered to the ground, the tractor is braked, engine stopped and ignition key removed to prevent accidental start.



Particular attention must be paid to safety when repairing hydraulics. Depressurise the hydraulic system before starting work.



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.



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

Hydraulics



Replacing cylinder for extension and retracting side sections

CULTILIFT must be fully extended and standing on ground for repairs.

1. Depressurise cylinders. Disconnect hoses.
2. Remove split pins and pins. Cylinder will now be free.
3. Fit new or repaired cylinder. Check pin locks into place, secure pins with split pins.
4. Connect hoses. Check there is no danger of hoses being ripped or crimped after fitting.

Fig. 13





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.

Replacing tips



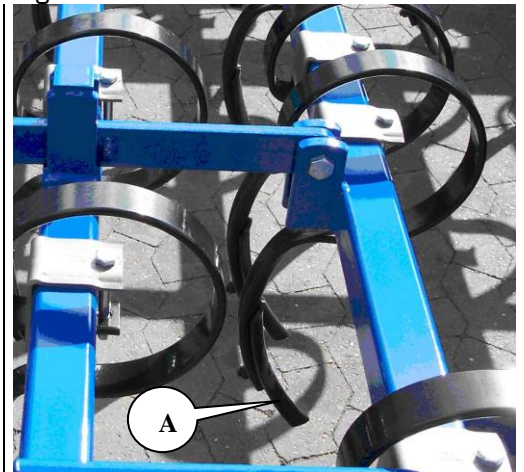
Support implement securely to avoid danger of crushing or falling

The tips (A) are reversible and bolted on. They must be turned or replaced before wear occurs on the tine.

When turning tips, old bolts can be re-used, but when replacing them, use new bolts.

Remove any accumulated soil between tine and tip.

Fig. 17



Scrapping



Depressurise hydraulic system



Beware of the weight of any given part when removing or disassembling. All parts **must** be supported or lifted to avoid danger of falling.

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.

Spare parts