Original operating instructions

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Round baler

Bellima F 130

From machine number: 1136331

Contact

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For information on your KRONE machines, also refer to mykrone.green. After you have registered, you can generate and manage your machines via the machine number so that you can view the machine data. Via your personal account, you can also access all KRONE Services.

Information for enquiries and orders

Model	
Vehicle identification number	
Year of manufacture	

Contact data of your dealer

1 Information on This Document

1.1 Validity

This document is valid for machines of type:

Bellima F 130
All information, illustrations and technical data in this document correspond to the latest state at the time of publication.

We reserve the right to make design changes at any time and without notification of reasons.

1.2 Significance of the document

This is an important document. It is addressed to the user and contains safety-relevant information.

- ▶ Prior to starting work, read the complete document and observe its contents.
- ▶ Keep this document ready to hand in the document storage tube for the user of the machine, *see Page 38*.
- ▶ Hand over this document to subsequent users.

1.3 Re-ordering

You can request a replacement document if this document became completely or partly unusable, or if you need it in a different language. Please specify the document number shown on the cover page in your order. Alternatively, you can download the document online from KRONE MEDIA https://media.mykrone.green.

1.4 Applicable documents

To ensure that the machine is used safely and as intended, observe the following further applicable documents.

- Operating instructions for universal shaft
- AUX joystick operating instructions
- Supplement to operating instructions "Error messages"
- Circuit diagram, KRONE
- Spare parts list, KRONE
- Service record booklet, KRONE

1.5 Target group of this document

This document aims at the operator of the machine who fulfills the minimum requirements of personnel qualification,*see Page 13*.

1.6 How to use this document

1.6.1 Directories and references

Contents/headers

The contents and headers in this document ensure quick orientation in the chapters.

Index

The index contains catchwords in alphabetical order which enable to find information on a desired topic easily. The index can be found on the last pages of this document.

Cross references

Cross references to another place in the document or to another document are in the text with page number.

Examples:

- Check the tight seat of all screws on the machine, *see Page 8*. (**INFO**: If you use an electronic version of this document, click on the link to go to the specified page.)
- For further information, refer to the operating instructions of the universal shaft manufacturer.

1.6.2 Information on direction

Directional information in this document, such as front, rear, right and left, applies in the direction of travel of the machine.

1.6.3 Term “machine”

Throughout the rest of this document, the “round baler” will also be referred to as the “machine”.

1.6.4 Figures

The figures in this document do not always represent the exact machine type. The information that refers to the figure always corresponds to the machine type of this document.

1.6.5 Scope of the document

In addition to standard equipment, accessories kits and versions of the machine are described in this document. Your machine may deviate from this document.

1.6.6 Means of representation

Icons in the text

The following means of representation (icons) are used to present the text more clearly:

- ▶ This arrow characterizes an **action step**. Several arrows in a row identify a sequence of actions to be performed step by step.
- ✓ This icon identifies a **prerequisite** that has to be fulfilled to perform an action step or a sequence of actions.
- ⇨ This arrow marks the **intermediate result** of an action step.
- ➡ This arrow identifies the **result** of an action step or sequence of actions.
- ● This bullet point identifies an **enumeration**. If the bullet point is intended, it identifies the second level of the enumeration.

Icons in figures

The following icons can be used in illustrations:

Icon	Explanation	Icon	Explanation
1	Reference sign for part	I	Position of a part (e.g. move from position I to position II)
X	Dimensions (e. g. also W = width, H = height, L = length)		Magnification of display detail
LH	Left side of machine	RH	Right side of machine
	Direction of travel		Direction of motion
——	Reference line for visible material	- - - - -	Reference line for covered material
_._._.	Centre line	——	Cable routes
	Open		Closed
	Apply liquid lubricant (e.g. lubricating oil)		Apply lubricating grease

Warning signs

Warnings of dangers are separated from the remaining text as warning signs and are identified with a danger sign and signal words.

The warning signs must be read and the measures must be observed in order to prevent personal injury.

Explanation of danger sign

This is the danger sign that warns of a risk of injury.

Please observe all notes marked with the danger sign in order to avoid injuries or death.

Explanation of signal words

DANGER
The signal word DANGER warns of a hazardous situation which will result in serious injuries or death if the warning sign is ignored.

WARNING
The signal word WARNING warns of a hazardous situation which will result in serious injuries or death if the warning sign is ignored.

⚠ CAUTION
The signal word CAUTION warns of a hazardous situation which will result in minor to moderate injuries if the warning sign is ignored.

Example of a warning sign:

⚠ WARNING
Eye damage caused by flying dirt particles When cleaning with compressed air, dirt particles are ejected at high speed and could get into the eyes. Therefore eyes could be hurt. ▶ Keep people away from the working area. ▶ Wear personal protective equipment when performing cleaning work with compressed air (e.g. eye protection).

Warnings of property damage/environmental damage

Warnings of property/environmental damage are separated from the remaining text and marked with "Notice".

Example:

NOTICE
Gearbox damage due to low oil level The gearboxes could be damaged when the oil level is too low. ▶ Check gear oil level at regular intervals and top up oil, if necessary. ▶ Check gear oil level approx. 3 to 4 hours after the machine has been switched off. Check oil level only when machine is in horizontal position.

Notices with information and recommendations

Additional information and recommendations for trouble-free and productive operation of the machine are separated from the remaining text and marked with “Information”.

Example:

INFO
Each safety sign is provided with an order number and can be ordered directly from the manufacturer or from an authorised specialist dealer.

1.6.7 Conversion table

The following table can be used to convert metric units into US units.

Size	SI units (metric)		Factor	Inch-pound units	
	Unit name	Abbrevi-ation		Unit name	Abbrevi-ation
Area	Hectare	ha	2.47105	Acre	acres
Volume flow	Litres per minute	L/min	0.2642	US gallons per minute	gpm
	Cubic metres per hour	m³/h	4.4029		

Size	SI units (metric)		Factor	Inch-pound units	
	Unit name	Abbrevi-ation		Unit name	Abbrevi-ation
Force	Newton	N	0.2248	Pound force	lbf
Length	Millimetre	mm	0.03937	Inch	in.
	Metre	m	3.2808	Foot	ft.
Power	Kilowatt	kW	1.3410	Horsepower	hp
Pressure	Kilopascal	kPa	0.1450	Pounds per square inch	psi
	Megapascal	MPa	145.0377		
	bar (non-SI)	bar	14.5038		
Torque	Newtonmeter	Nm	0.7376	pound-foot or foot-pound	ft·lbf
			8.8507	pound-inch or inch-pound	in·lbf
Temperature	Degrees Celsius	°C	°Cx1.8+32	Degrees Fahrenheit	°F
Velocity	Metres per minute	m/min	3.2808	Feet per minute	ft/min
	Metres per second	m/s	3.2808	Feet per second	ft/s
	Kilometres per hour	km/h	0.6215	Miles per hour	mph
Volumes	Litres	L	0.2642	US gallon	US gal.
	Millilitre	ml	0.0338	US ounce	US oz.
	Cubic centi-metre	cm³	0.0610	Cubic inch	in³
Weight	Kilogram	kg	2.2046	Pound	lbs

2 Safety

2.1 Intended use

This machine is a round baler and is used to press crops to round bales.

The crops designated for the intended use of this machine are cut stalk and leaf crops.

The machine is designed exclusively for use in agriculture and may only be used when

- all safety devices are available according to the operating instructions and are located in the protective position.
- all safety instructions of the operating instructions have been observed and complied with, both in chapter “Basic safety instructions”, *see Page 13*, and directly in the chapters of the operating instructions.

The machine may be used only by people who satisfy the personnel qualification requirements designated by the machine manufacturer, *see Page 13*.

These operating instructions are part of the machine and must therefore be at hand when the machine is in use. The machine may be operated only when the operator has received training and in compliance with these operating instructions.

If the machine is used for applications which are not described in these operating instructions, this may result in serious injuries or death and damage to the machine and other property.

Unauthorised modifications to the machine may affect the properties of the machine or disrupt the proper operation. For this reason, unauthorised modifications shall exclude any liability of the manufacturer for consequential damage.

The intended use shall also include the adherence to the operating, maintenance and repair conditions set by the manufacturer.

2.2 Reasonably foreseeable misuse

Any use beyond the intended use*see Page 12* is regarded as improper use and is therefore misuse according to the Machinery Directive. The manufacturer is not liable for damage resulting from this, the user alone bears the risk.

Such misuse is for example:

- Processing of crops which are outside the intended use of the machine,*see Page 12*
- Transport of people
- Transport of goods
- Exceeding the permitted technical gross weight
- Non-compliance with the safety labels on the machine and safety notes in the operating instructions
- Performing troubleshooting, setting, cleaning, repair and maintenance work contrary to the information in the operating instructions
- Unauthorised modifications to the machine
- Attachment of unauthorised or unapproved additional equipment
- Use of spare parts which are not KRONE original spare parts
- Stationary operation of the machine

Unauthorised modifications to the machine may affect the properties of the machine or disrupt proper operation. For this reason, unauthorised modifications will exclude any liability of the manufacturer for consequential damage.

2.3 Service life of the machine

- The service life of this machine depends on its proper operation and maintenance as well as the operating and harvesting conditions.
- By heeding the instructions and information in these operating instructions, permanent operational readiness and a long service life of the machine can be achieved.
- After each operating season, inspect the entire machine for wear and other damage.
- Replace damaged and worn components before recommissioning the machine.
- Carry out a full technical inspection of the machine after five years of machine operation and make a decision on further machine usage taking the results of this inspection into account.
- Theoretically, the service life of this machine is unlimited as all worn or damaged components can be replaced.

2.4 Basic safety instructions

Non-compliance with the safety instructions and warnings

Non-compliance with the safety instructions and warnings may result in injuries and damage to the environment and property.

2.4.1 Importance of operating instructions

The operating instructions are an important document and a part of the machine. They are intended for the user and contain information that is relevant to safety.

Only the procedures specified in the operating instructions are safe. If the operating instructions are not followed, there is a risk of serious or even fatal injuries.

- ▶ Prior to using the machine for the first time, read and observe the "Basic safety notices" completely.
- ▶ Prior to starting work, read and observe the respective sections in the operating instructions too.
- ▶ Keep the operating instructions ready to hand for the user of the machine in the document storage tube, *see Page 38*.
- ▶ Hand over the operating instructions to subsequent users.

2.4.2 Personnel qualification of the operating personnel

If the machine is not used properly, people may be seriously injured or killed. To avoid accidents, each person who works with the machine must satisfy the following minimum requirements:

- He is physically capable of controlling the machine.
- He can work safely with the machine in accordance with these operating instructions.
- He understands the method of operation of the machine within the scope of his work and can identify and avoid the dangers associated with the work.
- He has read the operating instructions and can implement the information in the operating instructions accordingly.
- He is familiar with driving vehicles safely.
- For road travel he has adequate knowledge of the highway code and has the stipulated driving licence.

2.4.3 Personnel qualification of the technicians

If the work (assembly, conversion, modification, extension, repairs, retrofitting) is performed improperly on the machine, people may be seriously or fatally injured. To avoid accidents, everyone who performs work according to these instructions must meet the following minimum requirements:

- Qualified professional, with relevant training.
- Capable of assembling the (partially) disassembled machine according to the assembly instructions provided by the manufacturer.
- He is capable, e.g. by attending a training course, of extending, modifying or repairing the function of the machine according to the relevant instructions provided by the manufacturer.
- He has read the operating instructions and can implement the information in the operating instructions accordingly.
- Ability to perform the work safely according to these instructions.
- Understands the mode of operation of the work to be performed and the machine and is able to identify and avoid risk in carrying out the necessary work.
- Has read these instructions and is able to implement the information explained in these instructions accordingly.

2.4.4 Children in danger

Children are not in a position to assess dangers and behave unpredictably.

Thus children are particularly at risk.

▶ Keep children away from the machine.

▶ Keep children away from consumables.

▶ Make sure that there are no children in the danger zone, especially when starting and triggering machine movements.

2.4.5 Connecting the machine

When tractor and machine are not correctly connected, there is a risk of causing serious accidents.

▶ When connecting, follow all operating instructions:

- the operating instructions of the tractor
- the operating instructions of the machine, *see Page 55*
- the operating instructions of universal shaft

▶ Observe the changed driving behaviour of the combination.

2.4.6 Structural modifications on the machine

Structural modifications and extensions that were not approved by KRONE can impair the functionality, operational safety and also the road traffic certification of the machine. As a result, persons can be seriously injured or killed.

Any structural modifications and extensions that are not authorised by KRONE are not permitted.

2.4.7 Additional equipment and spare parts

Additional equipment and spare parts that do not correspond to the requirements of the manufacturer may affect the operational safety of the machine and cause accidents.

▶ To ensure operational safety, use original parts or standard parts which correspond to the requirements of the manufacturer.

2.4.8 Jobs on the machine

Passengers

Passengers may be seriously injured by the machine or fall off the machine and run over. Ejected objects may strike and injure passengers.

- Never carry passengers on the machine.

2.4.9 Operational safety: Technically sound condition

Operation only after proper commissioning

The operational safety of the machine is not guaranteed without proper commissioning in accordance with these operating instructions. This may result in accidents and people may be seriously or fatally injured.

- Use the machine only after proper commissioning, *see Page 55*.

Technically sound state of the machine

Improper maintenance and setting could influence the operational safety of the machine and cause accidents. Thus there is a risk of serious injuries or death.

- All maintenance and setting work must be performed according to the chapters “Maintenance and Setting”.
- Before performing any maintenance and setting work, shut down and safeguard the machine, *see Page 25*.

Danger resulting from damage to the machine

Damage to the machine may impair the operational safety of the machine and cause accidents. As a result, people may be seriously injured or killed. The following parts of the machine are particularly important for safety:

- Brakes
- Steering
- Safety Devices
- Connecting devices
- Lighting
- Hydraulics
- Tyres
- Universal shaft

If there are doubts about the operational safety of the machine, for example due to an unexpected change to the operational behaviour, visible damage or leaking consumables:

- Shut down and safeguard the machine, *see Page 25*.
- Immediately eliminate potential causes of damage, for example heavy soiling, or tighten slack screws.
- Determine the cause of damage according to these operating instructions and repair the damage, if possible, *see Page 125*.
- In case of damage which may affect operational safety and cannot be repaired according to these operating instructions: Have damage repaired by a qualified service centre.

Technical limit values

If the technical limit values of the machine are not observed, the machine may be damaged. As a result, accidents may occur and people may be seriously or fatally injured. With regard to safety, it is especially important to observe the following technical limit values:

- maximum permitted operating pressure of the hydraulics
- maximum permitted drive speed
- maximum permitted total weight
- maximum permitted axle load/axle loads
- maximum permitted drawbar load
- maximum permitted axle loads of the tractor
- maximum permitted transport height and width
- maximum permitted speed

▶ Comply with limit values, *see Page 43*.

2.4.10 Danger zones

If the machine is switched on, its surrounding can present a danger zone.

Avoid entering the danger zone of the machine by observing the minimum safety distance.

If the safety distance is not observed, people may be seriously injured or killed.

▶ Do not switch on the drives and engine if the minimum safety distance has not been observed.

▶ If people fail to observe the minimum safety distance, switch off the drives.

▶ Switch the machine off in shunting and field mode.

The safety distance is:

For machine in shunting and field mode	
In front of the machine	3 m
Behind the machine	5 m
On either side of the machine	3 m

For machine switched on without driving motion	
In front of the machine	3 m
Behind the machine	5 m
On either side of the machine	3 m

The safety distances specified here are minimum distances in terms of intended use. If necessary, these safety distances must be increased according to the operating and ambient conditions.

▶ Before working in front of and behind the tractor and in the danger zone of the machine: Shut down and secure the machine, *see Page 25*. This also applies to brief inspection work.

▶ Consider the information in all relevant operating instructions:

- the operating instructions for the tractor
- the operating instructions of the machine
- the operating instructions of universal shaft

Danger zone universal shaft

People may be caught, pulled in and seriously injured by the universal shaft.

- Observe operating instructions of universal shaft.
- Ensure sufficient overlap of section tube and universal shaft guards.
- Make sure that the universal shaft guards are mounted and that they are fully functional.
- Allow the universal shaft locks to engage. There must be no areas of the locking device on the PTO shaft fork which could cause catching or entrapment (e.g. by annular design, protective collar around the locking pin).
- Attach chains to prevent the universal shaft guards from rotating with the shaft.
- Make sure that there is no one in the danger zone of PTO shaft and universal shaft.
- Ensure that the selected speed and direction of rotation of the PTO shaft of the tractor match the permitted speed and direction of rotation of the machine.
- Switch off the PTO shaft when the angles between the universal shaft and the PTO shaft are too large. The machine may be damaged. Parts may be hurled up and cause injury to people.

Danger zone PTO shaft

People may be caught, pulled in and seriously injured by the PTO shaft and the driven components.

Before switching on the PTO shaft:

- Ensure that all protective devices are mounted and brought into protective position.
- Make sure that there is no one in the danger zone of PTO shaft and universal shaft.
- Switch off drives if they are not needed.

Danger zone between tractor and machine

People standing between the tractor and machine may be seriously injured or killed if the tractor rolls away or by carelessness or machine movements:

- Before carrying out any work between the tractor and the machine: Always turn off and secure the machine, *see Page 25*. This also applies to brief inspection work.
- If the lifting device must be actuated, instruct all people to keep away from the range of movement of the lifting device.

Danger zone when drive is switched on

When the drive is switched on, there is a danger to life caused by rotating machine parts. Ensure that there are no persons in the danger zone of the machine.

- Before starting the machine, instruct all people to leave the danger zone of the machine.
- In case of dangerous situations, immediately switch off drives and instruct people to leave the danger zone.

Danger zone due to trailing machine parts

If machine parts are trailing, people may be seriously injured or killed.

After the drives have been switched off, the following machine parts will trail:

- universal shaft
- Drive chains
- Pick-up
- Cutting rotor
- Tying unit
- bale formation conveyor

▶ Shut down and safeguard the machine, *see Page 25*.

▶ Do not attempt to approach the machine until all moving machine parts have come to a standstill.

2.4.11 Ensuring functionality of safety devices

If safety devices are missing or damaged, people may be seriously injured or killed by moving machine parts.

▶ Replace damaged safety devices.

▶ Mount dismounted safety devices and machine parts again before start-up and move them to protective position.

▶ If it is doubtful whether all safety devices have been correctly installed and are functional, have a service centre check them.

Keeping universal shaft guard functional

The overlap of universal shaft and protective cap on the machine must not be less than 50 mm. This minimum overlap is also required for protective devices of wide-angle universal shaft and if couplings or other components are used. If the operator has to reach between the universal shaft guard and the protective cap to connect the universal shaft, the clearance on one level must be at least 50 mm. On all levels the clearance must be no more than 150 mm.

2.4.12 Personal protective equipment

The wearing of personal protective equipment is an important safety measure. Missing or unsuitable personal protective equipment increases health risks and injuries.

Personal protective equipment includes, for example:

- Suitable protective gloves
- Safety shoes
- Tight-fitting protective clothing
- Hearing protection
- Protective goggles
- If dust is generated: appropriate breathing protection

▶ Specify and provide personal protective equipment for the particular job.

▶ Use only personal protective equipment which is in proper condition and offers effective protection.

▶ Adjust personal protective equipment to the person, for example the size.

▶ Remove unsuitable clothing and jewellery (e.g. rings, necklaces) and cover long hair with a hairnet.

2.4.13 Safety sign on the machine

Safety labels on the machine warn of hazards at danger points and are an important component of the machine's safety equipment. Missing safety labels increase the risk of serious and fatal injuries.

- Clean dirty safety labels.
- Each time after cleaning, check to ensure that the safety labels are complete and legible.
- Immediately replace missing, damaged and unrecognisable safety labels.
- Label spare parts with the required safety labels.

Descriptions, explanations and order numbers of the safety labels, *see Page 27*.

2.4.14 Road safety

Dangers during road travel

Other road users can be put at risk when you drive on public roads and the machine is not properly illuminated and/or exceeds the maximum dimensions and weights laid down by national law.

- Prior to driving on public roads, ensure that the maximum permissible dimensions, weights and axle, support and trailer loads are not exceeded which are applicable under national law for driving on public roads.
- Before driving on roads, switch on the road travel lighting and ensure that it functions properly.
- Before driving on roads, close all stop cocks for the hydraulic supply to the machine between tractor and machine.
- Before driving on roads, move the tractor control units to the neutral position and lock them.

Danger when driving on road and field

Hitched and mounted machines change the handling characteristics of the tractor. The handling characteristics depend for instance on operating state and ground. If changed handling characteristics are not considered, the driver may cause accidents.

- Observe measures for driving on road and field,*see Page 82*.

Dangers if the machine is not prepared properly for road travel

If the machine is not prepared properly for road travel, serious accidents may occur with traffic.

- Before driving on roads, prepare the machine for road travel, *see Page 82*.

Danger when cornering with a machine hitched and due to the overall width

Accidents may occur when cornering due to the machine swinging out and also due to the overall width.

- Consider the overall width of the combined tractor and machine.
- Consider the larger swivel range when cornering.
- Adjust the driving speed when cornering.
- When turning, watch out for people, oncoming traffic and obstacles.

Dangers when operating the machine on slopes

The machine may tilt when it is used on slopes. As a result, accidents may occur and people may be seriously injured or killed.

- Do not work and drive on a slope unless the ground of the slope is flat and the adhesion of the tyres to the ground is ensured.
- Turn the machine at low speed. Turn in a large arc.
- Avoid driving across a slope because the centre of gravity of the machine will be changed by payload and by executing machine functions.
- Avoid abrupt steering movements on slopes.
- On slopes always deposit a round bale in such a way that it cannot move on its own.
- Do not park the machine on slopes.

Fire hazard

Frequent braking when driving on public roads, for example when driving downhill, can cause the brake to produce more heat.

Dust, contamination and crop residues can ignite on the hot surfaces of the brake. People can be seriously injured or killed by the fire.

- Prevent excessive heat from building up on the brake by driving with foresight in road traffic.
- Check and clean the machine in the brake area at regular intervals during the working day.

2.4.15 Parking the machine safely

An incorrectly parked and insufficiently safeguarded machine can represent a danger for people, especially children, and can be set into motion or fall over in an uncontrolled manner. People may be injured or killed.

- Park the machine on a horizontal and level ground capable of bearing the load.
- Before adjusting, repairing, servicing and cleaning the machine, ensure that it is securely positioned.
- Observe section “Parking the Machine” in chapter Driving and Transport.*see Page 83*
- Before parking: Shut down and safeguard the machine, *see Page 25*.

2.4.16 Consumables

Unsuitable consumables

Consumables which do not comply with the requirements of the manufacturer may impair the operational safety of the machine and cause accidents.

- Use only consumables which comply with the requirements of the manufacturer.

For requirements on consumables, *see Page 45*.

Contamination of hydraulic system and/or fuel system

Foreign objects and/or liquids in the hydraulic system and/or fuel system may impair the operational safety of the machine and cause accidents.

- Clean all connections and components.
- Close open connections by means of protective caps.

Environmental protection and disposal

Consumables such as diesel fuel, brake fluid, antifreeze and lubricants (e.g. gearbox oil, hydraulic oil) may damage the environment and the health of people.

- Do not release consumables into the environment.
- Fill consumables in a liquid-tight labelled container and dispose of according to the official regulations.
- Absorb leaked consumables with an absorbent material, fill them in a liquid-tight labelled container and dispose of according to the official regulations.

2.4.17 Dangers arising from environment

Fire hazard

Combustible materials may accumulate in the machine due to operation or animals, such as rodents or nesting birds, or dust resuspension.

In case of dry usage conditions, dust, impurities and crop residue may ignite on hot parts and the resulting fire may seriously injure or kill people.

- Check and clean the machine every day before using it for the first time.
- Check and clean the machine regularly during the working day.

Life-threatening electric shock from overhead lines

With tailgate open, the machine may reach the height of overhead lines. This may cause voltage to flash over to the machine and cause a fatal electric shock or fire.

- Keep a safe distance from electric overhead lines when opening the tailgate.
- Never open the tailgate near pylons and overhead lines.
- Keep a safe distance from electric overhead lines when the tailgate is open.
- To avoid a potential electric shock caused by a voltage flashover, never exit from or climb into the tractor under overhead lines.

Behavior in the case of voltage flashover of overhead lines

High electric voltage may be applied to electrically conducting parts of the machine due to voltage flashover. In case of voltage flashover, a voltage drop where major voltage differences are present is created on the ground around the machine. Due to major voltage differences in the ground, people may be killed by electric shocks when making big steps, laying on the ground or supporting themselves with their hands.

- Do not leave the cabin.
- Do not touch any metal parts.
- Do not establish any conductive connection to the ground.
- Warn people: Do not approach the machine. Electrical voltage differences on the ground may lead to severe electric shocks.
- Wait for help from professional rescue teams. The overhead line must be switched off.

If people have to leave the cabin despite the voltage flashover, for example because there is an imminent danger to life due to fire:

- Avoid simultaneous contact with machine and ground.
- Jump away from the machine. Jump into a safe standing position. Do not touch the machine from the outside.
- Move away from the machine in very small steps keeping your feet close together.

2.4.18 Sources of danger on the machine

Noise may damage your health

The noise development of the machine during operation may cause health damage such as hardness of hearing, deafness or tinnitus. When using the machine at high rotational speed, the noise level also increases. The height of the sound pressure level depends mainly on the tractor used. The emissions value was measured with the cabin closed under conditions according to DIN EN ISO 4254-1, Appendix B, *see Page 43*.

- Before starting up the machine, estimate the risk caused by noise.
- Depending on the ambient conditions, working hours and the working and operating conditions of the machine, specify and use suitable hearing protection.
- Specify rules for the use of hearing protection and for the working time.
- During operation keep windows and doors of the cabin closed.
- Remove hearing protection for road travel.

Liquids under high pressure

The following liquids are under high pressure:

- Hydraulic oil

Liquids escaping under high pressure may penetrate through the skin and cause severe injuries.

- Shut down and safeguard the machine and contact qualified specialist workshop upon suspicion of damaged hydraulic system.
- Never search for leaks with bare hands. Even a very pin-sized hole may lead to serious injuries.
- When searching for leaks, use suitable aids, e.g. a piece of cardboard to avoid injuries.
- Keep body and face away from leaks.
- If liquids penetrate the body, immediately consult a doctor. The liquid must be removed from the body as quickly as possible.

Hot liquids

Persons can suffer burns and/or scalding when hot liquids are drained.

- Wear personal protective equipment when hot consumables are drained.
- If necessary, allow liquids and machine parts to cool down before you start repair, maintenance and cleaning work.

Damaged hydraulic hoses

Damaged hydraulic hoses may tear off, burst or cause oil leaks. As a result, the machine may be damaged and people may be seriously injured.

- ▶ Shut down and safeguard the machine, *see Page 25*.
- ▶ If it is suspected that hydraulic hoses are damaged, immediately contact a service centre, *see Page 115*.

Hot surfaces

The following components may become hot during operation and may burn people:

- Bale chamber
- Magnetic coils of the regulating valves
- Gearbox

- ▶ Maintain an adequate distance from hot surfaces and adjacent components.
- ▶ Leave machine parts to cool down and wear protective gloves.

2.4.19 Dangers in connection with certain activities: Working on the machine

Only perform work when the machine is at standstill

If the machine is not shut down and safeguarded, parts may move unintentionally or the machine may start moving. Thus there is a risk of serious injuries or death.

- ▶ Before carrying out any repair, maintenance and cleaning work on the machine, shutdown and safeguard it, *see Page 25*.

Maintenance and repair work

Improper maintenance and repair work endanger operational safety. Thus there is a risk of accidents, serious injuries or death.

- ▶ Only perform work which is described in this operating instructions. Prior to any work, stop and safeguard the machine, *see Page 25*.
- ▶ All other maintenance and repair work must only be performed by qualified specialist workshop.

Working at or on heights of the machine

There is a risk of falling when working at or on heights of the machine. As a result, accidents may occur and people may be seriously or fatally injured.

- ▶ Prior to any work, stop and safeguard the machine, *see Page 25*.
- ▶ Make sure you stand securely.
- ▶ Use a suitable fall protection.
- ▶ Secure the area below the assembly point against falling objects.

Raised machine and machine parts

The raised machine and machine parts may fall or tilt unintentionally. People may be seriously injured or killed, as a result.

- ▶ Do not stay under the raised machine or machine parts which are not safely supported, *see Page 25*.
- ▶ Prior to all work on raised machines or machine parts, lower the machine or machine parts.
- ▶ Before performing any work under raised machines or machine parts, secure the machine or machine parts with rigid safety support or with hydraulic shut-off device or by supporting against lowering.

Danger associated with welding work

Improper welding work will endanger the operational safety of the machine. As a result, accidents may occur and people may be seriously or fatally injured.

- ▶ Never perform welding work on the following components:

- Gearbox
- Components of the hydraulics
- Components of the electronics
- Frame or supporting components
- Running gear

- ▶ Before carrying out welding work on the machine, obtain consent by KRONE customer service and, if required, identify alternatives.
- ▶ Before performing welding work on the machine, park the machine safely and disconnect it from the tractor.
- ▶ Welding work must only be performed by experienced qualified personnel.
- ▶ Attach the earthing of the welding device near the welding points.
- ▶ Caution when performing welding work near electric and hydraulic parts, plastic parts and pressure accumulators. The parts may be damaged, endanger people or cause accidents.

2.4.20 Dangers in connection with certain activities: working on wheels and tyres

Improper assembly or disassembly of wheels and tyres will endanger the operational safety. As a result, accidents may occur and people may be seriously injured or killed.

The fitting of wheels and tyres requires adequate knowledge and approved mounting tools.

- ▶ If there is a lack of knowledge, have the wheels and tyres fitted by the KRONE dealer or by a qualified tyre service.
- ▶ When fitting tyres on the rims, never exceed the maximum permitted pressure specified by KRONE, otherwise the tyre or even the rim may explode, *see Page 43*.
- ▶ When mounting the wheels, mount the wheel nuts with the specified tightening torque, *see Page 107*.

2.4.21 Behaviour in dangerous situations and in case of accidents

Any measures not taken or incorrect measures in dangerous situations can make it difficult or impossible to rescue exposed persons. Due to the impeded conditions of rescue, the chances to help and heal injured people deteriorate.

- As a matter of principle: Park the machine.
- Get an overview of the existing danger and identify the reason.
- Secure the accident site.
- Save persons from the danger zone.
- Leave danger zone and do not enter it again.
- Alarm rescue workers and seek help, if possible.
- Carry out immediate lifesaving actions.

2.5 Safety routines

2.5.1 Shutting down and safeguarding the machine

⚠ *WARNING*

Risk of injury due to movement of the machine or machine parts

If the machine has not been shut down, machine or machine parts may move unintentionally. As a result, people may be seriously injured or killed.

- Before leaving the operating position: Shut down and safeguard the machine.

To shut down and safeguard the machine:

- Park the machine on a stable, horizontal and level ground.
- Switch off the drives and wait until coasting parts have come to a complete stop.
- Switch off the tractor engine, remove the ignition key and take it with you.
- Secure the tractor against rolling away.
- Secure the machine against rolling away by using wheel chocks.
- If fitted, apply the parking brake on the machine.

2.5.2 Securing raised machine and machine parts against lowering

⚠ *WARNING*

Crushing hazard due to movement of machine or machine parts

If the machine or machine parts are not secured against lowering, the machine or machine parts may roll, fall or sag. Thus people could be squeezed or killed.

- Lower the raised machine parts.
- Shut down and safeguard the machine, *see Page 25*.
- Before working on or under raised machine parts: Secure machine or machine parts against lowering by means of hydraulic shut-off device (e.g. stop cock) on machine side.
- Before working on or under raised machine parts: Safely support machine or machine parts.

In order to safely support the machine or machine parts:

- To support, only use suitable and sufficiently dimensioned materials that do not break or yield.
- Bricks and hollow blocks are not suitable for safely supporting the machine and machine parts. Therefore they must not be used.
- Car jacks are also not suitable for safely supporting the machine and machine parts. They must not be used, as well.

2.5.3 Carrying out oil level check and oil and filter element changes safely

⚠ WARNING

Safely checking the oil level and changing oil and filter element

The operational safety of the machine can be impaired if oil level check and oil and filter element changes are not carried out safely. This can lead to accidents.

- Safely check the oil level and change oil and filter element.

To check the oil level and change oil and filter element safely:

- Lower raised machine parts or secure them against falling down, *see Page 25*.
- Shut down and safeguard the machine, *see Page 25*.
- Observe the intervals for oil level check, oil and filter element changes, *see Page 97*.
- Use only the oil grades/oil quantities specified in the consumables table, *see Page 45*.
- Ensure that the oil and the equipment for filling are clean.
- Clean the area around the components (for example gearbox, high-pressure filter) and make sure that no foreign objects get into the components or the hydraulic system.
- Check installed seal rings for damage. Replace them if necessary.
- Collect leaking oil and/or waste oil in a container provided for this purpose, and dispose of it properly, *see Page 21*.

2.5.4 Running actuator test

⚠ WARNING

Run actuator test safely

When actuators are energised, functions are carried out directly and without a safety prompt. This may cause the unintentional movement of machine parts, trapping and seriously or fatally injuring persons.

- ✓ Only persons familiar with the machine are permitted to perform the actuator test.
- ✓ The person performing the test must know which machine parts are activated by controlling the actuators.
- Run the actuator test safely.

To run the actuator test safely:

- Lower raised machine parts or secure them against falling, *see Page 25*.
- Shut down and secure the machine, *see Page 25*.
- Cordon off the danger zone of the actuated moving machine parts in a clearly visible manner.

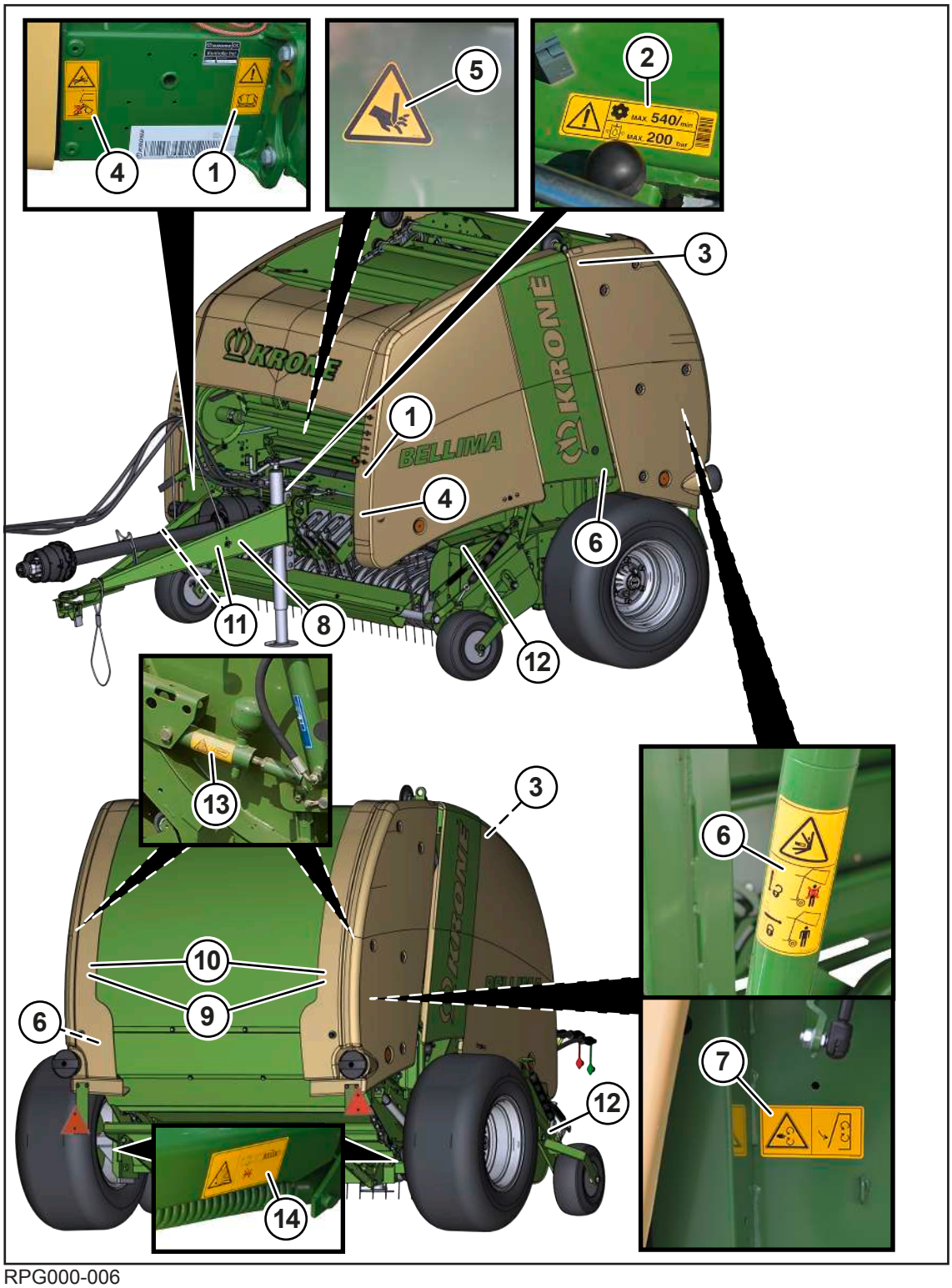
- Ensure that there is nobody in the danger zone of the actuated moving machine parts.
- Switch on the ignition.
- The actuator test must only be performed from a safe position outside the area that is affected by machine parts moved by the actuators.

2.6 Safety sign on the machine

Each safety sign is provided with an order number and can be ordered directly from the KRONE dealer. Immediately replace missing, damaged and unrecognisable safety signs.

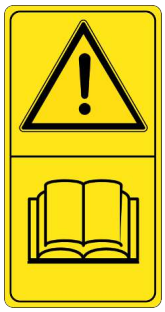
When attaching safety signs, the contact surface on the machine must be clean and free of dirt, oil and grease to ensure optimum adhesion of the safety signs.

Location and meaning of the safety signs



RPG000-006

1. Ord. no. 939 471 1 (2x)

	**Danger due to incorrect operation and lack of knowledge** Incorrect operation and lack of knowledge of the machine as well as incorrect behaviour in hazardous situations is risking the life of the operator and third parties. ▶ Before starting up the machine, read and follow the operating instructions and safety instructions.

2. Ord. no. 939 100 4 (1x)

	**Danger when exceeding the maximum permissible PTO speed or the maximum permissible operating pressure** When exceeding the permissible PTO speed, machine parts may be destroyed or ejected. If the maximum permissible operating pressure is exceeded, hydraulic parts may be damaged. As a result, people may be seriously or fatally injured. ▶ Observe the permissible PTO speed. ▶ Observe the permitted operating pressure.

3. Ord. no. 942 196 1 (2x)

	**Danger due to crushing or shearing** Risk of injury due to crushing or shearing points on moving machine parts. ▶ While parts are moving, never reach into areas where there is a risk of being crushed.

4. Ord. no. 939 407 1 (2x)

	**Danger due to rotating pick-up** There is a danger of being drawn in if you approach the danger zone and if you use your hands or feet to remove crop blockages. ▶ Before working on the pick-up, switch off the PTO shaft and the engine.

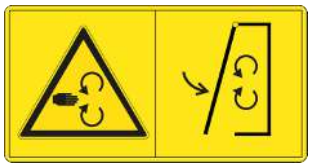
5. Ord. no. 939 125 1 (1x)

	**Danger from sharp blades** There is danger of being cut when reaching into the danger zone of the blades. ▶ Wear cut-resistant protective gloves.

6. Ord. no. 27 014 371 0 (4x)

	**Danger due to impact or crushing** There is danger to life due to the tailgate lowering. ▶ Before carrying out any maintenance work in the area of the tailgate, close the stop cock on the left lifting cylinder. ▶ Ensure that there is no one under the raised tailgate.

7. Order no. 942 002 4 (2x)

	**Danger due to rotating machine parts** When the machine is running, there is a risk of injury due to rotating machine parts. ▶ Before starting up, move the guards into their protective position.

8. Ord. no. 942 360 4 (1x)

	**Danger due to unintended movement of the machine when opening the tailgate** Risk of injury due to the machine rolling away or overturning. ▶ Before opening the tailgate, ensure that the machine has been correctly coupled to the tractor. ▶ When uncoupling the machine, ensure that the tailgate is closed.

9. Ord. no. 27 013 422 0 (2x)

	**Danger due to impact** Risk of injury from the rolling bale. ▶ Ensure that no one remains in the danger zone.

10. Ord. no. 939 412 2 (2x)

	**Danger due to impact or crushing** When opening the tailgate, there is a risk of people being crushed in the danger zone between the tailgate and a fixed obstacle. ▶ Ensure that there is nobody between the tailgate and a fixed obstacle.

11. Ord. no. 939 408 2 (2x)

	**Danger due to rotating machine parts** When climbing onto the machine while the PTO shaft is running, there is a risk of being pulled in by rotating machine parts. ▶ Before climbing onto the machine, switch off the PTO shaft and the engine.

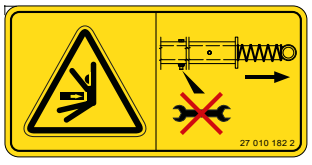
12. Ord. no. 939 520 1 (2x)

	**Danger due to rotating auger** There is a risk of being pulled in or caught by the rotating auger. ▶ Never reach into the rotating auger. ▶ Maintain an adequate distance from moving machine parts.

13. Order no. 27 018 010 0 (1x)

	**Danger due to high-pressure liquid** Hydraulic pressure tanks contain pressurised oil and gas. Risk of injury due to incorrect removal of a pressure tank or improper repairs to the hydraulic system. ▶ Removal of a pressure tank or repairs to a hydraulic system may be carried out by a service centre only.

14. Ord. no. 27 010 182 1 (2x)

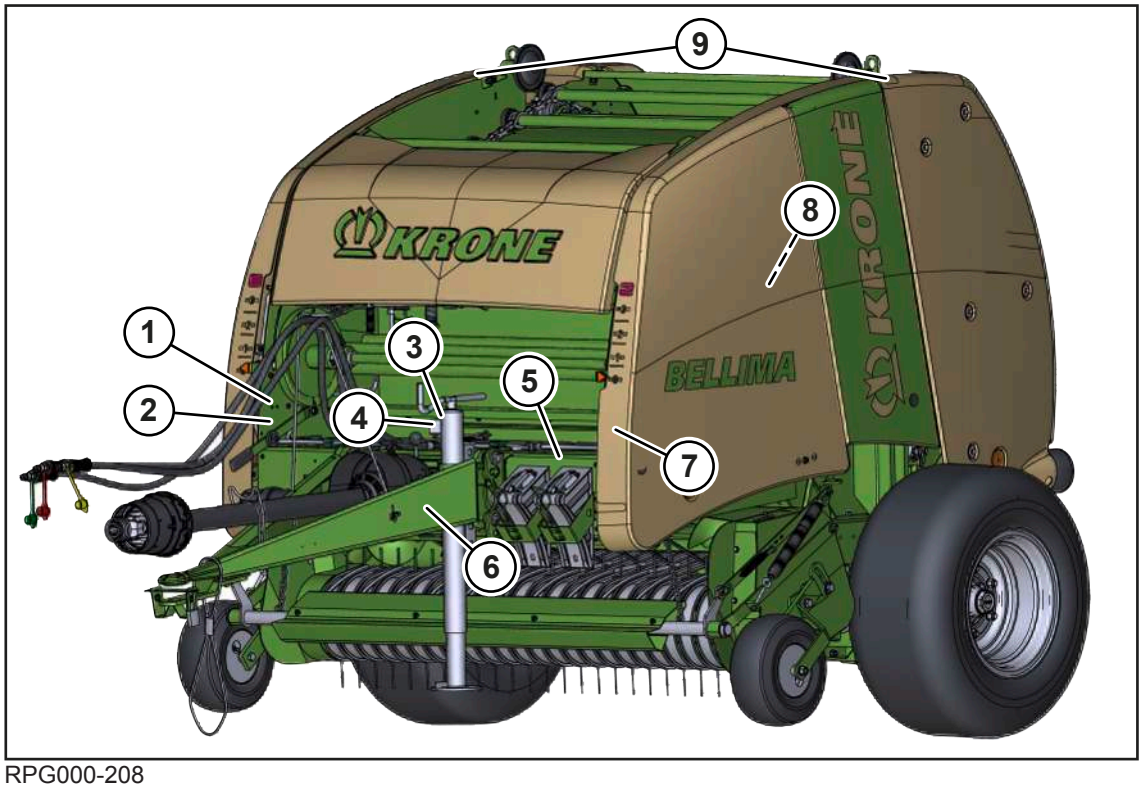
	**Danger due to spring under tension** Risk of injury from ejected machine parts. ▶ Never loosen the screw connection.

2.7 Information signs on the machine

Each information sign is provided with an order number and can be ordered directly from the KRONE dealer. Immediately replace missing, damaged and unrecognisable information signs.

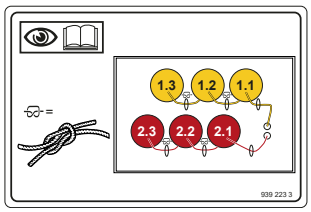
When attaching information signs, the contact surface on the machine must be clean and free of dirt, oil and grease to ensure optimum adhesion of the information signs.

Location and meaning of the information signs

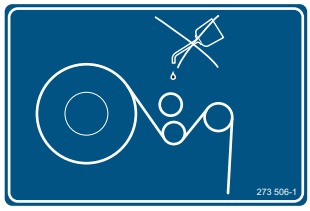


RPG000-208

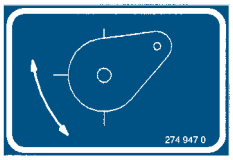
1. Order no. 939 223 3 (1x) for "net wrapping and twine tying" version

	This shows how to load the spools of twine and the twine in the machine, *see Page 71*.

2. Order no. 273 506 1 (1x) for "net wrapping" version

	This shows how to load the net in the machine, *see Page 76*. In addition, it should be noted that the net wrapping components must not be oiled.

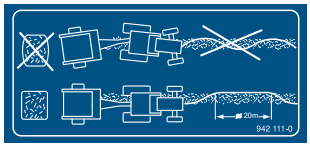
3. Ord. no. 274 947 0 (1x)

	If the machine is operated only via a hydraulic connection, the pick-up is selected via the hydraulic switching valve, *see Page 77*.

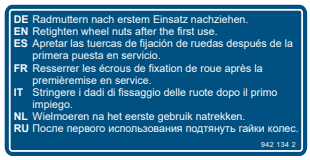
4. Ord. no. 274 948 0 (1x)

	If the machine is operated only via a hydraulic connection, the tailgate is selected via the hydraulic switching valve, *see Page 77*.

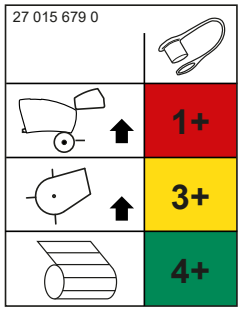
5. Ord. no. 942 111 0 (1x)

	The bottom section shows the optimal way to fill the bale chamber in order to obtain an evenly shaped round bale, *see Page 61*. The top section shows the **non-recommended** driving mode for loading the bale chamber.

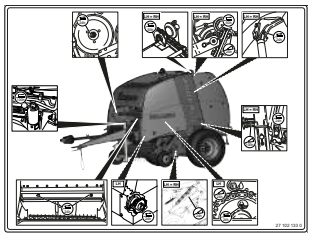
6. Ord. no. 942 134 2 (1x)

	The wheel nuts must be retightened after the first use, *see Page 108*.

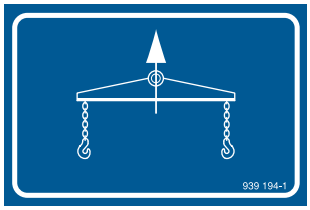
7. Ord. no. 27 015 679 0 (1x)

	These are the possible hydraulic connections of the machine. For additional information about connecting the hydraulic hoses, *see Page 58*.

8. Ord. no. 27 102 133 0 (1x)

	This shows the lubrication points on the machine which must be lubricated in the specified maintenance intervals, *see Page 99*.

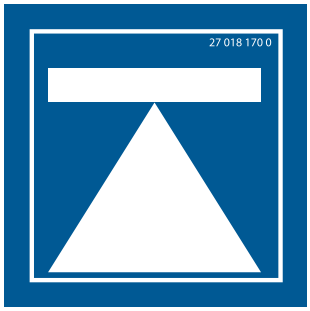
9. Ord. no. 939 194 1 (2x)

	Use a load beam when the machine is lifted, *see Page 85*.

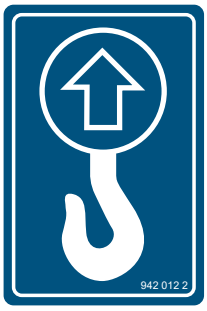
- Ord. no. 27 021 260 0

	There are several lubrication points on the machine which must be lubricated at regular intervals, *see Page 99*. Lubrication points which are not directly visible are additionally marked with this information sign.

- Ord. no. 27 018 170 0

	There are car jacking points on the machine which are marked by this information sign, *see Page 135*.

- Order no. 942 012 2

	There are suspension points on the machine which are marked by this information sign, *see Page 85*.

- Ord. no. 27 023 958 0

	There are lashing points on the machine which are marked by this information sign, *see Page 86*.

2.8 Safety equipment

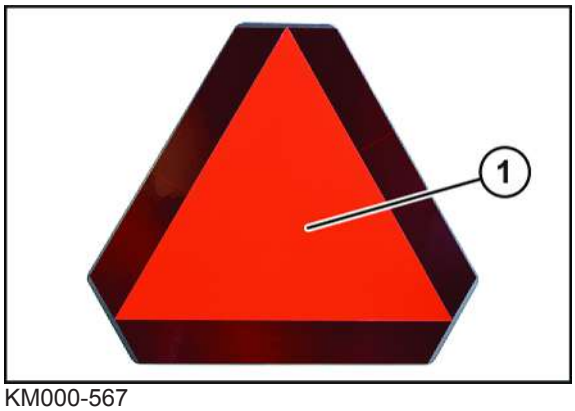
RPG000-015

Pos.	Designation	Explanation
1 (depending on country version)	Safety chain	The safety chain is used for the additional protection of trailed machines in case they become unhitched during transport, *see Page 56*. The country-specific regulations for using the safety chain during transportation of the machine must be observed.
	Catch loop	The catch loop is used for the additional protection of hitched machines.
2	Overload protection	The overload protection shall protect the machine against overload, *see Page 39*.
3	Support jack	The support jack is used to keep the machine stable when it is not connected to the tractor, *see Page 65*.

Pos.	Designation	Explanation
4	Wheel chocks	The wheel chocks secure the machine against rolling away. 2 wheel chocks are affixed to the machine, *see Page 66*.
5	Stop cock for the tailgate	The stop cock for the tailgate must be closed when you work in the bale chamber or on the tailgate, *see Page 79*.
6	SMV emblem	• The SMV emblem (Slow-Moving Vehicle) can be mounted on slow-moving machines or vehicles, *see Page 36*. The country-specific specifications must be observed. • The SMV emblem is at the rear in the centre or on the left. • If the machine is transported on transport vehicles (e.g. lorry or train), the SMV emblem must be covered or removed.

2.8.1 SMV emblem

For the version with “SMV emblem”



KM000-567

The SMV emblem (Slow-Moving Vehicle) (1) can be mounted on slow-moving machines or vehicles. The country-specific specifications must be observed.

The SMV emblem (1) is at the rear in the centre or on left.

If the machine is transported on transport vehicles (for example lorry or train), the SMV emblem must be covered or dismounted.

3 Data memory

A large number of electronic components of the machine contains data memories which save temporarily or permanently technical information on machine condition, events and errors. This technical information generally documents the condition of a part, a module, a system or the environment:

- Operating states of system components (e.g. filling levels)
- Status messages of the machine and its individual components (e.g. number of revolutions of wheel, wheel speed, motion delay, lateral acceleration)
- Malfunctions and defects in essential system components (e.g. light and brakes)
- Reactions of the machine in special driving situations (e.g. activation of the stability control systems)
- Ambient conditions (e.g. temperature).

This data, which is of an exclusively technical nature, is used to identify and eliminate faults and to optimise machine functions. The data cannot be used to generate movement profiles of travelled distances.

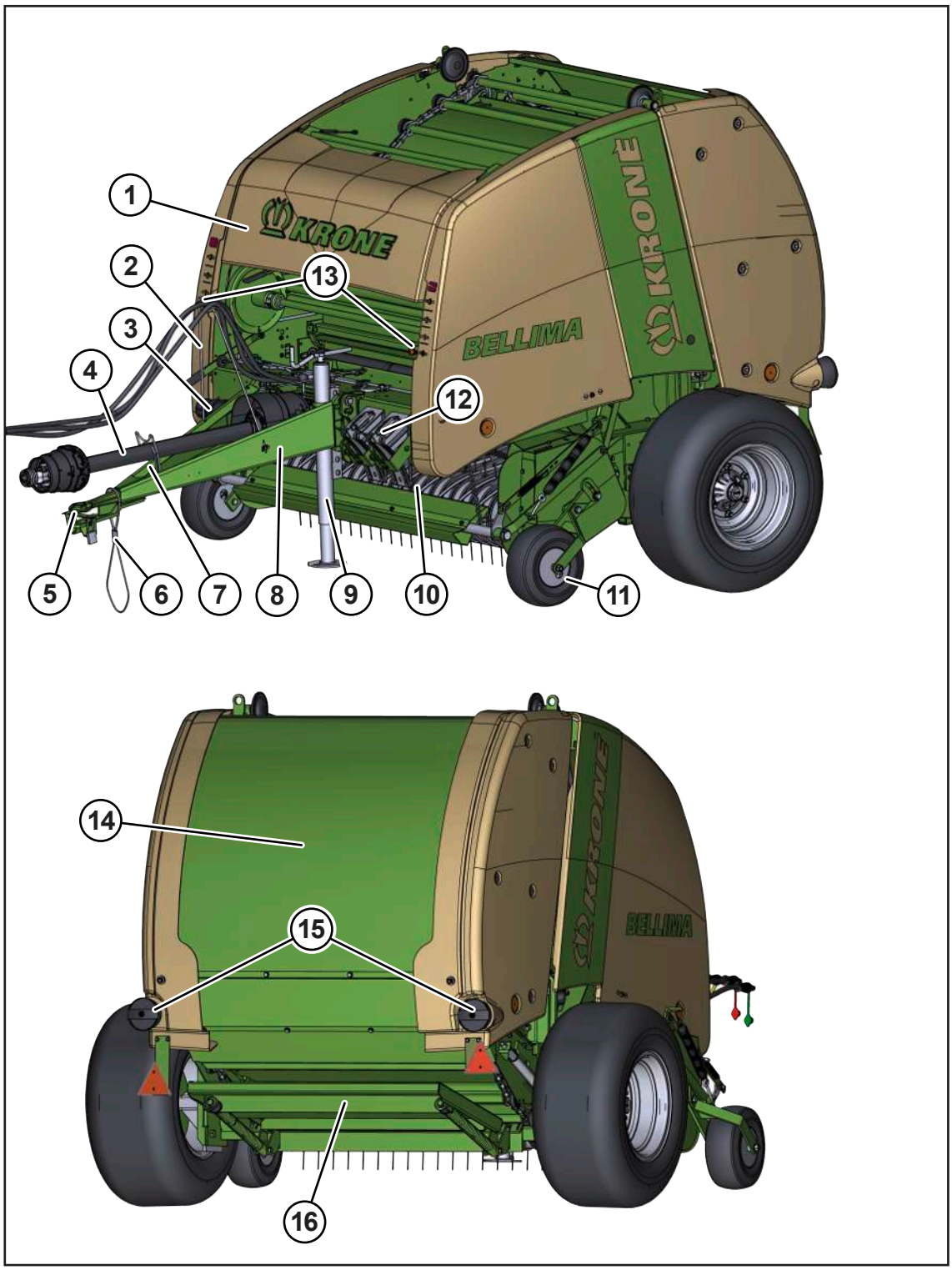
For service activities (e.g. repair services, service processes, warranty cases, quality assurance), employees of the service network (including manufacturer) can use special diagnostic units to read this technical information from the event and error data memories. If necessary, you can obtain further information there. After the error has been eliminated, the information in the error memory is either deleted or continuously overwritten.

When using the machine, situations are possible in which this technical data, in conjunction with other information (accident protocol, damage to the machine, witness statements etc.) - if necessary with the assistance of an expert - can be related to persons.

Additional functions, which are contractually agreed with the customer (e.g. teleservice), allow the transmission of certain machine data from the machine.

4 Machine description

4.1 Machine overview



RPG000-013

1	Storage compartment	9	Support jack
2	Hose and cable support	10	Pick-up
3	Document storage tube	11	Guide wheel
4	Universal shaft	12	Wheel chocks

5	Drawbar eye	13	Baling pressure indicator
6	Wire rope	14	Tailgate
7	Universal shaft bracket	15	Road travel lighting
8	Drawbar	16	Bale ejector

4.2 Overload protections on the machine

NOTICE

Machine damage due to load peaks

The overload protections protect the tractor and the machine from load peaks. For this reason, overload protections must not be modified. The warranty for the machine becomes void if other than the factory-specified overload protections are used.

- Only use the overload protections installed in the machine.
- To avoid early wear of the overload protection, switch the PTO shaft off if the overload protection responds for a longer period of time.
- Shut down and safeguard the machine, *see Page 25*.
- Remedy the malfunction, *see Page 125*.

The following components are protected by overload protections against damages.

Universal shaft

To prevent an overload, there is a cam clutch on the universal shaft. It is not necessary to bleed this cam clutch.

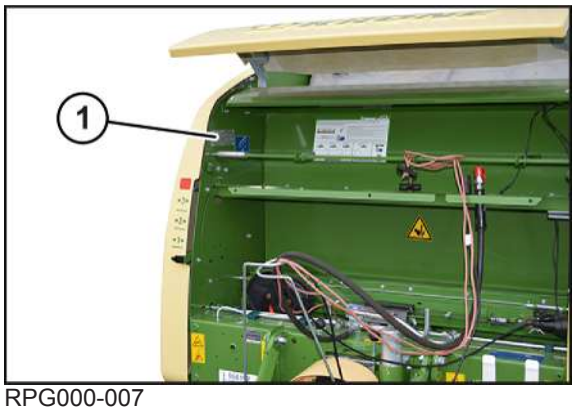
If the cam clutch is actuated due to a machine overload, *see Page 110*.

4.3 Identification plate

INFO

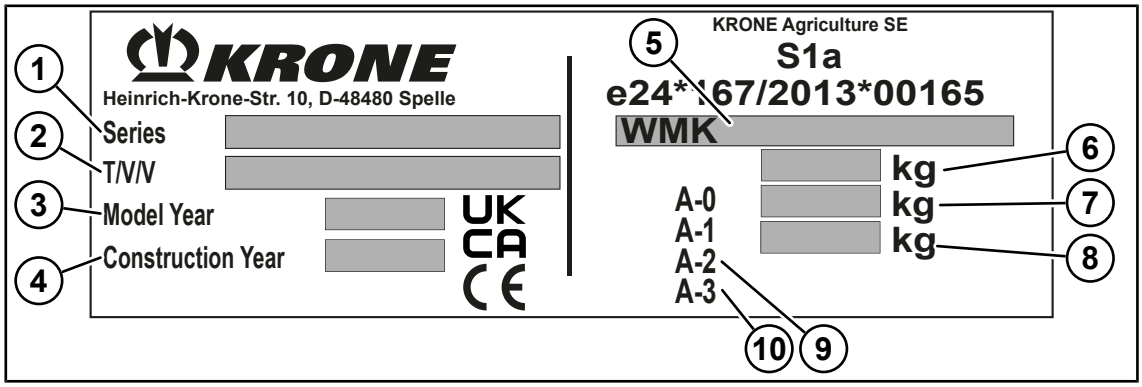
The entire identification plate represents a legal document and should not be altered or rendered illegible!

Type plate



RPG000-007

The machine data are specified on a type plate (1). This is located on the right side of the machine in the storage compartment.



DVG000-004

Example image

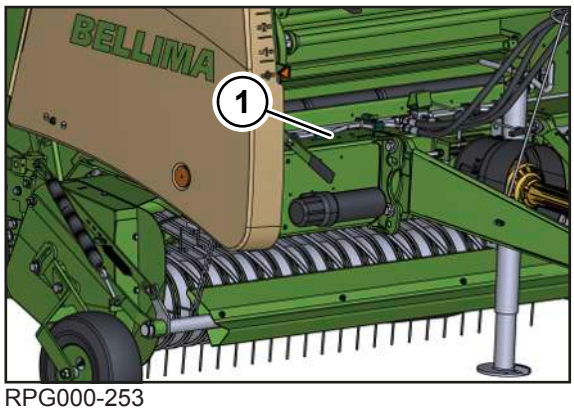
1 Series
2 Type/variant/version (T/V/V)
3 Model year
4 Year of manufacture
5 Vehicle identification number
6 Total weight of the machine
7 Drawbar load (A-0)
8 Axle load (A-1)
9 Axle load (A-2)
10 Axle load (A-3)

In case of queries about the machine and when ordering spare parts, ensure that you specify the series (1), the vehicle identification number (5) and the year of manufacture (4) of the corresponding machine. The machine number results from the last 7 digits of the vehicle identification number (5).

To ensure that the data is always available, KRONE recommends that you enter it in the boxes on the front cover of these operating instructions.

NOTE! To lift the machine, ensure that a hoist is used whose minimum load capacity depends on the permissible total weight of the machine. The minimum load capacity is the total weight of the machine (6) plus the drawbar load (7).

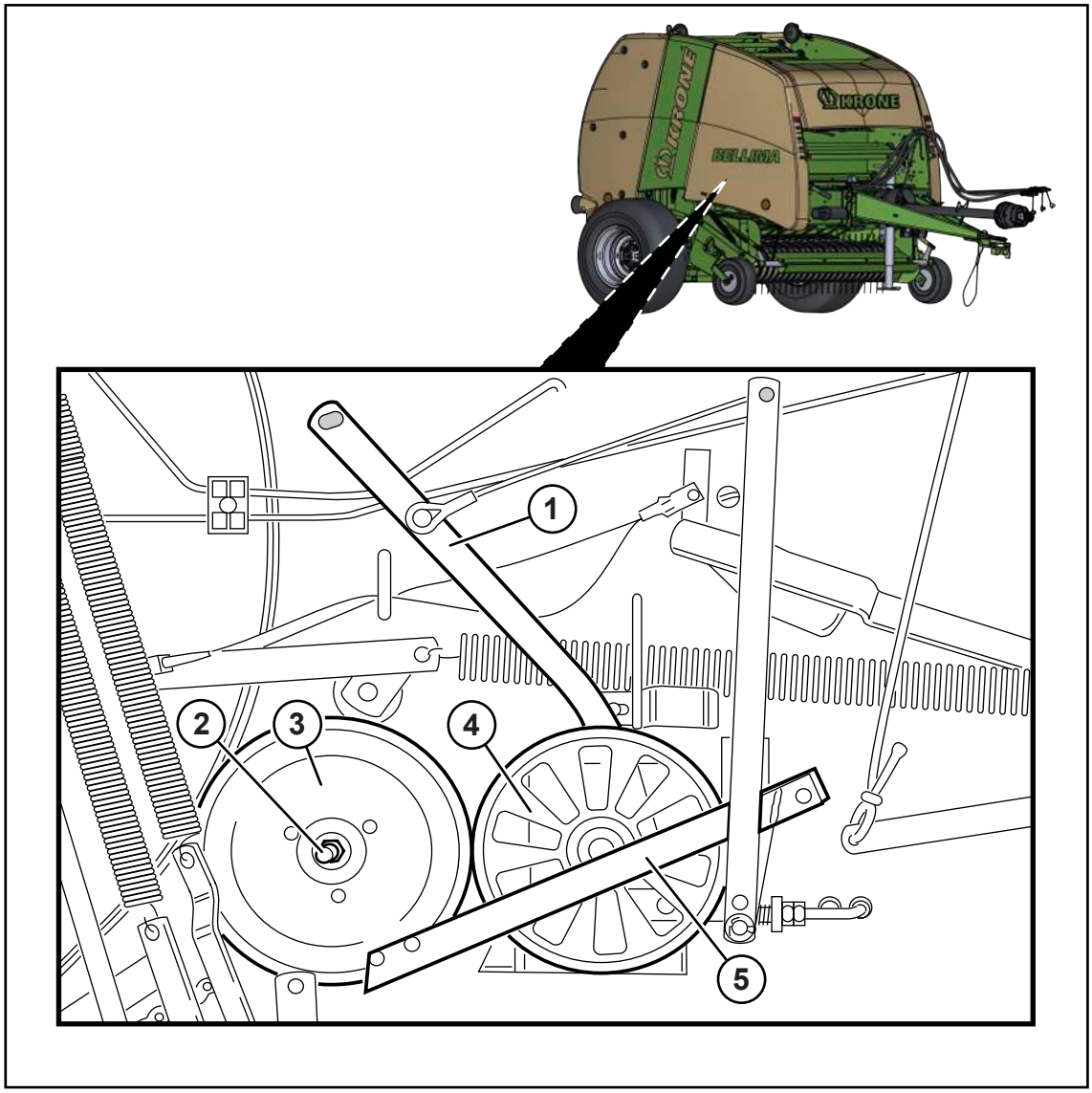
Location of the vehicle identification number



RPG000-253

In addition, the vehicle identification number (1) is embossed on the right-hand side of the machine.

4.4 Description of the net wrapping functionality



RPG000-020

When tying is started from the tractor, the deflection lever (1) is pulled to the right. Next, the spring rail (5) travels up to a point in some distance above the setting screw (2). At the same time, the wrapping material brake is released to allow for smooth retraction of the net at the start of the tying cycle.

The deflection lever (1) moves the drive wheel (4) which presses the drive wheel (4) against the friction wheel (3). This starts up the tying unit, guides the net to the round bale, and pulls it off the round bale.

The drive wheel (4) moves back to its initial position and can move freely. The friction wheel (3) continues rotating. The spring rail (5) settles on the setting screw (2). There, the spring rail (5) moves outwards until it drops, depending on the set net layers. This triggers the cutting unit to cut the net.

4.5 Description of the twine tying functionality

The machine is equipped with a storage compartment which can hold up to 6 rolls of tying twine.

To ensure adequate tying safety, ensure that only plastic twine is used which has a running length of 400–1,000 m/kg.

INFO

KRONE recommends using KRONE excellent Round Baler Twine for twine tying. This tying twine can be ordered by quoting material number 00 929 949 * (750 m/kg) or 00 929 951 * (1,000 m/kg).

The 2 twines are routed from the storage compartment via twine guide eyes, twine brake and drive roll to the starting device.

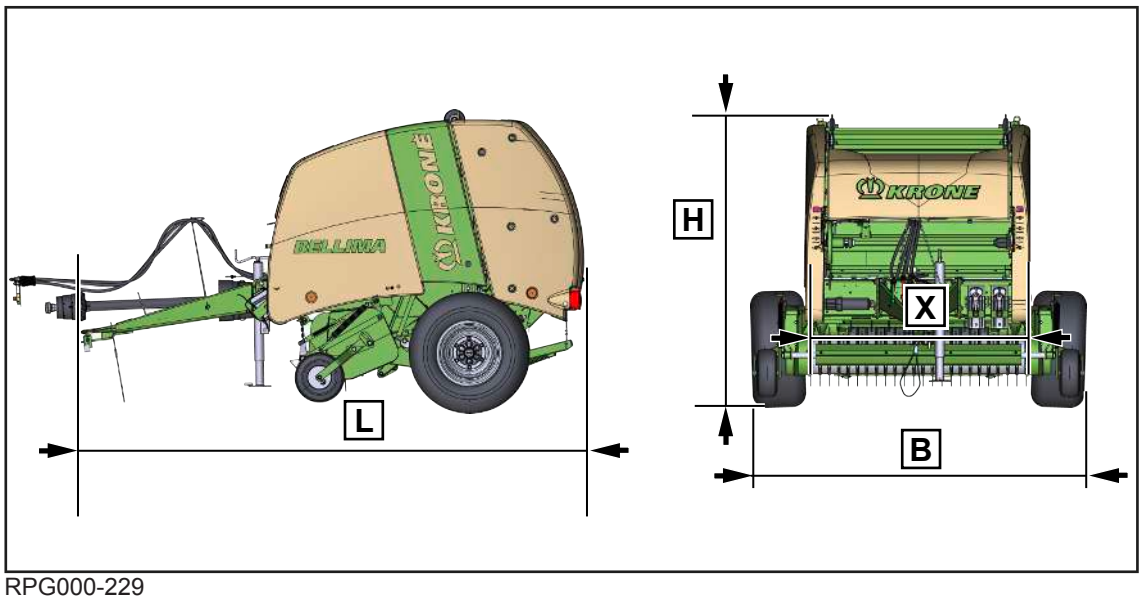
When the tying cycle is initiated, the twine is conveyed to the rotating round bale.

During the tying cycle, the drivers guide the twine from the centre to the outside right and outside left. The twine is cut at the end or start position of the drivers.

When the set twine layers have been reached, the cutting unit is triggered and the twines are cut. The tying cycle is complete.

5 Technical data

5.1 Dimensions



RPG000-229

Dimensions	
Width [W] depending on tyres	2,290–2,700 mm
Height [H] (with standard tyres)	2,090 mm
Length [L]	3,700 mm
Working width [X]	1,800 mm

5.2 Weights

Weights	
Weights	See information on the type plate, *see Page 39*.

5.3 Technically permitted maximum speed (road travel)

The technically permitted maximum speed may be restricted by different equipment features (e.g. coupling device, axle, brake, tyres, etc.) or by statutory regulations in the country of use.

Technically permitted maximum speed (road travel)	
Technically permitted maximum speed (road travel)	40 km/h

5.4 Airborne noise emission

Airborne noise emission	
Emissions value (sound pressure level)	73.1 dB
Measurement device	Bruel & Kjaer, Type 2236
Accuracy class	2
Measurement uncertainty (according to DIN EN ISO 11201)	4 dB

5.5 Ambient temperature

Ambient temperature	
Temperature range for machine operation	-5 to +45 °C

5.6 Tyres

Tyre designation	Minimum pressure V_{max}=10 km/h	Maximum pressure	Recommended tyre pressure[1]
Guide wheels on the pick-up			
15x6.00-6		2.5 bars	1.5–2.0 bar
Tyres on the machine			
11.5/80-15.3 (standard tyres)	2.2 bar	4.5 bar	3.5 bar
15.0/55-17	1.5 bar	2.6 bar	1.5 bar
19.0/45-17	1.5 bar	3.0 bar	1.5 bar

[1] The recommendation applies in particular to the usual mixed operation (field/road) at the maximum permitted speed of the machine. If required, the tyre pressure can be reduced to the indicated minimum air pressure. However, the associated maximum speed must then be observed.

5.7 Safety chain

Safety chain	
Tensile strength	89 kN

5.8 Bale dimensions

Bale dimensions	
Width	1,200 mm
Diameter	ø 1,200 mm

5.9 Net wrapping and tying material

Net wrapping and tying material	
External diameter of the net roll	ø max. 270 mm
Internal diameter of the sleeve	ø 75-80 mm
Length of the sleeve	max. 1,270 mm
Recommended net width	1,230–1,250 mm

5.10 Requirements for tractor - power

Requirements for tractor - power	
Tractor power	25 kW (34 HP)
PTO speed	540 rpm
PTO shaft end	1 3/8"; Z=6

5.11 Tractor requirements – hydraulics

Tractor requirements – Hydraulics	
Volume flow of the hydraulic system	30 ... 60 L/min
Maximum operating pressure of the hydraulic system	200 bar
Maximum hydraulic oil temperature	80 °C
Hydraulic oil quality	Oil ISO VG 46
Single-acting hydraulic connection	2x
For version with "Hydraulic tie starting device with additional hydraulic hose line for pick-up" Single-acting hydraulic connection	1x

5.12 Requirements for tractor – electrics

Requirements for tractor – electrics	
Road travel lighting	12 volt, 7-pin socket
Operation panel power supply	12 volt, 3-pin socket

5.13 Consumables

NOTICE

Complying with change intervals for biooils

To ensure high life expectancy of the machine, it is absolutely necessary to comply with change intervals for biooils due to the ageing of the oils.

NOTICE

Machine damage due to mixing of oil

If oils, which have different specifications, are mixed with each other, the machine may be damaged.

- ▶ Never mix oils, which have different specifications, with each other.
- ▶ Contact your KRONE service partner before using an oil with a different specification after changing the oil.

Biodegradable consumables can be used on request.

5.13.1 Oils

Designation	Filling quantity	Specification
Gearbox main drive	1.00 L	SAE 90 GL4

5.13.2 Lubricating greases

Designation	Filling quantity	Specification
Lubrication points (manual lubrication)	The filling quantity is as required. Lubricate the lubrication points until lubricating grease comes out of the bearing position. After lubricating, remove the grease coming out of the bearing position.	Lubricating grease as specified in DIN 51818 of NLGI class 2, Li soap with EP additives
Lubrication points on the ADR axle	The filling quantity is as required. Lubricate the lubrication points until lubricating grease comes out of the bearing position. After lubricating, remove the grease coming out of the bearing position.	Lubricating grease as specified in DIN 51825: KP 3 N-20.
Lubrication points on the BPW axle	The filling quantity is as required. Lubricate the lubrication points until lubricating grease comes out of the bearing position. After lubricating, remove the grease coming out of the bearing position.	BPW ECO-Li Plus

For a list of the lubrication points to be lubricated *see Page 99*.

6 Initial operation

This chapter describes assembly and adjustment work on the machine which may be carried out by qualified technicians only. Here, the notice “Personnel qualification of technicians” applies,*see Page 14*.

⚠ WARNING

Risk of injury or damage to the machine due to faulty initial operation

If the initial operation is carried out incorrectly or incompletely, the machine may present defects. As a result, people may be injured or killed or the machine may be damaged.

- ▶ Initial operation must only be carried out by authorised technicians.
- ▶ Read in full and observe the “Personnel qualification of technicians”,*see Page 14*.

⚠ WARNING

Risk of injury due to non-observance of relevant safety notices

If the relevant safety notices are not observed, persons may get seriously injured or killed.

- ▶ To avoid accidents, the basic safety instructions must be read and observed, *see Page 13*.

⚠ WARNING

Risk of injury due to non-observance of safety instructions

If the relevant safety routines are not observed, persons may be seriously injured or killed.

- ▶ The safety routines must be read and observed to avoid accidents, *see Page 25*.

6.1 Checklist for initial operation

⚠ WARNING

Risk of injury or damage to the machine due to faulty initial operation

If the initial operation is carried out incorrectly or incompletely, the machine may present defects. As a result, people may be injured or killed or the machine may be damaged.

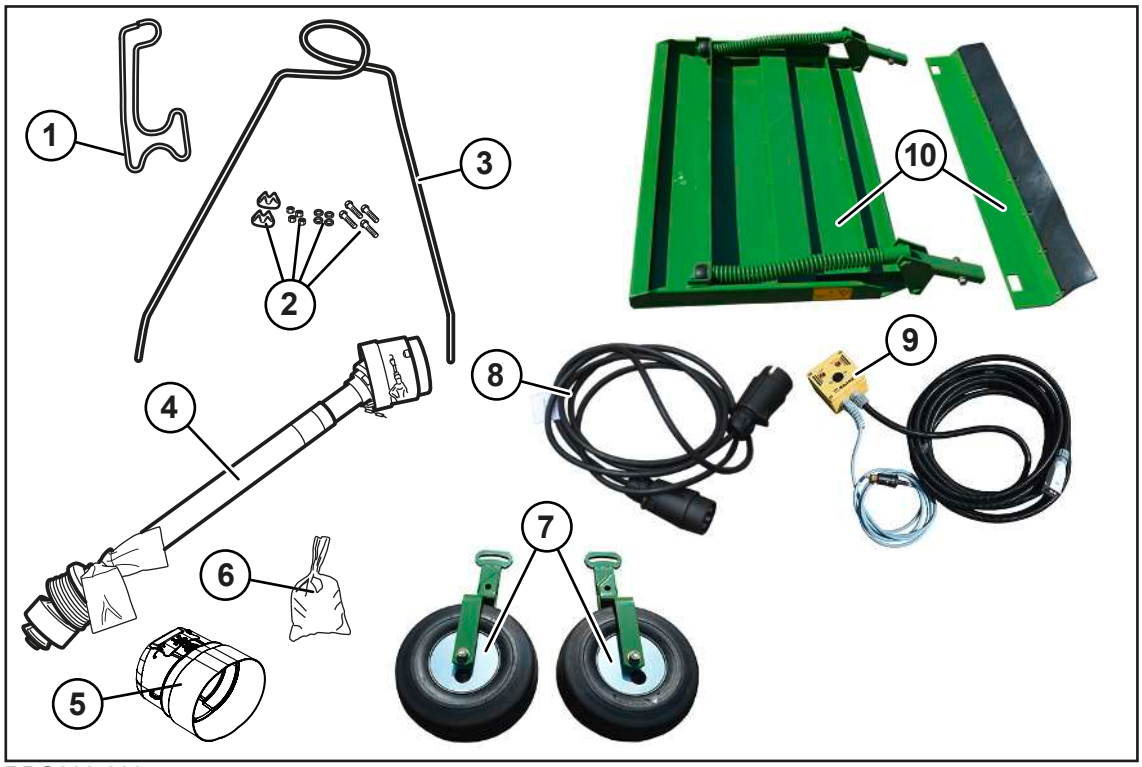
- ▶ Initial operation must only be carried out by authorised technicians.
- ▶ Read in full and observe the “Personnel qualification of technicians”,*see Page 14*.

- ✓ All screws and nuts are checked for tightness, and are tightened to the specified tightening torques, *see Page 104*.
- ✓ All sensors have been checked for tight fit and tightened to the specified tightening torques. The location of the sensors is shown in the circuit diagram.
- ✓ The safety devices are mounted and checked for completeness and damage.
- ✓ The machine is fully lubricated, *see Page 99*.
- ✓ The universal shaft is lubricated, *see Page 104*.
- ✓ The hydraulic system has been checked for leaks.
- ✓ The tractor corresponds to the machine requirements, *see Page 43*.
- ✓ The supplied operating instructions are in the document storage tube.
- ✓ The guide wheels are mounted on the pick-up, *see Page 48*.
- ✓ Hose and cable support are mounted, *see Page 53*.

- ✓ **For the net and twine tying version:** The starter roll of twine tying is prepared, *see Page 54*.
- ✓ The brake disc of the wrapping material brake is prepared, *see Page 54*.
- ✓ The tyres have been checked and the tyre pressure is adjusted correctly, *see Page 107*.
- ✓ The wheel hubs are adjusted to the correct height, *see Page 88*.
- ✓ The drawbar height is adjusted, *see Page 49*.
- ✓ The length of the universal shaft has been checked and adjusted, *see Page 51*.
- ✓ The protective cap of the universal shaft is mounted, *see Page 51*.
- ✓ The universal shaft is mounted, *see Page 52*.
- ✓ The bale ejector is mounted, *see Page 49*.
- ✓ The cable ties, which were mounted to secure the storage box flap and the side hood, were removed.

6.2 Scope of delivery

The machine is delivered together with the following additional parts located in the storage compartment or in the bale chamber.



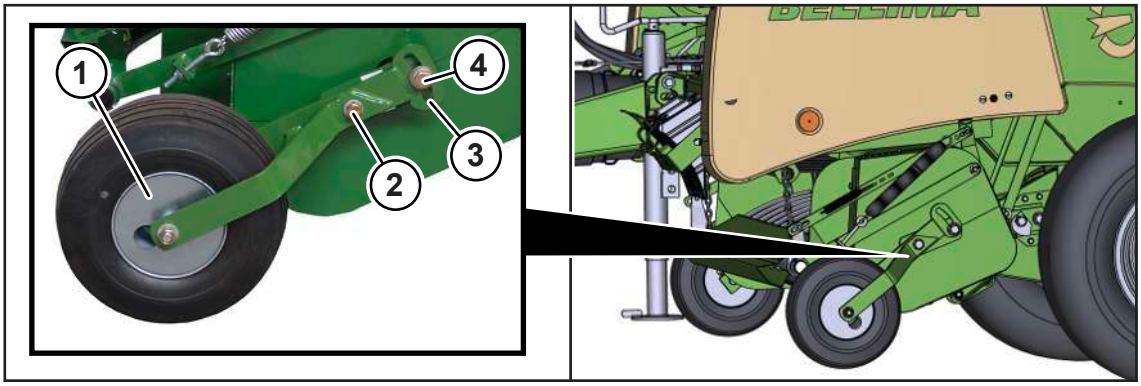
RPG000-009

1 Universal shaft bracket
2 Fastening material for hose and cable support
3 Hose and cable support
4 universal shaft
5 Protective cap for universal shaft
6 Bag of screws and small parts
7 Guide wheels of the pick-up
8 7-pole connection cable for road travel lighting
9 Electrical target baling pressure display with connection cable
10 Bale ejector

6.3 Mounting guide wheels on pick-up

On delivery, there are 2 guide wheels in the bale chamber which must be mounted on the pick-up.

The guide wheels must be mounted in the same way on the right-hand and left-hand machine side.

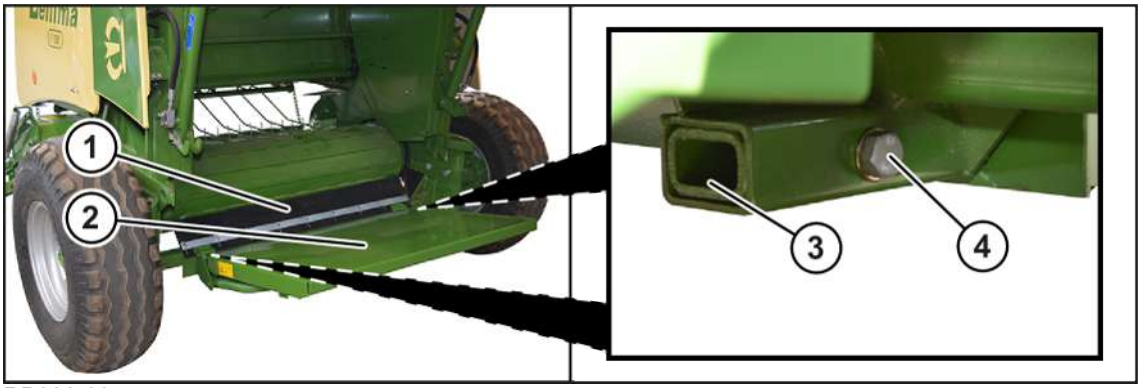


RP000-091

- To mount the guide wheel (1), mount the screw connections (2) and (4).

The guide wheel (1) can be adjusted via the oblong hole (3), *see Page 87*.

6.4 Mounting bale ejector



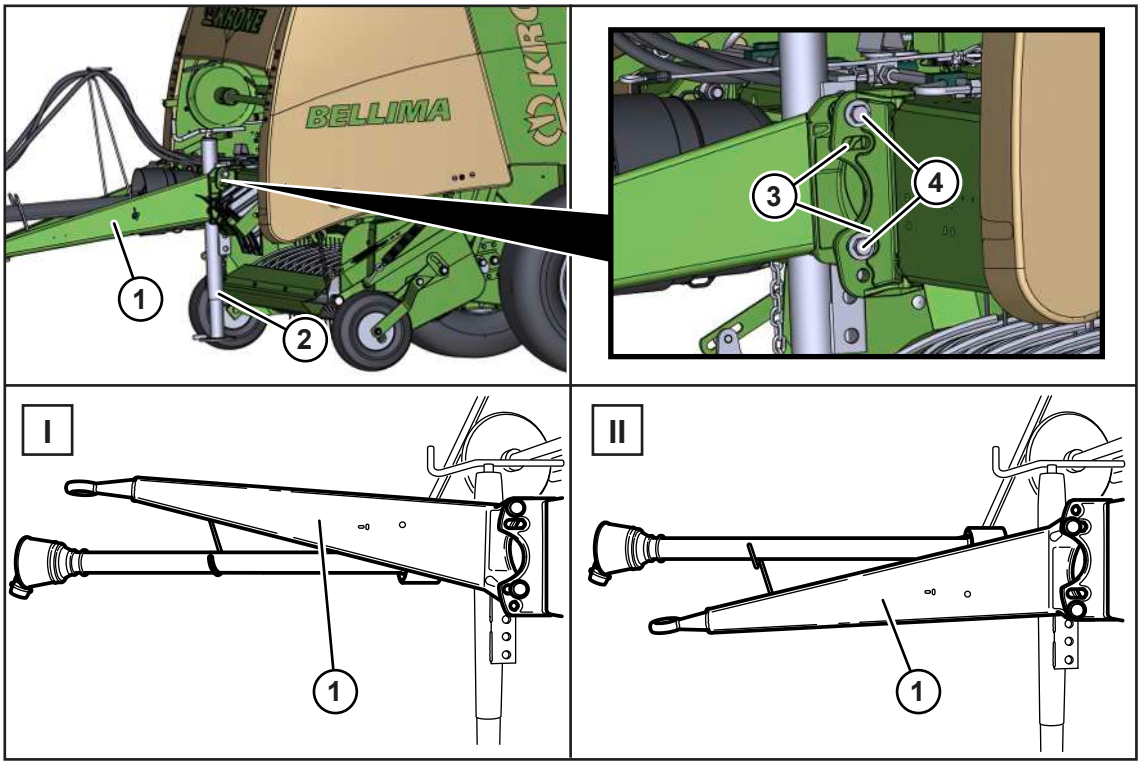
RP000-094

- Remove the screw connection (4).
- Insert the cover sheet (1) and the bale ejector (2) into the support (3) on the left and right of the machine and mount them with the screw connection (4).

6.5 Adjusting the drawbar height

NOTICE
When the tractor and machine are in a horizontal position, the hitched mechanical connection devices (e.g. ball-head hitch) must be in a horizontal position (+/- 3°) with respect to the ground so as not to obstruct the operational swivel angle between the mechanical connection devices.

To ensure that the pick-up evenly picks up the crops, the drawbar height of the machine must be adjusted to the tractor used. The set drawbar height is optimal if the hitched machine is aligned horizontally or slightly tilted forward towards the tractor.



RP000-073

In order to reach this optimum drawbar height, the drawbar (1) can be mounted in the top hitching [I] or in the bottom hitching [II].

✓ The machine has been shut down and secured, *see Page 25*.

- To change the hitch of the drawbar (1), remove the screw connections (4) on both sides of the drawbar (1).
- Turn the drawbar (1) by 180° around the longitudinal axis and mount it on both sides of the drawbar (1) using the screw connections (4).
- Ensure that the screw connections in the round holes are tightened first and then the screw connections in the oblong holes (3), tightening torque: *see Page 104*.
- Connect the machine to the tractor, *see Page 55*. In doing so, leave the machine on the support jack (2).
- For a finer adjustment of the drawbar height, loosen the screw connection in the oblong hole (3) on both sides of the drawbar (1).
- Slightly raise or lower the support jack (2) so that the machine remains in the prescribed position.
- Tighten the screw connection in the oblong hole (3) on both sides of the drawbar (1).

6.6 Universal shaft

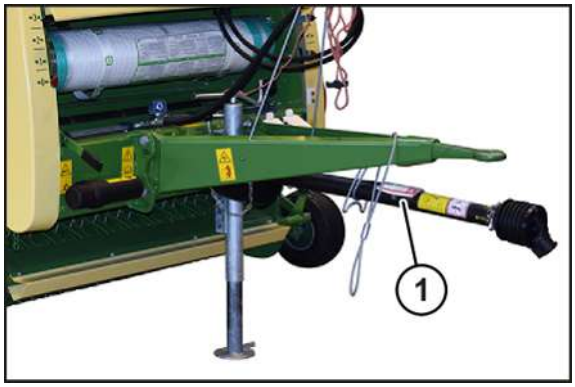
6.6.1 Adjusting the length of the universal shaft

NOTICE

Changing the tractor

There is a risk of damaging the machine if the length of the universal shaft is not checked when the tractor is changed.

- To prevent damage to the machine, check the length of the universal shaft whenever you change tractors. Have it corrected by a KRONE service partner if necessary.



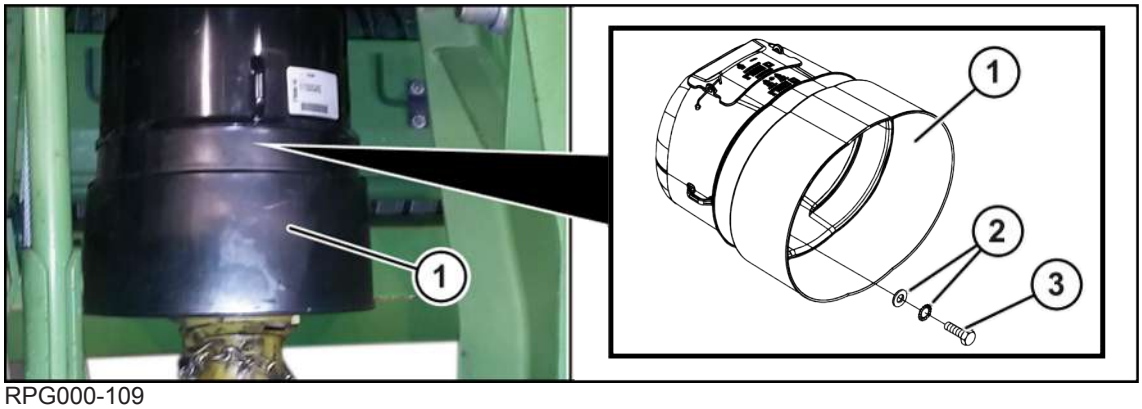
RPG000-086

The universal shaft (1) must be shortened as far as allowed by the narrowest position of both universal shaft halves.

To move the machine into the shortest position:

- ▶ Turn the steering of the tractor all the way to the left or to the right and move tractor and machine forwards until the narrowest position is reached when driving around curves.
- ▶ Switch off the engine and remove the ignition key and carry it with you.
- ▶ Secure machine and tractor against rolling away.
- ▶ Instructions on how to shorten the universal shaft (1) can be found in the operating instructions of the universal shaft manufacturer.

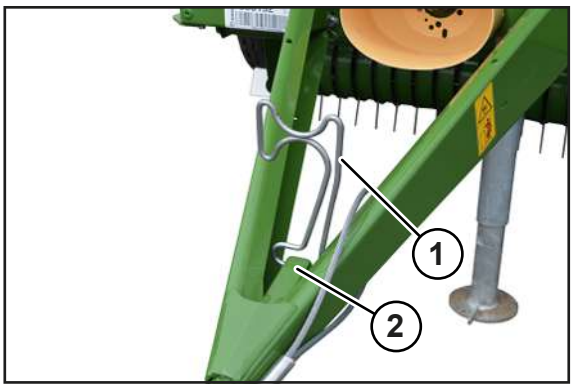
6.6.2 Mounting protective cap of universal shaft



RPG000-109

- ✓ The machine has been shut down and secured, *see Page 25*.
- ▶ Take the protective cap (1) out of the storage compartment.
- ▶ Remove the screws (3) and washers (2) pre-assembled on the machine.
- ▶ Push the protective cap (1) over the PTO shaft and mount on the machine using the screws (3) and disks (2), tightening torques, *see Page 104*.

6.6.3 Mounting universal shaft bracket



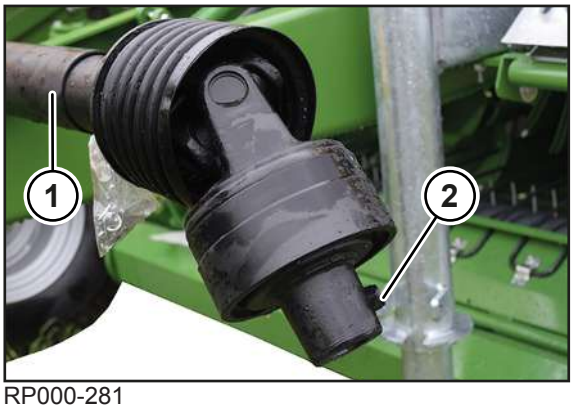
RPG000-133

The universal shaft bracket (1) is required to support the universal shaft when the machine has been uncoupled from the tractor.

✓ The machine has been shut down and secured, *see Page 25*.

▶ Pull the universal shaft bracket (1) apart and mount on the support (2).

6.6.4 Mounting the universal shaft on the machine



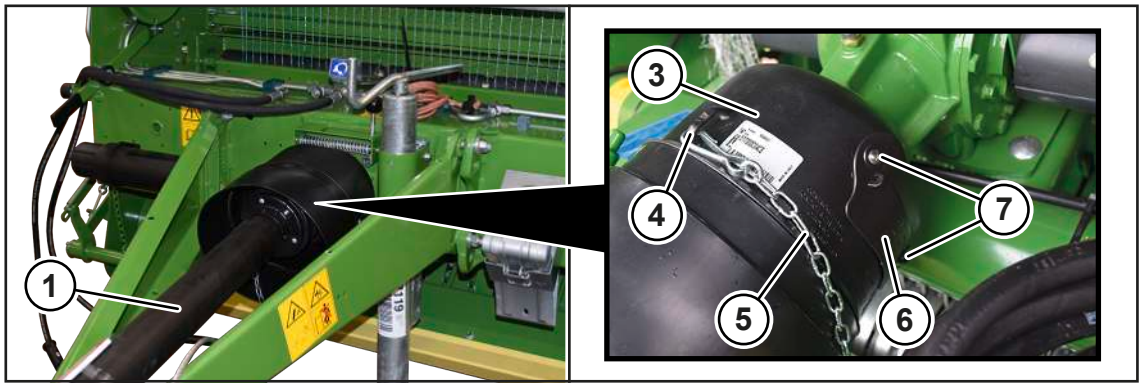
RP000-281

✓ The machine has been shut down and secured, *see Page 25*.

✓ The length of the universal shaft is adjusted to the tractor, *see Page 51*.

✓ The protective cap is mounted, *see Page 51*.

▶ Remove the screw connection (2) from the universal shaft (1).

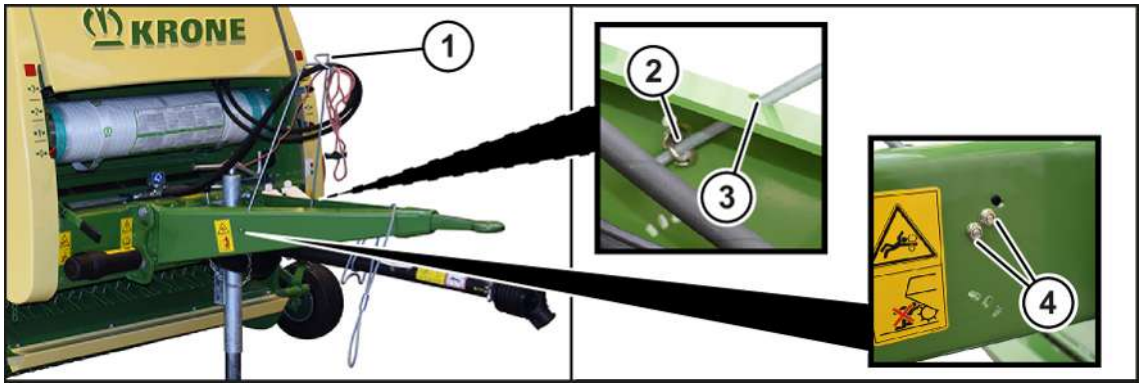


RPG000-179

- To facilitate access to the screw connection (2) on the universal shaft (1), remove the screw connections (7) and the cover (6) on the protective cap (3).
- Push the universal shaft (1) onto the PTO shaft end of the machine.
- Mount the screw connection (2) through the resulting hole behind the cover (6). The tightening torque is specified in the operating instructions provided with the universal shaft.
- Mount the cover (6).
- To prevent the supporting chain (5) from rotating, hook it into the eye (4) on the protective cap (3).

> ***INFO***
>
> More details can be found in the operating instructions for the universal shaft.

6.7 Mounting hose and cable support



RPG000-010

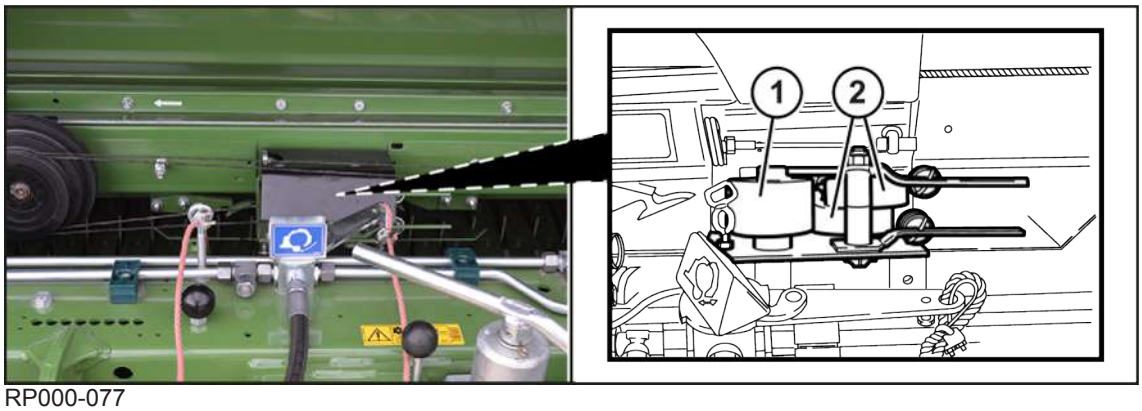
✓ The machine has been shut down and secured, *see Page 25*.

- Take the hose and cable holder (1) out of the storage compartment.
- Insert the hose and cable holder (1) into the oblong holes (3) on the right and left sides of the drawbar.
- Mount the hose and cable holder (1) with the terminals (2) from the inside and with the nuts (4) from the outside.

➡ The hoses and cables can be guided through the eye on the hose and cable holder (1) towards the tractor.

6.8 Preparing starter roll of twine tying

With "net wrapping and twine tying" version



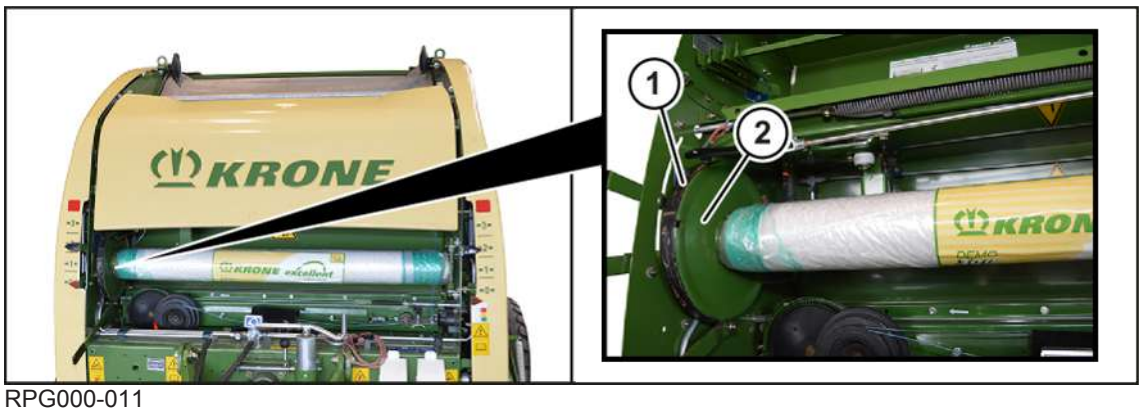
RP000-077

✓ The machine has been shut down and secured, *see Page 25*.

▶ Rotate the starter roll (1) slightly in order to check whether the pressure rolls (2) rotate easily.

▶ If the pressure rolls (2) do not rotate easily, adjust the starter roll, *see Page 111*.

6.9 Preparing the brake disc of the wrapping material brake



RPG000-011

▶ Remove the adhesive corrosion protection film (1) from the braking surface of the brake disc (2) and dispose of it.

7 Start-up

⚠ WARNING

Risk of injury due to non-observance of relevant safety notices

If the relevant safety notices are not observed, persons may get seriously injured or killed.

- To avoid accidents, the basic safety instructions must be read and observed, *see Page 13*.

⚠ WARNING

Risk of injury due to non-observance of safety instructions

If the relevant safety routines are not observed, persons may be seriously injured or killed.

- The safety routines must be read and observed to avoid accidents, *see Page 25*.

⚠ WARNING

Risk of injury or damage to the machine due to connection lines which have been incorrectly connected, interchanged or improperly installed

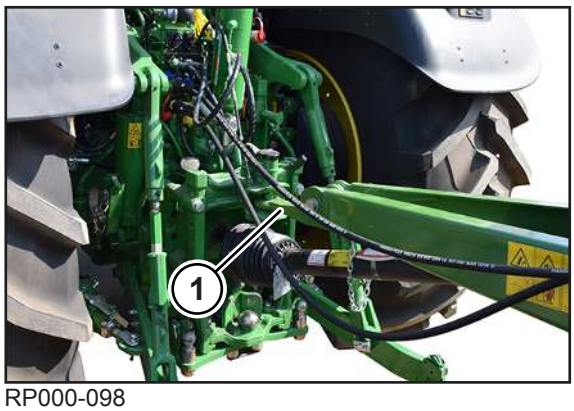
If the connection lines of the machine have been incorrectly connected to the tractor or have been improperly installed, they may pull off or be damaged. This may result in serious accidents. If connection lines are interchanged, functions may inadvertently be actuated which may also result in serious accidents.

- Correctly connect and secure the hoses and cables.
- Lay the hoses, cables and ropes so that they do not scrape, come under tension or become jammed or come into contact with other components (e.g. tractor tyres).
- Couple and connect the hoses and cables to the designated connections as described in the operating instructions.

7.1 Connecting machine to tractor

NOTICE

When the tractor and machine are in a horizontal position, the hitched mechanical connection devices (e.g. ball-head hitch) must be in a horizontal position (+/- 3°) with respect to the ground so as not to obstruct the operational swivel angle between the mechanical connection devices.



RP000-098

Example image

WARNING! Increased risk of injury! Make sure that there is no one between the tractor and the machine while connecting, especially during reverse travel of the tractor.

- ▶ Move the tractor in reverse onto the drawbar until the drawbar eye of the machine has been inserted into the hitching device of the tractor.
- ▶ Shut down and safeguard the machine, *see Page 25*.
- ▶ Secure the hitching device according to the operating instructions of the tractor manufacturer.

7.2 Mounting the universal shaft on the tractor

⚠ *WARNING*

Risk of injury by failure to take account of the danger zone of the universal shaft

If the danger zone of the universal shaft is ignored, persons can be seriously hurt or killed.

- ▶ To avoid accidents, observe the danger zone of the universal shaft, *see Page 17*.

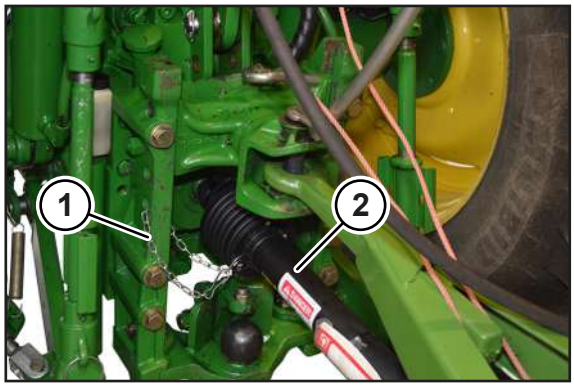
NOTICE

Changing the tractor

There is a risk of damaging the machine if the length of the universal shaft is not checked when the tractor is changed.

- ▶ To prevent damage to the machine, check the length of the universal shaft whenever you change tractors. Have it corrected by a KRONE service partner if necessary.

✓ The machine has been shut down and secured, *see Page 25*.



RPG000-096

- ▶ Slip the universal shaft (1) onto the tractor PTO shaft and secure it against rotating by attaching the supporting chain (2) at a suitable location.

7.3 Mounting safety chain

⚠ *WARNING*

Risk of accident due to a incorrectly dimensioned safety chain

When using an incorrectly dimensioned safety chain, the safety chain may tear if the machine loosens unintentionally. This may result in serious accidents.

- ▶ Always use a safety chain with a minimum tensile strength of 89 kN (20,000 lbf).

⚠ WARNING

Risk of injury or damage to the machine due to incorrectly installed safety chain.

If the installed safety chain is too taut or too slack, the safety chain may tear. As a result, people may be seriously injured or the tractor and machine may be damaged.

- ▶ Install the safety chain in such a way that, when cornering, it is not tensioned and does not come into contact with the tractor wheels or other parts of the tractor or machine.

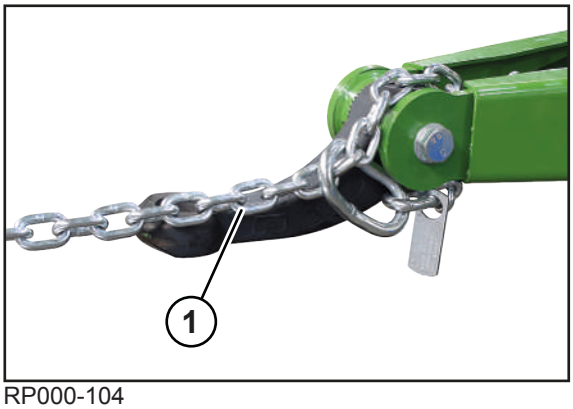
INFO

The country-specific regulations for using the safety chain during transportation of the machine must be observed.

The safety chain is in the storage compartment of the machine.

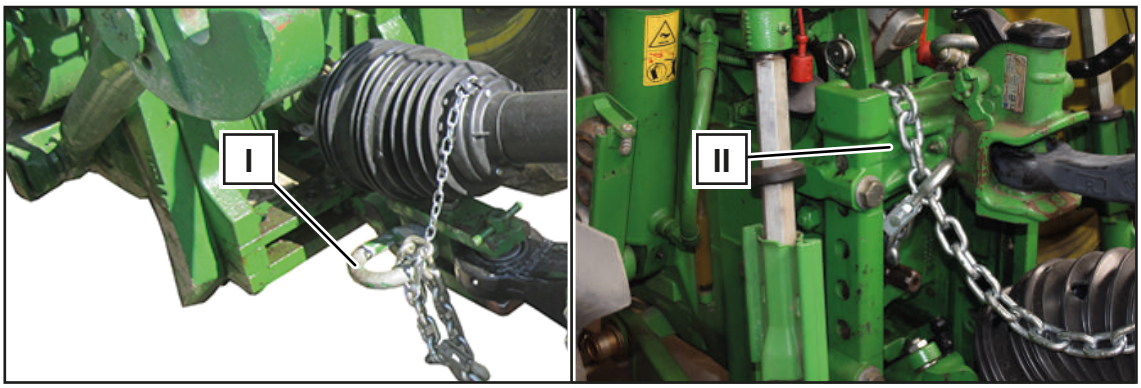
The safety chain serves as an additional safety precaution for trailed devices in case these come loose from the hitch during transport. Attach the safety chain with the respective mounting parts to the hitching device holder of the tractor or to another specified coupling point. The safety chain should have enough play when driving around curves.

✓ The machine has been shut down and secured, *see Page 25*.



RP000-104

- ▶ Mount the safety chain (1) on the machine.



RP001-623

- ▶ Install the safety chain (1) at a suitable position (for example: [I] or [II]) on the tractor.

7.4 Connecting hydraulic hoses

⚠ WARNING

Risk of injury from escaping hydraulic oil

The hydraulic system operates at very high pressure. Escaping hydraulic oil may seriously injure skin, limbs and eyes.

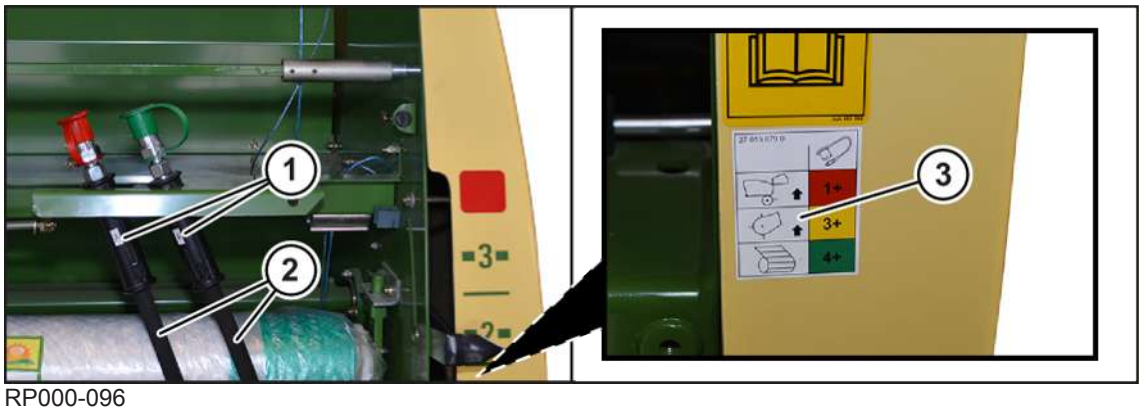
- Prior to connecting the hydraulic hoses to the tractor, depressurise both sides of the hydraulic system.
- Depressurise the hydraulic system before you uncouple the hoses and work on the hydraulic system.
- When connecting the quick couplings, ensure that they are clean and dry.
- Check hydraulic hoses at regular intervals *see Page 115* and replace them if they are damaged (e.g chafing areas or points of contact) or aged. The replacement lines must comply with the technical requirements of the device manufacturer.

NOTICE

Damage to the machine due to soiling of the hydraulic system

If foreign objects or liquids get into the hydraulic system, the hydraulic system may be severely damaged.

- When connecting the quick couplings, ensure that they are clean and dry.
- Check the hydraulic hoses for abrasion and pinch point and replace if required.



RP000-096

To connect the hydraulic hoses (2) correctly, the hydraulic hoses (2) are marked with numbers.

Hydraulic hoses (1) for the connection to a single-acting control unit are marked with a number and the plus sign, for example (1+).

Additional explanations of the markings on the handles can be found on the label (3).

- Depressurise the tractor hydraulics.
- Shut down and safeguard the machine, *see Page 25*.
- Clean and dry the connections of the hydraulic quick connector.

Opening/closing the hydraulic connection for the tailgate and lifting/lowering the pick-up

- Connect the hydraulic hose (red, 1+) to a single-acting control unit of the tractor.

For changing over between tailgate and pick-up, refer to chapter "Actuating the hydraulic switching valve", *see Page 77*.

Hydraulic connection for start tying

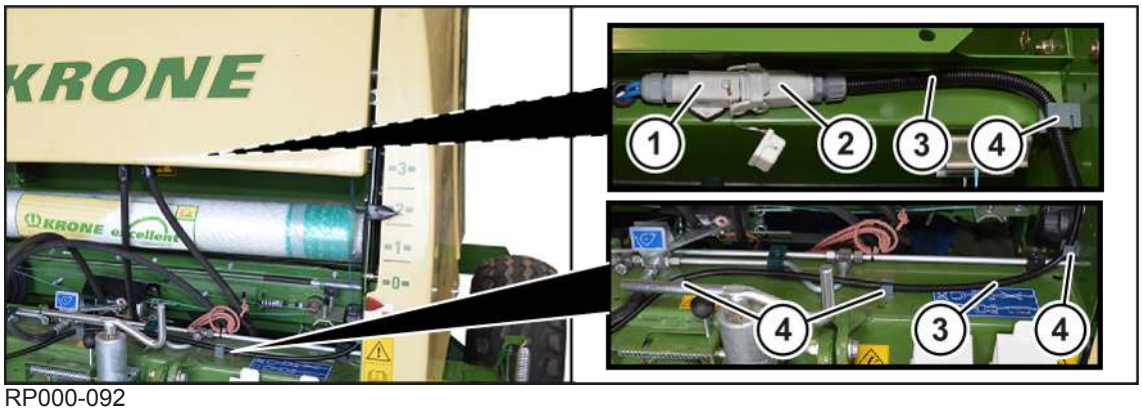
- Connect the hydraulic hose line (green, 4+) to a single-acting control unit of the tractor.

Hydraulic connections for start of tying and lifting/lowering pick-up (for the "Hydraulic tying start unit with additional hydraulic hose line for pick-up" version)

- Connect the hydraulic hose (green, 4+) to a single-acting control unit of the tractor.
- Connect the hydraulic hose (yellow, 3+) to a single-acting control unit of the tractor.

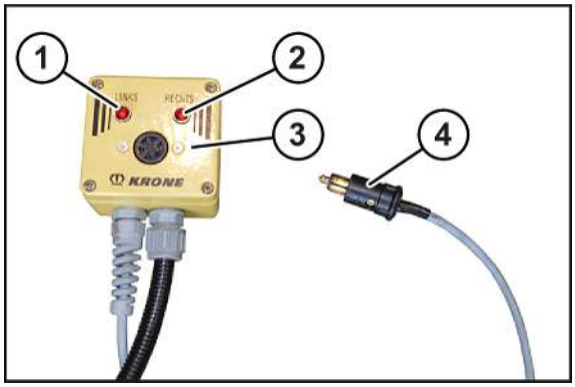
7.5 Connecting the electronic baling pressure indicator

For the "Electronic baling pressure indicator" version



RP000-092

- Open the storage compartment.
- Insert the plug (2) of the electronic baling pressure indicator into the connector (1) at the machine.
- To lay the cable (3), insert the cable (3) into the supports (4).



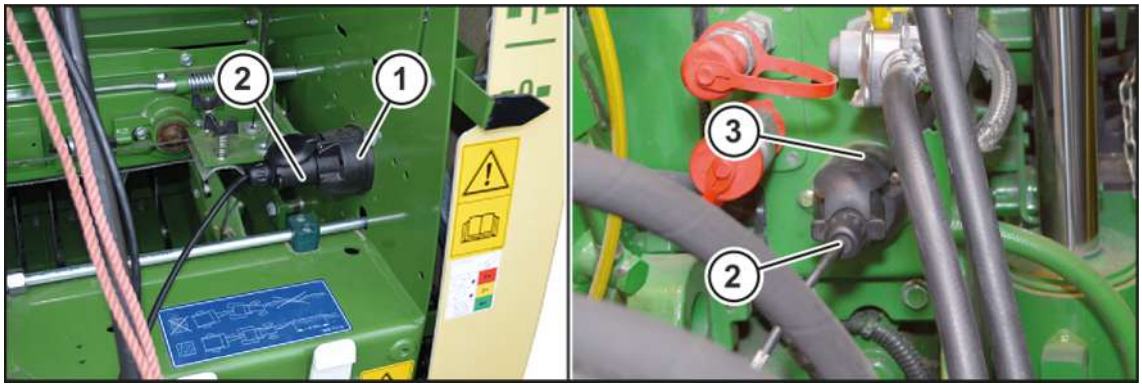
RP000-093

- Fasten the electronic baling pressure indicator (3) in the tractor cabin using the magnetic foot.
- Insert the plug (4) for the power supply into a matching socket or the cigarette lighter in the tractor cabin.
- To check the electronic baling pressure indicator for proper function, manually lift the red baling pressure indicators on the right and left machine side.

➡ If the indicator lamps (1) and (2) emit light until the red baling pressure indicators reach the black preselection indicators, the electronic baling pressure indicator functions correctly.

7.6 Connecting the road lighting

NOTICE
Short circuit caused by impurities and moisture in the plug connection The machine may be damaged by a short circuit. ▶ Make sure that the plugs and sockets are clean and dry.



BPG000-067

The road travel lighting is connected by means of the enclosed 7-pin lighting cable (2).

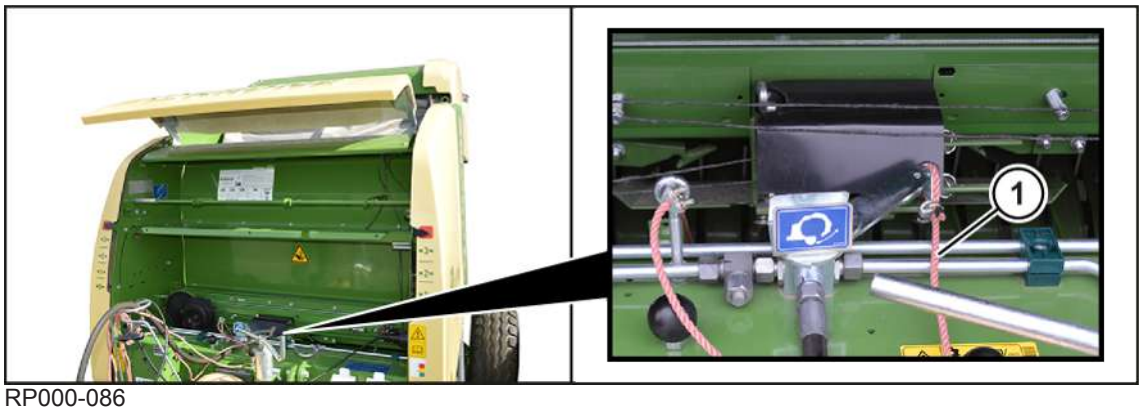
✓ The machine has been shut down and secured, *see Page 25*.

▶ Connect the 7-pin plug of the lighting cable (2) to the 7-pin socket (1) of the machine.

▶ Connect the 7-pin plug of the lighting cable (2) to the 7-pin socket (3) of the tractor.

▶ Route the lighting cable (2) so that it does not come into contact with the tractor wheels or other moving parts of the machine.

7.7 Preparing hydraulic switching valve for pick-up and tailgate



RP000-086

When the rope (1) of the hydraulic switching valve is pulled, the system changes between hydraulic operation of the pick-up and hydraulic operation of the tailgate.

▶ Guide the rope (1) to the tractor cabin in such a way that it is easily accessible but is not under tension and does not touch the tractor wheels when cornering.

To operate the rope (1), *see Page 77*.

8 Operation

⚠ WARNING

Risk of injury due to non-observance of relevant safety notices

If the relevant safety notices are not observed, persons may get seriously injured or killed.

- ▶ To avoid accidents, the basic safety instructions must be read and observed, *see Page 13*.

⚠ WARNING

Risk of injury due to non-observance of safety instructions

If the relevant safety routines are not observed, persons may be seriously injured or killed.

- ▶ The safety routines must be read and observed to avoid accidents, *see Page 25*.

⚠ WARNING

Risk of injury due to unpredictable movement of the round bales when the machine is operating on a slope

If round bales are deposited on a slope, they may start moving on their own. Once round bales have started moving, their weight and cylindrical shape may cause serious accidents and injure people.

- ▶ On slopes, deposit round bales in manual mode only.
- ▶ On slopes, always deposit round bales in such a way that they cannot start moving on their own.

8.1 Preparation before baling

- ✓ The pick-up is in working position, *see Page 67*.
- ✓ The holding-down clamp is correctly set for the crops quantity, *see Page 69*.
- ✓ The wrapping material has been correctly inserted.
  Twine tying: *see Page 71*
  Net wrapping: *see Page 75*
- ✓ The baling pressure is set, *see Page 94*.
- ✓ The bale counter is set to 0, *see Page 65*.
- ✓ The tailgate is closed.

8.2 Filling the bale chamber

NOTICE

Machine damage due to machine overload

Too firm or too large round bales can damage the machine and reduce the service life considerably. In the event of an overload, forced tying is automatically actuated which is saved on the terminal.

- ▶ Press only round bales which do not exceed the maximum set bale diameter.
- ▶ Observe the following information on the even filling of the bale chamber.

NOTICE
Risk of damage to the bale formation conveyor due to barrel-shaped round bales Distorted and compacted round bales may damage the bale formation conveyor. Also, proper silage production cannot be guaranteed. ▶ Only bale evenly shaped and compressed round bales. ▶ Observe the notices for even filling of the bale chamber.

To attain a consistent bale density inside the round bale, the bale chamber must be filled evenly. The appropriate swath width is important for this. The swath width is optimal when the swath has exactly the same width as the bale chamber.

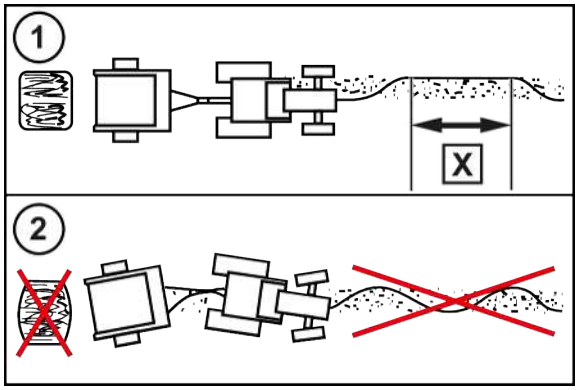
If swaths are too wide

The pressed round bales do not have an exact shape. Also the round bale is frayed on the sides and difficult to eject from the bale chamber.

- ▶ Make the swaths narrower on the field.
- ▶ Reduce the baling pressure.

If the swath is too narrow

Even filling of the bale chamber is possible only if the swath is approached alternating from the left and the right side. Too frequent changes and uneven filling of the bale chamber will produce barrel-shaped round bales and uneven baling density.



RP000-062

- ▶ Travel longer sections on the left respectively right side of the swath (1). Observe a length of roughly **X=20 m** on one side.
- ▶ Avoid swerving (2).

If the swath is small and flat

- ▶ Reduce the PTO speed.
- ▶ Increase the driving speed.

For very wet crops with little structure

- ▶ Reduce the baling pressure, *see Page 94*.

For short and brittle straw

- ▶ Reduce the baling pressure, *see Page 94*.
- ▶ To largely prevent short, brittle straw from falling out of the bale chamber when driving from one swath to the next swath, switch off the PTO shaft in the meantime.

Driving speed

KRONE recommends a driving speed of 5 ... 12 km/h.

The driving speed while working must be adapted to the following circumstances:

- Type of crop
- Moisture content of crops
- Swath height
- Selected cutting length
- Ground conditions

Additional tips for filling the bale chamber

- Reduce the driving speed at the start and at the end of the filling process to ensure consistent bale sizes.
- Crops can already be picked up again while the tailgate is still closing.

8.3 Completion of the baling process, start of tying, and ejection of the round bale

RPG000-049

The obtained baling pressure (filling level of the bale chamber) can be read off separately for the right and left sides of the machine on the red baling pressure indicators (3).

Depending on the obtained baling pressure, the red baling pressure indicators (3) are between 1 and 3 on the scales (1). The higher the number, the higher the baling pressure.

A required baling pressure can be set on the black preselection indicators (2). To set the baling pressure, *see Page 94*.

For the "Electronic baling pressure indicator" version

When the set baling pressure is reached, the driver in the tractor sees a signal on the electronic baling pressure indicator, *see Page 77*.

- ▶ Initiate the tying process, *see Page 64*. In doing so, continue picking up crops until the wrapping material is caught by the round bale.
- ▶ During the tying process set the machine back several metres.
- ▶ Drive forwards until the tailgate no longer touches the round bale.
- ▶ When the tying process is complete, hydraulically open the tailgate of the bale chamber all the way, *see Page 78*.
- ➡ The round bale rolls onto the field.
- ➡ The tailgate is locked when the right bale pressure indicator (2) is below position "0".

8.4 Initiating the tying cycle

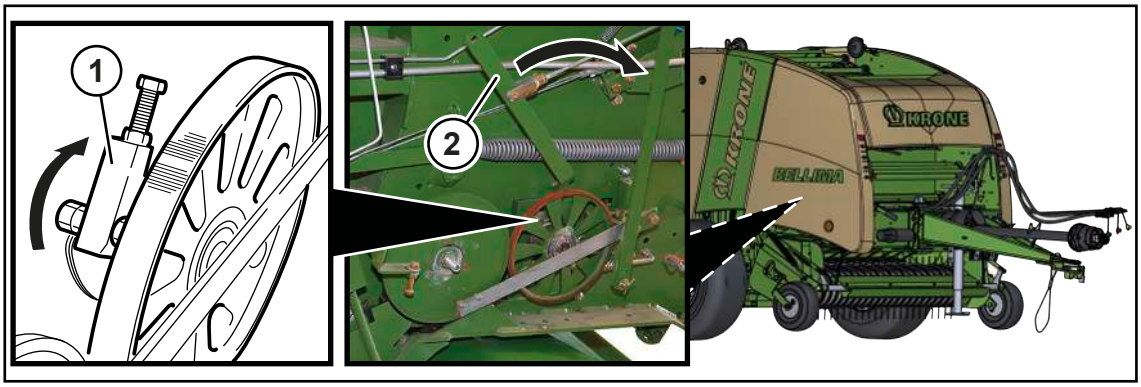
- ✓ The tie starting device is set to net wrapping or twine binding as required, *see Page 93*.
- ▶ To initiate a tying cycle, operate the control unit (green, 4+) in the tractor until the round bale in the bale chamber has caught the twine.

8.5 Locking/releasing the cutting unit of the net wrapping

For the "Net wrapping and twine tying" version

Locking

To be able to trigger a tying cycle with twine tying, the cutting unit of the net wrapping must be lifted out and locked.

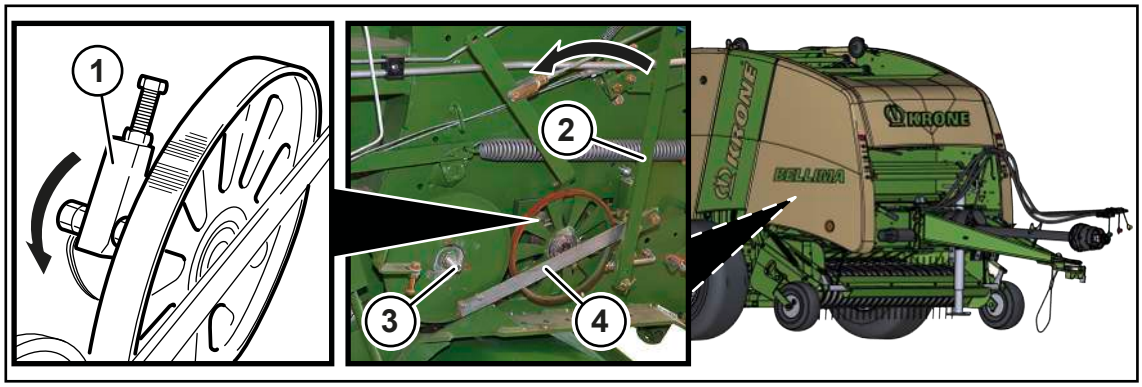


RPG000-041

- ✓ The machine has been shut down and secured, *see Page 25*.
- ▶ Move the lever (2) in the direction of the arrow.
- ▶ Turn the stop (1) in the direction of the arrow.

Unlocking

To be able to trigger a tying cycle with net wrapping, the cutting unit of the net wrapping must be unlocked.

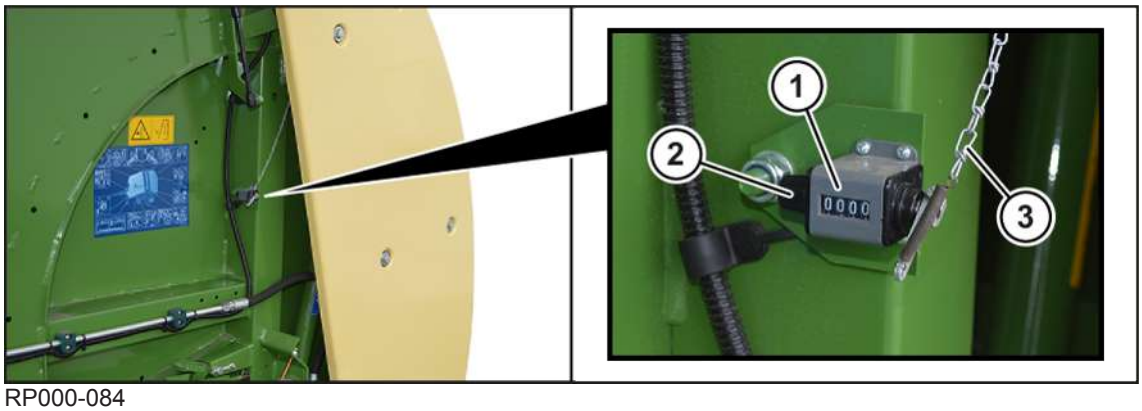


RPG000-042

- Turn the stop (1) in the direction of the arrow.
- To remove the spring rail (4) from the setting screw (3), pull the lever (2) in direction of the arrow.

➥ The spring rail is in the position shown in the picture.

8.6 Using the bale counter



RP000-084

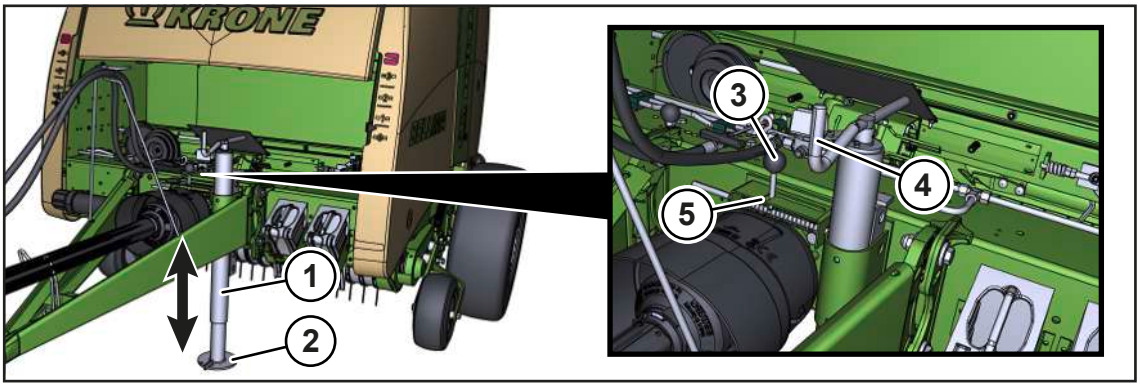
The bale counter (1) is located on the left-hand machine side behind the side hood. The bale counter (1) is automatically actuated via the chain (3) every time the tailgate is opened.

- To reset the bale counter (1), turn the knurled head screw (2) to set the indicator back to "0000".

8.7 Operating support jack

INFO

In order to increase the base of the support jack when the ground is soft, use a suitable support.



RP000-067

✓ The machine is connected to the tractor, *see Page 55*.
✓ The machine has been shut down and secured, *see Page 25*.

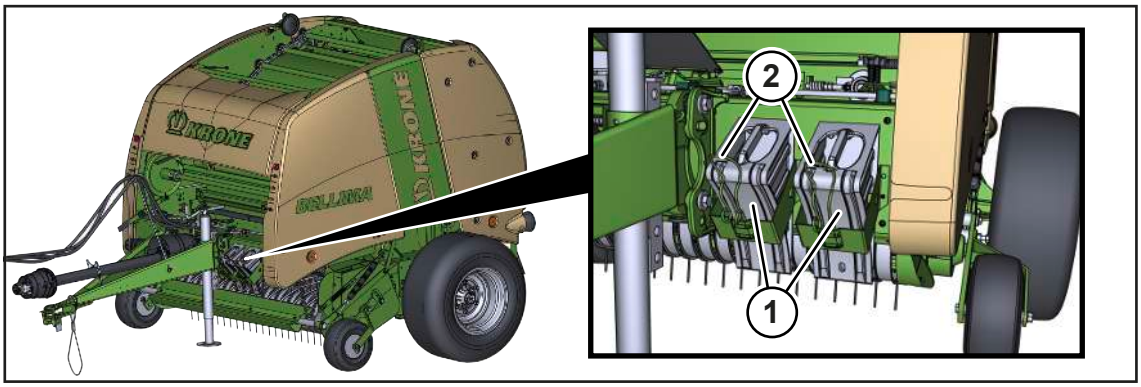
Moving support jack into support position

- Move the securing pin (3) in position (5) to unlock it.
- Move the support jack (1) in the bottom-most position and let the securing pin (3) engage.
- Turn the crank handle (4) anticlockwise until the support plate (2) stands firmly on the ground and there is no more load on the drawbar.

Moving support jack into transport position

- Turn the crank handle (3) several times clockwise until the support jack (1) is relieved.
- Move the securing pin (2) in position (5) to unlock it.
- Move the support jack (1) in the top-most position and let the securing pin (2) engage.
- Turn the support jack (1) clockwise all the way up using the crank handle (4).

8.8 Fitting wheel chocks

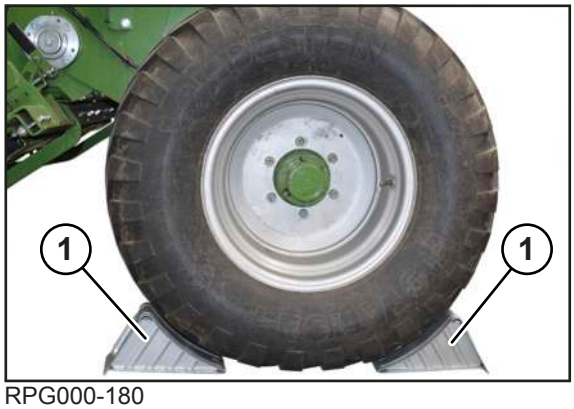


RPG000-012

The wheel chocks (1) secure the machine against rolling away. 2 wheel chocks are affixed to the machine.

✓ The machine is parked on a stable, horizontal and even surface.
✓ The machine has been shut down and secured, *see Page 25*.

- To dismount the wheel chocks (1) from the machine, press the supports (2) down, pull the wheel chocks (1) upwards, and remove them.



RPG000-180

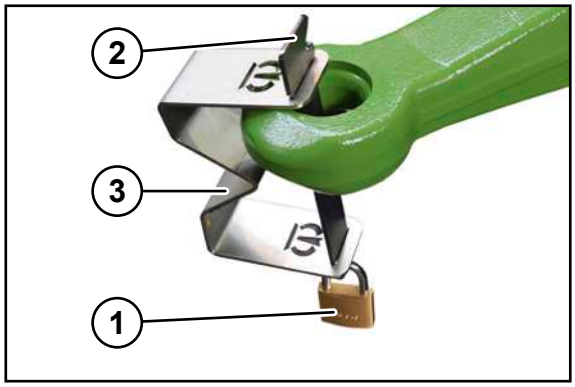
- ▶ Place the wheel chocks (1) so tightly in front of and behind the same wheel that the machine is prevented from rolling away.

8.9 Removing/mounting the safety device which prevents unauthorised use

The safety device is used to prevent unauthorised use when the machine has been switched off.

- ✓ The machine has been parked, *see Page 83*.

For version with "Drawbar eye attachment"



RP000-876

Removing

- ▶ Remove the padlock (1), the latch (2) and the bracket (3) and take them with you.

Mounting

- ▶ Mount the bracket (3) with the latch (2) and secure with the padlock (1) and keep the key in a safe place.

8.10 Pick-up

8.10.1 Bringing the pick-up to transport/working position

- ✓ For the "Hydraulic switching valve" version: The hydraulic switching valve is set to "Bringing the pick-up to transport/working position",*see Page 77*.

Working position

WARNING! Risk of injury due to falling pick-up! While the pick-up is being lowered, remove people from the movement range of the pick-up.

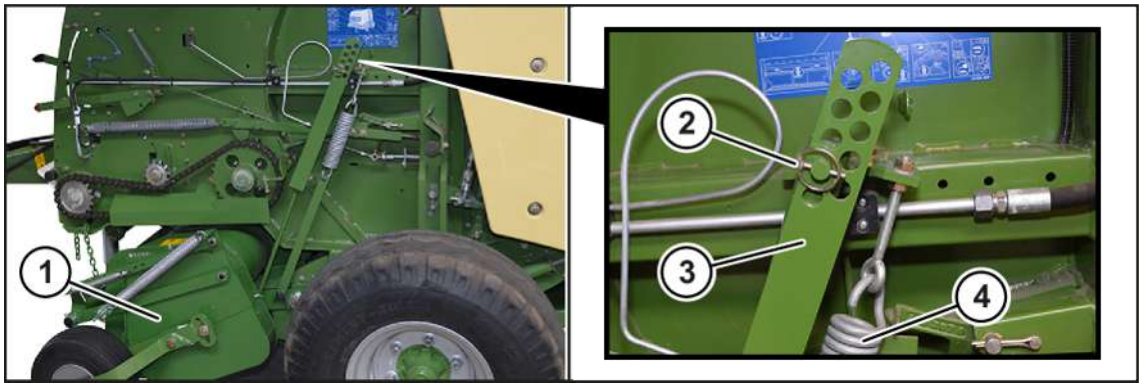
- **For the "Hydraulic connection for tailgate and pick-up" version:** Actuate the control unit at the tractor (red, 1+) until the pick-up is lowered.
- **For the "Additional hydraulic connection for pick-up" version:** Actuate the control unit at the tractor (yellow, 3+) until the pick-up is lowered.

Transport position

WARNING! Risk of injury due to rising pick-up! While the pick-up is being raised, tell people to leave the movement range of the pick-up.

- **For the "Hydraulic connection for tailgate and pick-up" version:** Actuate the control unit at the tractor (red, 1+) until the pick-up is raised.
- **For the "Additional hydraulic connection for pick-up" version:** Actuate the control unit at the tractor (yellow, 3+) until the pick-up is raised.

8.10.2 Adjusting the Pick-up Working Height



RPG000-047

The raking height of the pick-up drum (1) is set behind the side guard. The setting must be identical on the right-hand and left-hand machine side.

KRONE recommends a distance between tines and ground of **20-30 mm**.

- **For the "Hydraulic connection for tailgate and pick-up" version:** Actuate the control unit at the tractor (red, 1+) until the pick-up is raised.
- **For the "Additional hydraulic connection for pick-up" version:** Actuate the control unit at the tractor (yellow, 3+) until the pick-up is raised.
- Shut down and safeguard the machine, *see Page 25*.

Make the following settings equally on the right-hand and left-hand side of the machine:

- Pull the linch pin (2) out and insert it in the desired position in the perforated bar (3).
- Check that the setting of the relief springs (4) is identical on both the right-hand and left-hand machine side.

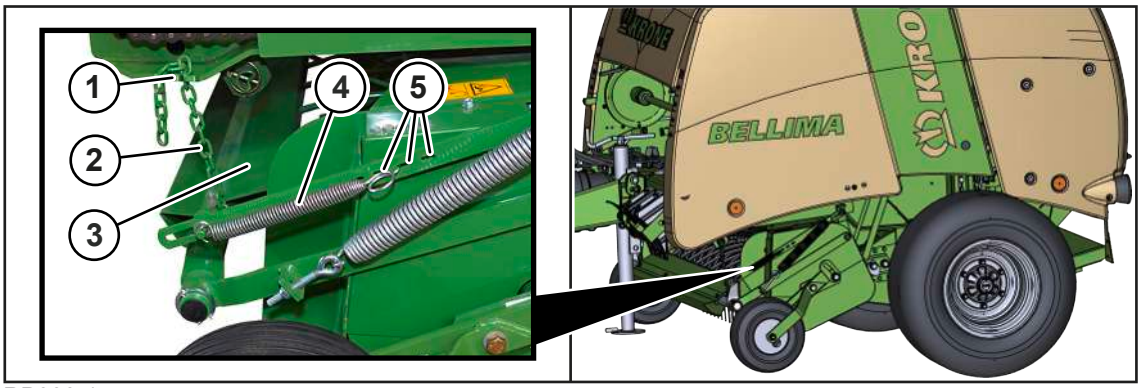
INFO

With crops laying very flat on the ground, it may be necessary to have the pick-up run on the guide wheels only. In this case, the working height is adjusted to the lowest setting.
If the pick-up fails to pick the crops up well even in the lowest working height setting, adjust the drawbar height, *see Page 49*.

8.11 Holding-down clamp

8.11.1 Setting the lower holding-down clamp

The lower holding-down clamp controls the crops during intake via the pick-up. This ensures controlled intake of the crops.



RP000-154

Setting the height of the holding-down clamp

Swath size	Chain (2)	Holding-down clamp (3)
Many crops	▶ Hook in the chain (2) shorter.	The holding-down clamp (3) is suspended higher.
Fewer crops	▶ Hook in the chain (2) longer.	The holding-down clamp (3) is suspended lower.

✓ The machine has been shut down and secured, *see Page 25*.

Make the following setting on the right and left sides of the machine in the same way:

▶ Hook the chain (2) into the support (1) according to the swath as shown in the table.

Setting the bearing pressure of the holding-down clamp

The spring (4) sets the bearing pressure of the holding-down clamp on the swath.

Crop condition	Spring (4)	Bearing pressure of the holding-down clamp
Dry crops	▶ Hook the spring (4) into a borehole (5) further to the right.	The bearing pressure is increased.
Moist crops	▶ Hook the spring (4) into a borehole (5) further to the left.	The bearing pressure is reduced.

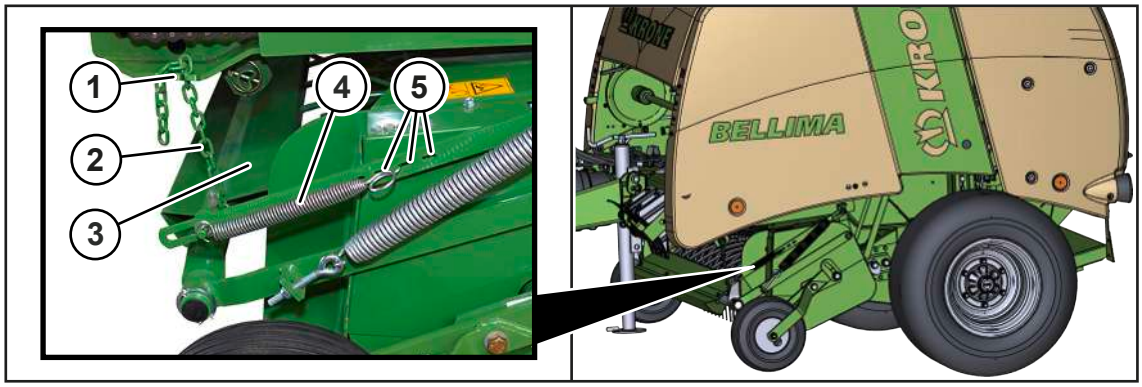
✓ The machine has been shut down and secured, *see Page 25*.

Make the following setting on the right and left sides of the machine in the same way:

▶ Hook in the spring (4) according to the swath as shown in the table.

8.11.2 Dismounting/mounting the lower holding-down clamp

In case of crop blockage, the lower holding-down clamp can be dismounted temporarily. The holding-down clamp must be mounted under working conditions.



RP000-142

✓ The machine has been shut down and secured, *see Page 25*.

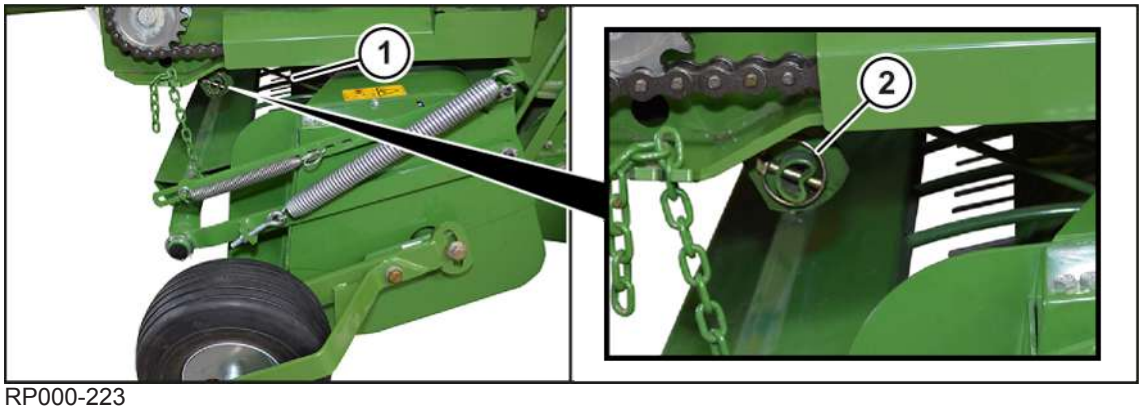
Dismounting

- Remove the linch pins (2) from the right and left sides of the machine.
- Remove the holding-down clamp (1).

Mounting

- Insert the holding-down clamp (1) above the pick-up and secure with the linch pins (2) on the right and left sides of the machine.

8.11.3 Dismounting/mounting the upper holding-down clamp



RP000-223

The pick-up is equipped with an additional holding-down clamp (1) which can be removed if necessary.

✓ The machine has been shut down and secured, *see Page 25*.

Dismounting

- Remove the linch pins (2) from the right and left sides of the machine.
- Remove the holding-down clamp (1).

Mounting

- Insert the holding-down clamp (1) above the pick-up and secure with the linch pins (2) on the right and left sides of the machine.

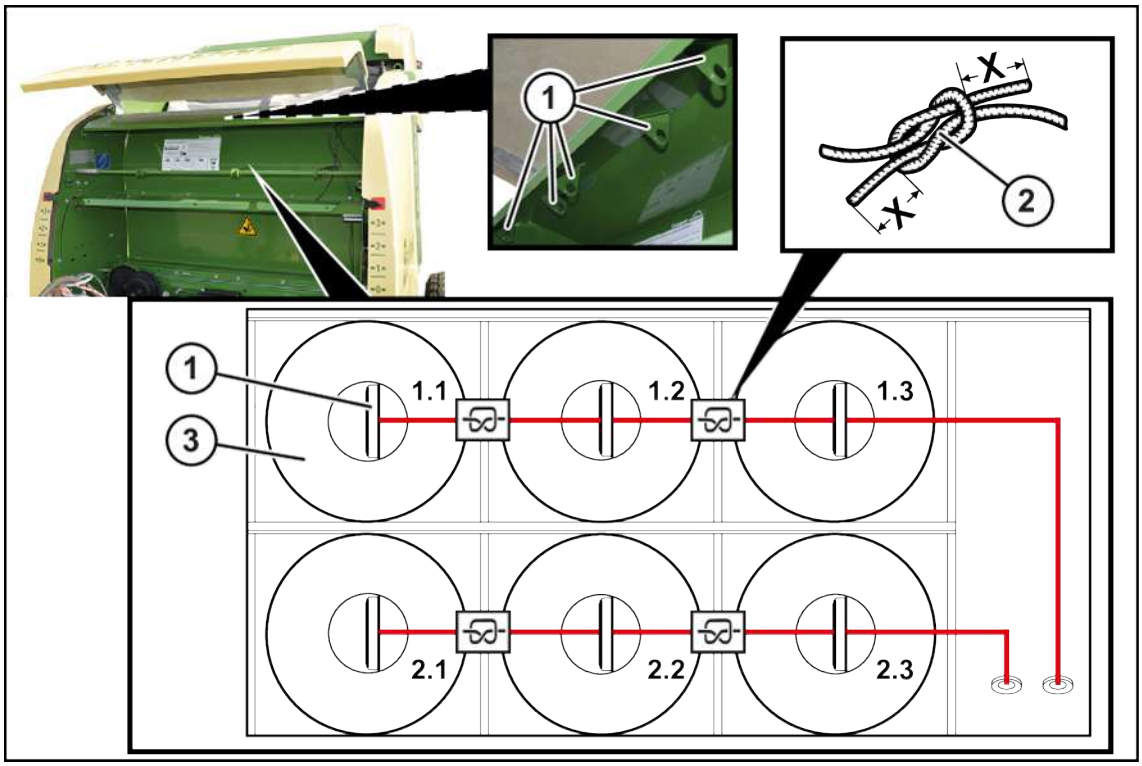
8.12 Twine tying

With "net wrapping and twine tying" version

8.12.1 Setting the twine in place

NOTICE
Damage to the machine due to soiling of the components of twine tying system If the twine or components of the twine tying are soiled by oil or lubricating grease, the machine may suffer damager. ▶ Cut off any soiled section of twine or use a new twine spool. ▶ Clean the components of the twine tying before inserting the twine.

✓ The machine has been shut down and secured, *see Page 25*.



RP000-078

▶ Place the 6 spools of twine (3) in the storage compartment. Make sure that the side marked with the word "Up" faces up.

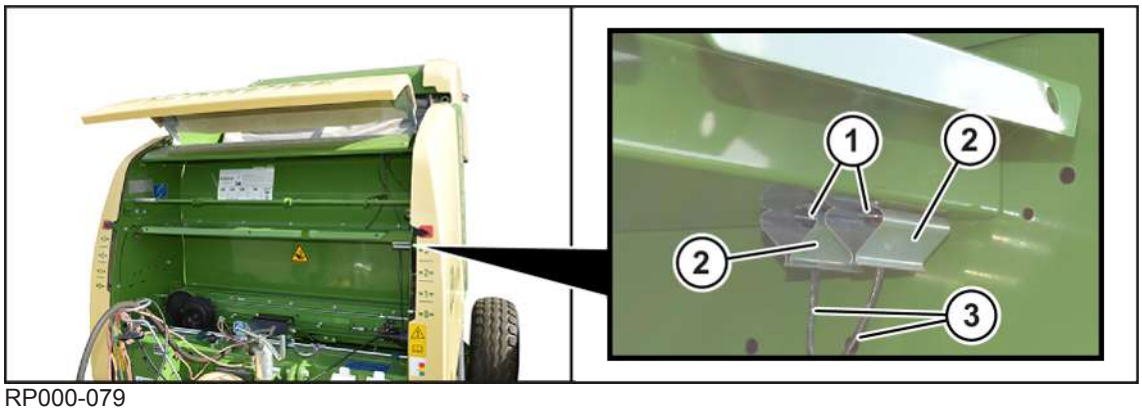
▶ Knot the twine as shown in the drawing and the table below.

	the beginning of twine spool	with the end of twine spool	the beginning of twine spool	with the end of twine spool
Twine 1	1.1	1.2	1.2	1.3
Twine 2	2.1	2.2	2.2	2.3

Producing twine 1 and 2

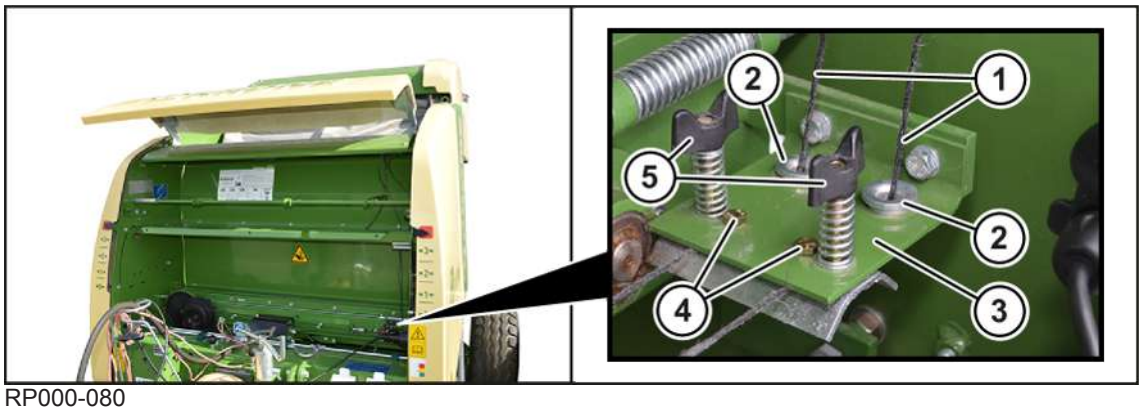
- Guide the beginning of the twine spool 1.1/2.1 through the eyelet (1) above and connect it with the twine end 1.2/2.2 using a reef knot (2).
- Guide the beginning of the twine spool 1.2/2.2 through the eyelet (1) above and connect it with the twine end 1.3/2.3 using a reef knot (2).
- Shorten the twine ends of all reef knots (2) to **X=15-20 mm**.
- Guide the beginning of the twine spool 1.3/2.3 via the eyelet (1) above it through the twine guide eye to the twine retainer.

Guiding twines from the storage compartment to the bale chamber



RP000-079

- Guide the two twines (3) via the twine guide eyes (1) in the storage compartment floor centrally through the twine retainers (2).



RP000-080

- Insert the two twines (1) via the twine guide eyes (2) in the twine brake (3).
- Guide the two twines (1) between the spring compressors (5) and the screws (4).

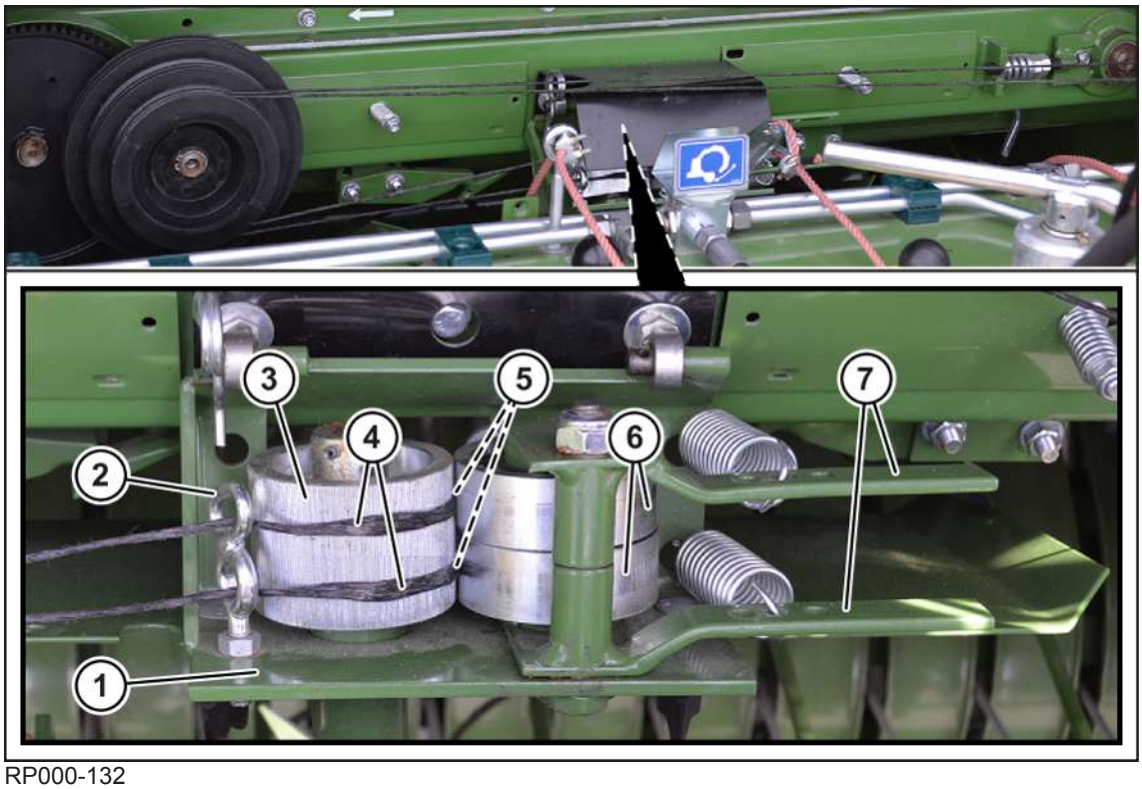
To set the twine brake, *see Page 90*.

RP000-081

NOTE! The arrow (2) shows the direction of rotation of the drive roll (3).

- ▶ Place the two twines (1) around the drive roll (3).

To set the number of twine layers, *see Page 89*.



RP000-132

- ▶ Guide the two twines (4) via the double eye screw (2) to the start device (1).

Threading the top twine (4) into the start device

- ▶ Pull the top lever (7) forwards and hold it.
  - ⇨ The top pressure roll (6) lifts off the starter roll (3), the top twine guide eye (5) becomes visible.
- ▶ Guide the top twine (4) through the top twine guide eye (5) and clamp it between the starter roll (3) and top pressure roll (6) as shown in the picture.
- ▶ Release the top lever (7) again.

Threading the bottom twine (4) into the start device

- ▶ Pull the bottom lever (7) forwards and hold it.

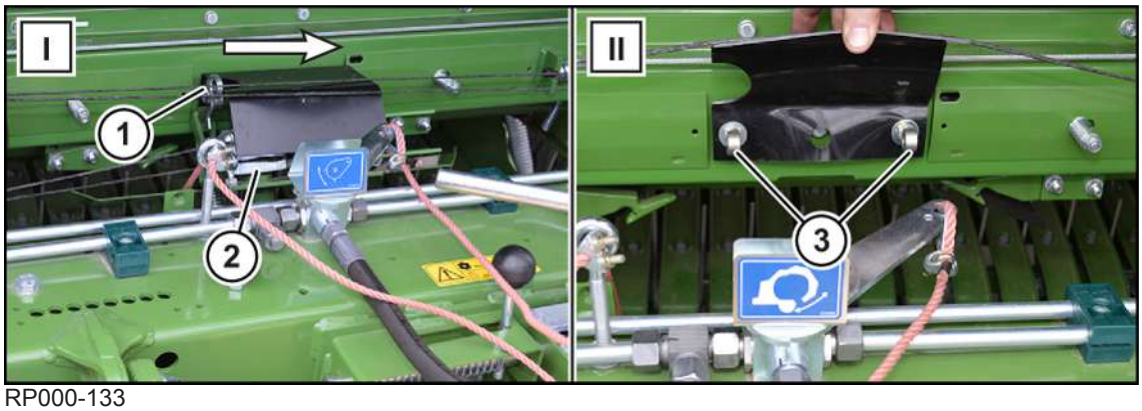
⇨ The bottom pressure roll (6) lifts off the starter roll (3), the bottom twine guide eye (5) becomes visible.

- ▶ Guide the bottom twine (4) through the bottom twine guide eye (5) and clamp it between the starter roll (3) and bottom pressure roll (6) as shown in the picture.
- ▶ Release the bottom lever (7) again.
- ▶ Allow the two twines (4) to project approx. 10 cm from the twine guide eyes (5) and place them on the twine deflector sheet.
- ▶ After inserting, tighten the two twines by pulling the excessive length of twine back into the storage compartment.

To set the twine guide at the starter roller (3), *see Page 130*.

8.12.2 Dismounting/mounting the start device of the twine tying system

For the "Net wrapping and twine tying" version



RP000-133

Position	Designation
[I]	Start device (2) mounted
[II]	Start device (2) dismounted

Dismounting

If the twine tying system is not required for a longer period of time because net wrapping is going to be used, the start device (2) can be dismounted.

- ▶ Dismount the spring cotter pin (1).
- ▶ Push the start device (2) in direction of the arrow out of the supports (3) and remove it.
- ▶ Store the start device (2) in a clean, dry place.

Mounting

- ▶ Push the start device (2) onto the supports (3) against the direction of the arrow.
- ▶ Secure with a spring cotter pin (1).

8.13 Net wrapping

For the "Net wrapping" or "Net and twine tying" version

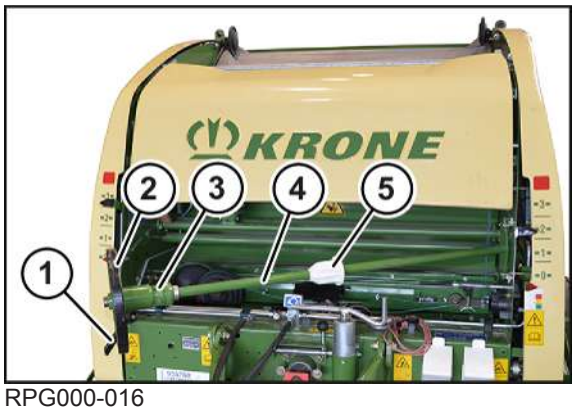
8.13.1 Inserting the net roll

To ensure that the sleeve clamp can hook completely into the sleeve of the net roll, a cardboard sleeve should be used. If a plastic sleeve with grooves is used, the sleeve clamp may hook into the grooves, transferring the brake force from the brake disc to the net roll. For this reason, plastic sleeves without grooves are not recommended.

When using cardboard sleeves, make sure they are inserted in the correct position. Moisture or high humidity may cause the cardboard sleeve to soften, impairing the tying functionality. Also observe the information on the package provided by the tying material manufacturer.

INFO

For trouble-free use in the field, KRONE recommends one of the "KRONE excellent" nets, see label on the machine with the number 27 016 326 *.



RPG000-016

✓ The machine has been shut down and secured, *see Page 25*.

✓ The remaining net rolls in the storage compartment are secured with the retaining rod.

▶ Raise the lever (1).

▶ Swing the roll holder (4) and brake disc (2) forward.

▶ Pull off the brake disc (2).

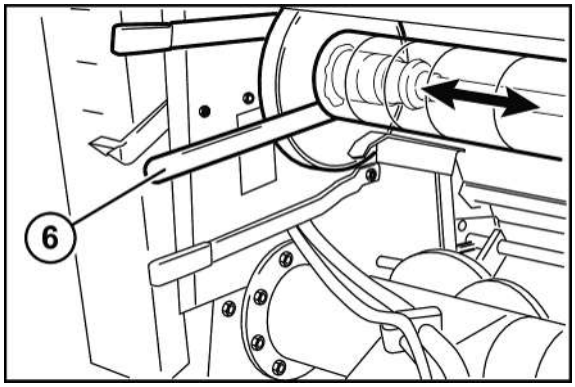
▶ Take a new net roll from the package. Make sure that the beginning of the net roll faces towards the machine and can be pulled out from above.

▶ Slide the net roll onto net roll holder (4) and the support (5).

▶ Slide the brake disc (2) with the sleeve clamp (3) anti-clockwise into the sleeve of the net roll as far as it will go.

➡ The net roll is permanently locked in the roll holder (4).

▶ Check that the net roll is aligned centrally. To do so, measure the distance dimensions to the left and right side walls.



RPG000-017

If the net roll is not centrally aligned:

- Use a mounting lever (6) to push the net roll in the desired direction shown by the arrow until the net roll is positioned in the centre.

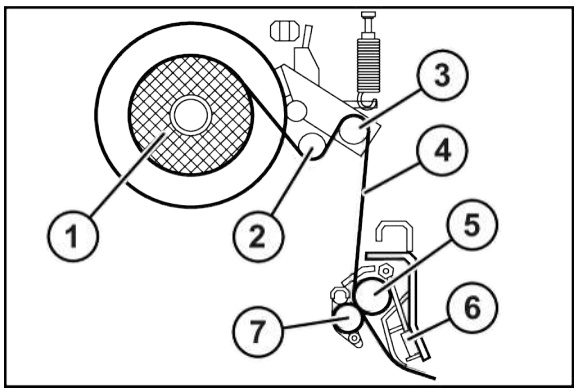
8.13.2 Insert net

⚠ WARNING

Risk of injury due to sharp blades on the cutting unit of the tying unit

When inserting the wrapping material or working in the area of the cutting unit of the tying unit, there is a risk of injury to the fingers and hands.

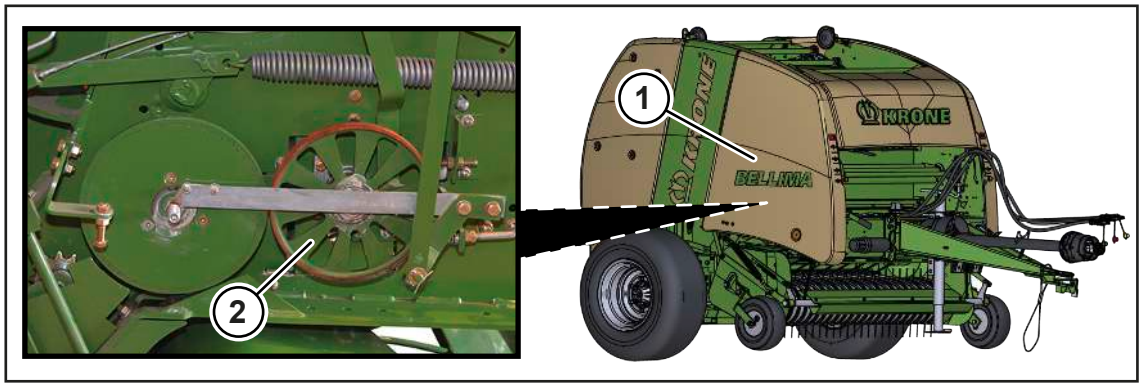
- When inserting the wrapping material and when working in the area of the cutting unit, wear suitable protective gloves.
- When working in the area of the cutting unit, work particularly carefully and prudently.



RPG000-018

✓ The machine has been shut down and secured, *see Page 25*.
✓ The roll holder has been swivelled forwards.

- Unwind a section of the net (4) from the net roll (1), gather it at the end and guide it under the deflection shaft (2) and over the deflection shaft (3).
- Insert the net between the rubber-coated drive roll (5) and aluminium roll (7) into the tying unit (6).



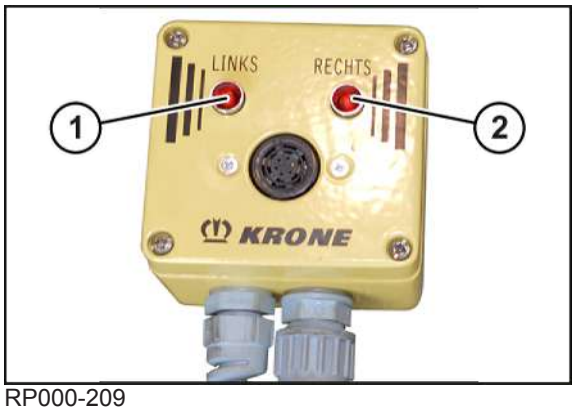
RPG000-019

- Open the side hood (1) on the right side of the machine.
- Open and secure the tailgate, *see Page 79*.
- Rotate the drive wheel (2) clockwise until the net is visible under the tying unit approx. 100 mm in the bale chamber from the back of the machine.
- If required, unlock the cutting unit of the net wrapping, *see Page 64*.

To set the number of net layers, *see Page 91*.

8.14 Indicating the baling pressure via the electronic baling pressure indicator

For the "Electronic baling pressure indicator" version



RP000-209

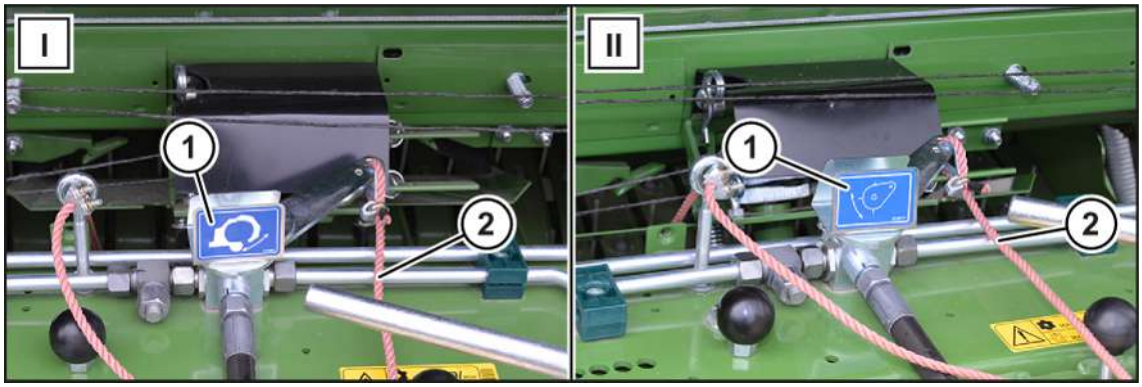
The indicator lamps (1) and (2) indicate how the baling pressure is built up. The indicator lamps (1) and (2) light up until the set baling pressure is reached on both sides.

The baling pressure must be reached both on left (1) and on right (2) in the round bale. Both indicator lamps must have gone out before a tying cycle can be triggered, *see Page 64*.

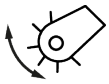
To set the baling pressure, *see Page 94*.

8.15 Actuating the hydraulic switching valve

If only one hydraulic connection is provided at the tractor, you can change between the hydraulic operation of the tailgate and the hydraulic operation of the pick-up.



RP000-087

Position	Hydraulic operation
[I] 	Opens/closes the tailgate
[II] 	Bringing the pick-up to transport/working position

✓ The operating cable (2) is correctly installed in the tractor, *see Page 60*.

▶ Pull the operating cable (2) from the tractor.

➡ The display (1) changes to the desired position [I] or [II].

➡ The tractor hydraulics can be used to open/close the tailgate, *see Page 78* or move the pick-up into transport/working position, *see Page 67*.

8.16 Opens/closes the tailgate

⚠ *WARNING*

Risk of injury due to unpredictable movement of the round bales when the machine is operating on a slope

If round bales are deposited on a slope, they may start moving on their own. Once round bales have started moving, their weight and cylindrical shape may cause serious accidents and injure people.

▶ On slopes, deposit round bales in manual mode only.

▶ On slopes, always deposit round bales in such a way that they cannot start moving on their own.

✓ For the "Hydraulic switching valve" version: The hydraulic switching valve is set to "Open/close the tailgate", *see Page 77*.

Opening

▶ Actuate the control unit on the tractor (red, 1+) until the tailgate is open.

Closing

▶ Actuate the control unit on the tractor (red, 1+) until the tailgate is closed.

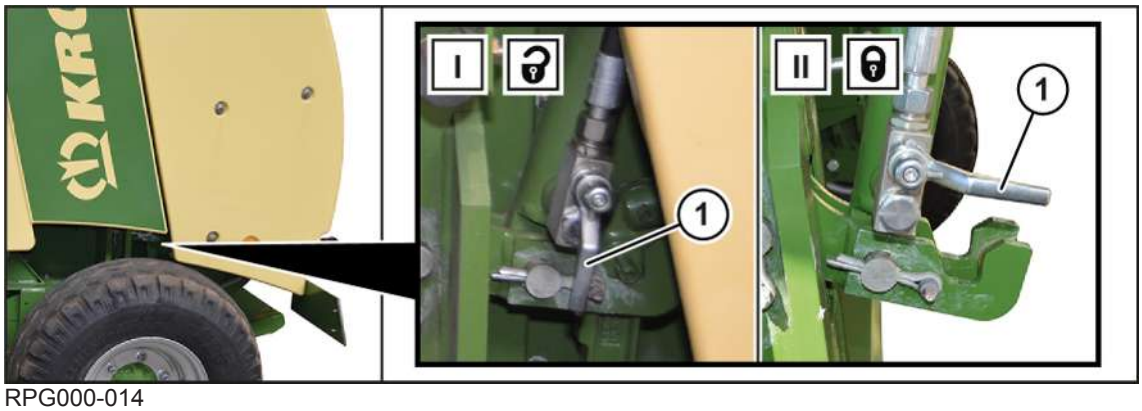
8.17 Using the stop cock of the tailgate

⚠ WARNING

Risk of injury if the stop cock of the tailgate is opened

When working on or underneath the opened tailgate or inside the bale chamber, the tailgate may drop down in an uncontrolled manner if the stop cock is opened. As a result, people may be seriously injured or killed.

- ▶ Always close the stop cock when carrying out work with the tailgate open.



RPG000-014

The tractor supplies the machine hydraulics via hydraulic hoses. The tailgate stop cock (1) is a safety component which prevents the tailgate from unintentionally closing. The tailgate stop cock (1) must be closed if working in the bale chamber or on the tailgate.

- ✓ The machine has been shut down and secured, *see Page 25*.

Opening the stop cock

- ▶ Lift the stop cock (1) and turn into position (I).
- ➡ The tailgate can be closed.

Closing the stop cock

- ▶ Lift the stop cock (1) and turn into position (II).
- ➡ The tailgate cannot be closed.

8.18 Removing crop blockages

8.18.1 Crop blockage at the right-hand and left-hand end of the pick-up

- ✓ For the "Hydraulic switching valve" version: The hydraulic switching valve is set to "Bringing the pick-up to transport/working position",*see Page 77*.
- ▶ Lower the rotational speed.
- ▶ Reverse with the PTO shaft running while repeatedly actuating the control unit in the tractor (red, 1+) to raise and lower the pick-up.

If this does not remove the crop blockage:

- ▶ Shut down and safeguard the machine, *see Page 25*.

CAUTION! Risk of injury due to sharp parts! Always wear appropriate protective gloves when removing crop blockages.

- ▶ Remove the accumulated crops manually.
- ▶ After remedying the crop blockage, increase the speed to the rated speed again.

8.18.2 Crop blockage in the pick-up

- ✓ For the "Hydraulic switching valve" version: The hydraulic switching valve is set to "Bringing the pick-up to transport/working position",*see Page 77*.
- ▶ Lower the rotational speed.
- ▶ Reverse with the PTO shaft running while repeatedly actuating the control unit in the tractor (red, 1+) to raise and lower the pick-up.

If this does not remove the crop blockage:

- ▶ Shut down and safeguard the machine, *see Page 25*.
- ▶ Remove the upper and lower holding-down clamp, *see Page 69* and *see Page 70*.

CAUTION! Risk of injury due to sharp parts! Always wear appropriate protective gloves when removing crop blockages.

- ▶ Manually remove the accumulated crops.
- ▶ Mount the upper and lower holding-down clamp, *see Page 69* and *see Page 70*.

8.18.3 Crop blockage between pick-up and bale chamber

RPG000-048

Proceed as follows to remove the accumulated crop between pick-up and bale chamber (1):

- ✓ For the "Hydraulic switching valve" version: The hydraulic switching valve is set to "Bringing the pick-up to transport/working position",*see Page 77*.
- ▶ Lower the rotational speed.
- ▶ Reverse with the PTO shaft running while repeatedly actuating the control unit in the tractor (red, 1+) to raise and lower the pick-up.

If this does not remove the crop blockage:

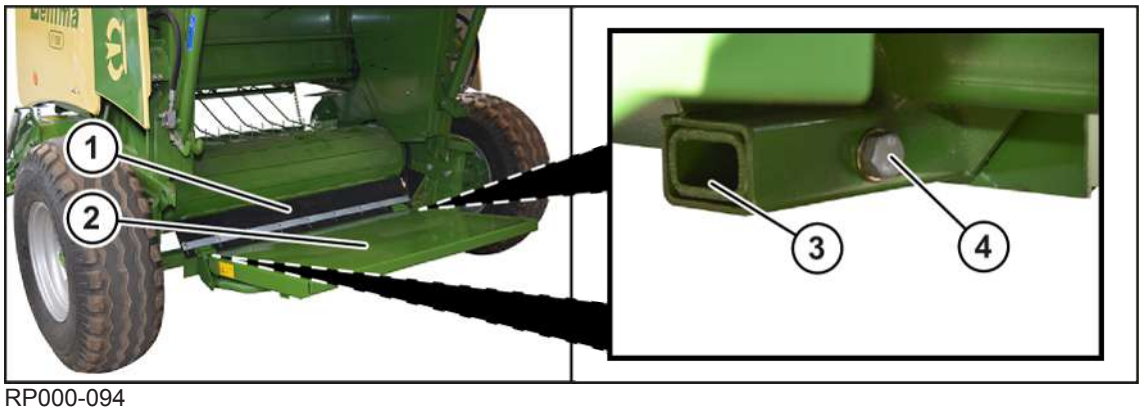
- ▶ To open the tailgate, actuate the control unit on the tractor (red, 1+).
- ▶ Shut down and safeguard the machine, *see Page 25*.
- ▶ To lock the tailgate, close the stop cock, *see Page 79*.

CAUTION! Risk of injury due to sharp parts! Always wear appropriate protective gloves when removing crop blockages.

- ▶ Remove the round bale from the bale chamber.
- ▶ Manually remove the accumulated crops.

8.19 Dismounting the bale ejector

For certain working conditions, such as working at slopes, the bale ejector should be dismounted.



RP000-094

- Dismount the screw connection (4) on the right-hand and left-hand machine side.
- Remove the cover sheet (1) and the bale ejector (2) from the support (3) on the right-hand and left-hand machine sides.
- Mount the screw connection (4) on the right-hand and left-hand machine side.

9 Driving and transport

⚠ WARNING

Risk of injury due to non-observance of relevant safety notices

If the relevant safety notices are not observed, persons may get seriously injured or killed.

- To avoid accidents, the basic safety instructions must be read and observed, *see Page 13*.

⚠ WARNING

Risk of injury due to non-observance of safety instructions

If the relevant safety routines are not observed, persons may be seriously injured or killed.

- The safety routines must be read and observed to avoid accidents, *see Page 25*.

⚠ WARNING

Risk of accident from open stop cocks

Machine components could be moved unintentionally when stop cocks are open. This may result in serious accidents.

- In order to avoid that functions are triggered by mistake, the stop cock/s must be closed during transport/road travel.

⚠ WARNING

Risk of accident when cornering with a hitched machine

When cornering, the hitched machine swings out further than the tractor. This may result in accidents.

- Consider the larger swivel range.
- Consider people, oncoming traffic and obstacles when turning.

⚠ WARNING

Risk of accident caused by non-locked regulating valves of tractor

When regulating valves are not locked, machine components could be activated unintentionally. This may result in serious accidents.

- To avoid that functions are triggered by mistake, the regulating valves of the tractor must be in neutral position when performing transport journeys on the road and must be locked.

9.1 Preparing the machine for road travel

- ✓ All items listed in chapter "Start-up" have been fulfilled, *see Page 55*.
- ✓ The control units on the tractor are in neutral position and locked.
- ✓ The machine has been shut down and secured, *see Page 25*.
- ✓ All guards are properly closed and locked.
- ✓ The wheel chocks are secured in the supports / holders on the machine, *see Page 66*.
- ✓ The support jack is in the transport position, *see Page 65*.
- ✓ The road lighting has been connected, tested and is functioning properly, *see Page 60*.
- ✓ The pick-up is fully raised in transport position, *see Page 67*.

- ✓ The fixing bolt for the pick-up is in transport position, *see Page 68*.
- ✓ The bale chamber is empty and the tailgate is closed.
- ✓ Soiling and crop residue have been removed from the machine, in particular from the lighting and identification elements.
- ✓ The tyres have no cuts and breaks.
- ✓ The tyre pressure is correct, *see Page 44*.
- ✓ The retaining rod in the storage compartment is mounted and secures net rolls stowed in the compartment.
- ✓ The permitted maximum speed of the machine is known and is maintained.
- ✓ The permitted weights of the machine are observed, *see Page 43*.

9.2 Parking the machine

WARNING

Risk of injury due to the unsecured machine rolling away

If the machine is not secured against rolling away when it has been switched off, there is a risk of people being injured by the machine rolling away in an uncontrolled manner.

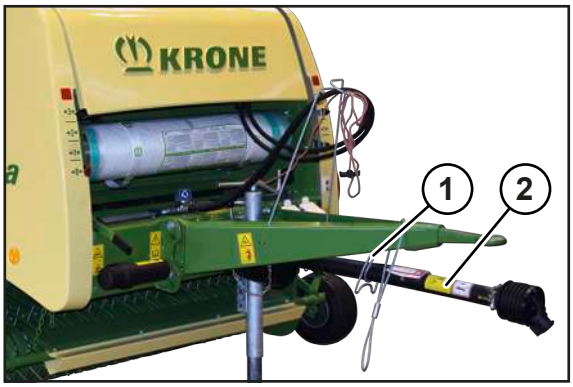
- ▶ Secure the machine against rolling using wheel chocks.

- ▶ Before uncoupling the machine from the tractor, completely close the tailgate.
- ▶ Shut down and safeguard the machine, *see Page 25*.
- ▶ Bring the support jack in support position, *see Page 65*.
- ▶ Release the supporting chain of the universal shaft on the tractor side, disconnect the universal shaft and put it down on the holding fixture provided for that purpose.
- ▶ Loosen the hitching device as specified in the operating instructions of the tractor manufacturer.
- ▶ When using a safety chain as an additional safety precaution for trailed implements: Remove the safety chain.
- ▶ Disconnect the road lighting plug, *see Page 60*.
- ▶ Disconnect the hydraulic hose lines and hook them into the support at the machine.
- ▶ Drive the tractor away carefully.
- ▶ Fit the safety device which prevents unauthorised use and keep the key in a safe place, *see Page 67*.

9.3 Securing the universal shaft

If the universal shaft is not connected to the tractor, it must be secured on the drawbar with the universal shaft bracket.

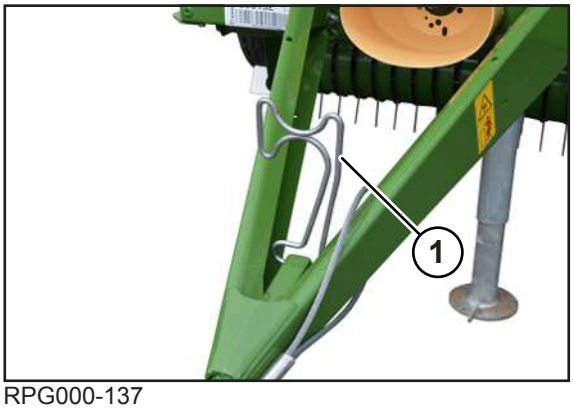
With top suspension of the drawbar



RPG000-118

- Fold down the universal shaft bracket and insert the universal shaft (2) into the universal shaft bracket (1).

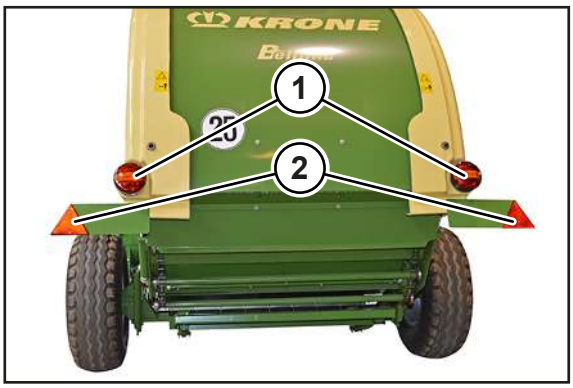
With bottom suspension of the drawbar



RPG000-137

- Fold up the universal shaft bracket (1) and place the universal shaft on the universal shaft bracket (1).

9.4 Checking road travel lighting



RPG000-038

- Connect the lighting system to the vehicle electrical system, *see Page 60*.
- Check whether the rear lamps (1) are functional.
- Clean the rear lamps (1) and the triangular reflectors (2).
- Clean other orange reflectors on the side hoods (not illustrated).

9.5 Lifting the machine

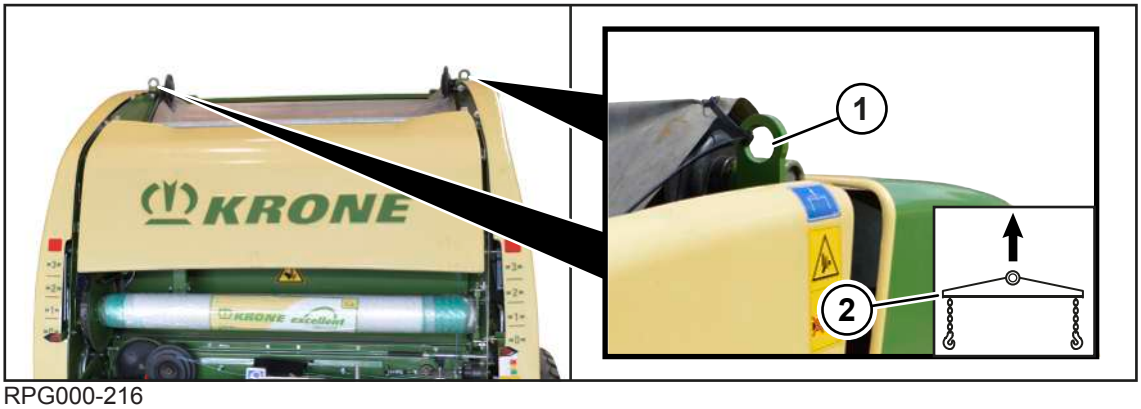
⚠ WARNING

Risk of injury due to raised machine

There is danger to persons when the machine drops or parts swing without control. Only qualified personnel are allowed to perform this work.

- Use only permitted hoists and slings with a sufficient load-bearing capacity. For the weights *see Page 43*.
- Note the information on the suspension points provided.
- Make sure the lifting means are properly secured.
- Never stay under the suspended machine.
- If work has to be performed under the machine, securely support the machine, *see Page 25*.

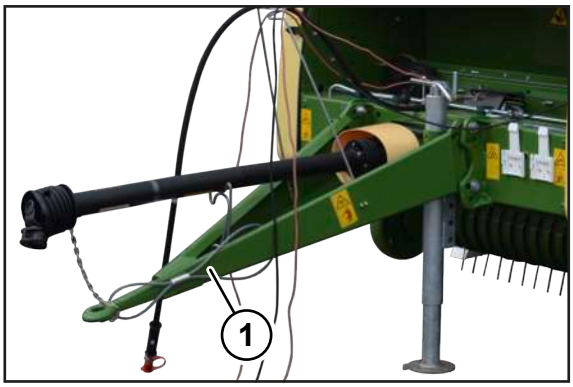
The machine is equipped with 3 suspension points.



RPG000-216

There are 2 suspension points (1) at the top, next to the bale formation conveyor.

Ensure that a load beam (2) is used when the machine is lifted.



RPG000-217

1 suspension point is located in the front area of the drawbar (1).

To lift the machine, a hoist must be used which has a minimum load bearing capacity depending on the permitted total weight of the machine, see type plate on the machine, *see Page 39*.

✓ The machine has been shut down and secured, *see Page 25*.

- Close the tailgate.
- Lift the pick-up into the transport position, *see Page 67*.
- Ensure that all safety devices are locked.

- Ensure that the universal shaft, hydraulic lines and cables have been secured.
- Attach the chains of the hoist to the suspension points on the machine.
- Ensure that the chain hooks have been correctly attached to the suspension points.
- Tension the chains so that the support jack is relieved.
- Move the support jack into transport position, *see Page 65*.

9.6 Lashing the machine

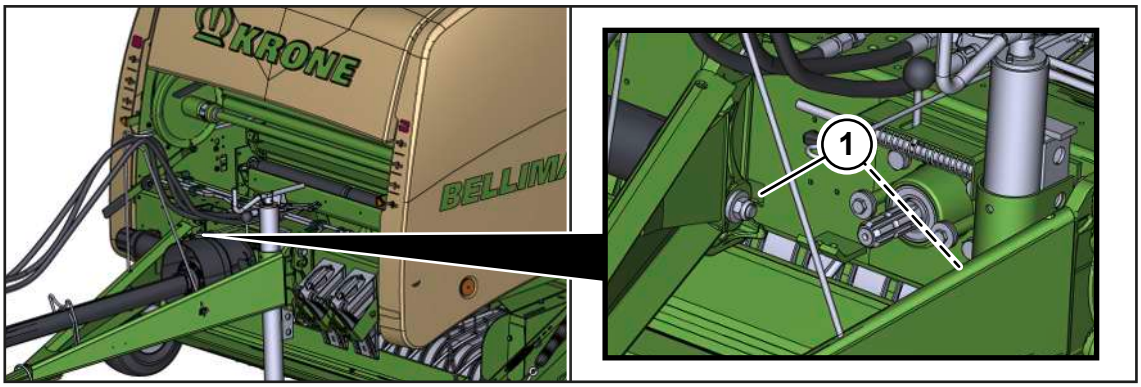
⚠ WARNING

Danger to life caused by uncontrolled machine movement

If the machine is not properly lashed for transportation by vehicle, the machine may move in an uncontrolled manner and endanger people.

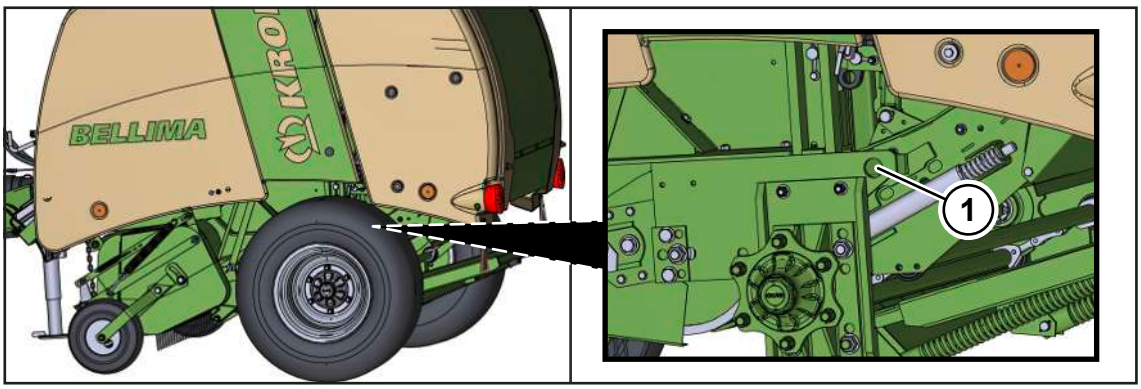
- Before transporting the machine, secure it properly to the designated lashing points using suitable lashing material.

The lashing points on the machine are marked by an information sign, *see Page 31*.



RPG000-219

1 2 lashing points at the front



RPG000-220

1 2 lashing points at the rear (one on the left and one on the right machine side)

10 Settings

⚠ WARNING

Risk of injury due to non-observance of relevant safety notices

If the relevant safety notices are not observed, persons may get seriously injured or killed.

- To avoid accidents, the basic safety instructions must be read and observed, *see Page 13*.

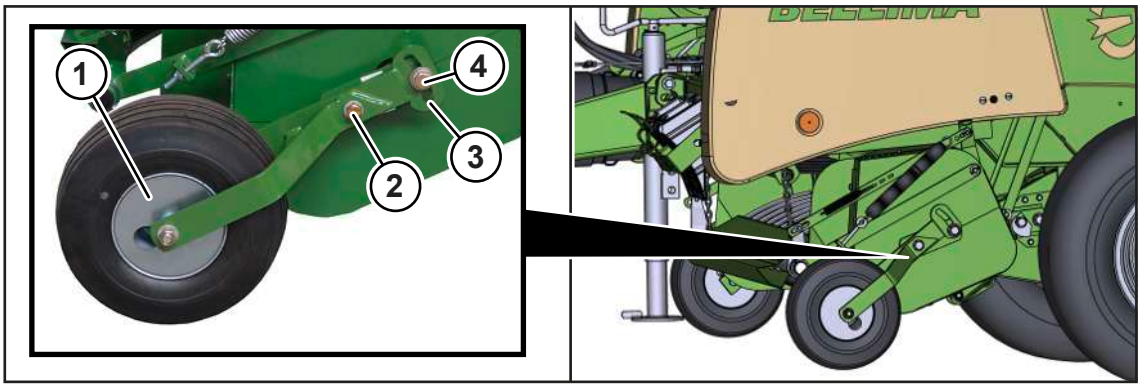
⚠ WARNING

Risk of injury due to non-observance of safety instructions

If the relevant safety routines are not observed, persons may be seriously injured or killed.

- The safety routines must be read and observed to avoid accidents, *see Page 25*.

10.1 Adjusting the guide wheels of the pick-up



RP000-091

The guide wheels (1) must be set so that they lightly touch the floor with the pick-up in the preselected working height. Set the guide wheels (1) identically on both sides of the pick-up.

Guide wheels with pneumatic tyres are shown here by way of example. Guide wheels made of sheet steel must be set in the same way.

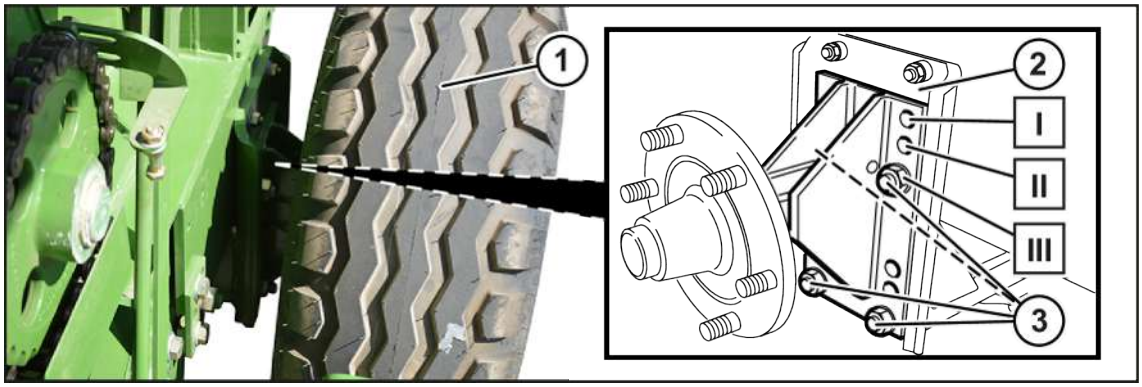
✓ The machine has been shut down and secured, *see Page 25*.

- Loosen the screw connections (2) and (4).
- Set the guide wheel (1) via the oblong hole (3).

INFO

With crops laying very flat on the ground, it may be necessary to have the pick-up run on the guide wheels only. In this case, the working height is adjusted to the lowest setting.
If the pick-up fails to pick the crops up well even in the lowest working height setting, adjust the drawbar height, *see Page 49*.

10.2 Setting the height of the wheel hubs



RP000-203

The height of the wheel hubs can be adjusted depending on the operating conditions. At the factory, the wheel hubs are set in assembling position II.

In special operating conditions, if the machine is to be 40 mm lower, the wheel hub must be fitted in assembling position III.

Make the following setting on the right and left sides of the machine in the same way:

✓ The machine has been shut down and secured, *see Page 25*.

✓ The machine is lifted with a car jack.

▶ Dismount the tyre (1), *see Page 107*.

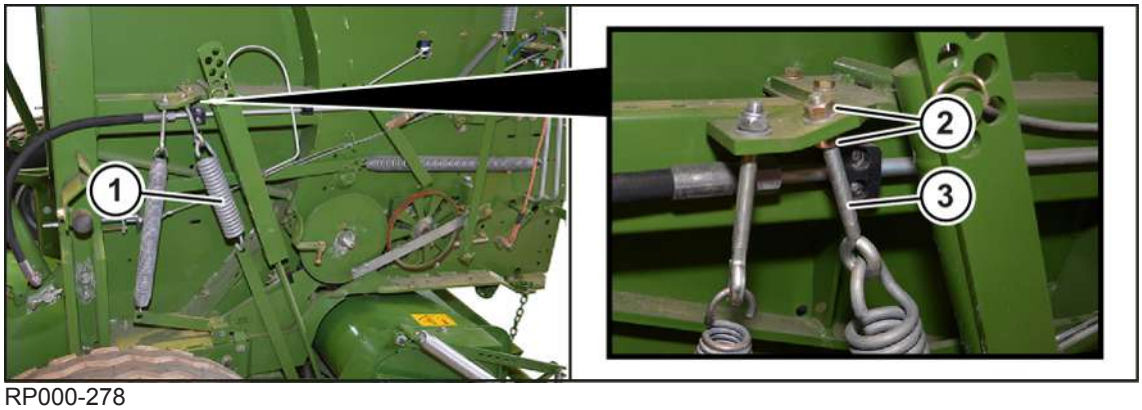
▶ Unscrew the screws (3) on the flange plate (2).

▶ Slide the flange plate (2) up or down so that the desired assembling position (I), (II) or (III) can be set.

▶ Insert the screws (3).

Tightening torque: *see Page 108*

10.3 Adjusting the relief springs of the pick-up



RP000-278

The relief spring (1) must be adjusted so that only the pick-up is relieved.

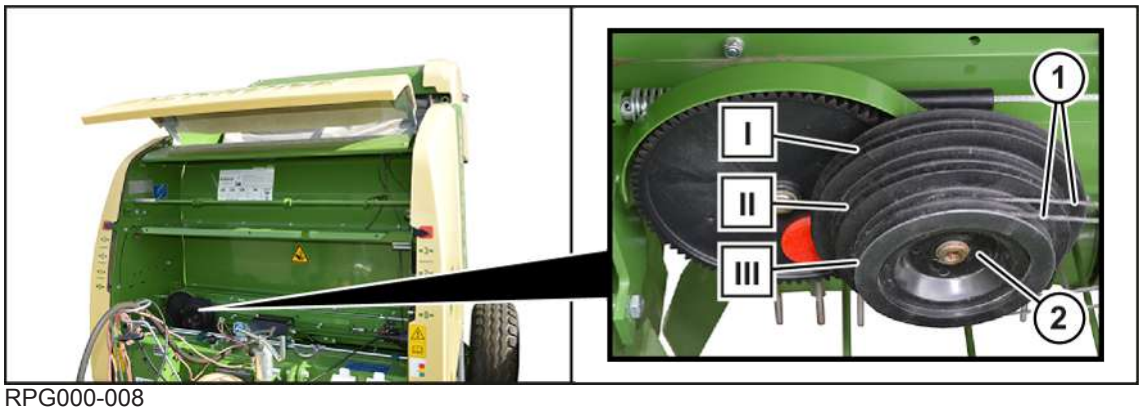
✓ The machine has been shut down and secured, *see Page 25*.

Make the following setting on the right and left sides of the machine in the same way:

▶ To set the relief spring (1), loosen or tighten the nuts (2) at the eyelet bolt (3).

10.4 Adjusting the number of twine layers

With "net wrapping and twine tying" version



RPG000-008

Length of the crops	Position of the stepped pulley (2)	Distance between the twine layers on the round bale
short	(I)	narrow
medium	(II)	medium
long	(III)	wide

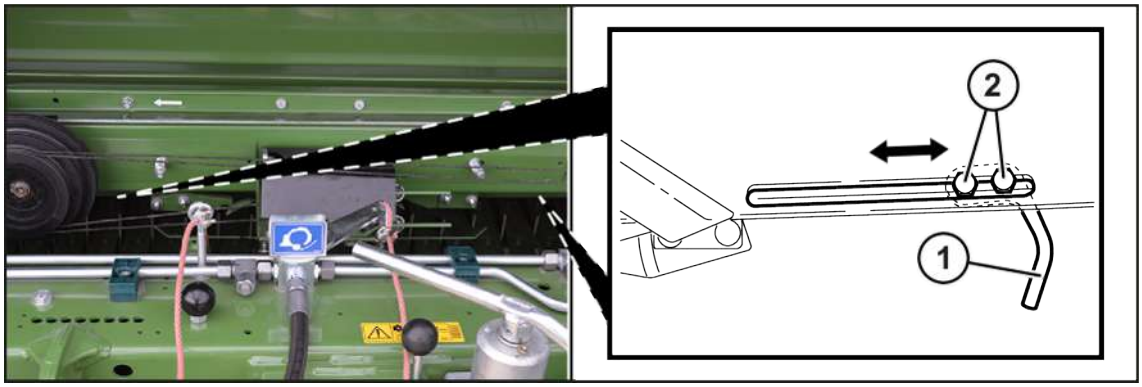
The longer the crops, the smaller the diameter of the stepped pulley (2) and the less twine is tied around the bale.

✓ The machine has been shut down and secured, *see Page 25*.

▶ Route the two twines (1) around one of the three stepped pulleys in position [I], [II], or [III].

10.5 Adjusting the twine limiter

With "net wrapping and twine tying" version



RPG000-033

The position of the twine limiters (1) determines the distance of the outermost wrapping of the twine to the outer edge of the bale. The twine limiters (1) must be set independently of the length and type of crops to prevent the twine from slipping off the round bale.

Length of crop material	Distance of the two twine limiters to each other
short	narrow
medium	medium
long	wide

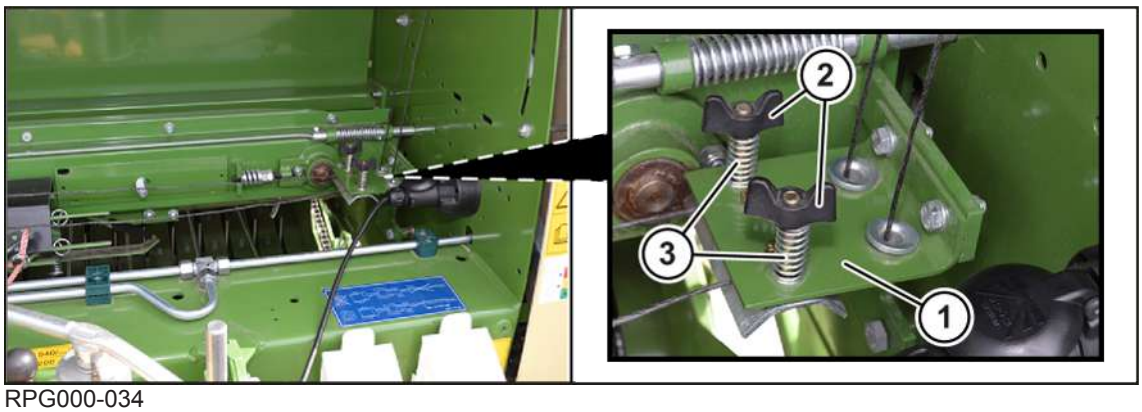
✓ The machine has been shut down and secured, *see Page 25*.

Make the following setting on both the right and left sides:

- Loosen the screws (2).
- Push twine limiter (1) in the direction of the arrow into the desired position. Ensure that the twine limiter (1) has the same setting on the right and left sides.
- Tighten the screws (2).

10.6 Setting the twine brake

With "net wrapping and twine tying" version



RPG000-034

The twine brake (1) keeps the twine under tension and ensures that the twine is taut when it is fed to the round bale. The twine must always be kept under tension to ensure that it can be cut off properly. At the same time, the twine must not be too tight so that it can pass through easily during the starting process. Different types of twine may have different frictional properties.

Readjust the twine brake when you change the type of twine:

✓ The machine has been shut down and secured, *see Page 25*.

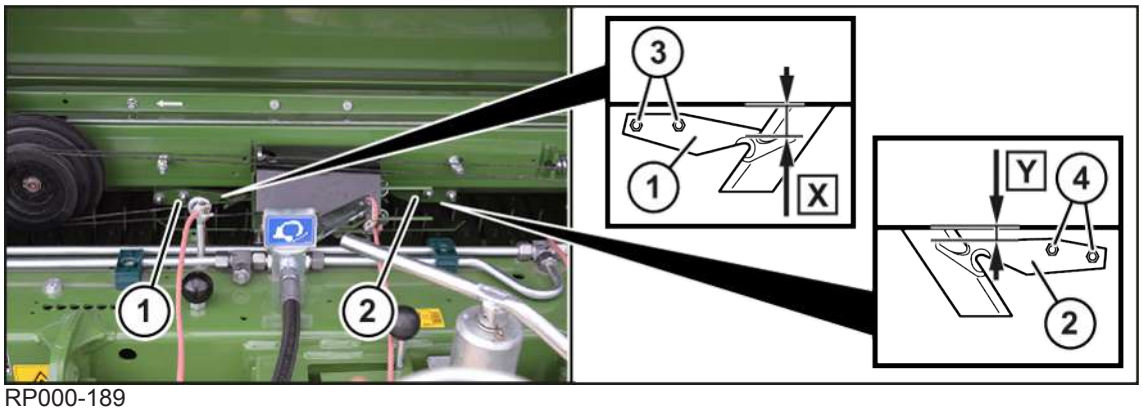
- Adjust the tension of the twine at the setting screws (2).

Direction of rotation of the setting screws (2)	Pretension of the compression springs (3)	Brake force of the twine brake (1)
Clockwise	higher	higher
Anti-clockwise	lower	lower

It may be necessary to adjust the compression springs (3) differently so that the cut twine ends have the same length.

10.7 Setting the driver of the twine tying

With "net wrapping and twine tying" version



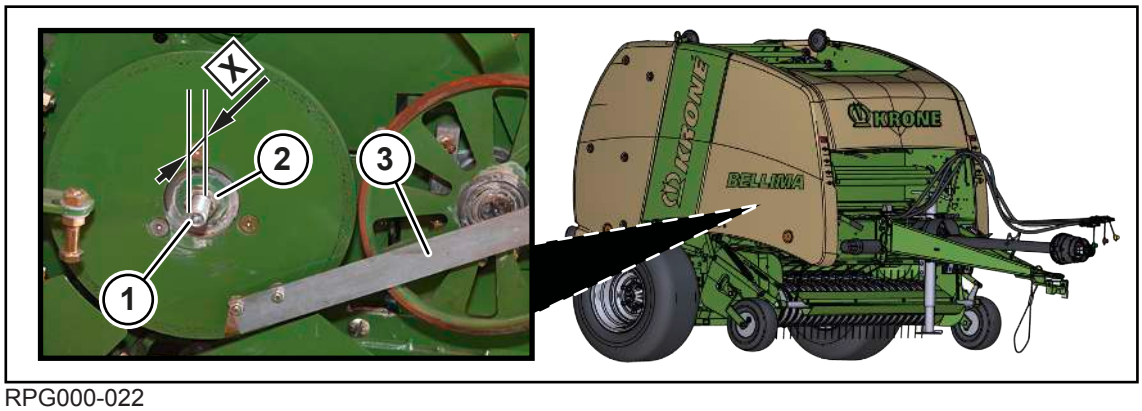
RP000-189

For the driver (1), the dimension must be **X=38 mm**, and for driver (2) the dimension must be **Y=20 mm**.

✓ The machine has been shut down and secured, *see Page 25*.

- To adjust the driver (1), loosen the screws (3) and move the driver (1) until the distance **X=38 mm**.
- Tighten the screws (3).
- To adjust the driver (2), loosen the screws (4) and move the driver (2) until the distance **Y=20 mm**.
- Tighten the screws (4).

10.8 Setting the number of net layers



RPG000-022

The number of net layers is set via the setting screw (1) on the right-hand side of the machine. Proceed as follows to set the number of net layers via dimension X:

Dimension X	Number of net layers
12 mm	1
24 mm	2
36 mm	3

✓ The machine has been shut down and secured, *see Page 25*.
✓ The spring rail (3) is in the lower position.

▶ Insert a hexagon wrench into the setting screw (1) and loosen the counter nut (2) with left-hand thread.

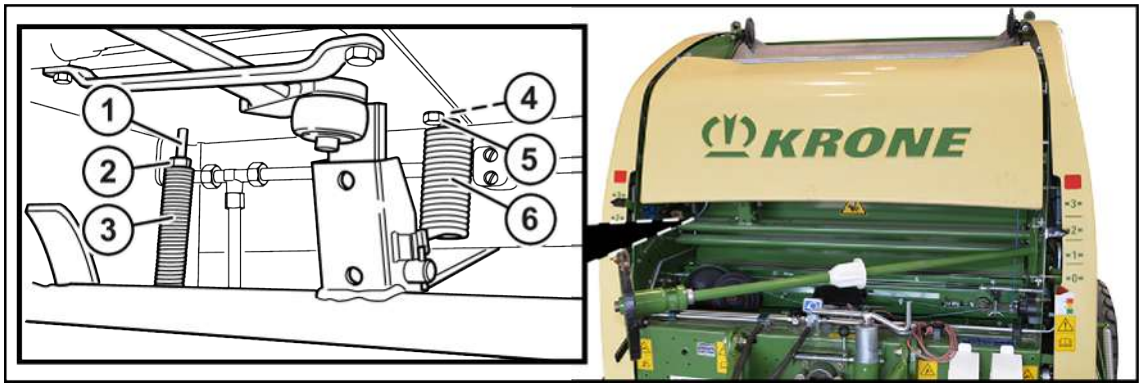
▶ Unscrew the setting screw (1) until the desired dimension X is set.

10.9 Setting the wrapping material brake

If the net is not cut correctly, the wrapping material brake must be checked and adjusted.

✓ The storage compartment is open und the roll holder has been swivelled forwards.
✓ The machine has been shut down and secured, *see Page 25*.

Setting the spring tension



RPG000-051

The no-load brake spring (3) must be set so that the net can be properly retracted but is still held taut.

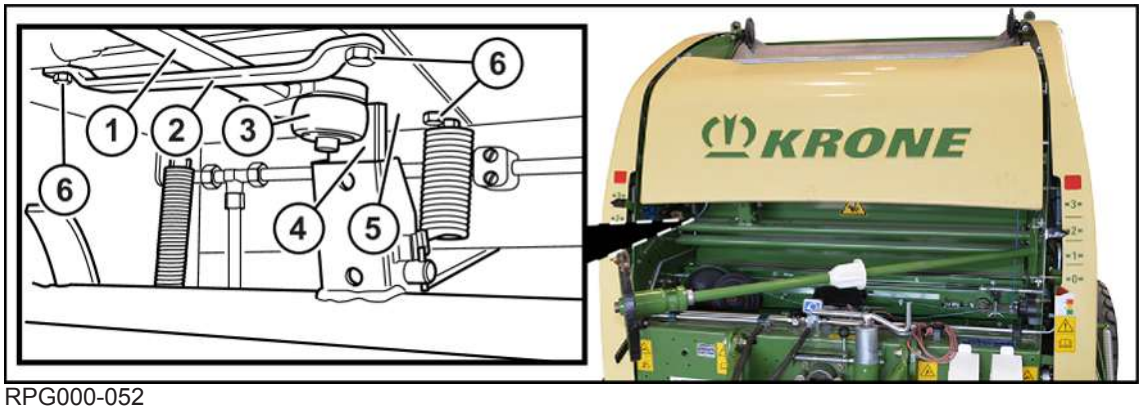
The main brake spring (6) must be set so that it takes some effort to rotate the net roll manually, and that the net is cut off properly.

▶ To set the no-load brake spring (3), loosen the counter nut (2) and correct the setting at the setting screw (1).

▶ To set the main brake spring (6), loosen the counter nut (5) and correct the setting at the setting screw (4).

▶ After setting, re-tighten the counter nuts (2) and (5).

Setting the time for loosening the main brake spring



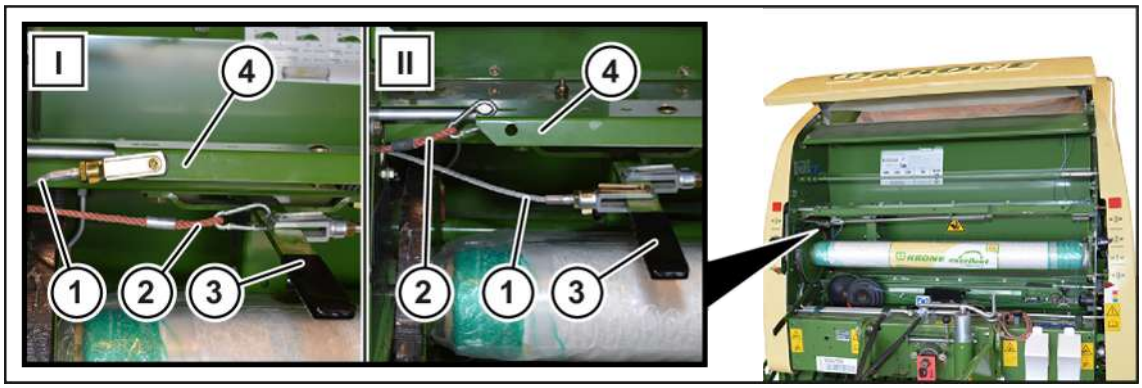
RPG000-052

- Move the manual lever (1) in the centre of the guidance (2).
  - ⇨ In this position, the roll (3) must touch the angular lever (4).
- If the roll (3) does not touch the angular lever (4), loosen the nuts (6) and move the plate (5) in the oblong holes until the roll (3) touches the angular lever (4).

10.10 Setting the hydraulic tying start unit for net and twine tying

For the "net wrapping and twine tying" version

The hydraulic tie starting device starts the tying on the machine via the control unit (green, 4+) on the tractor. Depending on whether net wrapping or twine tying is to be started, the operating cables must be changed.



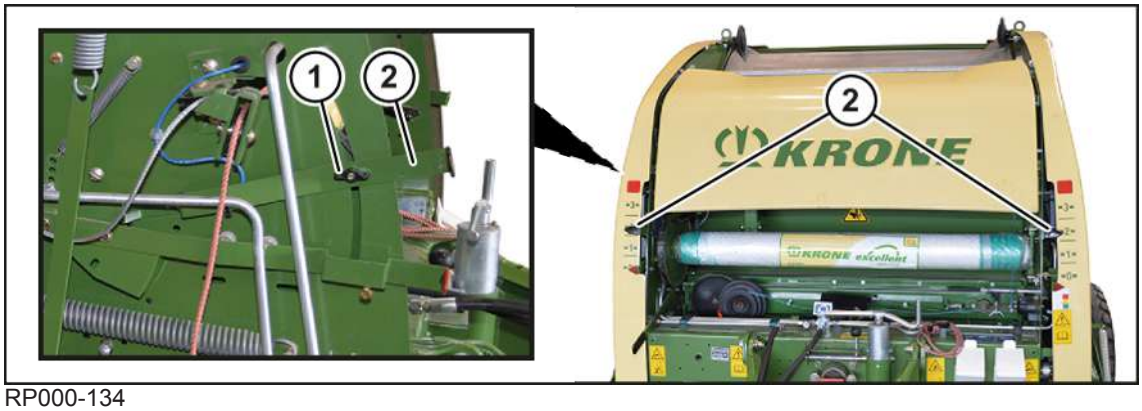
RP000-118

Position	Designation
I	Twine tying
II	Net wrapping

✓ The machine has been shut down and secured, *see Page 25*.

- To set twine tying [I], hook the synthetic rope (2) into the lever (3) and hook the steel cable (1) into the bottom of the storage compartment (4).
- To set net wrapping [II], hook the steel cable (1) into the lever (3) and hook the synthetic rope (2) into the bottom of the storage compartment (4).

10.11 Setting the baling pressure



RP000-134

The black preselection indicators (2) on the front side of the machine can be set to give you a visual indication of when the desired baling pressure has been reached. The baling pressure must not exceed setting "3".

For the "Electronic baling pressure indicator" version

When the set baling pressure is reached, the driver in the tractor sees a signal on the electronic baling pressure indicator, *see Page 77*.

Crops	Pressure range
Hay	low
Straw	medium/high
Silage	hoch

Make the following setting on the right and left sides of the machine in the same way:

✓ The machine has been shut down and secured, *see Page 25*.

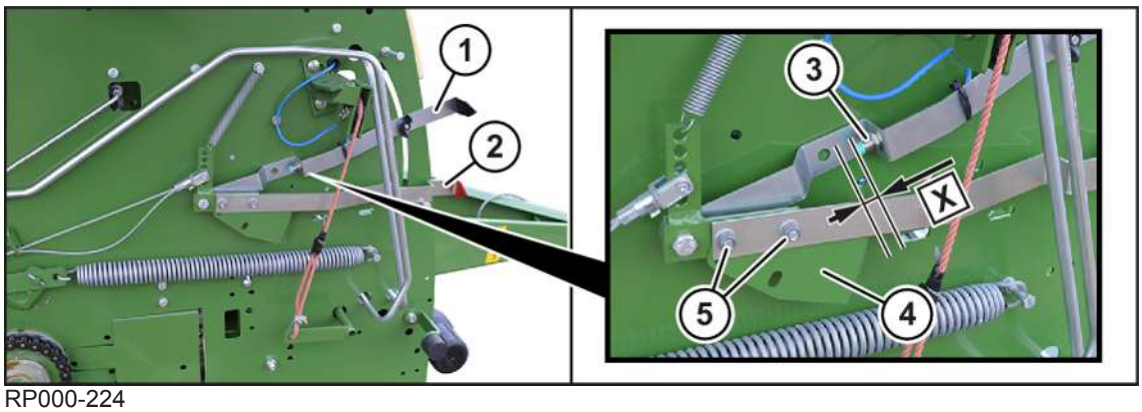
✓ The side guard is open.

▶ Loosen the wing nut (1).

▶ Move the preselection indicator (2) up or down to the selected position.

▶ Tighten the wing nut (1).

10.12 Adjusting the sensors of the electronic baling pressure indicator



RP000-224

The sensors (3) of the electronic baling pressure indicator are located on the right-hand and left-hand machine sides behind the side hoods.

Make the following setting on the right and left sides of the machine in the same way:

✓ The machine has been shut down and secured, *see Page 25*.
✓ The side hood is open.

Setting the sensor distance.

▶ To check the dimension X between sensor (3) and control plate (4), set the black preselection indicator (1) to the height of the red baling pressure indicator (2).

⇨ The upper edge of the control plate (4) is located in the middle of the sensor (3).

▶ Check dimension X.

⇨ If the dimension is **X=3 mm**, the setting is correct.

⇨ If the dimension is not **X=3 mm**, the sensor (3) must be set.

▶ Loosen or tighten the screw connections of the sensor (3) until the dimension **X=3 mm** is set.

Setting the control plate

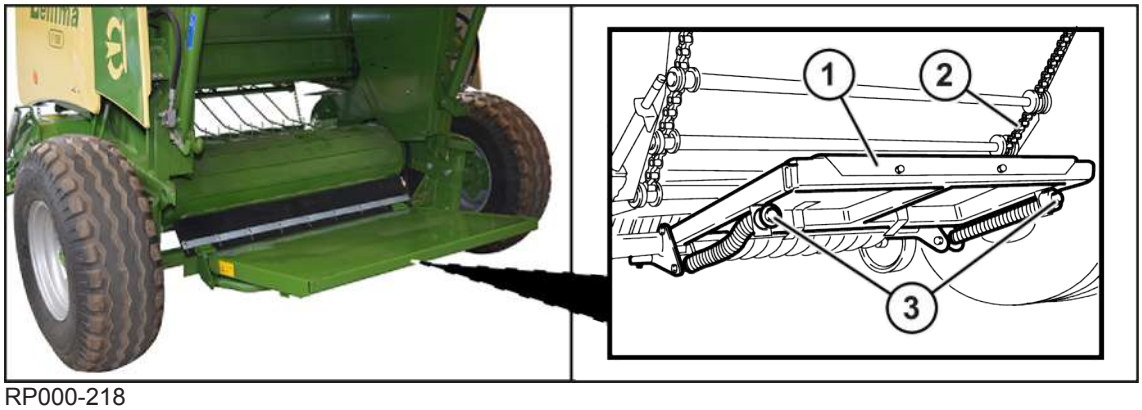
If the indicator lamps of the electronic baling pressure indicator light up too soon or too late, the control plate (4) must be set.

▶ Loosen the screw connections (5) and change the position of the control plate (4) in the oblong holes.

▶ Switch the vehicle electrical system on.

▶ Manually, move the red baling pressure indicator (2) to the black preselection indicator (1); check whether the indicator lamps light up at the point in time when the two hands overlap.

10.13 Setting the bale ejector



RP000-218

The bale ejector must have a gap of **10–30 mm** between the upper edge (1) and the operating bale formation conveyor (2).

✓ The tailgate is open and locked.
✓ The machine has been shut down and secured, *see Page 25*.

▶ Measure the gap at the narrowest point between the upper edge (1) and the operating bale formation conveyor (2).

➡ The bale ejector has been correctly set when the gap is **10–30 mm**.

If the gap is greater than 30 mm:

▶ Tighten the screws (3) tighter.

If the gap is less than 10 mm:

- Loosen the screws (3).

11 Maintenance

⚠ WARNING

Risk of injury due to non-observance of relevant safety notices

If the relevant safety notices are not observed, persons may get seriously injured or killed.

- To avoid accidents, the basic safety instructions must be read and observed, *see Page 13*.

⚠ WARNING

Risk of injury due to non-observance of safety instructions

If the relevant safety routines are not observed, persons may be seriously injured or killed.

- The safety routines must be read and observed to avoid accidents, *see Page 25*.

NOTICE

Damage to the machine due to incorrectly performed or unfinished maintenance work

There is a risk of machine damage if maintenance work is not carried out by qualified personnel. A qualified specialist workshop has the required technical knowledge, qualification and tools to perform the required work on the machine properly. This applies in particular to safety-relevant work.

- Have specially designated work performed by a qualified service centre only.

11.1 Observe the service record booklet

A service record booklet is enclosed with the machine. The service record booklet is absolutely essential as proof of regular maintenance in the event of any material defect claims under warranty and in particular as part of a warranty extension.

- Have the completed maintenance work confirmed by the KRONE service partner in the supplied service record booklet.

11.2 Maintenance table

11.2.1 Maintenance – Before the season

The manual for service technicians contains other maintenance items which must also be carried out. These may be carried out only by authorised qualified personnel.

Checking oil level	
Main gearbox	*see Page 109*

Components	
Adjusting and oiling drive chains	*see Page 118*
Tighten screws/nuts on the machine	*see Page 104*
Retightening wheel nuts	*see Page 108*
Check tyre pressure	*see Page 108*
Checking and adjusting the distance between the roller and the bale formation conveyor chain	*see Page 121*

Components	
Cleaning bushing and drawbar eye	see Page 116
Lubricate the machine according to the lubrication chart	see Page 99
Check hydraulic hoses	see Page 115
Check the electrical connection cables and, if necessary, have them repaired or changed by a KRONE service partner	

11.2.2 Maintenance – After the season

Components	
Clean the machine	see Page 116
Lubricate the machine according to the lubrication chart	see Page 99
Lubricate the universal shaft	see Page 104
Grease the threads of the setting screws	
Cleaning drive chains	see Page 117
Grease the uncoated piston rods of all hydraulic cylinders and insert as far as possible	
Lightly coat with oil all those lever joints and bearing positions which cannot be lubricated	
Touch up damaged paint and preserve uncoated areas with rust protection agent	
Check that all moveable components move freely. If required, dismount, clean, grease and remount.	
Park the machine in a weatherproof and dry location which is not in close proximity to corrosive substances	
Protect the tyres against external influences such as oil, grease or direct sunlight	

11.2.3 Maintenance – once after 10 hours

The manual for service technicians contains other maintenance items which must also be carried out. These may be carried out only by authorised qualified personnel.

Components	
Retightening wheel nuts	see Page 108
Check tyre pressure	see Page 108
Check the hydraulic hoses for leaks and, if necessary, have them replaced by a KRONE service partner.	see Page 115
Cleaning bushing and drawbar eye	see Page 116

11.2.4 Maintenance – once after 50 hours

The manual for service technicians contains other maintenance items which must also be carried out. These may be carried out only by authorised qualified personnel.

11.2.5 Maintenance – every 10 hours, at least daily

Checking oil level	
Main gearbox	*see Page 109*

Components	
Clean the machine	*see Page 116*
Oiling drive chain of the pick-up	*see Page 119*
Oiling drive chain of the bale formation conveyor drive	*see Page 120*
Oiling drive chain of the roller drive	*see Page 121*
Check function of the brake system	
Cleaning bushing and drawbar eye	*see Page 116*

11.2.6 Maintenance – every 50 hours

Components	
Tighten screws/nuts on the machine	*see Page 104*
Retightening wheel nuts	*see Page 108*
Check tyre pressure	*see Page 108*
Checking and adjusting the tailgate lock	*see Page 133*

11.2.7 Maintenance – Every 500 hours

The manual for service technicians contains other maintenance items which must also be carried out. These may be carried out only by authorised qualified personnel.

11.3 Lubrication Chart

NOTICE

Damage to bearing points

When using lubricating greases not approved and when mixing different lubricating greases, the lubricated parts may be damaged.

- ▶ Only use approved lubricating greases, *see Page 46*.
- ▶ Do not use graphite-containing lubricating greases.
- ▶ Do not mix different lubricating greases.

NOTICE

Environmental damage caused by consumables

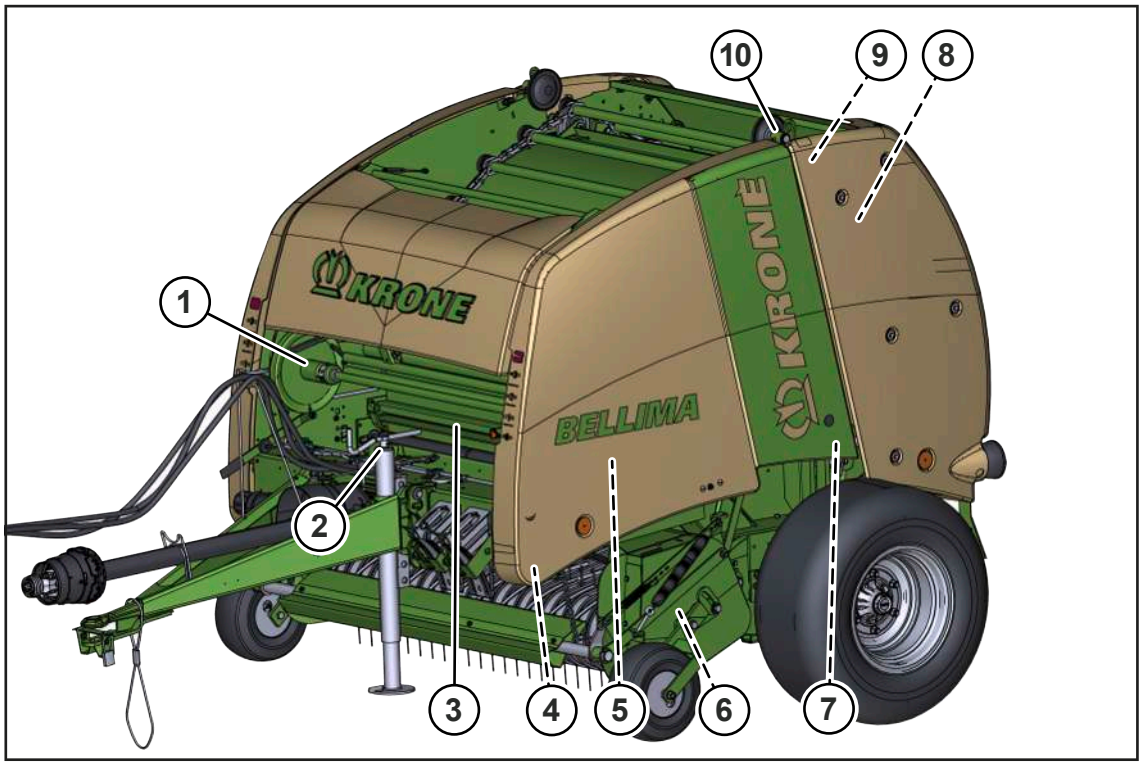
If consumables are not stored and disposed of properly, they may escape into the environment. As a result, the environment will be damaged, even by small quantities.

- ▶ Store the consumables in suitable containers according to the statutory provisions.
- ▶ Dispose of used consumables according to statutory provisions.

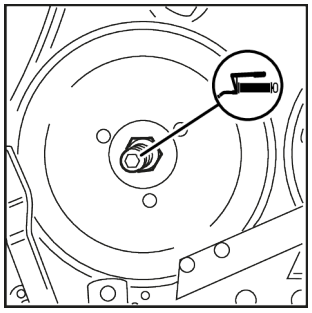
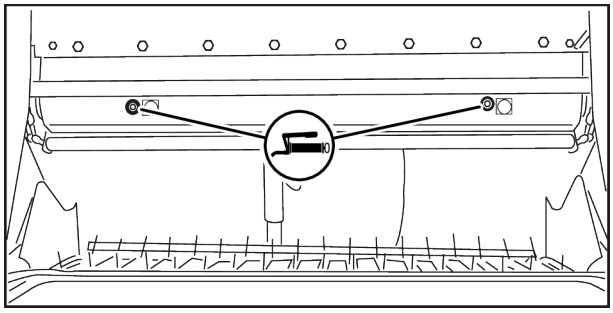
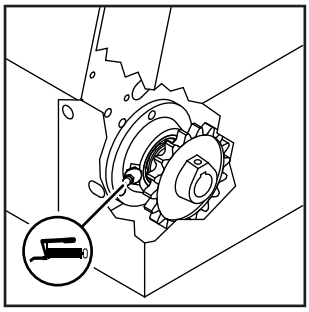
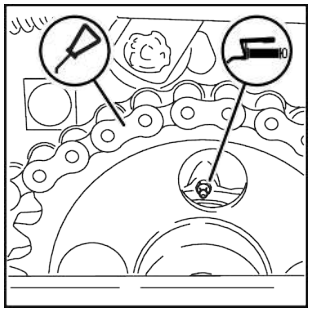
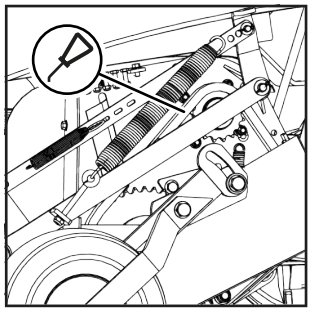
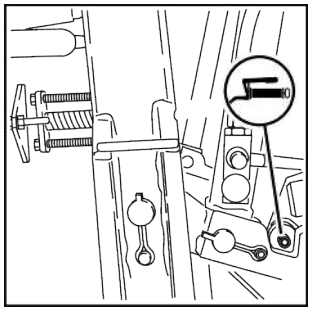
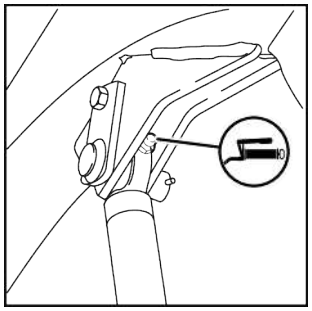
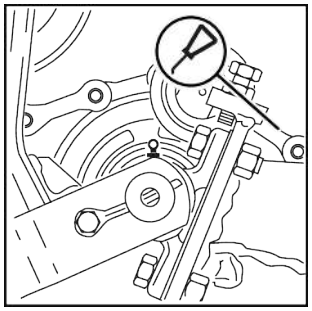
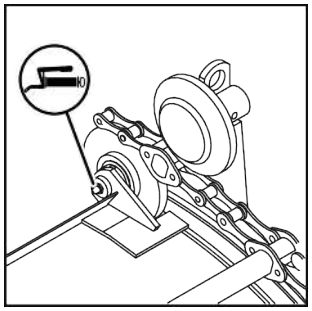
The information on maintenance intervals is based on average load of the machine. In case of an increased load and under extreme working conditions, the time periods must be reduced. The types of lubrication are marked by means of icons in the lubrication chart, refer to table.

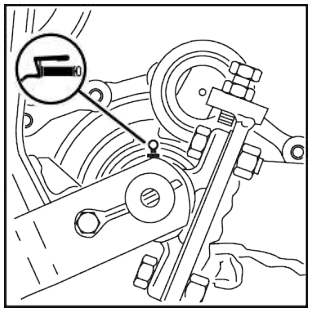
Type of lubrication	Lubricant	Comment
Grease	Multi-purpose grease	▶ Apply two strokes of lubricating grease from the grease gun per grease nipple. ▶ Remove excess lubricating grease at the grease nipple.
Oils	Plant-based oils, unless specified otherwise.	▶ Apply the oil evenly.

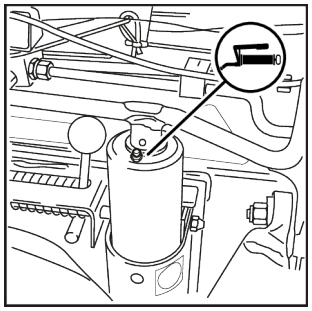
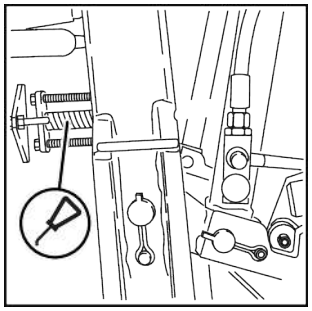
Left side of machine



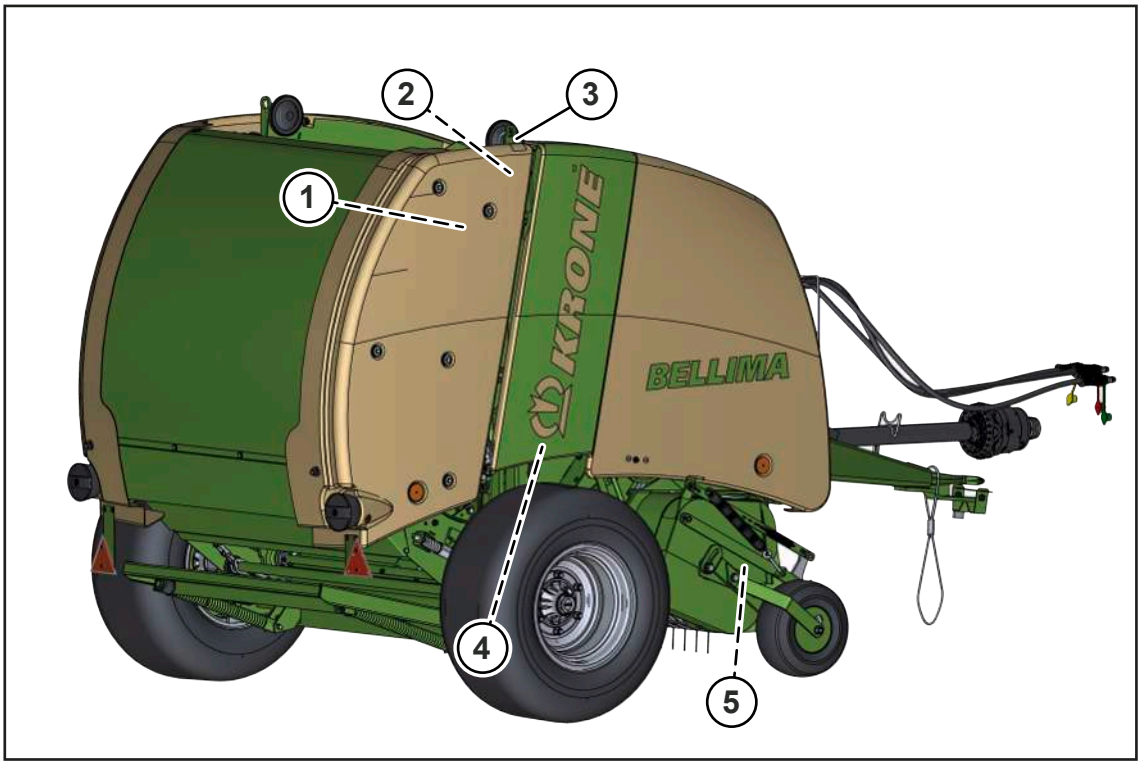
RPG000-031

Every 24 operating hours		
(1) 	(3) 	
(4) 	(5) 	(6) 
(7) 	(8) 	(9) 
(10) 		

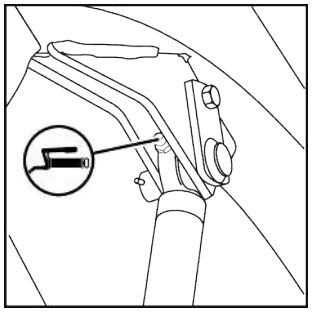
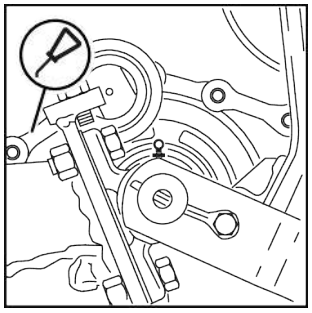
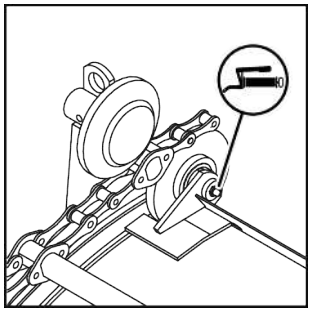
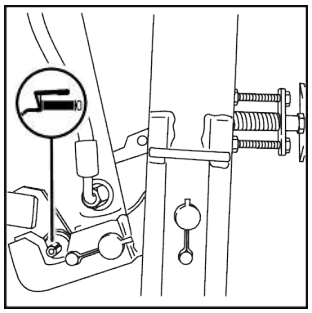
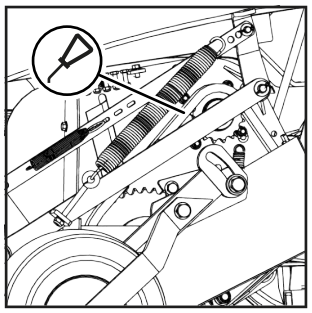
Every 50 operating hours		
(9) 		

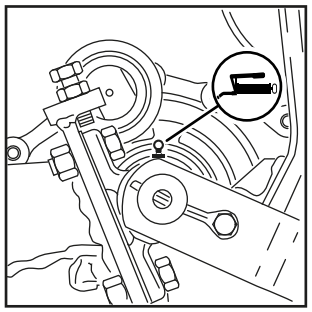
Every 100 operating hours		
(2) 	(7) 	

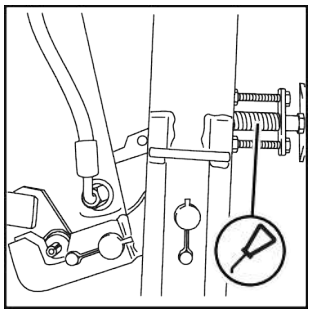
Right and rear side of machine



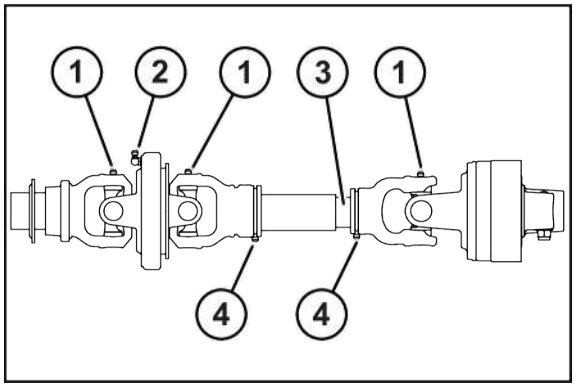
RPG000-032

Every 24 operating hours		
(1) 	(2) 	(3) 
(4) 	(5) 	

Every 50 operating hours		
(2) 		

Every 100 operating hours		
(4) 		

11.4 Lubricating the universal shaft



RP000-176

✓ The machine has been shut down and secured, *see Page 25*.

- Observe operating instructions of the universal shaft manufacturer.
- Clean the universal shaft.
- Lubricate the universal shaft with multi-purpose grease at the intervals indicated in the table below.

For a list of the lubricating greases to be used, *see Page 45*.

The following table provides information about the lubricant quantity and the lubrication interval per lubrication point.

Pos.	Lubricant quantity	Lubrication interval
(1)	10 g	50 hours
(2)	30 g	
(3)	20 g	
(4)	6 g	

11.5 Tightening torques

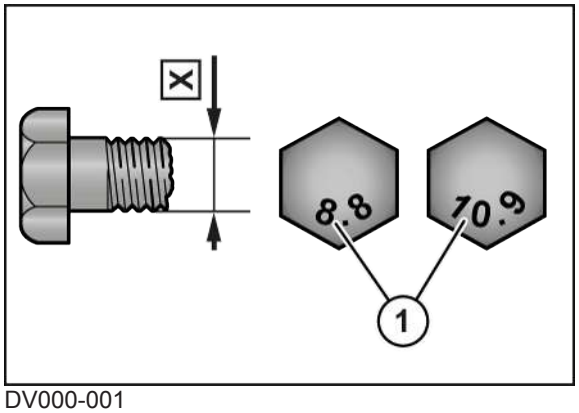
Deviating tightening torques

All screw connections must in general be tightened with the listed tightening torques following. Deviations from the tables are marked accordingly.

Metric thread screws with control thread

INFO

The table does not apply to countersunk screws with hexagon socket in case the countersunk screw is tightened via hexagon socket.

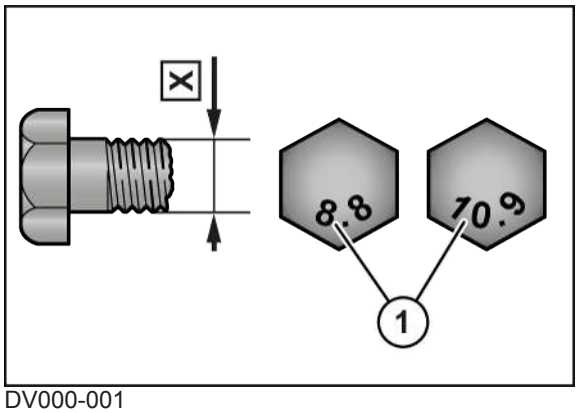


DV000-001

X Thread size 1 Strength class on screw head

X	Strength class			
	5.6	8.8	10.9	12.9
	Tightening torque (Nm)			
M4		3.0	4.4	5.1
M5		5.9	8.7	10
M6		10	15	18
M8		25	36	43
M10	29	49	72	84
M12	42	85	125	145
M14		135	200	235
M16		210	310	365
M20		425	610	710
M22		571	832	972
M24		730	1,050	1,220
M27		1,100	1,550	1,800
M30		1,450	2,100	2,450

Metric thread screws with fine thread



DV000-001

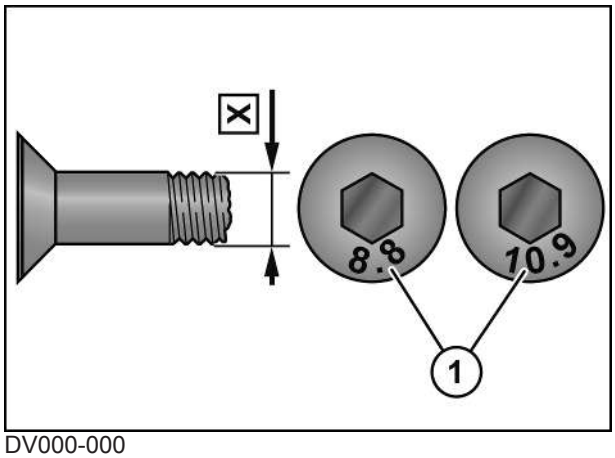
X Thread size 1 Strength class on screw head

X	Strength class			
	5.6	8.8	10.9	12.9
	Tightening torque (Nm)			
M12 x 1.5		88	130	152
M14 x 1.5		145	213	249
M16 x 1.5		222	327	382
M18 x 1.5		368	525	614
M20 x 1.5		465	662	775
M24 x 2		787	1,121	1,312
M27 x 2		1,148	1,635	1,914
M30 x 1.5		800	2,100	2,650

Metric thread screws with countersunk head and hexagon socket

INFO

The table applies only to countersunk screws with hexagon socket and metric thread tightened via hexagon socket.



DV000-000

X Thread size

1 Strength class on screw head

X	Strength class			
	5.6	8.8	10.9	12.9
	Tightening torque (Nm)			
M4		2.5	3.5	4.1
M5		4.7	7	8
M6		8	12	15
M8		20	29	35
M10	23	39	58	67
M12	34	68	100	116
M14		108	160	188
M16		168	248	292
M20		340	488	568

Locking screws on the gearboxes

> ***INFO***
>
> The tightening torques only apply to assembly of locking screws, viewing glasses, ventilation and breather filters and bleed valves in gearboxes with cast housings or aluminium or steel housings. The term “locking screw” includes the drain plug, the inspection screw as well as the ventilation and breather filters.

This table applies only to locking screws with external hexagon in connection with copper seal ring and for bleed valves made of brass with shaped seal ring.

Thread	Locking screw and sight glass with copper ring[1] Ventilation/breather filter made of steel		Bleed valve made of brass Ventilation/breather filter made of brass	
	Steel and cast	Aluminium	Steel and cast	Aluminium
	Maximum tightening torque (Nm) (±10%)			
M10x1			8	
M12x1.5			14	
G1/4“			14	
M14x1.5			16	
M16x1.5	45	40	24	24
M18x1.5	50	45	30	30
M20x1.5			32	
G1/2“			32	
M22x1.5			35	
M24x1.5			60	
G3/4“			60	
M33x2			80	
G1“			80	
M42x1.5			100	
G1 1/4“			100	

[1] Always replace copper rings.

11.6 Checking/maintaining tyres

✓ The machine has been shut down and secured, *see Page 25*.

Inspect the tyres visually

▶ Visually inspect tyres for cuts or breaks.

➡ If there are cuts or breaks in the tyres, have the tyres repaired or replaced by a KRONE service partner.

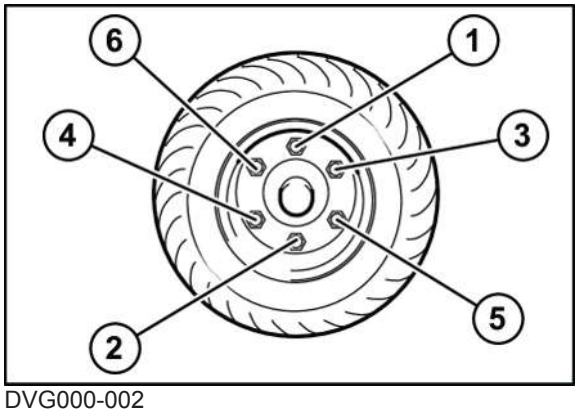
Maintenance intervals for visual inspection of the tyres, *see Page 97*.

Checking/adapting the tyre pressure

- ▶ Check the tyre pressure, *see Page 44*.
- ➡ If the tyre pressure is too high, deflate air.
- ➡ If the tyre pressure is too low, increase the tyre pressure.

Check the maintenance intervals for tyre pressure, *see Page 97*.

Retighten wheel nuts



DVG000-002

- ▶ Retighten the wheel nuts crosswise (as shown) with a torque wrench, tightening torque *see Page 108*.

Maintanance intervals, *see Page 97*.

Tightening torques for "BPW axle" version

Thread	Key size	Amount of bolts per hub	Maximum tightening torque	
			black	galvanised
Bolt centring				
M18x1.5	24 mm	6 units	270 Nm	250 ... 290 Nm
M20x1.5	27 mm	8 units	380 Nm	360 ... 400 Nm
M22x1.5	32 mm	8/10 units	510 Nm	485 ... 535 Nm
Hub centring				
M22x1.5	32 mm	10 units	630 Nm	600 ... 660 Nm

Tightening torques for "ADR/Colaert axle" version

Thread	Key size	Amount of bolts per hub	Maximum tightening torque	
			black	galvanised
Bolt centring				
M12x1.5	17 mm	4/5 units	—	90 ... 100 Nm
M14x1.5	19 mm	5 units	—	130 ... 140 Nm
M18x1.5	24 mm	6 units	—	270 ... 290 Nm
M20x1.5	30 mm	8 units	—	350 ... 380 Nm
M22x1.5	30 mm	8/10 units	—	450 ... 510 Nm
Hub centring				

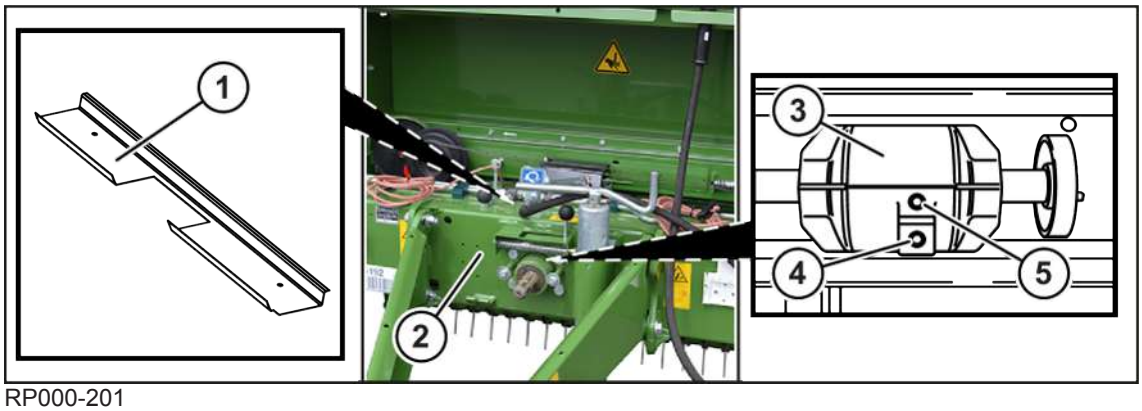
Thread	Key size	Amount of bolts per hub	Maximum tightening torque	
			black	galvanised
M18x1.5	27 mm	6 units	—	270 ... 290 Nm
M22x1.5	32 mm	8/10 units	—	450 ... 510 Nm
M24x1.5	36 mm	10 units	—	550 ... 610 Nm

11.7 Protecting brake disc of the wrapping material brake from corrosion

RPG000-222

- To prevent corrosion on the brake disc of the wrapping material brake, mask the brake surface of the brake disc (2) with adhesive protection film (1) or insulating tape.

11.8 Servicing the main gearbox



RP000-201

The main gearbox (3) is located in the front crossbeam (2) of the machine.

- ✓ The machine has been shut down and secured, *see Page 25*.
- Dismount the guard (1) behind the crossbeam (2).

Checking oil level

The oil level must reach up to the inspection hole (5).

If the oil does not reach the inspection hole (5):

NOTE! Risk of machine damage due to improperly performed oil level check, oil and filter element change! Follow the safety routine "Oil level check. Changing oil and filter elements safely", *see Page 26*.

- Remove the locking screw from the inspection hole (5).
- Pour in new oil through the inspection hole (5) up to the overflow. Ensure that the oil corresponds to the specification to be used, *see Page 45*.
- Mount the locking screw of the inspection hole (5); tightening torque *see Page 107*.

11.9 Releasing the cam clutch on the universal shaft

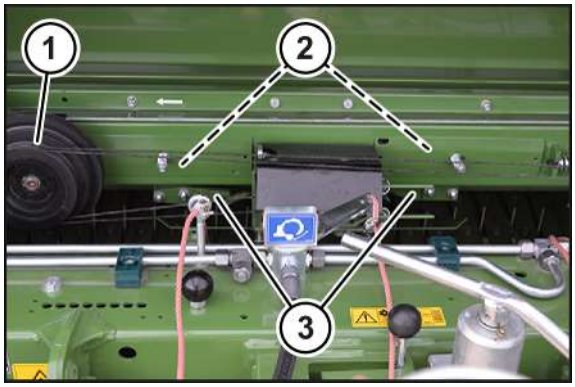
If the cam clutch was actuated during the baling process on the universal shaft due to an overload, proceed as follows:

- Switch off the PTO shaft.
- Switch on the PTO shaft at a lower idle speed until the cam clutch has engaged.
- Shift up the PTO shaft to rated speed.

11.10 Checking and adjusting the twine tying unit

With "net wrapping and twine tying" version

11.10.1 Cleaning the twine guide slide and oiling the drive chains



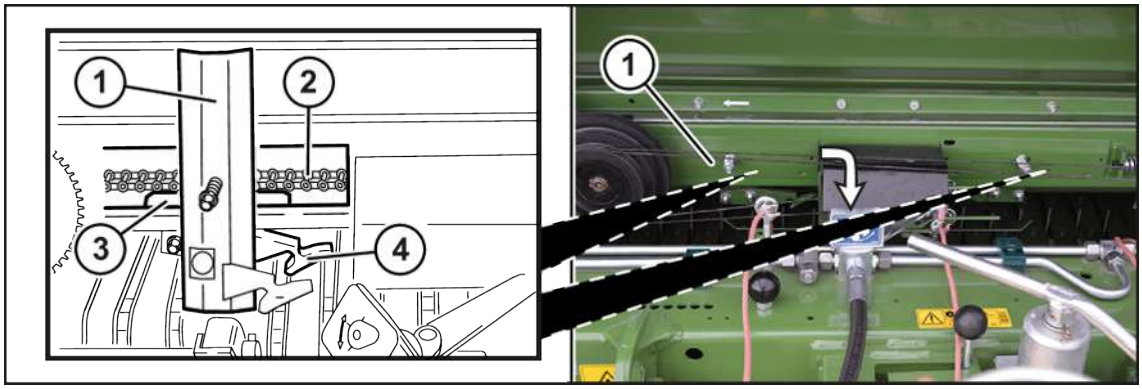
RP000-136

After prolonged downtimes or if there is heavy soiling, check the twine guide slides (2) behind the covers and clean if required.

✓ The machine has been shut down and secured, *see Page 25*.

- Turn the drive wheel (1) anticlockwise by hand until the drivers (3) have moved once completely from the inside to the outside and back.

If the twine guide slides (2) and the drivers fail to run smoothly, clean the area:

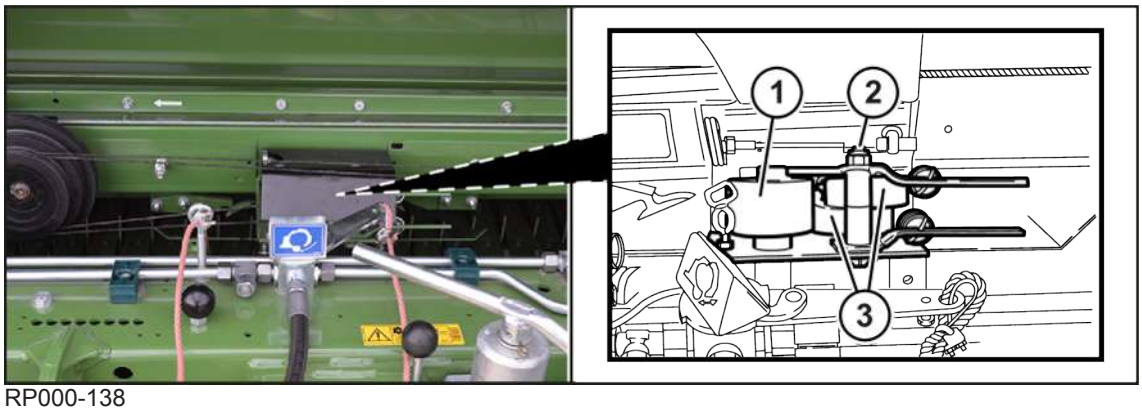


RP000-137

- Loosen the 2 covers (1) and turn them in the direction of the arrow to bring them in vertical position as shown on the left.
- Clean the twine guide slides (3), the drivers (4) and the area surrounding these components.
- If necessary, oil the drive chains (2).
- Close the 2 covers (1).

11.10.2 Checking and adjusting the starter roll and the pressure rolls

With "net wrapping and twine tying" version



RP000-138

✓ The machine has been shut down and secured, *see Page 25*.

- Rotate the starter roll (1) slightly in order to check whether the pressure rolls (3) rotate easily.

If the pressure rolls (3) do not rotate easily:

- Push a screwdriver between drive roll (1) and pressure rolls (3) and lightly move it from left to right.
- If necessary, loosen the screw connection (2) and oil the bearing positions.

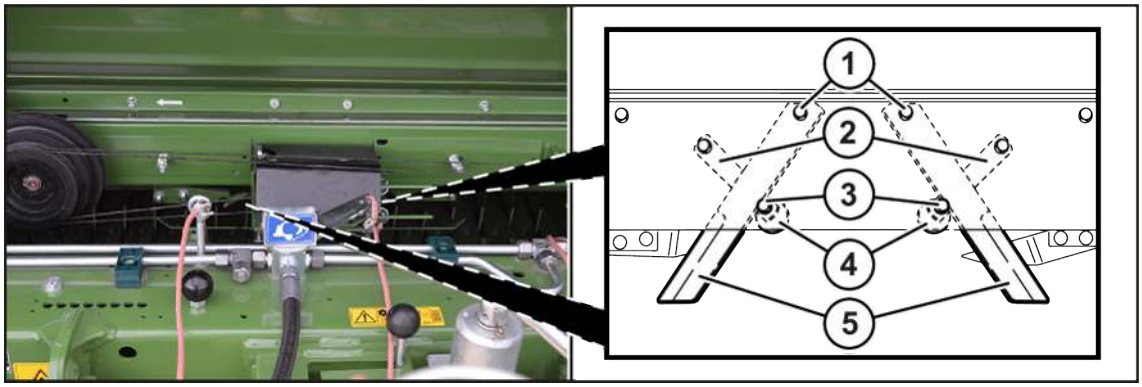
11.10.3 Cleaning the cutting unit

⚠ WARNING

Risk of injury due to sharp blades on the cutting unit of the tying unit

When inserting the wrapping material or working in the area of the cutting unit of the tying unit, there is a risk of injury to the fingers and hands.

- When inserting the wrapping material and when working in the area of the cutting unit, wear suitable protective gloves.
- When working in the area of the cutting unit, work particularly carefully and prudently.



RP000-190

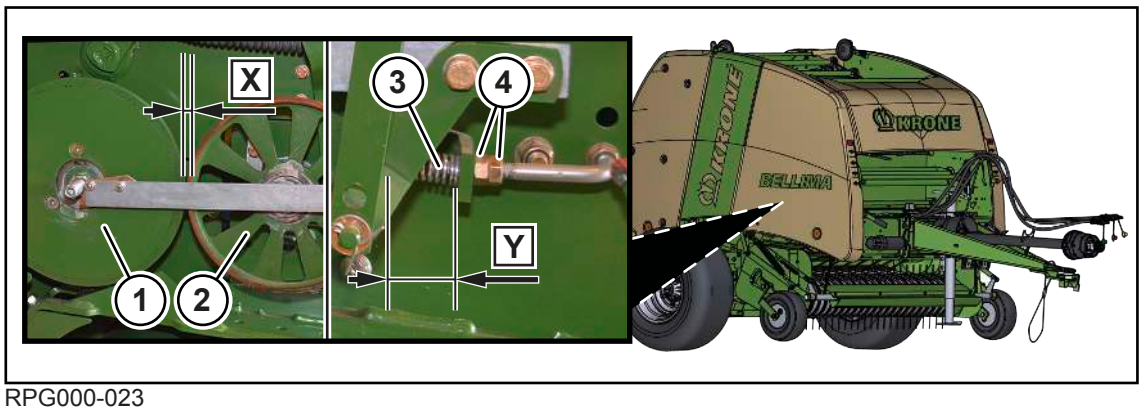
The blades (5) must be able to move freely. Corrosion or soiling may restrict the movability of the blades (5).

✓ The machine has been shut down and secured, *see Page 25*.

- Clean the blade guides (2).
- Loosen the screws (1) and move the blades (5) until they run smoothly once more.
- Tighten the screws (1) only so far that the blades (5) can still move smoothly.

11.11 Checking and adjusting the net wrapping device

11.11.1 Adjusting the friction wheel and drive wheel



RPG000-023

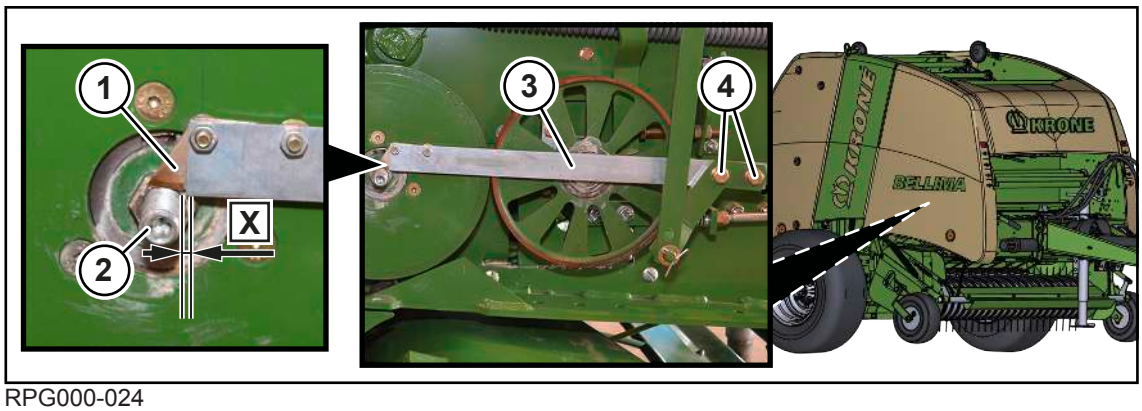
✓ The machine has been shut down and secured, *see Page 25*.

The dimension X between the friction wheel (1) and the drive wheel (2) must be **X=1 mm**.

The dimension Y of the spring (3) must be **Y=25-35 mm**.

- To set dimension X or dimension Y, loosen the nuts (4) and set the dimensions X and Y.

11.11.2 Setting the spring rail



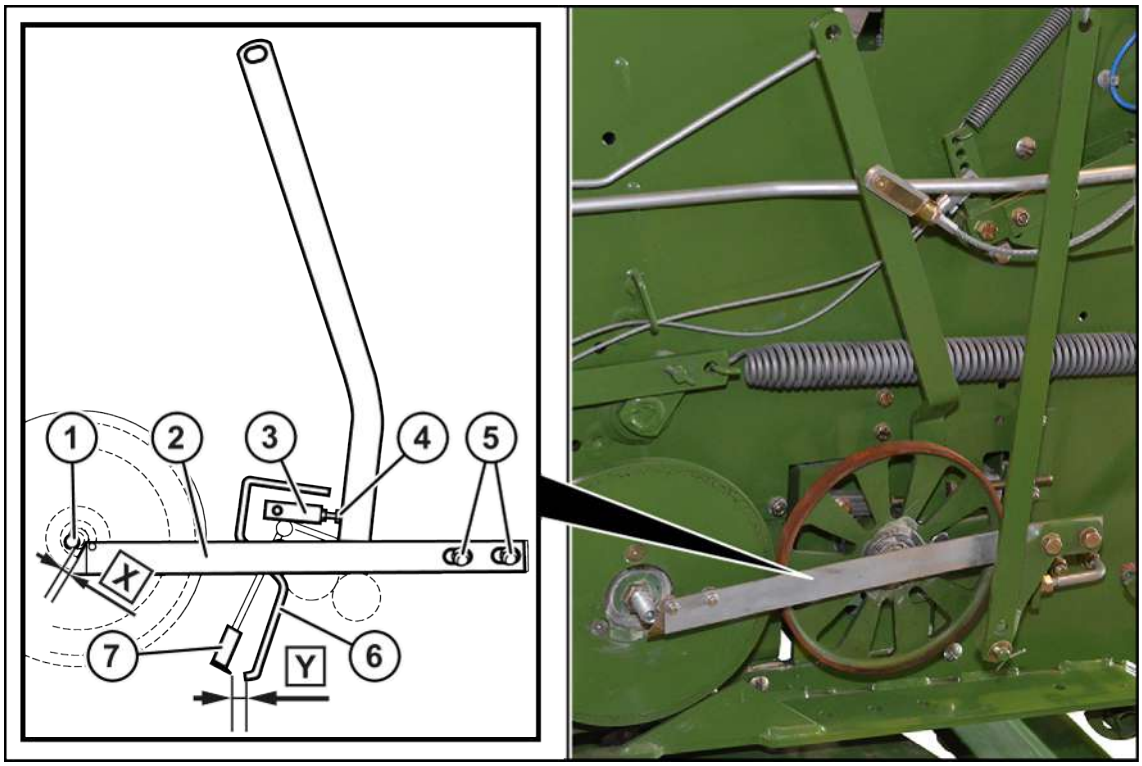
RPG000-024

✓ The machine has been shut down and secured, *see Page 25*.

At the end of the spring rail (3), there is a fold-down tip (1) which is movably screwed to the spring rail (3). The distance X between setting screw (2) and spring rail (3) must be **X=2-3 mm**.

- ▶ To set the distance X, loosen the screws (4) and move the spring rail (3) until the dimension **X=2-3 mm**.
- ▶ Tighten the screws (4).

11.11.3 Adjusting the cutting unit



RP000-130

✓ The machine has been shut down and secured, *see Page 25*.

Setting the distance Y between cutter blade (7) and cutting edge (6)

The distance Y between cutter blade (7) and cutting edge (6) must be **X=2-5 mm**.

✓ The tailgate is opened.

✓ The pick-up is lowered.

✓ The pawl (3) is in the position shown.

▶ To set the distance Y, loosen the counter nut at the screw (4) and set the distance Y.

▶ Tighten the counter nut at the screw (4).

Setting distance X between slightly lowered spring rail (2) and setting screw (1)

The distance X between slightly lowered spring rail (2) and setting screw (1) must be **X=1 mm**.

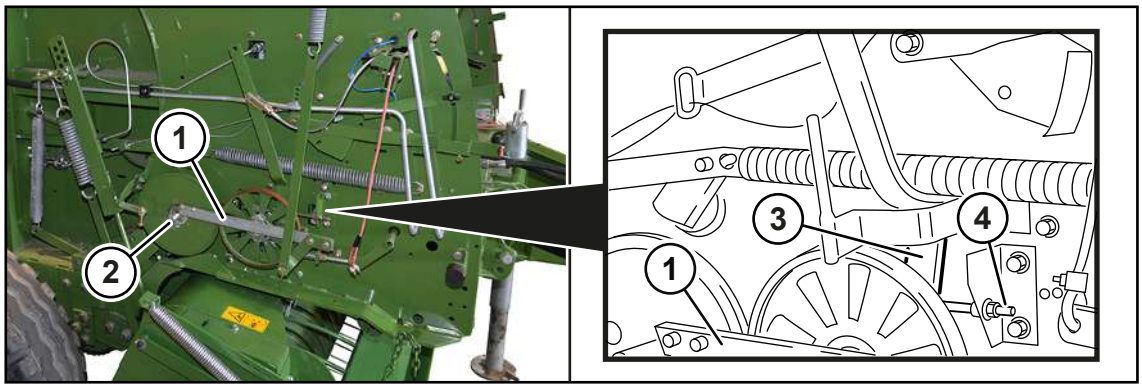
✓ The spring rail (2) has been removed from the setting screw (1) and slightly lowered.

✓ The dimension has been correctly set when the spring rail (2) is positioned on the setting screw (1), *see Page 113*.

▶ To adjust the distance X, loosen the screws (5) and move the spring rail until the distance **X=1 mm**.

▶ Tighten the screws (5).

Checking settings of distance X and Y



RP000-539

▶ Place the spring rail (1) back on the setting screw (2).

➡ The head of the setting screw (4) must be positioned on the deflection lever (3).

11.12 Checking and setting the hydraulic tying start unit

For the "Net wrapping and twine tying" version

RP000-131

The spring (2) on the hydraulic start cylinder (1) should compress to a dimension **X=110–120 mm** when the hydraulic cylinder is extended.

✓ The machine has been shut down and secured, *see Page 25*.

✓ The hydraulic cylinder for the tie starting device is fully extended.

▶ To set dimension X, loosen the nut (3) and turn the screw until dimension X is set.

11.13 Check hydraulic hoses

⚠ *WARNING*

Hydraulic hoses are subject to ageing

Hydraulic hoses may wear depending on pressure, heat load and the effect of UV rays. People can be seriously injured or killed by damaged hydraulic hoses.

The date of manufacture appears on the hydraulic hoses. This way the age can be ascertained quickly.

Replacement of the hydraulic hoses is recommended after a lifetime of six years.

▶ Use original spare parts when replacing hoses.

NOTICE

Damage to the machine due to soiling of the hydraulic system

If foreign objects or liquids get into the hydraulic system, the hydraulic system may be severely damaged.

▶ Clean hydraulic connections and components before removal.

▶ Seal open hydraulic connections with protective caps.

▶ Ensure that foreign objects or liquids do not get into the hydraulic system.

NOTICE

Storing and disposing of oils and used oil filters

If oil and used oil filters are not stored and disposed of properly, the environment may be damaged.

▶ Store or dispose of used oil and oil filters according to statutory provisions.

Hydraulic hoses are subject to natural aging. This limits their service life. The recommended service life is 6 years, including a maximum storage time of 2 years. The date of manufacture is printed on the hydraulic hoses. When checking hydraulic hoses, the state-specific conditions (e.g., BGVU) must be observed.

Performing a visual inspection

▶ Visually inspect all hydraulic hoses for damage and leaks and have them replaced by an authorised specialist if necessary.

11.14 Cleaning the machine

⚠ WARNING

Eye damage caused by flying dirt particles!

When cleaning the machine with compressed air or with high-pressure cleaner, the dirt particles are slung away at high speed. The dirt particles may hit the eyes and hurt them.

- ▶ Keep persons away from working range.
- ▶ When performing cleaning work with compressed air or with high-pressure cleaner, wear suitable working clothes (for example eye protection).

NOTICE

Machine damaged by water from a high-pressure cleaner

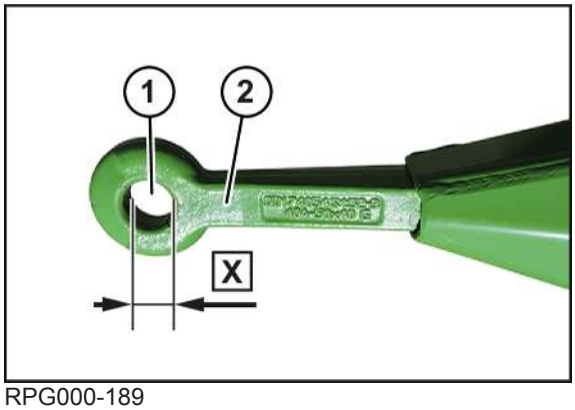
Bearings and electric or electronic components can be damaged if you aim the water jet of a high-pressure cleaner directly at them during cleaning.

- ▶ Do not direct the water jet of a high-pressure cleaner at bearings, electrical/electronic components and safety signs.
- ▶ Replace missing, damaged and unrecognisable safety signs.

✓ The machine has been shut down and secured, *see Page 25*.

- ▶ After each use, clean the entire area around the tying unit.
- ▶ Also after each use, clean all moving parts on the brake linkage and brake lever with compressed air, e.g. piston rod, brake lever and slack adjuster. This can prevent mechanical blockages.
- ▶ Remove crop build-up from the drive chains using compressed air.
- ▶ Ensure that the drive chains are sufficiently wetted with engine oil after cleaning.
- ▶ If required, repeat the cleaning several times a day.
- ▶ After the machine has been cleaned with water, lubricate all manually lubricated lubrication points, *see Page 99*.

11.15 Clean the bushing and the drawbar eye



RPG000-189

The drawbar eye must always be coupled horizontally in the towing hitch. The wear limit of the socket (1) in the drawbar eye (2) is **X=43 mm**. If the dimension X is exceeded, the drawbar eye (1) must be replaced by a KRONE service partner.

- ▶ To minimize wear, clean the bushing (1) and the drawbar eye (2) several times a day and coat with grease.

11.16 Cleaning drive chains

At the end of the season the machine drive chains must be cleaned.

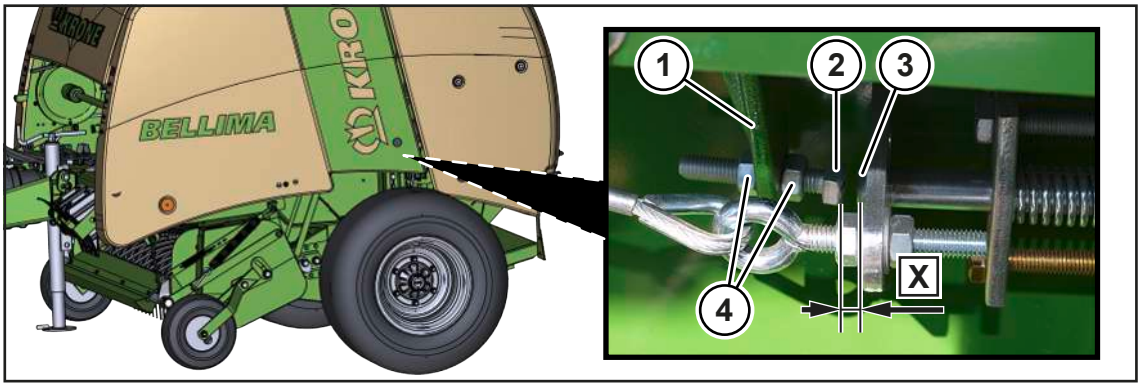
✓ The machine has been shut down and secured, *see Page 25*.

- Clean the drive chains with compressed air.
- Wet the cleaned drive chains with engine oil.
- Start up the machine to distribute the engine oil on all contact surfaces.

The drive chains must always be adequately wetted with engine oil.

- Shut down and safeguard the machine, *see Page 25*.
- Check the drive chains and sprocket wheels for wear.
- Check that the drive chains are centred on the sprocket wheels.

11.17 Checking and setting the lock hook blocker at the tailgate

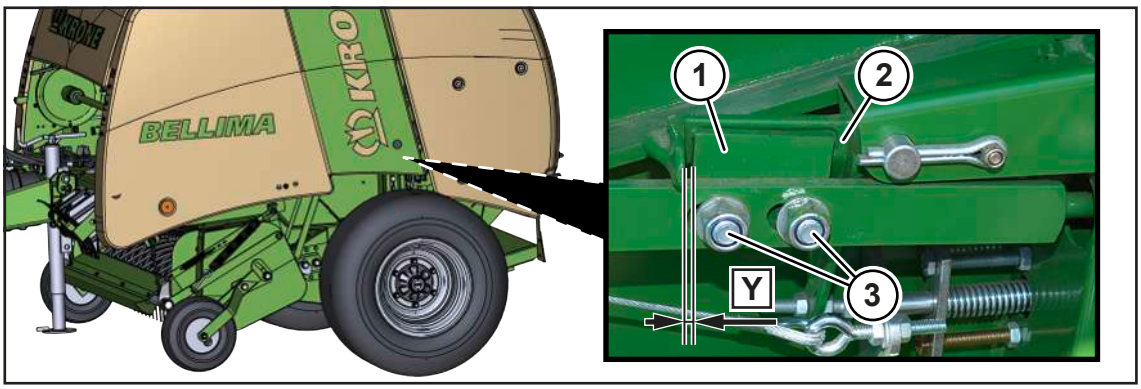


RPG000-044

The lock hook latch of the tailgate (1) sits on the left side of the machine. If the tailgate no longer closes fully, check and adjust the setting of the lock hook latch of the tailgate (1). The distance X between the setting screw (2) and the momentary switch (3) must be **X=2–5 mm**.

✓ The tailgate is open and secured against lowering with the stop cock, *see Page 79*.
✓ The left side hood is open.
✓ The machine has been shut down and secured, *see Page 25*.

- Tighten or loosen the counter nuts (4) and move the setting screw (2) until dimension **X=2–5 mm**.
- Tighten the counter nuts (4).



RPG000-045

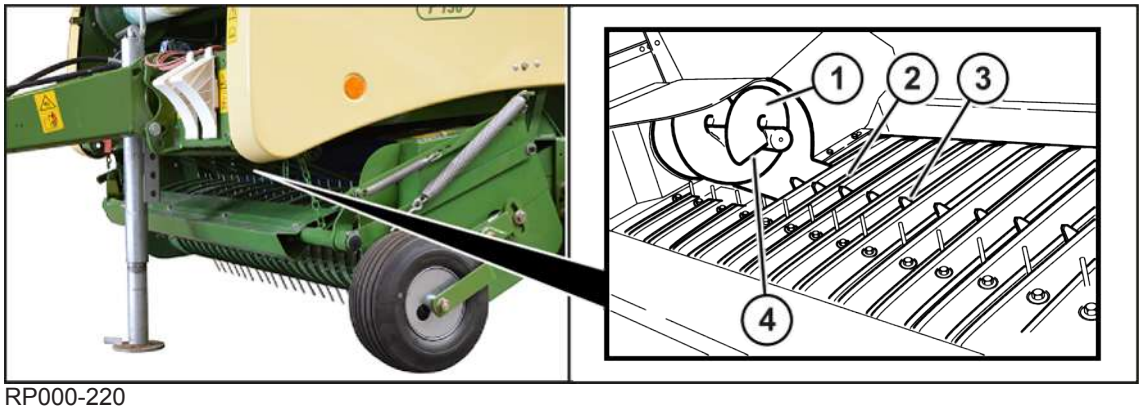
The distance Y (between lock hook latch (2) and stop (1)) must be **X=2–5 mm**.

✓ The tailgate is open and secured against lowering with the stop cock, *see Page 79*.
✓ The left side hood is open.
✓ The machine has been shut down and secured, *see Page 25*.

▶ Loosen the screw connections (3) and move them in the oblong hole until the dimension is **X=2–5 mm**.

▶ Tighten the screw connections (3).

11.18 Checking and setting the transverse worm conveyors of the pick-up



RP000-220

After repair or maintenance to the pick-up, it may be necessary to reset the 2 transverse worm conveyors (1) on the right-hand and left-hand machine side. The lower edge (4) of the transverse worm conveyor (1) must be parallel to the scrapers (2) of the pick-up. Additionally, the packer tines (3) must project approximately **10 mm** over the scrapers (2) in front.

✓ The machine has been shut down and secured, *see Page 25*.
✓ The drive chain of the pick-up has been dismounted.
✓ The chain has been lifted.

Make the following setting on the right and left auger conveyors in the same way:

▶ Turn the auger conveyor (1) with the lower edge (4) parallel to the scrapers (2) of the pick-up. In this position, the packer tines (3) must protrude at the front about **10 mm** above the scrapers (2).

▶ Mount the drive chain of the pick-up in this position.

11.19 Set and oil the drive chains

WARNING

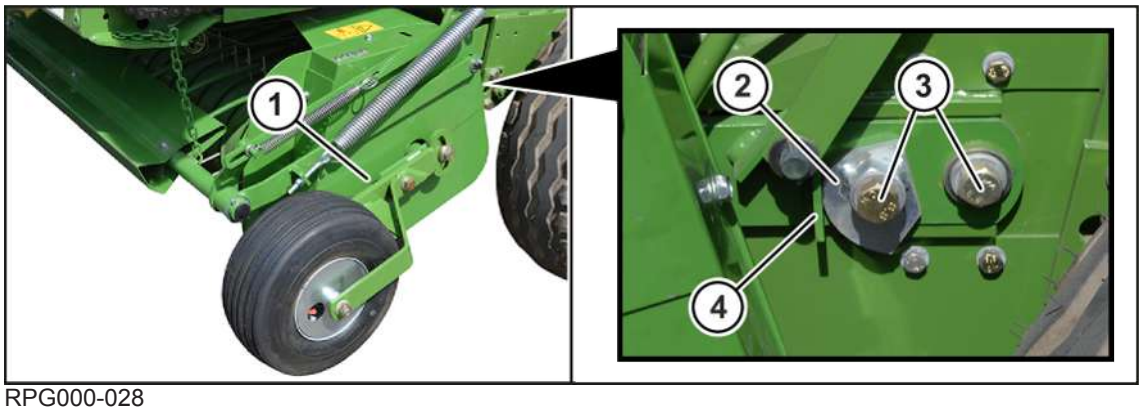
Risk of injury due to moving drive chains

When working on drive chains, there is a risk of injury due to entanglement of loose long hair or loose clothing.

▶ When working on the drive chains, wear protective equipment, *see Page 18*.

▶ Before working on any drive chains, shut down and safeguard the machine, *see Page 25*.

11.19.1 Drive chain of the pick-up



RPG000-028

The drive chain of the pick-up is located on the left machine side.

Setting the drive chain

✓ The machine has been shut down and secured, *see Page 25*.
✓ The pick-up is lowered to working position, *see Page 67*.

Make the following setting on the right and left sides of the machine in the same way:

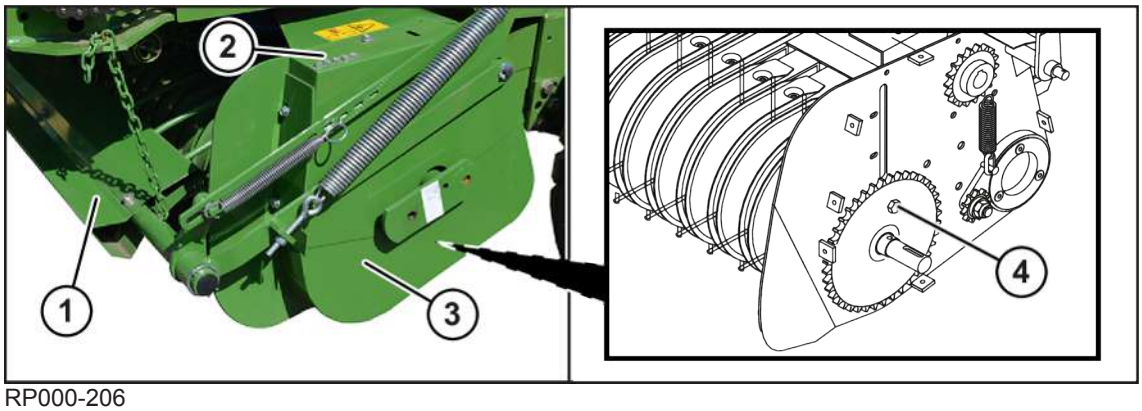
- Dismount the guard (1).
- Loosen the screw connections (3).
- Turn the tensioning device (2) at the support (4) until the drive chain is under tension.
- Tighten the screw connections (3).
- Mount the guard (1).

Oiling the drive chain

- Wet the drive chain with oil.

Consumables, *see Page 45*.

Replacing shear bolt



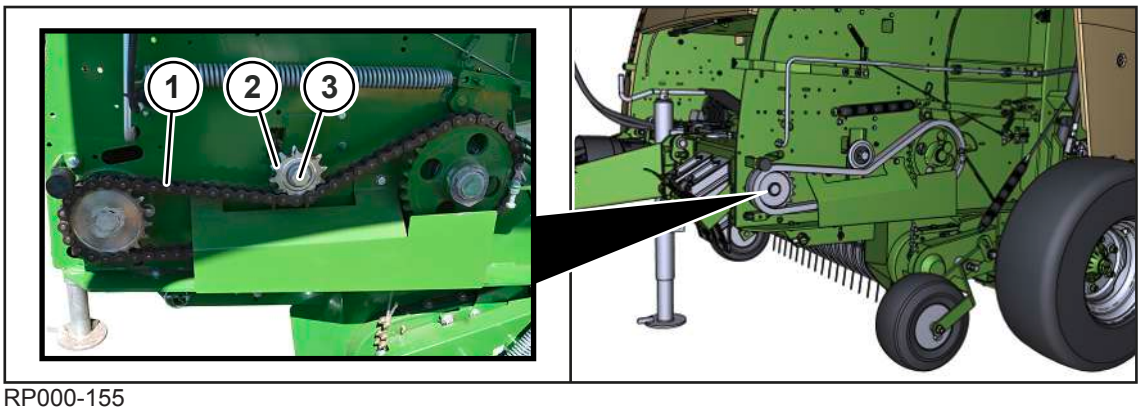
RP000-206

To protect against overload, the drive chain of the pick-up drive is secured with a shear bolt (4). This shear bolt can be replaced when it is sheared off. The replacement shear bolts (2) are located on the guard (3). The shear bolt (4) (M8x35) can be ordered by quoting the order number 00 900 201 *.

✓ The guide wheel has been removed.

- ▶ Dismount the holding-down clamp (1).
- ▶ Dismount the guard (2).
- ▶ If required, remove the rest of the shear bolt (4).
- ▶ Mount a new shear bolt (4).
- ▶ Mount the guard (2).
- ▶ Mount the holding-down clamp (1).

11.19.2 Drive chain of the bale formation conveyor



RP000-155

The drive chain (1) of the bale formation conveyor is located on the left side of the machine.

Setting the drive chain

✓ The machine has been shut down and secured, *see Page 25*.
✓ The side hood on the left side of the machine is open.

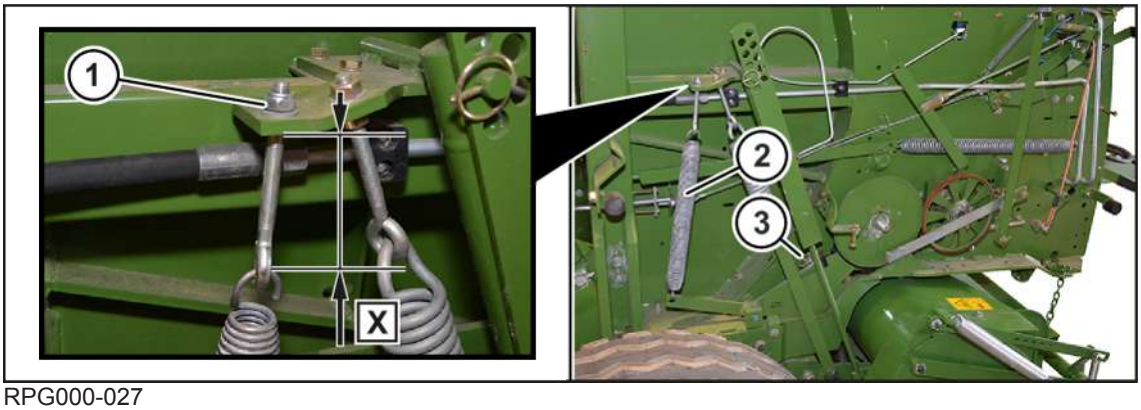
- ▶ To tension the drive chain (1), loosen the screw connection (3) and push the sprocket wheel (2) down in the oblong hole until the drive chain (1) is correctly tensioned.
- ▶ Tighten the screw connection (3).

Oiling the drive chain

- ▶ Wet the drive chain (1) with oil.

Consumables, *see Page 45*.

11.19.3 Drive chain of the rollers



RPG000-027

The drive chain (3) of the rollers is located on the right side of the machine.

When the drive chain (3) is correctly tensioned, the dimension must be approx. **X=55 mm** on the spring (2).

Setting the drive chain

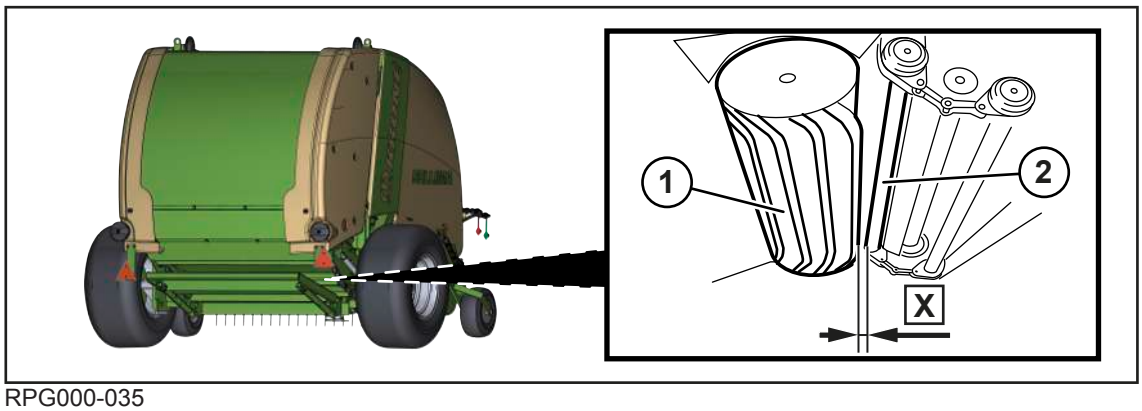
✓ The machine has been shut down and secured, *see Page 25*.
✓ The side hood on the right side of the machine is open.
▶ To tension the drive chain (3), use the counter nut (1) to set the dimension **X=150 mm**.

Oiling the drive chain

▶ Wet the drive chain (3) with oil.

Consumables, *see Page 45*.

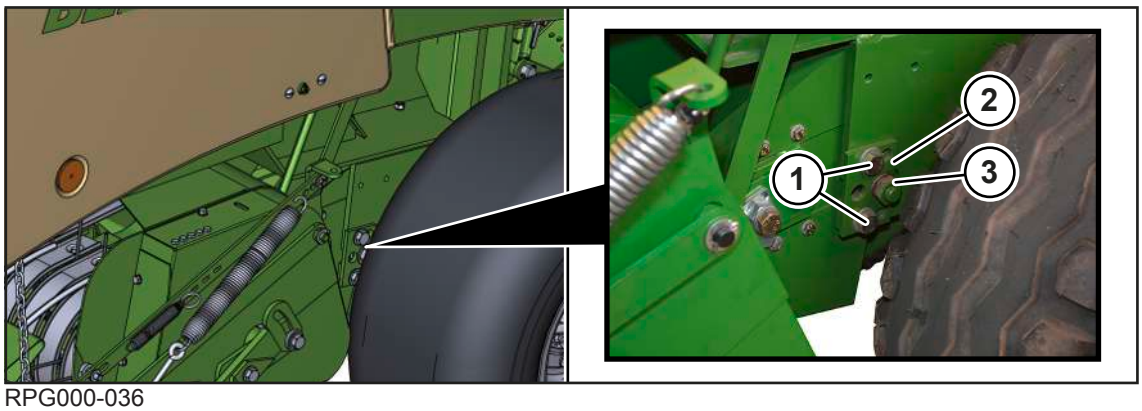
11.20 Check the distance of the roller to the bale formation conveyor chain, set if applicable



RPG000-035

The distance X of the roller (1) to the bale formation conveyor chain (2) must be **greater than 20 mm**. The dimension X can only be check below the machine.

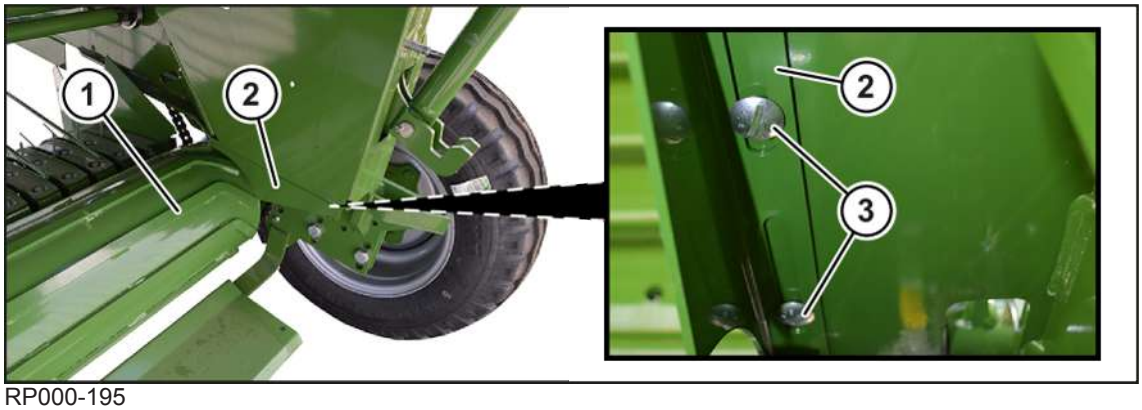
✓ The tailgate is open and secured with the stop cock, *see Page 79*.
✓ The machine has been shut down and secured, *see Page 25*.
▶ Check the dimension X.
➡ If dimension X is **not greater than 20 mm**, the distance between the roller (1) and the bale formation conveyor chain (2) must be set.



RPG000-036

Make the following settings equally on the right-hand and left-hand side of the machine:

- Dismount the nut (3).
- Loosen the screws (1) and move the perforated plate (2) until the correct distance between roller and bale formation conveyor chain is set.
- Tighten the screws (1).
- Mount the nut (3).



RP000-195

If the distance between the roller (1) and the bale formation conveyor chain is changed, the deflector sheets (2) must also be reset on the right and left sides of the machine inside the bale chamber.

The deflector sheets must be positioned close to, but not touching, the roller (1).

Make the following setting on the right and left sides of the machine in the same way:

- Loosen the screws (3) and move the deflector sheet (2) in the oblong hole until the deflector sheet (2) is positioned close to, but not touching, the roller (1).
- Tighten the screws (3).

11.21 Hydraulic diagram

WARNING

Hydraulic hoses are subject to ageing

Hydraulic hoses may wear depending on pressure, heat load and the effect of UV rays. People can be seriously injured or killed by damaged hydraulic hoses.

The date of manufacture appears on the hydraulic hoses. This way the age can be ascertained quickly.

Replacement of the hydraulic hoses is recommended after a lifetime of six years.

- Use original spare parts when replacing hoses.

NOTICE

Damage to the machine due to soiling of the hydraulic system

If foreign objects or liquids get into the hydraulic system, the hydraulic system may be severely damaged.

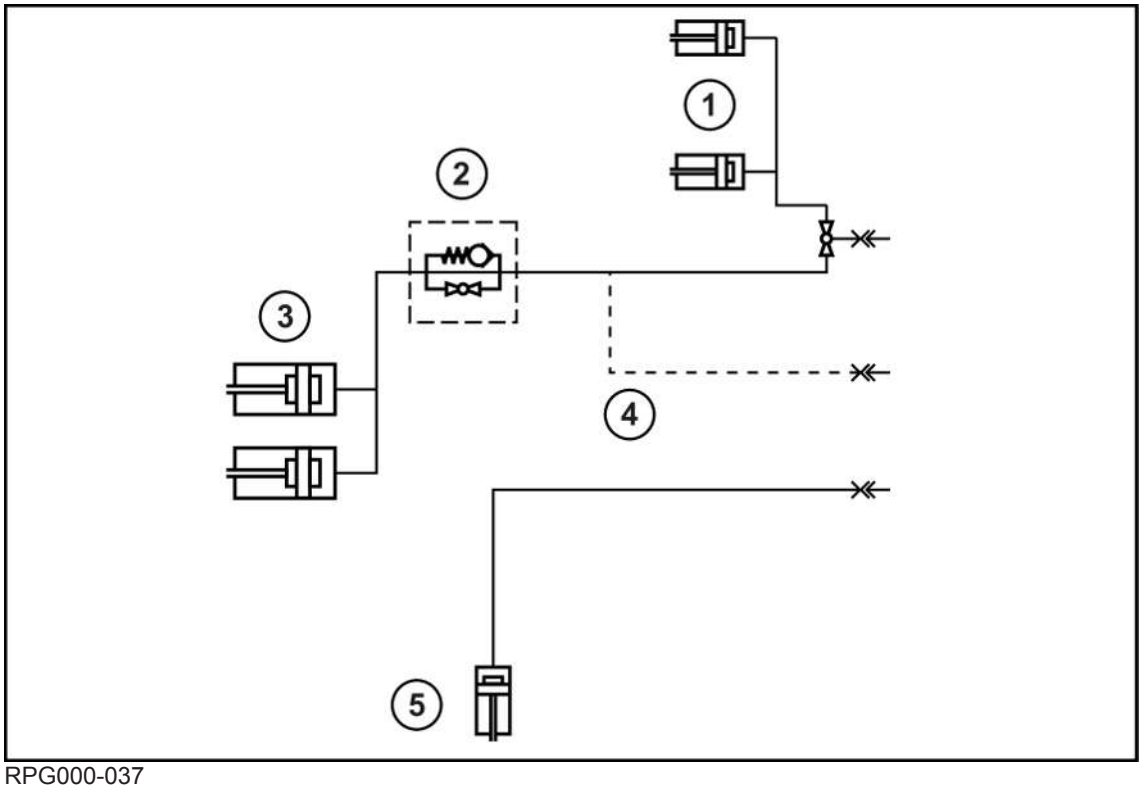
- Clean hydraulic connections and components before removal.
- Seal open hydraulic connections with protective caps.
- Ensure that foreign objects or liquids do not get into the hydraulic system.

NOTICE

Storing and disposing of oils and used oil filters

If oil and used oil filters are not stored and disposed of properly, the environment may be damaged.

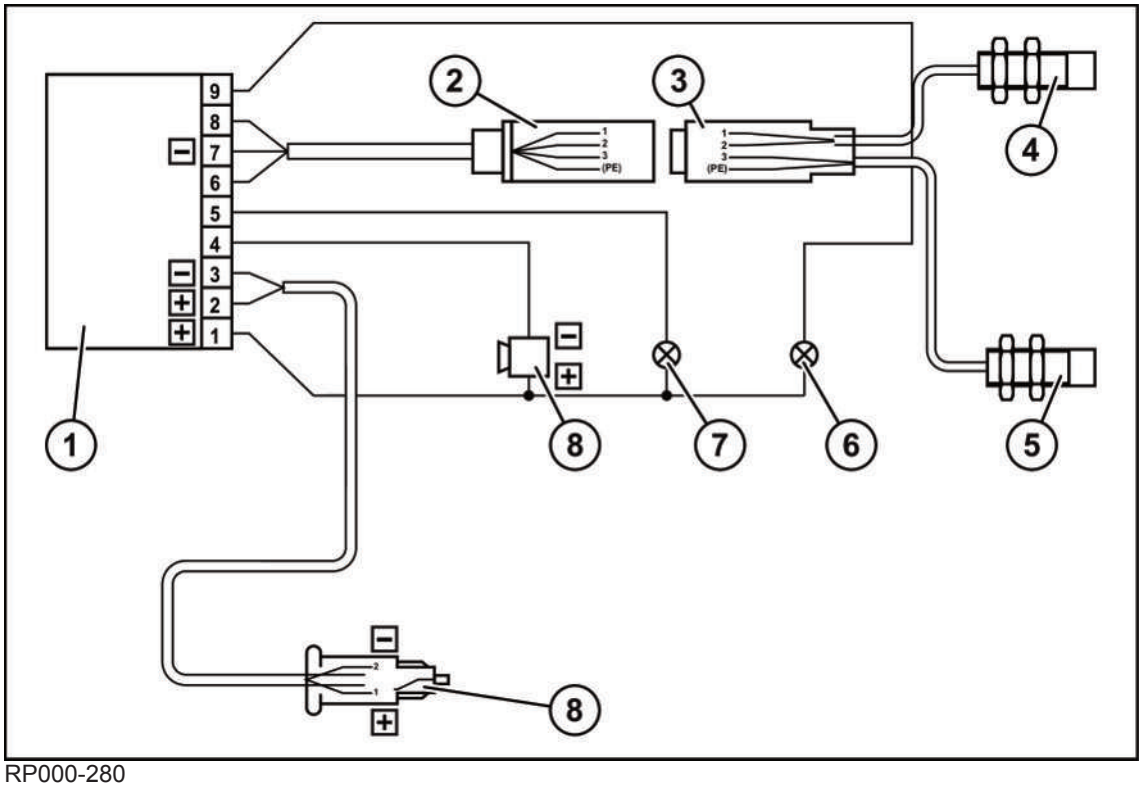
- ► Store or dispose of used oil and oil filters according to statutory provisions.



RPG000-037

1 Hydraulic cylinder pick-up
2 Stop cock tailgate
3 Hydraulic cylinder tailgate
4 Additional hydraulic hose (for version with "hydraulic tie starting device with additional hydraulic hose for pick-up")
5 Hydraulic cylinder tie starting device

11.22 Circuit diagram of the electronic baling pressure indicator



RP000-280

1 Circuit board
2 Plug
3 Bushing
4 Sensor right side
5 Sensor left side
6 Signal lamp right side
7 Signal lamp left side
8 Signal generator
9 Plug (2-pole)

12 Disturbance, cause and remedy

⚠ WARNING

Risk of injury due to non-observance of relevant safety notices

If the relevant safety notices are not observed, persons may get seriously injured or killed.

- To avoid accidents, the basic safety instructions must be read and observed, *see Page 13*.

⚠ WARNING

Risk of injury due to non-observance of safety instructions

If the relevant safety routines are not observed, persons may be seriously injured or killed.

- The safety routines must be read and observed to avoid accidents, *see Page 25*.

12.1 Disturbances at the pick-up or during picking up of crops

Malfunction: The pick-up cannot be lowered.

Possible cause	Remedy
The hydraulic switching valve is in the wrong position.	▶ Set the hydraulic switching valve to pick-up, *see Page 77*.
The relief springs of the pick-up have been set too tightly.	▶ Adjust the relief springs of the pick-up so that only the pick-up is relieved, *see Page 88*.
The working height of the pick-up is set too high that the pick-up cannot be lowered.	▶ Set the working height of the pick-up, *see Page 68*.

Malfunction: There are crop blockages in the intake area.

CAUTION! Machine damage due to crop blockages! Immediately stop, switch off PTO shaft and remove the crop blockages.

Possible cause	Remedy
The swaths are uneven or too large.	▶ Divide the swaths.
The machine height has not been set correctly with respect to the tractor.	▶ Set the machine correctly using the drawbar from the KRONE service partner, *see Page 49*.
The lower holding-down clamp has been set too low.	▶ Set the lower holding-down clamp higher, *see Page 69*.

To remove the crop blockages,*see Page 79*.

Disturbance: Crops fall out during the baling process between the roller and the bale formation conveyor chain.

Possible cause	Remedy
The distance between roller and bale formation conveyor chain is too large.	▶ Shift the roller to reduce the distance, *see Page 121*.
The bale formation conveyor chain is not oiled sufficiently. This increases the gap between roller and bale formation conveyor chain.	▶ Oil the bale formation conveyor chain using a brush.

12.2 Disturbances at the tying unit or during the tying cycle

Malfunction: The net is not transported after tying starts.

Possible cause	Remedy
The drive wheel of the net wrapping device is not pressed against the friction wheel or the freewheel is jammed in the drive wheel.	▶ Adjust the drive wheel and the friction wheel, *see Page 112*. ▶ Make the freewheel move freely.
The net roll has the wrong dimensions.	▶ Only use net rolls with the prescribed dimensions, *see Page 44*.
The net roll has not been correctly inserted into the roll holder.	▶ Correctly insert the net roll, *see Page 75*.
The net has not been correctly inserted.	▶ Insert the net according to the description, *see Page 76*.
The wrapping material brake has not been correctly set.	▶ Adjust the wrapping material brake, *see Page 92*.
There is soiling in front of and on the starter rollers which will cause the net to slip through.	▶ Clean the net wrapping device and the starter rollers.
The bale channel is blocked.	▶ Remove crop blockages, *see Page 79*.

Malfunction: The net is not, or not cleanly, cut.

CAUTION! Risk of injury on sharp parts! Always wear suitable protective gloves when you remove contamination at the cutting unit.

Possible cause	Remedy
The lever of the cutting unit locks the net wrapping.	▶ Unlock the net wrapping, *see Page 64*.
The cutting unit does not drop completely.	▶ Check whether the switching valve has been set to net wrapping, *see Page 93*.
The cutting unit is blunt.	▶ Remove deposits from the cutting unit. ▶ If required, have the cutting unit replaced by a KRONE service partner.

Disturbance: The net stops during activated tying. The net tears after tying starts or during the tying cycle.

CAUTION! Risk of injury on sharp parts! Always wear suitable protective gloves when you remove contamination at the cutting unit.

Possible cause	Remedy
The cutting unit has dropped directly after tying starts.	▶ Check the spring rail for ease of movement and adjust if required, *see Page 113*.
The wrapping material brake has been set too forcefully.	▶ Adjust the wrapping material brake, *see Page 92*.
The cutting unit has been set too deep.	▶ Adjust the cutting unit, *see Page 113*.

Disturbance: The net does not, or not completely, cover one or both of the outer edges.

Possible cause	Remedy
The net is not correctly braked during the tying cycle.	▶ Adjust the wrapping material brake, *see Page 92*.
The net has become caught on the cutting unit.	▶ Adjust the cutting unit, *see Page 113*.
The starter rollers of the tying unit are bent.	▶ Check the tying unit and, if required, have it replaced by a KRONE service partner.

Disturbance: Directly after cutting, the net pulls out forwards between the starter rollers.

Possible cause	Remedy
During the tying cycle, the PTO speed is kept too low.	▶ Carry out tying with a PTO speed of approx. 400 rpm.

Disturbance: During baling, the net pulls out between the starter rollers.

Possible cause	Remedy
The tension springs at the cutting unit have extended or are torn off.	▶ Change the attachment of the tension springs at the cutting unit, or replace them.

12.3 Disturbances at the twine tying unit

With "net wrapping and twine tying" version

Disturbance: The twine is not injected when tying starts.

Possible cause	Remedy
Do not press the friction wheel and the drive wheel together.	▶ Check the setting of the friction wheel and the drive wheel, *see Page 112*.
The O-ring seal on the starting device is defective.	▶ Change the O-ring seal, as the friction wheel must not press on the drive shaft without an O-ring seal, *see Page 132*.
The pressure rolls on the tie starting device are too sluggish.	▶ Slightly loosen the screw on the pressure rolls and retighten, *see Page 132*.
	▶ Oil the bearing positions on the pressure rolls, *see Page 132*.

Disturbance: The twine slips off the edges of the round bale.

Possible cause	Remedy
The twine limiters are not set correctly.	▶ Position the twine limiter at the tying start unit further to the inside, *see Page 89*.
The crop is very dry and crumbly.	▶ Position the twine limiter at the tying start unit further to the inside, *see Page 89*.
	▶ Slow down at the end of the baling process. ▶ Before the start of tying, Have the round bale re-baled without adding crops.

Disturbance: The twine is too far away from the edge of the round bale.

Possible cause	Remedy
The twine limiters are not set correctly.	▶ Position the twine limiter at the tying start unit further to the outside, *see Page 89*.

Disturbance: The twine is not simultaneously cut at the double twine tying system.

Possible cause	Remedy
The cutting edge on the cutting unit is not sharp enough.	▶ Clean and sharpen the blade. The cutting edge must be free of paint.
The position of the blades in the cutting unit is not set correctly.	▶ Adjust the cutting unit, *see Page 112*.
The twine brake is set too slack.	▶ Adjust the twine brake, *see Page 90*.
The pressure rolls on the tie starting device are too sluggish.	▶ Slightly loosen the screw on the pressure rolls and retighten, *see Page 132*.
	▶ Oil the bearing positions on the pressure rolls, *see Page 132*.

Malfunction: The twine guide slide is not entrained during the tying process.

Possible cause	Remedy
The twine tying chain is too slack because the chain tensioner is defective.	▶ Change the chain tensioner.

12.4 Disturbances during or after the baling process

Disturbance: The bale formation conveyor chain knocks against the roller, making loud noises.

Possible cause	Remedy
The bale formation conveyor chain has extended.	▶ Move the roller forward, *see Page 121*.

Disturbance: The bale formation conveyor chain has shortened.

Possible cause	Remedy
The bale formation conveyor chain is soiled and not oiled.	▶ Clean the bale formation conveyor chain and oil it using a brush.

Disturbance: The right-hand baling pressure indicator does not move fully down to the bottom position.

Possible cause	Remedy
The tailgate lock is not fully locked.	▶ Open the tailgate and close it again immediately.
The lock hooks of the tailgate do not snap home.	▶ Check the linkage for smooth running. ▶ Blow off any dirt from the housing. ▶ If necessary, re-tighten the tension springs.
The baling pressure indicators are not set correctly.	▶ Correctly set the baling pressure indicator, *see Page 134*.

Disturbance: The baling pressure indicator does not move up to the top baling pressure range.

Possible cause	Remedy
The pin at the baling pressure indicator does not move out completely.	▶ Blow off any dirt from the housing. ▶ Ensure smooth running of the pin at the baling pressure indicator.
The baling pressure indicators are not set correctly.	▶ Correctly set the baling pressure indicator, *see Page 134*.

Malfunction: The round bale does not roll, or only slowly, out of the bale chamber.

Possible cause	Remedy
The sides have been filled too high.	▶ Make narrower swaths, *see Page 61*. ▶ Do not drive too far to the side.
The baling pressure is too high.	▶ Reduce the baling pressure, *see Page 94*.

Malfunction: The tailgate cannot be completely closed.

Possible cause	Remedy
The stop cock for the tailgate is closed.	▶ Open the stop cock, *see Page 79*.

Malfunction: The tailgate cannot be opened.

Possible cause	Remedy
The hydraulic hose line for "Opening/closing tailgate and moving pick-up into transport/ working position has not been correctly connected.	▶ Connect the hydraulic hose line for "Opening/closing tailgate and moving pick-up into transport/working position, *see Page 58*.

Malfunction: The round bale is conically shaped.

Possible cause	Remedy
The bale chamber is filled on one side.	▶ Fill the bale chamber evenly, *see Page 61*.
Net wrapping: The number of net layers is too low.	▶ Increase the number of net layers, *see Page 91*.
The wrapping material is torn.	▶ Use only wrapping material of the designated quality. KRONE recommends one of the "KRONE excellent" products, see label on the machine with the number 27 016 326 *.

Disturbance: The diameters on the left-hand and right-hand side of the round bale differ.

Possible cause	Remedy
The distance between the roll pin in the locking lever and lock hook is too large.	▶ Correct the setting at the locking lever, *see Page 133*.
The hydraulic cylinder at the tailgate locking is defective.	▶ Have the hydraulic cylinder replaced by a KRONE service partner.

Malfunction: The round bale is barrel-shaped. This causes the wrapping material to tear open in the middle.

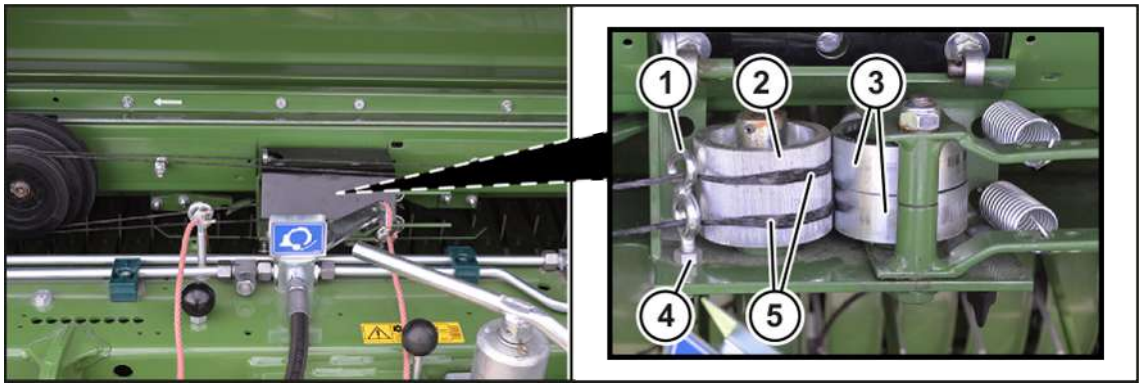
Possible cause	Remedy
The bale chamber is filled unevenly.	▶ Drive over the swath on alternate sides, *see Page 61*.
The number of layers of wrapping material is too low.	▶ Increase the number of layers. Twine tying: *see Page 89*. Net wrapping: *see Page 91*.

Disturbance: Too much crops material remains on the bale ejector. On bale ejection, this crops material is ejected together with the bale.

Possible cause	Remedy
The setting of the bale ejector is too low.	▶ Set the bale ejector higher, *see Page 95*.

12.5 Setting the twine guide at the starter roll

With "net wrapping and twine tying" version



RP000-188

If the twine is not received or the twine coil is basically not working, the twine guide must be checked and adjusted on the starter roll.

The 2 twines (5) must run in the centre of the respective pressure roll (3) on the starter roll (2) (as shown).

✓ The machine has been shut down and secured, *see Page 25*.

▶ Loosen the counter nuts (4) on the double eyelet bolt (1).

▶ Adjust the height of the double eyelet bolt (1) so that both twines run in the centre of the respective pressure roll (3) on the starter roll (2).

▶ Adjust the inclination of the double eyelet bolt so that the twines (5) lie against both sides of the eyelets.

▶ Tighten the counter nuts (4).

12.6 Setting the cutting unit of the twine tying unit

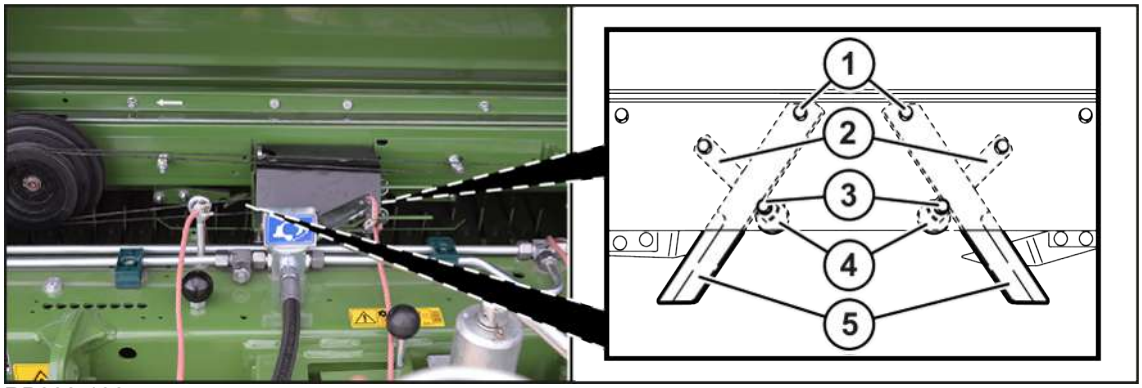
With "net wrapping and twine tying" version

⚠ WARNING

Risk of injury due to sharp blades on the cutting unit of the tying unit

When inserting the wrapping material or working in the area of the cutting unit of the tying unit, there is a risk of injury to the fingers and hands.

- When inserting the wrapping material and when working in the area of the cutting unit, wear suitable protective gloves.
- When working in the area of the cutting unit, work particularly carefully and prudently.



RP000-190

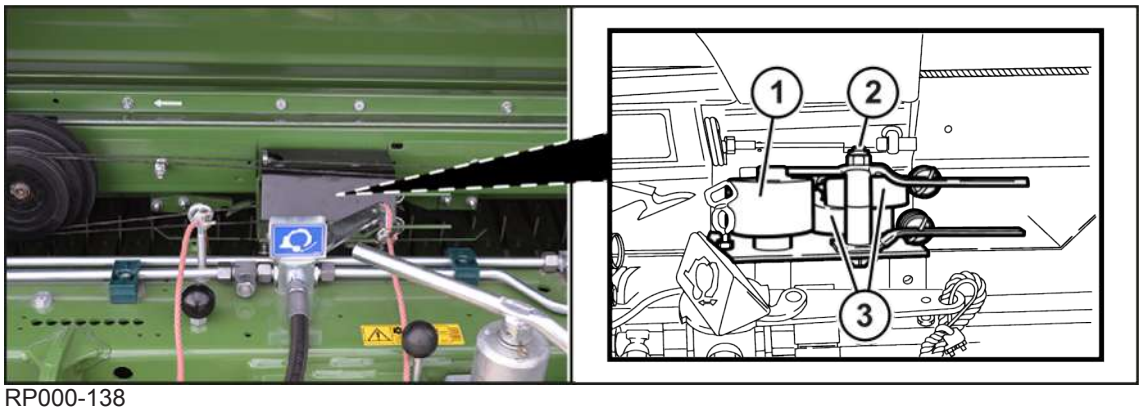
If the two twines are not cut off simultaneously at the cutting unit, you can change the position of the cutter blades (5). To do so, the cutter blade (5) which cuts the twine too late must be positioned further outwards.

✓ The cutting unit has been cleaned, *see Page 112*.
✓ The machine has been shut down and secured, *see Page 25*.

- Loosen the respective screw (3) at the blade guide (2).
- Move the respective eccentric (4) to the desired position.
- Tighten the respective screw (3).

12.7 Checking and adjusting the starter roll and the pressure rolls

With "net wrapping and twine tying" version



RP000-138

✓ The machine has been shut down and secured, *see Page 25*.

▶ Rotate the starter roll (1) slightly in order to check whether the pressure rolls (3) rotate easily.

If the pressure rolls (3) do not rotate easily:

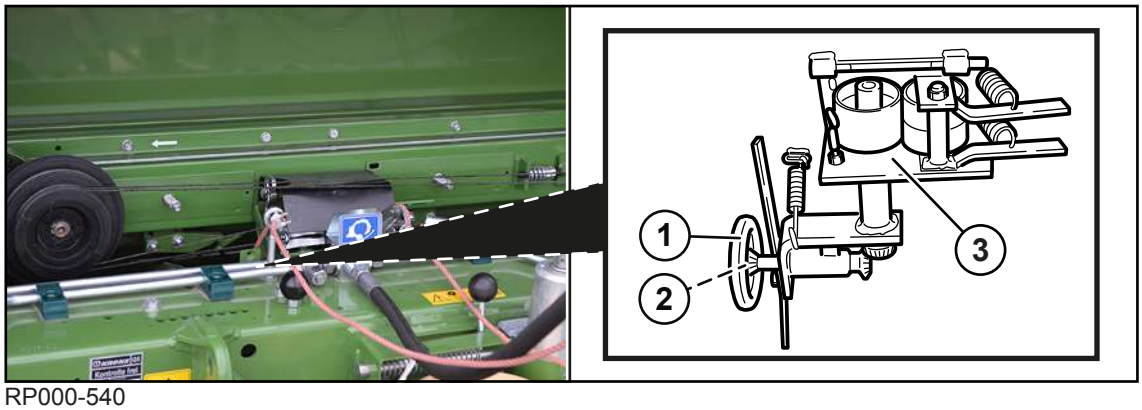
▶ Push a screwdriver between drive roll (1) and pressure rolls (3) and lightly move it from left to right.

▶ If necessary, loosen the screw connection (2) and oil the bearing positions.

12.8 Changing O-ring seal on the twine coil starting device

With "net wrapping and twine tying" version

If the O-ring seal on the twine coil starting device is defective, the twine will not be injected when tying starts. The O-ring seal must be changed.



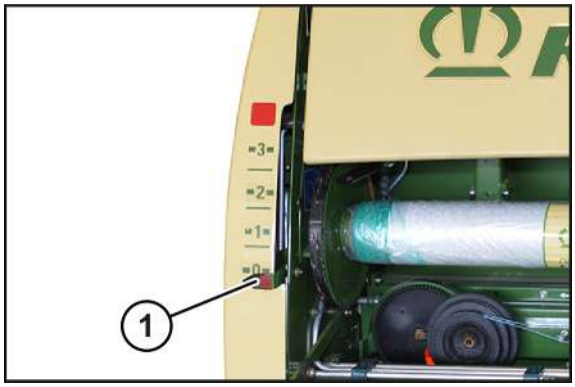
RP000-540

✓ The twine tying starting device (2) has been dismounted, *see Page 74*.

✓ The machine has been shut down and secured, *see Page 25*.

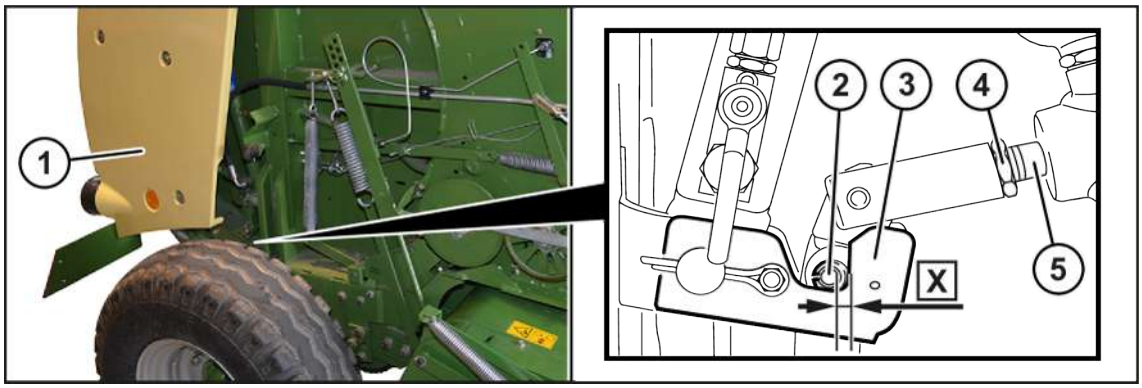
▶ Dismount the O-ring (2) from the friction wheel (1) and replace with a new O-ring.

12.9 Setting the tailgate lock



RPG000-039

The tailgate is correctly locked when the bale pressure indicator (1) on the right and left sides of the machine is below position "0" when the bale chamber is empty.



RPPG000-040

When the baling pressure indicator on the right-hand side of the machine is not below position "0" and/or the tailgate fails to open and close correctly, the dimensions X and Y at the tailgate lock must be adjusted.

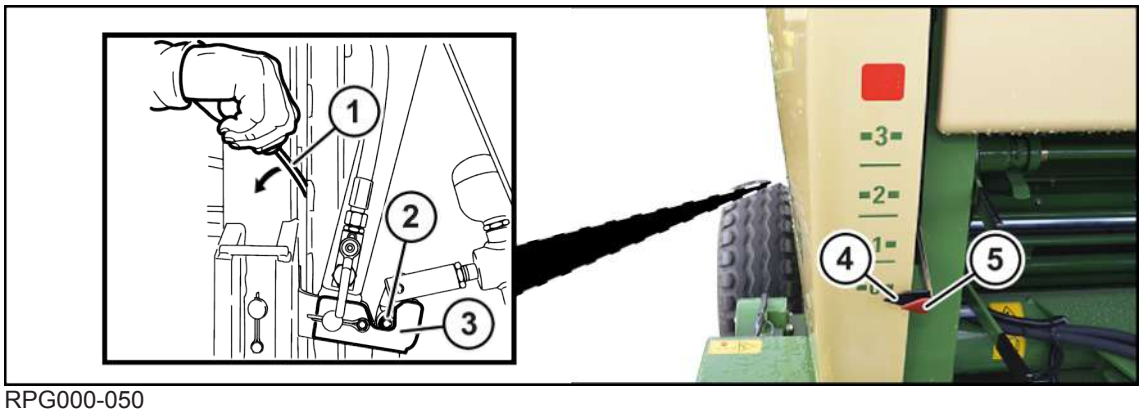
✓ The machine has been shut down and secured, *see Page 25*.
✓ The tailgate is closed.

Make the following setting on the right and left sides of the machine in the same way:

- ▶ Dismount the rear side guard (1).
- ▶ Check the dimension X between the roll pin (2) and the lock hook (3).
  - ⇨ If the dimension is **X=5-7 mm**, the setting is correct.
  - ⇨ If the dimension is not **X=5-7 mm**, the tailgate lock must be set.
- ▶ To set the tailgate lock, loosen the counter nut (4) and turn the piston rod (5) until the dimension **X=5-7 mm**.

12.10 Setting the mechanical baling pressure indicator

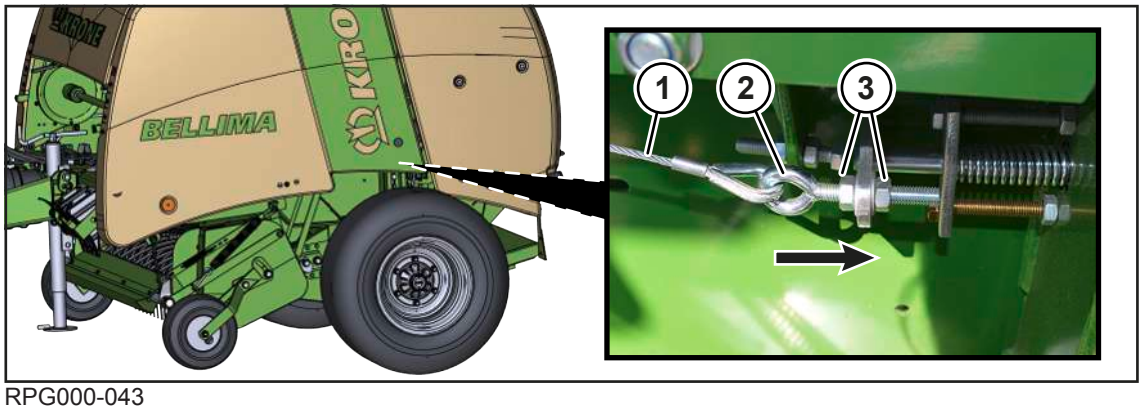
With the bale chamber empty and the tailgate closed, mechanical baling pressure indicators are not in "0" position



RPG000-050

If the baling pressure indicators (4) and (5) do not exactly overlap, or if the red baling pressure indicator (5) is not in position "0", the baling pressure indicators must be readjusted. This setting must be checked and adjusted equally on the right and left side of the machine.

- ✓ The tailgate is closed.
- ✓ The respective side guard on the right or left side of the machine is open.
- ✓ The machine has been shut down and secured, *see Page 25*.
- ▶ Insert a mounting lever (1) in the gap between tailgate and frame.
- ▶ Push the tailgate to the rear until the lock hook (3) rests against the roll pin (2).

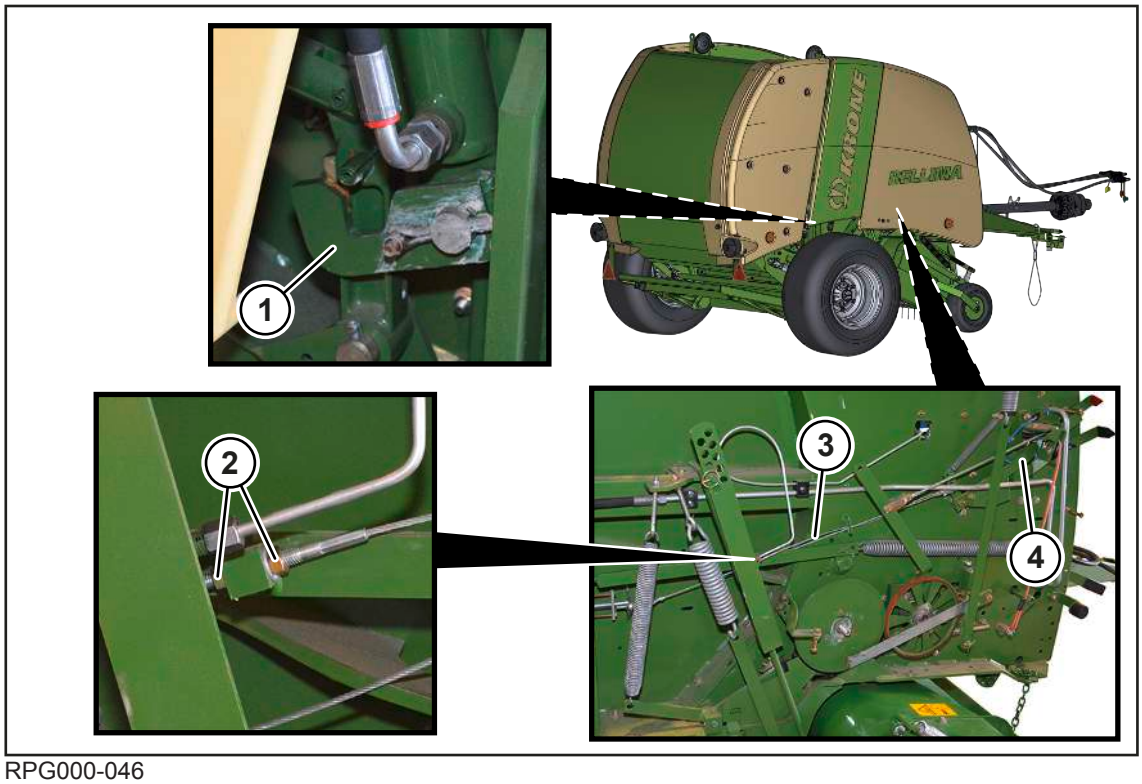


RPG000-043

The pictured tensioning device is located on the left-hand as well as on the right-hand machine side, depending on the baling pressure indicator to be aligned.

- ✓ The respective side guard on the right-hand or left-hand machine side is open.
- ▶ Loosen the nuts (3).
- ▶ To tension the wire rope (1), move the eyelet bolt (2) in direction of the arrow until the respective baling pressure indicator is in the correct position.
- ▶ Tighten the nuts (2).

With the bale chamber full and the tailgate not yet closed, mechanical baling pressure indicators are not in position "3"



RPG000-046

When the lock hook (1) of the tailgate is in its bottom-most position while the bale chamber is full (as illustrated) while the tailgate is still closed, the right-hand baling pressure indicator (4) must be in position "3".

When the right baling pressure indicator is not in position "3":

✓ The right-hand side hood is open.
✓ The machine has been shut down and secured, *see Page 25*.

▶ Loosen the nuts (2) and turn them until the baling pressure indicator is in position "3".

▶ Tighten the nuts (2) against each other.

12.11 Car jack contact points

⚠ *WARNING*

Risk of injury due to raised machine

There is danger to persons when the machine drops or parts swing without control. Only qualified personnel are allowed to perform this work.

▶ Use only permitted hoists and slings with a sufficient load-bearing capacity. For the weights *see Page 43*.

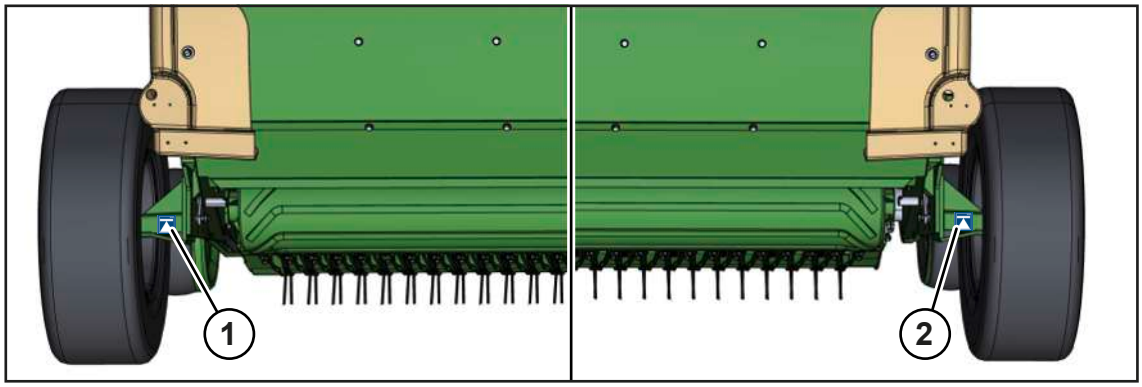
▶ Note the information on the suspension points provided.

▶ Make sure the lifting means are properly secured.

▶ Never stay under the suspended machine.

▶ If work has to be performed under the machine, securely support the machine, *see Page 25*.

The car jacking points are located on the left and right on the single axle and are marked with a label.



RPG000-177

1 Car jack contact point at rear left

2 Car jack contact point at rear right

13 Waste disposal

After the service life of the machine has expired, the individual components of the machine must be disposed of properly. The currently applicable country-specific waste disposal guidelines and the relevant laws must be observed.

Metal parts

- All metal parts must be taken to a metal recycling centre.
- Before scrapping, remove operating fluids and lubricants (e.g. gear oil, oil from the hydraulic system) from the components.
- The operating fluids and lubricants must be taken separately to an environmentally friendly disposal point or recycling centre.

Operating fluids and lubricants

- Operating fluids and lubricants (e.g. diesel fuel, coolant, gearbox oil, oil from hydraulic system) must be taken to a waste oil disposal point.

Synthetic materials

- All synthetic materials must be taken to a recycling centre for synthetic materials.

Rubber

- All rubber parts (e.g. hoses, tyres) must be taken to a rubber recycling centre.

Electronic components

- All electronic components must be taken to a disposal point for electronic scrap.

14 Declaration of conformity

UKCA Declaration of Conformity

We

KRONE Agriculture SE

Heinrich-Krone-Straße 10, D-48480 Spelle

hereby declare, as manufacturer of the product named below, under our sole responsibility, that the

Machine: Round baler
Series: Bellima F 130

to which this declaration refers is in compliance with the following relevant provisions of:

- Supply of Machinery (Safety) Regulations 2008, 2008 No. 1597
- Electromagnetic Compatibility Regulations 2016, 2016 No. 1091

The signing Managing Director is authorised to compile the technical documents.

Jan Horstmann
(Managing Director, Design & Development)

Spelle, 04/08/2021

Year of manufacture:

Machine no.:

Importer and authorised representative:
Krone UK Ltd.
Phoenix Avenue
Micklefield, Leeds LS25 4DY

KRONE

THE POWER OF GREEN

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