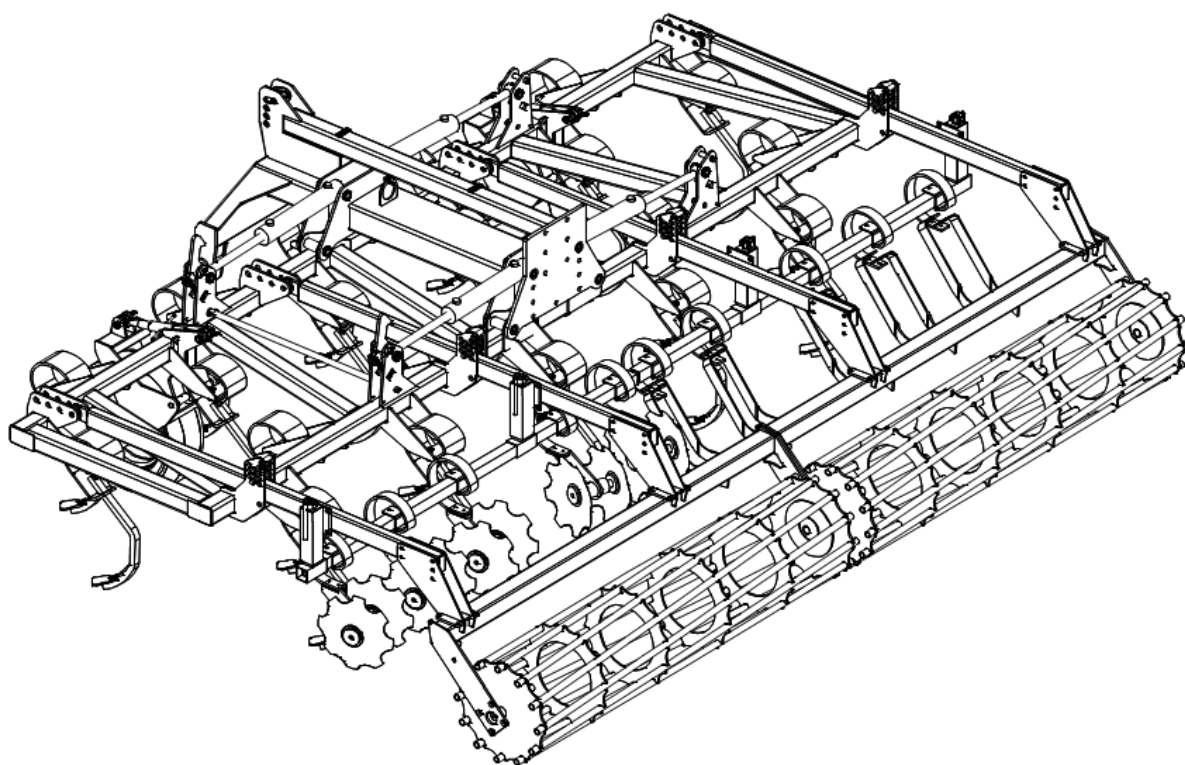


VIBRO FLEX 7400



Directions for use

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Introduction

Congratulation with your new KONGSKILDE Vibro Flex 7400!

The KONGSKILDE Vibro Flex 7400 is an implement for soil cultivation, based on the well known vibrating KONGSKILDE tines.

Vibro Flex 7400 is available as lift mounted or trailed version.

Vibro Flex 7400 is mainly designed for the primary tillage after harvest. Vibro Flex 7400 can be equipped according to the specific demands with front tools, tines, levelling devices and rear rollers etc.

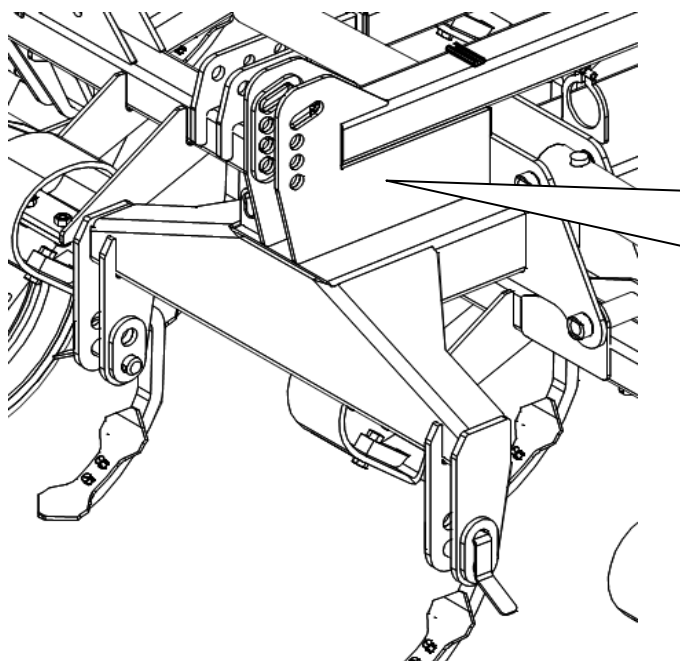
In order to obtain good weight distribution on the tractor, it is recommended always to use adequate front weights on the tractor.

In order to get the full benefit from your new cultivator, Kongskilde Industries A/S recommend to read this user manual, before taking the cultivator in use.

Kongskilde Industries A/S is convinced that you will benefit from your new Vibro Flex 7400.

Identification

The specifications of the Vibro Flex 7400 can be found in the type plate. This is located on the inside of the frame for the head stock near the fixation hole for the top link.



Please note the specifications from the type plate:










Type: _____ Name of implement.
 Serial Number: _____ Identification number
 Year: _____ Year of manufacture.

For any queries regarding the Vibro Flex 7400 and for ordering spare parts, please quote the above specifications.

The numbers for the spare parts can be found in the spare parts list.

Explanation of symbols

The symbols given in this manual will shorten the text and simplify working with the document. Please study carefully all symbols and their meaning prior to operation.

	Warning	Important note
	Visual inspection	Visual inspection, inspection of condition
	Setting	Check and adjust measures and settings
	Lubricate	Lubricate or grease parts of machine
	Securing	Adjust securings (bolts, guards, rings)
	Easy servicing	Facilitating work
	Observe direction of mounting	For these parts a wrong direction of mounting might be possible
	Recycling	Special operating elements are to be recycled
	Protection of environment	Follow local prescriptions for environmental protection

Safety



General safety advice

- Before commissioning the Vibro Flex 7400 read the operating instructions and safety advice. It is mandatory to stick to the safety advice and the warnings stated in the manual. The manufacturer declines any responsibility for accidents and damages to the Vibro Flex 7400 resulting from failure to apply safety advice.
- The Vibro Flex 7400 should only be used, maintained and repaired by persons, who are familiar with the safety advice and who are informed about the dangers.
- General safety advice and the regulations for the prevention of accidents must be observed.
- The safety instructions must be passed on to other users.
- Use the implement only for soil preparation in farming.

Coupling and uncoupling

- Be careful when coupling or uncoupling implements to and from the tractor. Do not stand between tractor and the Vibro Flex 7400, when the tractor is moving.
- Fasten the implement only at the provided points.
- **Do not use fully mounted cultivators together with tracked tractors. Damages on fully mounted cultivators caused by the use of tracked tractors are not covered by the normal warranty conditions of Kongskilde.**
- Check and attach transport equipment, for example lighting equipment, warnings and possibly safety equipment.
- Observe the tractor's operating instructions.
- Use original and correct coupling parts.

Three-point hitch or linkage

- The attachment category for the three-point hitch on the tractor and the implement has to match properly, or the appropriate adjustments must be made.

- Before coupling or uncoupling implements to the three-point hitch, put the operating mechanism into a position, which will prevent any accidental lifting or lowering.
- Before coupling, check all linkage parts for cracks, missing components, loose bolts and nuts etc. Make sure the implement will not disconnect by accident during fieldwork or transport.
- While the implement, when mounted in the three-point hitch, is in transport position, ensure sufficient locking at the side of the three-point linkage.

Operation

- Before each use, check the implement and the tractor as to their road and operational safety.
- Before starting work, familiarise yourself with all facilities and operating elements. It is too late to do so during work activities.
- Examine work surface for hidden obstacles, which could pose a risk (For example under-ground cables, pipes).
- Adjustments should only be made on the implement, when it is completely parked on the ground in unfolded position and when the engine of the tractor is switched off. Remove ignition key and apply hand brake.
- Wear tightly fitting working clothes. Avoid loose clothes, which could be caught in movable parts.
- Wear strong shoes or preferably safety shoes.
- Unauthorised persons are not allowed to stay in the working area during work. No work is to be carried out, if there are unauthorised persons, especially children, in the vicinity of the Vibro Flex 7400 or in the danger zone of foldable parts without keeping a safe distance.
- It is prohibited to allow any person to ride on the Vibro Flex 7400.
- Never work diagonally to inclines or slopes, where there is a risk that the tractor will overturn.

Transportation by road/transport

- When using public traffic routes, observe the regulations specific to the particular country including the local maximum transportation width.
- The attachment of implements should not exceed the admissible total weight, the admissible axle load and the weight-bearing capacity of the tractor tyres and the capacity of the lift.
- The tractor must be suitable for the Vibro Flex 7400
- To ensure the ability to steer, the front axle load should always amount to at least 20% of the total weight of the tractor with implement.
- Hitch up the machine as far as it is necessary to ensure a safe road transport.

Attention!

The driving behaviour of the tractor changes.

Suit your driving according to the conditions of the street.

Pay special attention to the centre of gravity of hydraulic foldable machines.

Do not exceed a speed of 25 km/h when transporting the trailed version of Vibro Flex 7400.

Before driving

- Observe admissible axle loads, total weights and transport measurements.
- For transportation on any public road, track or place, the legal transport width according to local rules should not be exceeded. If the transport width is exceeded, a special authorisation may be obtained under certain conditions from the appropriate authorities.
- Road behaviour, performance, ability to steer and brake are influenced by attached or coupled implements and ballast weights. Ensure that there is sufficient ability to steer and brake.
- Before starting off the Vibro Flex 7400, check the immediate area. Pay special attention to children and that there is sufficient visibility.
- For road transportation with the implement raised, lock the control valves of the tractor.
- Make sure that wing security locks (Foldable version) have correctly locked.
- Make sure that the transport wheel security lock (Trailed version) is locked.
- Make sure tyres are inflated to correct pressure. (Trailed version)

NOTE:

The security locking devices prevents from accidental unfolding (Foldable version) and lowering (Trailed version) in case of a defect in the hydraulic hoses. However, it may not prevent unintentional unfolding or lowering if the control device is operated by mistake.

During transportation

- Riding on the implement during work and transport is not permitted.
- Never leave the driver's cab during transportation.
- When driving around corners and bends take the extra width and the inertia of the Vibro Flex 7400 as well as the high centre of gravity of the folded frame (Foldable version) into consideration.

After transportation

- Before leaving the tractor, set the implement down onto the ground, switch engine off, remove ignition key and apply hand brake.
- No one should stand between tractor and implement without securing the vehicle by the hand brake and/or stop chocks.
- Foldable frame parts (Foldable version) should be completely unfolded. The implement must only be parked with unfolded frame parts.
- Make sure no one gets close to the discs, due to risk of cutting.

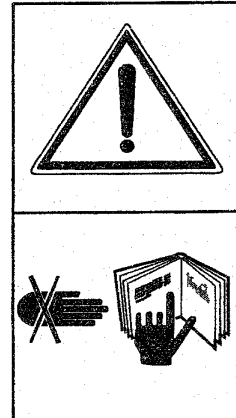
Maintenance

- Repairs, maintenance and cleaning work as well as the solving of functional faults should principally only be carried out, while the engine is switched off. Remove ignition key and apply hand brake.
- For maintenance on a raised up implement, always secure the Vibro Flex 7400 on suitable stands.
- Do not ever go under the Vibro Flex 7400 unless secured on suitable stands.
- Never attempt to disconnect hydraulic connections while system is pressurised.
- When changing work tools, which have cutting edges, use suitable tools and gloves.
- Spare parts should correspond at least to the technical requirements defined by the manufacturer. Use only original parts.

Safety decals**1**Instructions

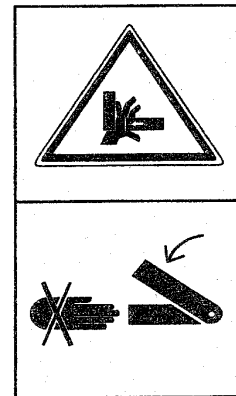
Read and observe the operating instructions. Before commissioning the Vibro Flex 7400, read and observe both operating instructions and safety advice.

Part no.: 71 000 187 250

**2**Danger of crushing

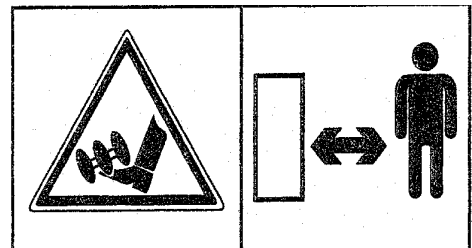
Never reach into the danger zone, as long as there could be moving parts.
(Foldable version only)

Part no.: 71 000 629 549

**3**Danger of rotating discs.

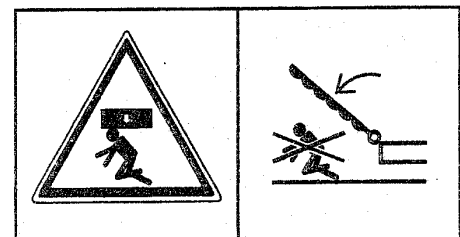
When discs are rotating, keep sufficient distance.

Part no.: 71 000 629 547

**4**Moving Parts

Do not stand near foldable frame of the Vibro Flex 7400.
(Foldable version only)

Part no.: 71 000 629 546

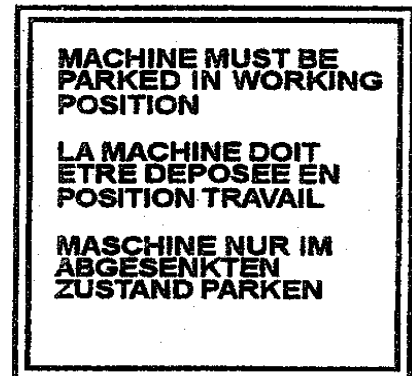


5

Park in lowered position.

The Vibro Flex 7400 must ONLY be parked in working position.

Part no.: 71 000 646 708

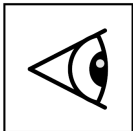


6

Stay clear of swinging area.

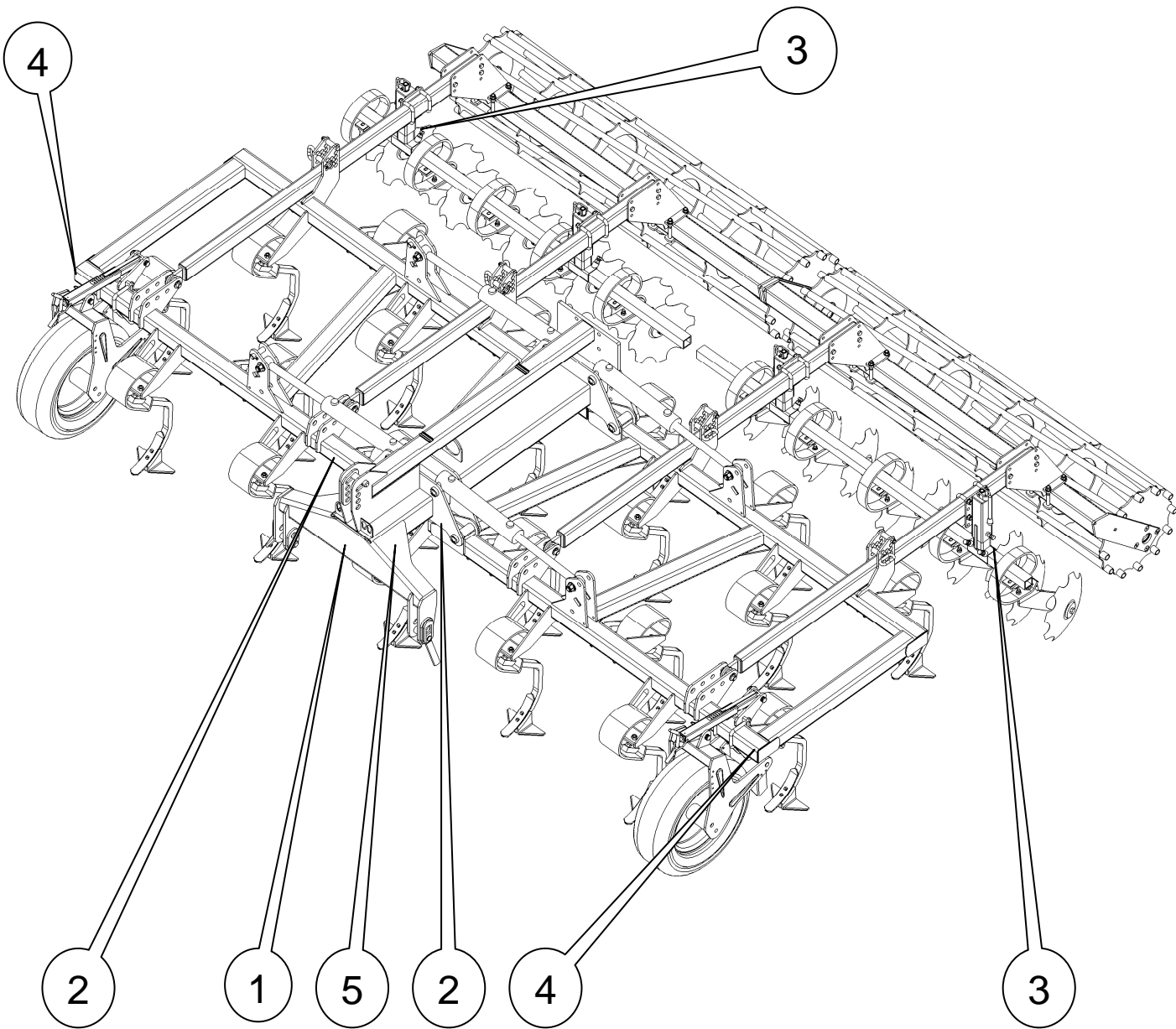
Do not get close to the transport wheels of trailed Vibro Flex 7400. Take care not to get squeezed between roller and wheels, or to be hit by wheels

Part no.: 372 003 609

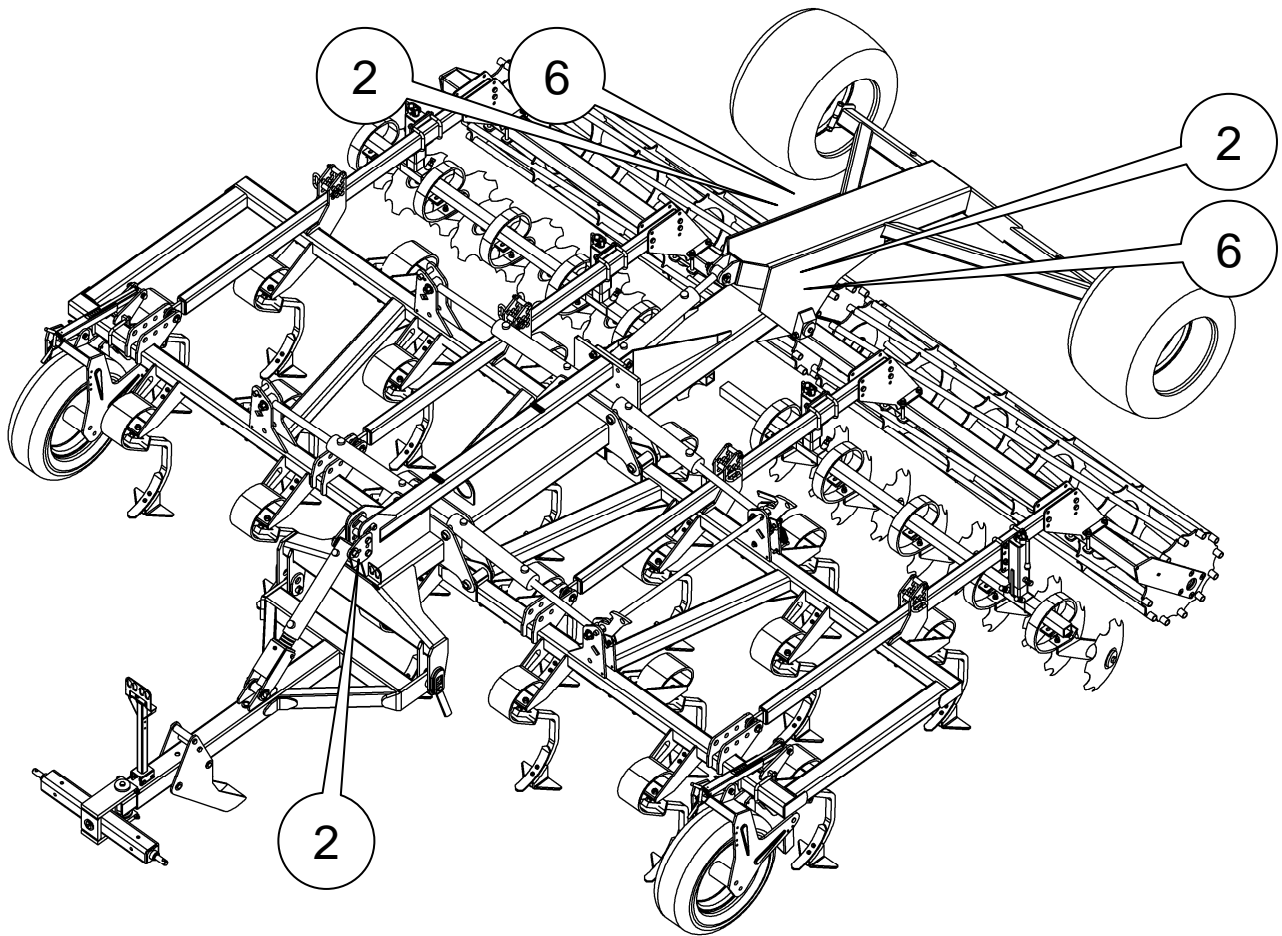


Always keep safety decals in clean and readable condition!

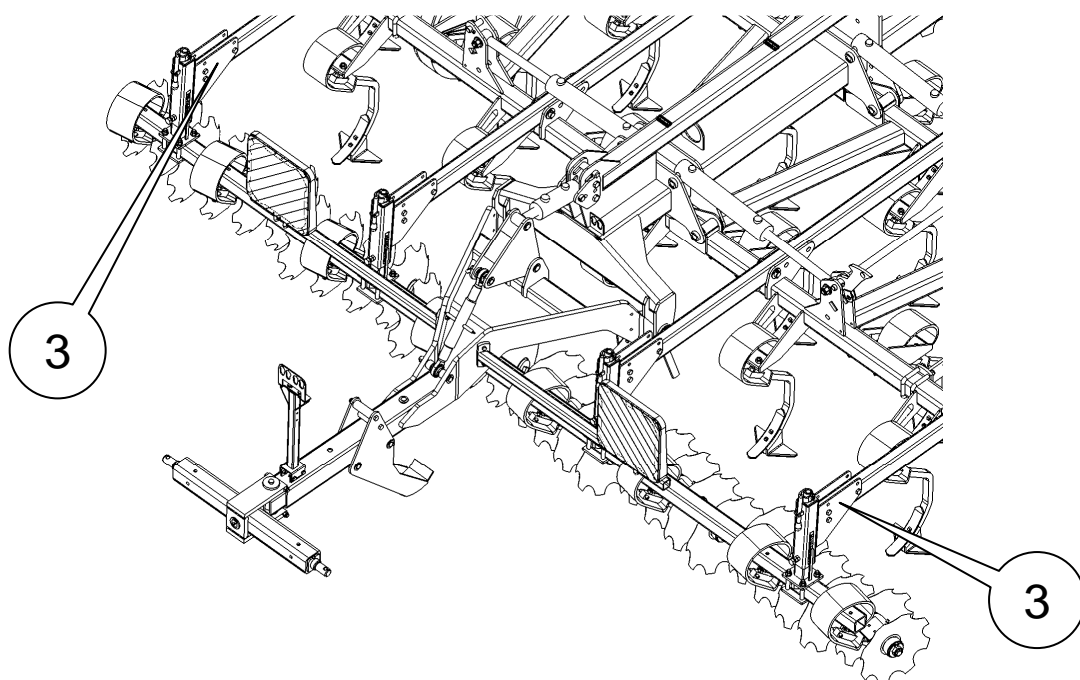
Request substitutes for damaged or missing decals from the dealer and place these at the intended positions!



Additional decals on trailed version:

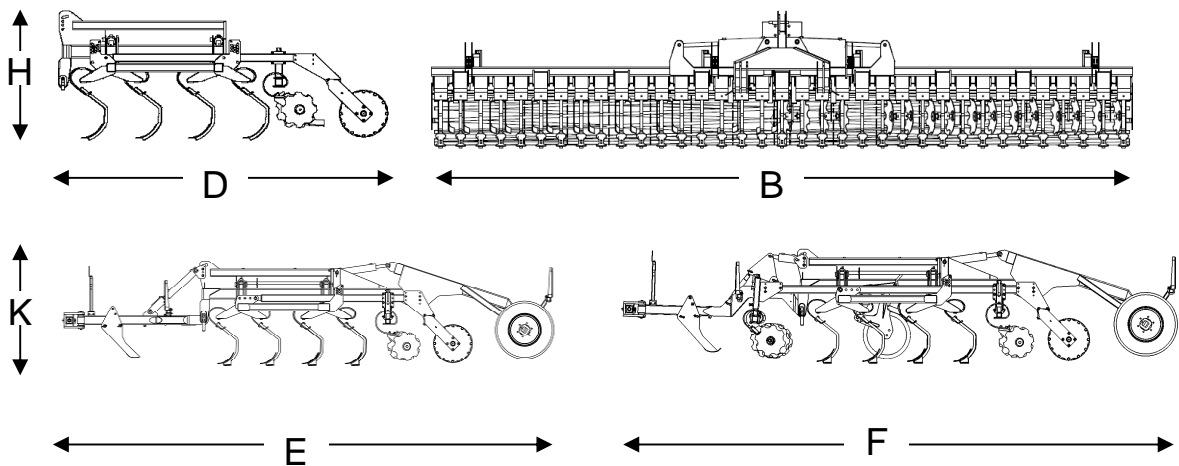


Additional decals on version with front discs



Technical data and dimensions

	2,5-m	3-m	4-m	4-m hydr. foldable	5-m hydr. foldable	6- m hydr. foldable	7-m hydr. foldable
Working width	2,5 m	3 m	4 m	4 m	5 m	6 m	7 m
Transport width	2,5 m	3,0 m	4,0 m	2,5 m	2,5 m	2,5 m	2,5 m
Fully mounted	yes	yes	yes	yes	yes	yes	no
Trailed	no	no	no	yes	yes	yes	yes
Weight, Mounted, bar roller				2050	2500	2800	3200
Weight, Trailed, bar roller	-	-	-	3000	3400	3725	4100
Lift capacity (Mounted)							
Working depth	0-15 cm						
Hydraulic demand, Lift mounted	1 (One) double acting valve needed						
Hydraulic demand, Trailed	2 double acting valves needed						
Recommended tractor(HP)	75-90	100-130	130-170	130-170	160-210	200-250	240-290
No. of tines	11	13	17	17	21	25	29
H	1,47 m						
D	3,84 m						
B	2,5 m	3 m	4 m	4 m	5 m	6 m	7 m
E	-			7,5 m			
F- with front discs	-			7,5 m			
K	-			2,05 m			



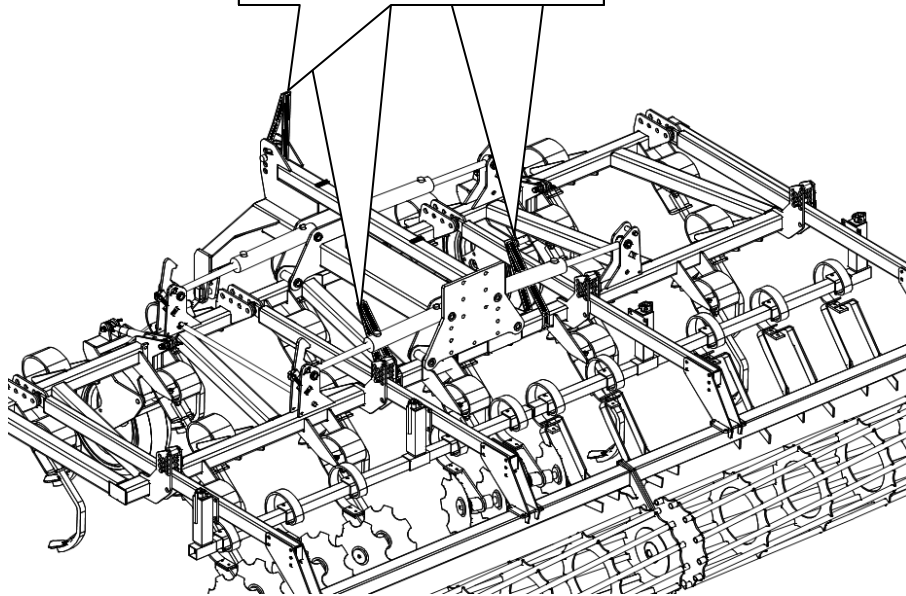
Lifting points

If the Vibro Flex 7400 should be lifted by a crane or a forklift the following lifting recommendations must be followed.

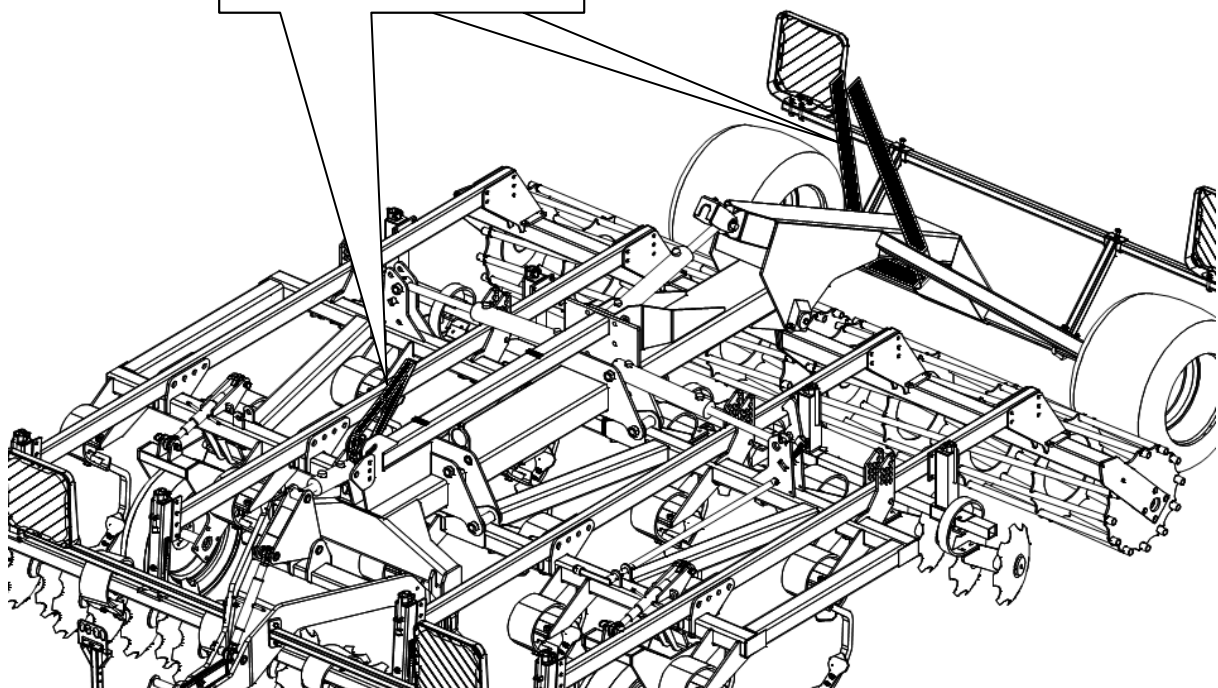


- Always use a crane or a forklift with the sufficient strength and ballast to carry the weight of the Vibro Flex 7400.
- Always lift the Vibro Flex 7400 in unfolded position.
- Do **not** go under the lifted Vibro Flex 7400.

Place straps as shown



Place straps as shown



Operation

Coupling (Lift mounted version or trailed with drawbar)

Attention!

- While hitching up the Vibro Flex 7400, stop the tractor and secure it from rolling.
- Do not step between the tractor and the Vibro Flex 7400 while hitching up – danger of accident!
- No one should stand in the operational range of the implement.

The three-point attachment category on the Vibro Flex 7400 and tractor must match with each other.

If they do not correspond, the three-point linkage on the tractor must be adjusted.

Make sure that the Vibro Flex 7400 is parked on solid ground and secure it against rolling.

- Fit ball bushes in correct category over the pins for the lower linkages and the head stock connections
- Lower the lower linkages of the tractor and drive backward until the lower link hooks are under the ball bushes
- Raise the lift until the lower link hooks are hooked in.
- Put in the top link (Lift mounted version)
- Secure all connections against unintentional opening
- Make sure the hydraulic fittings are clean and connect the hydraulic hoses.
- Connect light equipment (Optional)
- Control no oil is leaking from hydraulic connections
- Control all functions work correctly.

Adjusting the length of the drawbar (Trailed version)

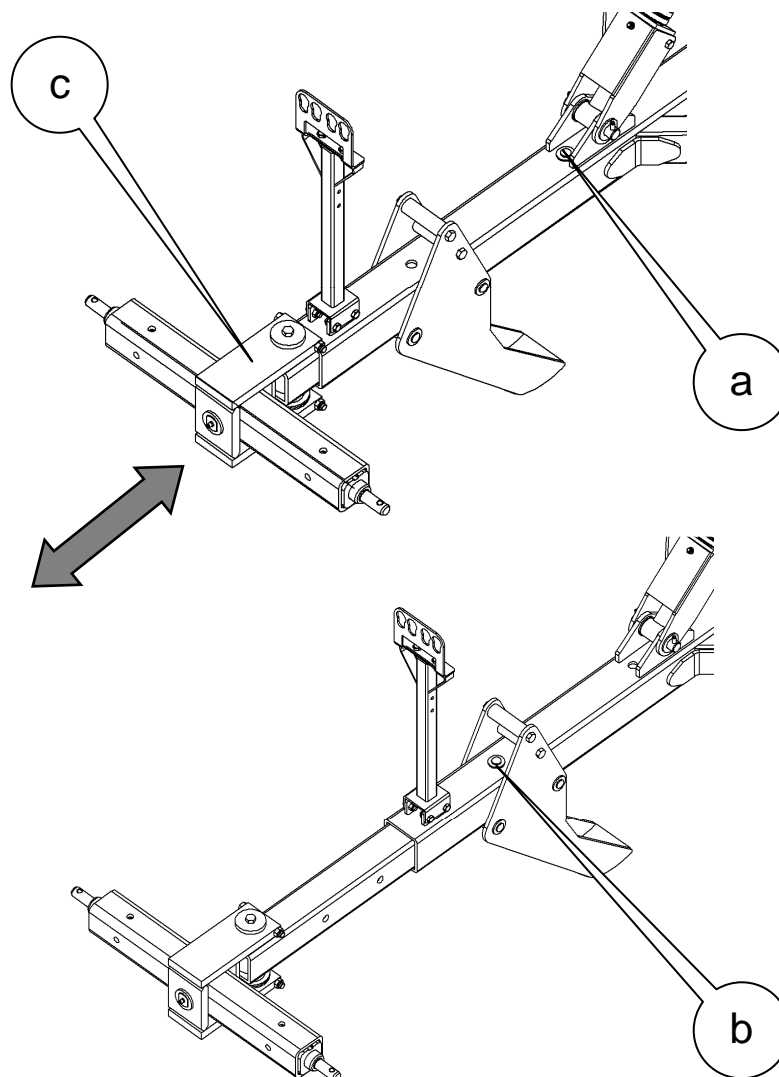
The length of the drawbar on the Vibro Flex 7400 (Trailed Version) can be extended to match the space taken by the tractor when turning. If the tractor is fitted with dual rear wheels, you may want to extend the drawbar.

Extending the drawbar

- Remove the security clip and the pin (a)
- Extend the drawbar (c) by pulling to the outer position
- Put back the pin in the outer hole (b) and lock it by the clip

Shortening the drawbar

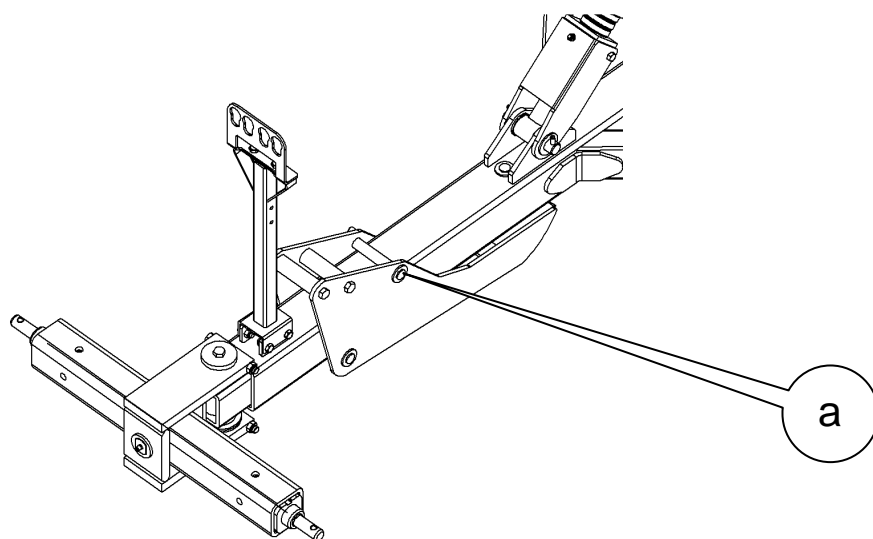
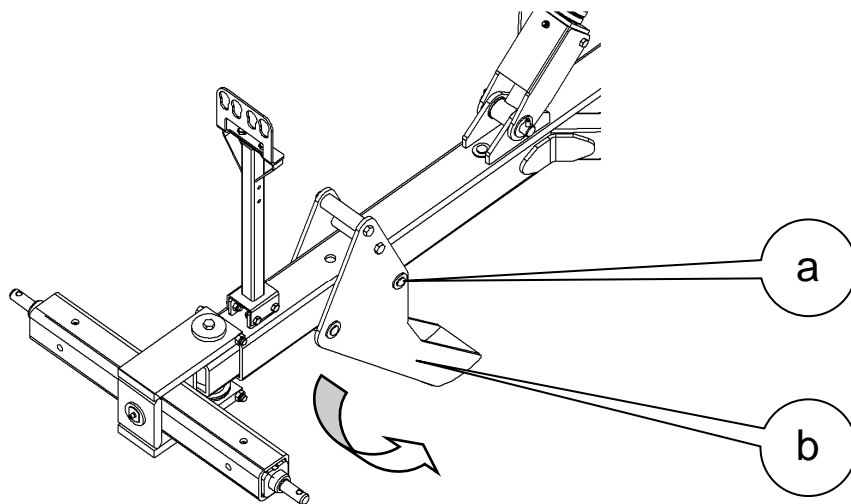
- Remove the security clip and the pin (b)
- Shorten the drawbar (c) by pushing to the inner position
- Put back the pin in the outer position (a) and lock it by the clip



Support leg (Trailed version)

The support leg is operated manually in the following way:

- Loosen the lynch pin and take out the bolt (a)
- Turn the leg (b) to the desired position (Up or down)
- Put back the bolt (a) and secure it with the lynch pin (a)



Uncoupling (Lift mounted version or trailed with drawbar)

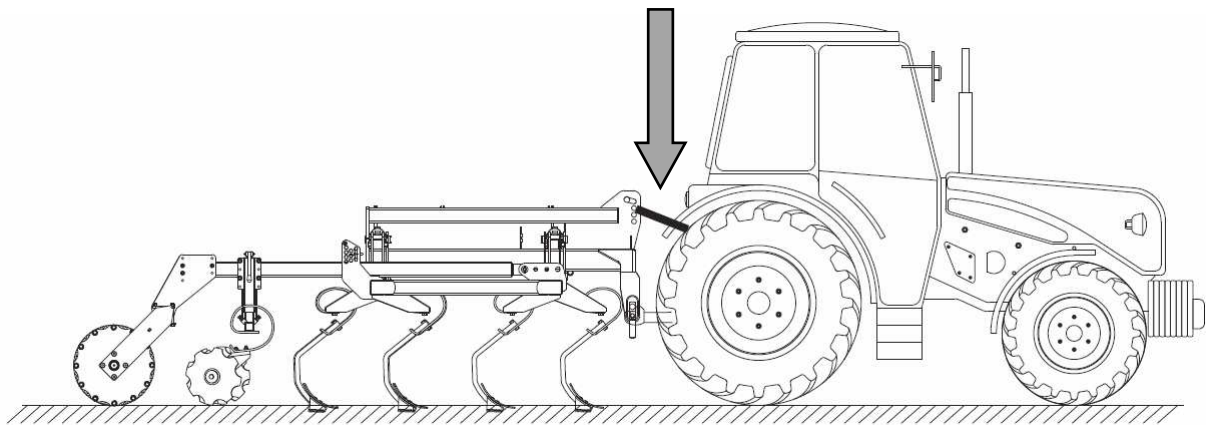
- Unfold the Vibro Flex 7400 (Hydraulic foldable version).
- Park the Vibro Flex 7400 on levelled, solid ground.
- Remove the oil pressure from the connections
- Uncouple the hydraulic hoses from the tractor
- Disconnect the light equipment (Optional)
- Remove top link from the Vibro Flex 7400. (Lift mounted version)
- Release the hooks of the lower linkages.
- Lower the lower linkages until free of the implement hitching points.
- Drive tractor slowly forwards.

Note: Although the trailed version can be parked in folded position, it is commended to park it only unfolded, as this gives a larger stability.

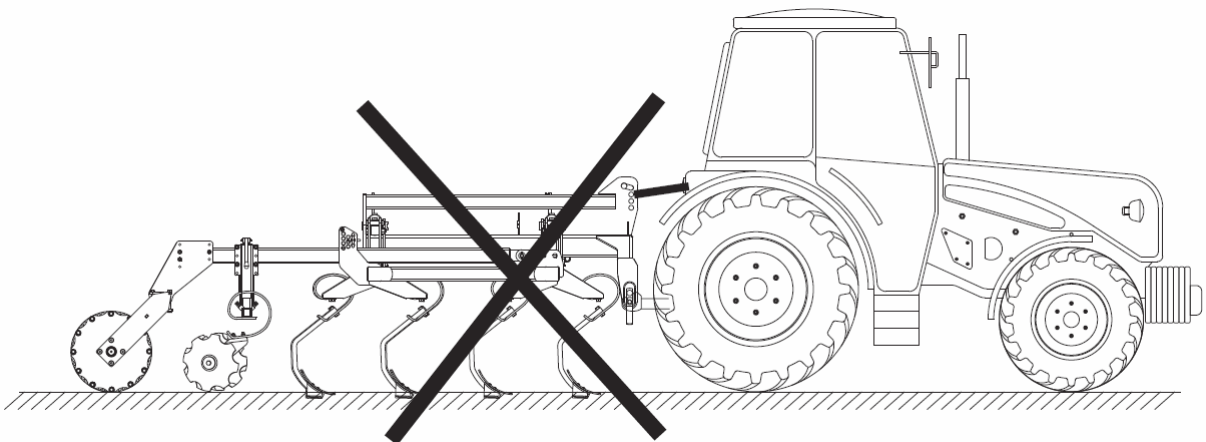
Adjustment of top link (Lift mounted version)

The cultivator frame must stay horizontal during work to make both the front and the rear row of tines work at the same depth. This is adjusted by means of the tractor's top link. A short top link raises the rear row of tines whereas a lengthened top link lowers the rear row of tines.

When the cultivator works in the field the top link must be lower at the tractor end than at the headstock of the cultivator.



The top link must never be horizontal or parallel to the lower linkages as the cultivator will run unsteadily and make the steering of the tractor difficult.

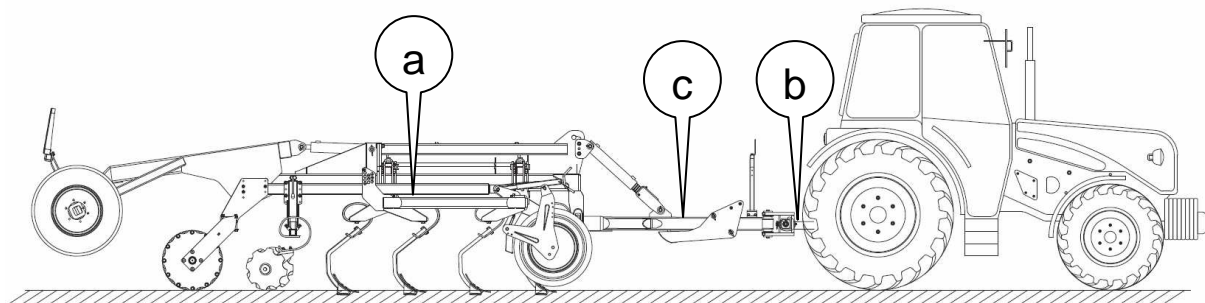


Position of the cultivator frame during work (Trailed version)

The cultivator frame (a) must stay horizontal (parallel to the ground) during work in order to make the front and rear rows of tines work at the same depth. This can be adjusted by means of the tractor's lower links.

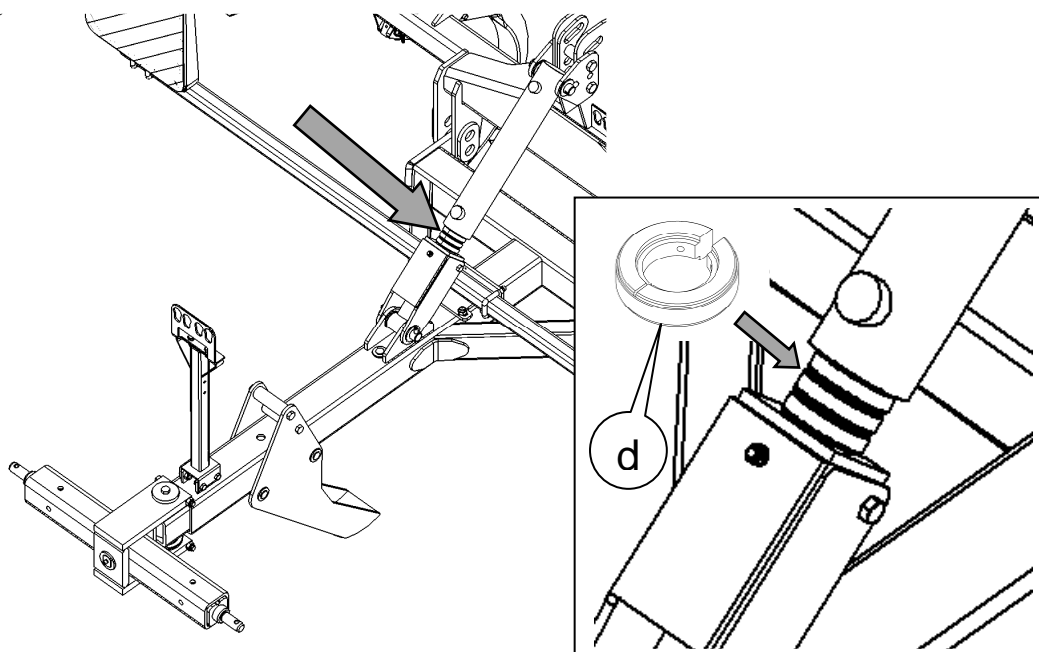
Adjustment of lower links (Trailed version)

When the cultivator is in work the lower links of the tractor (b) must be in a horizontal position or pointing slightly down wards. This depends on the tractor size and the desired working depth.



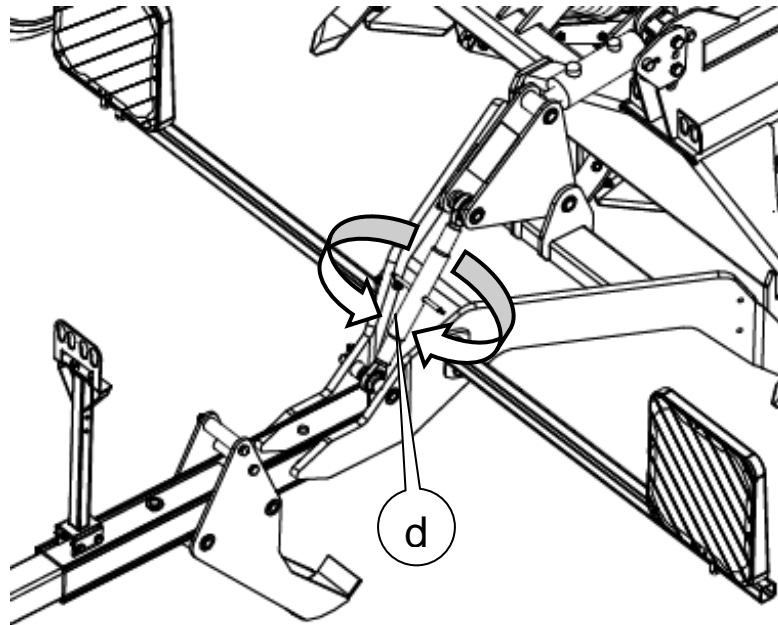
Drawbar position (Trailed version)

The drawbar (c) must be in a horizontal position during work, similar to the lower link arms. The angle of the drawbar can be adjusted by means of the clips (d), which can be inserted on the cylinder rod.



Drawbar position (Trailed version with front discs)

The drawbar (c) must be in a horizontal position during work, similar to the lower link arms. The angle of the drawbar can be adjusted by the spindle (d).



Operation during work

When the correct position of the lower link arms has been found, use only the cultivator hydraulic system to raise and lower the implement during headland turns.

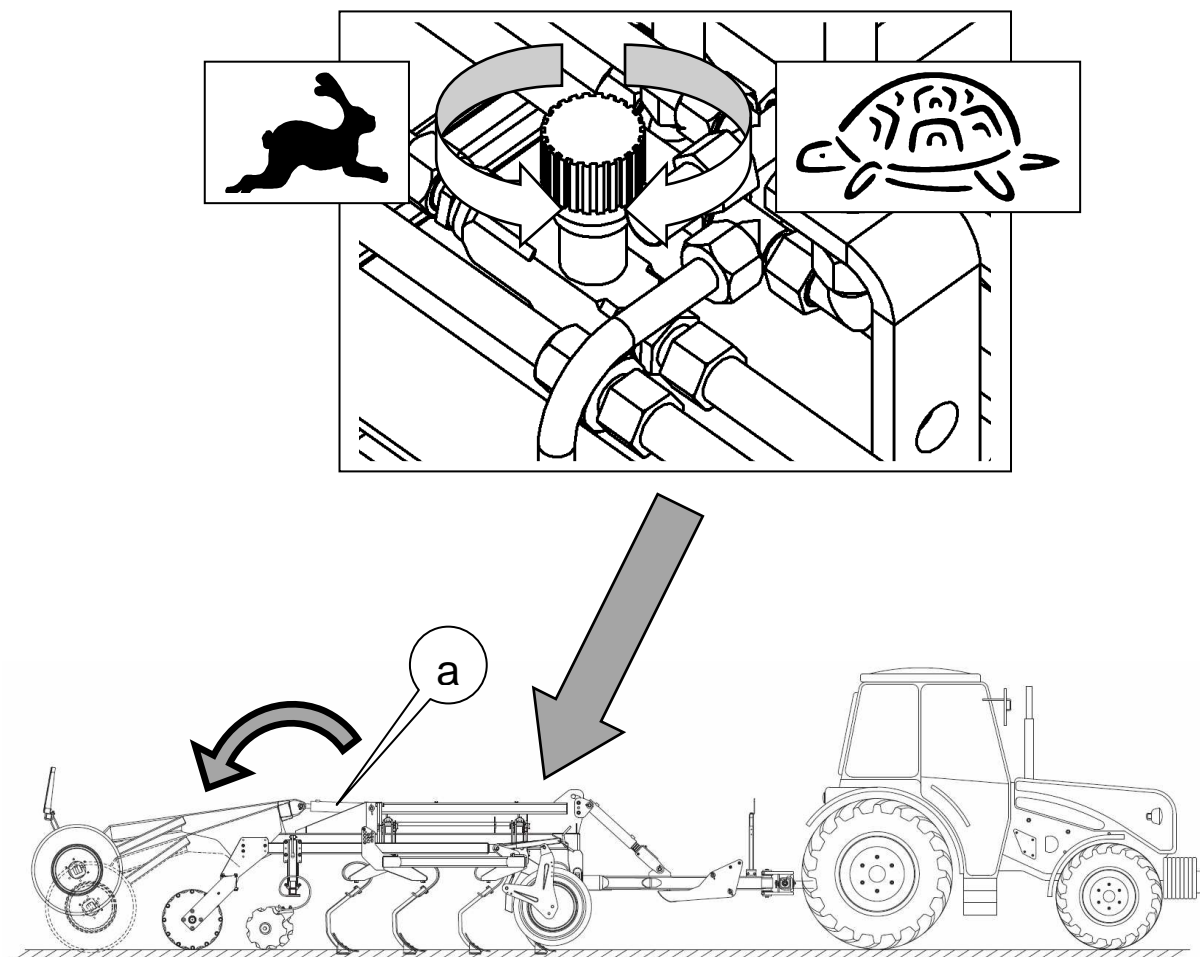
Adjustment of the flow divider valve for lifting (Trailed version)

Trailed cultivators are equipped with a flow divider valve for adjusting the oil flow on the rear hydraulic cylinder (a) for lifting the rear wheels.

The valve must be used to adjust the lift rate of the rear wheels compared to the front end of the cultivator. It is recommended to set the valve in a position which allows the front row of tines to enter the soil before the second and third rows of tines. This ensures better penetration in dry and hard conditions.

Faster operation of the rear cylinder = turn the handle anti-clock-wise

Slower operation of the rear cylinder = turn the handle clock-wise

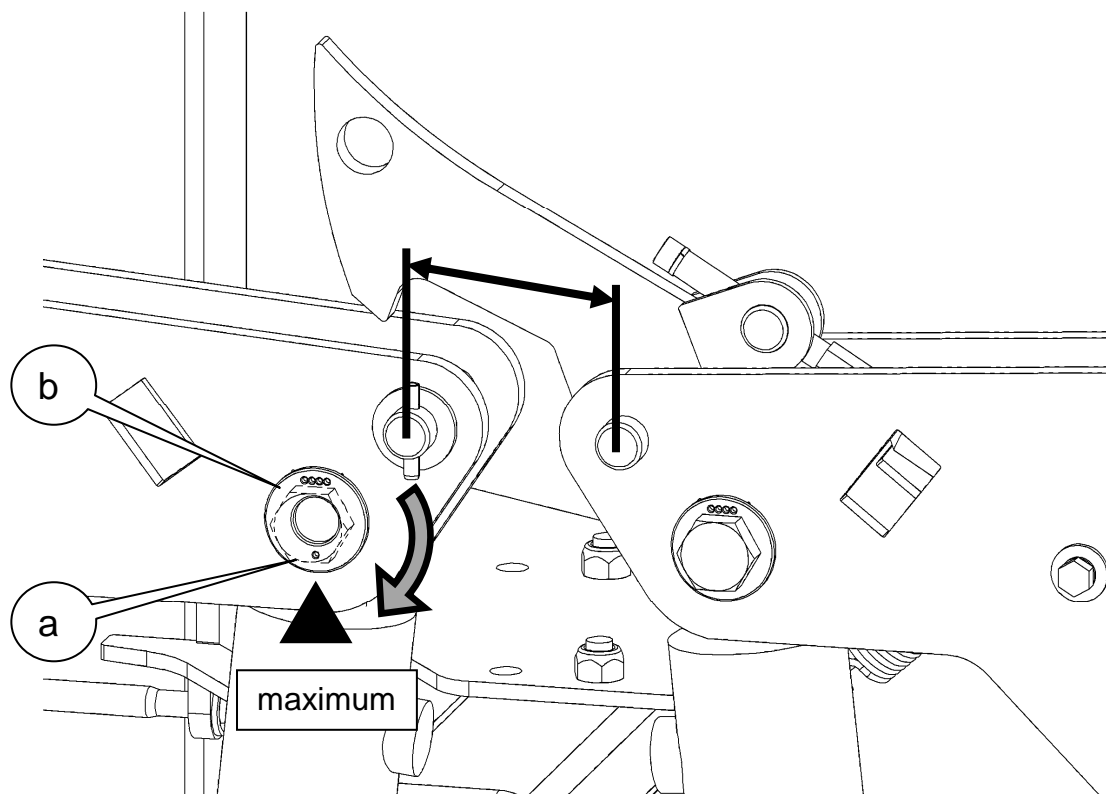


Adjustment of folding (Foldable version only)

If necessary, it is possible to change the geometry of the folding cylinder slightly, to secure the wing lock system makes a firm locking.

Make adjustments only when the machine is completely unfolded.

- Loosen the security bolt (a).
- Move the hexagonal bushes (b) to a different position.
- ● = maximum
- ●●●● = minimum
- Retighten security bolt (a).



- For the bushes from both sides of the same cylinder the markers have to be the equal level.

Folding and unfolding

Perform folding operations only after the machine has been raised.



- People must not remain in the operating range of foldable machine components.

All hydraulic foldable cultivators are equipped with an automatic wing lock system, for easy operation of the security hooks. The wing lock hooks are operated by a small hydraulic cylinder, which is integrated in the hydraulic system for folding.

Folding:

- Lift the machine completely off the ground
- Operate the hydraulics of the folding cylinders and check that both wings fold completely in.
- Check that the security hooks automatically click into place.
- Check that the security hooks have locked the frames in the upright position.

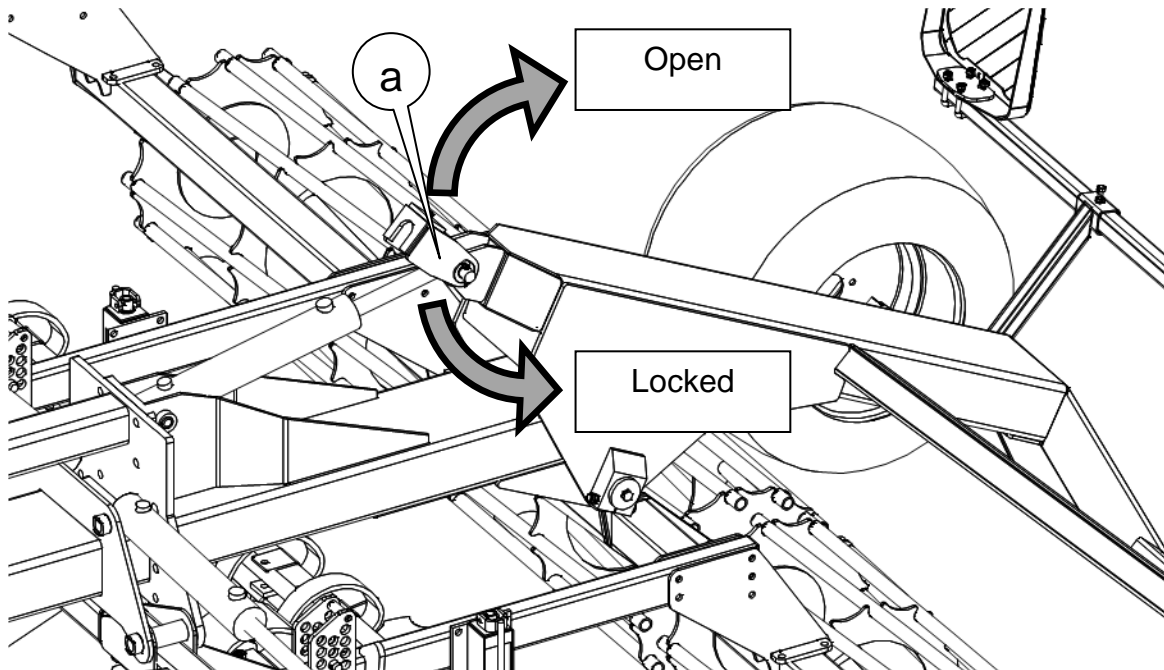
Unfolding:

- Lift the machine completely off the ground.
- Operate the hydraulics of the folding cylinders.
- The security hooks open automatically.
- Slowly unfold both wings and fully extend the wing cylinders .

Preparing for road transport (Lift mounted)

- Lift the implement and fold as described
- Make sure the security hooks have locked the frames in upright position
- To give a lower point of gravity, and thereby a more stable transport, it is recommended to lower the implement to a lower level, keeping sufficient distance to road during transport.
- Secure that the implement is safe, that nothing will fall off, including big lumps of soil, during transport.
- Check any light kits and warning plates that these are working and clean.

Preparing for road transport (Trailed version)



- Lift the implement by using the drawbar cylinder and the cylinder for the wheel system.
- Fold as described
- Close the security lock for the wheel system (a)
- Make sure the wing security hooks have locked the frames in upright position
- Lower the implement by use of the drawbar cylinder and the cylinder for the wheel system.
- Secure that the implement is safe, that nothing will fall off, including big lumps of soil, during transport.
- Check any light kits and warning plates that these are working and clean.

Adjustment and use of the Vibro Flex 7400

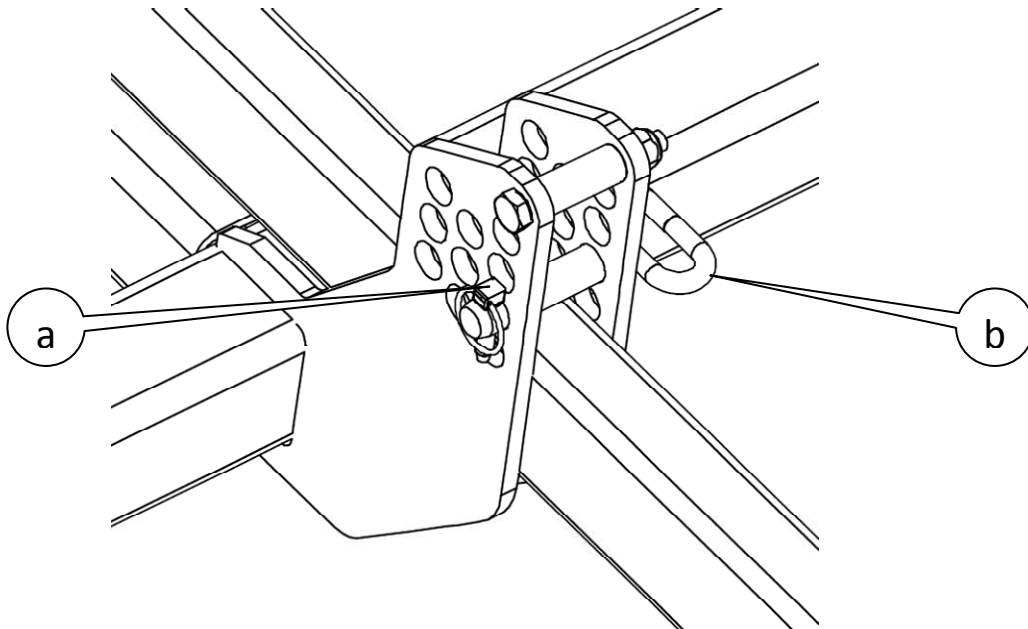
Adjustment of the working depth (Version with roller)

Make adjustments only when the engine of the tractor is switched off. Remove ignition key and apply hand brake!

The shares can work up to about 15 cm depth, depending on the

- Type of soil
- Heaviness of soil
- Working speed

The working depth is set by means of the drilled plate controlling the stopping point of the roller arms.



- Loosen the security clip (a).
- Move the bolt (b) to a different position in the drilled plate
- Lower hole = less working depth
- Higher hole = greater working depth
- Secure the bolt with clip (a).
- Repeat the setting at the other roller arms.



This adjustment sets the working depth of the rear end. Make sure to that top link is adjusted as specified and to adjust to a levelled frame as described.

If trailed version with front discs, it may be necessary to adjust the front discs after adjusting the working depth.

Adjustment of the front wheels

Version with rear roller:

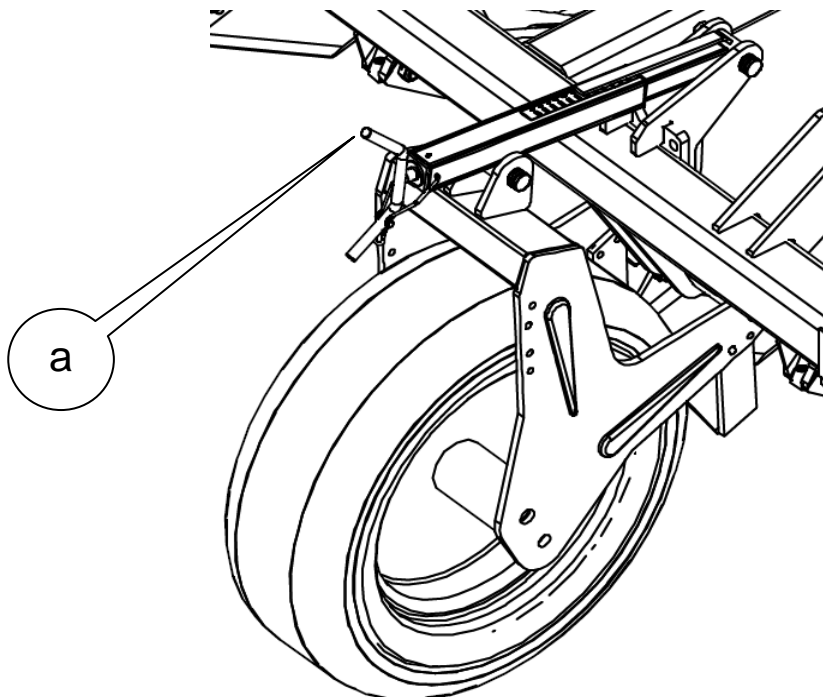
- The front wheels do NOT decide the working depth, but controls the levelling of the entire implement
- The roller must carry the weight of the implement, NOT the front wheels

Version without rear roller:

- The working depth is set by adjusting the front wheels
- The front wheels carries the weight of the implement

Adjustment of the front wheels

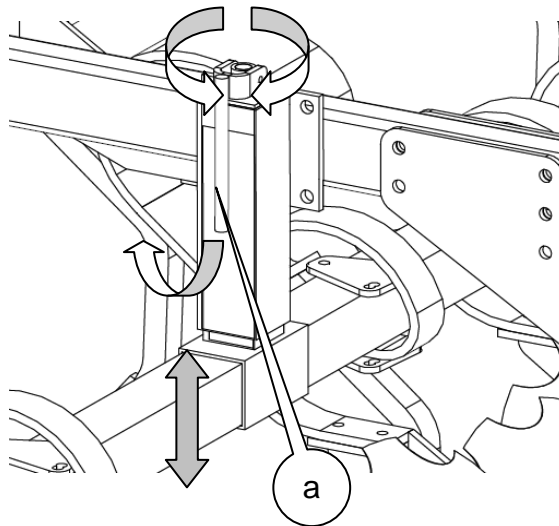
The front wheels are adjusted buy the spindle (a)
Make sure all front wheels are set to equal level



Adjustment of the working depth of the levelling tool

Adjust settings only when the cultivator is completely lowered and the engine of the tractor is switched off!

Remove ignition keys and apply hand brake!

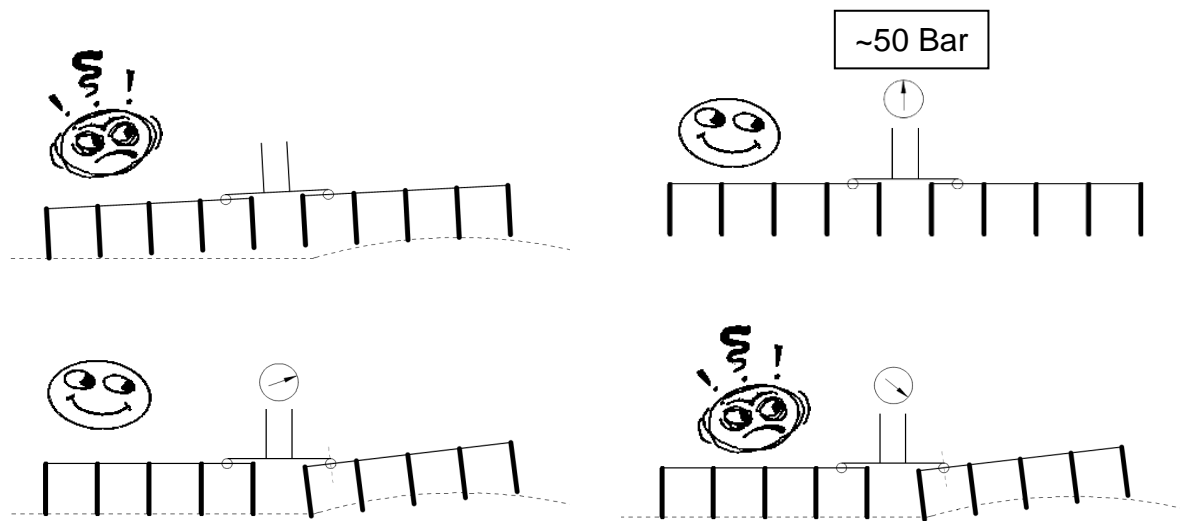


- Fold the handle (a) to horizontal position.
- By turning right or left, the levelling device can be lifted or lowered.
- Read the height on the indicator rod markings.
- Repeat the setting at the other bars.
- Fold the handle (a) down again.

Accumulator pressure for the wings (Foldable version only)

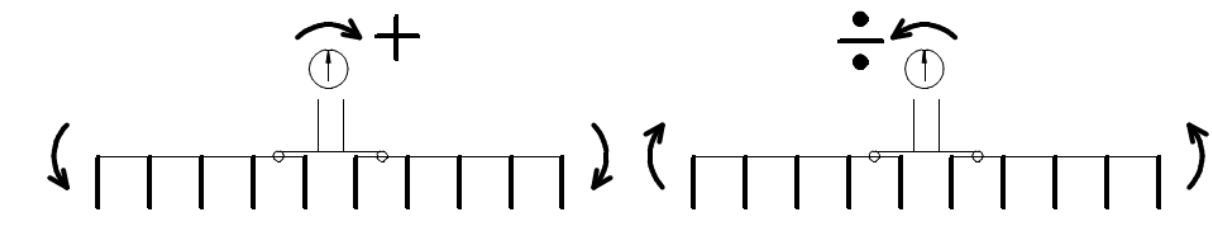
The foldable Vibro Flex 7400 is equipped with a hydraulic accumulator for giving the cultivator best possible contact to the soil also on uneven fields.

Normally the gauge value should be about 50 bar when working in the field.



Setting the accumulator pressure is done by pulling the tractors hydraulic lever that is used to unfold Vibro Flex 7400. When unfolded, the value on the pressure gauge will increase. Setting a value of about 60 bar should result in the correct 50 bars when working in the field.

To reduce the pressure, activate the tractors hydraulic lever used to fold the Vibro Flex 7400, but without folding. Observe how first the pressure goes down and then afterwards the wings starts to fold.



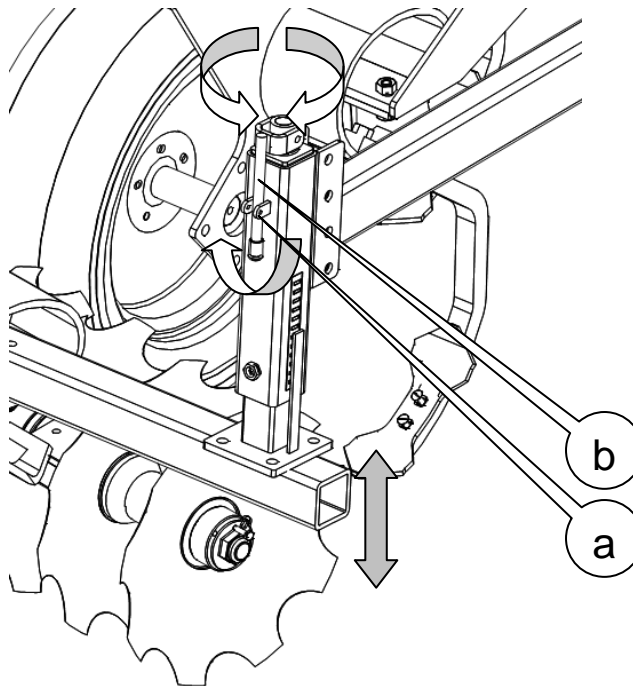
Adjustment the working depth of the front discs (Optional)

The purpose of the front discs is to open the soil, cutting mulch and mixing this into the soil, all to make it easier for the Vibro Flex tines to operate.

**The front discs should not work as deep as the tines, but a guideline is:
The discs work in half the depth of the tines, but not less than 5 cm.**

The front discs are adjusted in the following way:

- Set the working depth as described earlier
- Make sure the frame is horizontal
- Remove the security clip (a)
- Fold the handle (b) to horizontal position.
- By turning right or left, the discs can be lifted or lowered.
- Read the height on the indicator rod markings.
- Repeat the setting at the other bars.
- Fold the handle (b) down again.
- Lock the handle by putting back the clip (a)
- Make sure all spindles are adjusted to equal depth.



Working speed

It is extremely important that the Vibro Flex works at the right speed. At speeds below 6 km/h, the tines cannot vibrate with sufficient force. The recommended speed is 8 – 12 km/h. At this speed the most efficient tine vibrations are achieved –and vibrations form the basis of the Vibro Flex function.

Turning

Never turn the cultivator so sharply that the tines are forced sideways and backwards. It may result in loads far in excess of what the tines are designed for.

Reversing

Never reverse with the tines in the soil. The cultivator must be raised to avoid the tines being overloaded, as this can lead to breakage of the tines.

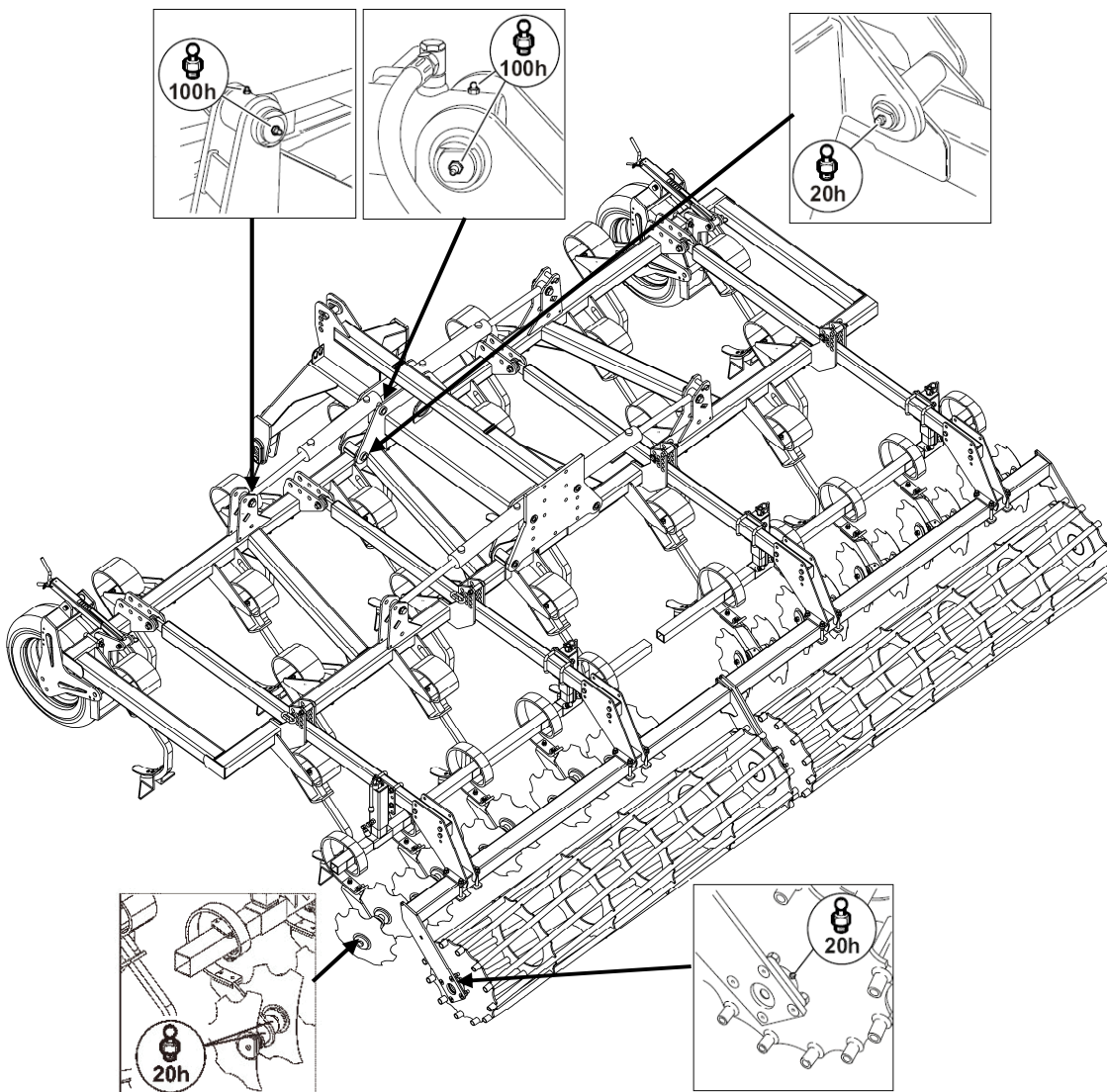
Maintenance

General

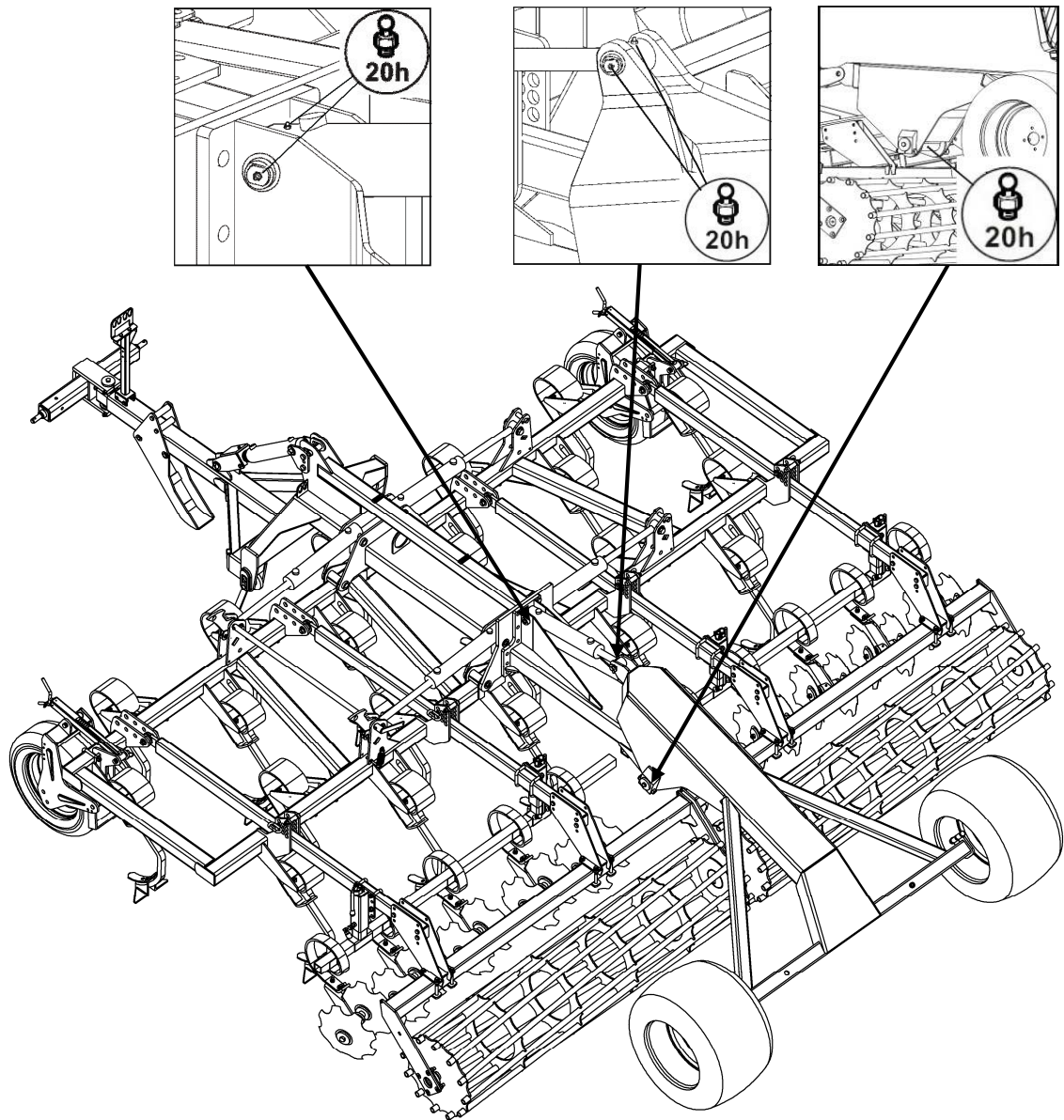
The KONGSKILDE Vibro Flex 7400 needs very little maintenance:

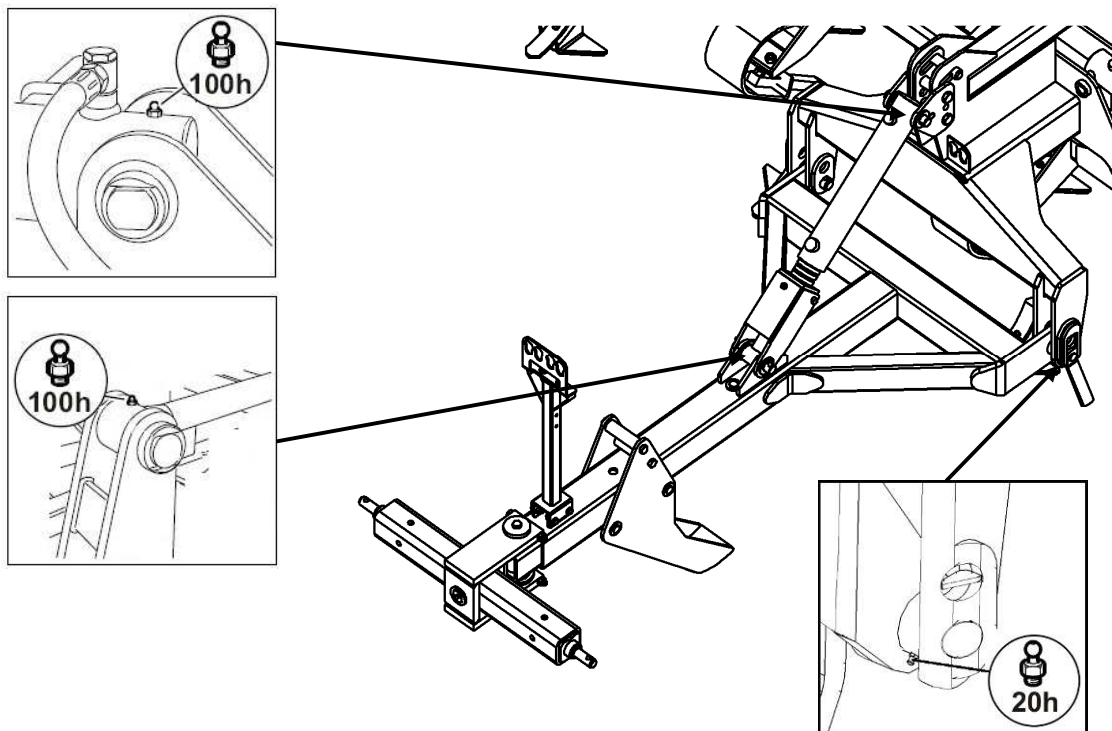
- After usage clean the machine.
- All nuts and bolts must be checked and tightened after initial 10 working hours and then for every 100 hours. Tighten if necessary.
- Grease according to the specifications below.
- Worn and damaged parts must be changed at the earliest possible moment in order to secure correct and safe function.
- Use only original KONGSKILDE wearing and spare parts.

Lubrication

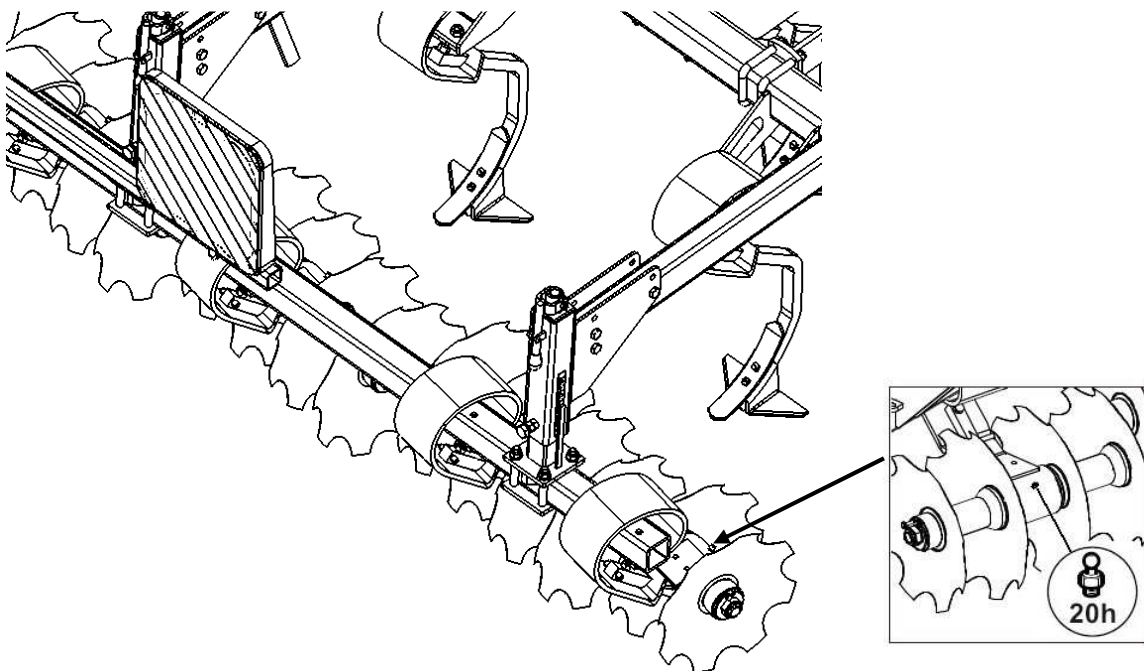


Additional lubrication of trailed version:

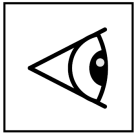




Additional lubrication of front discs (Optional equipment)



Hydraulic pipes, hoses and couplings.



Before every use of the Vibro Flex 7400, check the hydraulic pipes, hoses and connections. If there is any sign of breakage emerging, make sure to change the parts in question.



Note, that if the hydraulic fails during folding or unfolding (Foldable version), then the wings may immediately unfold.

Tyre pressure

Rear wheels (Trailed version) 2,8 bar / 40 psi.

Front wheels 2,8 bar / 40 psi.

Warehousing and storage



For longer operation pauses, store the machine in safe place-not accessible for children.



Prior to longer operation pauses (winter) and prior to first operation all lubrication points must be lubricated and pins and adjusting devices must be greased.



During longer operation pauses exposed surfaces of scrapers and hollow discs must be greased in order to prevent the formation of rust. Only use grease, which does not have any polluting impact on the environment.



Order necessary spare parts and wearing parts before the beginning of storage period to avoid delays with the new season starting.

