



Shredders

BKE REV





Dear Owner

In buying a Kuhn machine you have chosen wisely. Into it have gone years of thought, research and improvement. You will find, as have thousands of owners all over the world, that you have the best that engineering skill and actual field testing can produce. You have purchased a dependable machine, but only through proper care and operation can you expect to receive the performance and long service built into it.

This manual contains all the necessary information for you to receive full efficiency from your machine. The performance you get from this machine is largely dependent on how well you read and understand this manual and apply this knowledge. Please **DO NOT ASSUME YOU KNOW HOW TO OPERATE AND MAINTAIN YOUR MACHINE** before reading this manual carefully. **KEEP THIS MANUAL AVAILABLE FOR REFERENCE.** Pass it on to the next owner if you re-sell the machine.

Your KUHN dealer can offer a complete line of genuine KUHN service parts. These parts are manufactured and carefully inspected in the same factory that builds the machine to assure high quality and accurate fitting of any necessary replacements.

■ About improvements

We are continually striving to improve our products. It therefore reserves the right to make improvements or changes when it becomes practical to do so, without incurring any obligations to make changes or additions to the equipment sold previously.

■ Designated use of the machine

BKE REV shredders must only be used for the work for which they have been designed: shredding of grass covered areas, maintenance of green spaces, shredding of vine shoots and other pruning residues.

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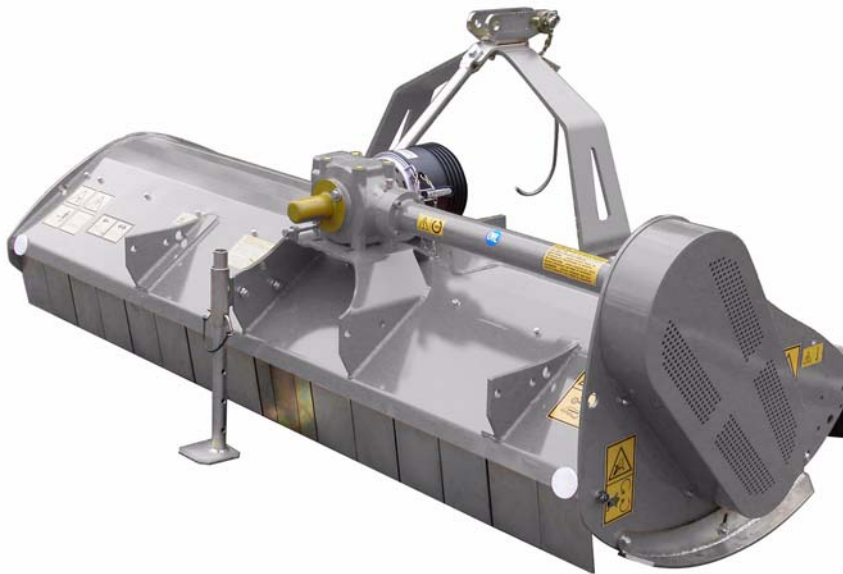


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Identification of the machine

1. 2 position rigid linkage

■ Front view



■ Rear view



2. Linkage with hydraulic offset

■ Front view



■ Rear view



3. Model identification plate

Please write below the type and serial number of the machine. This information is to be indicated to the dealer for all spare parts orders.

Type: **BKE REV**

Serial no.:



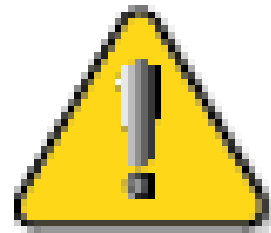
4. Optional equipment

- ☐ **Kit no. 1556829:** Skids (BKE 150-250 REV).
- ☐ **Kit no. 1556855:** Double skinned plate (BKE 150 REV)
- ☐ **Kit no. 1556856:** Double skinned plate (BKE 180 REV)
- ☐ **Kit no. 1556843:** Double skinned plate (BKE 210 REV)
- ☐ **Kit no. 1556857:** Double skinned plate (BKE 230 REV)
- ☐ **Kit no. 1556830:** Double skinned plate (BKE 250 REV)
- ☐ **Kit no. 1556929:** Pivoting front wheels

Safety

1. Description of symbols used in this document

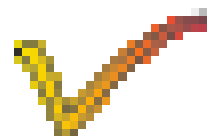
This symbol indicates a potentially hazardous situation that if not avoided, could result in serious bodily injury.



This symbol is used to identify special instructions or procedures which, if not followed strictly, could result in machinery damage.



This symbol is used to communicate technical information of particular interest.



2. Safety instructions

■ Introduction

The machine must only be operated, maintained and repaired by competent persons who are familiar with machines' specifications and operation and aware of safety regulations for preventing accidents.

The operator must imperatively respect safety instructions in this manual and in the warnings posted on the machine. The operator is also obliged to respect current legislation concerning accident prevention, work safety and public traffic circulation.

Designated use of the machine also means following operation, maintenance and repair recommendations given by the manufacturer, and using only genuine spare parts, equipment and accessories, as recommended by the manufacturer.

The manufacturer is not held liable for any damage resulting from machine applications other than those specified by the manufacturer. Any use other than the designated operation is at the risk and responsibility of the operator.

The manufacturer is not held liable for any damage or accident resulting from machine modifications carried out by the operator himself or by a third party without previous written agreement from the manufacturer.

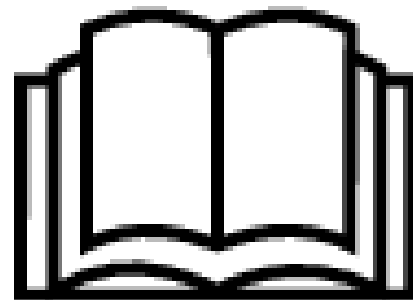
■ Read and follow the safety instructions

Before using the machine, carefully read all the safety instructions in this manual and the warnings placed on the machine.

Before starting work, the operator must be familiar with all machine controls, handling devices and their functions. It is too late to learn once work has been started!

Never let anyone operate the machine who is not trained to do so.

Should you have any difficulties in understanding certain parts in this manual, please contact your KUHN dealer.



■ Precautions to be taken before carrying out any operations on the machine

Before leaving the tractor or before adjusting, maintaining or repairing the machine, disengage the PTO drive, turn off the engine, remove ignition key and wait until all moving parts have come to a complete stop and apply park brake.



■ Precautions to take before using the machine

Do not wear loose clothing which could become caught up in moving parts.

Wear the appropriate protective clothing for the work in hand (gloves, shoes, goggles, helmet, ear defenders, etc.).

Ensure that all operating controls (ropes, cables, rods, etc) are placed so as they cannot be operated unintentionally and cause damage or injury.

Before operating the machine, check tightness of nuts and bolts, particularly on fixing elements (tines, forks, blades, knives, etc). Retighten if necessary.

Before operating the machine, ensure that all the safety guards are firmly in place and in good condition. Immediately replace any worn or damaged guard.



■ Precautions when driving

Tractor handling, stability, performance and braking efficiency are all affected by weight distribution, trailed or mounted implements, additional ballast and driving conditions. It is therefore of great importance that the operator exercises caution in every given situation.

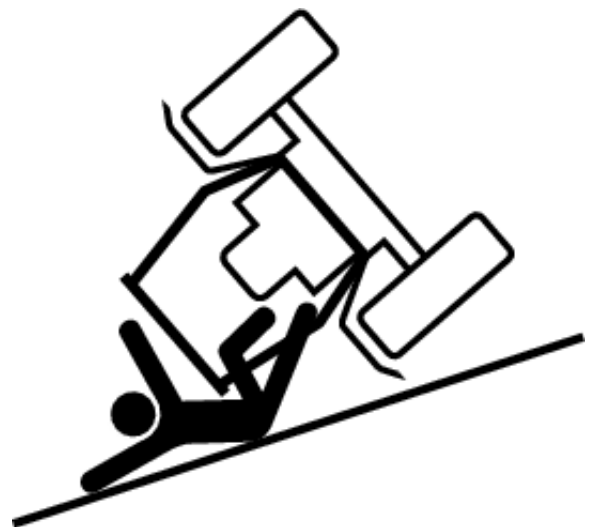
Groundspeed must be adapted to ground conditions as well as to roads and paths. Always avoid abrupt changes of direction.

Be particularly cautious when turning corners, paying attention to machine overhang, length, height and weight.

Never use a narrow track tractor on very uneven or steeply sloping ground.

Never leave the tractor seat while the machine is operating.

Carrying people or animals on the machine when working or in transport is strictly forbidden.



■ Precautions when driving on public roads

Dimensions

Depending on the dimensions of the machine, contact the relevant authorities to ensure that it can be legally transported on public roads.

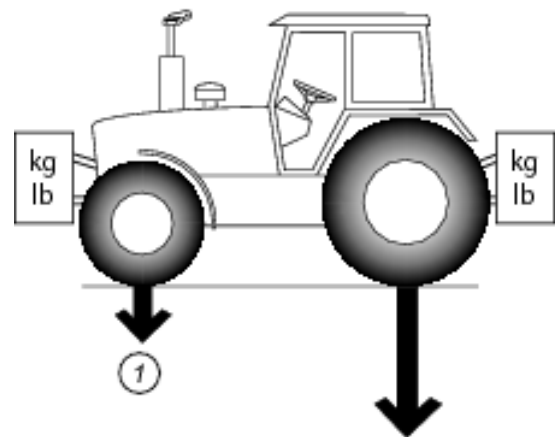
If the machine is over the maximum legal size, follow the local regulations for special transportation of oversize equipment.

Gross weight and weight per axle

Check that the tractor's authorized gross weight as well as its lift capacity and maximum weight per axle are not exceeded.

If necessary, add ballast weights to the front or to the rear to preserve the steering and braking efficiency.

The front axle load (1) must never, under any circumstances, be less than 20% of the tractor's unladen weight.



Transport position

Before transporting the machine on public roads, place the machine into its transport position, according to the instructions in this manual.

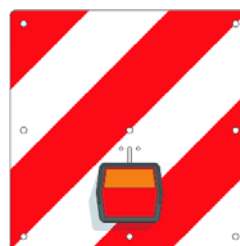
Lights and indicators

Before transporting the machine on public roads, ensure that all legally required lightings and signalings are in place.

Ensure that lightings and signalings are clean and in good working order. Replace any missing or broken equipment.



Always obey current regulations for driving on roads.



■ Maximum speed

Always keep to the legal speed limit for driving a tractor-machine assembly on public roads.

■ Precautions when coupling

Before attaching the machine, make sure that it cannot accidentally start moving (chock the wheels) and that the parking stand is in the right position.

The machine must only be attached to the hitch points provided for this purpose.

Never stand between the tractor and the machine when operating the three point linkage.

Do not stand between the tractor and the machine without ensuring that the parking brake is applied.



■ Hydraulic circuit

Caution! The hydraulic circuit is under high pressure. Maximum pressure at work: 200 bar.

Before connecting hoses to the tractor hydraulics, ensure that tractor and machine circuits are not under pressure. Before disconnecting a hose, depressurize the hydraulic circuit.

To avoid making incorrect connections, mark hydraulic couplers and corresponding hoses with colors. **WARNING!** Functions could be reversed (for example: lift/lower) and cause accidents.

Regularly check the hydraulic hoses. In case of normal wear, replace the hydraulic hoses every 5 years. Damaged or worn hoses must immediately be replaced. When replacing the hydraulic hoses, only use hoses with the specification recommended by the manufacturer of the machine.

To locate a leak, use appropriate means. Protect body and hands from liquid under pressure.

Any liquid under pressure (particularly oil from hydraulics) can penetrate the skin and cause severe injury. If injured, see a doctor immediately, there could be danger of infection.

Before any adjustments, maintenance or repairs are carried out, lower the machine to the ground, depressurize the hydraulics, turn off the engine, remove ignition key and wait until all moving parts have come to a complete stop.



■ PTO shaft

Use only PTO shafts supplied with the machine or recommended by the manufacturer.

The protective shield of the tractor PTO stub, the PTO shaft guards and the protective covering of the machine input shaft must always be in place and in good condition.

Make sure that the PTO shaft guards are secured with the safety chains provided.

Any worn or damaged guards must be replaced immediately. A worn guard or an unprotected PTO shaft can cause a serious or even a lethal accident.

Do not wear loose clothing that could be caught in the rotating PTO shaft.

Before attaching or removing a PTO shaft, or before doing any work on the machine, disengage the PTO drive, turn off the engine, remove ignition key and wait for all moving parts have come to a complete stop.

If the primary PTO shaft is equipped with a slip clutch or a free wheel, these must be fitted on the machine side.

Ensure that the PTO shaft is always correctly fitted and locked into place.

Before connecting the PTO shaft, ensure that the PTO speed (rotational frequency) and directions of rotation are in line with manufacturer's recommendations.

Before engaging the PTO drive, make sure all people and animals are clear from the machine. Never engage the PTO drive when the tractor engine is stopped.

When uncoupling the machine, rest the PTO shaft on the support specially provided, and replace protective cover on the PTO stub of the tractor.

Read and follow the instructions in the operator's manual provided with the PTO shaft.



■ Precautions during manoeuvres

When moving the machine from the transport position to the working position and vice versa, make sure that nobody is within the machine pivoting area.

■ Remote controlled components

Danger of crushing and shearing can exist when components are operated by hydraulic or pneumatic controls. Keep away from these danger zones.

■ Safety decals

Safety warning decals are placed in pictorial form on various parts of the machine. They are there to warn you of potential dangers and to tell you how to avoid accidents.

Always keep the safety decals clean and readable, and replace them when they are worn, damaged, missing or illegible.

■ Waste disposal

Respect the environment! Never spill pollutants (oil, grease, filters, etc.) on the ground, never pour them down the drain and never discard them in any other place where they could pollute the environment. Never throw away or burn a tyre. Always take waste to specialized recycling or waste disposal centers.



■ Precautions for maintenance and repair work

Before leaving the tractor or before adjusting, maintaining or repairing the machine, disengage the PTO drive, turn off the engine, remove ignition key and wait until all moving parts have come to a complete stop and apply park brake.

Rest the machine on the ground, release the pressure from the hydraulic circuit and leave the machine to cool down.

Make sure that the parts of the machine that need to be lifted for maintenance or repair work are firmly propped up.

Before any work is done on the electric circuit or before any electric welding is carried out on the attached machine, disconnect the machine from the tractor

electrical circuit. Also disconnect alternator and battery terminals.

Repairs on elements under pressure or tension (springs, pressure accumulators, etc.) must only be carried out by competent persons with regulation equipment.

Wear the appropriate protective clothing for the work in hand (gloves, shoes, goggles, helmet, ear defenders, etc.).

Do not solder, weld or use a blow torch near fluids under pressure or inflammable products.

For your own safety and for correct machine operation, only use original manufacturer parts.

It is strongly recommended to have your machine serviced by Kuhn your dealer after each season, especially cutting elements and their fastening devices.



■ Projection of stones and foreign objects

For driver safety, always use a tractor equipped with a cab. Keep the ground to be shredded free from foreign objects. Avoid using the shredder on stony or rocky ground. If this is not possible, take extra safety precautions, such as:

- Fit polycarbonate screens inside the tractor cab's side and rear windows, or install narrow mesh guards on their exterior.
- Increase the cutting height to avoid contact with stones or rocks.

Never start the shredder when there are people nearby.

Even when the machine is used in accordance with its purpose, objects may be projected. Stones and other foreign objects projected by the moving parts can travel a considerable distance. Keep all persons and animals away from the danger zone.

The guard plates/covers on the machine help reduce the risks of projection. Therefore, make sure that all mower protection devices are in place and good condition prior to using the machine.

Regularly check the condition of the guard plates/covers. Immediately replace any worn, damaged or missing guard plate/cover.



■ Precautions for machine use

Before using the shredder, inspect shredding tools (knives, rotors) and their attachment hardware in accordance with the instructions given in the present manual. Immediately replace any worn, damaged or missing guard plate/cover. Before engaging the pto drive, lower the shredder onto the ground. For your safety, only use genuine parts !



Regularly check the condition of the guard plates/covers. Immediately replace any worn, damaged or missing cover. Before engaging the PTO drive, lower the machine on the ground. Make sure all the guards are in place. Keep all persons and animals away from the danger zone.

Stay a safe distance from the machine when the cutting tools are in movement.

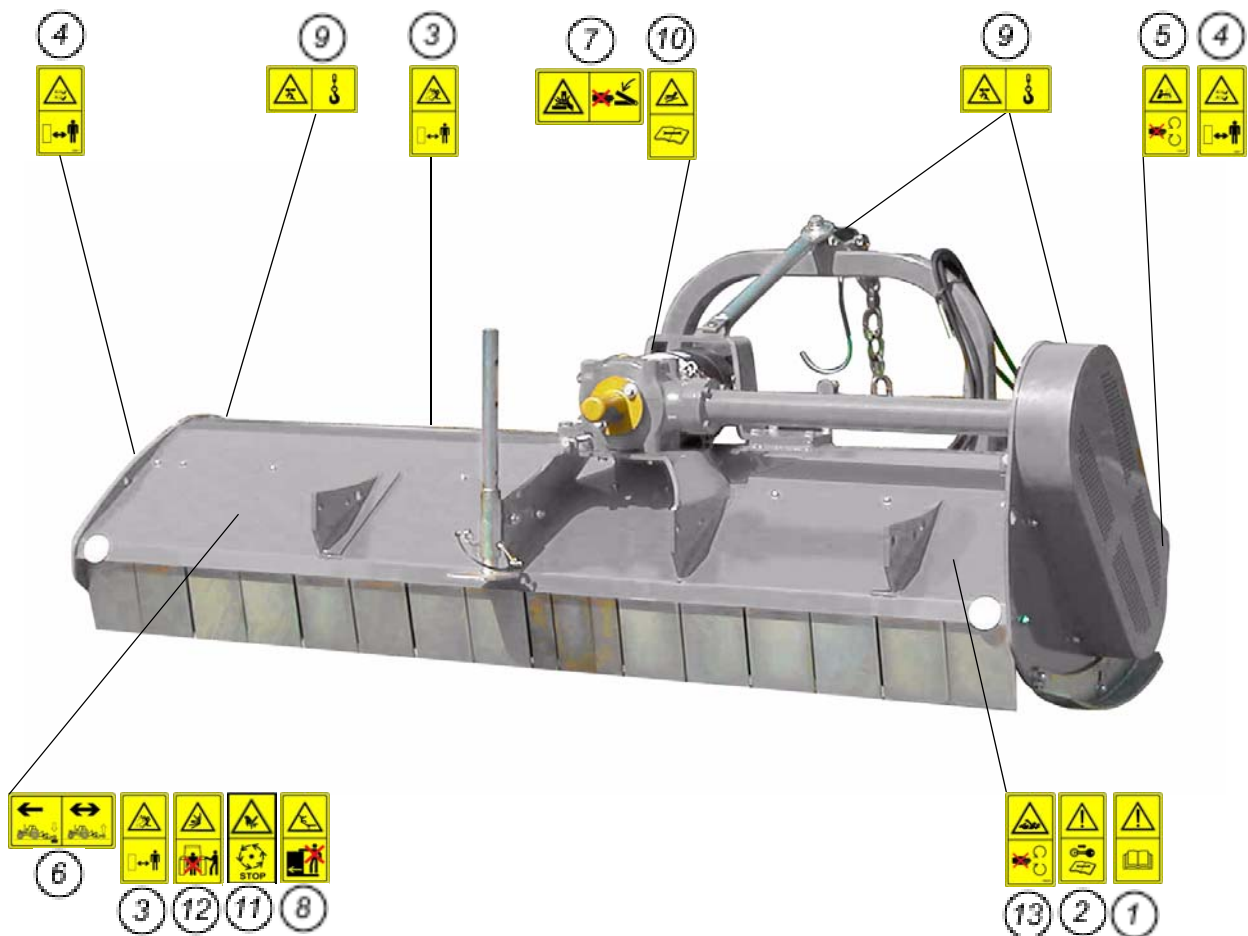
Never work in reverse.

After disengaging the PTO drive, cuttings tools can continue rotating for some time. Stay away from the machine until all moving parts have come to a complete standstill.

If the machine hits an obstacle, disengage the PTO drive, stop the tractor engine, remove the ignition key and wait for all moving parts to come to a complete standstill. Check the entire machine for any damage before resuming work.

3. Location and description of safety decals on the machine

■ Location of safety decals



■ Description of safety decals

Operating instructions (1)

The operators' manual contains all the information necessary for using the machine safely. It is imperative to read and comply with all instructions.



Working on the machine (2)

Before leaving the tractor or before adjusting, maintaining or repairing the machine, disengage the PTO drive, turn off the engine, remove ignition key and wait until all moving parts have come to a complete stop and apply park brake.



Projections (3)

Stones and other debris projected by the moving parts can travel a long distance. The guard plates/covers must always be in position and in good condition. Always stay at a safe distance from the machine.



Rotating cutting tools (4)

Keep away from the machine tools all the time the engine is running, the PTO drive engaged and the moving parts have not come to a complete stop.



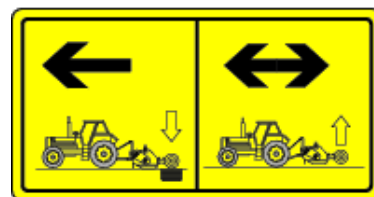
Moving elements (5)

Do not open or remove guards when the engine is running.



Support wheels (6)

At work, the support wheels must rest on the ground. During manoeuvres, raise the machine to lift the wheels off the ground.



Crushing area (7)

Never operate in an area where there is a crushing risk before all moving parts have come to a complete stop.



Danger of falling (8)

Do not ride on the machine.



Anchoring point (9)

To lift the machine, use anchoring points indicated by this decal.



Hazard: high-pressure fluids (10)

Beware of escaping fluids under pressure.

**Risk of injuries (11)**

Before adjusting, maintaining or repairing the machine, wait until all moving parts have come to a complete stop.

**Risk of being crushed (12)**

Do not stay between the machine and the tractor.

**Risk of entanglement (13)**

Stay clear of rotating drive line.



4. Road safety equipment and recommendations

The road safety equipment is mounted in the factory or by your authorized Kuhn dealer according to current safety regulations. Always keep to the legal speed limit for driving a tractor-machine assembly on public roads.

The rear safety device comprises:

- 2 red reflectors (1).



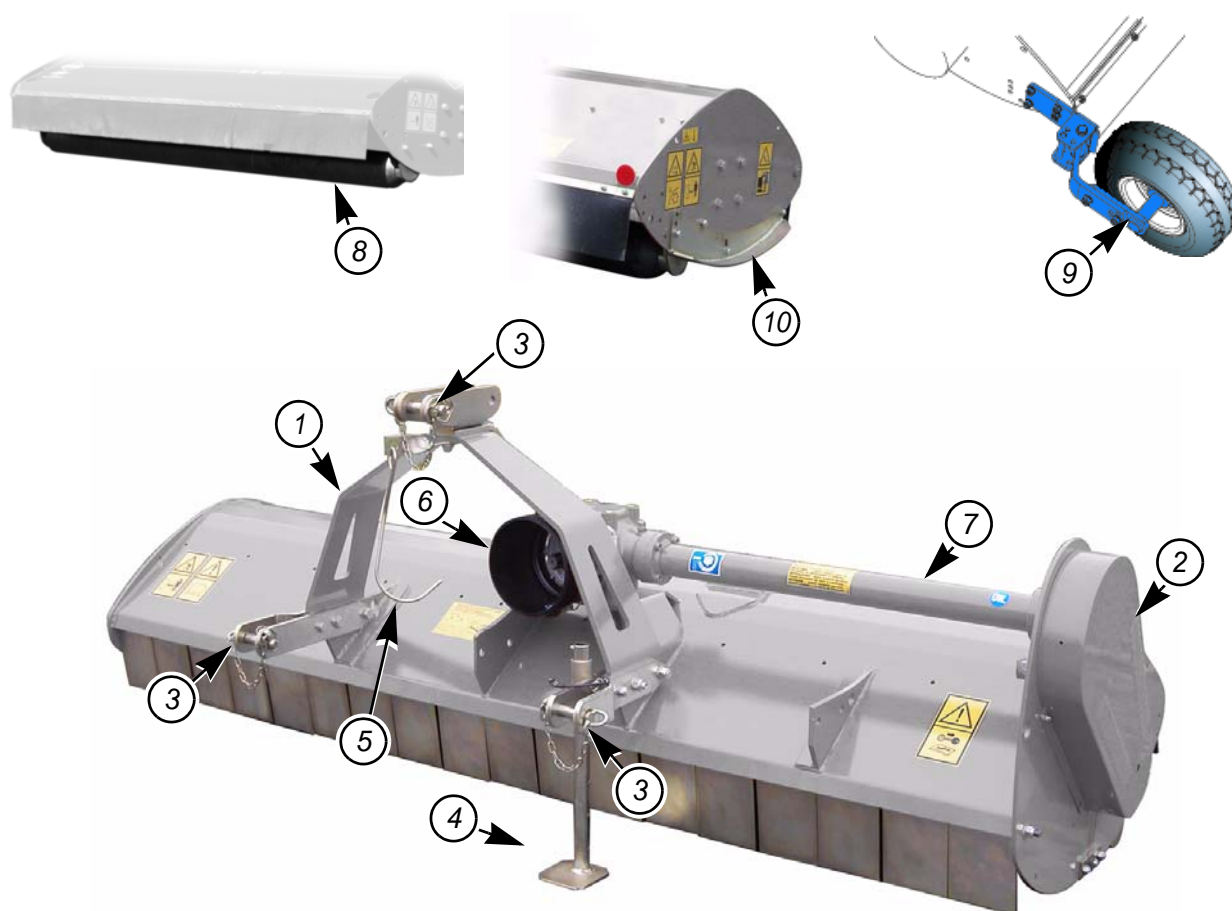
The front safety device comprises:

- 2 white reflectors (1).



Machine specifications

1. Description and glossary



- | | |
|--|-----------------------------------|
| 1 : Three-point hitch coupler | 2 : Side guard |
| 3 : Hitch pins | 4 : Parking stand |
| 5 : PTO shaft support | 6 : Central gearbox |
| 7 : Side drive shaft | 8 : Roller (Compulsory equipment) |
| 9 : Semi-pivoting wheels
(Optional equipment) | 10 : Skids (Optional equipment) |

2. Technical specifications

BKE		150		180		210	
Coupling device	Type	2 position rigid linkage or Hydraulic offset					
	Category	1 or 2		2			
Lateral offset		450 mm (1'6")		450 mm (1'6")		455 mm (1'6")	
Working width		1531 mm (5'11")		1800 mm (5'11")		2144 mm (7')	
Maximum width		1716 mm (6'6")		1979 mm (6'6")		2360 mm (7'9")	
Required tractor power		26 kW (35 hp)		33 kW (45 hp)		36 kW (49 hp)	
Allowable tractor power		28 kW (38 hp)	43 kW (58 hp)	44 kW (60 hp)	60 kW (80 hp)	44 kW (60 hp)	60 kW (80 hp)
Free wheel				Inside central gearbox			
Power takeoff rotation frequency		540 min ⁻¹	1000 min ⁻¹	540 min ⁻¹	1000 min ⁻¹	540 min ⁻¹	1000 min ⁻¹
Rotor speed		1833 or 1961 min ⁻¹		1833 or 1961 min ⁻¹		1833 or 1961 min ⁻¹	
Cutting diameter		425 mm (1'5")		425 mm (1'5")		450 mm (1'6")	
Number of knives	Universal knives	36	36	40		48	
	Hammer knives	18	18	20		24	
	Pallet for grass	18	18	20		24	
	Articulated knives	36	36	40		48	
	Articulated hammer knives	18	18	20		24	
Weight including equipment		470 kg (1036 lb)		580 kg (1279 lb)		660 kg (1455 lb)	

BKE		230		250	
Coupling device	Type	2 position rigid linkage or Hydraulic offset			
	Category	2		2	
Lateral offset		455 mm (1'6")		455 mm (1'6")	
Working width		2295 mm (7'6")		2496 mm (8'2")	
Maximum width		2511 mm (8'3")		2712 mm (8'11")	
Required tractor power		38 kW (52 hp)		40 kW (54 hp)	
Allowable tractor power		44 kW (60 hp)	60 kW (80 hp)	44 kW (60 hp)	60 kW (80 hp)
Free wheel		Inside central gearbox			
Power takeoff rotation frequency		540 min ⁻¹	1000 min ⁻¹	540 min ⁻¹	1000 min ⁻¹
Rotor speed		1833 or 1961 min ⁻¹		1833 or 1961 min ⁻¹	
Cutting diameter		450 mm (1'6")		450 mm (1'6")	
Number of knives	Universal knives	52		56	
	Hammer knives	26		28	
	Pallet for grass	26		28	
	Articulated knives	52		56	
	Articulated hammer knives	26		28	
Weight including equipment		690 kg (1521 lb)		710 kg (1565 lb)	

3. Required equipment

■ Rear support unit

Roller

Kit no. 1556849 (BKE 150)

Kit no. 1556850 (BKE 180)

Kit no. 1556842 (BKE 210)

Kit no. 1556851 (BKE 230)

Kit no. 1556804 (BKE 250)

The roller can be used for work on grass covered areas, set-aside land or pasture land.



or

Movable bottom land roller

Kit no. 1556936 (BKE 150)

Kit no. 1556937 (BKE 180)

Kit no. 1556938 (BKE 210)

Kit no. 1556939 (BKE 230)

Kit no. 1556940 (BKE 250)

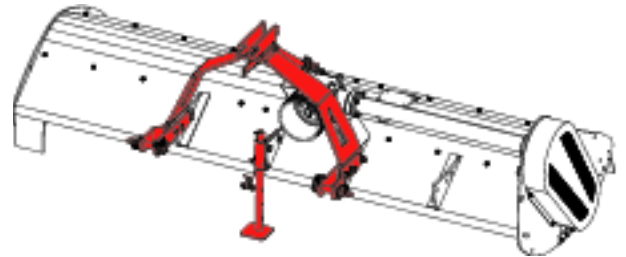
The roller with removable ends is recommended for intensive conditions of machine use.



■ Coupling the machine

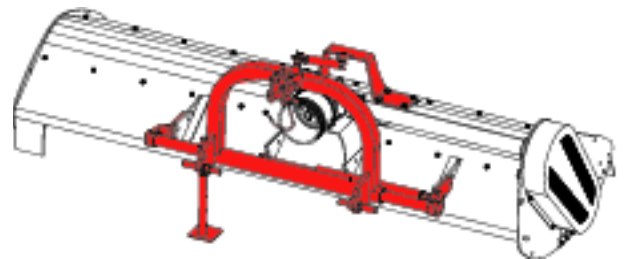
2 possibilities:

Fixed headstock.



or

Headstock with hydraulic offset.



4. Sound levels

Sound levels have been measured in accordance with the measuring methods as defined in:

NF EN 1553

"Agricultural machinery - Self-propelled, mounted, semi-mounted and trailed - Common safety recommendations"

Weighted equivalent continuous acoustic pressure level at the driver's seat (closed cabin) L (A) eq:

- BKE150 REV: **83.5 dB(A).**
- BKE180 REV: **85.0 dB(A).**
- BKE210 REV: **85.0 dB(A).**
- BKE230 REV: **86.0 dB(A).**
- BKE250 REV: **86.5 dB(A).**

Measured weighed volume level **L_w (A)** according to standard **EN ISO 3744 : 1997** for machines that exceed a pressure of 85dB(A) in the driver's post:

- BKE180 REV: **105.0 dB(A).**
- BKE210 REV: **110.0 dB(A).**
- BKE230 REV: **108.5 dB(A).**
- BKE250 REV: **105.0 dB(A).**



Wear ear protectors.



Putting into service

1. Coupling and uncoupling

■ Description of coupling elements

- A PTO shaft 1 3/8" - 6 splines (1).
- A category 1 and 2 three point hitch coupler.
- Attachment configuration category 2 (BKE 180-210-230-250).

2. Preparing the tractor



The tractor must be fitted with lower link stabilizers.

The tractor PTO stub must rotate at a speed of 540 or 1000 min⁻¹.



■ Hitch pin parallelism

Adjust tractor lift rods so that hitch pins are parallel to the ground.



3. Preparing the machine

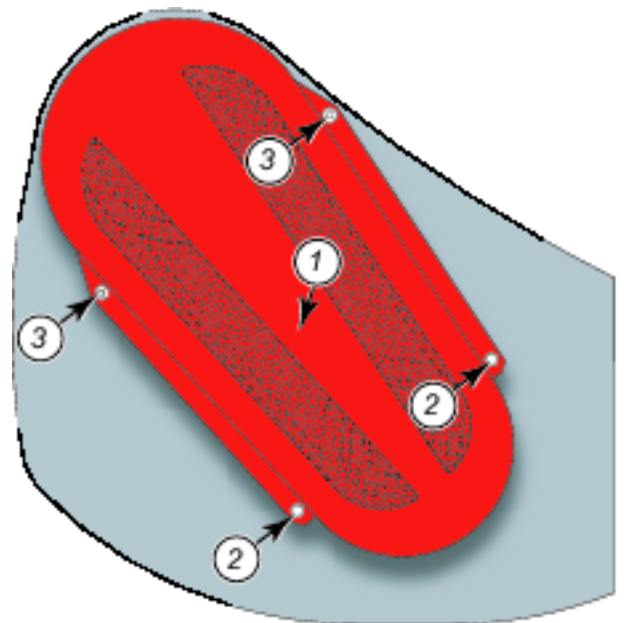
Check the speed preset by the manufacturer through the stickers on the machine.

✓ *The machine is factory set at a PTO speed (rotational frequency) of 1000 min⁻¹.*

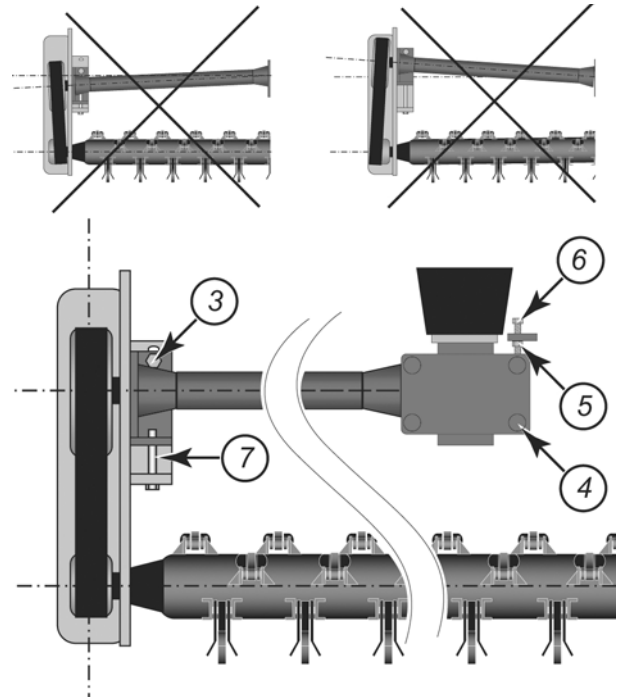
Invert drive pulleys to obtain a different machine PTO speed (540 min⁻¹).

■ Inverting the pulleys

- Remove 2 bolts (2).
- Remove the 2 nuts (3).
- Remove belt guard (1).



- Loosen screw (3).
- Loosen the 4 screws (4) that hold the central gearbox.
- Loosen counter nut (5).
- Loosen adjustment screws (6) and (7) to slacken belts.

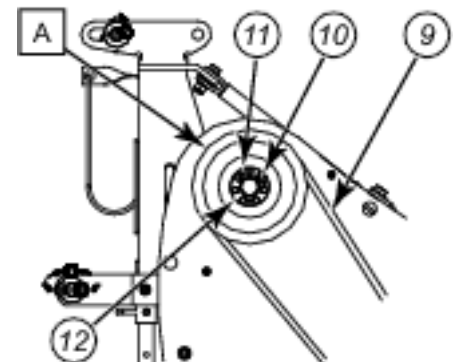


- Remove belts (9).
- Unscrew and remove the 7 screws (10).
- Insert and screw 3 out of the 7 screws in the 3 threaded holes (11).

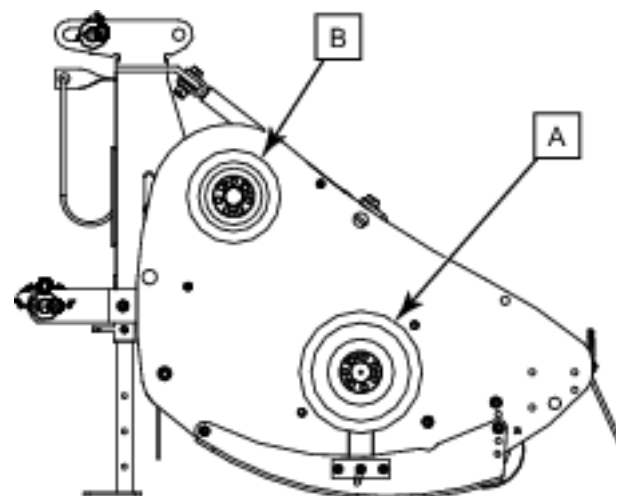


Insert screws in threaded holes (11) to extract T-clamps.

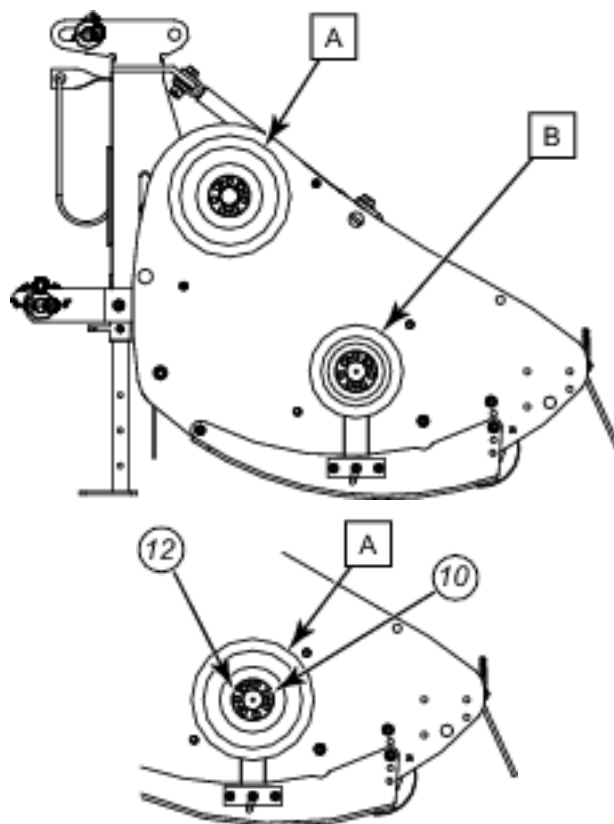
- Remove T-clamp (12).



- Remove pulley (A).
- Repeat procedure on pulley (B).

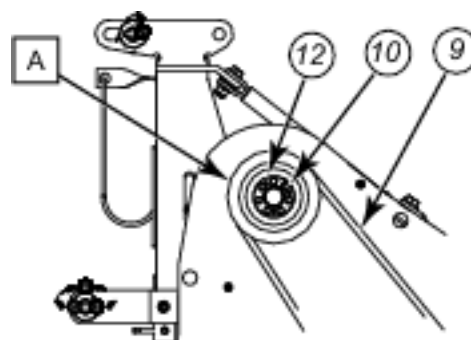


- Invert and reinstall pulleys (A) and (B).



- Reinstall T-clamp (12) of pulley (A).
- Reinstall the 7 bolts (10).
- Tighten screws (10)
 - Torque: 4,2 daNm (31 lbf ft).

- Reinstall T-clamp (12) of pulley (B).
- Reinstall the 7 bolts (10).
- Torque: 4.2 daN m (31 lbf ft).
- Reinstall belts (9).

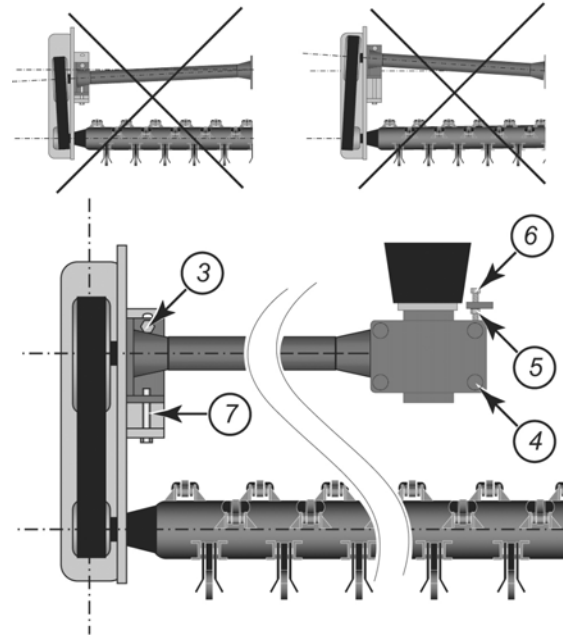


- Turn the adjustment screws (6) and nuts (7) equally until reaching the optimum tension.

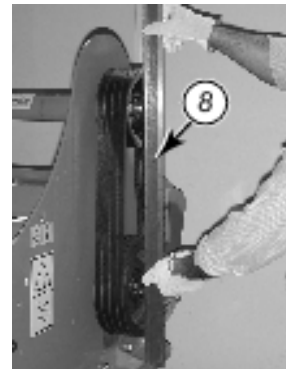


By adjusting (6) and (7) equally, the central transmission shaft is kept parallel to the rotor.

- Tighten screws (3) and (4).
- Tighten counter nut (5).



- Using a ruler, check that pulleys are in line (8).
- Repeat procedure until perfect pulley alignment is obtained.

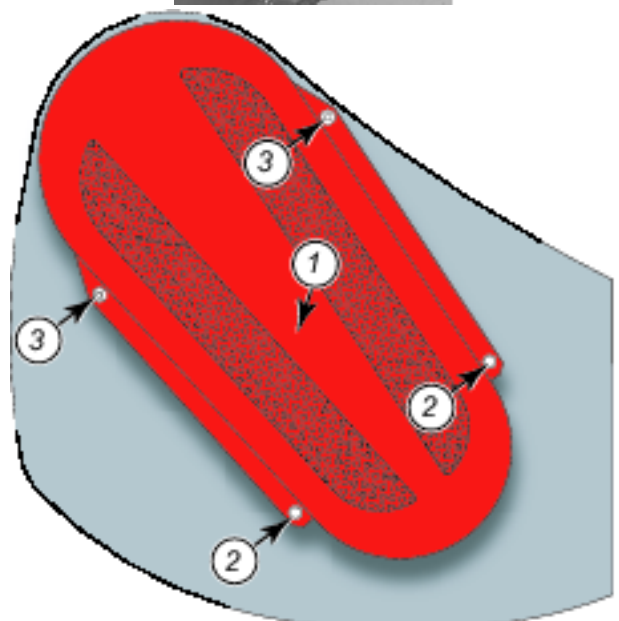


- Reinstall belt guard (1).
- Reinstall bolts 2:

 - Torque: 2,5 daN m (18 lbf ft).

- Reinstall the 2 nuts (3):

 - Torque: 2,5 daN m (18 lbf ft).



■ Rigid attachment

The attachment is factory fitted in central position.



When lifting this equipment, use appropriate lift straps, chains or any other equipment, in perfect working order, complying with safety standards in force for this type of equipment, and with capacities that exceed the total weight of the unit, as listed in this manual: 70 kg (155 lb) (approximately).

Lateral offset

In parking position:

Attach a sling to the headstock.

Block machine with wooden chocks (1).

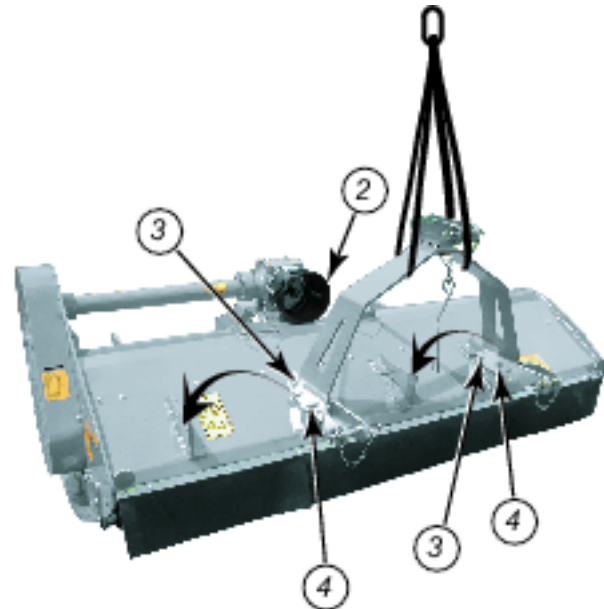
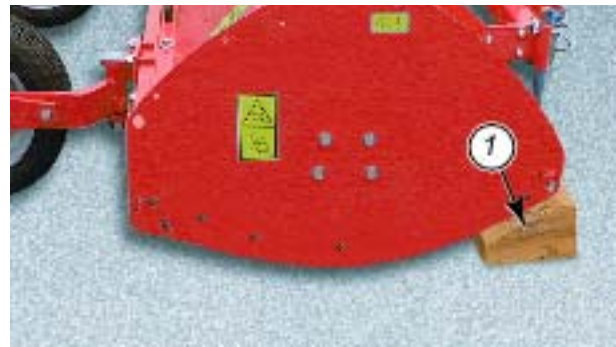
Raise the lifting device to tension the sling.

Remove headstock:

- Remove nuts and washers (3) (4).
- Remove bolts (2) (3) (4).

Reinstall headstock on offset attachments:

- Reinstall bolts (2):
 - Torque: 9 daN m (66 lbf ft).
- Insert screws (3) (4).
- Reinstall washers and nuts (3) (4):
 - Torque: 21 daN m (155 lbf ft).
- Remove sling.

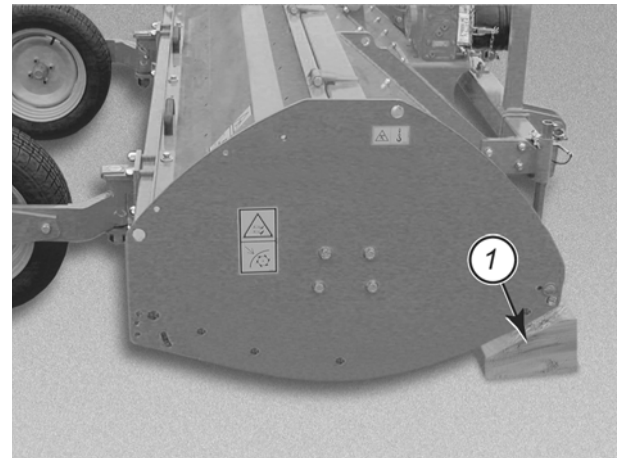


Rear linkage

In parking position:

Attach a sling to the headstock.

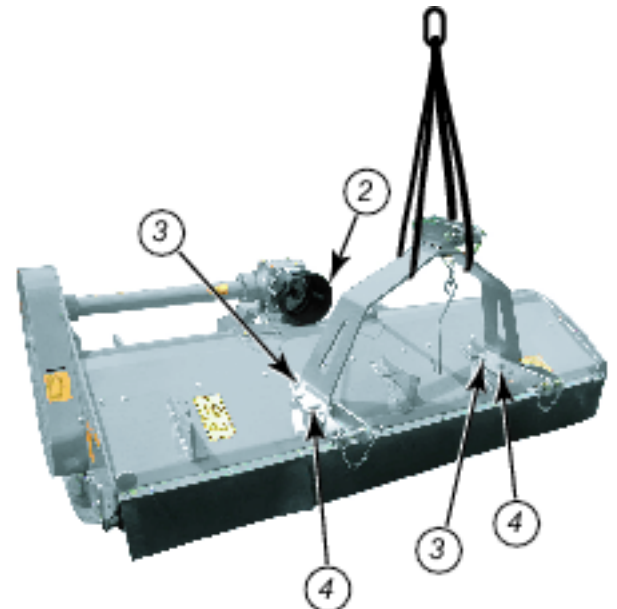
Block machine with wooden chocks (1).



Raise the lifting device to tension the sling.

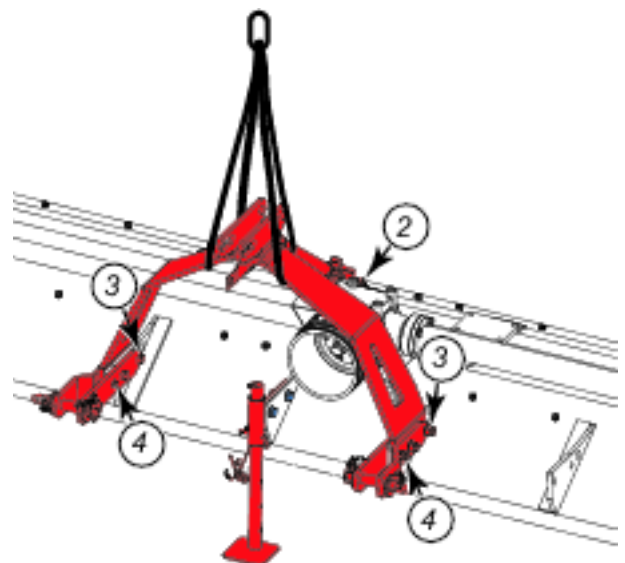
Remove headstock:

- Remove nuts and washers (3) (4).
- Remove bolts (2) (3) (4).

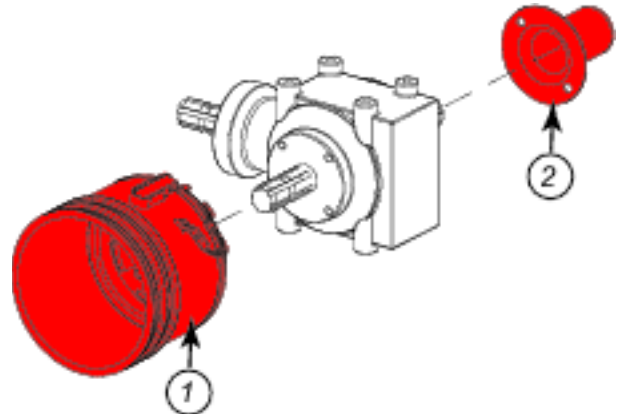


Reinstall assembly on the rear holders:

- Reinstall bolts (2):
 - Torque: 9 daN m (66 lbf ft).
- Insert screws (3) (4).
- Reinstall washers and nuts (3) (4):
 - Torque: 21 daN m (155 lbf ft).
- Remove sling.



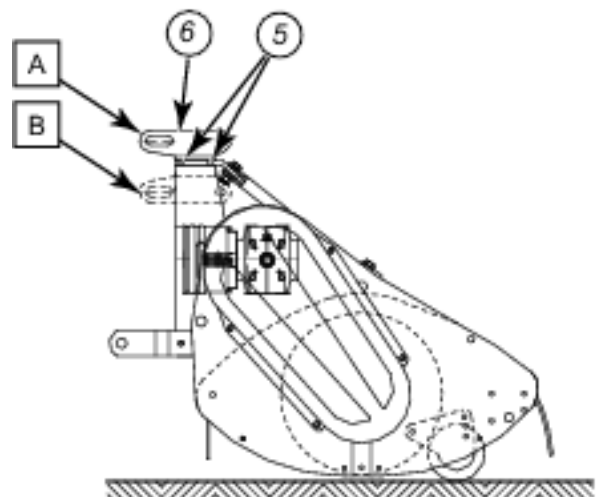
Invert guard cone (1) and input shaft guard (2).



Coupling to a small tractor

For easier coupling to small size tractors:

- Remove screws and nuts (5).
- Remove the top link coupling bracket (6).
- Reinstall coupling bracket in position (B).
- Insert screws and nuts (5)
 - Torque: 9 daN m (66 lbf ft).



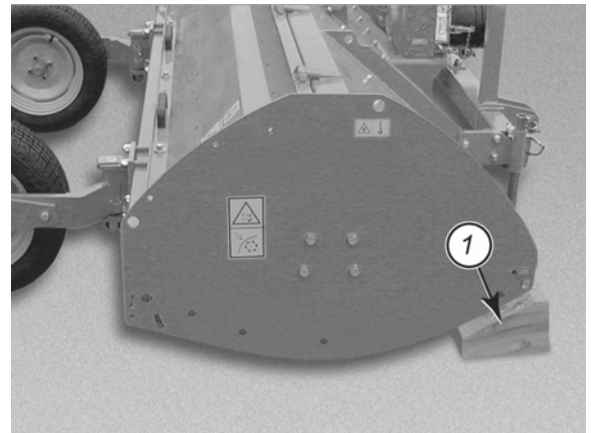
■ Offset linkage



The linkage is factory fitted in the forward position.



When lifting this equipment, use appropriate lift straps, chains or any other equipment, in perfect working order, complying with safety standards in force for this type of equipment, and with capacities that exceed the total weight of the unit, as listed in this manual: 90 kg (200 lb) (approximately).



Rear machine attachment

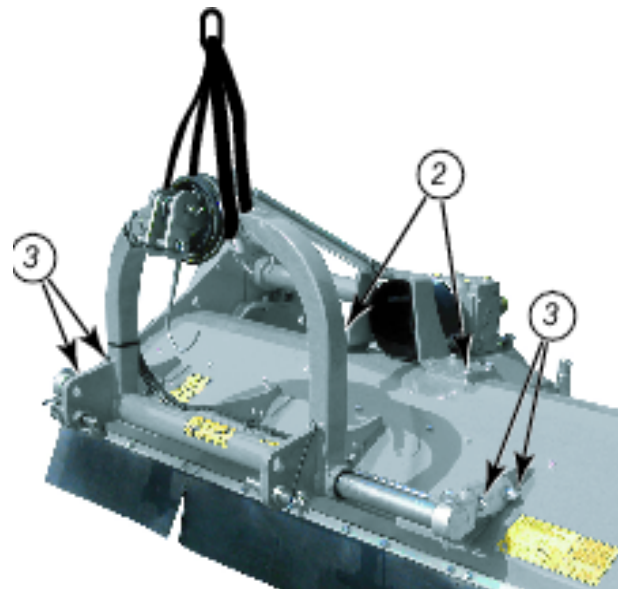
In parking position:

- Attach a sling to the headstock.
- Block machine with wooden chocks (1).

- Raise the lifting device to tension the sling.

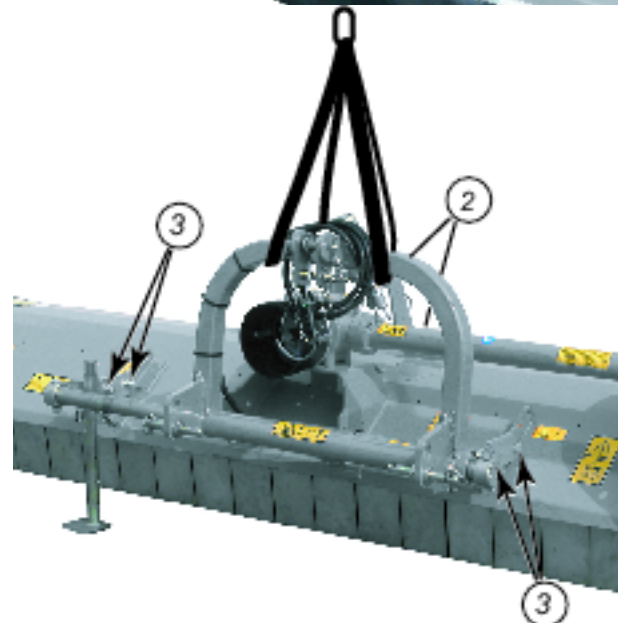
Remove headstock:

- Remove nuts and washers (3).
- Remove bolts (2) (3).



Reinstall assembly on the rear holders:

- Reinstall bolts (2):
 - Torque: 9 daN m (66 lbf ft).
- Insert screws (3).
- Reinstall washers and nuts (3):
 - Torque: 21 daN m (155 lbf ft).
- Remove sling.



Adaptation of the direction of rotation

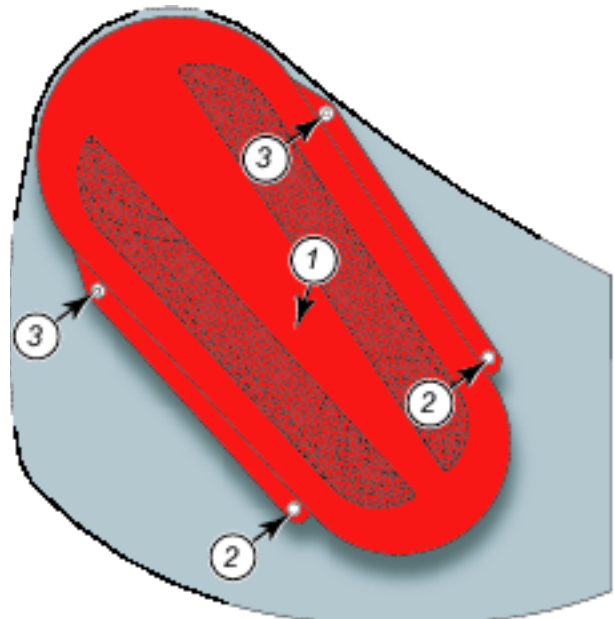
In the BKE REV series machines a transmission is assembled, which is adaptable to the PTO rotation direction through the gearbox rotation.

The machine is supplied with the following factory settings:

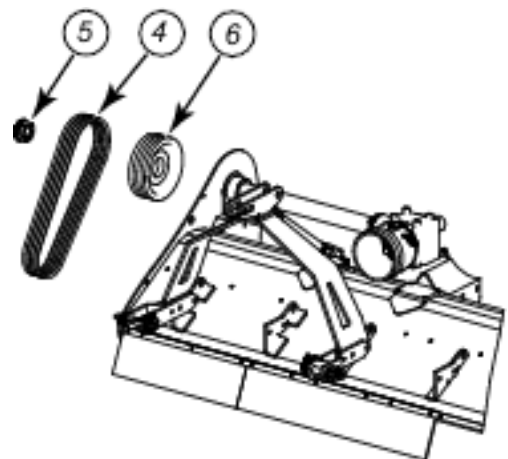


- Front attachment.
- PTO speed: 1000 min⁻¹.
- Clockwise direction.

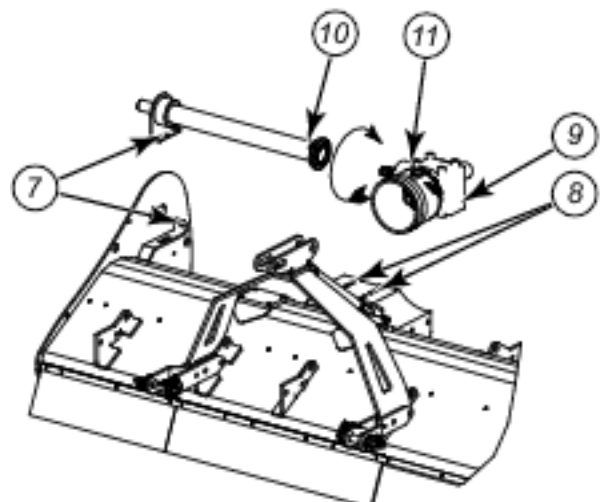
- Remove 2 bolts (2).
- Remove the 2 nuts (3).
- Remove belt guard (1).



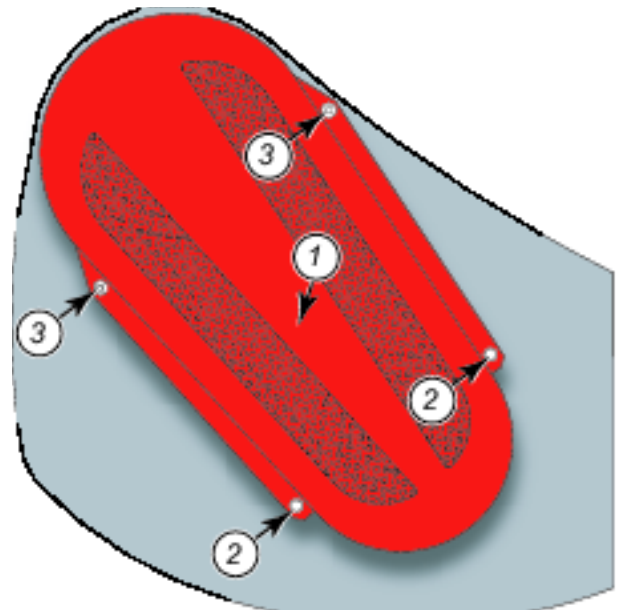
- Remove belts (4).
- Remove T-clamp (5).
- Remove pulley (6)



- Remove screws (7) that secure the drive.
- Remove screws (8) that secure the central gearbox (9).
- Remove the screws (10) that fix the drive tube to the angle gearbox unit.
- Invert plug and oil breather plug (11).
- Rotate the angle gearbox (9) by 180°.
- Insert and tighten the screws (10):
 - Torque: 2.5 daN m (18 lbf ft).
- Insert and tighten screws 7 and 8:
 - Torque: 9 daN m (66 lbf ft).
- To fit and position pulley in line, refer to instructions in chapter "Machine preparation".



- Reinstall belt guard (1).
- Reinstall bolts 2:
 - Torque: 2,5 daN m (18 lbf ft).
- Reinstall the 2 nuts (3):
Torque: 2,5 daN m (18 lbf ft).

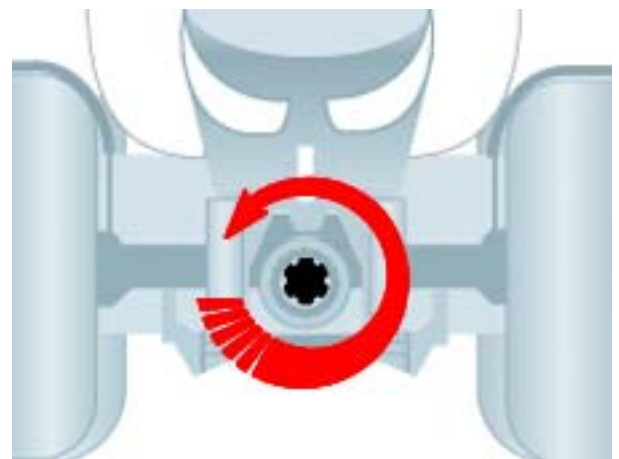


■ Machine front attachment

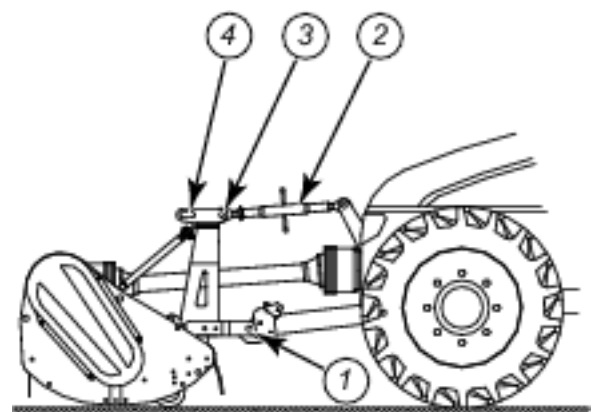


The input machine rotation direction must correspond to the tractor PTO rotation direction.

Check that the tractor PTO rotates counterclockwise.



- Lower the tractor three-point linkage.
- Place the lower links as close as possible under the hitch pins.
- Attach the lower links to the hitch pins (1).
- Secure with lynch pins.
- To obtain a machine rigid position, attach top link (2) to hole (3).
- To obtain a machine floating position, attach top link (2) to oblong hole (4).

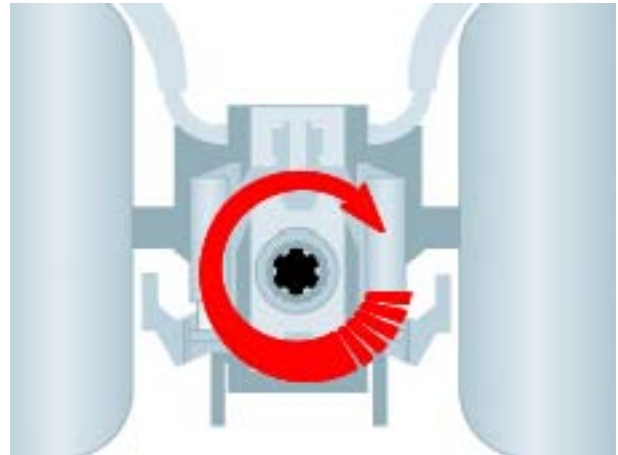


■ Rear machine attachment



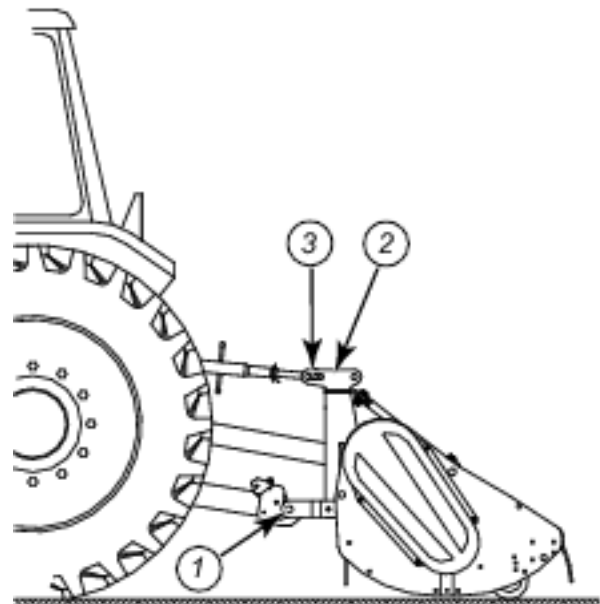
The input machine rotation direction must correspond to the tractor PTO rotation direction.

Check that tractor PTO rotates clockwise.



- Lower the tractor three-point linkage.
- Place the lower links as close as possible under the hitch pins.
- Attach the lower links to the hitch pins (1).
- Secure with lynch pins.

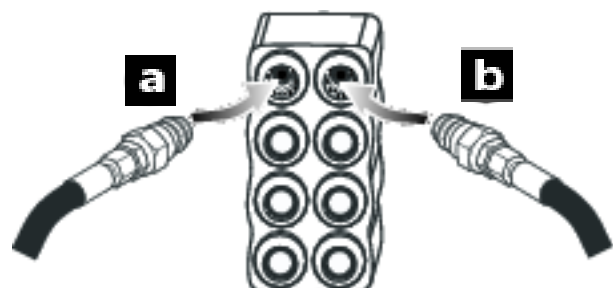
- Attach top link (2).
- Lock the upper hitch attachment using lynch pin (3).
- Lift the machine using the tractor's lift linkage.



■ Hydraulic connection

Hydraulic rear 3-point linkage

Connect hydraulic hoses (a) and (b) to a double acting outlet.



■ Primary PTO shaft

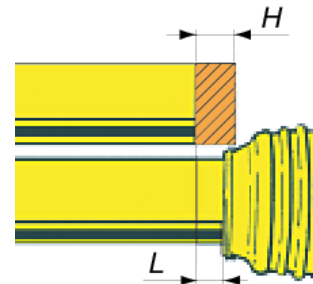


Make sure that the PTO shaft is correctly adjusted, to avoid premature wear and tear.

The tractor PTO stub must rotate at a speed of 540 min^{-1} .
Separate the two half PTO shafts and connect them to the machine's input shaft and to the tractor PTO stub.

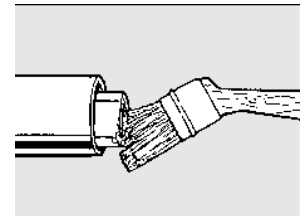
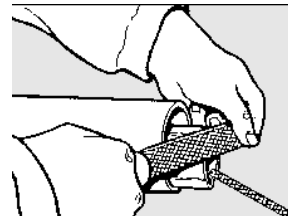
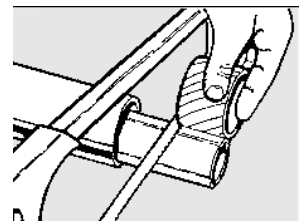
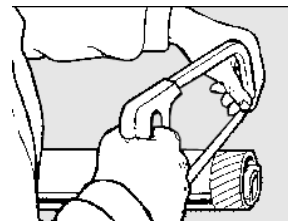
Check the length of the PTO shaft:

- When the PTO shaft is in its maximum overlap position (retracted), tubes should not butt against the yokes. As a safety measure, a clearance (L) of at least 25 mm (1") must be maintained.
- When the PTO shaft is in its maximum extended position, the tube overlap must be more than 250 mm (10").

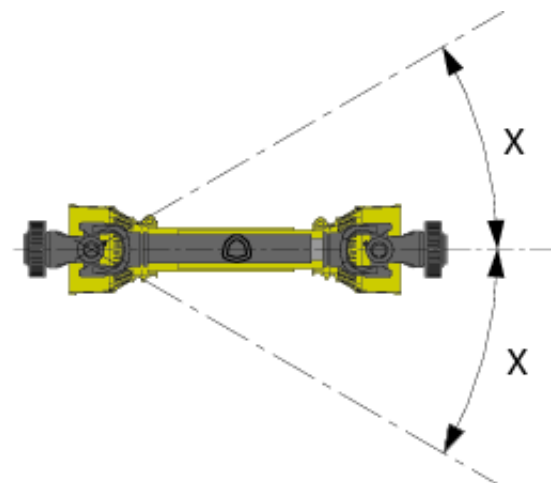


If this is not the case:

- Mark length (H) to cut when the transmission is the maximum overlap position.
- Shorten the guard tubes and the transmission tubes by the same length.
- Bevel and clean the tubes.
- Grease the inside of the outer tube.



Never operate the PTO shaft at an angle X exceeding 30° .



To avoid serious accidents, the PTO drive shaft guards must be properly in place and fixed with the chains provided.

Attach PTO shaft guard chain in hole (1) on machine side.

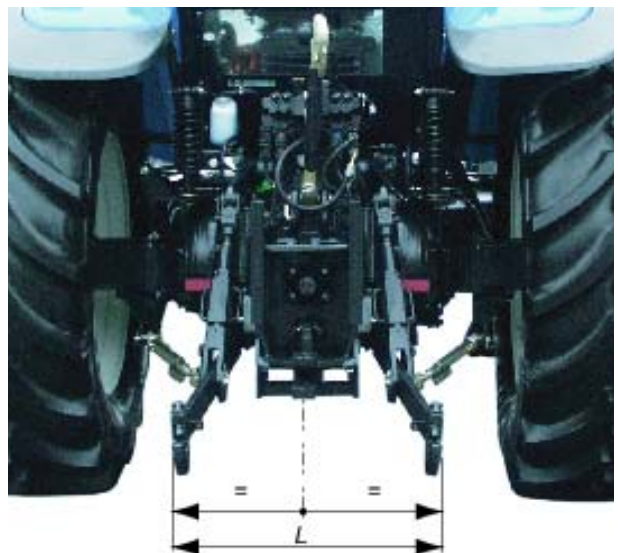


Immediately replace any worn or damaged guard.

■ Adjusting the machine

Lateral adjustment of the lower links

Balance the play on either sides of the lift linkage and lock lower link stabilizers.

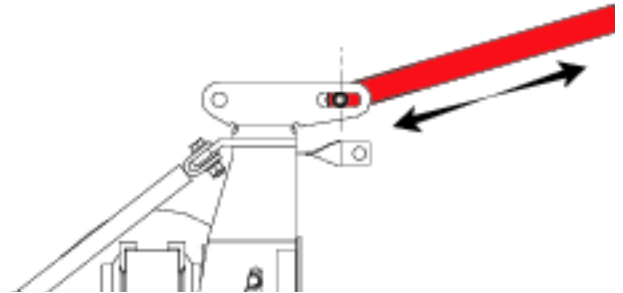


Length of the top link

Fixed headstock

Adjust the height of the lift linkage and the length of the top link until the machine is horizontal or only slightly higher at the front.

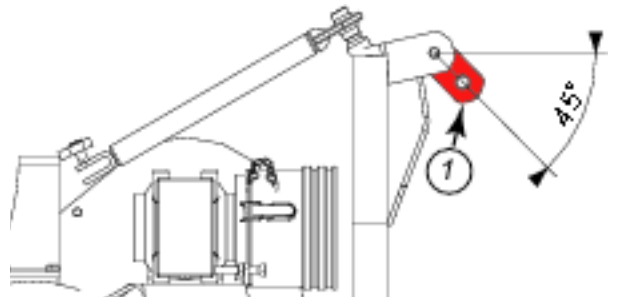
Adjust the length of the top link in order to place the hitch pin in the middle of the oblong hole.



Headstock with hydraulic offset

Adjust the height of the lift linkage and the length of the top link until the machine is horizontal or only slightly higher at the front.

Adjust the length of the top link in order to set the swinging yoke (1) at an angle of 45° when the machine is in the working position.



■ Uncoupling the machine

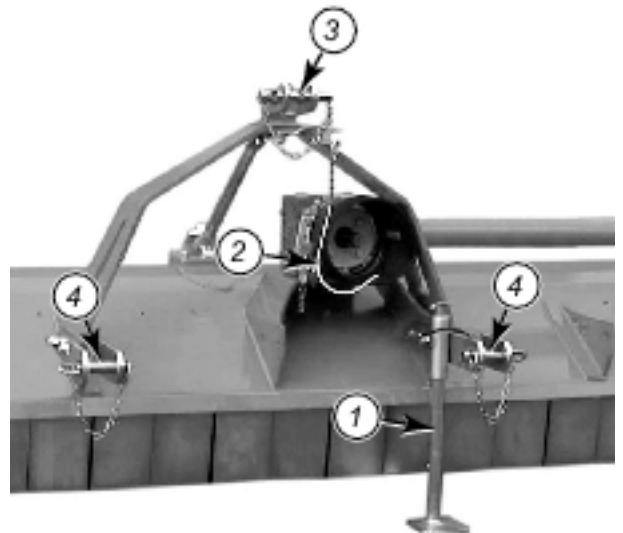


Park the machine on an even fairly level ground.

From the working position:

- Lower and lock parking stand (1).
- Lower the tractor three-point linkage to rest the machine on the ground.
- Uncouple and place PTO shaft in support (2).
- Detach the top link from the machine end (3).
- Release the lower links (4).
- Lower the tractor three-point linkage.

The machine is uncoupled.



■ Handling

When lifting this equipment, use appropriate lift straps, chains or any other equipment, in perfect working order, complying with safety standards in force for this type of equipment, and with capacities that exceed the total weight of the unit, as listed in this manual:

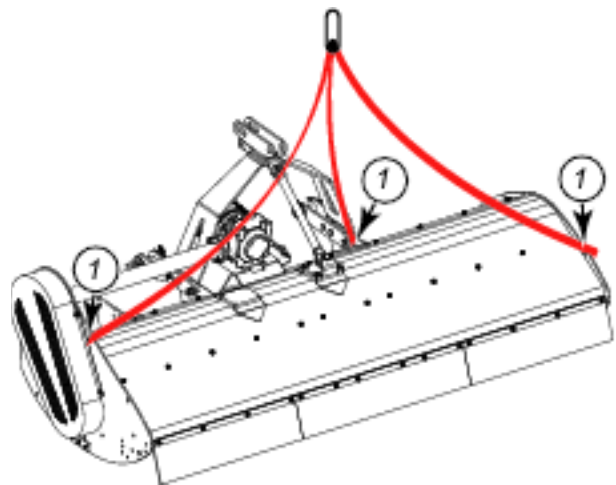


- BKE150: 470 kg (1036 lb).
- BKE180: 580 kg (1279 lb).
- BKE210: 660 kg (1455 lb).
- BKE230: 690 kg (1521 lb).
- BKE250: 710 kg (1566 lb).



The location of lifting points is indicated by a pictorial Part no. 0018661.

Use lifting points (1).



Instructions for transport

Before placing the machine into transport position:



- Wait until the rotating parts have come to a complete stop.
- Check that nobody is within the machine pivoting area.
- If there is someone, make sure the person moves away.

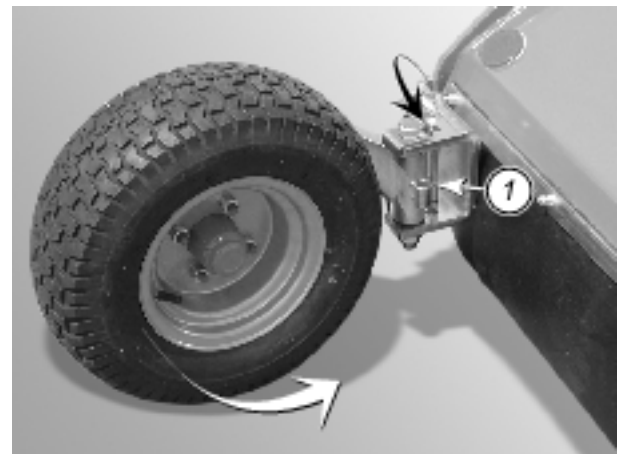
1. Putting the machine into transport position

From the working position:

Lift the machine with the tractor's three point linkage.

If the machine is equipped with semi-pivoting wheels:

- Pivot semi-pivoting wheel in transport position.
- Lock semi-pivoting wheels:
 - Secure pin (1) using R-clip.



Headstock with hydraulic offset

Activate offset cylinder to put the machine in line with the tractor.

The machine is in transport position.



Never engage the tractor PTO drive when the machine is in transport position.

2. Conformity with the road regulations



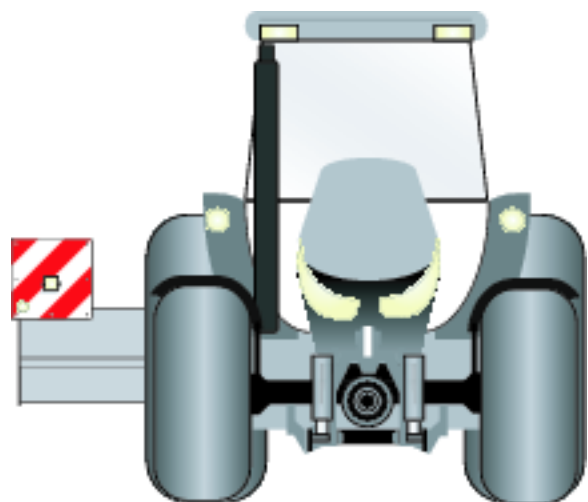
Before driving the machine on public roads, ensure that the machine complies with current highway code regulations.

Check that the light boards are clean and that the lighting equipment functions before transporting the machine on public roads.



In offset position, the machine juts out with regards to the tractor.

Follow the local regulations in terms of oversize equipment signalling and be careful when driving on roads.



Instructions for work

Before placing the machine in working position:



- Check that nobody is within the machine pivoting area.
- If there is someone, make sure the person moves away.

1. Putting the machine into work position

From the transport position:

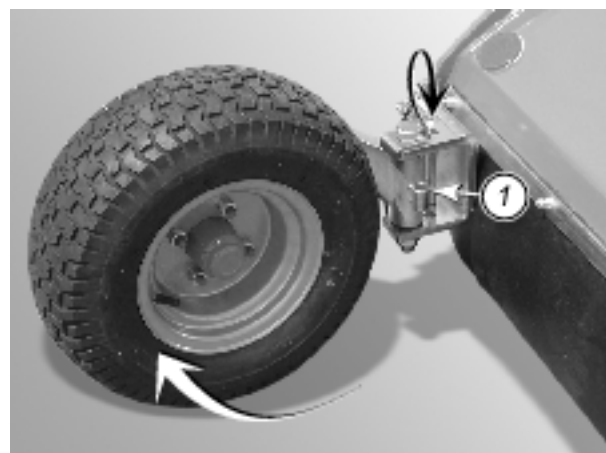
If the machine is equipped with semi-pivoting wheels.

Unlock semi-pivoting wheels:

- Unlock and remove pin (1).
- Pivot the semi-pivoting wheel in the work position.
- Fit pin in its holder.
- Secure pin (1) using R-clip.

Lower the tractor's lift linkage until the rear support unit touches the ground.

The machine is in working position.



2. Adjustments in working position

■ Working height

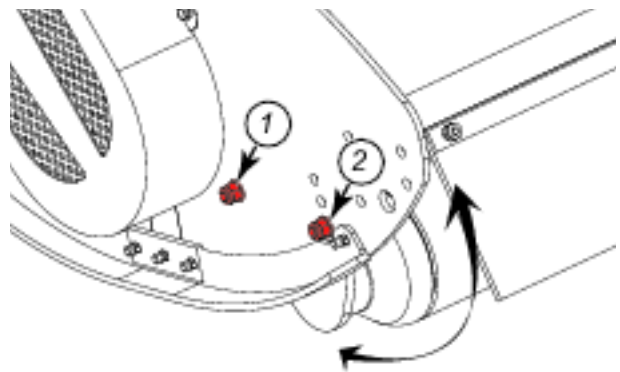


The cutting tools must never touch the ground.

The working height is set by the position of the rear support unit.

With roller:

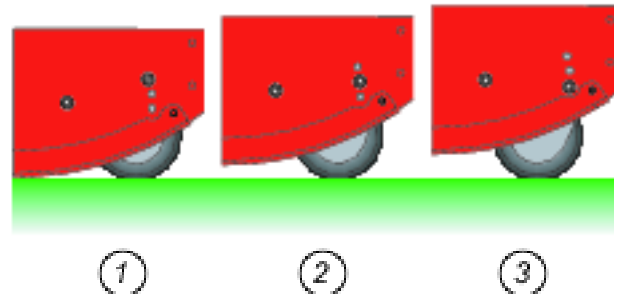
- Slightly lift the machine from the ground.
- Loosen bolts (1).
- Remove bolts (2).
- Position roller in holes corresponding to the required adjustment.
- Reinstall bolts (2).
- Tighten all the screws:
 - Torque: 9 daN m (65 lbf ft).



Relationship between the working height and the roller position:

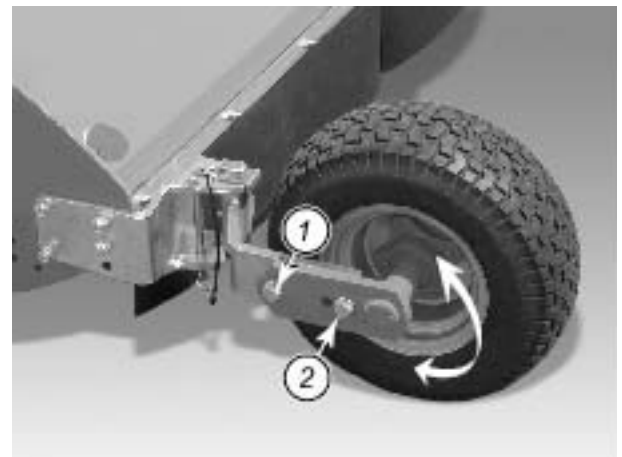


- Hole (1) = 23 mm (0.9").
- Hole (2) = 43 mm (1.7").
- Hole (3) = 63 mm (2.5").



With semi-pivoting wheels:

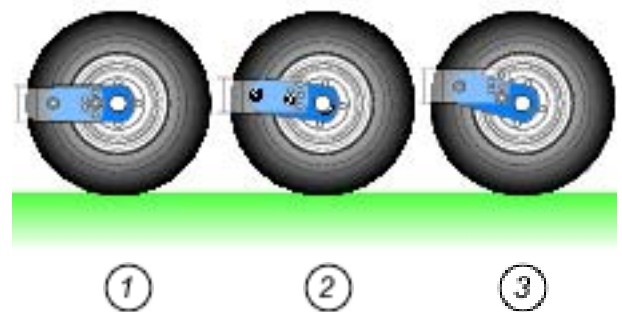
- Slightly lift the machine from the ground.
- Loosen screw (1).
- Remove screw (2).
- Position wheel arm in hole corresponding to the required setting.
- Reinstall and tighten screw (2):
 - Torque: 13.5 daN m (99 lbf ft).
- Tighten screw (1).
 - Torque: 13.5 daN m (99 lbf ft).



Relations between the working height and the position of the wheels:



- Hole (1) = 23 mm (0.9").
- Hole (2) = 46 mm (1.8").
- Hole (3) = 63 mm (2.5").



■ Height of the tractor's lift linkage

- Lower the 3 point lift of the tractor until the rear support element rests on the ground.
- Adjust the height of the lift linkage until the machine is horizontal or only slightly higher at the front.

This adjustment helps vegetation to enter.

with a front mounted machine:



- The tractor lift linkage must be in floating position.

3. Machine use



Before shredding: Keep all persons and animals away from the machine danger zone.



If using a tractor with a cab that is not sound-proofed or pressurized, the operator must use individual protection equipment:

Ear protections, if the noise exceeds normal exposure limits.

Anti-dust mask if working in very dry conditions or when large quantities of dust are lifted.



If the machine starts vibrating oddly during work, immediately stop and check the condition of the rotor, the cutting tools and the balancing ballast. Excessive vibration can cause physical harm to the user.



The top link is in floating position during work to provide good ground adaptation in irregular grounds.

■ Using the offset

Fixed headstock

- See section: "Preparing the machine".

Headstock with hydraulic offset

- Slightly lift the machine off the ground using the tractor lift linkage.
- Operate offset cylinder to move machine sideways or to center it with regards to the tractor.
- Lower the tractor three-point linkage to rest the machine on the ground.

■ Groundspeed

Adapt the forward speed to the working conditions.

Optional equipment

1. Skids

Kit no. 1556829 (BKE 150-250 REV)

Use skids on irregular grounds, they ensure a steady working height and prevent contact between the shredding tools and the ground.



The skids can be fitted in addition to the roller or the wheels.



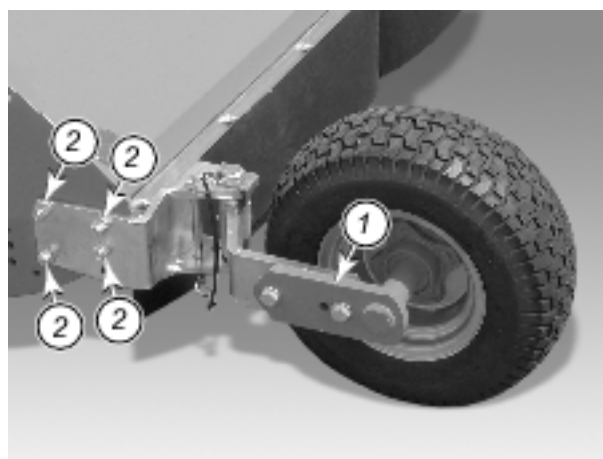
■ Mounting and adjustment

Slightly lift machine off the ground using an adapted lifting device.

When semi-pivoting wheels are fitted:

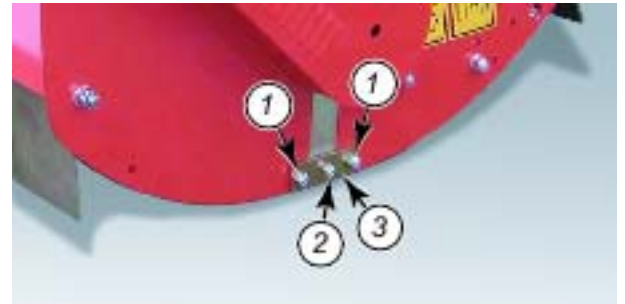
Remove the support wheel (1):

- Remove nuts and washers (2).
- Remove bolts (2).
- Proceed the same way on the other side.
- Store parts in a dry place free of dust.

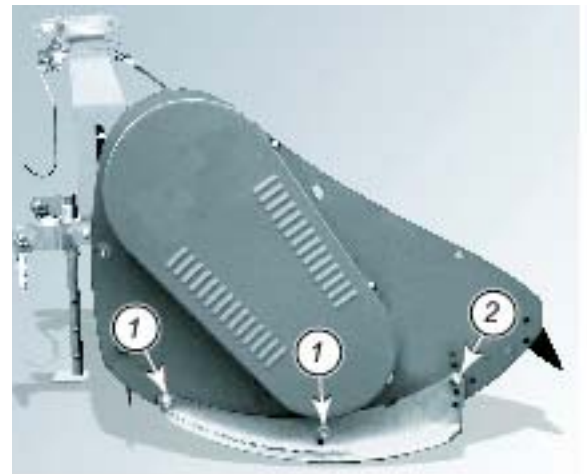


Remove bracket (3):

- Remove original bolts and nuts (1).
- Remove nut (2).



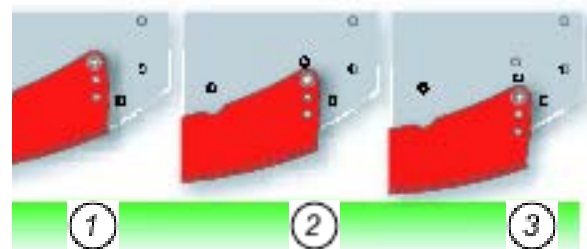
- Insert screws (1).
- Reinstall washers and nuts (1).
- Position skid in holes corresponding to the required adjustment.
- Insert screw (2).
- Install washer and nut (2):
 - Torque (1): 5 daN m (37 lbf ft).
 - Torque (2): 5 daN m (37 lbf ft).



Relations between the working height and the skid position:



- Hole (1) = 20 mm (0.8").
- Hole (2) = 30 mm (1.2").
- Hole (3) = 50 mm (2").

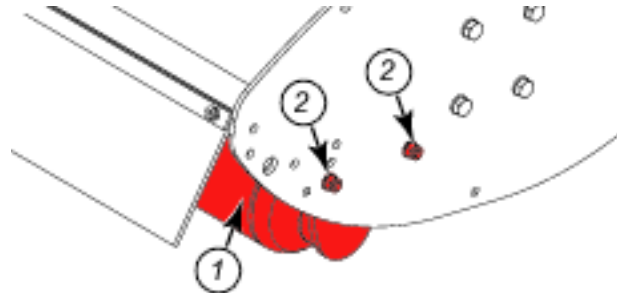


- Proceed the same way on the other side.
 - Check that the 2 skids are set identically.

When a roller is fitted:

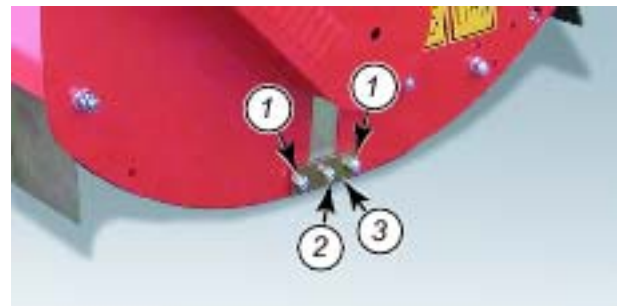
Remove the roller (1):

- Remove nuts and washers (2).
- Remove bolts (2).
- Proceed the same way on the other side.

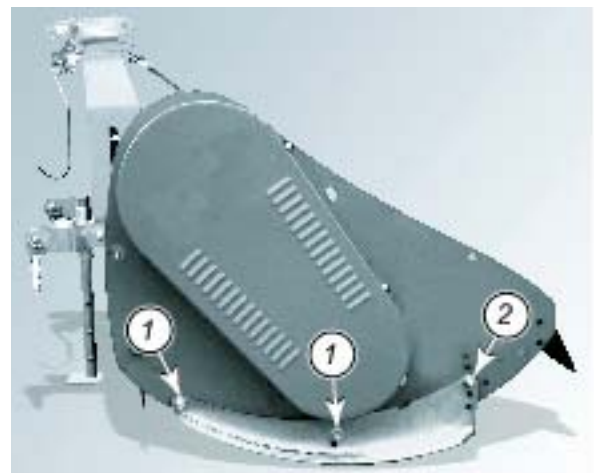


Remove bracket (3):

- Remove original bolts and nuts (1).
- Remove nut (2).
- Store parts in a dry place free of dust.



- Insert screws (1).
- Reinstall washers and nuts (1).
- Position skid in holes corresponding to the required adjustment.
- Insert screw (2).
- Install washer and nut (2):
 - Torque (1): 5 daN m (37 lbf ft).
 - Torque (2): 5 daN m (37 lbf ft).

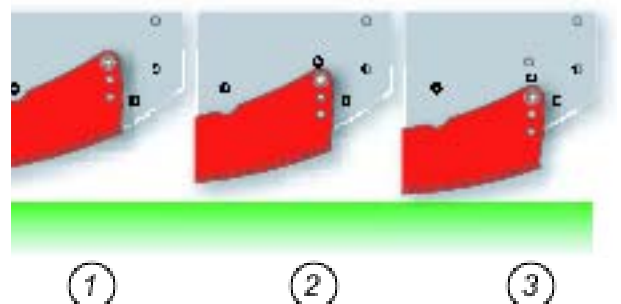


Relations between the working height and the skid position:



- Hole (1) = 20 mm (0.8").
- Hole (2) = 30 mm (1.2").
- Hole (3) = 50 mm (2").

- Proceed the same way on the other side.
- Check that the 2 skids are set identically.



2. Double skinned plate

Kit no. 1556855 (BKE 150 REV)

Kit no. 1556856 (BKE 180 REV)

Kit no. 1556843 (BKE 210 REV)

Kit no. 1556857 (BKE 230 REV)

Kit no. 1556830 (BKE 250 REV)

Machine reinforced for work in very intensive conditions.

■ Fitting



When lifting this equipment, use appropriate lift straps, chains or any other equipment, in perfect working order, complying with safety standards in force for this type of equipment, and with capacities that exceed the total weight of the unit, as listed in this manual:

- BKE 150 REV: **470 kg (1036 lb).**
- BKE 180 REV: **580 kg (1279 lb).**
- BKE 210 REV: **660 kg (1455 lb).**
- BKE 230 REV: **690 kg (1521 lb).**
- BKE 250 REV: **710 kg (1566 lb).**

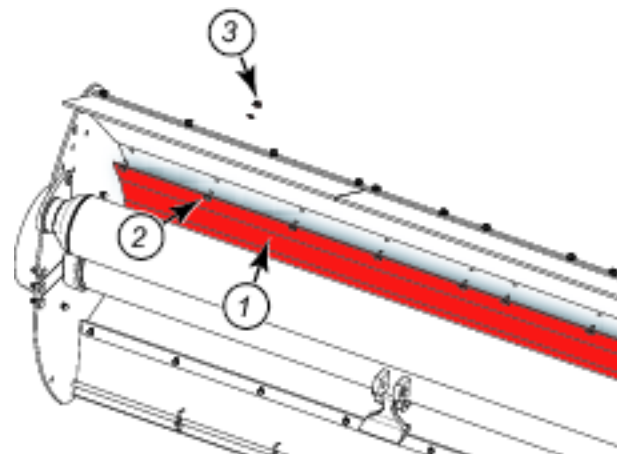
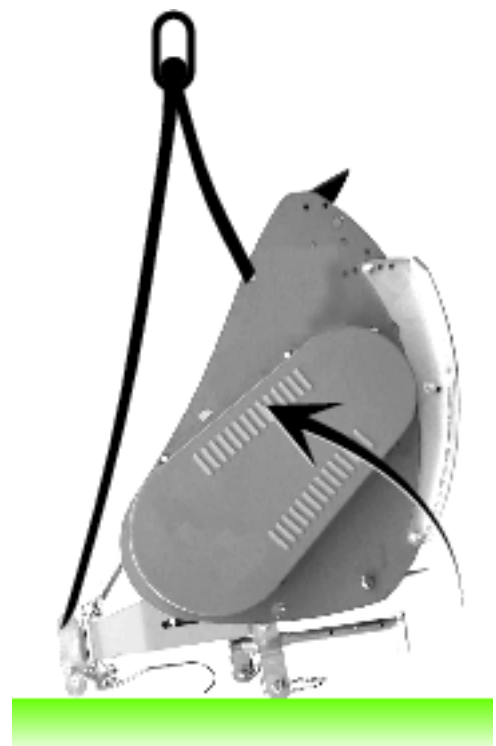
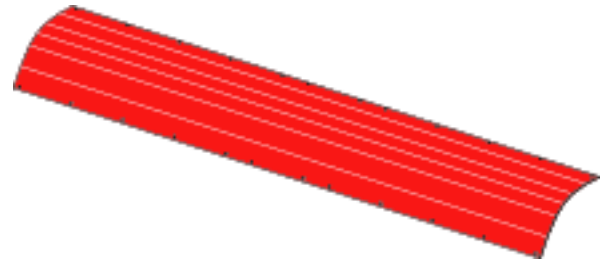
In parking position:

- Slightly lift machine off the ground using an adapted lifting device.
- Tip the machine forward.
- Lower the lifting device until the attachment yokes touch the ground.



Keep the slings under tension.

- Position double skinned plate (1) opposite the holes.
- Insert screws (2).
- Reinstall washers and nuts (3):
 - Torque: 2.5 daN m (18 lbf ft).
- Tilt machine rearwards.
- Place the machine in parking position.
- Remove slings.



3. Pivoting front wheels

Kit no. 1556929

The front pivoting wheels are intended for work on rolling land.

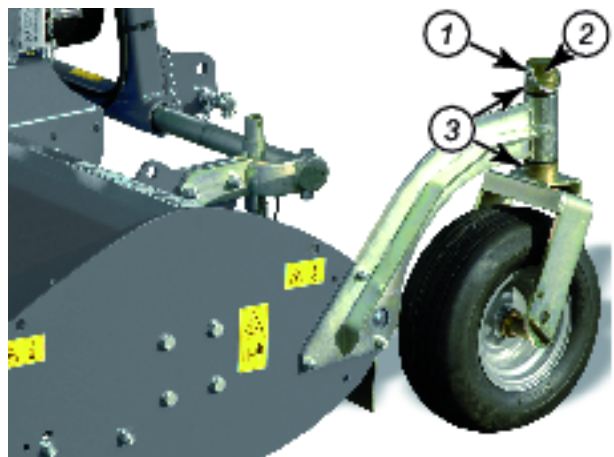


■ Adjustment



Adjust wheel height according to the roller setting so as to have the machine level in relation to the ground.

- Remove lynch pin (1).
- Remove spacer (2).
- Modify position of the spacers (3) to obtain the required wheel column height.
- Reinstall bush (2).
- Reinstall lynch pin (1).



■ Lubrication

Clean grease nipples before greasing.

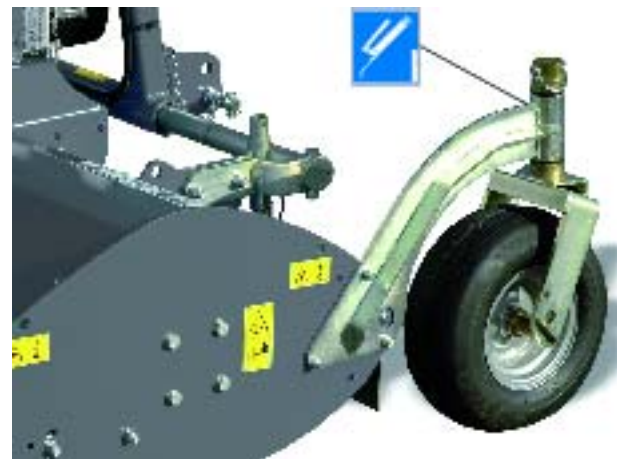


Lubricate with SHELL multi-purpose grease grade NLGI 2.



Grease:

- Wheel pivot pin articulations



Maintenance and storage



Before adjusting, maintaining or repairing the machine, turn off ignition key and wait until all moving parts have come to a complete stop.



1. Cleaning the machine

Regularly clean the rotor and the machine inner panels.

2. Frequency chart

	After the first 3 hours of use	Every 8 hours	Every 20 hours	After the first 30 hours of use	Every 50 hours	Every 250 hours or at the end of the season
Lubrication						
Grease:						
- Cardan cross joints.		✓				
- PTO shaft tubes.			✓			
- The PTO shaft guiding bushes.					✓	
- Hitch sliding tubes.					✓	

	After the first 3 hours of use	Every 8 hours	Every 20 hours	After the first 30 hours of use	Every 50 hours	Every 250 hours or at the end of the season
- The wheel pins.					✓	
- Roller removable bottoms.					✓	
Oil change: - Central gearbox.				✓		✓
Maintenance						
- Check belt tension.	✓	✓				

3. Lubrication

Clean grease nipples before greasing.



Lubricate with SHELL multi-purpose grease grade NLGI2.

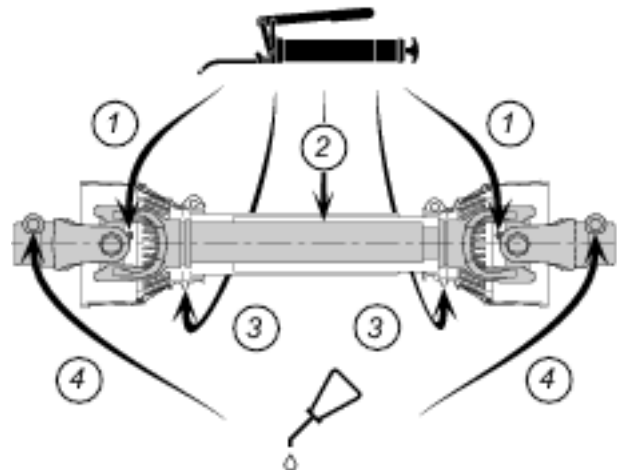


■ PTO shaft

Primary PTO shaft

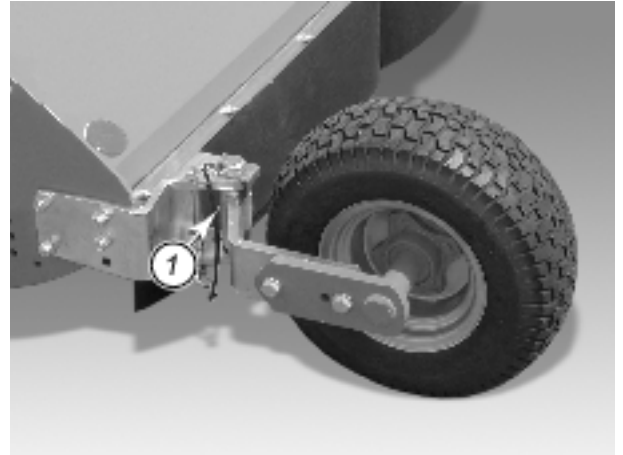
Grease:

- Every 8 hours:
 - universal joints (1).
- Every 20 hours:
 - transmission tube (2).
- Every 50 hours:
 - guide rings (3).



■ Grease

- The wheel pins (1).



- Roller removable bottoms (1).



- Hitch sliding tubes (2).



■ Oil change

Central gearbox



Before draining oil, operate the machine for a few minutes so that the oil warms up.

The angle gearbox is lubricated with SHELL SPIRAX A extreme-pressure gear oil with viscosity grade 80W90 and API grade GL5.

- BKE 150: 1.1 L (0.290 US gal).
- BKE 180: 1.4 L (0.37 US gal).
- BKE 210: 1.5 L (0.39 US gal).
- BKE 230: 1.6 L (0.42 US gal).
- BKE 250: 1.7 L (0.45 US gal).



When refilling it is recommended to use:

For normal use:

- A mineral base oil with viscosity grade SAE 80W90 or 85W140 and API grade GL5 (SHELL SPIRAX A 80W90 or SHELL SPIRAX A 85W140).

For intensive use:

- A synthetic base oil, type PAO (Poly-Alpha-Olefins) with a viscosity grade equivalent to SAE 80W90 or 85W140 and API grade GL5 (SHELL SPIRAX ASX 75W90).

- Park the machine on an even fairly level ground.
- Remove filler plug (1).
- Place a container of sufficient capacity under drain plug.
- Remove drain plug (2).
- Allow oil to drain completely.
- Wait for dripping to stop.
- Clean and reinstall drain plug (2) and its washer. Replace if necessary.
- Pour the correct oil quantity and quality through the opening of the filler plug.
- Reinstall filler plug (1).
- Check central gearbox oil level.



4. Maintenance

■ Checking the oil levels



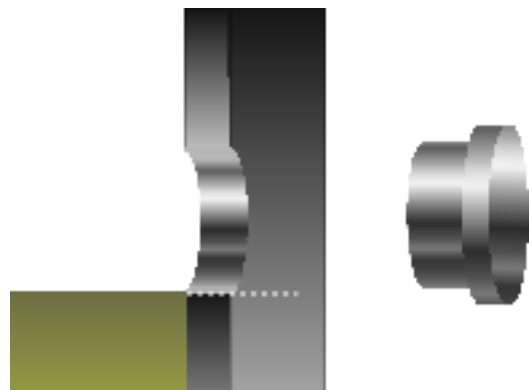
Place the machine on level ground.

Check central gearbox oil level:

- Place the machine on level ground.
- Remove level plug (1).



- The oil level must reach lower part of level plug hole.
- Reinstall level plug (1).



■ Check cutting tools and their fixing elements

Cutting tools:

Universal knives (1)

Part no. 6061201 (2x)

Hammer knives (2)

Part no. 6061900

Pallet for grass (3)

Part no. 6061709

Pivoting universal knives and Shackles (4)

Pivoting universal knives: (Part no. 6060012)

Shackles: (Part no. JX133540)

Articulated hammer knives (5)

Articulated hammer knives: (Part no. JX135698)

Shackles: (Part no. JX135697)

Spacer: (Part no. JX136263)



Check cutting tools before each use in order to:

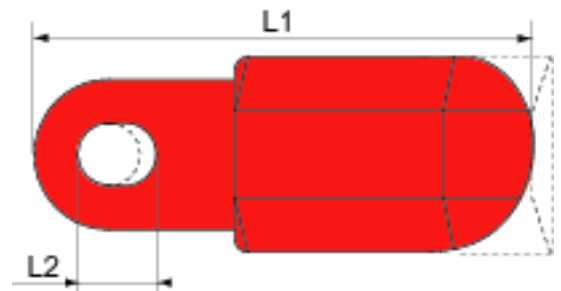
- ensure shredding quality.
- guarantee safety in use.
- avoid risk of damaging the fixing elements.

Replace cutting tools in the following cases:

- Damaged cutting tools:
 - Very uneven ground can cause the knives to crack or warp.
- Important wear.

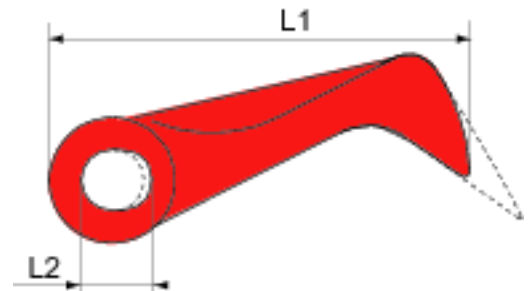
Universal knives

- The length (L1) of the universal knives must exceed 90 mm (3.54").
- Ovalisation of the mounting hole L2 must not exceed 18 mm (0.71").



Hammer knives

- The cutting tool length L1 must exceed 90 mm (3.54").
- Ovalisation of the mounting hole L2 must not exceed 18 mm (0.71").



Fixing elements

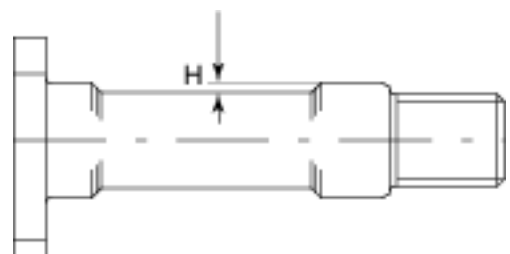
Check the condition of the fixing elements regularly and also the torque of the knife-fixing bolt. Torque: 10.5 daN m (77.4 lbf ft).

Check the fixing elements:

- After hitting an obstacle.
- When knives are replaced.
- At the start of each season.

The fixing bolts should be changed in the following cases:

- When there is visible distortion.
- When the thread is damaged or worn.
- When a groove (H) of over 2 mm (0.08") has developed.



■ Replacing knives and pallet knives



Immediately replace worn or damaged parts with genuine KUHN parts.



Replace self-locking nuts after each removal operation:

Torque: 10.5 daN m (77.4 lbf ft).

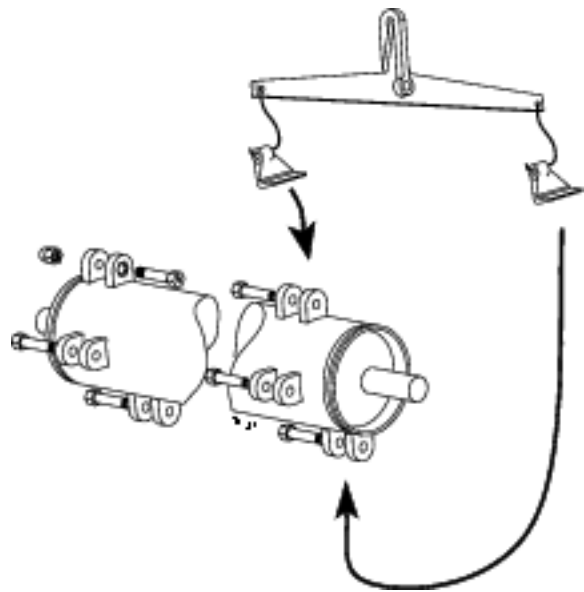
From the transport position:

Uncouple PTO shaft on machine side.

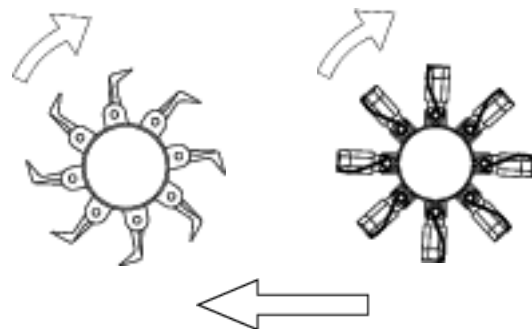
- Partial replacement:
 - Replace damaged or worn knives.
 - Replace the knives that are diametrically opposite to maintain the existing balance.
 - Check that there is still 1 to 2 mm (0.04" - 0.08") play between the pair of knives and the supports.
- Total replacement:
 - Weigh cutting tools.
 - Pair up equally weighted cutting tools so that they can be placed diametrically opposite.



Put the lighter pairs in the center of the rotor and the heavier pairs to the edges.



- Fit the knives according to the direction of travel of the machine.
- Check that there is still 1 to 2 mm (0.04" - 0.08") play between the pair of knives and the supports.
- Checking the balance:
 - Couple PTO shaft on machine side.
 - Slightly lift the machine from the ground.
 - Start the PTO drive and increase speed progressively up to a steady speed of 540 min⁻¹.
 - When mounted correctly, the rotor must rotate without causing the machine to vibrate.



■ Belt tension

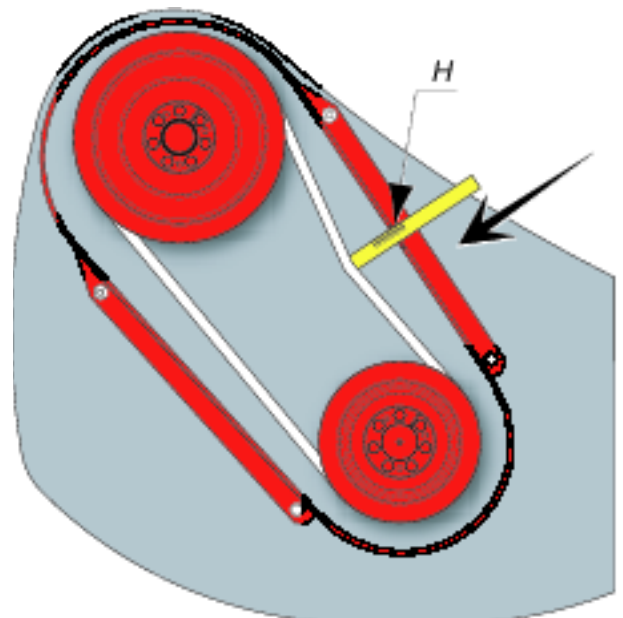
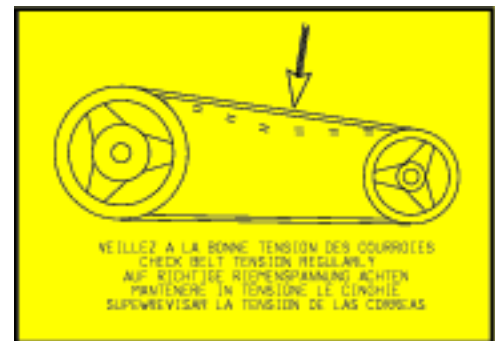


Check belt tension:
After the first 3 hours of use.
Every 8 hours.

Checking the tension:

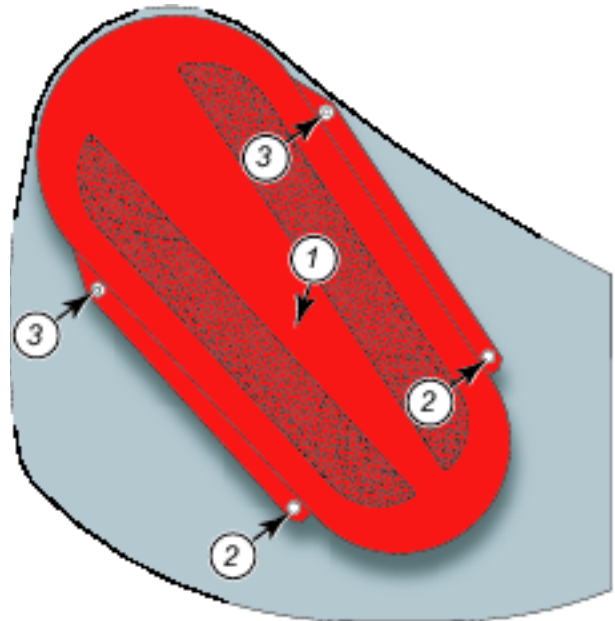
Through the belt guard slot:

- Apply a force of 35 N (1.6 lbf) on the belt: the belt should not deflect more than $H = 7 \text{ mm}$ (0.3").



Adjusting the tension:

- Remove 2 bolts (2).
- Remove the 2 nuts (3).
- Remove belt guard (1).



Replace belts, if proper tension can no longer be obtained:



- BKE 180: 3 x Part no. JX001800.
- BKE 210-230-250: 4 x Part no. J0019025.

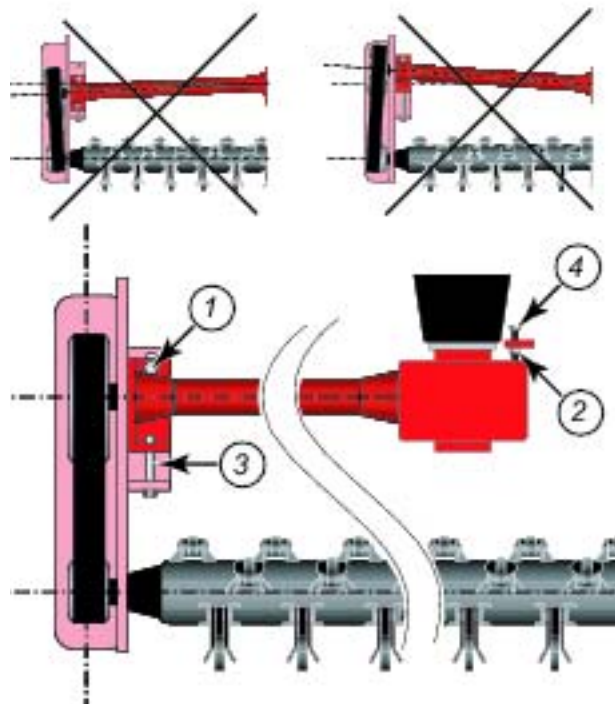
When a belt is damaged, always replace the whole set.

- Loosen screw (1).
- Loosen counter nut (2).
- Turn the adjustment screws (3) and nuts (4) equally until reaching the optimum tension.

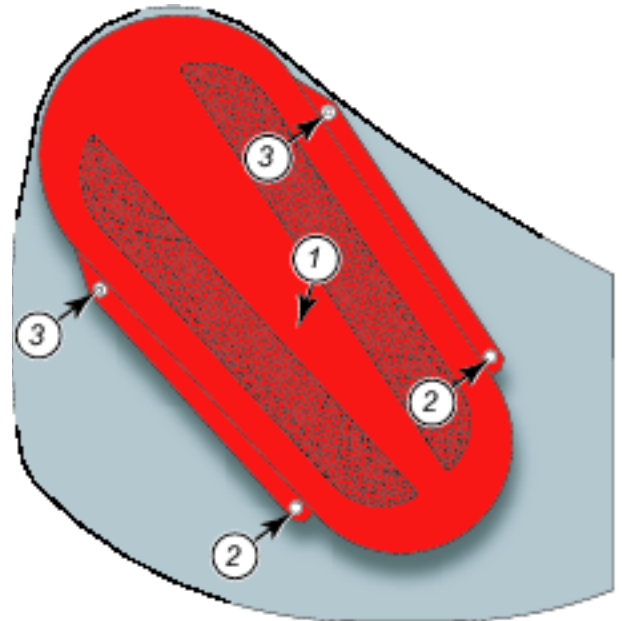


By adjusting (3) and (4) equally, the central transmission shaft is kept parallel to the rotor.

- Tighten screw (1).
- Tighten counter nut 2.
- Check that pulleys are in line.



- Reinstall belt guard (1).
- Reinstall bolts (2):
 - Torque: 5 daN m (37 lbf ft).
- Reinstall the 2 nuts (3):
 - Torque: 5 daN m (37 lbf ft).



5. Storage

■ At the end of each season

Clean the machine thoroughly:

- The rotor.
- The inner panels.
- Rotor housings.
- Roller housings.

Touch up any areas of damaged paintwork.

Put the machine under cover in a dry place.

Check the condition of the fixing elements regularly and also the torque of the knife-fixing bolt. Replace if necessary.

Slacken V-belts and check their condition.

■ At the start of each season

- Re-read the operators' manual.
- Check that the machine is greased.
- Check all the knives and fixings, and replace if necessary.
- Check that all nuts and bolts are sufficiently tightened.
- Retension V-belts.
- Check belt guard condition and if it is firmly secured in place.
- Make sure that all protection devices are in place and in good condition.

6. Machine recycling

In case of recycling, the machine will have to be recycled in conformity with the legislation in force in the country concerned.

Prior to proceeding with the recycling, remove all plastic or rubber parts, electric or electronic equipment.

Collect possible residual oil and give it to an appropriate processing center.

Parts only made up of plastic, aluminium, steel can be recycled if they are collected by an appropriate center.

Trouble shooting guide

■ Problem	■ Cause	■ Remedy
Excessive vibrations.	<ul style="list-style-type: none"> - Breakage or excessive wear of knives or hammer knives. - Knife or hammer knife jamming on the pivot point. - Incorrect rotor balance. 	Replace worn or damaged parts. Clean and grease pivot points. Check weight of knives and hammer knives.
Poor cutting quality due to a drop in the rotor speed.	<ul style="list-style-type: none"> - Insufficient belt tension. - Excessive belt wear. 	Adjust belt tension. Replace belts.
Belt overheating.	<ul style="list-style-type: none"> - Insufficient belt tension. - The angle gearbox axle is no longer in line with the rotor axle. 	Adjust belt tension. Check alignment.
Angle gearbox overheating.	<ul style="list-style-type: none"> - Lack of oil. - No oil. 	Top up until proper oil level is reached.
Fast knife or hammer knife wear.	<ul style="list-style-type: none"> - Working position too low, interference with the ground. 	Adjust working height.
Drive shaft oil loss on the belt side.	<ul style="list-style-type: none"> - Seal wear or breakage. 	Replace seal.
Distortion of roller or wheel supports.	<ul style="list-style-type: none"> - The roller or wheel supports have been subject to lateral forces. 	Raise machine off the ground when inverting the direction of travel or steering the wheels.
Distortion of the front pivoting safety flaps.	<ul style="list-style-type: none"> - The machine has been lowered onto the residues to shred from the raised position (transport position). 	The machine must be in working position before coming into contact with the residues to shred.
Rotor jamming during work.	<ul style="list-style-type: none"> - Clogging due to foreign bodies (example: wire, plastic material). 	Put on gloves and remove foreign bodies with adequate tools.

Limited warranty

KUHN S.A. 4, Impasse des Fabriques, 67706 SAVERNE Cedex FRANCE (hereinafter called "the Company") warrants, in accordance with the provisions below, to each retail purchaser of a new KUHN equipment from an authorized KUHN dealer, that such equipment is, at the time of delivery to such purchaser, free from defects in material and workmanship, and that such equipment is covered under this Limited Warranty providing the machine is used and serviced in accordance with the recommendations in the Operator's manual.

This Limited Warranty covers the equipment for a period of one year starting from the date the equipment is delivered to the retail purchaser and during this period up to a limit of 500 hours of use.

The date of invoice to the retail purchaser and the registration of the machine by the dealer are taken as evidence of delivery of the machine.

This Limited Warranty covers the reimbursement (or repair) of components as well as labor charges incurred, based on the Company warranty labor rate and allowable time for repair.

■ **These conditions are subject to the following exceptions:**

- Parts of the machine which are not of KUHN manufacture, such as tires, PTO shafts, slip clutches, hydraulic cylinders, etc. are not covered by this Limited Warranty, but are subject to the warranty of the original manufacturer.

Warranty claims applying to these types of parts must be submitted in the same way as if they were parts manufactured by KUHN. However, compensation will be paid in accordance with the warranty agreement of the manufacturer concerned, in as much as the latter justifies such a claim.

- This Limited Warranty does not apply to failure through normal wear and tear, to damage resulting from negligence or from lack of inspection, from misuse, from lack of maintenance and/or if the machine has been involved in an accident, lent out or used for purposes other than those for which it was intended by the Company.
- This Limited Warranty will not apply to any product that has been altered or modified in any way without the express permission of the Company, or if parts and/or equipment not approved by Kuhn are used on a machine manufactured by the Company and/or if repairs have been carried out by anyone other than an authorized KUHN dealer.
- The Company shall not be responsible for any damage to the machine or its equipment in transit or handling by any common carrier, within or without the Warranty period. Machines, equipment and parts are transported at owner's risk.
- The Company cannot be held responsible for any claims or injuries to the owner or to any third party, nor to any resulting responsibility.
- Also, on no account can the Company be held liable for incidental or consequential damages (including loss of anticipated profits) or for any impairment due to a failure, a latent defect or a breakdown of the machine.

■ **The customer will be responsible for and bear the costs of:**

- Normal maintenance such as greasing, maintenance of oil levels, minor adjustments, etc.
- Dealer travel time, or travelling costs to and from the machine.
- Transporting machines, equipment or parts to the repair site and returning them to the user site.
- Parts defined as normal wearing items such as, but not limited to belts, blades, discs, knives, shares, tines, tine holders, slip clutches, etc. that are not covered by the Limited Warranty.

■ **The Limited Warranty is dependent on the strict observance of the following conditions:**

- The machine has been put in service by the dealer according to our instructions.
- The machine has been registered on line via extranet - www.kuhn.com or the warranty/product registration form has been completed and returned to the address indicated on the form as soon as the machine had been delivered to the retail purchaser.
- The warranty claim is completed on line via extranet - www.kuhn.com or submitted on a KUHN warranty claim form and returned to the Company within one month after the date of failure or the date of problem becoming apparent.
- The claim must be completed by the dealer and following information must be mentioned.
 - **Dealer's name and address**
 - **Name and address of retail purchaser**
 - **Exact type of machine**
 - **Machine serial number**
 - **Date of delivery to the retail purchaser**
 - **Date of failure**
 - **Number of hours of use or area (hectares, acres) worked**
 - **Power of tractor used**
 - **PTO speed (if applicable)**
 - **Detailed description and estimated cause of the failure**
 - **Quantity, reference number and name of the damaged parts**
 - **Invoice number and invoicing date for replacement parts.**
- The dealer has stored the damaged parts safely and labelled them clearly so that they can be recognised and returned to the Company if requested. They must be retained until a credit note has been issued to cover the parts. Carriage charges for the return of said parts are borne by the sender.
- The machine has been used and maintained according to the instructions in the operator's manual. The quality and quantity of lubricants used must always be in accordance with Company specifications.
- The safety measures mentioned in the Operator's manual and on the machine itself have been followed, and all the guards and protective elements, of whatever nature, have been inspected regularly and maintained in perfect working order.
- The judgment of the Company in all case of claims under this Limited Warranty shall be final and conclusive and the retail purchaser agrees to accept its decisions.
- If damaged parts have been returned to the Company and Warranty is refused, the dealer is allowed a period of 1 month from the date of receiving our letter of decision to request the return of the damaged parts to the dealer site.

■ **Further conditions: limits of application and responsibility**

- This Limited Warranty can not be assigned or transferred to anyone without the prior written consent of the Company.
- Authorized KUHN Dealers have no right or authority to assume any obligation or take any decision on the Company's behalf, whether expressly or tacitly.
- Technical assistance given by the Company or its agents for repairing or operating equipment does not lead to any responsibility on the Company's behalf and cannot under any circumstances bring novation or derogation to the conditions of the present Limited Warranty.
- The Company reserves the right to incorporate changes in its machines without prior notice and without obligation to apply these changes to machines previously manufactured.
- Moreover, because of the constant progress in technology, no guarantee is given to the descriptions of equipment published in any document by the Company.
- The present Limited Warranty excludes any other responsibility, whether legal or conventional, express or implied, and there are no warranties extending beyond those defined herein.



Specimen of the "Declaration of conformity"



EC Declaration of conformity (European directive 2006/42/CE)

The manufacturer:

KUHN S.A., 4 impasse des fabriques B.P. 50060 F - 67706 SAVERNE CEDEX

declares that the product described hereafter:

Type: "*Machine name*"

Serial no.: "*Machine serial number*"

- conforms to the requirements of the European directive 2006/42/CE
- conforms to the requirements of following European harmonized standards:
**EN 1553 - NF U 02-007 - EN 703 - EN 708 - EN 745+A1 - EN 907
EN 14017 - EN 14018 - EN ISO 4254-6**
- conforms to the requirements of following standards or technical specifications:

Name and address of the person authorised to compile the technical file:

Made in Saverne, on 00/00/0000

In the event of the machine being re-sold, this declaration of
conformity is to be passed on to the new owner

Customer code or order number

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www.kuhn.com

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Société par Action Simplifiée au Capital de 2 000 000 Euros

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Société Anonyme au Capital de 4 800 000 Euros

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