

CD1001

Operating manual

Translation of original manual

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Machine identification

In order for your dealer to assist you as efficiently as possible, you will need to provide some information about your machine. Please enter the details here:

Designation	CD1001
Operating width	
Weight	
Machine number	
Accessories	
Address of supplier	
Address of the manufacturer	Kverneland Group Les Landes-Genusson S.A.S. 9 Rue du Poitou F-85130 LES LANDES-GENUSSON Tel. +33 (0)2 51 64 13 00

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Onboard documents

The machine user manual is stored in the waterproof tubular document box fitted on the machine, generally near the coupling point.

After reading the document, put it back in the box.

This user manual is also available via
https://www.kvgportal.com/publicquest/

Other applicable documents

The machine documentation consists of this user manual, together with other documents:

Name	Description
Spare parts catalogue	Complete list of all spare parts available in the KVERNELAND GROUP after-sales service network. Online catalogue corresponding to the machine, available via **https://www.kvgportal.com/publicquest/**

Introduction

Who should read this operating manual?

This user manual is aimed at farmers and persons trained and qualified in activities in the field of agriculture and who have received training in the use of this machine.

Safety note for the user
Familiarise yourself with the contents of this user manual before starting to use it or climbing on the machine. User safety and quality of work depend on it.

Note for the manager:
Personnel should be given regular training in the use of this machine . No person, who is not trained or authorised, should use this machine.

Instructions

The dealer provides the user with instructions relating to the use and maintenance of the machine.

Meaning of symbols

A variety of symbols is used to provide clarity. Their meaning is as follows:

- A dot is followed by a list
- ▸ A triangle precedes operations to be carried out.
- → An arrow refers back to other passages in the text.

We have also used pictograms to help you find instructions more quickly:

NOTE The term “Note” indicates advice and comments on use.



A key indicates advice on fitting or adjustment work.



A warning triangle indicates important safety information. Failure to observe these safety instructions can result in:

- Machine operating faults;
- Damage to the machine;
- Injuries or accidents.



This symbol indicates the presence of a message of an informative nature.



This symbol indicates examples to assist with comprehension.

[+] A plus sign in square brackets indicates optional equipment.

For user safety

This section contains general safety information. The various chapters in this user manual include specific safety instructions, among other things. Follow the safety instructions, in order to:

- ensure your own safety,
- ensure the safety of others,
- ensure the safety of the machine.

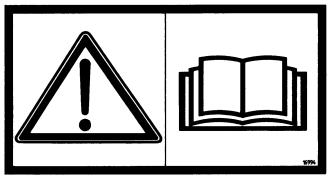
When handling agricultural machines, failure to follow instructions can result in multiple hazards. Therefore, always take care when working and never rush.

Note for the manager:
As required by law, you should regularly inform those working on the machine of the existence of safety instructions.

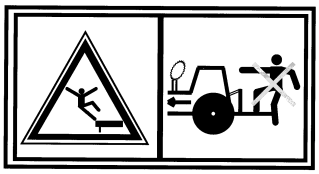
Safety symbols

To ensure user safety, stickers are applied to the machine. Do not remove these stickers. If they are illegible or no longer properly stuck, order new ones and fit them in the corresponding positions.

Meaning of symbols



Read and follow the user manual and the safety instructions before switching on the machine or doing work on it.



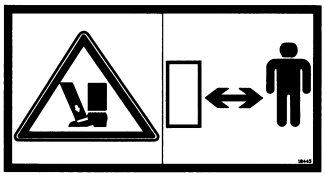
Carrying passengers on the moving machine is prohibited (during transport and when working).



There is a danger of hands being crushed in an area where there are likely to be moving parts. Keep your hands away from these areas.



Danger of crushing by an articulated part of the machine. Install the safety devices provided and/or check the working order of the automatic safety devices before entering a hazardous area.

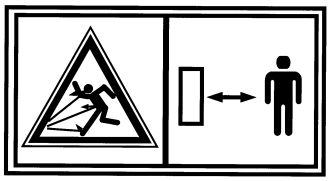


Risk of the feet being crushed during adjustment of the machine. Keep a safe distance from this part of the machine.

Security



Presence of cutting and contusive edges. Before you start to make any adjustments, make sure that all the parts of the machine are immobile. Make sure that you do not bump against the machine.



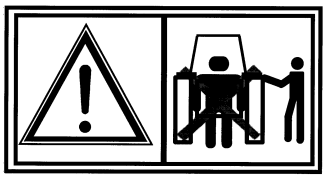
Risk of flying stones or other items. Keep a safe distance from this part of the machine.



Risk of foot amputation caused by a rotating toothed tool. Keep a safe distance from this part of the machine.



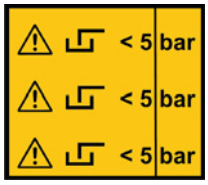
Risk of falling on tools with rotating rollers. Keep a safe distance from this part of the machine.



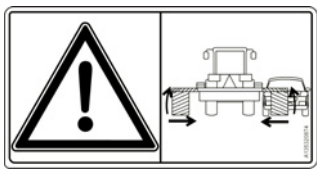
Risk of crushing from the tractor's lower lift arms during hitching/ unhitching operations. Keep a safe distance from this part of the machine.



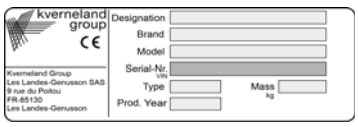
The tractor's hydraulic pressure must not exceed 210 bars (*3045 PSI*). Check the hydrayulic pressure.



Applies to machines fitted with an open return line. Indicates a hydraulic connection that cannot accept pressure in excess of 5 bar. There is a risk of destruction to hydraulic components.



Risk of collision due to excessive width. Make sure that all the retractable or folding elements are blocked in transport position.



EC identification plate certifying that the machine complies with the "machinery" directive (directive 2006/42/EC) and with the national legislation transposing it.

Safety rules

General recommendations

Prior to switching on, check that the machine complies with safety requirements and particularly that protective and safety devices (for example moving guards, cover, hazard stickers, etc.) are in place and functional.

Before you start work, familiarise yourself with all the equipment, controls and functions on your machine. Once you have started, it is too late.

If an operating incident occurs:

- Shut down the machine immediately.
- Identify the cause of the incident.
- Make repairs before continuing.

No repair operations should be carried out on the machine unless:

- all measures have been taken to prevent unintentional start-up (uncouple the power take-off and/or hydraulic hoses, tractor engine switched off, for example).
- chocks have been placed under the frame to prevent it falling,
- the vehicle has been immobilised using the appropriate systems.

Before leaving the tractor:

- Put the machine on the ground.
- Activate the hand brake.
- Remove the ignition key.

No one should stand between the tractor and the machine unless the vehicle is immobilised (hand brake, chocks, etc.), the engine is switched off and the ignition key removed.

Hitching

Follow the coupling instructions carefully:

- when manoeuvring, select the tractor's lowest possible forward speed,
- no one should stand between the tractor and the machine when manoeuvring the tractor or during lifting operations,
- the type of tractor hitch should be adapted to suit the machine's hitch,
- when hitching, position the tractor's hydraulic controls such that the hitch does not move during handling,
- the hitch must be locked and should not come detached by itself in the lower position.

The weight distribution is altered when the machine is hitched. The maximum load per vehicle axle (see manufacturer's information) should not be exceeded. If there is insufficient loading on the front axle, extra weights must be installed, so that control over the vehicle's steering is retained.

When hitching or unhitching the tool, remember to position all supports correctly (for machines equipped with such) to prevent machine imbalance.

Transport

Follow the highway code when travelling on public roads.

Pay attention to the machine's off-centre weight on bends, and to load transfer. Adjust your forward speed accordingly.

During transport, lock the lower lift arms to prevent any sideways movement.

No movement should be made outside an agricultural field or close to people, until folding extensions or folding or tipping accessories (where they exist) have been locked in the transport position.

In transit, the hydraulic hoses of the folding jacks must be disconnected to prevent accidental unfolding.

For machines with a transport axle, secure the locking system in place prior to travelling on the road.

During travel, the lift control must be positioned, so as to prevent the tool from being accidentally lowered.

Check that your hitch meets local road safety requirements. Where applicable, it is your responsibility to install and test transport equipment (for example lighting, signals, guards, etc.) corresponding to the characteristics of your tractor-machine assembly and the applicable statutory requirements. Make sure that the dimensions of the machine comply with the highway code.

Carrying persons on the working tool or during transport is prohibited.

For all movements, brakes must be coupled (no single wheel braking).

Use

No one should enter the folding extensions area or folding or tipping (where fitted) accessories movement area, until they have been locked by the system provided for this purpose. This system can be a chain, pin, rigid rod or a controlled double valve.

Before starting up:

- Ensure that there is no one in the immediate vicinity (children, etc.).
- Make certain that you have sufficient visibility.

Any intervention on the machine is prohibited when the tractor is moving. Keep a safe distance of at least 5 metres from the moving machine (forward movement, movement of any part of the machine, movement of the tractor lift).

For equipment with lateral deflectors or any other accessory with vertical adjustment, it is recommended that you maintain a safe distance, in case the equipment accidentally falls during adjustment. Wearing safety shoes is recommended.

Serious injury - even death - can result from contact with power lines. Take all necessary precautions to avoid any contact, if you are moving or using the machine close to a power line.

In the event of use on uneven terrain, the tractor can deviate from its path if it encounters a hole, ditch or other irregularity.

Allow only one person, the operator, on the tractor when it and the tool are in operation.

Sustains

No work should take place within the turning circle of the tractor/tool assembly, unless the brakes or immobilisation system have been engaged.

When changing parts on the machine, you should pay attention to all parts with sharp edges or corners. We recommend that safety equipment is worn (hard hat, safety shoes, gloves, etc.)

For machines fitted with folding extensions, you must follow the instructions in this user manual for assembly, disassembly and adjustment.

It is strictly forbidden to disassemble springs used as safety devices for working parts: This operation must only be performed by specialists.

Regularly check that bolts are tight, tyre pressures are correct and the hydraulic circuit is in good condition.

Before doing any welding, disconnect the electrical boxes (where present) and disconnect the tractor's alternator and battery, if the tractor is hitched.

Never direct a high pressure cleaner jet straight at bearings, the hydraulics, electrical boxes or other sensitive machine components (you could damage them). Take care with splashback from the jet on certain surfaces.

Unhitching

There is a serious risk of injury when unhitching the machine from the tractor! Therefore :

- Immobilise the tractor,
- never position yourself between the tractor and the machine during unhitching,
- operate the tractor’s hydraulic lift slowly and carefully,
- make sure that the machine is on flat and sufficiently stable ground.
- Connect or disconnect hydraulic tubes, only if there is no pressure in the tractor’s and machine’s hydraulic system.

Hydraulic installation

The hydraulic system is pressurised.

When connecting the hydraulic system, make sure that the tractor system and tool are not pressurised.

Connect the hydraulic system, following the instructions in the user manual. Colour code sockets, so as to prevent incorrect connections (inverting functions could cause an accident).

Before doing any work on the hydraulic system, lock the hydraulically controlled folding extensions in the rest position, bleed out the pressure and switch off the tractor engine.

Other instructions

Follow instructions
In addition to the instructions listed above, always obey:

- Accident prevention regulations
- generally recognised safety regulations, occupational health requirements and road traffic regulations,
- the notes that can be found in the user manual,
- instructions for use, maintenance and servicing.

Field of application

This machine is considered to be interchangeable equipment within the meaning of European directive **2006/42/CE** and is considered to be agricultural equipment within the meaning of directive **ASABE S390**.

This chapter contains general information about your machine as well as information concerning the following points:

- Usage clause.
- Characteristics.
- Description of machine components.
- Technical data.

Usage clause

This machine has been designed solely for normal agricultural use, i.e. for cultivating farmland. Any other use or misuse, for example, transport, land clearing or transmission of power to another machine is considered to be contrary to the intended use.
The manufacturer and specialist dealer decline any responsibility for damage caused by use other than normal use. **The user assumes all risks**.

Compliance with the conditions of use includes compliance with the manufacturer's user manual.

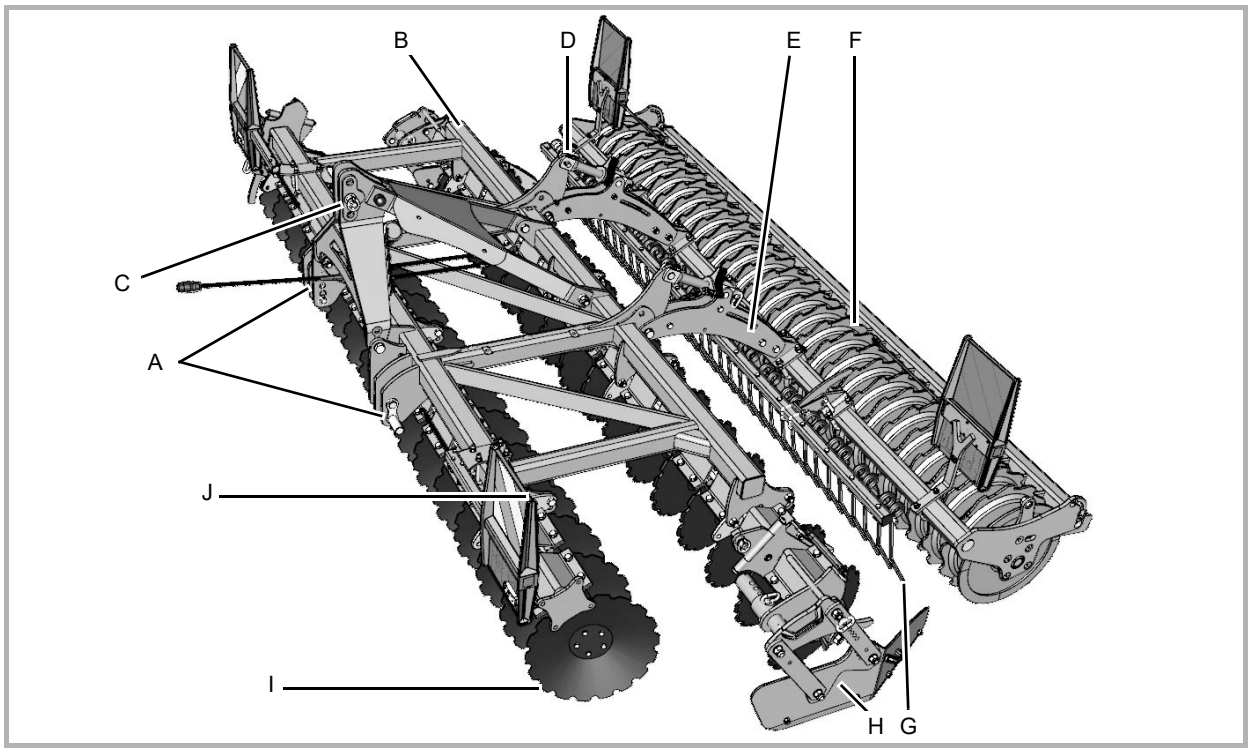
The safety instructions (detailed above) and rules regarding general safety, occupational health and road traffic must also be followed.

Modifications to the tool made by the customer or the use of spare parts or accessories that are not original parts will void the manufacturer's liability for all damage resulting from the modification.

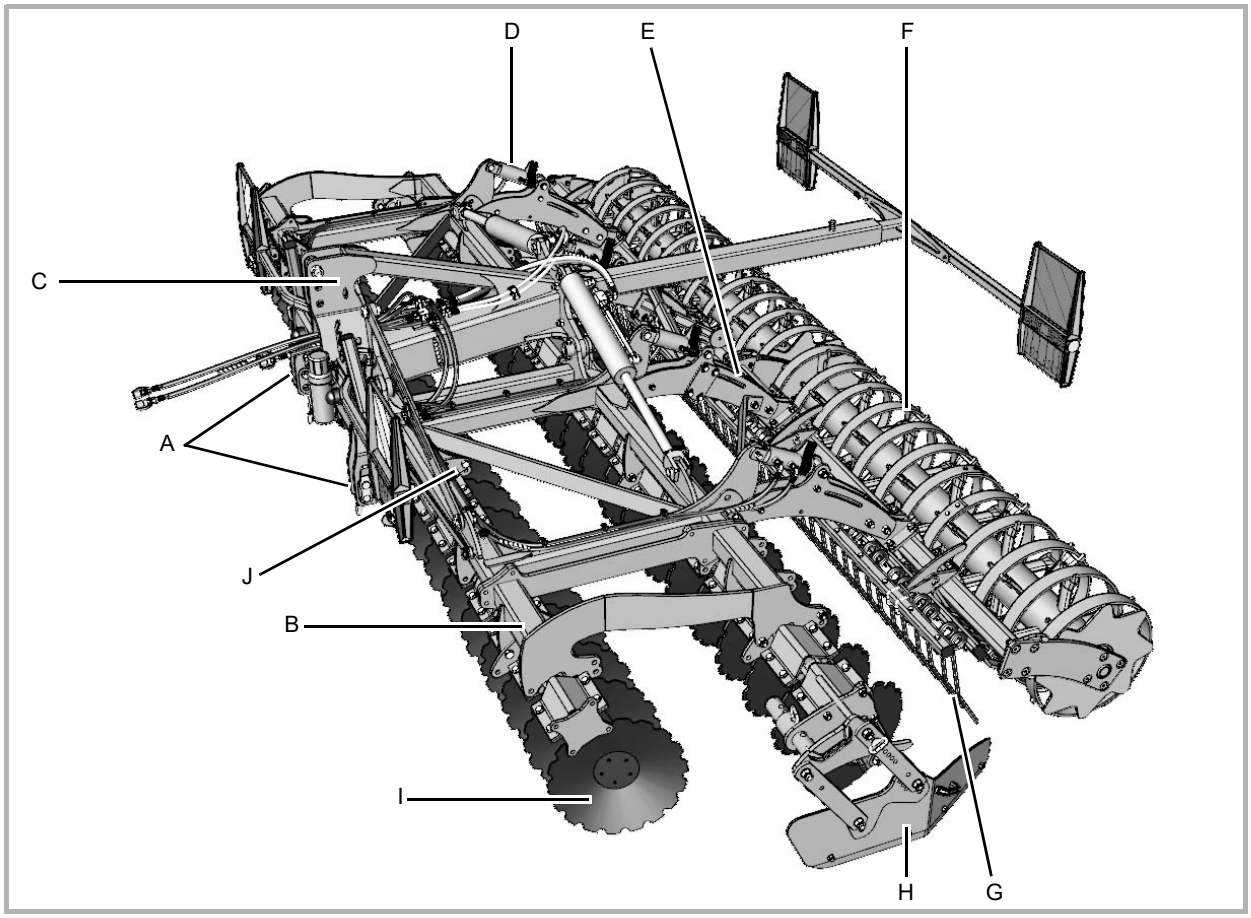
The manufacturer cannot be held liable for damage resulting from incorrect settings, choice of equipment, seed, fertilizer, treatments or farming strategy or for any other damage not directly related to the machine.

General Description

Rigid



Folding



Designation	Sub-assemblies
A	Coupling of the lower arms
B	Chassis
C	Coupling of the upper link bar
D	Depth control
E	Roller arm
F	V-press
G	Finger harrow
H	Lateral deflector
I	Row of discs
J	Overlapping adjustment

Technical specifications

Rigid machines

	CD1201	CD1251	CD1301	CD1351	CD1401
Working width (m/ft)	2.00 *(6'6")*	2.50 *(8'2")*	3.00 *(9'10")*	3.50 *(11'6")*	4.00 *(13'1")*
Transportation width (m/ft)					
Dimension of discs	Conical, notched discs Ø520 mm *(20 1/2")* thickness 5 *(13/64")* standard Ø520 mm *(20 1/2")* thickness 5 *(13/64")* large notches [+]				
	Edge star discs Ø520 mm *(20 1/2")* thickness 8 *(5/16")* 1 pair per machine [+]				
Number of discs	16	20	24	28	32
Gap between discs (mm/*ft*)	250 *9 41/64"*				
Type of safety device	Disc installed on independent arm with elastomer safety device				
Disc hub	Angular contact ball bearing with 5-lip seal				
Depth control	Mechanical or hydraulic roller adjustment using plastic chocks				
Working depth (cm/*ft*)	From 2 *(1")* to 10 *(3 7/8")*				
Available rollers	Cage roller Ø550 mm *(22 1/2")* Actipack Ø560 mm *(21 1/4")* Actiring Ø540 mm *(21 1/4")* Double cage roller D400 mm *(15 3/4")* Actiflex Ø580 mm *(23 1/2")* Actipress Solo Ø565 mm *(23 1/2")* Actipress Twin Ø565 mm *(21 1/4") [Except 4M]*				
Min./max. power (hp/*kW*)	50 / 100 *37 / 75*	55 / 120 *41 / 89*	70 / 150 *52 / 112*	90 / 180 *67 / 134*	110 / 200 *82 / 149*
Speed range in use (km/h / *mph*)	8 to 20 *5 to 12*				
Light signal kit [+]	Option				
Coupling category (upper link)	Cat II / III				
Coupling category (on lifting arm)	Cat II		Cat II / III		
Weight with all options and Actipack roller (approximate weight for the heaviest machine) (kg/*lbs*)	1,349 *2,974*	1,570 *3,461*	1,785 *3,935*	2,100 *4,630*	2,419 *5,333*

Folding machines

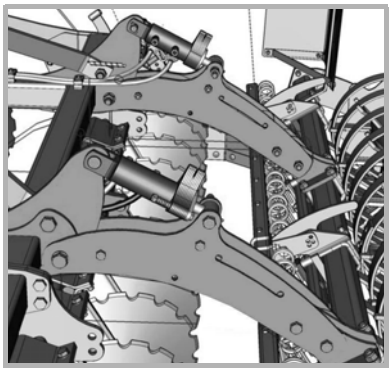
	CD1401F	CD1501F	CD1601F
Working width (m/ft)	4.00 *(13'1")*	5.00 *(16'5")*	6.00 *(19'8")*
Transportation width (m/ft)	2.45 *(8'3")*		
Dimension of discs	Conical, notched discs Ø520 mm *(20 1/2")* thickness 5 *(13/64")* standard Ø520 mm *(20 1/2")* thickness 5 *(13/64")* large notches [+]		
	Edge star discs Ø520 mm *(20 1/2")* thickness 8 *(5/16")* 1 pair per machine [+		
Number of discs	32	40	48
Gap between discs (mm/*ft*)	250 *9 27/32"*		
Type of safety device	Disc installed on independent arm with elastomer safety device		
Disc hub	Angular contact ball bearing with 5-lip seal		
Depth control	Mechanical or hydraulic roller adjustment using plastic chocks		
Working depth (cm/*ft*)	From 2 *(1")* to 10 *(3 7/8")*		
Available rollers	Cage roller Ø550 mm *(22 1/2")* Actipack Ø560 mm *(21 1/4")* Actiring Ø540 mm *(21 1/4")* Double cage roller Ø400 mm *(15 3/4")* Actiflex Ø580 mm *(23 1/2")* Actipress Solo Ø565 mm *(23 1/2")* Actipress Twin Ø565 mm *(21 1/4") [Except 6M]*		
Min./max. power (hp/*kW*)	110 / 200 *82 / 149*	130 / 250 *97 / 186*	150 / 300 *112 / 223*
Speed range in use (km/h / *mph*)	8 to 20 *5 to 12*		
Light signal kit [+]	Option		
Coupling category (upper link)	Cat III		
Coupling category (on lifting arm)	Cat III		
Weight with all options and Actipack roller (approximate weight for the heaviest machine) (kg/*lbs*)	2,845 *6,272*	3,369 *7,427*	3,917 *8,635*

Variants of rear accessories



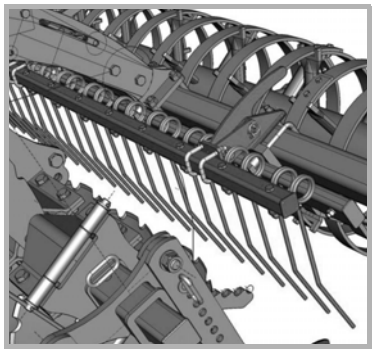
Roller arm with manual depth control

- Adjusts the working depth of the machine using plastic chocks.
- Allows load transfer to the rear of the machine, thus improving penetration.



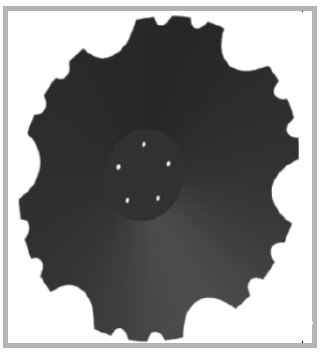
Roller arm with hydraulic depth control

- Arm movement by hydraulic cylinders.
- Adjusts the working depth of the machine using plastic chocks.
- Allows load transfer to the rear of the machine, thus improving penetration.



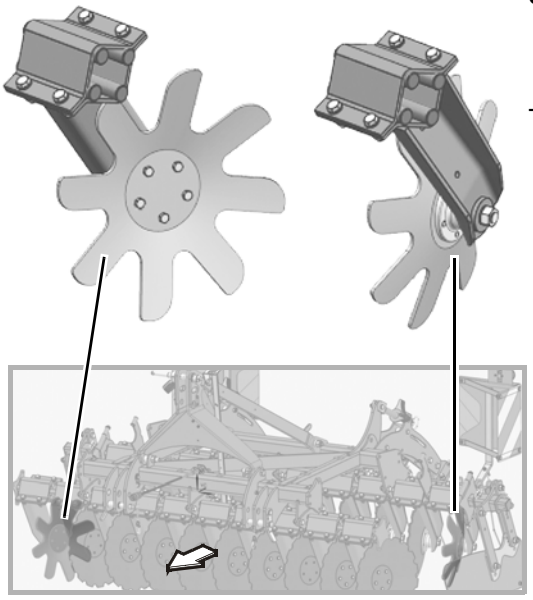
Finger harrow

- Breaks up the soil entering the roller.
- Allows fine soil to stay on the surface for improved lifting of weeds.



Conical, notched discs - Large notches [+]

- Diameter 520 mm *(20 1/2").*
- Thickness 5 mm *(13/64").*
- Offers a good compromise between cutting quality and good drive under wet or sticky conditions (soils containing more than 20 % clay).



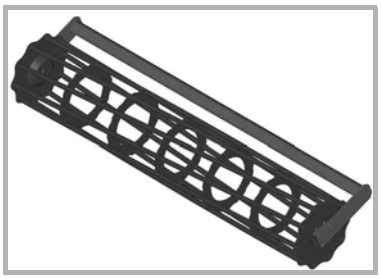
Star discs [+]

- Diameter 520 mm *(20 1/2”).*
- Thickness 8 mm *(5/16”).*

To improve the levelling quality on the edges:

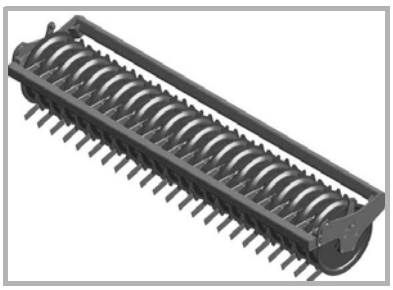
- Install one pair per machine:
  - install the right disc on the front right arm,
  - install the left disc on the rear left arm,

Roller variants



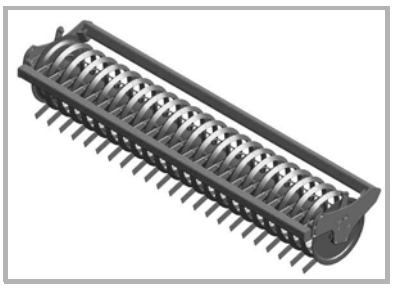
Cage roller diameter 550 mm (*21 1/2”*)

- Compaction of light to medium soils.



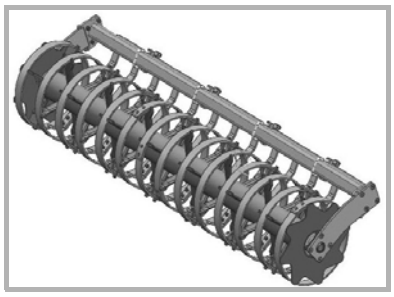
Actipack roller diameter 560 mm (*22”*)

- Compaction and crumbing of all types of soil.
- This roller is also suitable for clay and sticky soils.



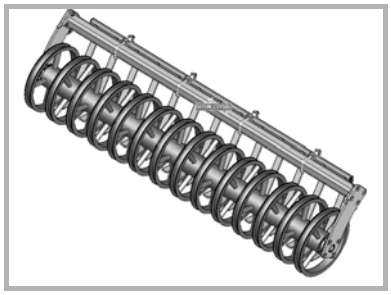
Actiring roller diameter 540 mm (*21 1/4”*)

- Compaction and crumbing of all types of soil (but limited in excessively stony conditions).



Actiflex roller diameter 580 mm (*22 3/4"*)

- Compaction and crumbing of all types of soil.



Actipress Solo roller diameter 565 mm [+] (22 *1/4"*)

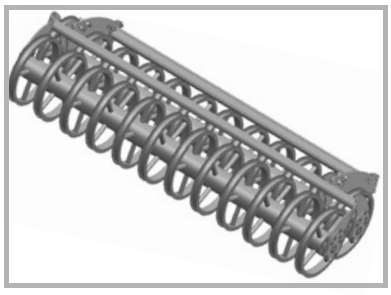
- Good drive and good lift in light soils.
- This roller is also suitable for ground with an irregular surface and stony conditions.
- With or without levelling device composed of standard or carbide skids mounted on blade.



Double cage roller

- Crumbing, levelling and depth control for all types of soil.

On long chassis only.



Actipress Twin crossing roller diameter 565 mm (*22 1/4"*)

- Crumbing, levelling, consolidation and improved depth control for all types of soil.
- This roller is also suitable for ground with an irregular surface and stony conditions.

On long chassis only.

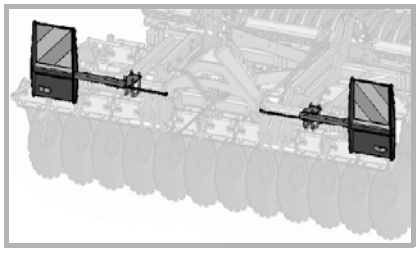
Other accessories

Signalling and lighting [+]

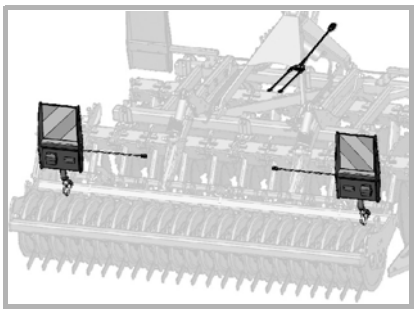
All lights, reflectors, licence plates and signalling / warning panels must be perfectly visible.
If this is not possible, you must install lights and a licence plate on the machine.

If necessary, contact your dealer to order a new lighting kit.

Rigid machines

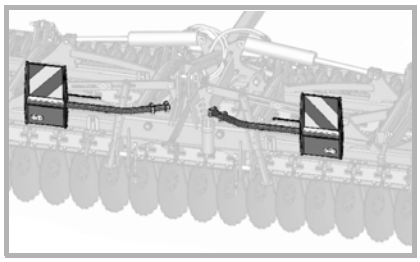


- Front

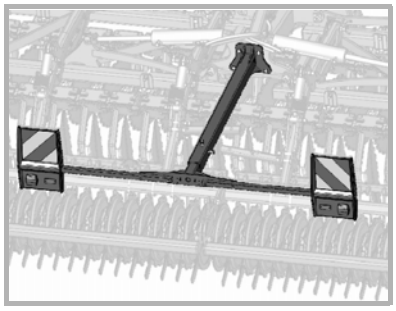


- Rear

Folding machines

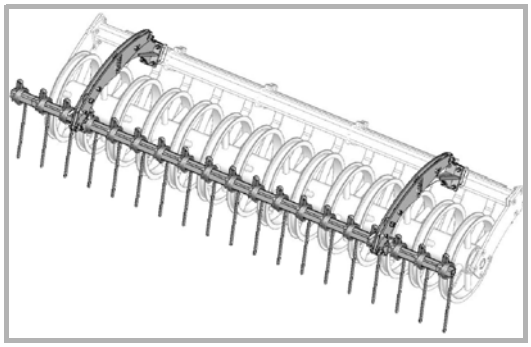


- Front



- Rear

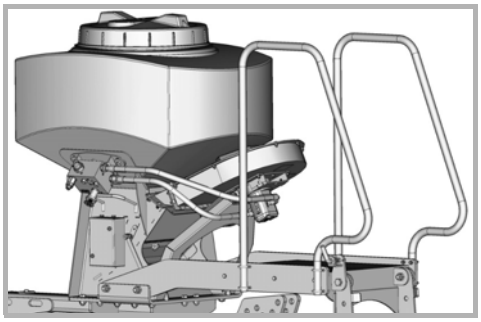
Roller accessories



Finger harrow:

- Installed behind the rollers.
- A short version for the single rollers and a long version for the double rollers.
- Used to:
  - Prevent growth of weeds
  - Pull the surface roots.

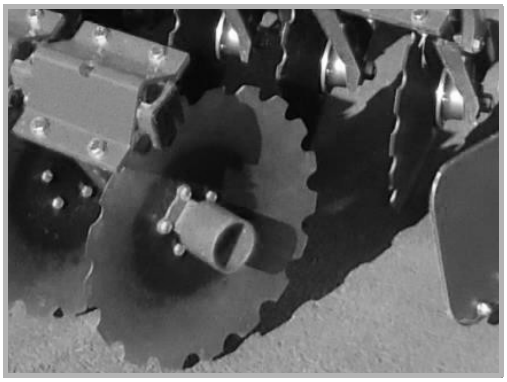
Seeder for vegetation cover



- Setting up of vegetation cover.
- Broadcast seeding.

For more information on safety conditions, assembly, use and maintenance of the seeder, please refer to its user manual.

Unit counter



- Enables the surface worked to be recorded.

Unhitching



WARNING

High risk of injury when uncoupling the machine

To prevent any danger:

- Immobilise the tractor.
- Never position yourself between the tractor and the machine during uncoupling.
- Operate the tractor hydraulic lift slowly and carefully.
- Make sure that the machine is on flat and sufficiently stable ground.
- Connect or disconnect the hydraulic connectors to/from the tractor hydraulic system only when the tractor/machine assembly is no longer pressurised.

Hydraulic system



The hydraulic system is pressurised.

Before any intervention on the hydraulic system:

- Block the folding extensions hydraulically controlled accessories in their rest position.
- Reduce the pressure.
- Stop the tractor engine.

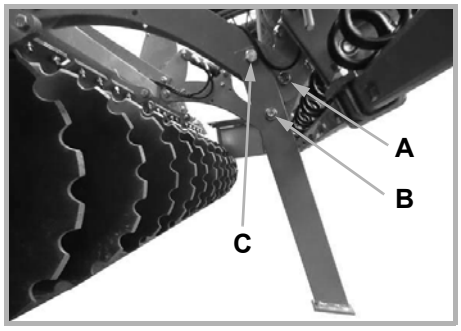
When connecting the hydraulic system:

- Ensure that the tractor/machine assembly are not pressurised.
- Connect the hydraulic system, following the instructions in the user manual.
- Colour code sockets, so as to prevent incorrect connections (inverting functions could cause an accident).

Checks upon receipt

The machine may be delivered partly disassembled.
In this case, carefully follow the assembly instructions contained in the assembly handbook.

Repositioning the roller

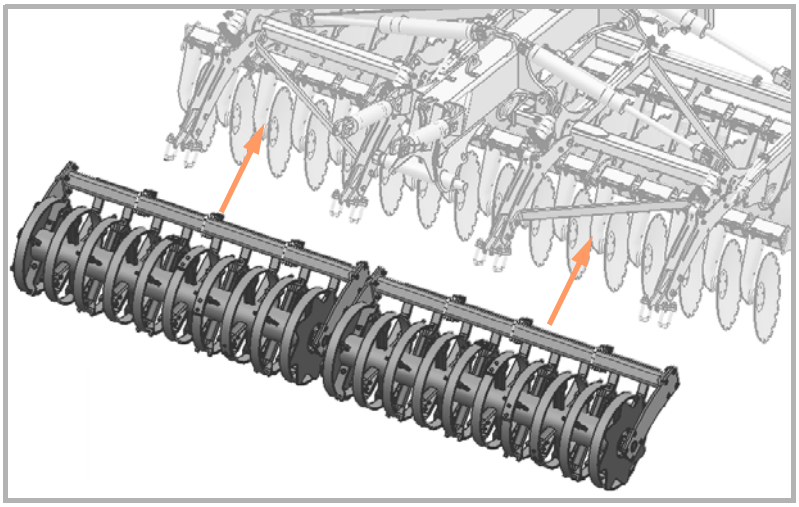


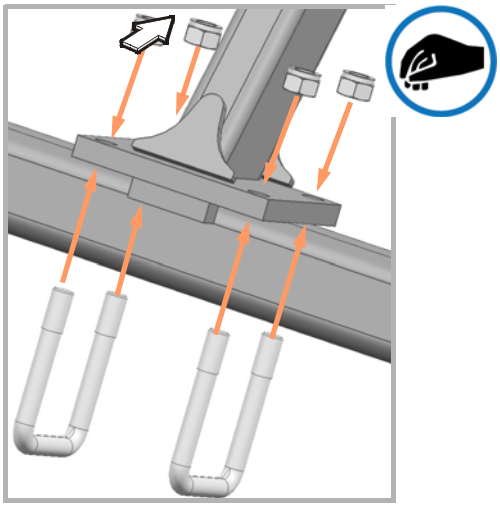
Rigid models

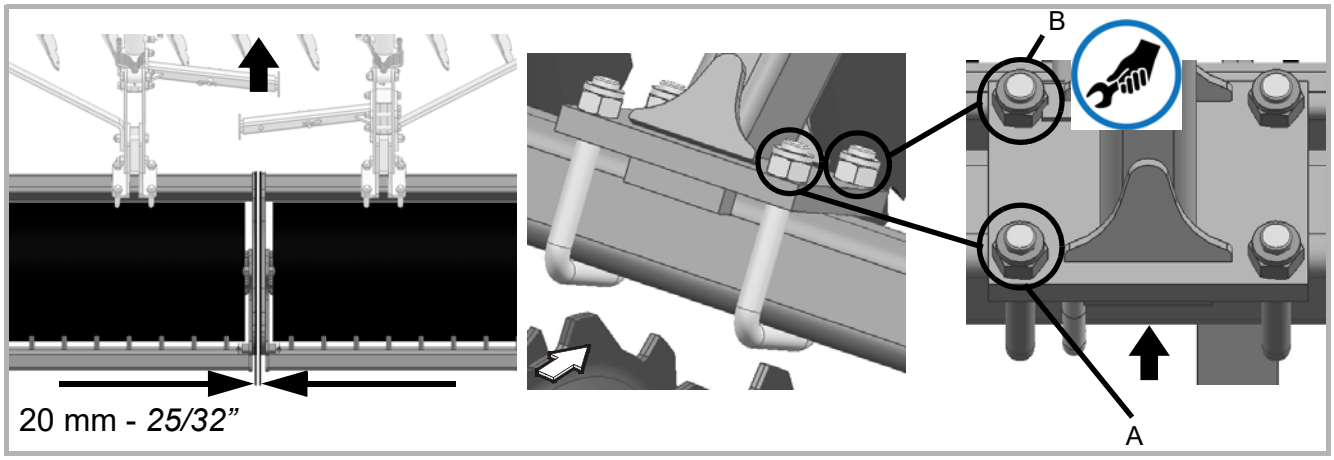
- Loosen the screw **A** on each attachment.
- Remove screws **B** and **C**.
- Remove the struts.
- Pivot the rollers around screw **A** towards the rear so that point **B** aligns with point **C**.
- Replace screw **C**.
- Tighten the screws **A** and **C** to torque.

→ For the tightening torques, refer to the “Standard tightening torques” section on page 89.

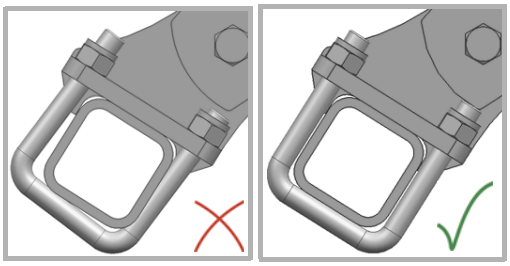
Folding models







Attachment by bracket

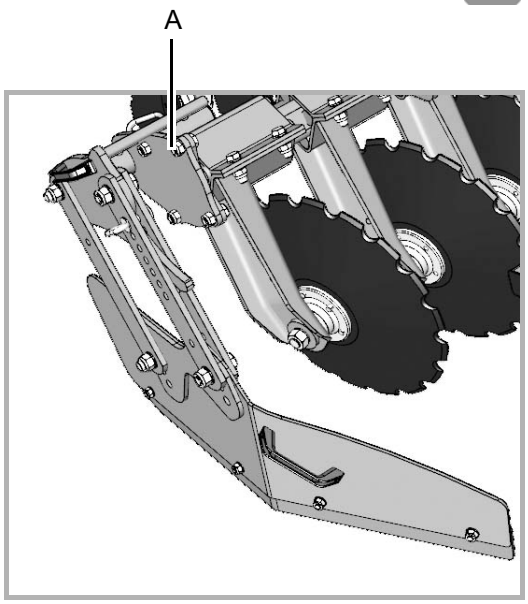


→ For the tightening torques, refer to the “Standard tightening torques” section on page 89.

- Symmetrically present the roller(s) at the rear of the machine.
- Assemble the brackets.
- Bolt the brackets without tightening to the recommended torque.
- Check that the roller(s) is (are) aligned with the chassis, with a 20 mm *(1”)* gap in the centre.
- Tighten the nuts **A** until the tube of the roller touches the flat of the roller arms.
- Tighten the nuts **B** to the recommended torque.
- Lastly, tighten the nuts **A** to the recommended torque.
- Check all the tightening torques.

Repositioning the lateral deflectors on folding models

The lateral deflectors are mounted on the row of discs located to the rear of the machine.

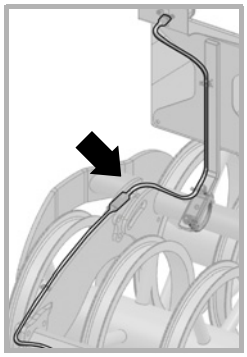


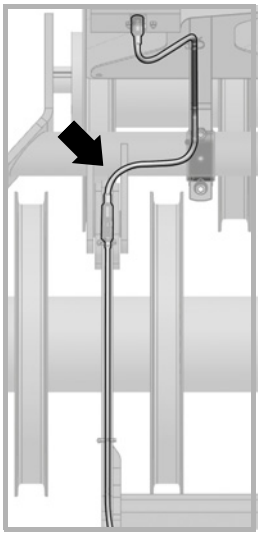
- Position the 4 screws **A**.
- Tighten to the recommended torque.

→ For the tightening torques, refer to the “Standard tightening torques” section on page 89.

Repositioning the signalling equipment on the Actipress Twin

Rigid machines





When fitting the signalling equipment on the roller frames:

- Make sure that the lighting harnesses follow the recommended cable routing.

DANGER

- Comply fully with safety instructions.
- Never stand between the tractor and the machine during the coupling operation.

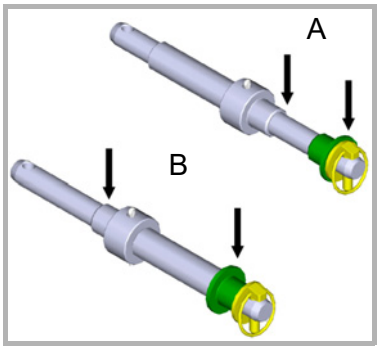
Risk of collision
All folding and unfolding operations must be made with the struts retracted.

- Before unfolding, pin the struts in the retracted position.
- Connect the hydraulic hoses to the tractor.
  - Dual effect for folding.
- Connect the road signals connector, if present.

Keep a safe distance from the machine/tractor assembly during operations.
Non-compliance with this instruction may cause serious injury or even death.

Check that the tractor and the machine are completely immobilised before working between the machine and the tractor.

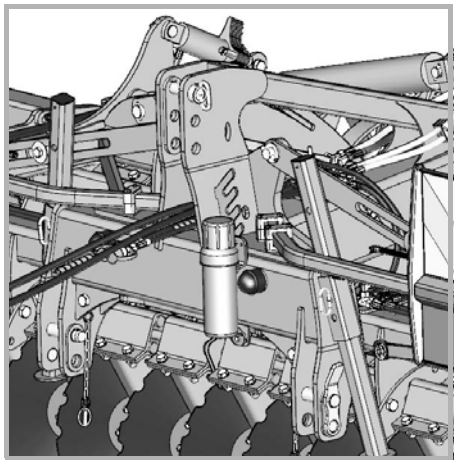
Rigid machines



- Adjust the spindle on the upper link bar to the required category **A** or **B**.
- Bring the tractor to the machine.
- Couple the machine to the tractor lifter.
- Adjust the lower arms so that the machine has a little play to the right or the left.
- Connect the road signals connector, if present.
- Connect the hydraulic hoses to the tractor (dual effect for hydraulic depth control, if fitted).

Reference	Designation
A	Category II
B	Category III

Folding machines



- Bring the tractor to the machine.
- Couple the machine to the tractor lifter.
- Adjust the lower arms so that the machine has a little play to the right or the left.
- If necessary, clean the hydraulic couplings to prevent impurities from entering the hydraulic circuit.
- Connect the hydraulic hoses to the tractor.
  - Dual effect for folding (blue).
  - Dual effect for hydraulic depth control (green, if fitted).

Safety



CAUTION

Before travelling on roads with the machine, please read the following safety instructions carefully. Compliance with these instructions is important and helps you avoid accidents.

In general

Before driving on public roads with your machine:

- Check that your machine complies with the law and the highway code:
  - Your machine is equipped with suitable warning signs, alarms and safety devices.
  - Your machine complies with permitted transport widths and weights, as well as axle loadings, the load limits on the tyre and total permitted weights.
  - Nothing prevents the tractor from being manoeuvred. Even when the machine is in the transport position, there must be sufficient weight on the front axle.
- Do not carry anyone on the machine.
- Remove plant debris, stones and large clumps of earth.

Failure to comply with applicable regulations engages the liability of the driver and the machine owner.

Before driving on public roads

Comply with the machine width

All tipping elements on the machine must be folded or blocked.

On folding machines, to ensure that the width of your machine does not exceed 2.45 m, set the working depth to maximum.

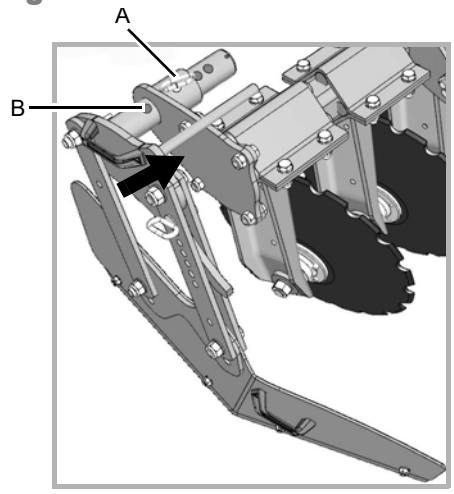
Stop lights, tail lights and indicator lights

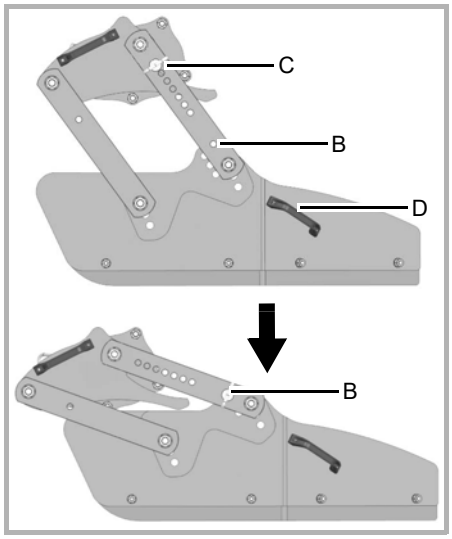
The following devices must be visible:

- Lights,
- reflectors,
- licence plates,
- signalling panels,
- warnings.

If these devices are not fitted on your machine, it is your responsibility to install them.

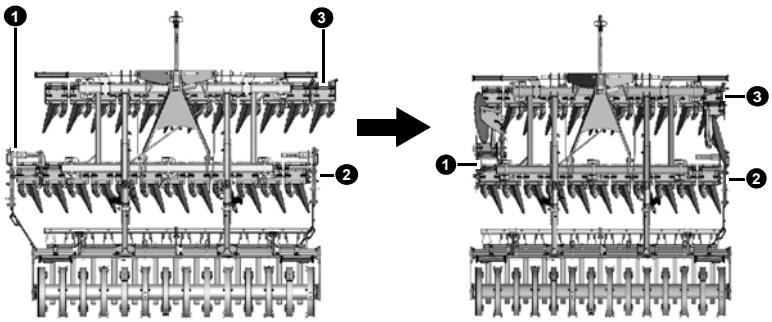
Rigid machines





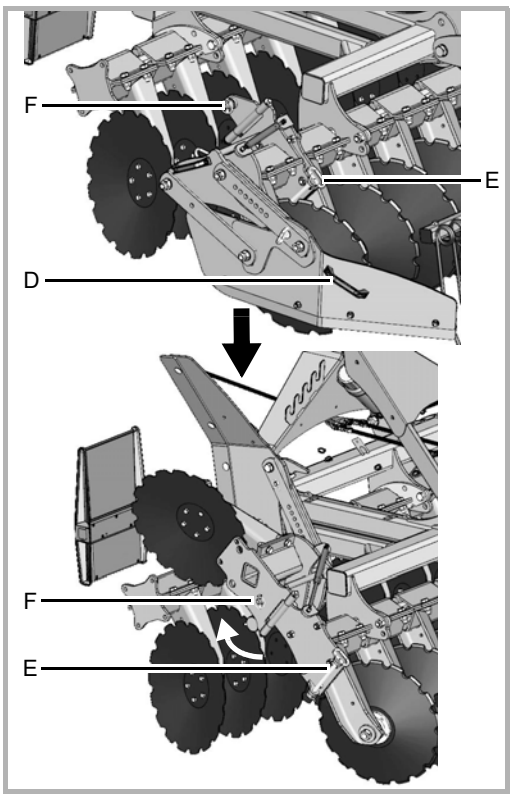
Before travelling on the road:

- Deflectors ❶ and ❷ must be folded.
- <u>The right deflector must be in the transport position:</u>
  - Remove the spindle **A** and its pin.
  - Slide the deflector assembly on the tube to move it to its "transport" position **B**.
  - Put back the spindle **A**.
  - Lock the spindle with the pin.
- The left side deflector + disc ❶ and the front right disc ❸ must be tilted.



▸ <u>Fold deflectors ❶ and ❷:</u>

- Remove the spindle **C** and its pin.
- Lift the deflector using the handle **D**.
- Engage the spindle **C** in the "Transport" position **B** .
- Insert the pin to lock.



▸ <u>Tilt the left deflector + disc ❶ :</u>

- Remove the spindle **E** and its pin.
- Remove the pin **F**.
- Tilt the left side deflector + disc fully over, using the handle **D**.
- Put back the pin **F** to lock the position.
- Put back the spindle **E** and its pin.

▸ <u>Tilt the right front disc❸:</u>

- Use the same procedure for the left deflector + disc❶.



DANGER

- Comply fully with safety instructions.
- Keep at a safe distance from the machine when manoeuvring to reduce the risk of crushing and entrapment.

Any **disc arm that is abnormally blocked in the raised position** may suddenly return to its position and is therefore a **serious source of danger**.

- Keep away from the disc arm.
- Never stand on the disc arm return path.

Folding machines:

- After driving on the road, re-connect the hydraulic hoses of the chassis folding function to the tractor.
- Unfold the chassis.



WARNING

- Comply fully with safety instructions.
- Keep at a safe distance when changing the settings.

There is a risk of the lower limbs being crushed.

IMPORTANT NOTE Never turn when the machine is in the ground.

Working depth of the machine

The roller controls the working depth of the discs.

- After adjusting the working depth of the discs, check that the machine chassis remains horizontal in operation (parallel to the ground).

Manual depth control

Principle

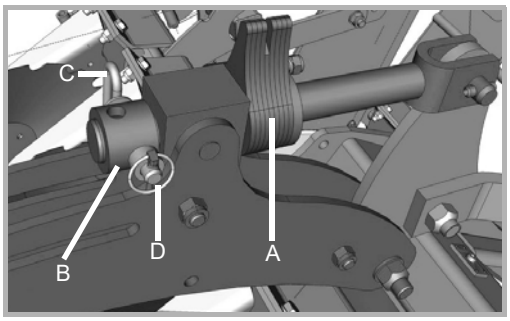
The working depth is adjusted using plastic chocks. According to the number of chocks engaged, the depth control system rests on the chocks and adjusts the working depth of the machine.

- Adding more chocks reduces the working depth.
- Removing chocks increases the working depth.

For discs of diameter 520 mm (*20 1/2"*):

Number of chocks engaged	Working depth	
	Metric system	Imperial system
4	12 cm	*4 23/32"*
6	8 cm	*3 5/32"*
9	2 cm	*0 25/32"*

Adjustment procedure



- Raise and stabilise the machine.
- Add chocks **A** to reduce the working depth or remove chocks to increase it.
- Apply the same setting to all the roller arms.

To adjust the transfer load to the rear of the machine

- Place the machine on the ground.
- Slide the ring **B** to position it as close as possible to the bearing surface.
- Rotate the ring **B** to bring the holes in line with the spindle.
- Put back the spindle **C**.
- Put back the pin **D**.

Adjusting the hydraulic depth

Principle

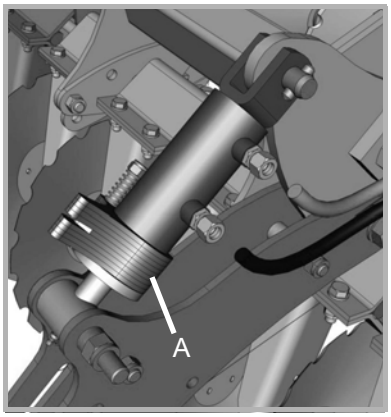
The hydraulic jacks are used to move the roller(s) and to transfer load to the rear of the machine.
The working depth is adjusted using plastic chocks. Depending on the number of chocks inserted, the jacks rest on the chocks and adjust the working depth of the machine.

- Adding more chocks reduces the working depth.
- Removing chocks increases the working depth.

For discs of diameter 520 mm (*20 1/2"*):

Number of chocks engaged	Working depth	
	Metric system	Imperial system
4	12 cm	*4 23/32"*
6	8 cm	*3 5/32"*
9	2 cm	*0 25/32"*

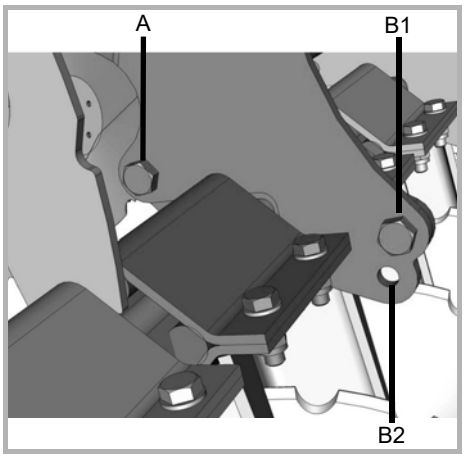
Adjustment procedure



- Raise the machine.
- Stabilise the machine.
- Actuate the hydraulic distributor to lower the rollers.
- Add or remove chocks **A**.
- Apply the same setting to all roller cylinders.
- Actuate the hydraulic distributor until the jack(s) bear against the chocks.

Overlapping of discs

The new machine is adjusted so that the entire surface of the soil is cut and mixed across the complete width. This ideal overlapping can be preserved, even when the discs are worn and under difficult conditions.



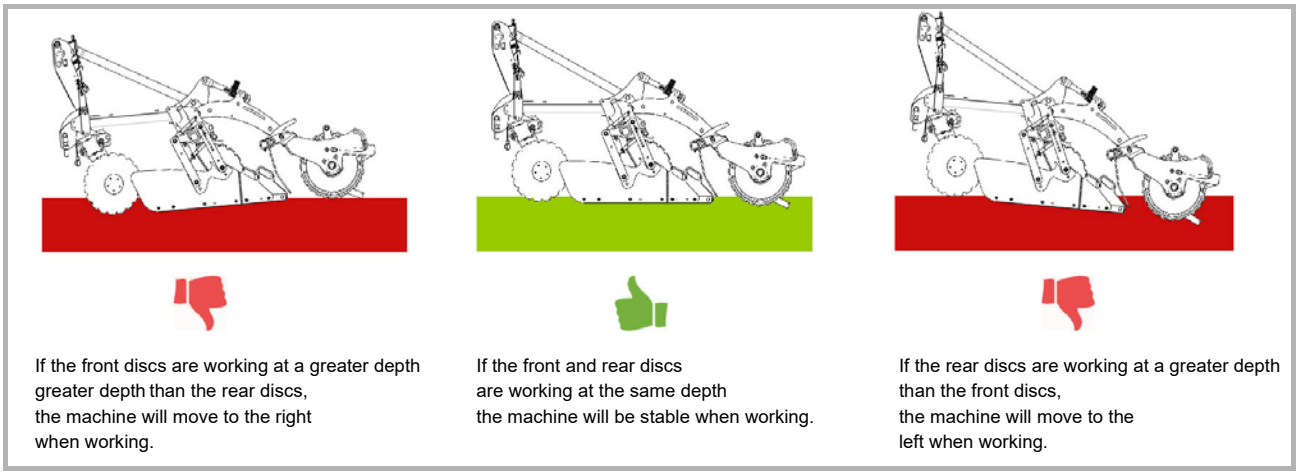
- Loosen the screws **A** on each attachment.
- Remove the screws **B1**.
- Rotate each disc line around the screws **A** up to position **B2**.
- Place the screws in **B2**.
- Tighten the screws **A** and **B2**.

→ For the tightening torques, refer to the “Standard tightening torques” section on page 89.

Stability of the unit

To acquire better stability, the rows of discs at the front and rear should operate at the same depth.

- To this end, make sure that the chassis is horizontal, adjusting the length of the third point.



If the front discs are working at a greater depth greater depth than the rear discs, the machine will move to the right when working.

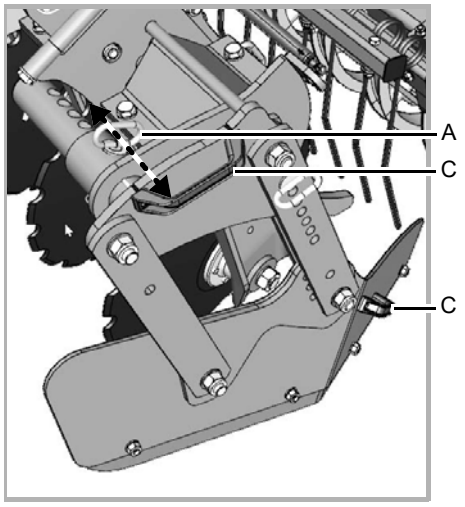
If the front and rear discs are working at the same depth the machine will be stable when working.

If the rear discs are working at a greater depth than the front discs, the machine will move to the left when working.

Adjustment of accessories

Lateral deflectors

Adjusting the spacing of the deflector

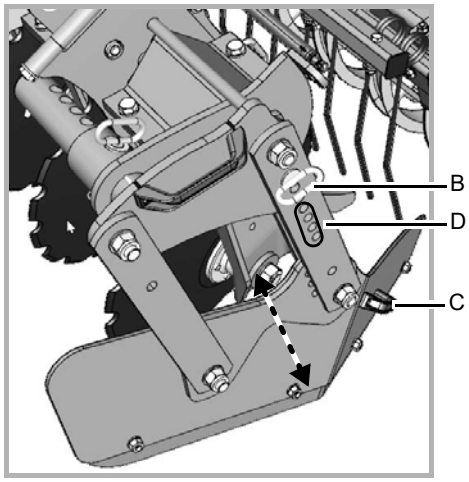


The deflector prevents earth from accumulating at each end of the machine. The deflector spacing must be adapted depending on the soil type, speed and working depth.

The stickier the soil and the greater the speed and working depth, the more the deflector must be moved away from the ends.

- Remove the pin locking the spindle **A**.
- Remove the spindle **A**.
- Using the handles **C**, slide the deflector assembly on the tube to adjust the distance between the outer disc and the metal panel according to the path of the flow of soil.
- Put back the spindle **A**.
- Lock the spindle with the pin.

Adjusting the height of the deflector



Adapt the height of the deflector so that it is flush with the soil during work.

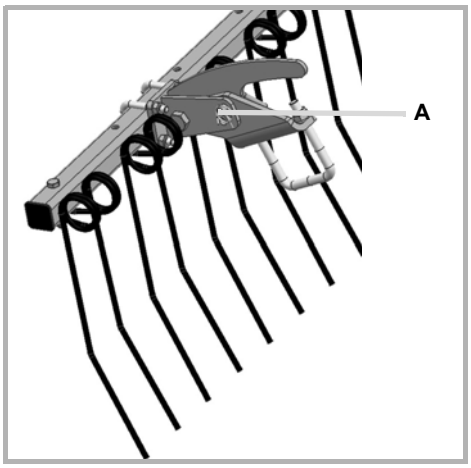
The deflector height can be adjusted according to the working depth using the spindle **B**.

- Remove the pin locking the spindle.
- Remove the spindle **B**.
- Lift the deflector using the handle **C**.
- Engage the spindle **B** in one of the positions **D**.
  - Top hole: shallowest working depth.
  - Bottom hole: high working depth.

Finger harrow

The finger harrow is adjusted automatically to more or less break up the flow of soil projected into the roller.

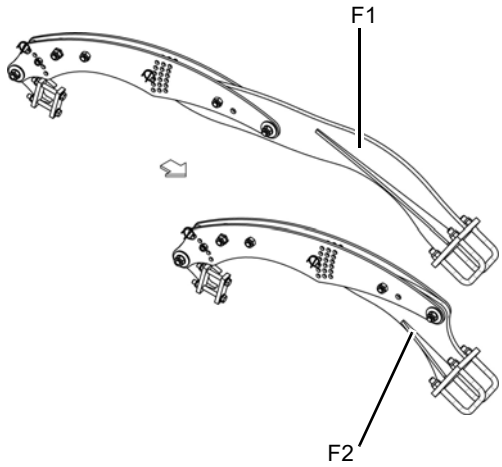
The more residues there are, the more the harrow must be set to fleeting position.



- Remove the pin locking the spindle **A**.
- Remove the spindle.
- Turn the row to the required angle.
- Place the spindle **A** in one of the four positions.
  - Minimum angle to break up the entire flow.
  - Maximum angle to smooth the flow.
- Lock the spindle with the pin.

Finger harrow on roller

Adapting the support on roller



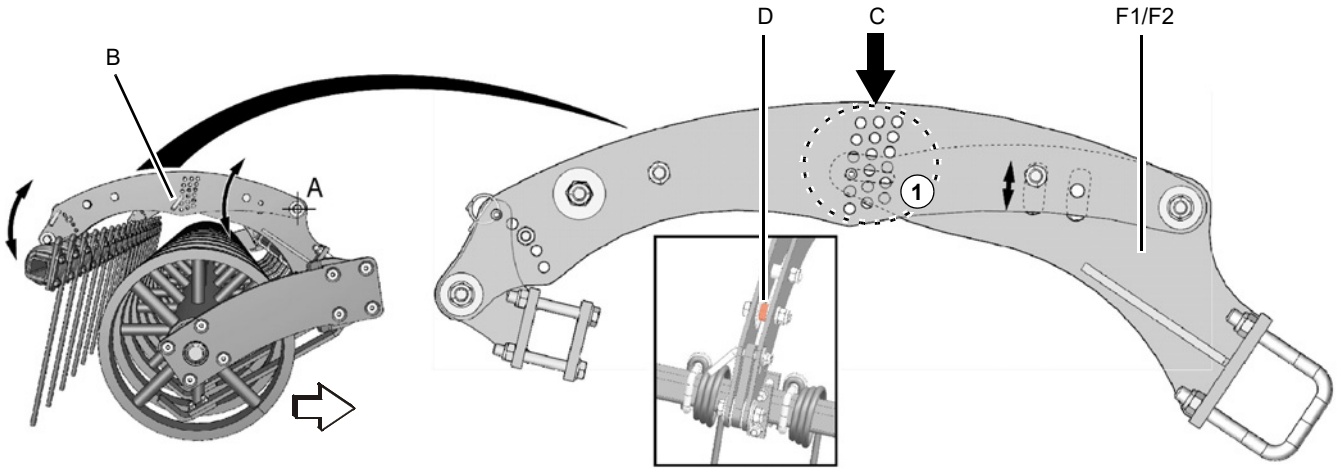
There are two types of support depending on the model of the roller on which the finger harrow will be adapted:

- A long support **F1** to adapt the harrow on a double roller.
- A short support **F2** to adapt the harrow on a single roller.

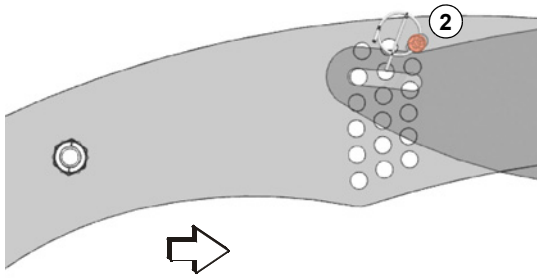
Adjusting the height

The height of the finger harrow can be adjusted using the various positions **C**. This adjustment can be used to apply more or less pressure on the fingers but also to compensate their wear.

- To apply pressure on the fingers, spindle **B** will be placed towards the fixed positions① in the adjustment range **C**.



- For surface work with no pressure, spindle **B** will be moved to the floating positions② placed on the support.



To make adjustment easier, place the spanner supplied on nut **D** and use it as a lever.

Procedure:

- Take the weight off the spindle with the spanner.
- Remove the spindle **B**.
- Raise or lower the harrow to the required position.
- Put back the spindle **B**.

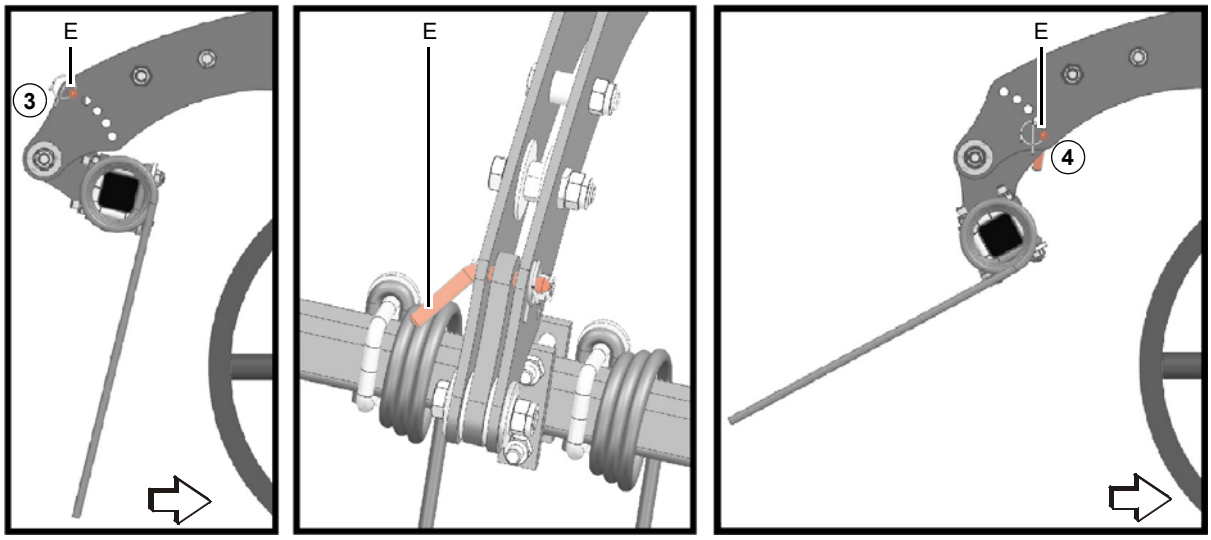
Angular adjustment

The fingers can also be adjusted. Depending on the quantity of residues, the harrow can be adjusted to be more or less passive.

Procedure to change the angle:

- Remove the spindle **E**,
- Tilt the harrow to the required position.
- Put back the spindle.

- The harrow can be cleared completely by using the last position③ of this adjustment range.
- The position④ corresponds to the most passive setting.

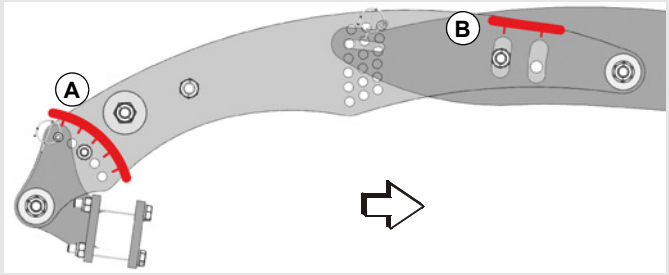


CAUTION

Do not modify the machine safety locking

To avoid any collisions with the objects near the finger harrow, some positions may be locked by construction depending on the roller model and the machine type. When the locking screw is in one of the holes **A** and **B**, it must never be removed.

Risk of collisions and damage to the machine.



Kilo



The kilometre counter measures the distance worked by the machine.

To calculate the surface area worked in hectares:

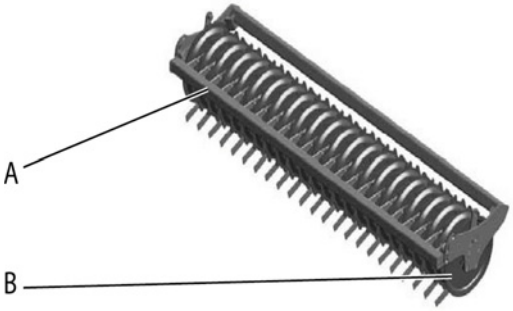
Number in black on the counter	**x**	Coefficient determined according to the working width and the diameter of the discs

Worn discs may alter the values obtained. See values below according to the disc diameter.

Width (m/*ft*)	**Coefficient to obtain the area in hectares**
	Diameter 520 mm (20 1/2")
2.00 (*6'6")*	0.15
2.50 (*8'2")*	0.19
3.00 (*9'10")*	0.23
3.50 (*11'5")*	0.27
4.00 (*13'1")*	0.31
5.00 (*16'4")*	0.39
6.00 (*19'7")*	0.46

Rollers

Actipack and Actiring



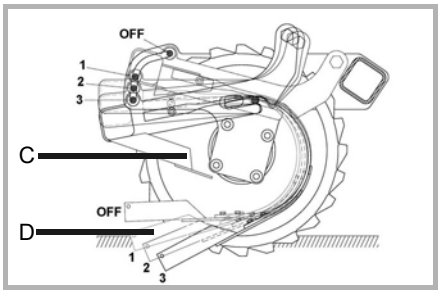
Reference	Description
A	Rear manifold
B	Disc roller

Active knife skids

Use this configuration if you want:

- A levelled, fine tilth finish.
- Sow immediately after harrowing.

Introduction



Adjust the knife skid height **D** according to the following:

- The soil characteristics,
  - Light or sandy soil: raised knife skid
  - Heavy, clay soil: knife skid in lower position
- the type of machine you are using,
- the position of the attachment arms (varies according to the working depth).

We recommend exerting the lowest possible pressure on the knife skids as excessive pressure could cause:

- Increased wear of the knife skids,
- increased traction power requirement,
- a risk of blockage,
- etc.

The scrapers **C** do not have to be adjusted when changing from one setting to another. The scrapers are only used in the "**OFF**" position to clean the central tube.

Adjustment procedure

- Set the knife skids to position "**1**".
- Adjust the working depth of the machine.
- Test at work.
- Check the quality of the work, if necessary:
  - gradually increase the pressure on the knife skids by setting to position "**2**" or "**3**".

Passive knife skids

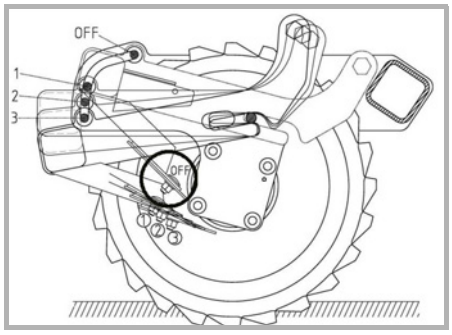
Introduction

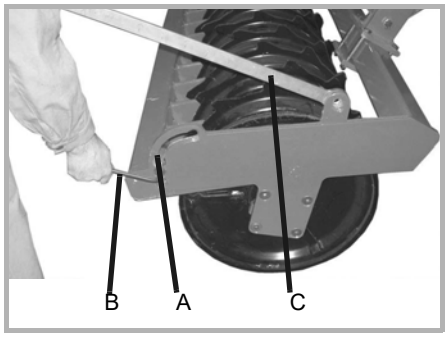
Use this configuration if:

- You want a coarser level and surface finish in order to avoid any risk of surface breakdown.
- You are working in the autumn and you want to sow in the spring.
- You are not planning to sow for a long time.

Adjustment procedure on Actiring and Actipack

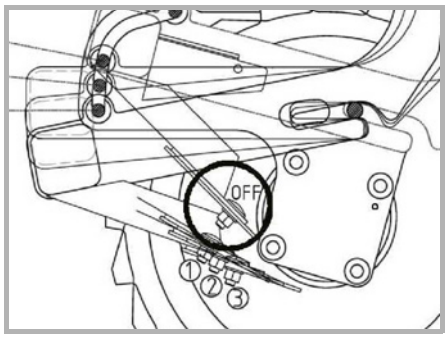
Raise the knife skids fully to put them in the "**OFF**" position (folded away).





- Loosen the locknut.
- Loosen the countersunk screw **A** with the small wrench **B** so that it protrudes by about 1 cm from its conical housing.
- Loosen the locknut on the other side.
- Engage the long wrench **C** on the welded nut located on the lower part, so that the rear rail is supported.
- While holding the wrench **C** in position, loosen the countersunk head screw **A** with the small wrench **B** so that it protrudes by about 1 cm from its conical housing.
- Swing the rail to the required position ("**1**", "**2**", "**3**" or "**OFF**").
- Still holding the wrench **B** in position, fully tighten the countersunk head screw **A**.
- Tighten the locknut.
- Go to the other side to completely screw in the other countersunk head screw **A**. If necessary, use the wrench **C** again to adjust the alignment of the screw in the desired position.
- Tighten the second locknut.

Scrapers on Actipack



If using scrapers on the roller:

- Set the scrapers to the "**OFF**" position.

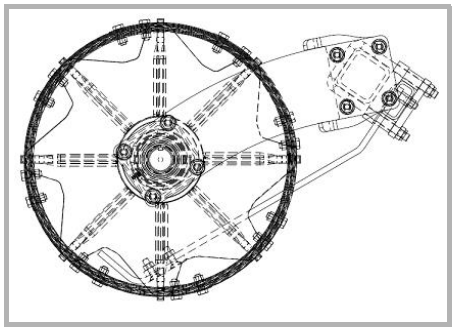
The scraper must not touch the central tube, respect a clearance of 5 mm (*3/16"*) to 10 mm (*6/16"*) from the tube.

Actiflex and Actipress Solo

CAUTION

Do not reverse while the roller is in contact with the ground. This could damage the blades, as there is no safety mechanism.

Configuration with the levelling blades

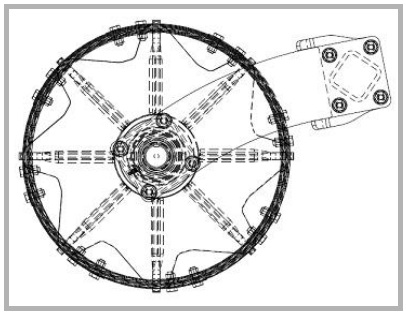


Use this configuration if you want:

- A levelled, fine tilth finish.
- Sow immediately after harrowing.

Configuration without the levelling blades

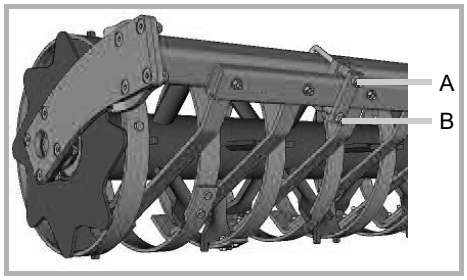
Introduction



Use this configuration if:

- You want a coarser level and surface finish in order to avoid any risk of surface breakdown.
- You are working in the autumn and you want to sow in the spring.
- You are not planning to sow for a long time.

Dismantle the levelling blade rail



- Loosen the nuts **A** and **B** on each support (between 3 and 6 supports depending on the width).
- Remove the supports

Raise the levelling blade rail

- Put the mountings back in their position.
- Centre the levelling blades with respect to the rings.
- Tighten the nuts **A** and **B** on each mounting.

Actipress Twin

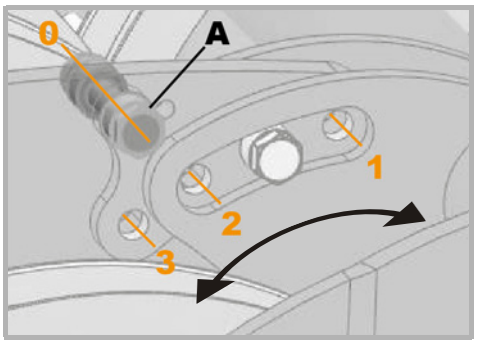
WARNING

- Comply fully with safety instructions.
- Keep at a safe distance when changing the settings.

There is a risk of the lower limbs being crushed.

IMPORTANT NOTE Never turn when the machine is in the ground.

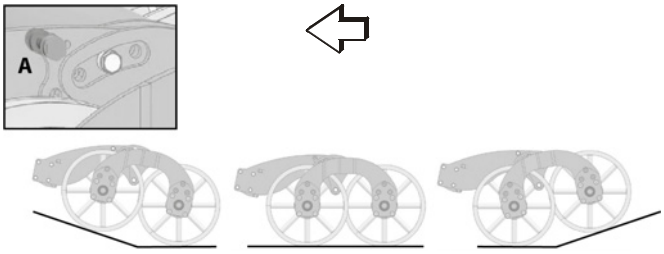
Checking the rocker arm rotation



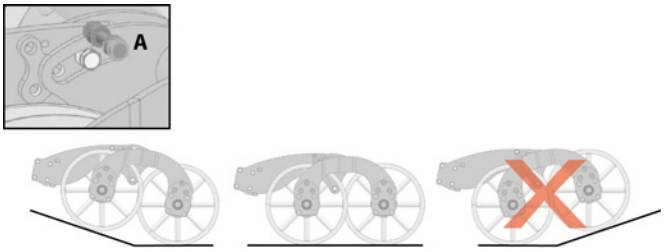
Actipress Twin can follow the ground profile correctly by pivoting ±11° forward or backward.

The pressure exerted by the front and rear rotor rings on the ground can be adjusted by moving the screw **A** and its bushes between the holes of the "**0**", "**1**", "**2**" or "**3**" positions.

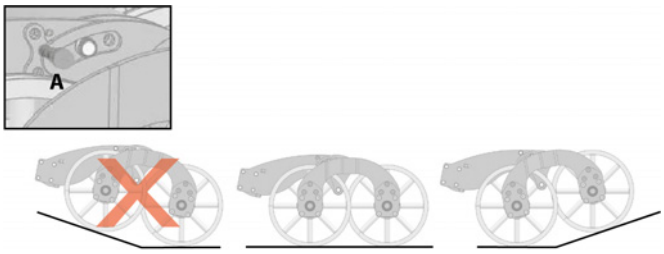
Position "0" - Screw A in Hole "0"



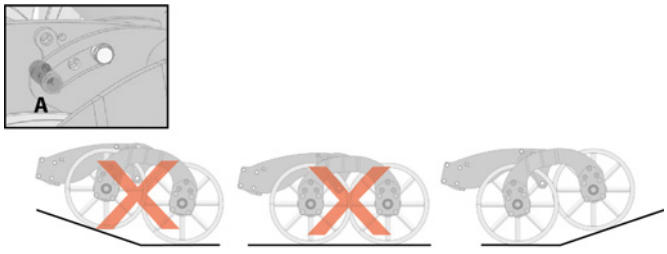
Position "1" - Screw A in Hole "1"



Position "2" - Screw A in Hole "2"

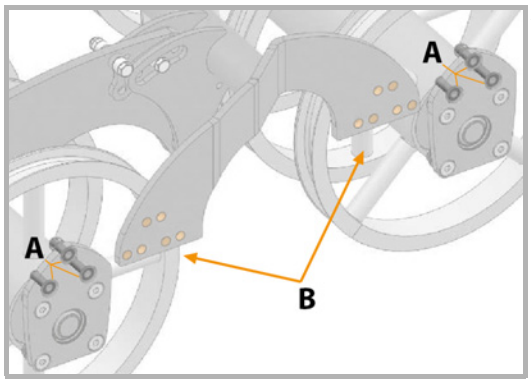


Position "3" - Screw A in Hole "3"



Adjusting the roller overlap

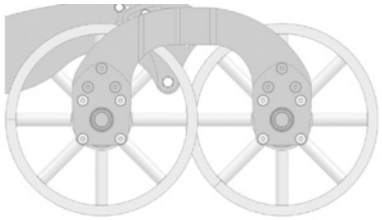
The overlap of the 2 rollers produces a self-cleaning effect on damp or sticky soils.
To change the overlap configuration:



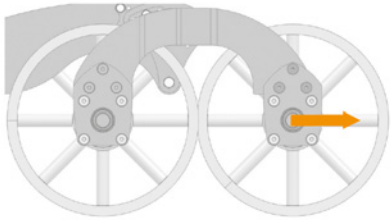
→ For the tightening torques, refer to the “Standard tightening torques” section on page 92.

- Unscrew the 3 screws **A** of the roller to be switched.
- Place the rotor in the required position **B**.
- Put back the 3 screws **A** and tighten to torque.

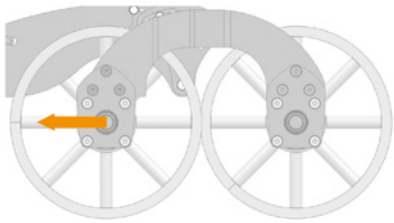
Short overlap



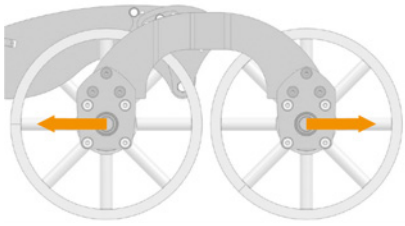
Intermediate overlap 1
Rear roller moved away



Intermediate overlap 2
Front roller moved away



Wide overlap
Rear and front rollers moved away



Choose the roller overlap suitable for the soil conditions:

- **short**: dry soil with few residues.
- **wide**: damp and sticky soil with lots of residues and stones
- or **intermediate**: for mixed conditions.



DANGER

- Comply fully with safety instructions.
- There is a serious risk of injury when unhitching the machine.

  To prevent any danger:
  - Immobilise the tractor.
  - Make sure that the machine is on flat and sufficiently stable ground.
  - Never stand between the tractor and the machine.
- Actuate the hydraulic lift slowly and carefully.

Storing your fixed machine

- Position the machine on a stable and level surface.
- Disconnect the road signals kit connector (if fitted).
- Disconnect the hydraulic hoses.
- Unhitch the machine.
- Apply grease on the jack rods to prevent corrosion.

Storing your folding machine

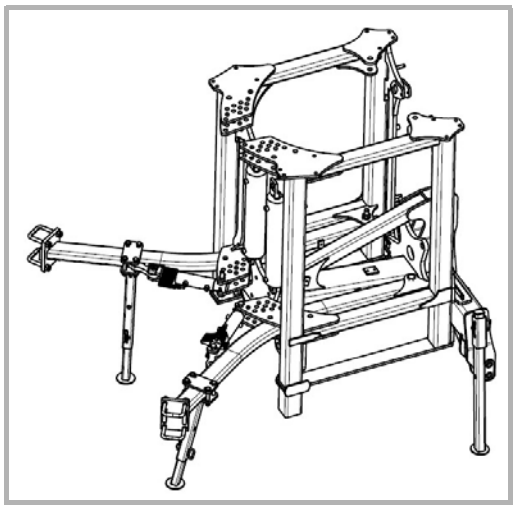
In unfolded position

Storing your machine in the unfolded position ensures maximum stability.

- Unfold the chassis.
- Set the machine on a flat, stable surface.
- Disconnect the hydraulic hoses.
- Disconnect the road signals kit connector (if fitted).
- Unhitch the machine.
- Apply grease on the jack rods to prevent corrosion.

In folded position

In order to save space, you may prefer to store the machine with the chassis folded using the set of storage struts.



In this case:

- Fold up the frame.
- Raise the machine until the clearance is greater than the height of the storage struts.
- Remove the pins from the struts.
- Lower the struts into the storage position.
- Lock the struts using the pins.
- Set the machine on a flat, stable surface.
- Lower the machine until the struts touch the ground.
- Make sure that there are no obstacles or uneven surfaces under the feet of the struts.
- Ensure that the machine is flat and that none of the struts sink into the ground.
- Disconnect the hydraulic hoses.
- Disconnect the road signals kit connector (if fitted).
- Unhitch the machine.

Cleaning



CAUTION

Never use a high pressure cleaner with a rotating nozzle to clean your machine. This could damage the machine.

The equipment may be cleaned using a high pressure cleaner.

- Move the water jet further away when cleaning the bearings to avoid damaging the seals and roller bearings.
- Protect the cylinder rods.

Maintenance

To ensure that the machine has a long service life, we recommend that a protective coating of oil is applied at the end of each season. Use only a suitable, biodegradable oil such as rapeseed oil.

Storage

To keep your machine in good condition during storage:

- Clean it.
- Lubricate the various points listed in the "Maintenance" section.
- Store your machine on a flat, stable surface.
- Machines stored in unfolded position: apply grease on the jack rods to prevent corrosion.

For your safety

Specific instructions instructions



WARNING

Prevent any unintentional movement of the machine
Carry out repairs or maintenance or eliminate malfunctions with the machine hitched only when:

- the power take-off has been deactivated,
- the engine is switched off,
- the ignition key is removed,
- the electronic control system has been deactivated.

An unexpected movement of the machine could cause serious injury.



CAUTION

Conditions necessary for maintenance work
Carry out maintenance work only if you have the necessary knowledge and tools at your disposal. Lack of knowledge or the wrong tools can lead to accidents.

Use original replacement parts
Use only original replacement parts for safety-related components. Only parts of the appropriate dimensions, strength and material quality should be used. If parts other than original replacement parts are fitted, the warranty is void.

Do not use pneumatic grease pumps
Never use pneumatic grease pumps when lubricating the bearings. Their high pressure would damage the bearings.

Protection measures when handling oils and lubricants

Additives mixed with oils and lubricants can be harmful to your health. Since regulations do not require manufacturers to identify these hazards, it is essential that you follow the advice below:



CAUTION

Avoid contact with the skin
Avoid all skin contact with these products. Contact with the skin may cause skin damage.

Protect your skin
Protect your skin when handling oils or lubricants by applying a protective cream on the skin or by wearing oil and lubricant-proof gloves. Oils can cause health problems. Do not use oils to clean your hands
Never use oil or lubricants to clean your hands. Swarf in such liquids can also cause injury.

Do not wear clothing contaminated with oil
Remove garments heavily soiled with oil as quickly as possible. Oils may cause health problems.

Used oil must be collected and disposed of.
In the event of wounds to the skin caused by oil or lubricants, contact a doctor immediately.

General

These notes refer to routine maintenance work. For any maintenance work, the machine must be configured and locked in its working position. If the transport position is necessary for any maintenance work, refer to section Specific instructions instructions page 46.

RECOMMENDATIONS Work carried out with the grease pump:
Lubricate with two squeezes of the grease pump If you feel resistance during the second squeeze, do not proceed further. Excess grease will open seals. Dust and dirt can penetrate bearings and cause premature wear.

In principle

This table provides a brief explanation of the main maintenance points.

Work	Execution
Lubricate	Apply grease on sliding surfaces with a brush.
Oil	Unless otherwise indicated, use only vegetable oils such as rape seed oil. Mineral oils are not suitable. Used oils are dangerous to your health and their use is strictly prohibited.
Replacement	Replace the part concerned by following the instructions contained in the maintenance chapter.
Inspection	Inspection is sometimes necessary when you replace a part.
Comply with maintenance intervals.	All data refers to an average usage of the machine. If used more intensively (for example by agricultural works businesses), shorten maintenance intervals accordingly. Shorter maintenance intervals are also advisable under extreme working conditions (considerable quantities of dust).

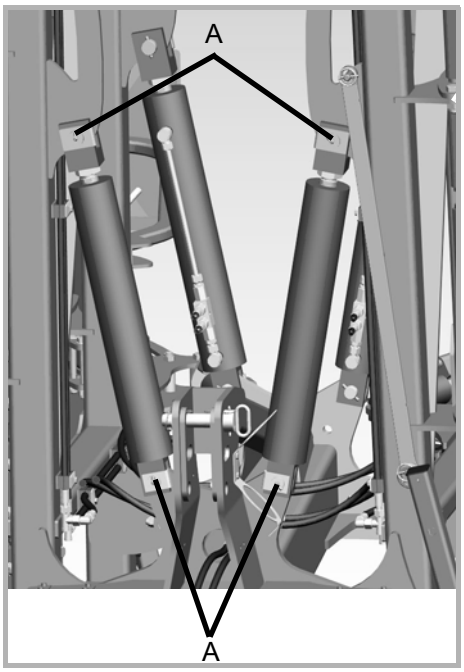
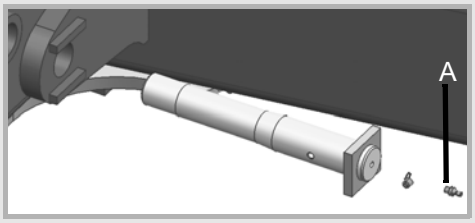
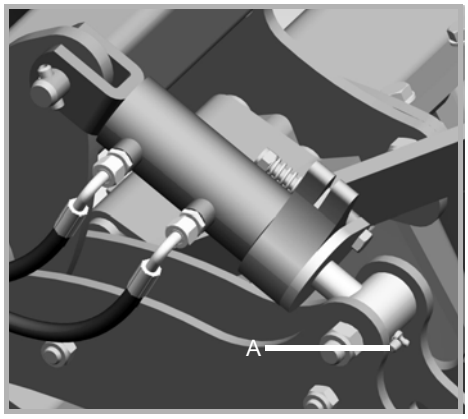
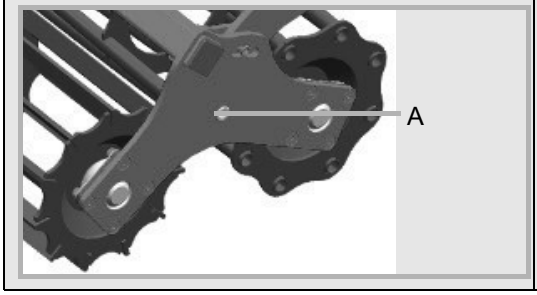
Greasing



For all greasing operations, the machine must be in the park position with the tines on the ground to avoid any risk of crushing.



The pictogram opposite appears next to the greasing points **A** on the machine to enable you to locate the machine's greasing points quickly.

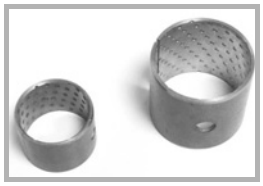
Image	Part	Frequency		
		Every day	Every 40 hours	Every year
	Folding cylinders		X	
	Folding side articulation pivot axes		X	
	Depth control cylinders		X	
	Double tube roller/bar	X		

Wear rings

CAUTION

The wear rings must be changed when they stop protecting the different parts of the machine.
If used wear rings are not replaced, damaged machine parts will not be covered by the warranty.

If damaged rings are not replaced, their housing may also suffer from wear.

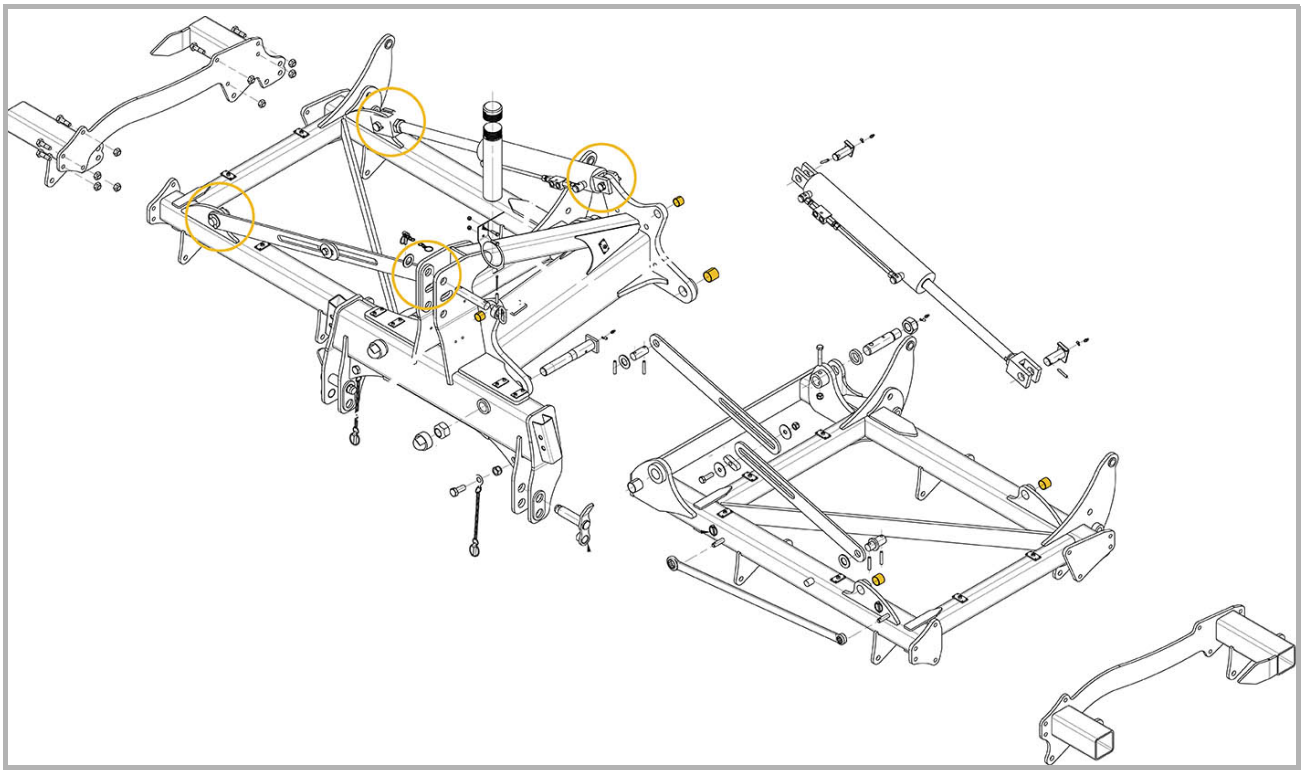


Most of the machines articulations use wear rings.

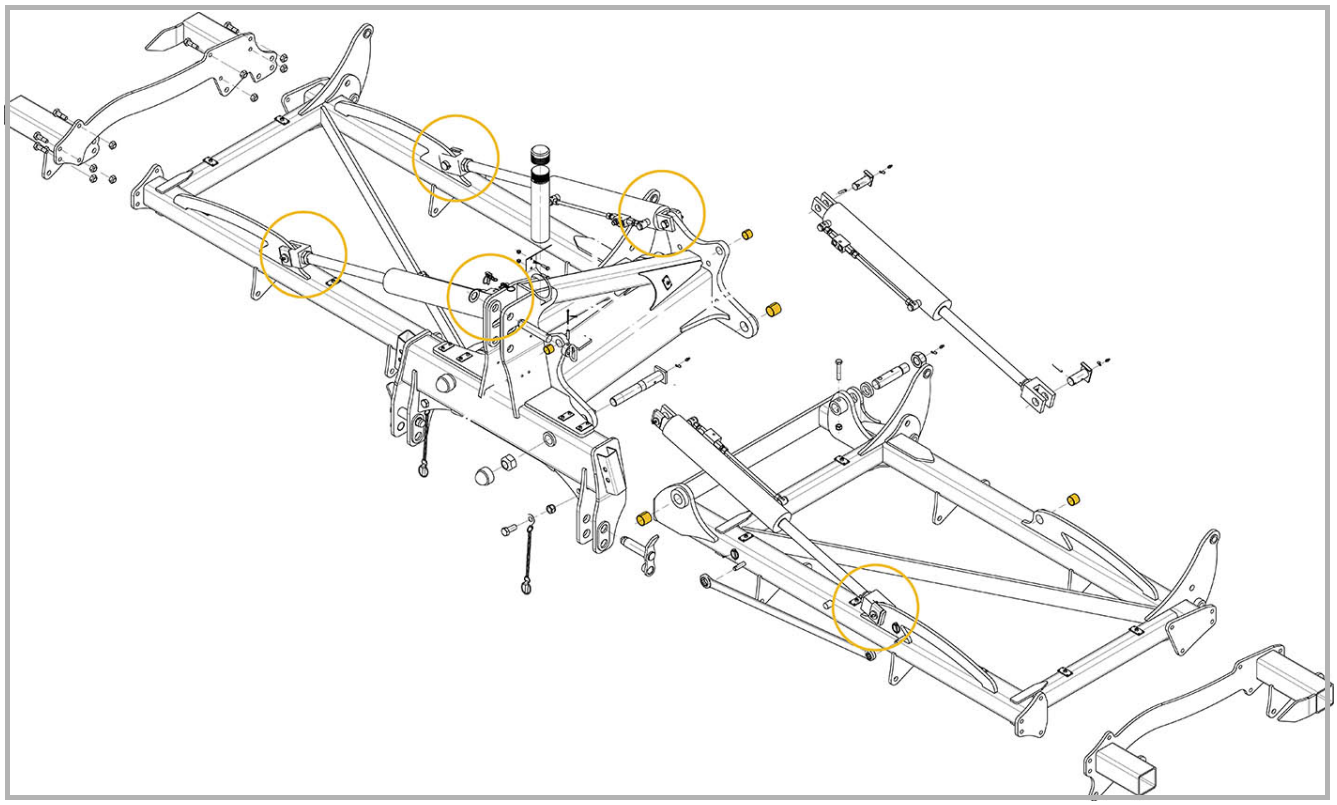
- Regularly check the condition of the articulations (lubrication and lack of play).
- Replace wear rings if significant play appears on a ringed articulation.

Location of the wear rings on the machine

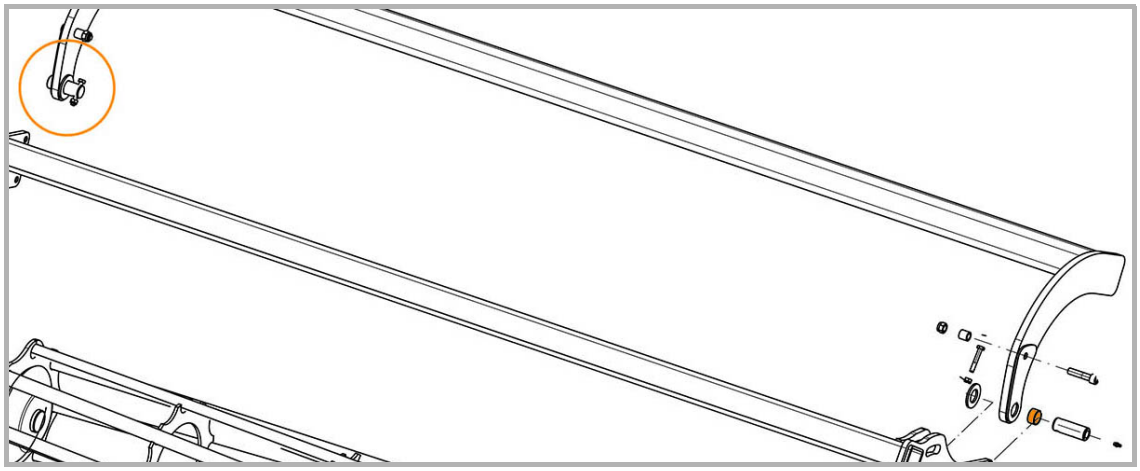
Frame for 4M and 5M machines



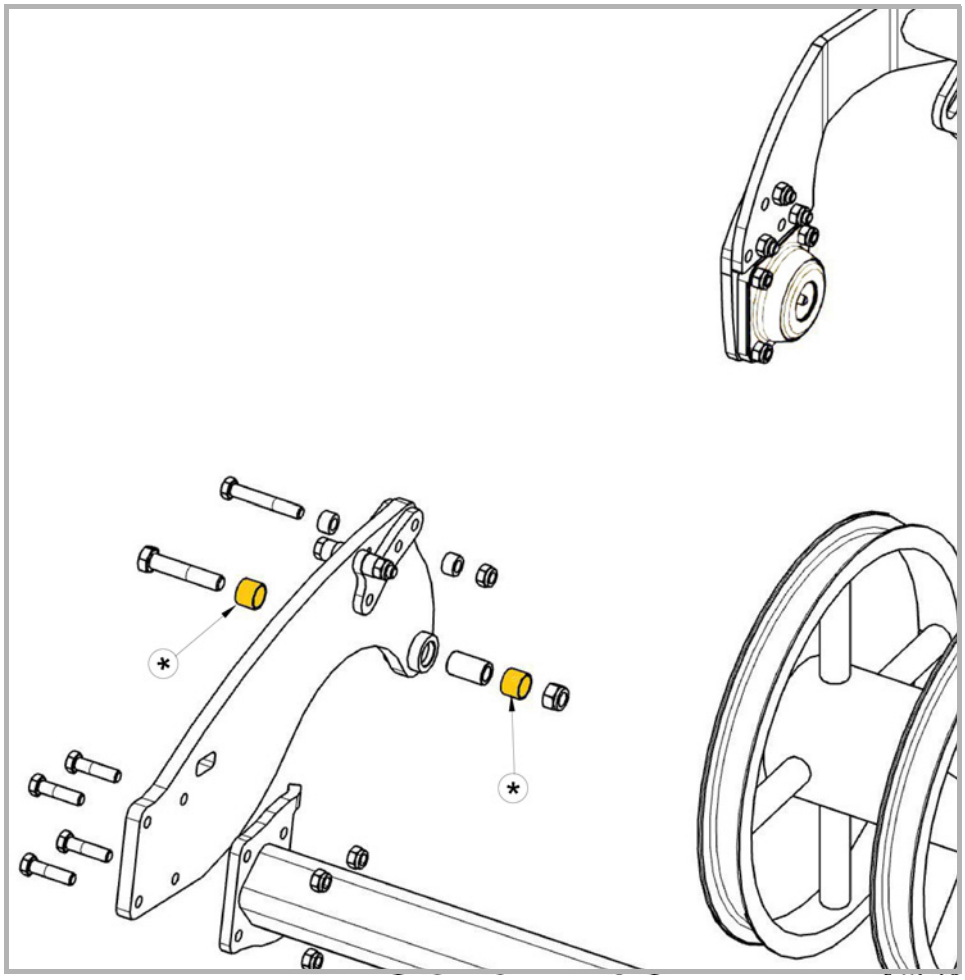
Frame for 6M machines



Double tube roller bar



Actipress Twin roller



Checks

Screwed assemblies

Regularly check wheel nuts for tightness and the hub clearance adjustment.

All the bolts must be tightened:

- After the initial period of use.
- According to the frequency of use.
- At least once per season.

Standard tightening torques

Unless otherwise specified, all screwed assemblies should be tightened in accordance with the table below. The values shown apply to rigid assemblies with normal thread pitches and no bearing washer. Values provided for assembly with no special lubrication:

Diameter of screw	Quality 8.8		Quality 10.9		Quality 12.9	
	N.m	*ft.lbf*	N.m	*ft.lbf*	N.m	*ft.lbf*
3	1.41	*1.04*	2.07	*1.53*	2.43	*1.79*
4	3.22	*2.38*	4.74	*3.50*	5.5	*4.06*
5	6.4	*4.72*	9.4	*6.94*	11	*8.12*
6	11.1	*8.19*	16.3	*12.03*	19.1	*14.10*
8	27	*20*	39	*29*	46	*34*
10	53	*39*	78	*58*	92	*68*
12	92	*68*	136	*100*	159	*117*
14	148	*109*	218	*161*	255	*188*
16	232	*171*	341	*252*	399	*294*
18	330	*244*	469	*346*	549	*405*
20	471	*348*	667	*492*	781	*576*
22	648	*478*	920	*679*	1,077	*795*
24	809	*597*	1,148	*847*	1,343	*991*
27	1,201	*886*	1,706	*1,259*	1,997	*1,474*
30	1,628	*1,201*	2,311	*1,706*	2,704	*1,996*
33	2,216	*1,635*	3,148	*2,323*	3,684	*2,719*
36	2,840	*2,096*	4,036	*2,979*	4,723	*3,486*
39	3,697	*2,728*	5,255	*3,878*	6,150	*4,539*

Fasteners

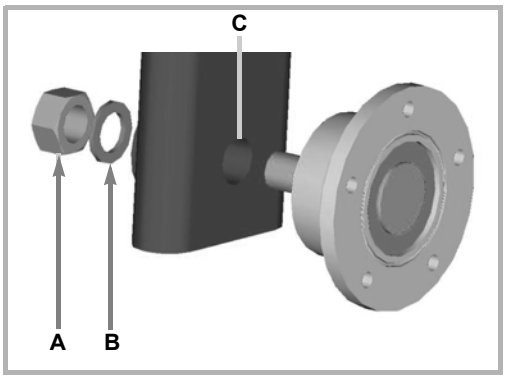
CAUTION

Use only the screws supplied
The securing screws supplied are special screws for specific requirements. Commercially available screws will not stand up to the stresses on the machine. If you use inappropriate screws or if you do not tighten them to the recommended torque, the machine could be damaged.

Using the machine with loose fasteners may damage it and cause accidents.

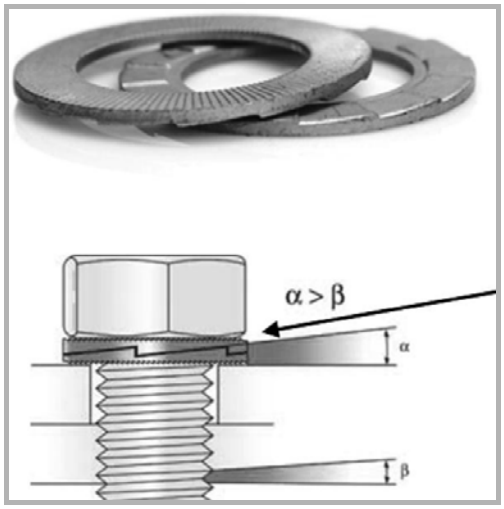
Replacing the disc hub

CAUTION
Always use the original repair kit containing the hub, the nut and the lock washers.



When removing the disc hub:

- Loosen the nut **A**.
- Remove the lock washer **B**.
- Remove the complete hub.



When installing the disc hub:

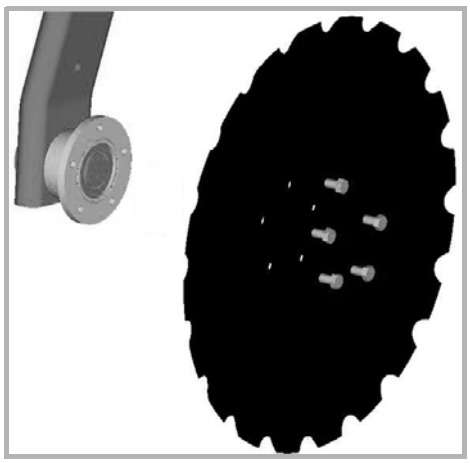
- Carefully clean all the bearing surfaces:
  - hub,
  - disc arms,
  - nut,
  - washers.
- Insert the shaft of the complete hub, making sure that the flat side **C** is in the right direction on the shaft and in its housing.
- Insert the lock washer **B** the right way round.
- Tighten the nut **A** with a tightening torque of **400 Nm** *(295 ft.lbf)*.

Disc wear

CAUTION

Replace the discs with original discs. The initial discs have an exclusive heat treatment that significantly increases their life cycle.

For optimal overlapping, replace the discs when their diameter reaches 400 mm *(15" 3/4")*.



When installing conical notched discs of star disc:

- thoroughly clean the bearing surfaces of the disc and hub.
- Check that the O-ring on the hub is in its housing. Replace if damaged.
- Place the disc.
- Screw the 5 screws.

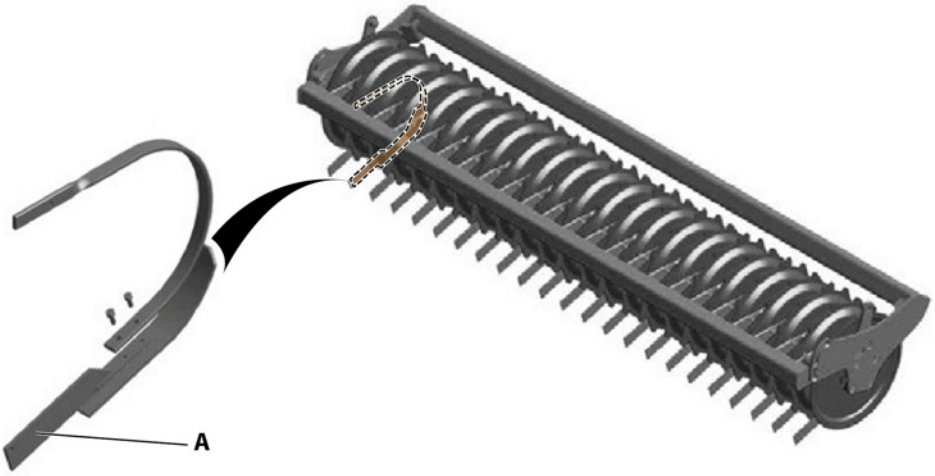
Comb wear

For finger harrows, check the combs and replace them if they are badly worn.

Wear of knife skids

Actipack and **Actiring**:

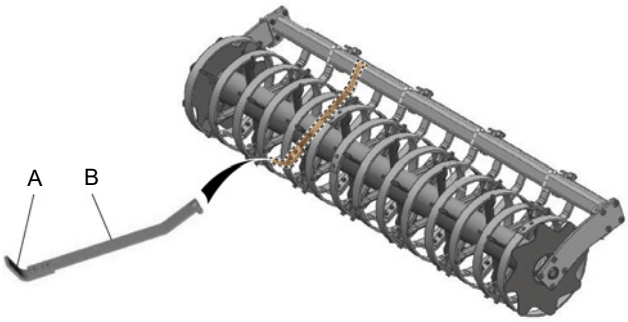
- Regularly check the wear of the knife skids **A**.
- Replace them before wear can cause the part to be lost during operation.



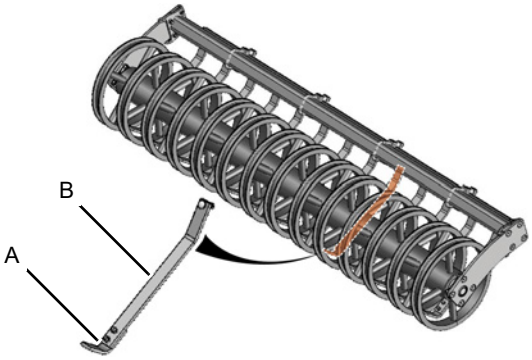
Levelling blade wear

Actiflex and Actipress Solo:

- Check that the screws are still tight after several hours of use.
- Regularly check the wear on the skids **A** of the levelling blades **B**.
- Replace them before wear can cause the part to be lost during operation.
- After use and before storage, it is recommended that the roller is thoroughly cleaned, to remove any earth attached to it which may cause a nuisance when resuming work.



Actiflex



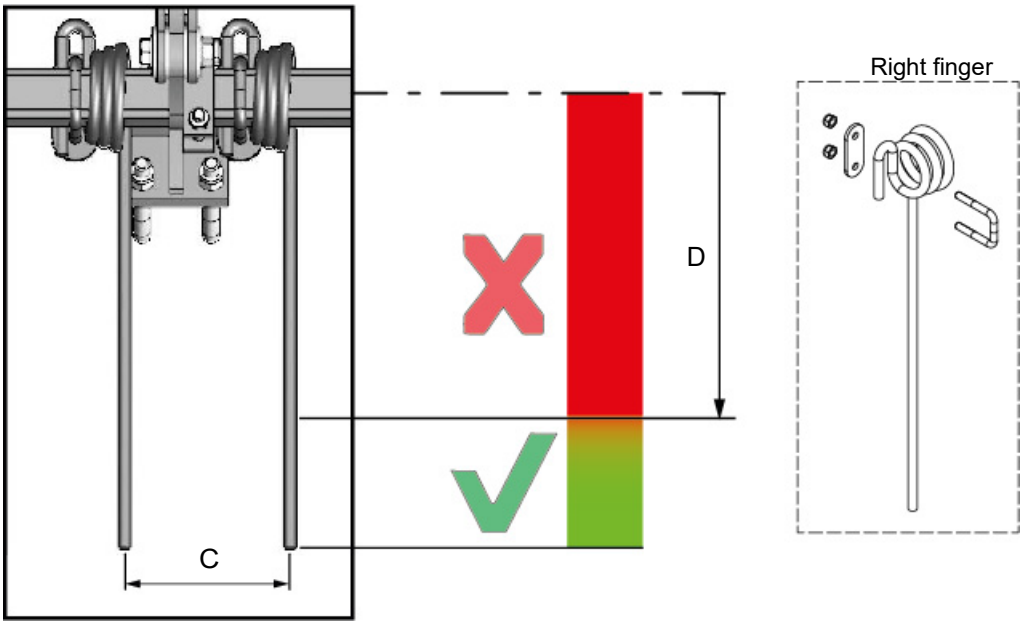
Actipress Solo

CAUTION

Check the level of wear of the levelling blades regularly
If the skids are not replaced in time, parts which are too worn may be lost during work and the levelling blades may in turn become worn.

Wear of the fingers on harrow for roller

- Regularly check the wear and shape of the fingers.
- Replace the fingers when they are bent and/or badly worn: minimum length **D** = **350mm**.
- To maintain the performance of the finger harrow, when replacing it, keep the original arrangement of the fingers on the machine with a step **C** of **167 mm** between each finger.



On delivery of the tool, check that all accessories are present and that no damage has occurred during transport. Any claims must be made to us in writing within six (6) days.

The warranty will apply only if the conditions appearing on the delivery contract have been met by the buyer.

The warranty cannot apply if the machine:

- has been repaired by the customer without the dealer's approval,
- has been modified by fitting non-original parts.

At the end of the machine's life, it must be scrapped in accordance with environmental rules. Follow the appropriate instructions when disposing of the machine.



CAUTION

Do not spread on the ground or pour into sewers used grease or other substances such as motor oil, hydraulic oil, coolant fluid, brake fluid, fuel, etc.

Metal parts

All metal parts may be sent to a scrap metal recycling centre.

Tyres

Tyres can be sent to a tyre recycling centre.

Hydraulic fluid

Collect hydraulic fluid in clean, sealed containers designed for this purpose. Avoid using food containers or drinks bottles.
Take hydraulic fluid and hoses to an appropriate recycling centre.

Declaration of conformity

In accordance with Directive 2006/42/EC



CD1001
EC identification plate, CE marking

We,

Kverneland Group Les Landes-Genusson SAS
9, rue du Poitou
FR-85130 Les Landes-Genusson

declare under our sole responsibility that the product

CD1001 and accessories

to which this declaration relates, meets the relevant health and safety requirements stipulated in EC Directive **2006/42/EC**.

To implement the safety and health requirements stipulated in the EC Directive, the following standards have been taken into account:

- EN ISO 4254-1:2013

Kverneland Group Les Landes-Genusson S.A.S
9 Rue du Poitou
85130 LES LANDES-GENUSSON
FRANCE

Les Landes-Genusson, 01-12-2020

Guillaume Hulin
Chief Executive Officer, Kverneland Group Les Landes-Genusson

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