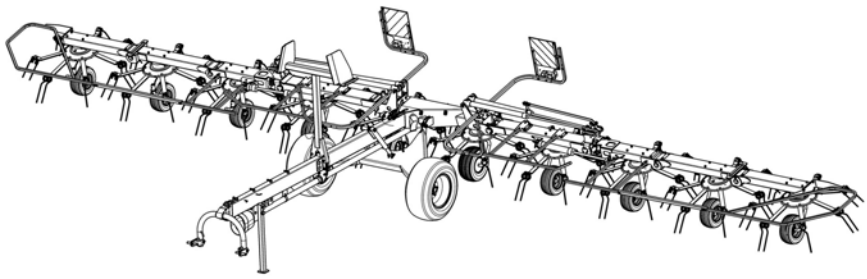


TE10514C

Operator's manual

Original operator's manual

Edition	01.2018
Date of print	06.2022
Language	EN
Machine number	UKGTEDK7PJBM00448 –
Model	TED6921
Document number	A145362840

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	TE10514C
Operating width	13.35 m (43.80 ft)
Weight	2300 kg (5071 lbs)
Machine number	UKGTEDK7P _ _ _ _ _ _ _ _
Accessories	
Address of supplier	
Address of the manufacturer	Kverneland Group Kerteminde AS Taarupstrandvej 25 DK-5300 Kerteminde Denmark Tel: +45 65 19 19 00

Table of contents

Target group for this operator's manual

Simplified illustrations for better understanding
Illustrations of the machine in the operator's manual are shown without protective equipment – or with the protective equipment open – for better understanding. Be sure to observe the safety information and follow the handling instructions in the operator's manual. Serious or fatal injury may be caused as a result.

This operator's manual is intended for trained agriculturists and persons who are otherwise qualified for agricultural activities and have received instruction in working with this machine.

For your safety
You must familiarise yourself with the contents of this operator's manual before assembly or initial operation of the machine. In this way, you will achieve optimum work results and operational safety. The operator's manual forms an integral part of the machine and must always be kept to hand. This will ensure that you:

- avoid accidents.
- comply with warranty conditions.
- have a fully functional machine in good working order at all times.

Training and instruction

Your will receive training from your dealer concerning using the controls and care of the machine.

Information for the employer
All personnel are to be regularly, but at least once a year, instructed on the use of the machine, in accordance with the regulations of the national organisation for Health and Safety at Work. Untrained or unauthorised persons are not permitted to use the machine.

You are responsible for ensuring that the machine is operated and maintained safely. Make sure that you and all other persons that operate, maintain or work in close proximity with the machine are familiar with the operating and maintenance regulations, as well as the corresponding safety instructions in this operator's manual.

Symbols used

In this operator's manual, the following symbols and terms have been used:

- A bullet point accompanies each item in a list.

▸ A triangle indicates operating functions which must be performed.

[+] A plus sign indicates additional equipment which is not included in the standard version.

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

- Moderate to serious injury
- Fatal injury

The warning information in the operator's manual is specifically associated with individual operations and instructions. It is important to observe the warning information before these operations are carried out.

In the »Safety« chapter, you will also find safety information which is not related to individual operations, but rather is designed to encourage safety-conscious behaviour in various situations.

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

- Serious faults in the correct operation of the machine
- Damage to the machine

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

The "Information" pictogram indicates tips and additional information.

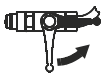
The “Examples” pictogram indicates examples that assist understanding of the instructions.

The spanner indicates tips for assembly or adjustment work.

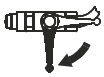
This arrow in the diagram shows the direction of travel.

- Switch on the tractor.

- Switch off the tractor engine, put the parking brake in the park position, remove the ignition key and secure the tractor against rolling away.



- Open the ball valve.



- Close the ball valve.

The grease gun indicates the points that must be lubricated using the grease gun.

The brush indicates the points that must be lubricated using the brush.

For your safety

Familiarise yourself with your equipment and its limitations. Read the entire manual before attempting to put the machine into operation and to use it.

This chapter contains general safety instructions. Each chapter of the operator's manual contains additional specific safety information which is not described here. Observe the safety information:

- in the interest of your own safety.
- in the interest of the safety of others.
- to ensure the safety of the machine.

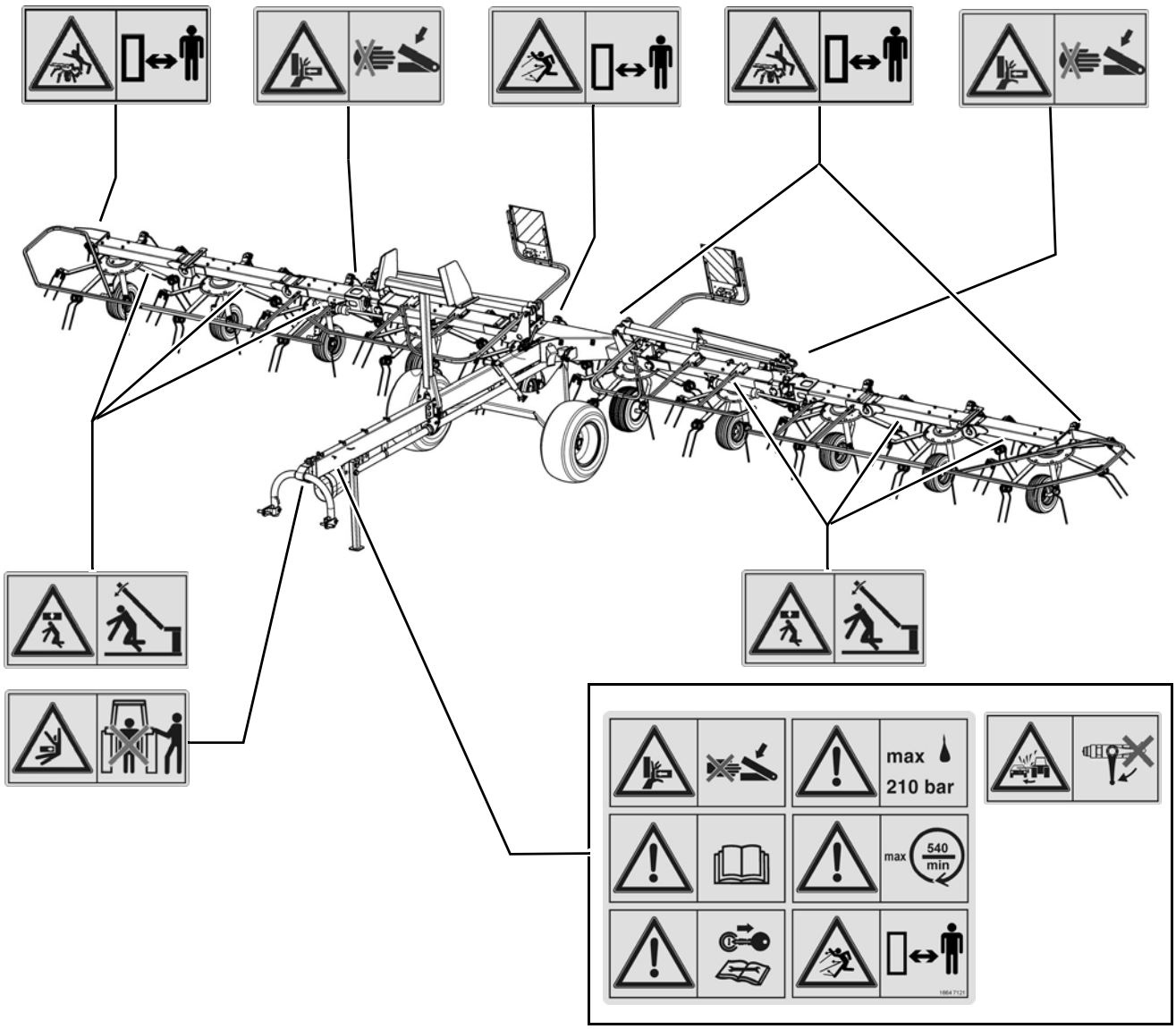
Numerous risks can result from handling agricultural machinery in the wrong way. Therefore, always work with particular care and never under time pressure.

Information for the employer
Inform all persons who work with the machine about this safety information at regular intervals and in accordance with statutory regulations.

Warning signs

Safety-related stickers attached to the machine indicate potential hazards. The stickers must not be removed. Illegible or missing stickers should be replaced. You can obtain new stickers as replacement parts from your dealer.

Warning signs on the machine



Meaning of warning signs

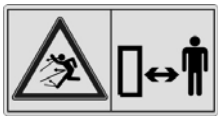
Read the operator's manual
Read and observe the operator's manual and the safety instructions before using the machine for the first time. The machine must not be used for the first time until the operator's manual has been read and understood. This applies in particular to the safety information. Serious or fatal injury may be caused as a result.

Switch off the engine
Only perform maintenance, repair and adjustment work when the machine is shut down. Serious or fatal injury may be caused as a result.

Distance from the rotor
Maintain a safe distance from the rotor when it is rotating. Nobody may remain in close proximity to the machine when tedders and rakes are running. Serious or fatal injury may be caused as a result.

Distance from the tractor
When the machine is being coupled, uncoupled or operated, there should be no-one between the tractor and the machine. Serious or fatal injury may be caused as a result.

Risk of crushing
Never reach into an area where there is a risk of crushing if parts in that area are still likely to move. Serious or fatal injury may be caused as a result.



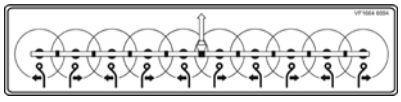
Caution, parts ejected at speed
Hazard caused by parts which may become detached when the drive is in operation, and ejected at speed. Maintain a safe distance. Serious or fatal injury may be caused as a result.

No persons within the slewing range
There is an acute risk of injury within the slewing range from machine parts which are slewing or folding. Serious or fatal injury may be caused as a result.

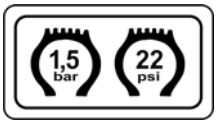
Do not exceed the maximum hydraulic pressure
The tractor's hydraulic pressure on the machine's hydraulic system must not exceed 210 bar. Damage to the machine may be caused as a result.

PTO shaft speed 540 rpm
The specified maximum PTO shaft speed of 540 rpm must not be exceeded. Damage to the machine may be caused as a result.

Close the ball valve for road transport
Always close the ball valve for road travel and transportation. The machine may swing out if the ball valve is open. This can result in traffic accidents and accidents causing serious or fatal injuries.



Observe the direction of rotation of the rotors
Observe the direction of rotation of the rotors and the tine position. If the direction of rotation of the rotors is incorrect and/or the tine position is incorrect, the machine does not work correctly.



Check tyre pressures
Check tyre pressure on a regular basis. Incorrect tyre pressures reduce the service life of a tyre and cause unstable driving characteristics. Accidents with serious or fatal injuries may be caused as a result.

Jacking points for carriage jack
Jacking points for the carriage jack are identified with the sticker. Secure the machine and use a suitable carriage jack. Proceed in accordance with the instructions in the "Maintenance" chapter.

Lubrication points
Lubrication points are marked with an information label. Lubricate the machine in accordance with the instructions in the "Maintenance" chapter.

Who is allowed to operate the machine?

Only qualified personnel
Only qualified persons who have been informed of the dangers associated with handling the machine are permitted to operate, service or repair the machine. The necessary knowledge can be gained in the course of agricultural vocational training, professional training or intensive instruction.

General safety information

The general safety information and warning signs apply to every phase of the life cycle of the machine and to every application.

Switch off the tractor and secure it
Before you dismount:

- Switch off the PTO shaft drive.
- Lower all implements.
- Switch all operating controls to the neutral or park position.
- Put the tractor's parking brake into the park position.
- Switch off the tractor engine, put the parking brake in the park position, remove the ignition key and secure the tractor against rolling away.
- Remove the ignition key.
- Secure the tractor against rolling away.

An unsecured tractor can run you over or trap you. Serious or fatal injury may be caused as a result.

Operate for the first time only after proper training
The machine may only be put into operation if thorough training has been carried out by an authorised dealer or by an employee of the manufacturer. Operation without proper training can lead to damage to the machine due to incorrect operation, or may cause accidents.

Safety is your responsibility
Follow the safety instructions. Ensure that all operators comply with the safety instructions. Prevent serious or fatal accidents by following the safety instructions.

Instructions in the event of malfunctions
In the event of a malfunction

- Shut down,
- Stop and secure the machine immediately.
- Immediately rectify the faults, if you are qualified to do so, or
- Commission an authorised dealer.

Operating a faulty machine can cause accidents or damage.

No persons in the working area
Ensure that no persons – children in particular – are present in the slewing and working area of the machine. Persons could be caught by the machine within this area. Fatal injury may be caused as a result.

Correct working conditions
Ensure that the tractor and the machine are always in perfect working condition. Make sure that the tractor brakes work in synchronisation with the machine. Also follow the instructions in your tractor's operator's manual.

Never manoeuvre or position in the transport position
Never manoeuvre machines in the transport position if the machine is not coupled properly. When manoeuvring, also make sure that all parking stands are retracted and secured. Otherwise, damage to the machine or life-threatening injuries may caused as a result.

Switch off the PTO shaft drive when raising the machine
Switch off the tractor's PTO shaft drive if people – especially children – may enter the working area of the machine when you

- raise the machine,
- raise the side devices or
- raise the rotors to the headland position.

Rotating, unprotected parts can damage the machine and cause life-threatening injuries.

Switch off the tractor PTO shaft drive
Switch off the tractor's PTO shaft drive when changing from work to transport position (and vice versa). Wait for moving parts to come to a stop. If this requirement is ignored, the consequence may be damage to the machine and even life-threatening injuries.

No reversing while the drive is running
Never drive in reverse with the PTO shaft drive running and in the work position if people may enter the working area of the machine. Switch off the PTO shaft drive. Rotating, unprotected parts can damage the machine and cause life-threatening injuries.

Specified workwear
Do not wear baggy, loose-fitting or other unsuitable clothing. Loose fitting items of clothing may become caught in rotating parts. Wear workwear and protective clothing which is suitable for the working environment and the operating conditions. Wear workwear and protective clothing, as specified by the Accident Prevention and Insurance Association. Serious or fatal injury may be caused as a result.

No riding on the machine
Persons or objects must never be transported on the machine. Carrying passengers on the machine is life-threatening and prohibited. Serious or fatal injury may be caused as a result.

Safety for children
Never assume that children will remain where you last saw them. Be alert and shut down the machine if children are in the working area of the machine. Prohibit children from playing on or around the machine and from operating the machine.

Never work on the machine while it is running
No operations may be performed on the machine while it is running. Objects or persons can be caught, drawn in or crushed. Serious or fatal injury may be caused as a result.

Safe distance from raised and unsecured loads
Never work under suspended loads. Maintain a sufficient distance from raised and unsecured loads. Serious or fatal injury may be caused as a result.

Only use the PTO shaft specified
Use only the PTO shafts specified by the manufacturer and read the attached operator's manual carefully. Adjust the length of the PTO shaft as required. Incorrect PTO shaft lengths can cause damage to the machine and personal injury.

Check and fasten the PTO shaft guard in position
The rotating PTO shaft is protected by the PTO shaft guard. Ensure that the guard is not damaged. Fasten the PTO shaft guard in position by connecting the chains on the implement and the tractor. Unguarded PTO shafts can cause life-threatening injuries.

Make sure the machine is standing level
Before changing from the transport to the work position (and vice versa), make sure the machine is standing level. The machine could tip over, particularly on hillside locations. Damage to the machine and serious or fatal injury may be caused as a result.

Do not make any modifications to the machine
No modifications of any kind may be made to the machine. Unauthorised modifications can adversely affect the correct operation and safety of the machine and shorten its service life. Unauthorised modifications to the machine render the manufacturer's guarantee null and void and free the manufacturer from all liability.

Maximal PTO shaft speed: 540 rpm
The specified maximum PTO shaft speed of 540 rpm must not be exceeded. A higher PTO shaft speed will damage the machine.

Checking the angle of lock
On machines with attachment carriers, a steering angle of 80° is possible. This angle must not be exceeded. Otherwise, damage to the PTO shaft may be caused as a result.

Unrestricted field of vision to the rear
After it has been coupled, ensure that you have an unrestricted view of the machine, in both its work and transport positions. Otherwise, dangerous situations may not be detected in good time. Accidents or damage may be caused as a result.

Keep the rear window closed
Always keep the rear window of the tractor cab closed when folding. During the folding procedure, an open rear window can be irreparably damaged. A damaged rear window can cause personal injury.

Coupling

Increased risk of injury
When the machine is being coupled to the tractor, there is an increased risk of injury. Therefore:

- Switch off the tractor engine, put the parking brake in the park position, remove the ignition key and secure the tractor against rolling away.
- Never stand between the tractor and machine.
- Lock the PTO shaft securely on the PTO stub shafts of the tractor and the machine.

If this requirement is ignored, the consequence may be damage to the machine and even life-threatening injuries.

Attaching electrical connections after assembly
The electrical supply to the tractor must not be connected when the lighting equipment is being fitted. Otherwise, short circuits may occur and the electronic system may be damaged.

Observe the operator's manual of the PTO shaft manufacturer
Observe the operator's manual of the PTO shaft manufacturer. It will provide you with instructions on how to handle the PTO shaft correctly. If these instructions are ignored, damage may be caused to the PTO shaft and machine.

Risk of tipping due to unsecured quick-release couplings
When the machine is coupled to tractors with lower link quick-release couplings, the quick-release couplings must be secured against unintentional opening. If the quick-release couplings open unintentionally, the tractor and machine may tip over. If this requirement is ignored, the consequence may be damage to the machine and even life-threatening injuries. Also follow the instructions in your tractor's operator's manual.

Hydraulics

Hydraulic connection at zero pressure only
Only connect hydraulic hoses to the tractor hydraulic system if the tractor and machine hydraulic system is at zero pressure. A pressurised hydraulic system can trigger unpredictable movements of the machine and can cause serious damage to the machine and personal injury. Serious or fatal injury may be caused as a result.

High pressures in the hydraulic system
The hydraulic system is under high pressure. Regularly check all lines, hoses, and screwed connections for leaks and externally visible damage. Only use suitable equipment when looking for leaks. Rectify any damage immediately. Oil escaping under pressure may result in injuries and fires. Seek medical attention immediately if injuries occur.

Replace hydraulic hoses every six years or sooner
Hydraulic hoses age without showing externally visible signs. Replace hydraulic hoses every six years or sooner. Use hydraulic hoses only with the same technical specifications. The required information is printed on the hydraulic hose. Defective or incorrect hydraulic lines can cause serious or fatal injuries.

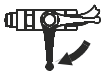
Colour-coded hydraulic connections
The hydraulic connections are uniquely colour-coded. Lines between the tractor and machine should be connected to hydraulic connections of the same colour. Wrongly connected hydraulic connections can initiate unforeseen movements on the machine.

Road transport

Ensuring road safety
The machine must conform to current national traffic regulations if you intend to drive with it on public roads. Ensure the following:

- Lighting, warning and protective equipment must be fitted.
- The permissible transport widths and weights, axle loads, tyre load-bearing capacities, laden weights and national speed restrictions must be complied with.
- The maximum permissible road transport speed must be complied with, but not exceed 50 km/h (30 mph).
- Before driving on public roads, fold in all guard bars and rotors and secure the machine.
- The machine should only be towed by agricultural or forestry tractors.

The empty weight of the tractor must be greater than the weight of the machine. The driver and keeper of the vehicle are liable should these conditions not be observed.



Close the ball valve
Close the ball valve before driving on the road. If the ball valve is open and there is an operating error, the machine may drop or swing out unexpectedly. This can result in traffic accidents and accidents causing serious or fatal injuries.

Check tyre pressures
Check tyre pressure on a regular basis. Incorrect tyre pressures reduce the service life of a tyre and cause unstable driving characteristics. Accidents with serious or fatal injuries may be caused as a result.

Altered driving and braking performance
Driving and braking performance are altered when the machine is coupled or hitched to the tractor. When cornering, take the overall width and centrifugal mass of the machine into consideration. Adjust your driving speed accordingly. A driving style which is not adapted to conditions can cause accidents. Accidents with serious or fatal injuries may be caused as a result.

Speed adjustment
In poor road conditions and at high speeds, significant forces can be generated which subject the tractor and machine material to high or excessive stresses. Adjust your driving speed to the road conditions. A driving style which is not adapted to conditions can cause accidents. Accidents with serious or fatal injuries may be caused as a result.

Check hitch pins
Hitch pins must be in perfect condition. Hitch pins must show no signs of wear and be properly secured. Otherwise, hitched machines may detach themselves of their own accord. Accidents with serious or fatal injuries may be caused as a result.

Check release ropes on quick-release couplings
Release ropes must hang loose and must not trigger a release in their lowered position. Hitched machines may otherwise detach themselves from the lower link hitching system of their own accord. Accidents with serious or fatal injuries may be caused as a result.

Operation

Operate for the first time only after proper training
The machine may only be put into operation after proper training has been provided by an employee from a dealership or the manufacturer, or by a factory representative. Operation without training can lead to damage to the machine due to incorrect operation, or cause accidents.

Make sure the machine is in perfect working condition
Do not operate the machine unless it is in perfect working condition. Check all key components and their correct operation before use. Replace defective components. Defective components can cause material damage and personal injury.

Check the protective equipment
The protective equipment must not be removed or by-passed. Check all protective equipment before using the machine. Unprotected machine parts can cause serious or fatal injury.

Check the immediate vicinity
Check the area immediately surrounding the machine before driving off, and continually during operation. Make sure that you have an adequate view. Only begin work when the immediate vicinity is cleared of any persons or objects. Serious or fatal injury may be caused as a result.

Retighten all nuts, bolts and screws
Regularly check that nuts and bolts are correctly tightened. Retighten bolts if necessary. Nuts and bolts can work loose when the machine is used. Damage to the machine or accidents may be caused as a result.

→ Observe the correct torque specifications in chapter »Screw and bolt tightening torques« on page 69.

The PTO shaft continues turning after it has been switched off
After the PTO shaft drive on the tractor has been switched off, the machine continues to run due to the moment of inertia. Maintain a sufficiently safe distance until all moving parts have come to a complete standstill. Otherwise, damage to the machine and serious or fatal injury may be caused as a result.

Cornering and turning manoeuvres
Centrifugal forces are in operation during cornering. The machine's centre of gravity at the rear of the tractor is displaced. Be aware of the turning radius and the moment of inertia. A driving style which is not adapted to conditions can cause accidents. Accidents with serious or fatal injuries may be caused as a result.

Uncoupling

Increased risk of injury
There is an increased risk of injury when uncoupling the machine from the tractor. Therefore:

- Switch off the tractor engine, put the parking brake in the park position, remove the ignition key and secure the tractor against rolling away.
- Never stand between the tractor and machine.
- Set the machine down on firm, secure and level ground.
- Ensure that the parking stand is securely locked.
- Place the PTO shaft in the holder provided.
- Secure the machine against rolling away.

Failure to observe these instructions can result in serious or fatal injury.

Care and maintenance

Observe the care and maintenance intervals
Observe prescribed intervals for maintenance checks and inspections specified in the operating manual. If these periods are not observed, damage to the machine and accidents may be caused as a result.

Use original parts
Many components have special properties that are essential for the stability and correct operation of the machine. Only spare parts and accessories supplied by the manufacturer have been tested and approved. Other products may adversely affect the correct operation of the machine and safety. Using non-OEM replacement parts renders the manufacturer's guarantee null and void and frees the manufacturer from all liability.

When performing care and maintenance work:

- Switch off the PTO shaft drive.
- Whenever possible, uncouple the tractor.

- Switch off the tractor engine, put the parking brake in the park position, remove the ignition key and secure the tractor against rolling away.
- Ensure the machine is standing on firm, secure and level ground, and provide additional support, if necessary.
- Secure the machine against rolling away.

Only if these regulations are observed can safe working be ensured during care and maintenance work.

Turn off the electrical supply
Disconnect the power supply before working on the electrical system. Systems being supplied with electrical power can cause damage to equipment and injury to persons.

Caution when cleaning with a high-pressure cleaner
Exercise caution when cleaning with a high-pressure cleaner. Bearings, seals and pipe unions are not waterproof. In order to prevent damage to the machine, the bearings, seals and pipe unions must not be exposed to direct contact with the high-pressure water jet.
No aggressive washing additives
Do not use any aggressive washing additives for cleaning. Uncoated metal surfaces can be damaged.

Before carrying out welding work
Disconnect all electrical connections from the tractor when carrying out welding on the hitched machine. Damage may otherwise be caused to the electrical system.

Retighten all nuts, bolts and screws
All pin and screwed connections that are loosened during maintenance and repair operations must be retightened. Serious injury and damage to equipment can be caused by loose pin and screwed connections.

→ Observe the correct torque specifications in chapter »Screw and bolt tightening torques« on page 69.

Further regulations

Observe the regulations
In addition to the safety information listed above, observe the following:

- Regional accident prevention regulations.
- Generally recognised safety regulations, occupational health requirements and road traffic regulations.
- The instructions provided in this operator's manual.
- Standards and instructions relating to operation, maintenance and repair.

Warranty

The warranty and manufacturer's liability will no longer be valid if the instructions provided in the chapter on Safety are not observed, if maintenance is inadequate or faulty, if the machine is used for purposes other than those for which it was intended and if it is overstressed, or if impermissible modifications are made to the machine.

EU type approval

An EU type approval in line with EU Regulation 167/2013 for vehicle class "S" is available for this machine.

The EU Certificate of Conformity is included in the scope of delivery as evidence of the EU type approval. Present the EU Certificate of Conformity to the licensing authorities to obtain the type approval.

Invalidation of the type approval

If a trailed machine with EU type approval is modified to such an extent that it is no longer in the condition it was delivered in or it no longer meets EU Certificate of Conformity specifications, the type approval is invalidated.

The customer or the dealer must present the machine to the national Technical Audit Association without delay so that the modifications can be entered in the national approval documents.

Range of application of the machine

This product is classified as replaceable equipment in accordance with EC directive 2006/42/EC.

The machine is a rotary tedder that is solely to be used for tedding, turning and swathing mown, stalked material such as straw and hay.

Proper use

Any use other than the use described above - such as silo spreading, and any type of soil preparation, sweeping, or transmitting power to other machines - constitutes improper use. The manufacturer and dealers are not liable for damage caused by improper use. The risk is borne solely by the user.

Features of the machine

Use on large areas
This rotary tedder with a working width of over 13 m and a combination of 10 rotors is ideal for large-scale operations.

Low-maintenance gears
The machine is equipped with low-maintenance gears and seven tine arms per rotor. The fully enclosed gears run in an oil bath and provide perfect protection against wear.

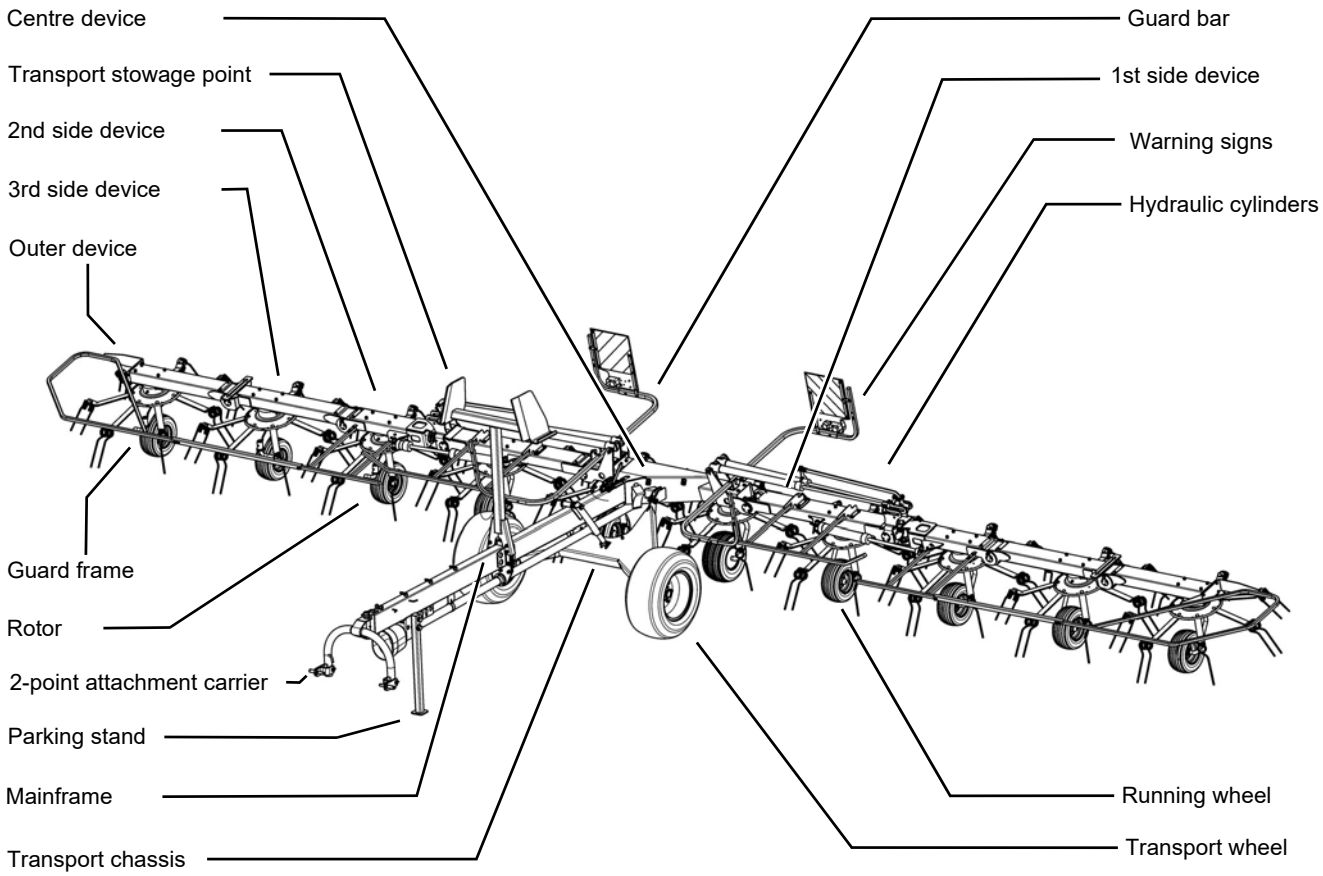
Clear field edges
The crop is spread inwards away from the field edge by swivelling the controlled second and third side devices and the outer device. This helps to prevent fodder from being lost.

Inclination of rotors
The inclination of rotors is adjustable. This enables processing a wide spectrum of feed types.

Simple transformation from work to transport position
The rotary tedder is easily changed from work to transport position. The hydraulic cylinders swivel the rotary tedder into the transport position. Dismounting from the tractor is not required.

Stable chassis
The machine is equipped with a stable chassis, offering the highest degree of safety possible in conjunction with the large transport wheels.

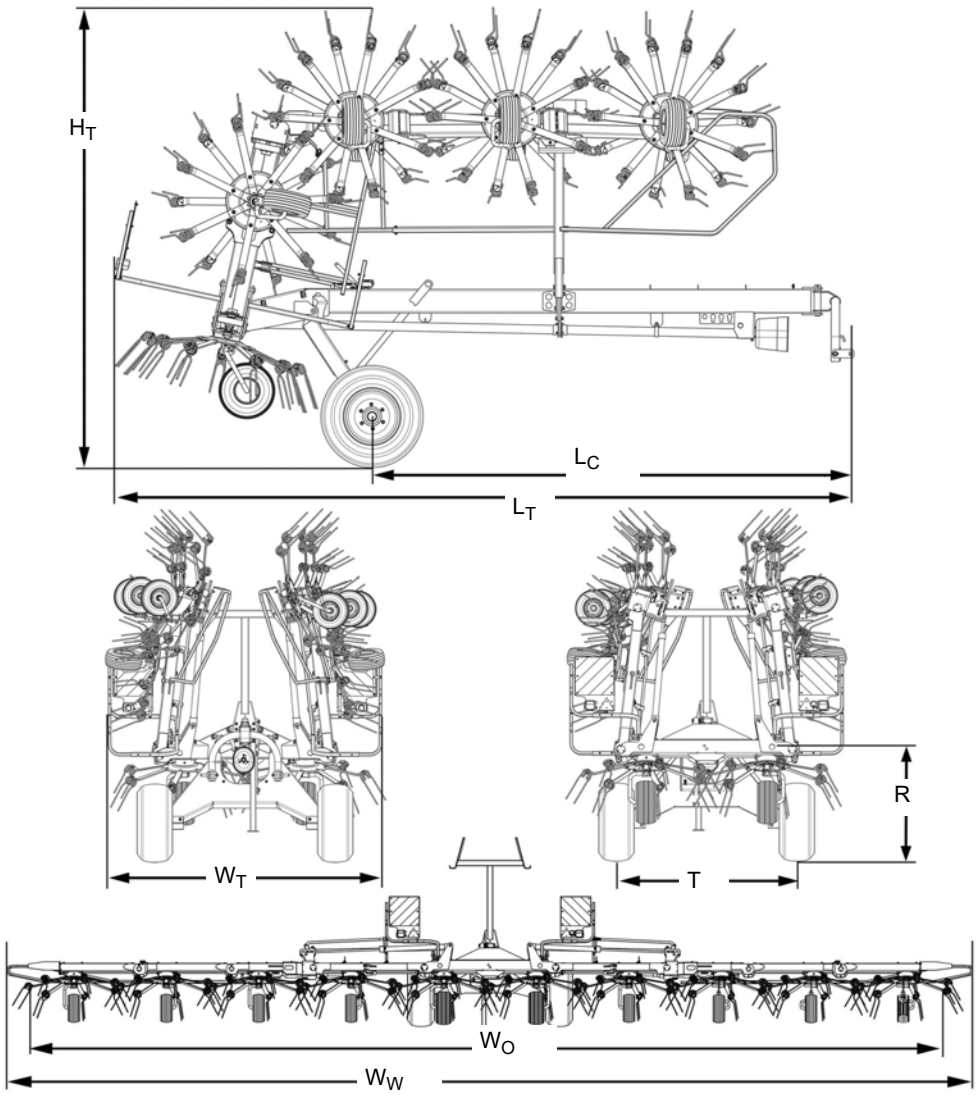
Designation of components



Technical specifications

Dimensions

		Work position (m)	Transport position (m)
L_T	Length	6.20 (20.34 ft)	
L_C	Length to chassis axle	–	4.05 (13.29 ft)
W	Width	W_W: 13.80 (45.28 ft)	W_T: 2.98 (9.78 ft)
H_T	Height	–	3.85 (12.63 ft) Parking height: 3.40 (11.15 ft)
R	Reflector height	–	1.18 (3.87 ft)
W_O	Clearing width	13.35 (43.80 ft)	–
T	Chassis track width	–	1.93 (6.33 ft)



Weights

Transport position		
M_M	Total weight according to EC Directive 2006/42/EC	2300 kg (5071 lbs)
M_{EU}	Technical total weight according to EU Regulation 167/2013. Total axle loads on the transport chassis	2020 kg (4454 lbs)
H_L	Supported load on the attachment carrier. Attachment carrier (category 2)	280 kg (617.30 lbs)

Tractor equipment required

Output / connections		
	Minimum output of the tractor	60 kW (82 hp)
	Voltage supply for lighting equipment	12 V, 7-pin plug socket ISO 1724
	Hydraulic connections	1 x double-acting hydraulic control device 1 x single-acting hydraulic control device with floating position
	Hydraulic pressure	150 - 210 bar
	PTO shaft speed	540 rpm
	Lower link	Fixable in height and laterally, (category 2)

Machine equipment

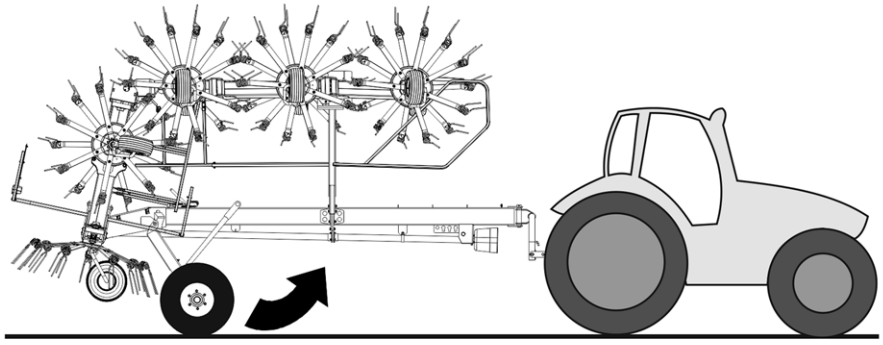
Rotors / tine supports / tines		
	Number of rotors	10
	Number of tine supports per rotor	7
	Tine guard	8
	Tine adjustment	Mechanical
	Hydraulically controlled clearance of the field edge	Standard
	Tine saver	[+]
Wheels		
	Centre device running wheel axles and first side device	18.5 x 8.50-8 Imp. 6PR (x 4)
	Running wheel axles of the second and third side devices	16 x 6.50-8 Imp. 6PR (x 6)
	Chassis wheels	10.0/75-15 8R
Safety accessories		
	Lighting equipment	Standard
	Warning signs	Standard
PTO shaft		
	Single wide-angle	Standard

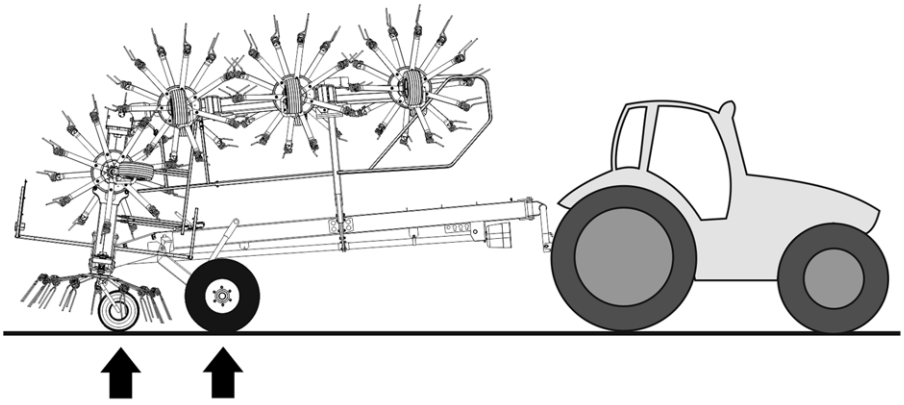
Measurement of airborne sound emissions

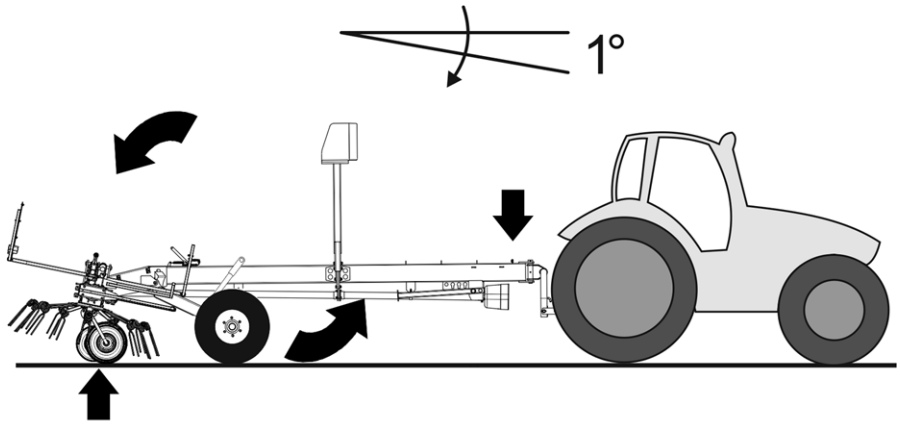
The airborne sound emissions from the machine are below the levels stipulated by machinery directive 2006/42/EC.

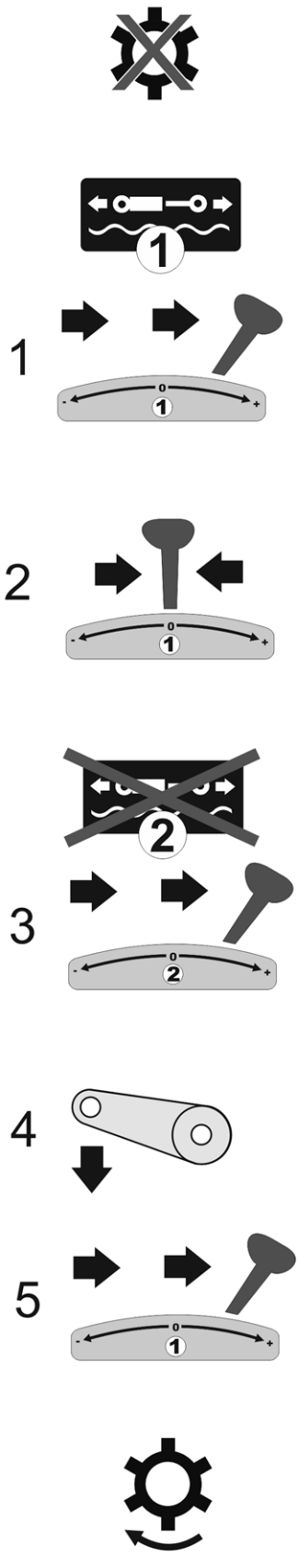
- A-weighted sound level in the workplace:
  < 70 dB(A)
- Currently C-weighted sound level:
  < 63 Pa (130 dB based on 20 µPa)
- A-weighted sound level on the machine:
  < 80 dB(A)

Quick guide









Checking the scope of delivery

Delivery is in the fully assembled state
The machine is delivered fully assembled. Using the check list, check the loose parts on delivery. If any parts of the machine have not been fitted or are missing, please contact your dealer.

Do not assemble the machine yourself
Trained personnel are required to assemble the machine. Do not perform assembly work yourself. The following points are required to be met for the machine to be in proper condition:

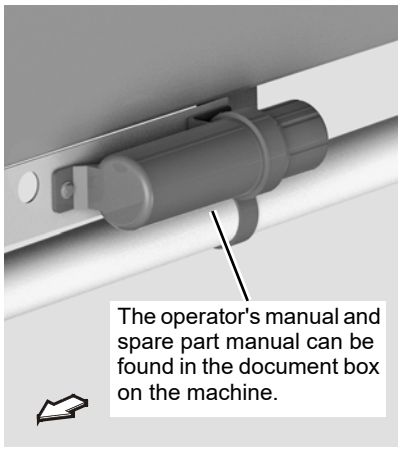
- Observance of a sequence of worksteps.
- Compliance with tolerances and torques.
- Knowledge of work safety during assembly.

Incorrect assembly can result in damage to the machine or accidents.

If parts are missing or have been damaged during transportation, please inform the dealer, importer or manufacturer immediately.

Check list for parts which were supplied loose	Quantity
PTO shaft for drive	1
Operator's manual	1
Spare part manual	1
EU Certificate of Conformity	1
Additional equipment	See delivery note

Operator's manual



The operator’s manual is a safety feature that belongs with the machine and must always be kept on board. A document box for the operator's manual and spare part manual is mounted on the main frame.

Adjusting the PTO shaft

The length of the PTO shaft was selected at the factory to suit almost all types of tractor. Only in exceptional cases is a correction of the PTO shaft length required on individual tractors. Check the length of the PTO shaft on each tractor prior to first use.

A manufacturer's operator's manual for the PTO shaft is enclosed. This includes detailed information on the relevant version of the PTO shaft and must be observed.

Safety

Switch off the tractor engine, put the parking brake in the park position, remove the ignition key and secure the tractor against rolling away

Before you dismount:

- Lower all implements to the ground.
- Switch all operating controls to their neutral or park position.

- Switch off the tractor engine, put the parking brake in the park position, remove the ignition key and secure the tractor against rolling away.

An unsecured tractor can run you over or trap you. Otherwise, serious or fatal injury may be caused as a result.

Correct length

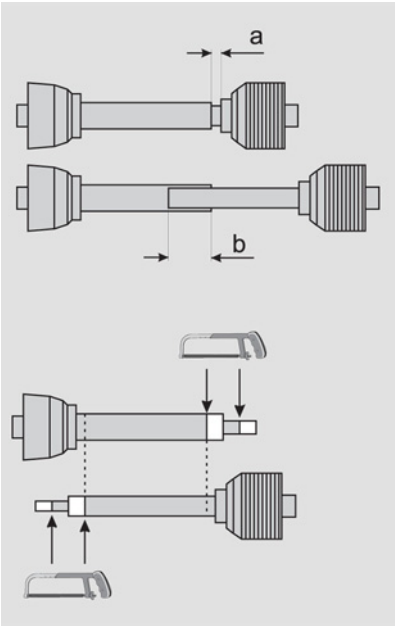
A PTO shaft that is too long must not be used. Otherwise, damage to the drive bearings on the tractor and machine may be caused as a result.

Checking the length of the PTO shaft

- Couple the machine to the tractor without the PTO shaft.
- Lower the lower link of the tractor.
- Set the combination (tractor and machine) to the smallest steering angle.

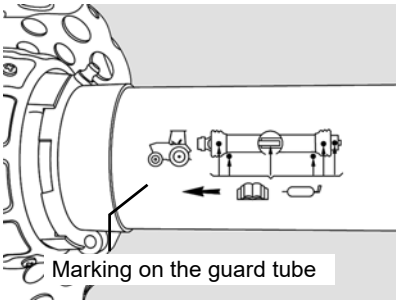
- Switch off the tractor engine, put the parking brake in the park position, remove the ignition key and secure the tractor against rolling away.

Shortening the PTO shaft



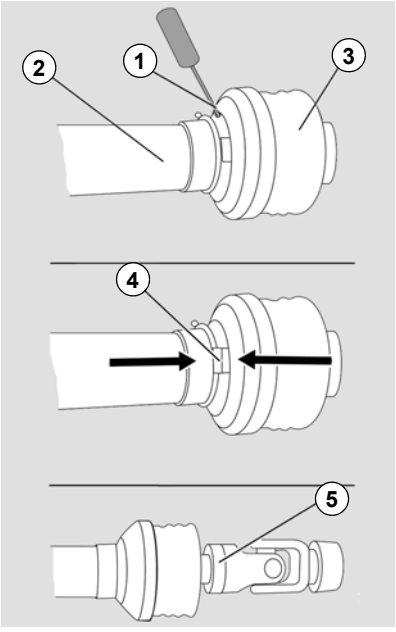
- Pull the PTO shaft apart and connect one half to the tractor PTO shaft drive and one to the machine and secure them.
- Place the two shaft halves next to each other and:
  - Check for a minimum of 250 mm (10 in) overlap (b).
  - Check that the PTO shaft does not block at one end (minimum clearance (a) = 20 mm (1 in)
- Shorten the slide tube and guard tube by the same dimension.
- Deburr the ends of the tube.
- Remove the swarf.
- Grease the sliding surfaces well.

Fitting the PTO shaft


Marking on the guard tube

Make sure that you fit the PTO shaft in the correct installation position. There is a marking on the guard tube of the PTO shaft.

- Check the length of the PTO shaft and shorten it if necessary.
- Place the PTO shaft onto the PTO stub shaft of the machine.
- Secure the PTO shaft with a locking pin.



- Remove the locking screw (1) between the guard tube (2) and the guard cone (3).
- Twist the guard cone (3) and the guard tube (2) in opposite directions so that the "noses" of the slide ring (4) are positioned directly over the slots on the guard cone (3).
- Pull the guard cone (3) and guard tube (2) back until the single joint (5) is accessible.
- Connect the PTO shaft to the machine.
- Push the guard cone (3) and guard tube (2) back over the single joint (5).
- Tighten the locking screw (1).
- Secure the guard cone to the gear box using a jubilee clip.

Safety

Observe the safety information
Disregard for safety information can lead to serious or fatal injury.
See chapter »Safety«, page 7.

Increased risk of injury
When the machine is being coupled to the tractor, there is an increased risk of injury. Therefore:

- Never stand between the tractor and machine.
- Secure the tractor against rolling away.
- Persons must not be present behind the machine under any circumstances.
- Actuate the three-point power lift system slowly and carefully.

Failure to observe these instructions can result in serious or fatal injury.

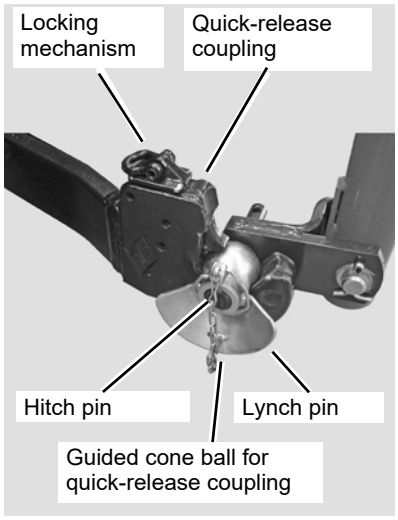
General

The following worksteps are described in this section:

- »Coupling the lower link«
- »Swivelling in the parking stand«
- »Coupling the PTO shaft«
- »Electrical connections«
- »Hydraulic connections«

Coupling the 2-point attachment carrier

Tractors with quick-release couplings



Follow the instructions for the quick-release coupling
Follow the instructions below for tractors with quick-release couplings. Also note the instructions and warnings in the operator's manual of the tractor manufacturer.
If this requirement is ignored, the consequence may be damage to the machine and even life-threatening injuries.

- Slide guided cone balls for the quick-release coupling that are suitable for the tractor onto the hitch pins of the machine.
- Secure the guided cone balls for the quick-release coupling with lynch pins.
- To couple the machine, raise the lower link (rear power lift system) until the locking mechanisms for the quick-release coupling lock in place.
- Follow the instructions for »Coupling the lower link«, page 31.

Coupling the lower link

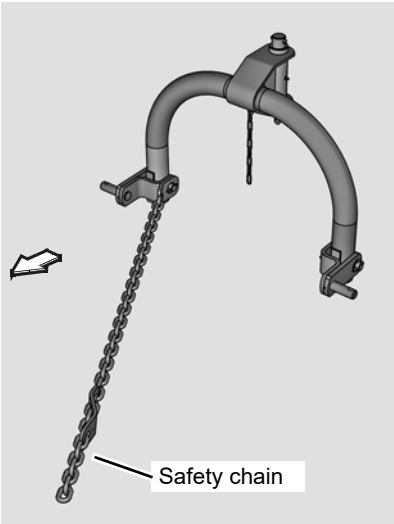
The following applies to all tractors – with or without quick-release couplings:

- Couple the machine to the lower link - in accordance with the operating manual of the tractor manufacturer - lift slightly and secure.
- Slightly raise the lower link.
- Secure the tractor against rolling away, shut off the engine and remove the ignition key.
- Swivel in the parking stand.

  → See »Swivelling in the parking stand«, page 32.
- With the lower link in the work position, lift it off the ground until the main frame of the machine is tilted approximately 1 degree forwards.
- Engage the lower link at the sides.
- Adjust the lower link such that a uniform ground clearance is maintained.

Safety chain

The safety chain is an auxiliary coupling which must be used for road transport.



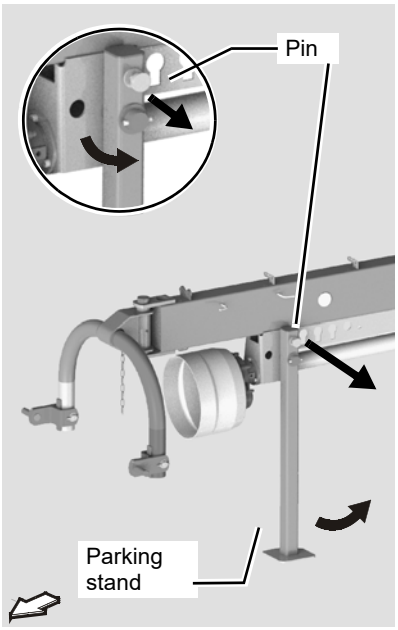
Safety chain
When travelling on the road, always connect the machine and the tractor using a safety chain. Use a safety chain with a strength that corresponds to at least the supported load of the machine. Otherwise, serious or fatal injury may be caused as a result.

- Fasten the supplied safety chain between the tractor and the machine.

Choose an appropriate length of chain so that the movement of the drawbar is not adversely affected and the chain does not hang down too low.

Also observe the national regulations regarding the length and fitting of safety chains, as well as the tractor manufacturer's operating manual.

Swivelling in the parking stand

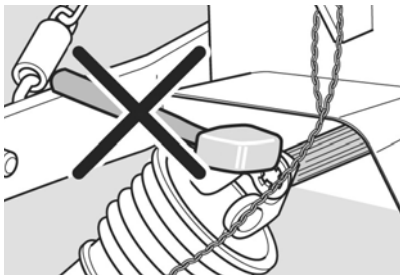


After coupling the machine to the tractor, swivel in the parking stand.

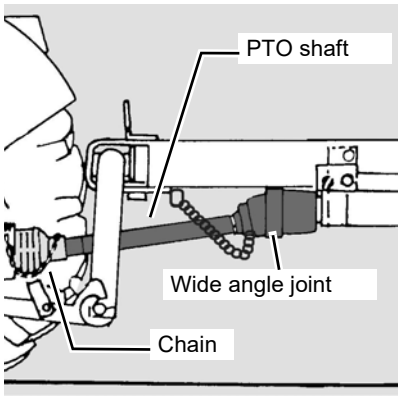
- Switch off the tractor engine, put the parking brake in the park position, remove the ignition key and secure the tractor against rolling away.
- Pull the pin on the parking stand.
- Swivel in the parking stand.
- Release the pin on the parking stand and lock it in place.

Coupling the PTO shaft

Make sure that you fit the PTO shaft in the correct installation position. There is a marking on the guard tube of the PTO shaft.

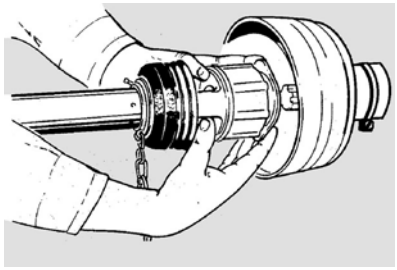


Do not use force
When coupling the PTO shaft, do not use a hammer or any similar tools. Using these types of tool can severely damage the PTO shaft. Damage to the machine may be caused as a result.

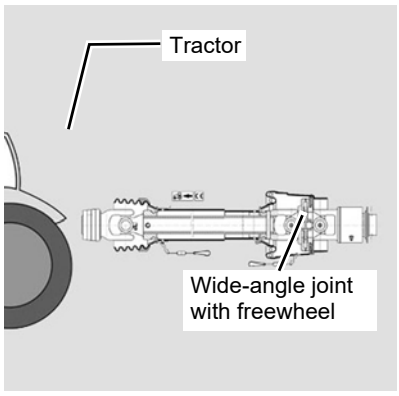


When coupling the PTO shaft, make sure it is in the correct position.

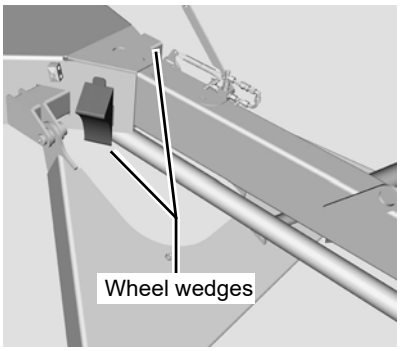
- Check whether the PTO shaft must be shortened before coupling.
- Shorten the PTO shaft if necessary.
  → »Checking the length of the PTO shaft«, page 28.
- Check that the tractor's PTO stub shaft is clean and lubricated.
- Couple the PTO shaft to the tractor and the machine.



- Ensure that the PTO shaft is engaged on the shaft ends.
- Secure the guard tubes so that they cannot rotate at the same time.
- Couple the wide-angle joint to the machine's PTO stub shaft.



Wheel wedges



Use wheel chocks
Never remove the wheel chocks before the machine has been coupled to the tractor. Persons could be run over by the machine or the tractor. Serious or fatal injury may be caused as a result.

- Switch off the tractor engine, put the parking brake in the park position, remove the ignition key and secure the tractor against rolling away.
- Remove wheel wedges from in front of the wheels.
- Fit the wheel chocks into the brackets provided on the left and right of the transport chassis and lock them in place securely.

Connections

Electrical connections

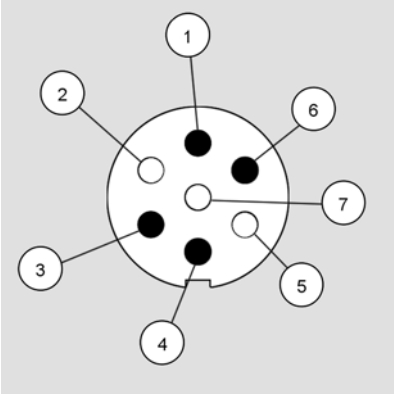
Checking the electrical cables
Check the electrical cables. The electrical cables must not chafe or hang loose. Electrical cables that have been torn away or worn through must be replaced. Damage to the machine may be caused as a result.

Attach the following electrical cables to the tractor:

Lighting equipment

- Connect the plug for the 12 V power supply to the 7-pin plug socket on the tractor.

ISO 1724 plug arrangement



A connection in accordance with ISO 1724 must be present on the tractor. If your tractor does not have the corresponding connection, a corresponding connection must be retrofitted. Consult your dealer.

PIN	Cable	Connection to
1	Yellow	Left-hand indicator (amber)
2		Not used
3	White	Earth; all lights
4	Green	Right-hand indicator (amber)
5	Brown	Right rear light (red)/right position light (white)
6	Red	Brake lights
7	Black	Left rear light (red)/left position light (white)

Hydraulic connections

Check hoses and couplings
Check all hydraulic hoses for damage before connecting them. Check all hydraulic couplings for firm seating after connecting them. Defective hydraulic hoses and poorly fitting hydraulic connections can trigger unpredictable movements of the machine, causing severe damage to the machine as well as personal injury. Serious or fatal injury may be caused as a result.

Secure the tractor's control devices
In the transport position, secure the tractor's control devices against unintended actuation and lock them if possible. Unintentional activation of a control device can trigger unpredictable movements of the machine and cause serious machine damage and personal injury. Serious or fatal injury may be caused as a result.

Check the routing of the hydraulic hoses
Close or disconnect the quick-release couplings with great care. Remove any dirt or air which has entered the hydraulic system. The hydraulic system may otherwise be seriously damaged. Material damage or personal injury may be caused as a result.

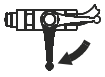
Avoid mixing oils
If the machine is used on different tractors, an impermissible mixing of oil may occur. Impermissible oil mixtures can irreparably damage tractor components.

High pressures in the hydraulic system
The hydraulic system is under high pressure. Regularly check all lines, hoses, and screwed connections for leaks and externally visible damage. Never use your hands to search for suspected leaks. Only use suitable equipment when looking for leaks. Rectify any damage immediately. Fluid escaping under pressure can penetrate skin may result in injuries and fires. Seek medical attention immediately if injuries occur.

Connecting the hydraulic couplings

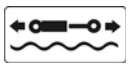
Ensure the connection is correct
Ensure that the hydraulic system is connected correctly. Otherwise, injuries and damage to the machine may be caused as a result.

Hydraulic connection at zero pressure only
Work must only be performed on the hydraulic system if the tractor and machine hydraulic system is at zero pressure. A pressurised hydraulic system can trigger unpredictable movements of the machine and can cause serious damage to the machine and personal injury. Serious or fatal injury may be caused as a result.



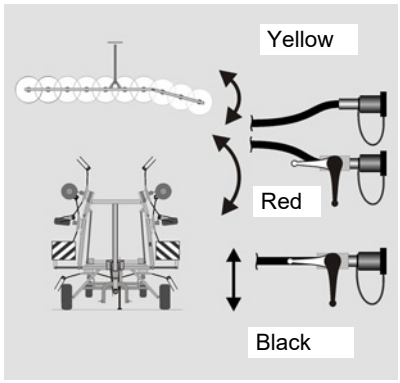
- Close the ball valve.
- Set the tractor hydraulics to “free float”.

- Switch off the tractor engine, put the parking brake in the park position, remove the ignition key and secure the tractor against rolling away.
- Roll up the control ropes and store them in the tractor cab.



- Connect the machine's hydraulic coupling to the single-acting hydraulic control device when it is set to the floating position.
- Connect the machine's hydraulic coupling to the double-acting hydraulic control device.

- Deactivate the floating position on the double-acting hydraulic control device.



Connection on a double-acting hydraulic control device:

- The yellow-marked hydraulic coupling for lowering the side devices and hydraulic field edge clearance.
- The red-marked hydraulic coupling for raising and lowering the side devices.

Connection to a single-acting hydraulic control device with floating position:

- Hydraulic coupling for raising and lowering the transport chassis.

Hydraulic line	Marking
Single-acting hydraulic control device pressure line	Black
Double-acting hydraulic control device pressure line	Red
Double-acting hydraulic control device return line	Yellow

Safety

The following applies to all preparations for operation:

Observe the safety information
Observe the safety information. Disregard for safety information can lead to serious or fatal injury. See chapter »Safety«, page 7.

Secure the machine
Secure the machine against accidental starting and rolling away. Use wheel chocks. The machine must stand on a level, firm and secure surface and be supported during the work, if necessary. Unsecured or non-supported machines can cause accidents. Otherwise, serious or fatal injury may be caused as a result.

No persons in the working area
Ensure that no persons – children in particular – are present in the slewing and working area of the machine. Persons could be caught by the machine within this area. This could result in fatal injury.

Avoid the hazard area
The rotors are considered a hazard area. Do not stand in the hazard area. The rotors may lower or turn. This can lead to serious or fatal injuries.

Remove tine supports
When carrying out adjustment work on the machine, tine supports which hinder work on the machine must be removed. Tine supports that are not removed can cause serious injuries.

Unfold fully and evenly
Ensure that the side devices are evenly unfolded. If there is a malfunction, fold the side devices back in and repeat the process at a higher engine speed. The hydraulic cylinders must be completely extended in the work position. Otherwise, the machine may be damaged.

General

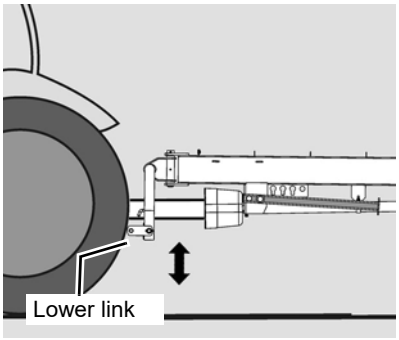
The following applies when performing all adjustment work:

- Check the tyre pressure.
- Secure the machine.
- Lower the machine to its work position.
- Undo the appropriate bolts.
- Make the required adjustment.
- Retighten the bolts.

Adjust the following work settings:

- Rotor pitch
- Tine height

Adjusting the working depth



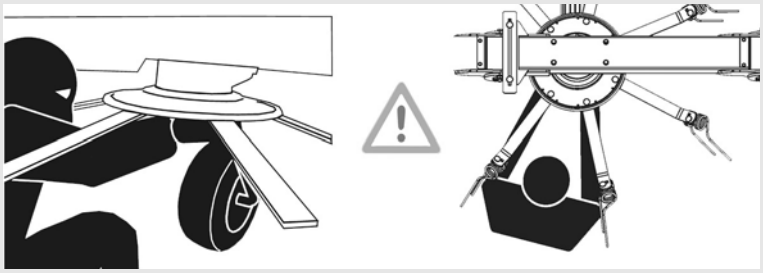
The distance between the tine and ground is adjusted in the work position via the height of the lower link.

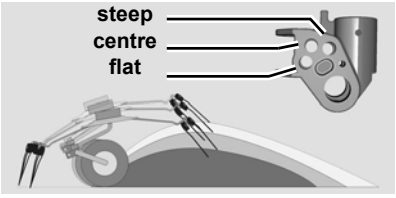
- Switch off the tractor PTO shaft drive.
- Using the hydraulic control device, fold the machine into its work position.
- Align the running wheels by driving forwards.
- Adjust the lower link to the required height to adjust the distance between the tines and the ground. The tines must only just be touching the ground.

Adjusting the rotor pitch

Secure the machine
Secure the machine against inadvertent starting and rolling. The machine must be standing on firm and level ground and, if necessary, be supported during the work. Unsecured or non-supported machines can cause accidents.

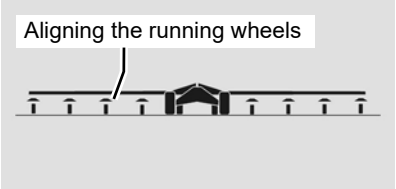
Never work under the rotors
Do not carry out work on raised rotors unless they have been secured. Carry out the work only from the outside and between the tine arms. Otherwise, serious injury may be caused.



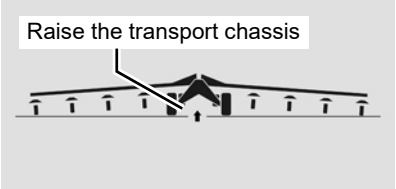


By virtue of the tedding angle, rotor pitch determines how far the crop is ejected from the rear. The tedding angle can be adjusted in steps of 1°.

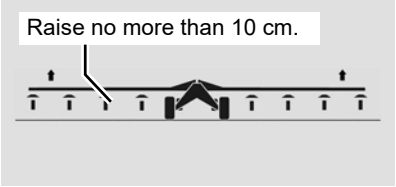
- Switch off the tractor PTO shaft drive.
- Using the hydraulic control device, fold the machine into its work position and fully extend the hydraulic cylinders.



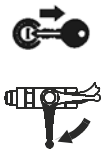
- Align the running wheels by driving forwards.



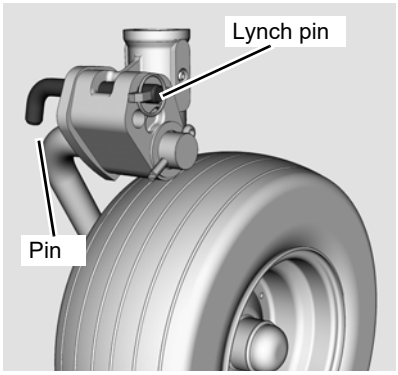
- Raise the transport chassis using the single-acting hydraulic control device. The wheels on the axles must be no more than 10 cm from the ground.



- Raise the side devices using the double-acting hydraulic control device. The wheels on the axles must be no more than 10 cm from the ground.



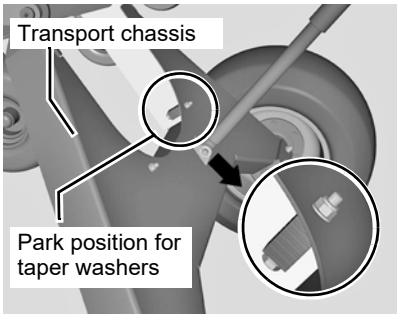
- Switch off the tractor engine, put the parking brake in the park position, remove the ignition key and secure the tractor against rolling away.
- Close the ball valve.



- Release the lynch pin on all rotor chassis.
- Move running wheel axle into new position.
- Insert bolt and secure with lynch pin.

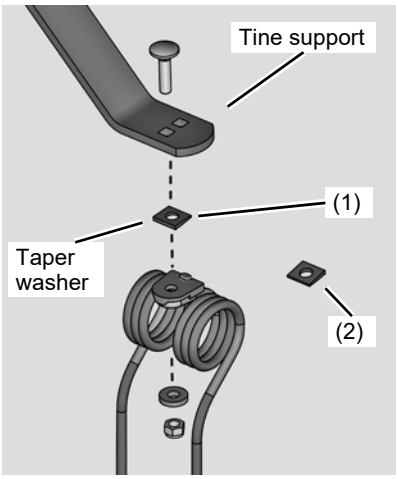
Adjust all wheels uniformly. Flat rotor pitch results in optimised crop pickup.

Adjusting the tine supports



The ejection angle of the spring tines is adjusted by means of taper washers. This function enables consistent, uniform and optimum work results. The smaller the angle, the steeper and stronger the tine position.

- Remove the taper washers from the park position on the transport chassis.



- Attach taper washers to tine supports.
  - Angle of tine position (1): gentle (8°).
  - Angle of tines without taper washer: normal (4°).
  - Angle of tine position (2): aggressive (0°).

Safety

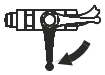
Before transporting the machine on public roads, please read the following safety information. Compliance is mandatory and will help you to avoid accidents.

Observe the safety information
Observe the safety information. Disregard for safety information can lead to serious or fatal injury. See chapter »Safety«, page 7.

Ensuring road safety
The machine must conform to current national traffic regulations if you intend to drive with it on public roads. Ensure the following:

- Lighting, warning and protective equipment must be fitted.
- The permissible transport widths and weights, axle loads, tyre load-bearing capacities, laden weights and national speed restrictions must be complied with.
- The maximum permissible road transport speed must be complied with, but not exceed 50 km/h (30 mph).
- Before driving on public roads, fold in all guard bars and rotors and secure the machine.
- The machine should only be towed by agricultural or forestry tractors.
- The empty weight of the tractor must be greater than the weight of the machine.

The driver and keeper of the vehicle are liable should these conditions not be observed.



Close the ball valve
Close the ball valve before driving on the road. If the ball valve is open and there is an operating error, the machine may drop or swing out unexpectedly. This could cause traffic accidents and accidents with fatal consequences.

Observe transport width
Observe the permissible transport widths. Fold the machine into the transport position and attach lights, warning signs and protective equipment. The driver and keeper of the vehicle are liable for any non-compliance with national traffic regulations.

Observe the contour of the terrain
Move the machine onto ground that is as flat as possible before changing from work to transport position. Avoid inclines on which the combination (tractor and machine) could slip or overturn. There is an increased risk of tipping and injury in a position at right angles to the direction of the slope.

General

The following worksteps are described in this section:

- Prior to road transport.
- Fold up the machine.
- Resetting the field cleaning.
- Releasing the running wheel latch.
- Secure the machine.

Prior to road transport

When driving on public roads, the machine must be in the transport position.

Clean the machine before travelling on the road
Before travelling on the road, remove all coarse dirt, crop residues and clods of earth from the machine and clean it. Crops or dirt that drop onto the road can cause slippery road conditions. This can result in traffic accidents and accidents causing serious or fatal injuries.

Clean lighting equipment before travelling on the road
All lighting equipment must be cleaned before road transport. Crop residue or dirt may cover up the lighting equipment and adversely affect its correct operation. This can result in traffic accidents and accidents causing serious or fatal injuries.

Fold up the machine completely
Ensure that the machine is always completely folded up. Never drive with a partially folded side device. This could lead to accidents and personal injury.

Fit the tine cover
When driving with the machine on public roads and in the park position, all tine supports must be secured using the tine covers provided. This can result in traffic accidents and accidents causing serious or fatal injuries.

The following steps are necessary to set the machine to the transport position:

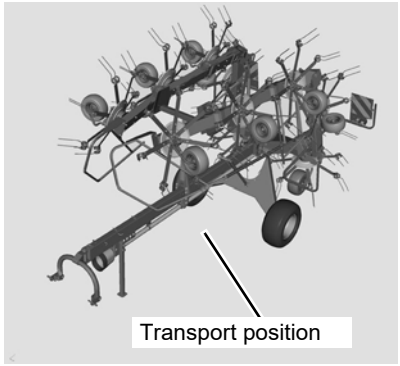
- Remove any crops and coarse dirt.

Folding the machine into the transport position

No persons within the slewing range
Ensure that no persons – children in particular – are present in the slewing and working area of the machine. Persons can be trapped by the machine. Serious or fatal injury may be caused as a result.

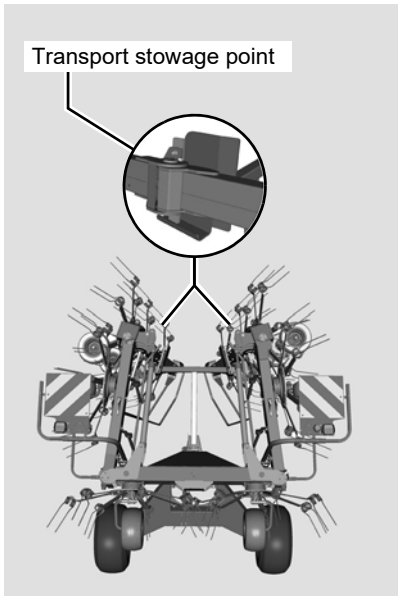
Make sure the machine is standing level
Before changing from the transport to the work position (and vice versa), make sure the machine is standing level. The machine could tip over, particularly on hillside locations. Damage to the machine and serious or fatal injury may be caused as a result.

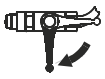
- Switch off the tractor PTO shaft drive.
- Open the ball valve.



- Set the single-acting hydraulic control device for the transport chassis to the neutral position.
- Using the double-acting hydraulic control device, swivel in the side device at an increased engine speed until all hydraulic cylinders are fully retracted.

It is not necessary to reset the angled position. This occurs automatically when the side devices are swivelled in.



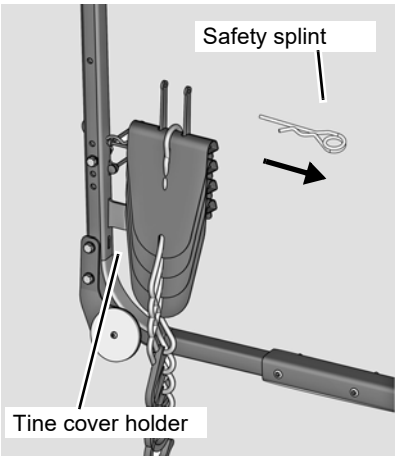


- Check and make sure that the side devices are safely stowed on the transport stowage point.
- Fully raise the transport chassis using the single-acting hydraulic control device.
- Close all ball valves .

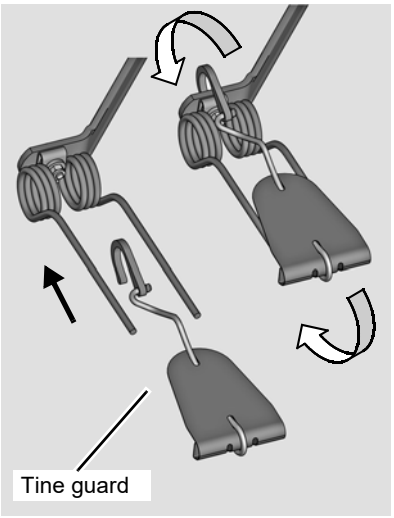
Fitting the tine cover

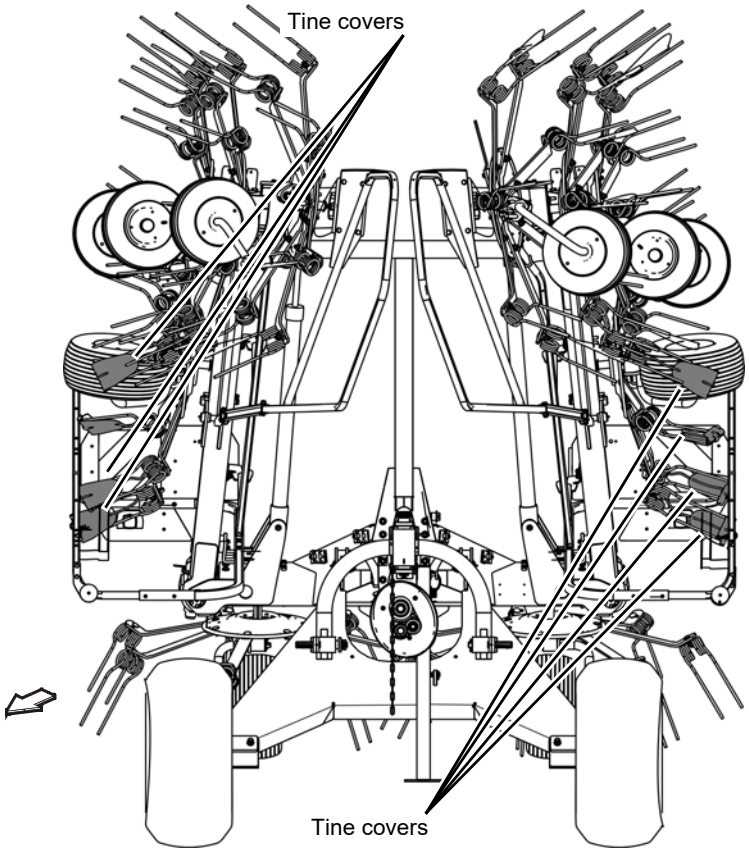
Exercise caution when close to unprotected tines
Maintain a sufficiently safe distance from exposed tines. When working in the vicinity of the tines, ensure that you have a firm footing (risk of slipping on wet ground). Serious or fatal injury may be caused as a result.

All tine tips which point at right angles to the direction of travel and which are at a height of less than 2 metres must be safeguarded using the tine covers supplied, provided these point at right angles to the direction of travel and are not secured by the front guard bar.



- Remove the safety splint and secure it to the holder.
- On each side of the machine, fit a tine cover on four tines (see illustration).





When in the work position, the tine covers are stowed in two holders, one on the right and one on the left of the front guard bar.

- Take a tine cover from the holder.
- Fit the tine cover on the tine.
- Fit all tine covers on the tines provided.

Road transport

Follow the instructions below for road transport. There is otherwise the risk of traffic accidents and accidents with fatal consequences.

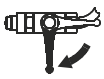
- Before pulling away, check the immediate vicinity. Always make sure that you have a clear field of vision and, in particular, look out for children within the operating area of the machine.
- When the vehicle is in motion, lock the tractor's control devices.
- Do not transport people or objects on the machine.
- Adjust your speed to road conditions.
- Do not exceed a maximum speed of 50 km/h. Comply with the national speed limits.
- Ensure sufficient steering and braking capability. Driving characteristics, steering, and braking capability are all influenced if the machine is coupled (increased braking distance as a result of greater inertia).

There is a danger of tipping on slopes and if corners are taken too fast.

Checking the machine

Prior to driving on the road, check the machine against the check list:

- ☑ Side devices safely stowed on the transport stowage point?
- ☑ Tractor's PTO shaft drive is "OFF"?
- ☑ Side devices completely folded in?
- ☑ Tractor control system for hydraulics is "OFF"?

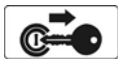


- ☑ All ball valves closed?
- ☑ Lower link engaged and secured at the sides?
- ☑ Hitch pins secured?
- ☑ Machine in transport position?
- ☑ Parking stand in the transport position?
- ☑ Crop residue and dirt removed?
- ☑ Lighting cables routed so that they are not strained and cannot be caught by the tractor's wheels when cornering?
- ☑ Lighting equipment in good working order?

Safety

The following applies for all preparations on the field:

Observe the safety information
Observe the safety information. Disregard for safety information can lead to serious or fatal injury. See chapter »Safety«, page 7.



Switch off the tractor and secure it
Before you dismount:

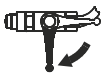
- Switch off the tractor.
- Remove the ignition key.
- Secure the tractor against rolling away.

An unsecured tractor can run you over or trap you. Otherwise, serious or fatal injury may be caused as a result.

Avoid the hazard area
The rotors are considered a hazard area. Do not stand in the hazard area. The rotors may lower or turn. Serious or fatal injury may be caused as a result.

Secure the machine
Secure the machine against accidental starting and rolling away. Use wheel chocks. The machine must stand on a level, firm and secure surface and be supported during the work, if necessary. Unsecured or non-supported machines can cause accidents. Otherwise, serious or fatal injury may be caused as a result.

No persons in the working area
Ensure that no persons – children in particular – are present in the slewing and working area of the machine. Persons could be caught by the machine within this area. Fatal injury may be caused as a result.



Close the ball valve
Close the ball valve before adjusting. If the ball valve is open and there is an operating error, the machine may drop or swing out unexpectedly. This may cause damage to the machine or accidents with fatal consequences.

Observe the slewing process
Observe the rotors during the slewing process. If the machine behaves unusually during the process, stop immediately to avoid damage.

No persons within the slewing range
While the machine is slewing out, no persons must be present within the slewing range. Otherwise, they may be caught by the machine and injured.

General

The following worksteps are described in this section:

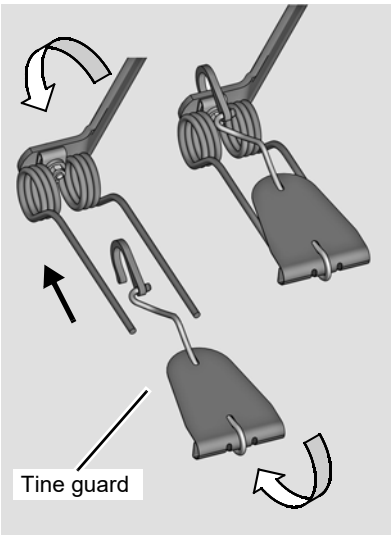
- Fold the machine into its work position.
- Adjust rotor pitch.

Folding the machine into the work position

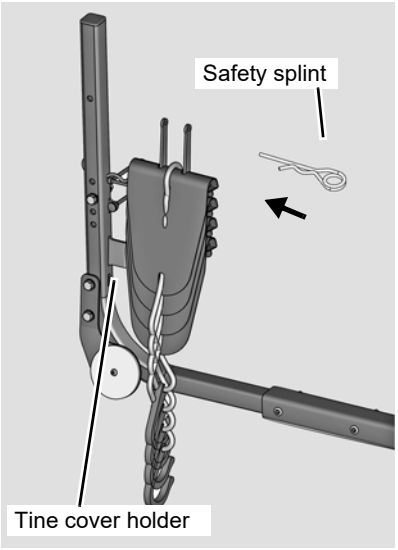
After road transport, the machine is brought into the work position on the field. Follow the handling instructions below.

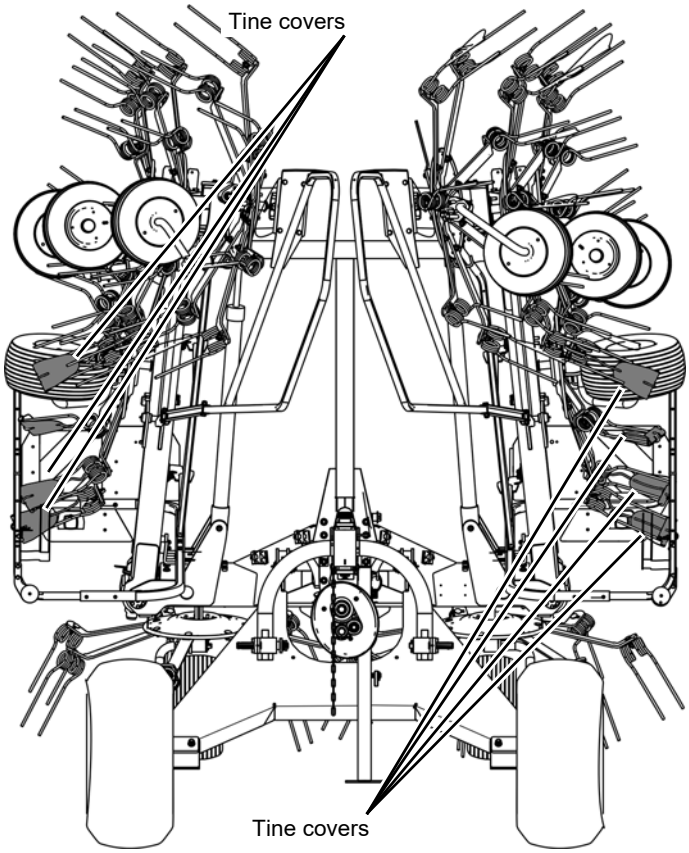
Removing the tine cover

Exercise caution when close to unprotected tines
Maintain a sufficiently safe distance from exposed tines. When working in the vicinity of the tines, ensure that you have a firm footing (risk of slipping on wet ground). Serious or fatal injury may be caused as a result.



- Remove all the tine covers.
- Stow the tine cover in the holder.
- Secure the tine cover in the holder with safety splints.



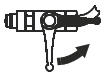


The tine covers are stowed in the two holders, one on the left and one on the right of the front guard bar.

Folding out the machine

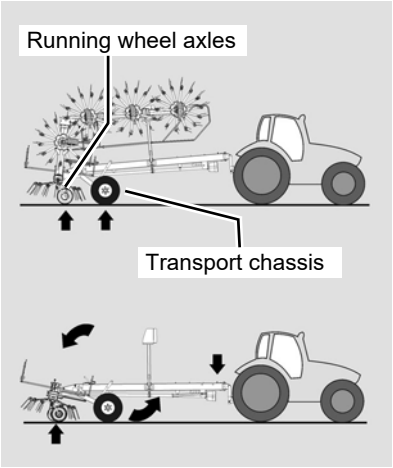
Make sure the machine is standing level
Before folding the machine out, check that it is standing level. The machine could tip over, particularly on hillside locations. This could lead to damage to the machine and personal injury.

Keep the rear window closed
Always keep the rear window of the tractor cab closed when folding. During the folding procedure, an open rear window can be irreparably damaged.

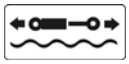


- Open all ball valves.

- Switch on the tractor.



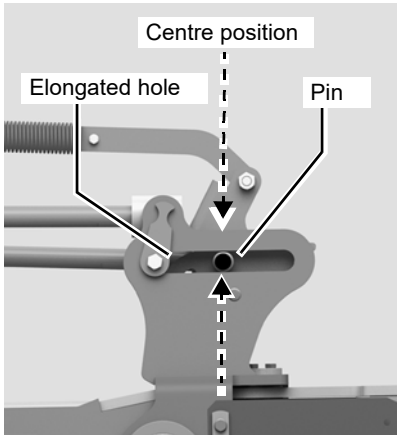
- Using the single-acting hydraulic control device, lower the transport chassis until the wheels on the running wheel axles are touching the ground.
- Using the double-acting hydraulic control device, fold down the side devices until the lift cylinders are fully extended.



- Activate the floating position on the single-acting hydraulic control device.

- Deactivate the floating position on the double-acting hydraulic control device.

Lift cylinder in centre position

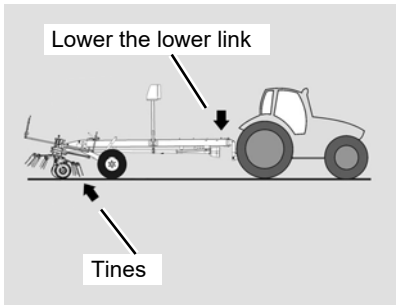


The pin must be roughly in the middle of the elongated hole in order the achieve the correct running and operating characteristics in the work position.

For tractors with control devices with floating position

- Using the double-acting hydraulic control device, fold the side devices down fully until the pin is approximately in the centre of the elongated hole.
- Raise the lower link to working depth.
  - See »Adjusting the working depth«, page 39

Adjusting the rotor pitch



For work on damp or soft ground, it is possible to adjust tine height by means of the rotor pitch.

- Adjust the tine height to suit the ground.
  → »Adjusting the rotor pitch«, page 40
- Lower the lower link on the tractor until the tines are only just touching the ground.

Safety

Observe the safety information
Observe the safety information. Disregard for safety information can lead to serious or fatal injury. See chapter »Safety«, page 7.

No riding on the machine
Persons or objects must never be transported on the machine. Carrying passengers – particularly children – on the machine is life-threatening and prohibited. Serious or fatal injury may be caused as a result.

No persons in the working area
Ensure that no persons – children in particular – are present in the slewing and working area of the machine. Persons could be caught by the machine within this area. Fatal injury may be caused as a result.

Maximum PTO shaft speed 540 rpm
The PTO shaft speed must not exceed 540 rpm and must be adapted to the condition of the crop. Higher revolution rates can cause damage to the machine.

Only allow the PTO shaft clutch to respond for a short time
Do not allow the slip clutch to respond for longer than 3 seconds. If the clutch responds for a longer period of time, it will become worn and the disconnect torque will drop.

Do not compress the PTO shaft
The PTO shaft between the tractor and machine must not be compressed when in the work position or transport position. If compressed, PTO shafts can cause damage to the machine and tractor.

Observe the contour of the terrain
Pay even more attention when driving on an incline. Avoid inclines on which the combination (tractor and machine) could slip or overturn. There is an increased risk of tipping and injury in a position at right angles to the direction of the slope.

Changes in the centre of gravity
When in work position, the machine's centre of gravity changes. Pay even more attention when driving on an incline. Avoid inclines on which the combination (tractor and machine) could slip or overturn. There is an increased risk of tipping and injury in a position at right angles to the direction of the slope.

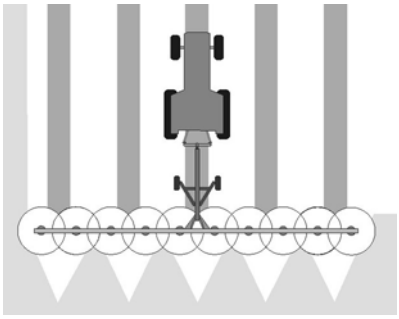
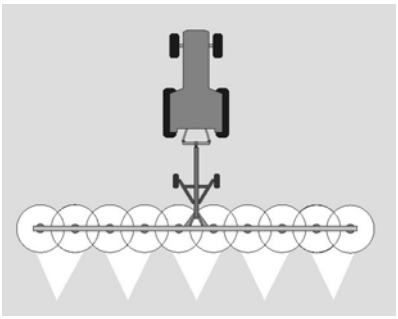
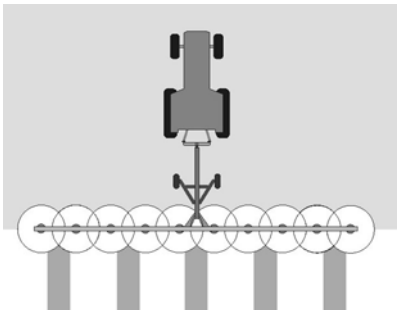
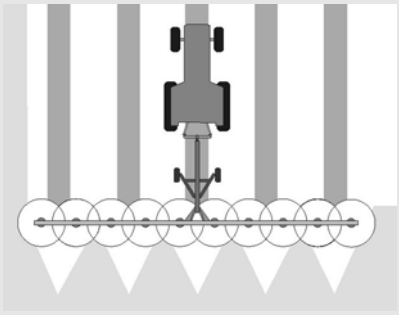
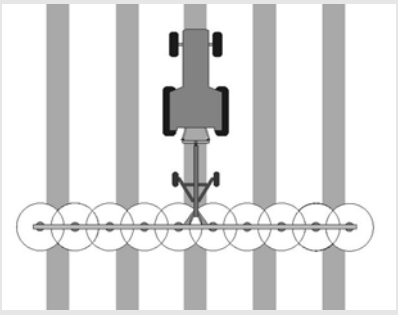
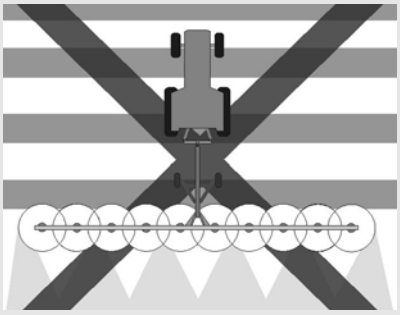
General

The following worksteps are described in this section:

- »Crop processing«
- »Using the machine«
- »Driving on headlands«
- »Border tedding«

Crop processing

The following methods of crop processing are possible with the rotary tedder:

Tedding	Turning	Night swath laying
		
When tedding, the freshly cut crop is distributed over the sward. ▸ Recommended PTO shaft speed: approx 400 rpm	Turning ensures uniform drying of the crop after cutting. ▸ Recommended PTO shaft speed: approx 400 rpm	Night swathing arranges the distributed crop in small swathes. ▸ Fit the night swath gear box. ▸ Maximum PTO shaft speed: 540 rpm
Swath laying	**Night swath turning**	**Prevent crossing swathes**
		
Swath laying disperses the available swath to allow it to dry better.	For uniform drying, use night swath turning.	Swaths should not be crossed. This puts uneven loads on the machine.

Night swathing is possible only with the use of an additional swathing gear.

→ »Night swath gear box«, page 79

- ▸ Night swath laying: work at max. 540 rpm.
- ▸ Night swaths can be tedded again by turning.

Using the machine

No persons in the working area
Ensure that no persons – children in particular – are present in the slewing and working area of the machine. Persons could be caught by the machine within this area. Fatal injury may be caused as a result.

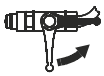
Requirements

The machine is set correctly as follows:

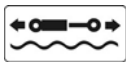
- Correct adjustment of rotor pitch.
- Correct adjustment of tine supports
- Machine in work position.

Start work as follows:

- Switch on the tractor.



- Open the ball valve.



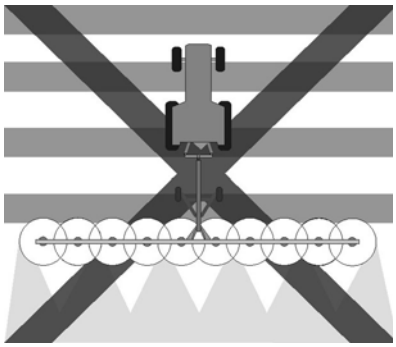
- Set the single-acting hydraulic control device to the floating position.
- Check that there is nobody in the working area of the machine.

Switching on the PTO shaft drive

- Switch on the PTO shaft drive at a low engine speed.
- Slowly increase the speed. Do not exceed the maximum speed of 540 rpm.
- Select a working speed at which the crop is distributed cleanly and completely.

Select a PTO shaft speed depending on crop processing requirements.

Working speed



Prevent crossing swathes
As a general measure, prevent the crossing of mowing swathes. The crop is distributed unevenly and the machine is subjected to abrupt stresses. Damage to the machine may be caused as a result.

Allow ample space when driving around obstacles
Obstacles must be circumnavigated in good time and at a distance. Due to the width and length of the implement, the machine reacts slowly and has an afterrun. Damage to the machine may be caused as a result.

A constant working speed is essential for uniform crop processing. The working speed should be set between 4 and 8 km/h. The working speed depends on ground and crop conditions.

- Select a working speed (4 and 8 km/h) at which the crop is distributed cleanly and evenly.

Spreading pattern

Depending on the crop, the spreading pattern is changed via the following settings:

- Rotor pitch,
- PTO shaft speed,
- Working speed.

Rotor pitch

- A steep inclination is ideal for tedding.
- A low inclination is ideal for almost dry and short crop and for improved pickup if the stubble is short.

→ »Adjusting the rotor pitch«, page 40

PTO shaft speed

- Too high a PTO shaft speed results in shatter losses and swath formation if the crop is dry.
- Too low a speed produces swath formation.

Working speed

- Too high a working speed produces uneven distribution and heap formation.

Driving on headlands

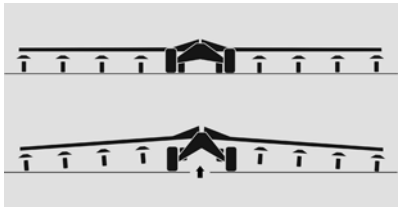
Observe the contour of the terrain
Pay even more attention when driving on an incline. Avoid inclines on which the combination (tractor and machine) could slip or overturn. There is an increased risk of tipping and injury in a position at right angles to the direction of the slope.

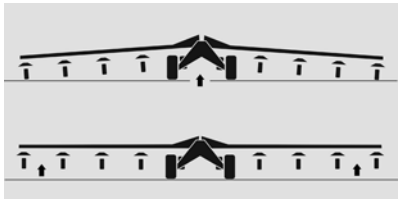
Before raising, reduce the tractor speed and rotational speed of the tines
Before raising to the headland position, significantly reduce the speed and PTO shaft speed. Only raise the machine to the headland position so that the inner side devices are horizontal. Damage to the machine may be caused as a result.

Observe the slewing range
The rear wheels of the tractor must not come into contact with the drawbar or the attachment carrier when cornering. This may happen when turning sharply. Unsuitable driving behaviour can cause serious damage to the machine.

Do not fully raise the machine
Do not fully raise the machine while in the headland. Damage to the machine may be caused as a result.

- Before raising, significantly reduce the speed and PTO shaft speed (≤ 4 km/h).
- Using the single-acting hydraulic control device, fully raise the machine over the transport chassis.



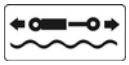


- Use the double-acting hydraulic control device to raise the outer side device into the headland position.
  - The outer side devices first swivel forwards and are then raised.

Only raise the machine to the headland position so that the inner side devices are horizontal. Otherwise, damage to the machine may be caused as a result.

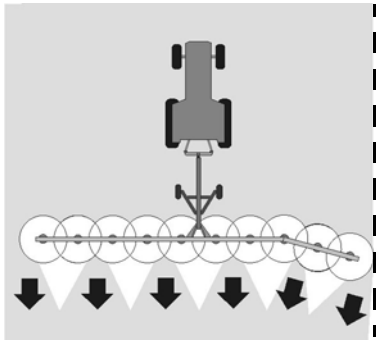
Ending driving on headlands

- Using the single-acting hydraulic control device, lower the transport chassis until the wheels on the running wheel axles are touching the ground.
- Using the double-acting hydraulic control device, fold down the side devices until the lift cylinders are fully extended.



- Activate the floating position on the single-acting hydraulic control device.

Border tedding



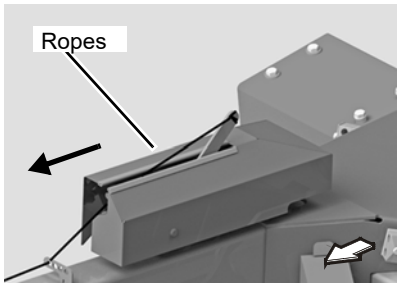
Pay attention to ground quality
Pay attention to ground quality, particularly when tedding borders. The guidelines for turning on downhill terrain must be observed without fail. On an incline, the tractor and machine could tip over. This could result in injury and damage to the machine.

Watch for obstacles
When driving around obstacles or along fences ensure a sufficient distance is kept. A collision may cause damage to the machine.

Take care when cornering in the border tedding position
Note the limited curve radius in the border tedding position. A curve radius which is too tight can cause damage to the machine.

For tedding borders (clearing field edges), the two outer rotors on the right-hand side are tilted inwards using the hydraulics system.

Border tedding



Starting border tedding:

- Pull the rope on the border tedding system and keep the rope tensioned.
- Slowly drive the tractor forwards.
- Using the double-acting hydraulic control device, fold the side devices into the border tedding position.

The cylinders for the side devices must remain extended for the duration of border tedding.

- Check and adjust the cylinder position if necessary.

Ending border tedding:

- Using the double-acting hydraulic control device, fold the side devices into the work position.

Working in the border tedding position

- Switch on the PTO shaft drive at a low engine speed.
- Slowly increase the speed. Do not exceed the maximum speed of 540 rpm.
- Select a driving speed at which the crop is picked up cleanly and distributed evenly.

Safety

The following applies to all cleaning and care work:

Observe the safety information
Observe the safety information. Disregard for safety information can lead to serious or fatal injury. See chapter »Safety«, page 7.

Secure the machine

- Switch off the PTO shaft drive.
- Depressurise the hydraulic system.
- Whenever possible, uncouple the tractor.
- Switch all operating controls to their neutral or park position.
- Put the tractor's parking brake into the park position.
- Switch off the tractor and remove the ignition key.
- Ensure the machine is standing on firm, secure and level ground, and provide additional support, if necessary.
- Secure the machine against rolling away.

Only if these regulations are observed can safe working be ensured during care and maintenance work. Unsecured or non-supported machines can cause accidents.

No persons in the working area
Ensure that no persons – children in particular – are present in the slewing and working area of the machine. Persons could be caught by the machine within this area. Fatal injury may be caused as a result.

Do not clean bearings or hydraulic parts with high-pressure cleaners
Do not clean bearings or hydraulic parts with high-pressure cleaners. The high-pressure cleaner removes the grease film from the bare metal surfaces. Metal surfaces treated in this way can corrode. After each cleaning procedure, lubricate the bearing points and grease uncoated parts.

Clean the bearings and hydraulic parts with care
Exercise caution when cleaning with a high-pressure cleaner. Bearings, seals and pipe unions are not waterproof. In order to prevent damage to the machine, the bearings, seals and pipe unions must not be exposed to direct contact with the high-pressure water jet.

Never manoeuvre or position in the transport position
Never manoeuvre implements with three-point pickup in transport position if the machine is not properly connected to the tractor's three-point lifting pick up. When manoeuvring, also make sure that all parking stands are retracted and secured. Otherwise, damage to the machine or life-threatening injuries may caused as a result.

General

The following worksteps are described in this section:

- »Cleaning«
- »Care«

Cleaning

- Switch off the tractor PTO shaft drive.
- Using the hydraulic control device, fold the machine into its work position.
- Leave the machine coupled to the tractor's lower links.
- Lock the hydraulic control device.

- Switch off the tractor engine, put the parking brake in the park position, remove the ignition key and secure the tractor against rolling away.
- Never clean the bearings and piston rods of hydraulic cylinders using a high-pressure cleaner.
- After each use, clean the machine of any coarse dirt and crop residue.

After cleaning

- Lubricate all bearings after cleaning.
  → Observe the chapter »Maintenance« and the following pages.
- Replace missing warning signs and stickers.

Care

For a long service life, we recommend the following:

- Apply a protective layer of oil to all uncoated work tools. Only use approved, biodegradable oil, e.g. rapeseed oil.
- Repair any paint damage.

Setting down the machine in a secure position

When setting down and parking the machine, special safety precautions have to be observed:

Observe the safety information
Disregard for safety information can lead to serious or fatal injury.
See chapter »Safety«, page 7.

Keep children away from the machine
Forbid children from playing on or around the machine. Select a parking area to which no unauthorised persons have direct access. Metal edges and machine work tools can cause serious injury.

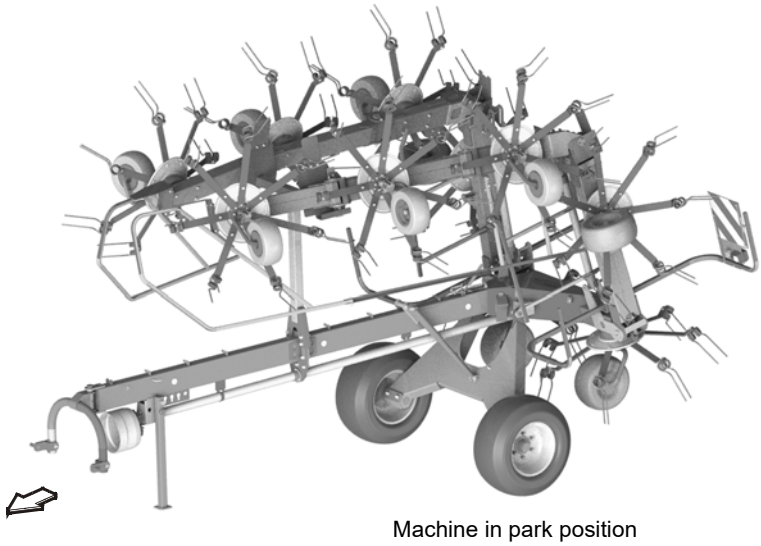
Observe the operating manual of the tractor manufacturer
Note the instructions and warnings in the operating manual of the tractor manufacturer. If this requirement is ignored, the consequence may be damage to the machine and even life-threatening injuries.

Make sure the machine is standing level
Before changing from the transport to the work position (and vice versa), make sure the machine is standing level. The machine could tip over, particularly on hillside locations. Damage to the machine and serious or fatal injury may be caused as a result.

General

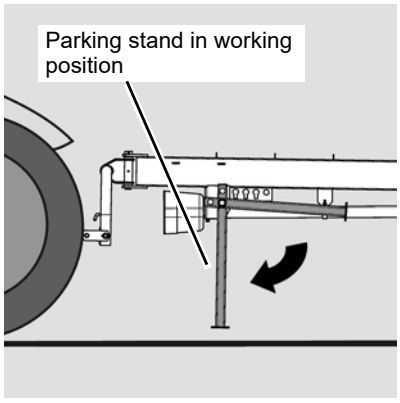
The following worksteps are described in this section:

- »Uncoupling and securing the machine«
- »After the end of the season«



Machine in park position

Uncoupling and securing the machine

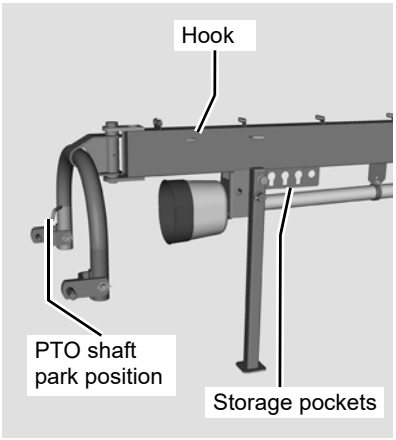


Secure the machine with the parking stand and wheel chocks
When parking and storing the machine, the parking stand and wheel chocks must be used to secure the machine against rolling away. The machine could be damaged and serious or fatal injuries could be caused.

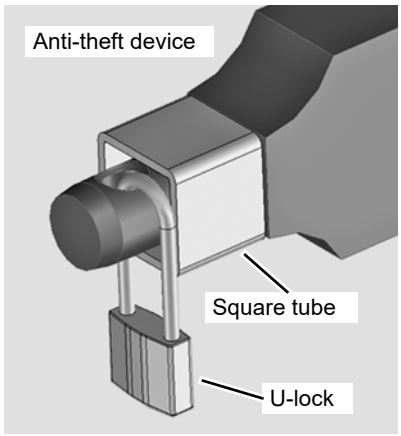
To uncouple the implement from the tractor proceed as follows:

Switch off the tractor PTO shaft drive.

- Stop the machine in the work position on firm, secure, level ground.
- Switch off the tractor engine, put the parking brake in the park position, remove the ignition key and secure the tractor against rolling away.
- Close the ball valve and release the hydraulic couplings.
- Insert hydraulic couplings into the storage pockets on the machine.
- Disconnect the lighting equipment plug [+] and place it into the storage pockets on the machine.
- Pull the pin on the parking stand.
- Tilt the parking stand downwards and lock it in the lower position using the pin and secure it.
- Detach the PTO shaft, place it in the park position provided and secure it with the chain.
- Wind the control rope on the longitudinal carrier onto the hook.
- Release the retainer of the lower link guided cone ball to clear the hitch pin on the machine.
- Lower the lower link until the parking stand rests on the ground.
- Drive tractor forward with lowered lower links.



Locking and securing



To secure the machine against unauthorised use, an anti-theft device corresponding to the type of coupling is included in the scope of delivery.

- Place the square tube on the pin of the lower link and secure with the u-lock.

After the end of the season

Preserve the piston rods of the hydraulic cylinder
For winterising or storing, preserve the piston rods of the hydraulic cylinder with grease. Otherwise the pistons rods may corrode. Damage to the machine may be caused as a result.

After the end of the season and if the machine is to be stored for a long period of time, perform the following work:

- Clean the machine thoroughly.
- Check all the screwed connections and tighten the bolts.
  → Observe the correct torque specifications in chapter »Screw and bolt tightening torques« on page 69.
- Repair or replace any damaged components.
- Repair any paint damage.
- Lubricate the machine in accordance with the lubrication schedule.
- Check the tyre pressures.
- Replace missing warning signs and stickers.

Safety

The following applies to all maintenance work:

Observe the safety information
Observe the safety information. Disregard for safety information can lead to serious or fatal injury. See chapter »Safety«, page 7.

Requirements for maintenance work
Only perform the maintenance work if you have the required expert knowledge and suitable tools. The absence of technical knowledge or suitable tools can cause accidents and injuries.

Protect the machine against unintended starting
The following conditions must be observed for carrying out repairs and maintenance work and rectifying malfunctions on the machine when it is coupled:

- Switch off the PTO shaft drive.
- Switch all operating controls to the neutral or park position.
- Put the tractor's parking brake into the park position.

- Switch off the tractor engine, put the parking brake in the park position, remove the ignition key and secure the tractor against rolling away.
- Ensure the machine is standing on firm, secure and level ground, and provide additional support, if necessary.
- Secure the machine against rolling away.

Serious accidents may be caused if the machine starts accidentally.

Use OEM replacement parts
Many components have special properties that are essential for the stability and correct operation of the machine. Only spare parts and accessories supplied by the manufacturer have been tested and approved. Other products may adversely affect the correct operation of the machine and safety. The use of non-OEM replacement parts renders the manufacturer's guarantee null and void and frees the manufacturer from all liability.

Secure moving parts
Moving parts must be secured with lifting gear against sliding, folding or swivelling. Otherwise, serious injury to persons or damage to the machine may be caused as a result.

Disconnect electrical connections before performing welding work
Disconnect all electrical connections from the tractor when carrying out welding on the hitched machine. Otherwise, electrical and hydraulic systems may be damaged as a result.

Risk of tipping when setting down in transport position
The machine must only be uncoupled and set down in transport position on level ground. Also make sure that all parking stands are extended and secured. Select a parking area to which no unauthorised persons have direct access. Otherwise, damage to the machine or life-threatening injuries may caused as a result.

Protective measures when handling oils or lubricants

Additives in oils and lubricants may have adverse effects on health. As marking in accordance with the hazardous goods regulation is not necessary, please always ensure the following:

Avoid skin contact
Avoid skin contact with these materials. Protect your skin by means of protective skin cream or oil-resistant gloves. Contact can result in skin damage.

Do not use oils for cleaning
Do not use oils or lubricants to clean your hands. Swarf and abraded material in these materials can also result in injuries.

Change any soiled clothing
Change out of clothing that is heavily soiled with oil as soon as possible. Oils can be hazardous to your health.

- Used oil must be collected and disposed of.
- If the skin is damaged by oil or lubricant, seek medical advice immediately.

General

This information relates to general maintenance work. For all maintenance work, the machine must be locked in the work position. If the transport position is required for maintenance work, refer to the relevant instructions for the work.

- Lower the machine to the work position.
- Secure the machine against rolling away by using chocks.

Direction information

Direction information (right, left, front, rear) is given in relation to the direction of travel. Rotary direction is defined as follows:

- Rotary direction right = clockwise.
- Rotary direction left = counterclockwise.
- Rotation about a vertical axis, viewed from top to bottom.
- Rotation about a horizontal axis, viewed at right angles to the direction of travel, from left to right.
- The rotation of bolts and nuts, etc. is always viewed from the operating side.

Maintenance terms

Listed in this table are short explanations of the most important maintenance terms.

Task	Explanation
Greasing	Apply grease to the slide surfaces using a brush.
Lubrication	One or two presses of the grease gun, unless specified otherwise
Oiling	Unless specified otherwise, use only plant-based oils, such as rapeseed oils. The use of used oil will endanger your health and is also strictly prohibited.
Replacement	Replace the appropriate part in accordance with the instruction in the Maintenance chapter.
Inspection	Check the tyre pressures, adjustment dimensions and seal tightness as required, and replace any worn parts or seals.
Observe the maintenance intervals	The specifications relate to an average usage of the machine. If subjected to heavier duty (e.g. by contracting companies), select the maintenance intervals to be shorter. Also, for extreme working conditions (for example heavy dust creation), shorter maintenance intervals are possible.

Lubricant

Lubricant used on this machine must meet the following requirements:

Lubricant	Specifications
Gear oil	SAE 90 API-GL-4 or 5
e.g.: KUBOTA HEAVY DUTY 80W-90 GEAR OIL	
Grease	NLGI GC/LB
e.g.: KUBOTA Polyurea Grease	

Maintenance intervals

		After 5 hours of operation	Daily	After 20 hours of operation	After 100 hours of operation	After 250 hours of operation	Once per season	After heavy use	As required	After every high-pressure cleaning	In case of wear	Lubrication	Greasing	Inspection	Replacement	Cleaning	Page
General																	
	All screws	●					●		●								68
	Visual inspection		●					●						●			
	Bearing				●			●				●					72
	Tyre pressure		●						●					●			77
	Hose connections		●						●					●			78
	Lighting equipment								●					●		●	
Lubrication																	
	Grease the machine				●		●			●		●					72
	Grease the single joints		●	●			●			●		●					73
Hydraulics																	
	Hydraulic hoses every 6 years						●		●						●		78
	Hydraulic cylinders						●	●	●					●			
	Hydraulic couplings								●							●	
	Hydraulic connections						●							●			
PTO shaft																	
	Lubricate the PTO shaft			●			●						●	●			73
	PTO shaft guard					●	●						●	●			
Gear box																	
	Main gear box								●					●			76
	Rotor gear								●					●			76
Adjusting the machine																	
	Adjust the tines								●					●			41

Screwed connections

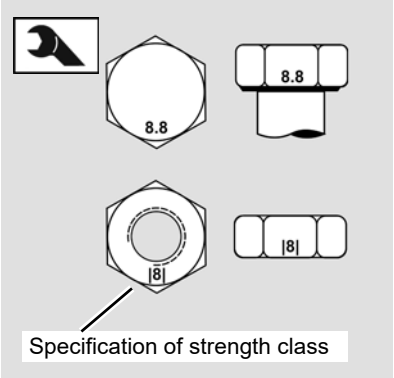
Use original parts
Many components have special properties that are essential for the stability and correct operation of the machine. Only spare parts and accessories supplied by the manufacturer have been tested and approved. Other products may adversely affect the correct operation of the machine and safety. The use of non-OEM replacement parts renders the manufacturer's guarantee null and void and frees the manufacturer from all liability.

Tightening screws

All bolts must be retightened:

- After the first 5 hours of operation and
- According to the frequency of use,
- But at least once a season.

Screw and bolt tightening torques

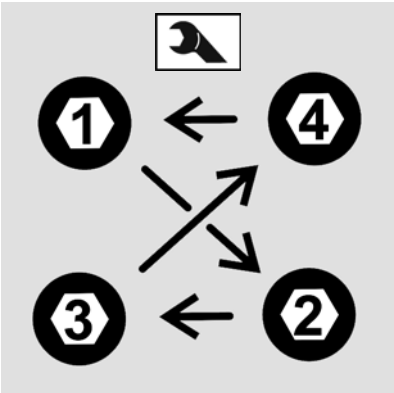


Use the correct screw and bolt tightening torques
Securely tighten screws, nuts and bolts to the specified torques. Damage to the machine and serious or fatal injury may be caused as a result.

Note the strength class specification for screws, nuts and bolts. Refer to the table for the corresponding tightening torque. Securely tighten screws, nuts and bolts to the specified values, provided that no other value is specified. The torque specifications refer to a dry coefficient of friction (0.12).

Bolt size	Bolt quality		
	8.8	10.9	12.9
M6	9.9 Nm (7.3 ft.lbs)	14 Nm (10.3 ft.lbs)	17 Nm (12.5 ft.lbs)
M8	24 Nm (18 ft.lbs)	34 Nm (25 ft.lbs)	41 Nm (31 ft.lbs)
M10	48 Nm (36 ft.lbs)	68 Nm (51 ft.lbs)	81 Nm (60 ft.lbs)
M12	85 Nm (63 ft.lbs)	120 Nm (89 ft.lbs)	145 Nm (107 ft.lbs)
M14	135 Nm (100 ft.lbs)	190 Nm (140 ft.lbs)	230 Nm (166 ft.lbs)
M16	210 Nm (155 ft.lbs)	290 Nm (215 ft.lbs)	350 Nm (258 ft.lbs)
M20	410 Nm (302 ft.lbs)	580 Nm (428 ft.lbs)	690 Nm (509 ft.lbs)

Tighten safety bolts and nuts to a 10% higher value.

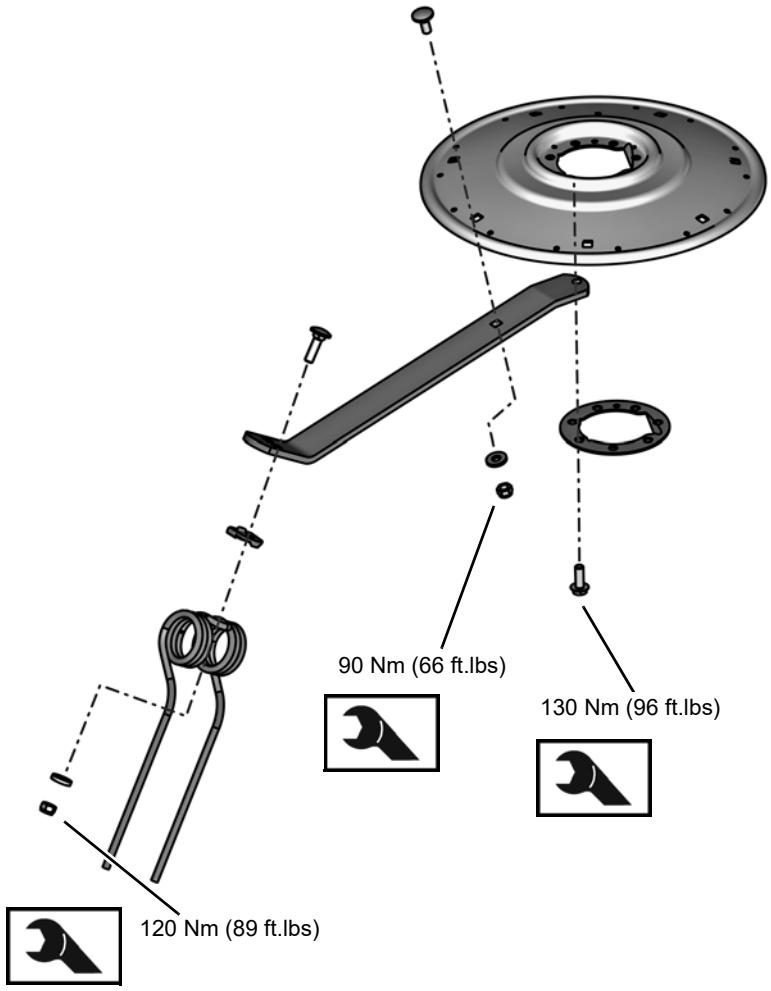


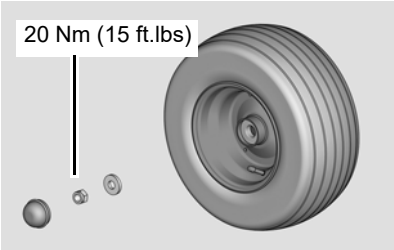
On a level surface, tighten the bolts evenly, alternating between the bolts. This ensures that the connection is distortion-free. Damage to the machine may be caused as a result.

Special screw and bolt tightening torques

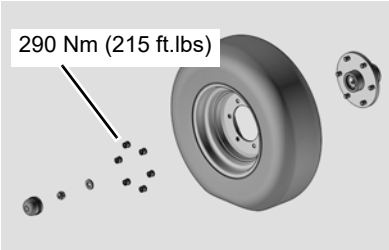
Use the correct screw and bolt tightening torque
Securely tighten screws, nuts and bolts to the specified torques. Damage to the machine and serious or fatal injury may be caused as a result.

Observe the special tightening torques for the following screwed connections:





- Running wheel nuts: 20 Nm (15 ft.lbs).



- Chassis wheel nuts: 290 Nm (215 ft.lbs).

Lubrication points for grease

Working with a grease g

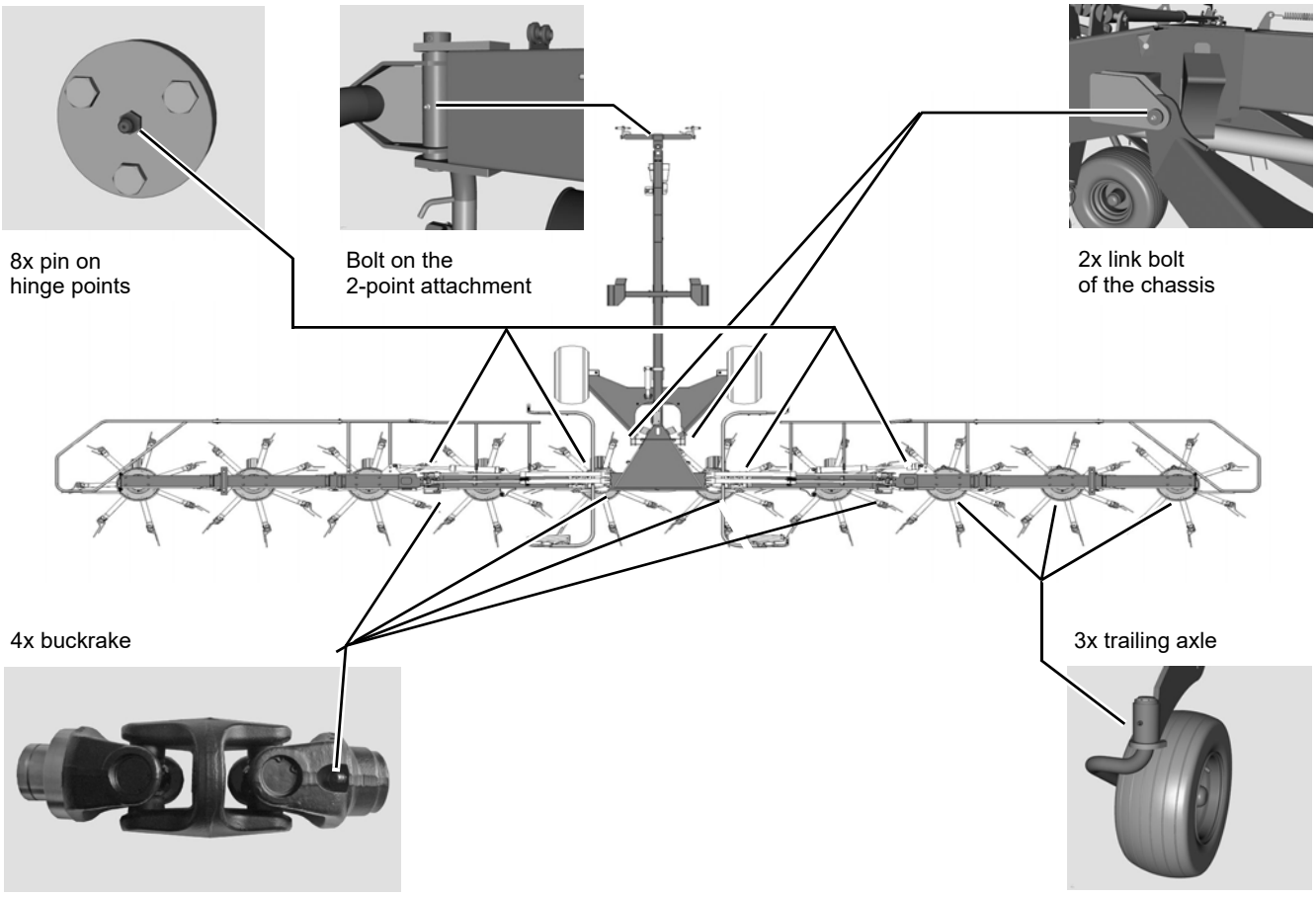
Hidden lubrication points are marked with an information label.
Before applying the grease gun:

- Clean grease fittings and
- Clean the grease gun attachment fitting.

Lubricate the bearings with one or two presses of the grease gun. If you feel resistance at the second press, do not press a second time. Too much grease will force the bearings apart. Dust and dirt can penetrate into the bearings. This leads to premature wear.

Lubricate the places listed in the illustration as follows:

- After the first 5 hours of operation.
- Each time after cleaning with a high-pressure cleaner.



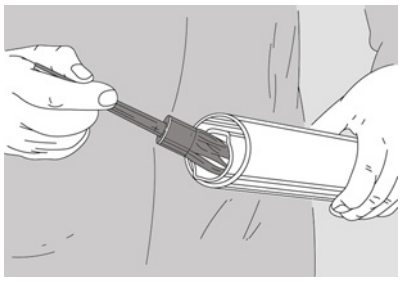
Lubricating the PTO shafts

The manufacturer's own operating manual is attached to each PTO shaft. This includes detailed information on the relevant version of the PTO shaft.

Check the guard components
Check all guard components of the PTO shafts for wear or damage (visual inspection). Replace any defective guard components. An unguarded PTO shaft or damaged guard components can cause very serious injuries during operation.

Lubricate the single joints and their couplings as follows:

- after 100 hours of operation.
- before and after the season.
- each time after cleaning with a high-pressure cleaner.



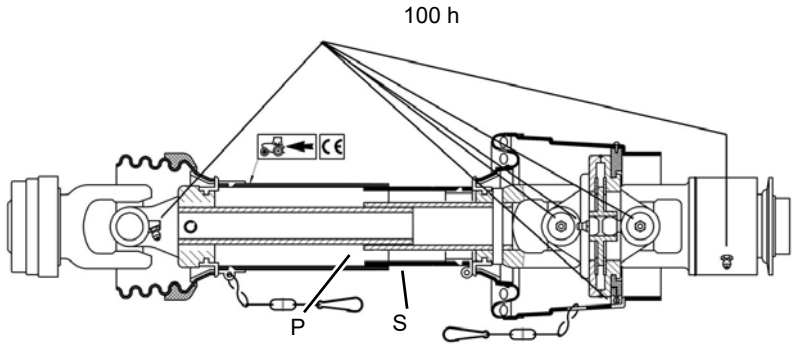
Grease the profile section tubes (P):

- daily.
- after 100 hours of operation.
- before and after the season.
- each time after cleaning with a high-pressure cleaner.

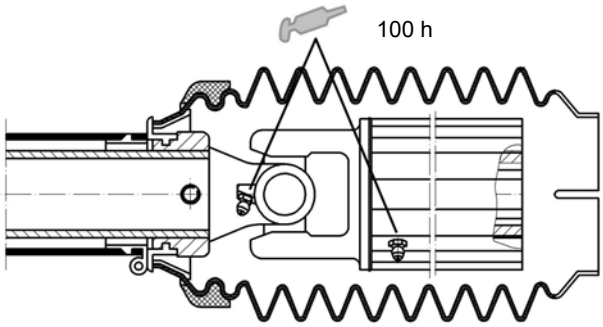
Lubricate the guard (S) as follows:

- after 250 hours of operation.
- before and after the season.
- Each time after cleaning with a high-pressure cleaner

PTO shaft for the main drive



Shafting



Slip clutch

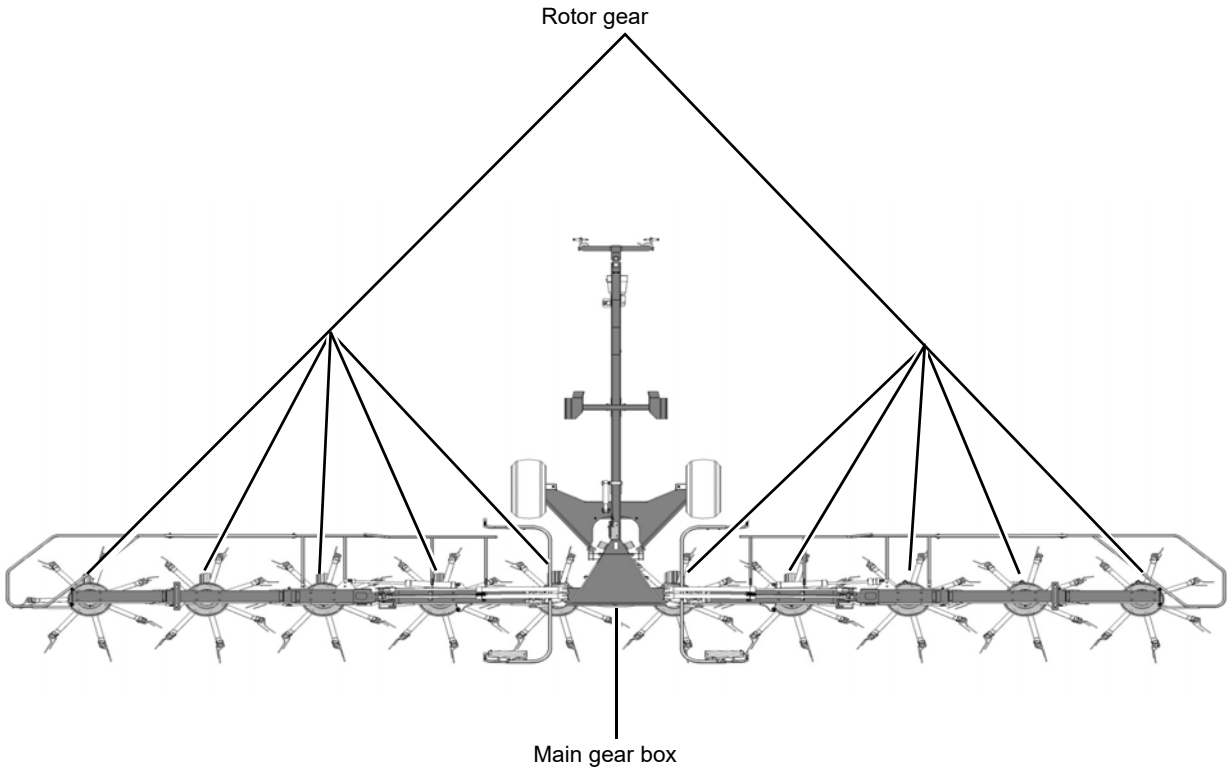
The slip clutch requires no maintenance.

Lubrication points for oil lubrication

Check the oil level of the main gear box and rotor gears regularly.
→ »Checking the main gear box«, page 76
→ »Rotor gear«, page 76

If there is visible oil loss, the gear boxes must be checked and refilled.

The points presented in the illustration show the check position of the gears:



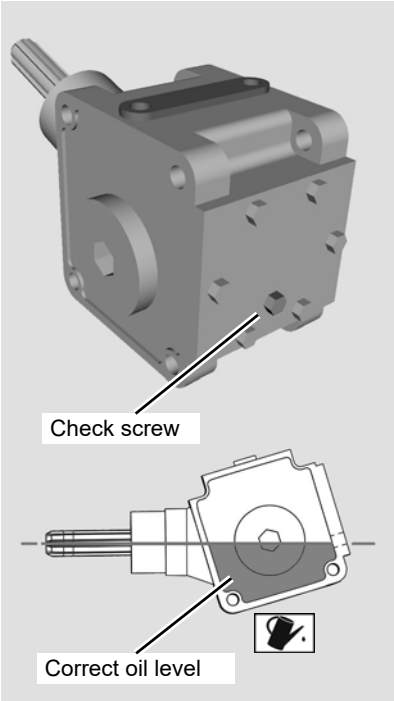
Filling quantities

Observe the correct fill quantities
Observe the correct lubricant fill quantities. Check them regularly. A lubricant level which is too low or too high may result in damage to the machine.

The main gear box and rotor gear require no maintenance.

Gear box	Quantity	Lubricant
Main gear box	2.2 l (1.3 US qt)	Gear oil: SAE 90 API-GL-4 or 5
Rotor gear	200 g (0.440 lbs)	Grease: NLGI GC/LB

Checking the main gear box



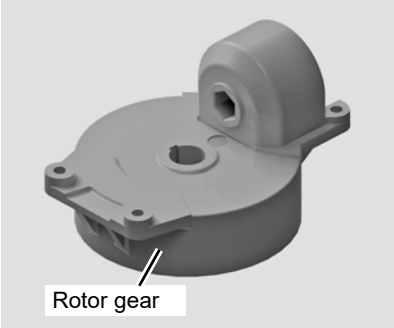
- No oil change is required.
- The maintenance-free main gear box is filled ex works with sufficient oil.
- Only check the oil level in the work position (machine positioned horizontally), if there is visible oil loss.

Checking the oil level:

- Fold the machine into its work position.
- Undo the check screw completely.
- Check the oil level.
  - Correct oil level: bottom edge of check screw hole.

Check the main gear box at least once per season. If there is a visible loss of lubricant, consult your dealer. Damage to the machine may be caused as a result.

Rotor gear



The maintenance-free rotor gears are filled ex works with sufficient grease.

- The grease must not be changed.
- The locking pieces should be greased:
  → See »Lubrication points for grease«, page 72.
  → See »Maintenance intervals«, page 67.

Tyres

Do not drive with worn or damaged tyres
Replace worn or damaged tyres immediately. There is a high risk of accident especially when driving on the road with such tyres.

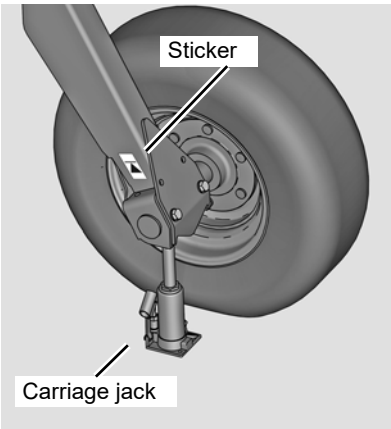
Tyre pressure

Check the tyre pressures on a regular basis:

- Daily
- before any road transport.
- as required (for example before setting the tine height).
- before and after the season.

Tyre size	Tyre pressure
16 x 6.50-8 6PR	1.5 bar (22 psi)
18.5 x 8.50-8 6PR	1.5 bar (22 psi)
10.0/7.5-15 [+]	2.5 bar (36 psi)

Replacing tyres

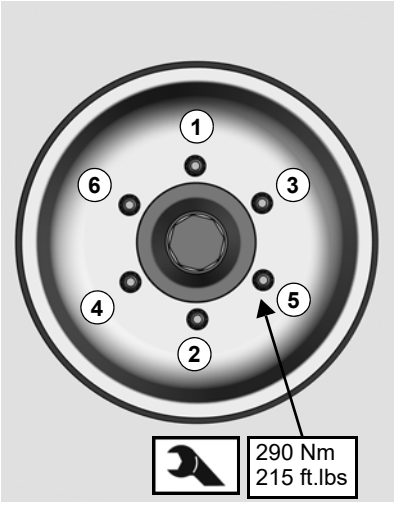


Using the carriage jack correctly
Jacking points for the carriage jack are identified with a sticker.

- Secure the machine against rolling away.
- Use a suitable carriage jack.

If these safety instructions are not observed, damage to the machine and accidents may be caused as a result.

- Secure the machine against rolling away and use a suitable carriage jack*.
- Lift the machine at the labelled jacking points.
- Replace the wheel.



- Tighten the wheel nuts to the correct torque (290 Nm, 215 ft.lbs), diagonally across from each other. See adjacent illustration.

- After each wheel replacement, retighten the wheel nuts and wheel screws after the first 10 hours of operation. Afterwards, check that they are attached firmly every 50 operating hours.

* The carriage jack is not included in the scope of delivery.

Hydraulics

Hydraulic system at zero pressure
Work must only be performed on the hydraulic system if the tractor and machine hydraulic system is at zero pressure. A pressurised hydraulic system can trigger unpredictable movements of the machine and can cause serious damage to the machine and personal injury. Serious or fatal injury may be caused as a result.

Exercise caution when welding
Do not perform any welding work in the vicinity of the hydraulic hoses. Hydraulic oil can catch fire very easily.

Clean hydraulic system
Close or disconnect the quick-release couplings with great care. Remove any dirt or air which has entered the hydraulic system. The hydraulic system may otherwise be seriously damaged. Material damage or personal injury may be caused as a result.

Collect escaping oil
Escaping oil must be collected and disposed of in accordance with national regulations. Otherwise, damage to the environment may be caused as a result.

Hydraulic hoses

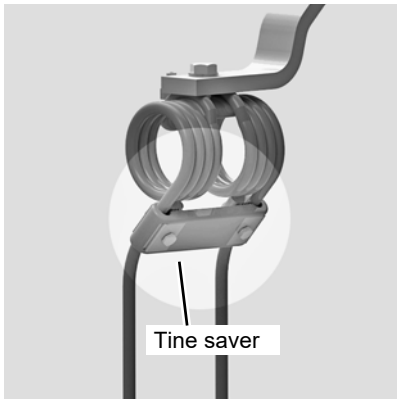
Replace hydraulic hoses every six years or sooner
Hydraulic hoses age without showing externally visible signs. Replace hydraulic hoses every six years or sooner. Use hydraulic hoses only with the same technical specifications. The required information is printed on the hydraulic hose. Defective or incorrect hydraulic lines can cause serious or fatal injuries.

Hydraulic hoses age without showing externally visible signs. We therefore recommend replacing the hydraulic hoses every six years.

- Lower the machine to the work position.
- Depressurise the system.
- Switch off the tractor engine, put the parking brake in the park position, remove the ignition key and secure the tractor against rolling away.
- Disconnect the hydraulic hoses.
- Replace hydraulic hoses.

Optional additional equipment does not form part of the standard scope of delivery, and, in this manual, is indicated by a plus symbol [+]. Additional equipment is available to order from your dealer.

Tine saver



If tines are broken, the tine savers can prevent the broken-off part from being lost. Broken-off tine parts in the crop may damage machines that are following behind.

- The flexible plastic holders can be easily attached and released again.
- One tine saver is required for each tine.

For a good crop pickup, both tine legs must be parallel after fitting the tine saver.

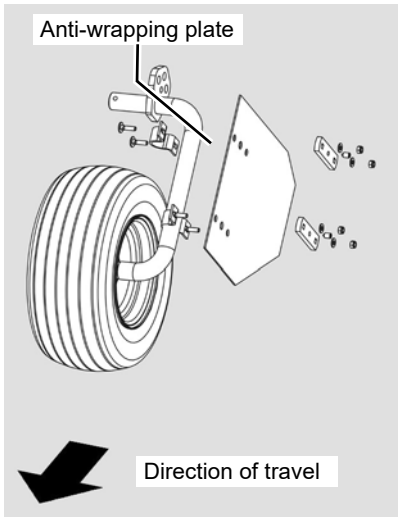
If the tine saver is overtightened, the tine legs become splayed.

Night swath gear box

A night swath gear box is available in order to use the rotary tedder to lay down night swaths for the hay harvest. The night swath gear box reduces the speed of the PTO shaft. The crop is not spread but deposited between two rotors as a swath.

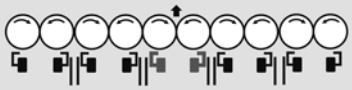
- Remove the existing protective pot.
- Slide the night swath gear box with the protective pot onto the intermediate shaft and secure it with a circlip.
- Secure the night swath gear box with the clamping bolt.
- Fit the PTO shaft on the side shaft end.

Anti-wrapping plate



The anti-wrapping plate ensures a perfect, uniform fodder flow. It stops the fodder getting wrapped around the running wheel axles.

- The anti-wrapping plates are fitted to the running wheel axles in the work position, as shown.
  → Please consult your dealer.



Arrangement of the anti-wrapping plates

Take note of the arrangement of the axles when fitting the anti-wrapping plates.

Spare wheel

The optional spare wheel is fitted on the guard bar.

Spare wheel

Faults and malfunctions

Faults can often be eliminated quickly and easily. Before calling Customer Service, refer to the table to check whether the fault is one you can eliminate yourself.

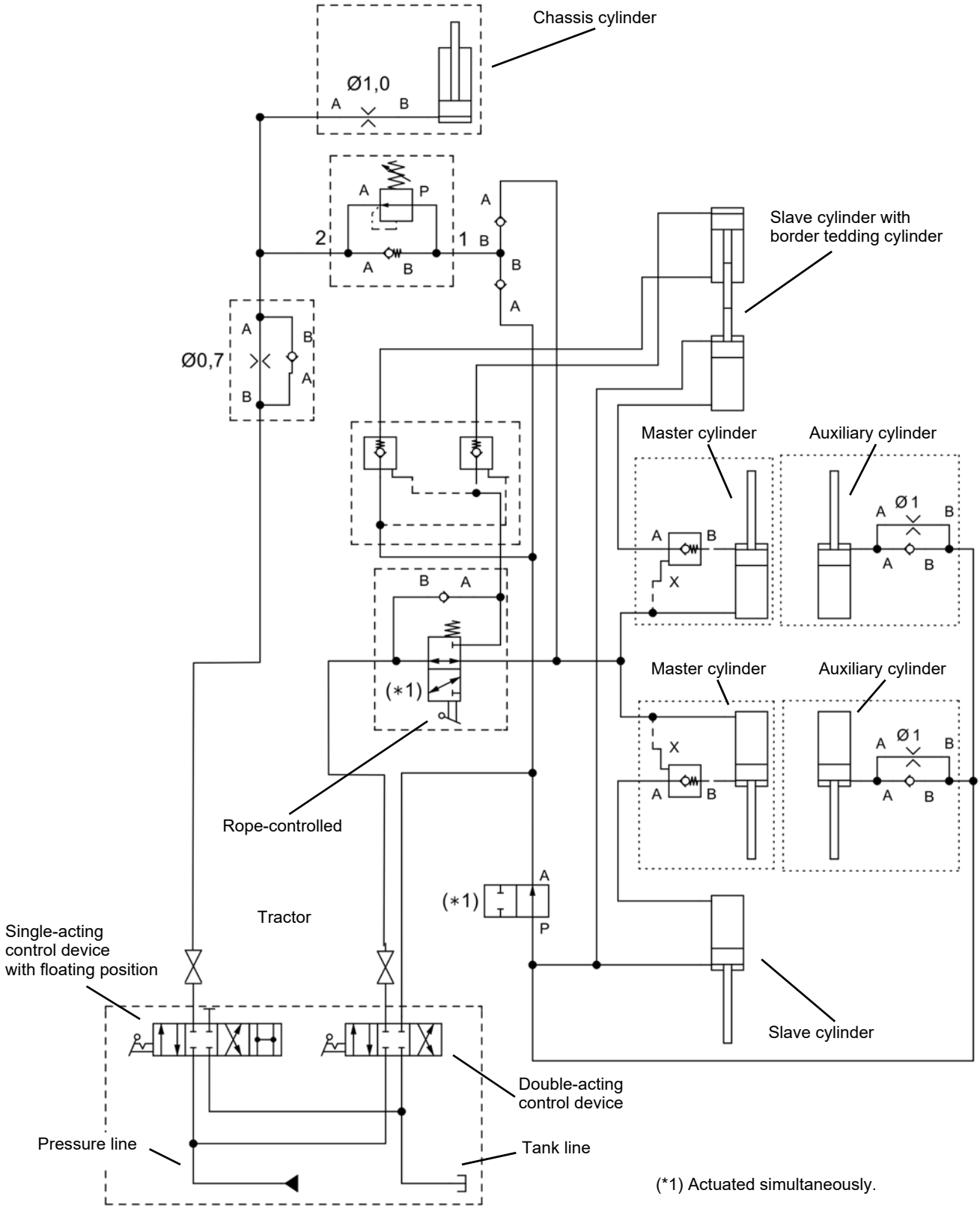
In case of a fault, proceed as follows:

- Immediately stop operation.
- Switch off the PTO shaft drive.
- Switch all operating controls to the neutral or park position.
- Put the tractor's parking brake into the park position.
- Switch off the tractor engine, put the parking brake in the park position, remove the ignition key and secure the tractor against rolling away.
- Ensure the machine is standing on firm, secure and level ground, and provide additional support, if necessary.
- Secure the machine against rolling away.

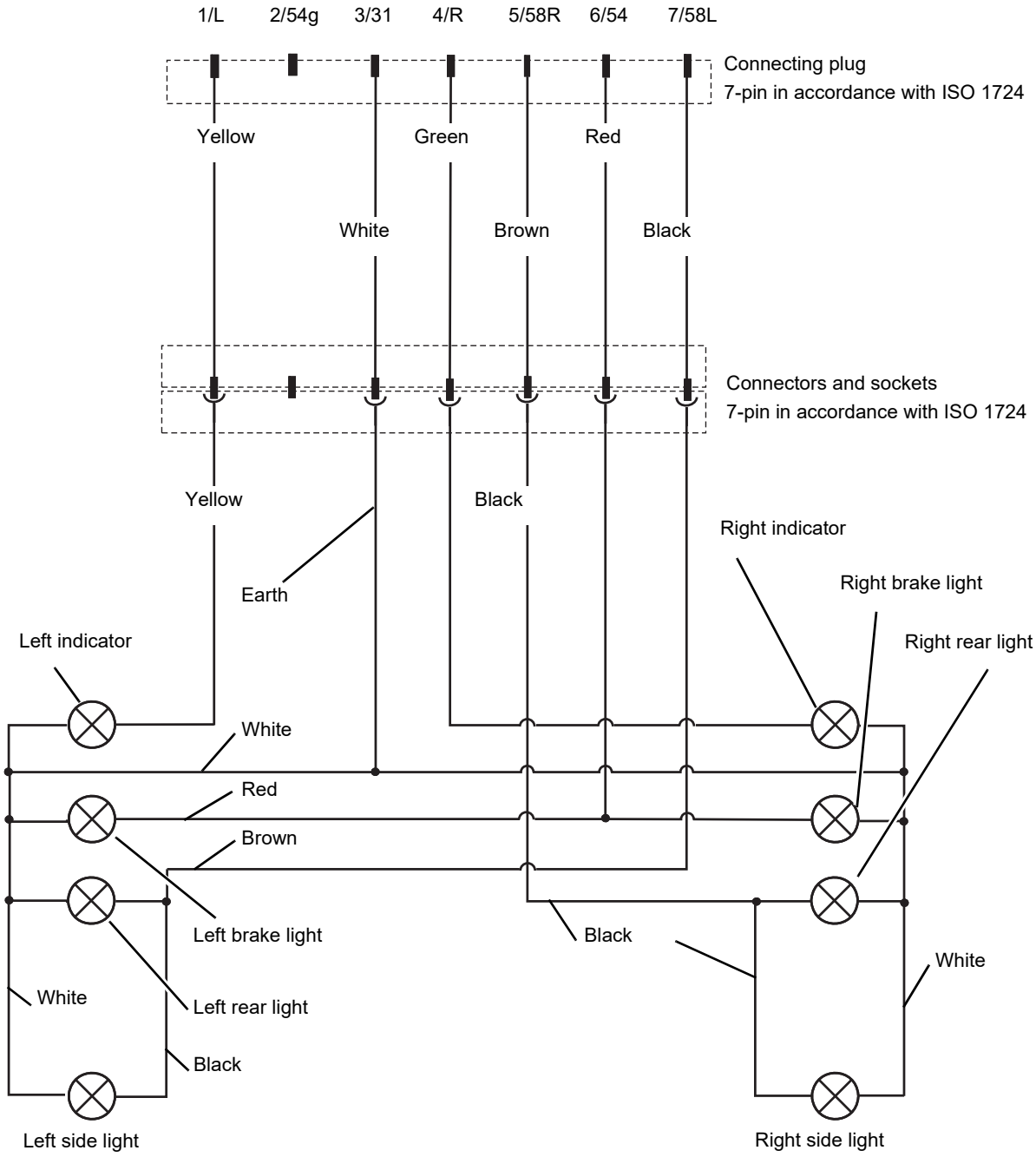
The fault must be repaired before work can be resumed. Damage to the machine and serious or fatal injury may be caused as a result.

Faults	Causes	Remedy
Rotor is leaving crop behind across the entire width	Working depth set too high	→ »Adjusting the working depth«, page 39 → »Adjusting the rotor pitch«, page 51
Fodder is heavily contaminated	Working depth set too low	→ »Adjusting the working depth«, page 39 → »Adjusting the rotor pitch«, page 51
Machine not operating cleanly at high speed	Raking wheel tines set too high Uneven terrain	→ »Adjusting the working depth«, page 39 → »Adjusting the rotor pitch«, page 51
	Speed too fast to process the amount of fodder	Reduce speed
Slip clutch responding frequently	Fodder mass too great or irregular	Reduce speed Reduce PTO shaft speed
	Working depth set too low	→ »Adjusting the working depth«, page 39 → »Adjusting the rotor pitch«, page 51
Noise production during work	Loose screwed connections or worn-out tine supports	Check tine supports and screwed connections on tines

Hydraulic circuit diagram



Lighting equipment circuit diagram



Disposal

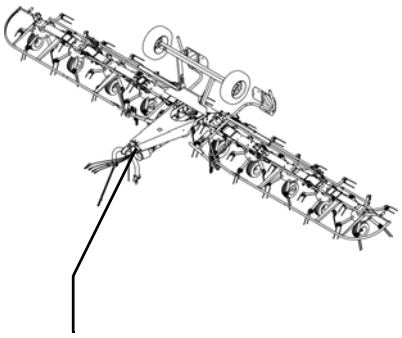
During decommissioning, the individual parts must be disposed of properly and in an environmentally friendly manner. Please observe the waste disposal guidelines that are currently in force.

Plastic parts
Plastic parts can be disposed of in normal household waste (residual waste), depending on the laws specific to your country.

Metal parts
All metal parts can be sent for recycling.

Oil
In terms of waste legislation, environmentally-compatible hydraulic oils must be stored, collected and disposed of separately in accordance with regulations.

Rubber
Rubber parts, such as hoses or tyres, must be disposed of at a rubber recycling facility.



Type plate and CE marking

We

Kverneland Group Kerteminde AS
Taarupstrandvej 25
DK-5300 Kerteminde
Denmark

declare with sole responsibility that the product

Vicon Fanex 1404 C
Kubota TE10514C
Kverneland 85140 C
in all equipment variants and its accessories

Model: TED6921

Valid from machine number:
UKGTEDK7PJBM00448 –

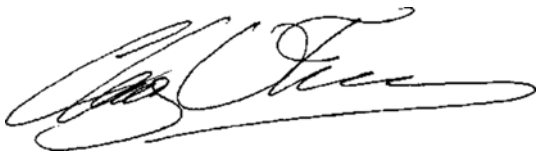
complies with the following relevant EU provisions:

- Directive 2006/42/EC
- Directive 2014/30/EU

The following harmonised standards have been applied:

- EN ISO 4254-1:2015
- EN ISO 4254-10:2009 + AC:2010

Kverneland Group Kerteminde AS
Kerteminde, 02.01.2021



Claus Udengaard Thomsen

CEO
and authorised representative*

* person who is responsible for compiling the technical documentation and resides in the European Community. See address above.

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