Original operating instructions

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RP701-10

Round baler

Comprima F 125

From machine number: 1078089

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Information for enquiries and orders

Type	
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:

RP701-10 (Comprima F 125)
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 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.krone.de.

1.3 Applicable documents

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

- Operating instructions for universal shaft
- Operating instructions for operation unit/terminal
- Operating instructions for camera system (for version with "net wrapping and chamber film wrapping")
- AUX joystick operating instructions
- Circuit diagram, KRONE
- Spare parts list, KRONE

1.4 Target group of this document

This document aims at the operator of the machine who fulfills the minimum requirements of personnel qualification,*see Page 15*.

1.5 How to use this document

1.5.1 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 10*. (**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.

1.5.2 Information on direction

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

1.5.3 Term “machine”

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

1.5.4 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.

1.5.5 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.

1.5.6 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.

Notes 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 label is provided with an order number and can be ordered directly from the manufacturer or from the authorized specialist dealer.

1.5.7 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		
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

Size	SI units (metric)		Factor	Inch-pound units	
	Unit name	Abbrevi-ation		Unit name	Abbrevi-ation
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	cm^3	0.0610	Cubic inch	in^3
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 15*, 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 15*.

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 14* 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 14*
- 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 42*.
- ▶ 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 58*
- 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 58*.

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 27*.

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 27*.
- 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 226*.
- 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 46*.

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 27*. 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 27*. 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 27*.

▶ 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 markings 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.
- After each 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 29*.

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 174*.

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 175*.

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.

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 175*
- Before parking: Shut down and safeguard the machine, *see Page 27*.

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 48*.

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 46*.

- ▶ 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 compressor unit

Damaged compressed-air hoses of compressor unit can tear off. Hoses moving in an uncontrolled manner can cause severe injuries.

- ▶ Contact a specialist workshop immediately if you suspect that the compressor unit is damaged.
- ▶ Shut down and safeguard the machine, *see Page 27*.

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 27*.
- ▶ If it is suspected that hydraulic hoses are damaged, immediately contact a service centre, *see Page 225*.

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 27*.

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 27*.
- ▶ 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 27*.
- ▶ 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 27*.
- ▶ 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 46*.
- ▶ When mounting the wheels, mount the wheel nuts with the specified tightening torque, *see Page 203*.

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 27*.
- 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 27*.
- Shut down and safeguard the machine, *see Page 27*.
- Observe the intervals for oil level check, oil and filter element changes, *see Page 193*.
- Use only the oil grades/oil quantities specified in the consumables table, *see Page 48*.
- 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 22*.

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 27*.
- Shut down and secure the machine, *see Page 27*.
- Cordon off the danger zone of the actuated moving machine parts in a clearly visible manner.

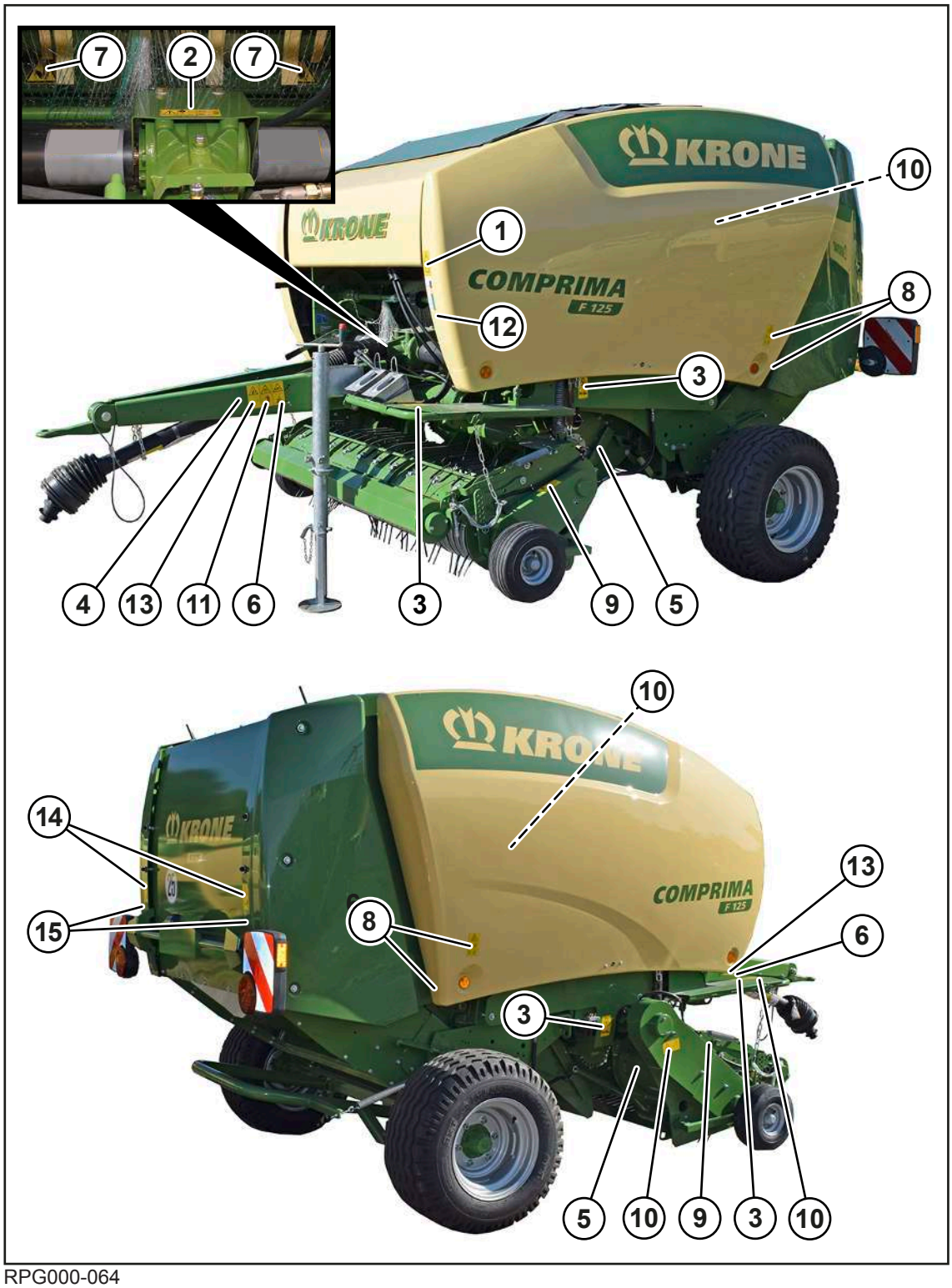
- Ensure that there is nobody in the danger zone of the actuated moving machine parts.
- Switch on the ignition.
- The actuator test must only be performed from a safe position outside the area that is affected by machine parts moved by the actuators.

2.6 Safety labels on the machine

Every safety label is provided with an order number and can be ordered directly from the authorised KRONE dealer. Immediately replace missing, damaged and unrecognisable safety labels.

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

Position and meaning of safety labels



RPG000-064

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

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. Order no. 942 196 1 (4x)

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. Order no. 942 196 1 (1x) for "Hydraulic support jack" version

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.

5. Order no. 942 196 1 (2x) for version "Drop floor of feed rotor"

	**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.

6. 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.

7. Ord. no. 939 125 1 (2x)

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

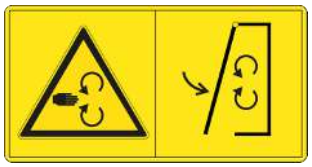
8. Ord. no. 27 014 371 0 (4x)

	**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.

9. 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.

10. Ord. no. 942 002 4 (4x)

	**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.

11. 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.

12. Ord. no. 27 017 775 0 (1x)

	**Danger due to incorrect setting** Risk of accident due to incorrect brake setting. ▶ When driving on public roads, ensure that full load (1/1) is set on the brake force regulator.

13. 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.

14. 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.

15. 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.

2.7 Information labels on the machine

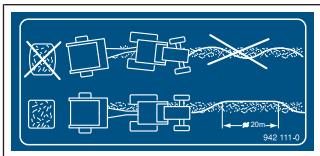
Each information label has an order number. You can order the labels directly from your KRONE dealer. Replace missing, damaged and illegible information labels immediately.

Prior to attaching an information label, ensure that the contact surface on the machine is clean and free of dirt, oil and grease so that the label can adhere to properly.

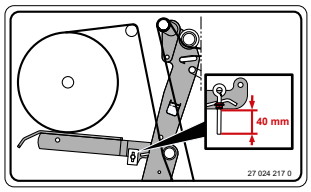
Location and meaning of the information labels

RPG000-204

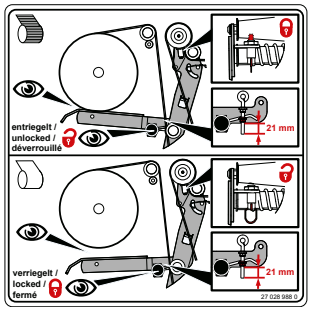
1. Ord. no. 942 111 0 (1x)

	This label shows the optimal way to fill the bale chamber in order to obtain an evenly shaped round bale, *see Page 76*.

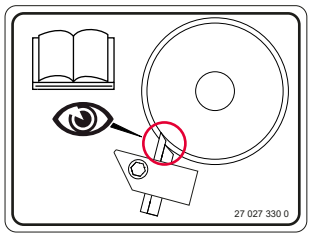
2. Order no. 27 024 217 0 (1x) for "Net wrapping" version

	The label tells you how the wrapping material brake is adjusted, *see Page 185*.

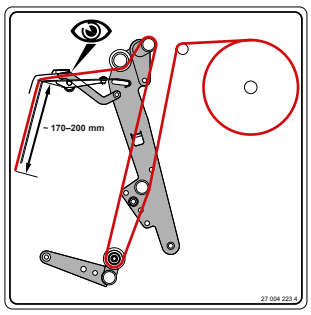
3. Order no. 27 028 988 0 (1x) for "Net and chamber film wrapping" version

	The label tells you how the wrapping material brake is adjusted. There are differences whether machine tying is with net or with film, *see Page 186*.

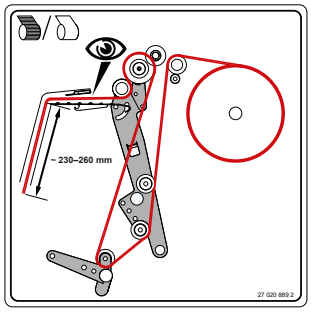
4. Order no. 27 027 330 0 (1x) for "Net and chamber film wrapping" version

	The scraper to the spiral roller must be checked and adjusted at regular intervals, *see Page 209*.

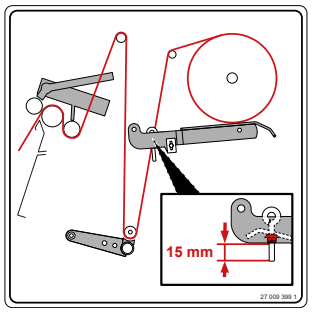
5. Order no. 27 004 223 4 (1x) for "Net wrapping" version

	The label shows how to load the net in the machine, *see Page 92*.

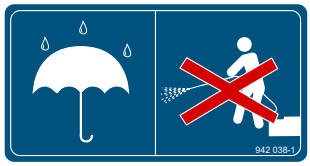
6. Order no. 27 020 889 2 (1x) for "Net and chamber film wrapping" version

	The label tells you how to load the wrapping and tying material in the machine, *see Page 94*.

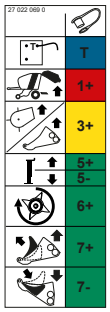
7. Ord. no. 27 009 399 1 (1x)

	**For certain countries only** The label shows how to load the net in the machine.

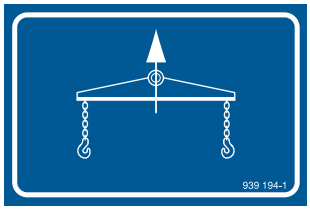
8. Ord. no. 942 038 1 (2x)

	Areas marked with this label shall be protected against splashing water. Never direct the water jet of a high-pressure cleaner at bearings and electric/electronic components.

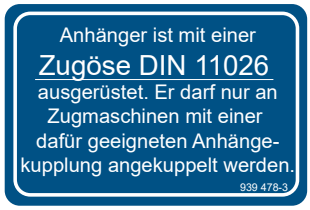
9. Ord. no. 27 022 069 0 (1x)

	The label shows the possible hydraulic connections of the machine. For additional information about connecting the hydraulic hoses *see Page 60*.

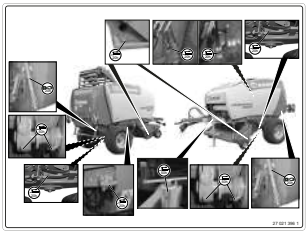
10. Ord. no. 939 194 1 (1x)

	Use a load beam when the machine is lifted, *see Page 179*.

11. Order no. 939 478 3 (1x) for "Drawbar eye top" version

	The trailer is equipped with a drawbar eye to DIN 11026. It may only be coupled to tractors with a suitable tow coupling.

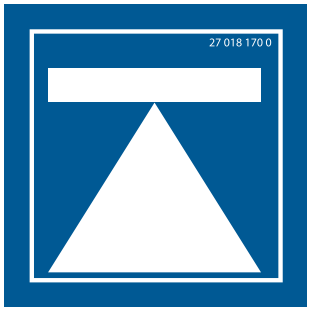
12. Ord. no. 27 021 396 1 (1x)

	The label shows the lubrication points on the machine which must be lubricated in the specified maintenance intervals, *see Page 196*.

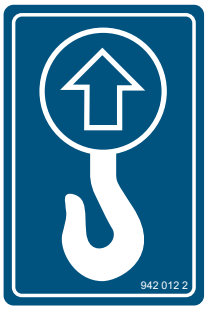
- Ord. no. 27 021 260 0

	There are several lubrication points on the machine which must be lubricated at regular intervals, *see Page 196*. Lubrication points that are not directly visible are additionally marked with this information label.

- Ord. no. 27 018 170 0

	There are jacking points on the machine that are identified with this label, *see Page 235*.

- Order no. 942 012 2

	The lifting points on the machine are marked with this label, *see Page 179*.

- Ord. no. 27 023 958 0

	There are lashing points on the machine that are identified with this label, *see Page 180*.

2.8 Safety equipment

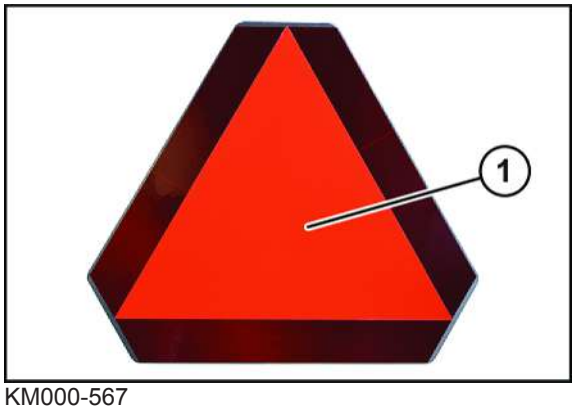
RPG000-067

Pos.	Designation	Explanation
1	Parking brake (country-specific)	• The parking brake is used to secure the machine from unintentionally rolling away, *see Page 82*. • The additional safety cable applies the parking brake if the machine breaks away from the tractor while it is driving, *see Page 82*. • In order to prevent the machine from rolling away, also use the wheel chocks, *see Page 83*.
2	Safety chain	• The safety chain is used for the additional protection of trailed machines in case they become unhitched during transport, *see Page 63*. • 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.

Pos.	Designation	Explanation
3.1	Overload protection universal shaft	• The overload protection guards the tractor and the machine from load peaks, *see Page 42*.
3.2	Pick-up overload protection	• The overload protection guards the tractor and the machine from load peaks, *see Page 42*.
4	Wheel chocks	• The wheel chocks secure the machine against rolling away. 2 wheel chocks are affixed to the machine, *see Page 83*. • **For version with "Parking brake":** In order to prevent the machine from rolling away, use the parking brake in addition to the wheel chocks, *see Page 82*.
5	Support jack	• The support jack is used to keep the machine stable when it is not connected to the tractor, *see Page 79*.
6 (depending on country version)	SMV emblem	• The Slow-Moving Vehicle emblem may be attached to slow-moving machines or vehicles, *see Page 40*. 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.
7	Stop cock tailgate	• The tailgate stop cock is a safety component which prevents the tailgate from unintentionally closing, *see Page 81*.

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.

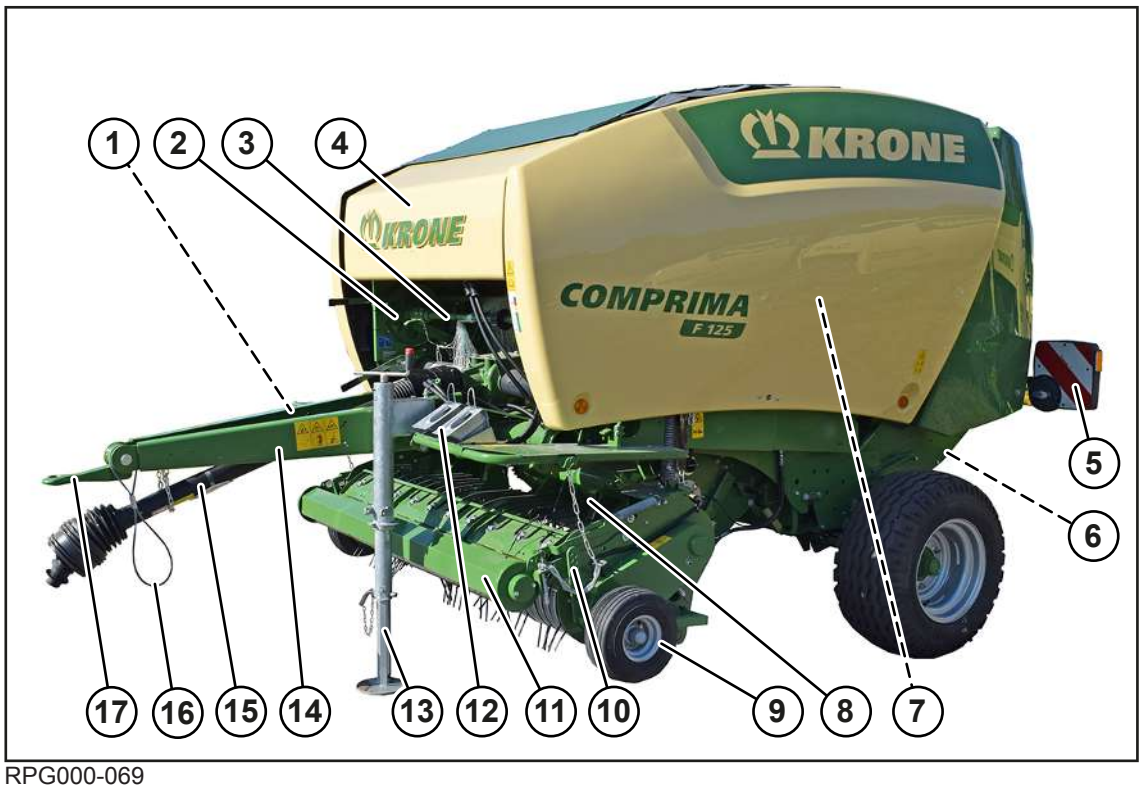
For service activities (e.g. repair services, service processes, warranty cases, quality assurance), employees of the service network (including manufacturer) can use special diagnostic units to read this technical information from the event and error data memories. If necessary, you can obtain further 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



RPG000-069

1 Hose and cable support
2 Wrapping material brake
3 Wrapping material
4 Storage compartment
5 Road travel lighting
6 Bale ejector
7 Document storage tube
8 Feed rotor
9 Guide wheel
10 Pick-up
11 Crop press roller unit
12 Wheel chocks
13 Support jack
14 Drawbar
15 Universal shaft
16 Catch loop
17 Drawbar eye

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 27*.
- ▶ Remedy the malfunction, *see Page 226*.

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 212*.

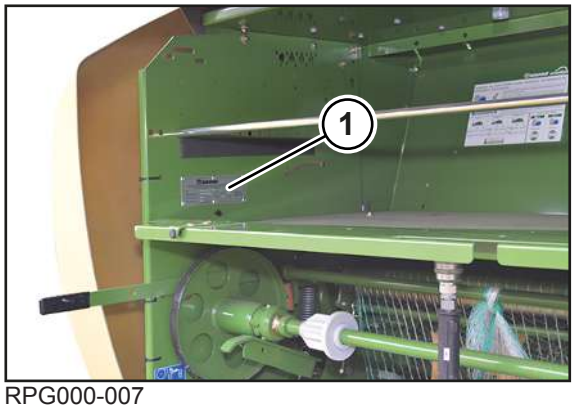
Pick-up drive

To prevent an overload, there is a cam clutch on the pick-up drive. This cam clutch has been set at the factory and must not be adjusted without consulting your KRONE service partner.

4.3 Identification plate

INFO

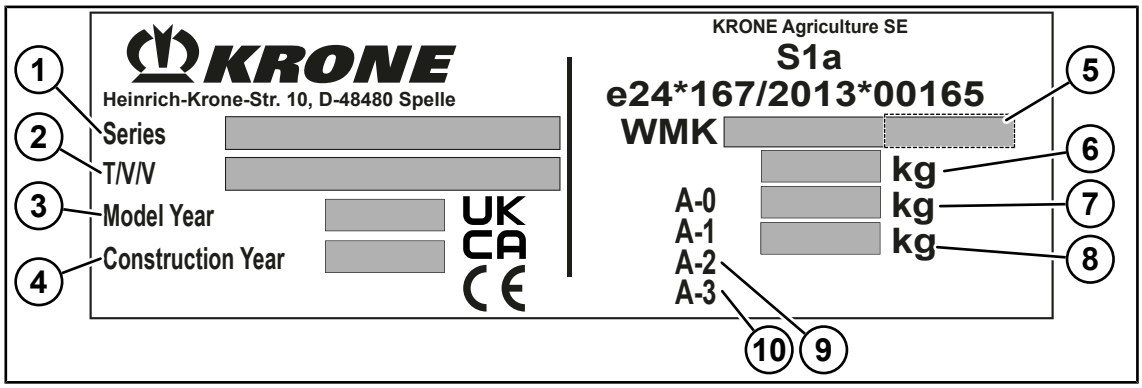
The entire identification plate represents a legal document and should not be altered or rendered illegible!



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.

Information for enquiries and orders



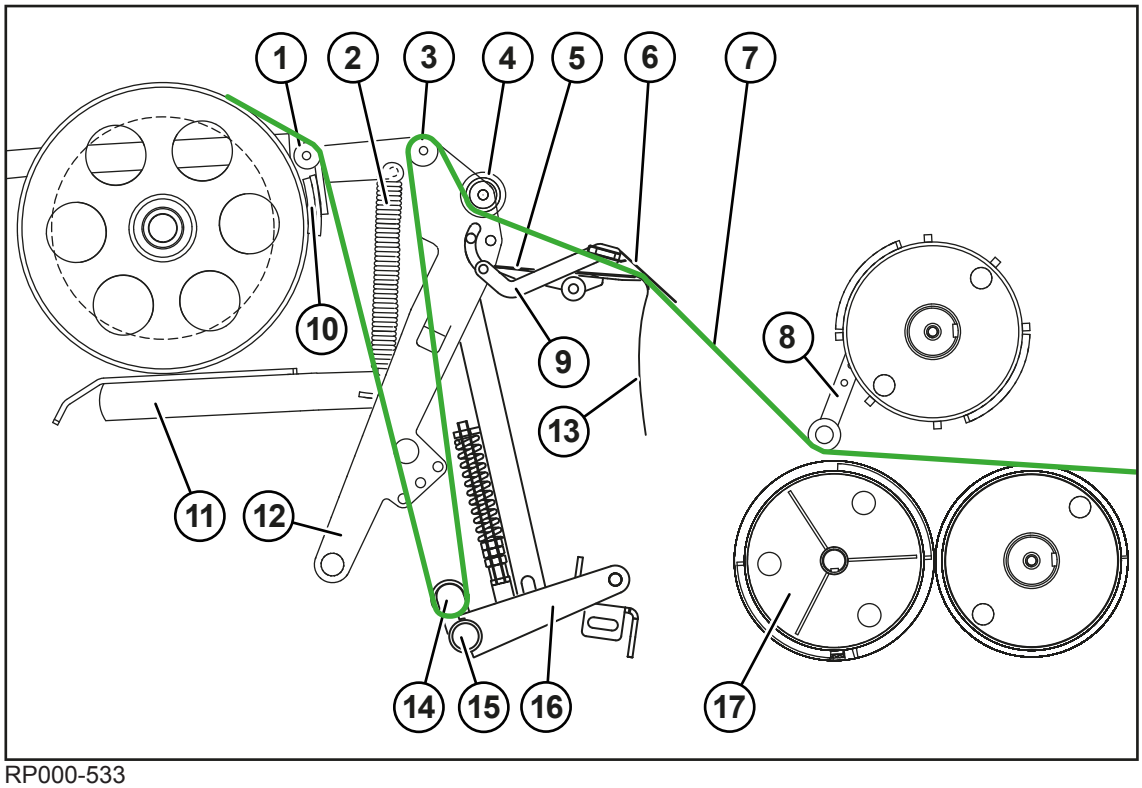
DVG000-004

Example image

1 Series
2 Type/variant/version (T/V/V)
3 Model year
4 Year of manufacture
5 Vehicle identification number (the last 7 digits)
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)

For inquiries about the machine and for ordering spare parts, please specify series (1), vehicle identification number (5) and year of manufacture (4) of the specific machine. 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.

4.4 Function description net wrapping

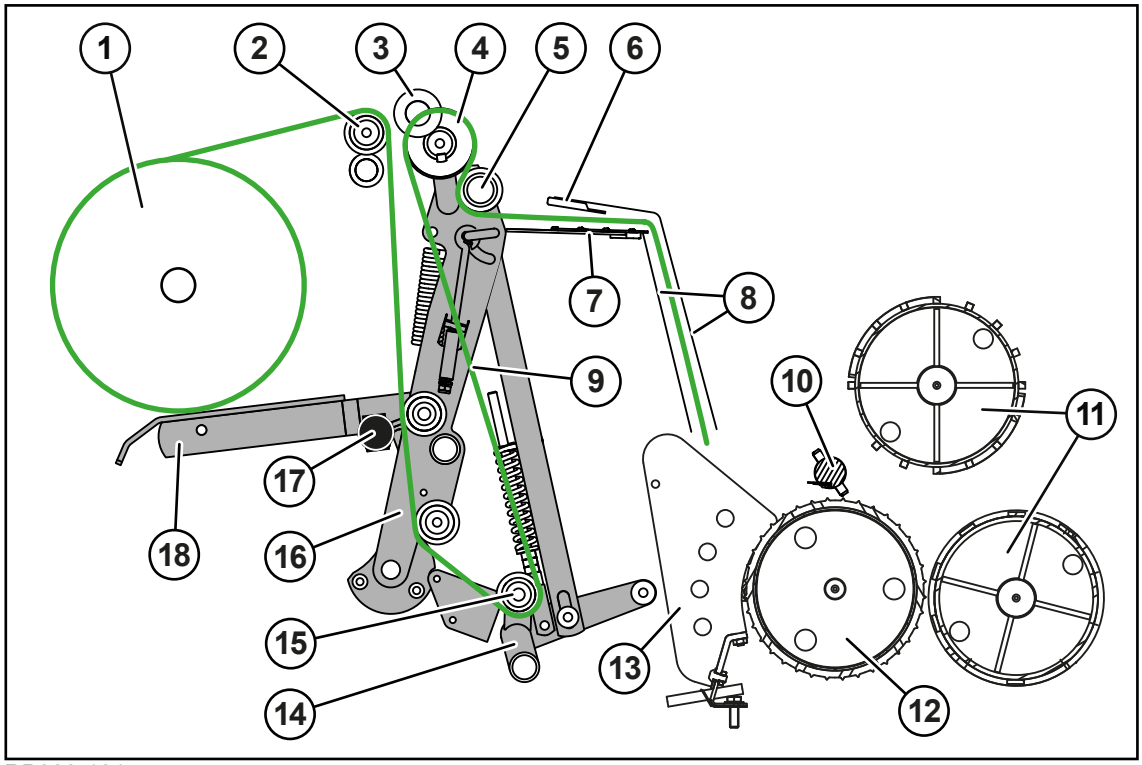


RP000-533

1	Deflection shaft	10	Wrapping material brake
2	Spring of the wrapping material brake	11	Tension lever
3	Spreading bracket	12	Feed rocker arm
4	Spreading roller	13	Plastic guide
5	Retaining sheet	14	Deflection roll on the cross tube
6	Synthetic cloth	15	Deflection tube on the cross tube
7	Path of net	16	Cross tube
8	Cutting unit	17	Feed roller
9	Retaining bracket		

When tying is started, the feed rocker arm (12) guides the net onto the feed roller (16). The feed roller (16) guides the net between the compression rollers to the round bale and pulls it off the round bale. When the tying cycle of the set number of net layers is complete, the cutting unit (8) swings over the net and cuts the net.

4.5 Function description net and chamber film wrapping



RP000-181

1 Net or film roll
2 Deflection roll
3 Pressure axis with foam wadding
4 Conical roller
5 Spreading roll
6 Synthetic cloth
7 Retaining sheet
8 Feed strips
9 Wrapping material path of net or film
10 Cutting unit
11 Compression rollers
12 Feed roller
13 Feed unit
14 Spreading bracket
15 Deflection roll on the cross tube
16 Feed rocker arm
17 Spherical button for locking the tension lever
18 Tension lever

When tying is started, the feed rocker arm (16) guides the wrapping material (net or film) via the feed unit (13) onto the feed roller (12). The feed roller (12) guides the wrapping material (net or film) between the compression rollers (11) to the round bale and pulls it off the round bale. When the tying cycle of the set number of net or film layers is complete, the cutting unit (10) swings over the wrapping material (net or film) and cuts the wrapping material (net or film).

5 Technical data

5.1 Dimensions

Dimensions	
Width [W] depending on tyres	2,541–2,700 mm
Height [H] (with standard tyres)	2,650 mm
Length [L]	4,700 mm
Working width [X]	2,150 mm

5.2 Weights

Weights	
Weights	See information on the type plate, *see Page 43*.

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)	72.8 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		3.2 bar	
Single axle			
15.0/55-17 (standard tyres)	1.5 bar	3.6 bars	2.6 bar

Tyre designation	Minimum pressure V_{max}=10 km/h	Maximum pressure	Recommended tyre pressure[1]
500/50-17	1.5 bar	2.8 bars	2.0 bar
500/55-20	1.5 bar	3.0 bars	1.5 bar
500/60-R22.5	1.5 bar	3.0 bars	1.5 bar
600/50-R22.5	1.5 bar	4.0 bars	1.5 bars
Tandem axle			
15.0/55-17	1.5 bar	3.6 bars	1.5 bar
500/50-17	1.5 bar	2.8 bars	1.5 bar
500/55-20	1.5 bar	3.0 bars	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 1,250 mm

5.9 Net wrapping and tying material

Net wrapping and tying material	
Net width	1,300 mm
Tear resistance	260 ... 320 kgf
Diameter of the net roll	ø max. 310 mm
Diameter of the sleeve	ø 75-80 mm
Length of the sleeve	1,250-1,330 mm

5.10 Film wrapping and tying material

Film wrapping and tying material	
Film width	1,280 mm
Film thickness	16 ... 20 µm
Pre-stretching	10 %
Diameter of the film roll	ø 225 mm (2,000 m roll)
Diameter of the sleeve	ø 77,3 mm
Length of the sleeve	1,295 mm

5.11 Requirements for tractor - power

Requirements for tractor - power	
Tractor power	36 kW (50 HP)
PTO speed	540 rpm
PTO shaft end	1 3/8"; Z=6

5.12 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 support jack" Double-acting hydraulic connection	1x

5.13 Requirements for tractor – electrics

Requirements for tractor – electrics	
Road travel lighting	12 volt, 7-pin socket
DS 100 operation unit power supply	12 volt, 9-pin socket
DS 500 operation unit power supply	12 volt, 9-pin socket
CCI 800/CCI 1200 terminal power supply	12 volt, 9-pin socket
ISOBUS	12 volt, 9-pin socket

5.14 Requirements for tractor – brake system

Requirements for tractor – brake system	
Compressed-air connection for "Compressed-air brake" version	2x
Maximum operating pressure for "Hydraulic brake" version	100 bar

5.15 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.

5.15.1 Oils

Designation	Filling quantity	Specification
T-gearbox main drive	2.00 L	SAE 90 GL4
Central chain lubrication unit	7.00 L	SAE 10W-40

5.15.2 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 196*.

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 16*.

⚠ *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 16*.

⚠ *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 15*.

⚠ *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.

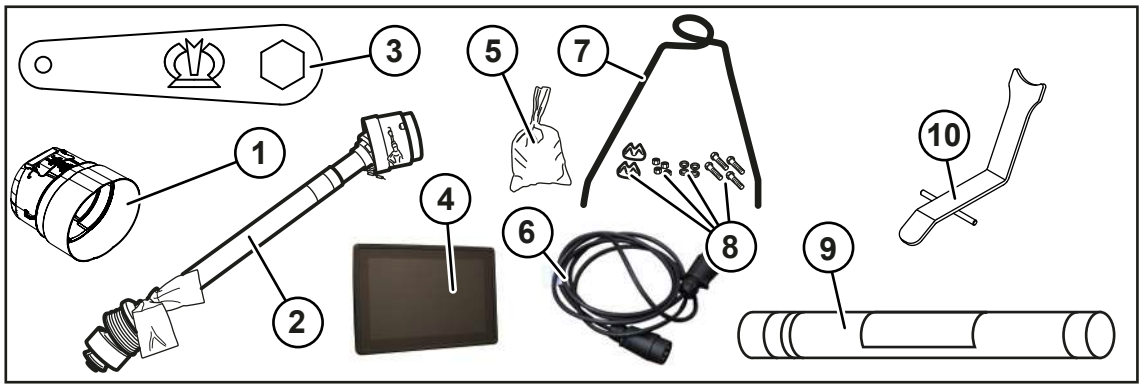
- ▶ The safety routines must be read and observed to avoid accidents, *see Page 27*.

6.1 Checklist for initial operation

- ✓ All screws and nuts are checked for tightness, and are tightened to the specified tightening torques, *see Page 199*.
- ✓ 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 196*.
- ✓ The universal shaft is lubricated, *see Page 199*.
- ✓ The hydraulic system has been checked for leaks.
- ✓ The tractor corresponds to the machine requirements, *see Page 46*.
- ✓ The supplied operating instructions are in the document storage tube.
- ✓ Hose and cable support are mounted, *see Page 51*.
- ✓ The brake disc of the wrapping material brake is prepared, *see Page 52*.
- ✓ The tyres have been checked and the tyre pressure is adjusted correctly, *see Page 203*.
- ✓ The drawbar height is adjusted, *see Page 52*.
- ✓ The length of the universal shaft has been checked and adjusted, *see Page 56*.
- ✓ The protective cap of the universal shaft is mounted, *see Page 54*.
- ✓ The universal shaft is mounted, *see Page 55*.
- ✓ The cable ties, which were mounted to secure the storage box flap and the side hood, were removed.

6.2 Scope of delivery

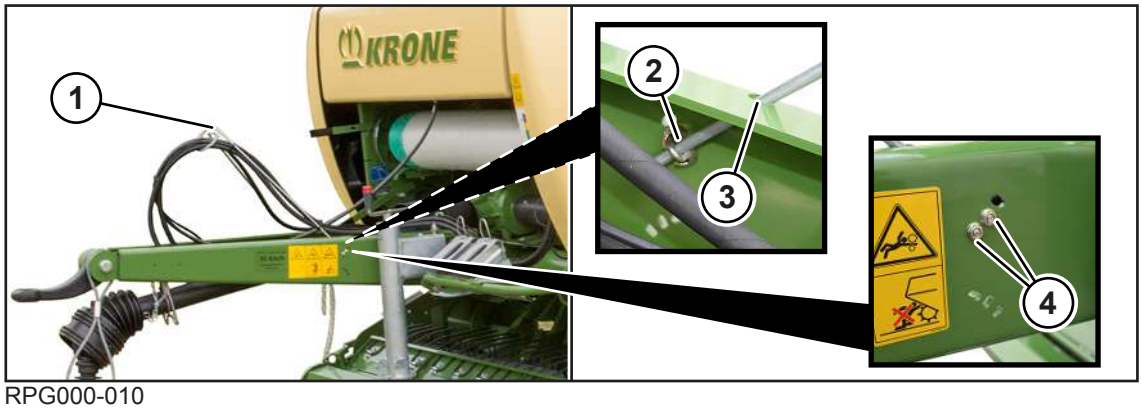
The machine is delivered with the following additional parts which are in the storage compartment, under the machine or on the pick-up.



RPG000-056

1 Protective cap
2 universal shaft
3 Ring spanner
4 Terminal (depending on version)
5 Small parts
6 7-pole connection cable for road travel lighting
7 Hose and cable support
8 Mounting material
9 Test roll KRONE excellent, net for net wrapping
10 universal shaft bracket

6.3 Mounting hose and cable support



RPG000-010

✓ The machine has been shut down and secured, *see Page 27*.

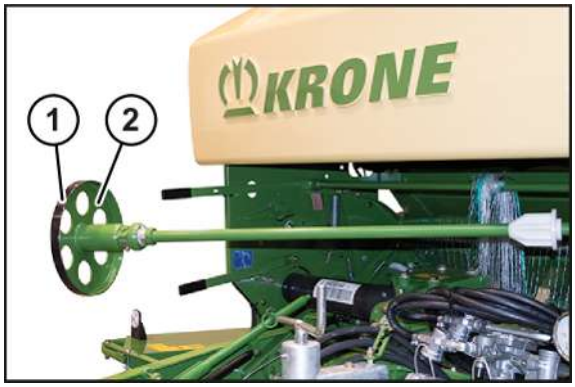
▶ Take the hose and cable holder (1) out of the storage compartment.

▶ 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.

6.4 Preparing the brake disc of the wrapping material brake

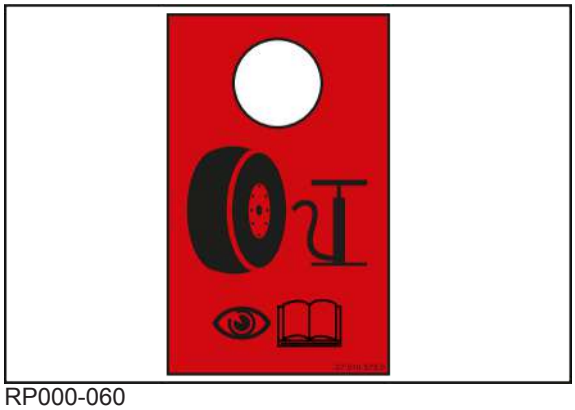


RPG000-011

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

6.5 Checking/adapting the tyre pressure

Before the initial operation, check and adjust the tyre pressure. A label at the PTO shaft end draws the attention to this important test:

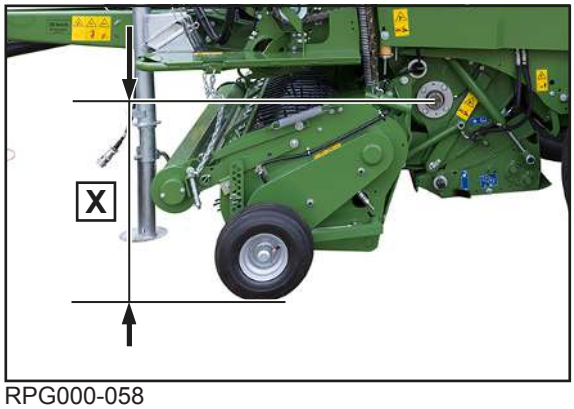

RP000-060

- Checking and adjusting the tyre pressure, *see Page 203*.

6.6 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.



RPG000-058

The height of the drawbar is ideally set if, when the machine is coupled to the tractor, dimension X between the middle of the cutting or feed rotor and the ground is **X=700-750 mm**.

With straw (large swaths), the dimension may deviate: **X=750-800 mm.**

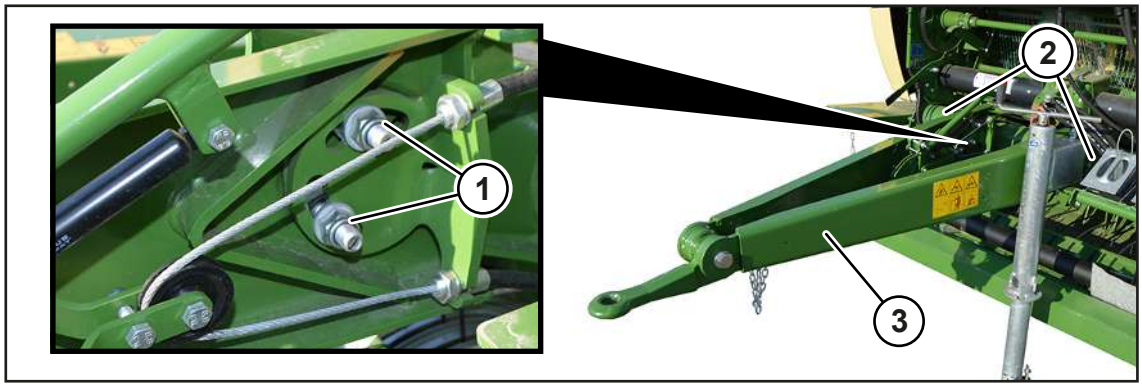
Checking drawbar height

✓ The tyre pressure matches the value in the tyre table, *see Page 46*.

▶ To ensure optimum operating conditions, hitch the machine so that the dimension X matches the aforementioned values.

⇨ If the measured dimension differs from dimension X, adjust the drawbar height as follows.

Adjusting the drawbar height



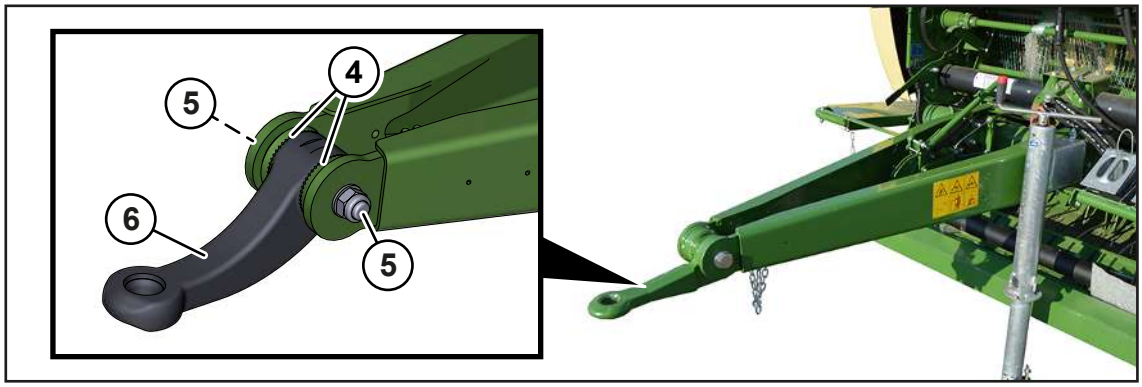
RPG000-087

✓ The machine is disconnected from the tractor and stands on the support jack.

▶ Loosen the screw connections (1) on the right and left sides of the drawbar until the drawbar (3) can be moved in the toothed disc connections (2).

▶ Adjust the drawbar (3) to the height of the tractor hitch.

▶ Ensure that the toothed disc connections (2) mesh.



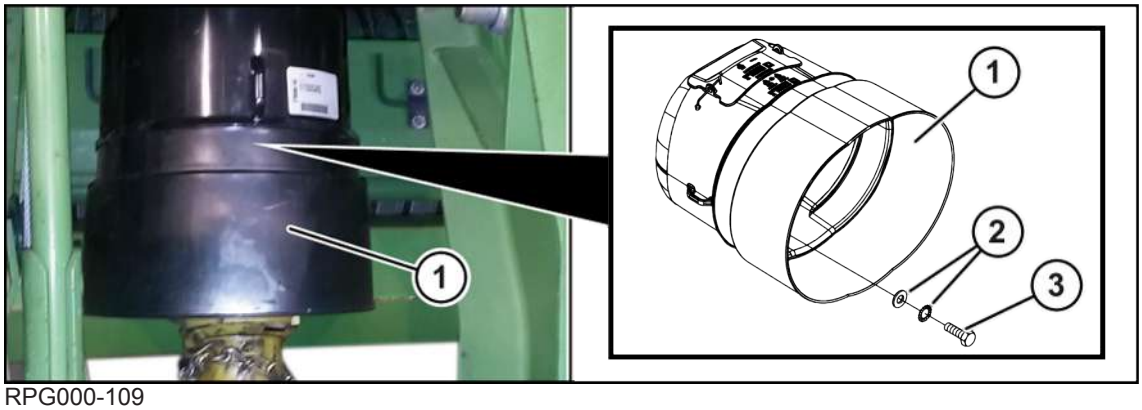
RPG000-136

To adjust the height of the drawbar eye (6):

- Loosen the screw connections (5) until the drawbar (6) can be moved in the toothed disc connections (5).
- Align the drawbar eye (6) parallel to the ground.
- Ensure that the toothed disc connections (5) mesh.
- Tighten the screw connections (1) and (5). Torque, *see Page 199*.
- After 10 operating hours tighten the screw connections (1) and (5).

6.7 Universal shaft

6.7.1 Mounting protective cap of universal shaft

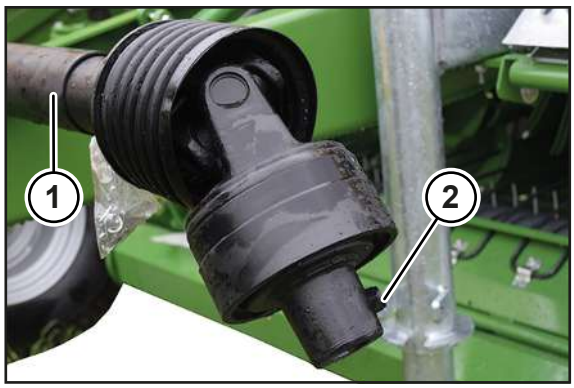


RPG000-109

✓ The machine has been shut down and secured, *see Page 27*.

- 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 199*.

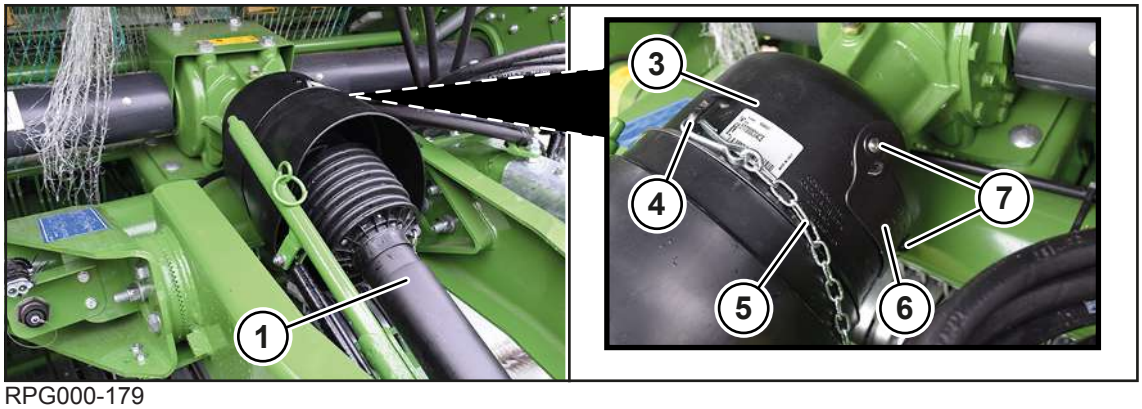
6.7.2 Mounting the universal shaft on the machine



RP000-281

✓ The machine has been shut down and secured, *see Page 27*.
✓ The length of the universal shaft is adjusted to the tractor, *see Page 56*.
✓ The protective cap is mounted, *see Page 54*.

▶ 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.

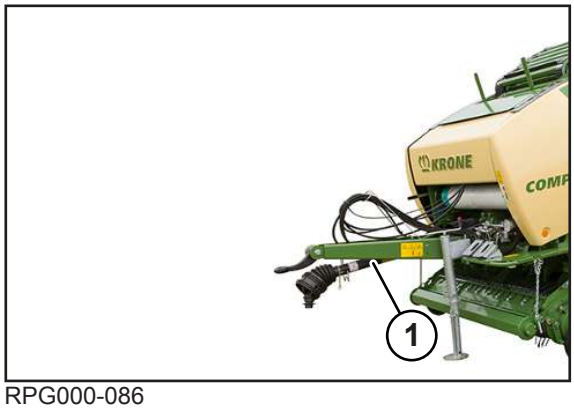
6.7.3 Adjusting the length of the universal shaft

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.



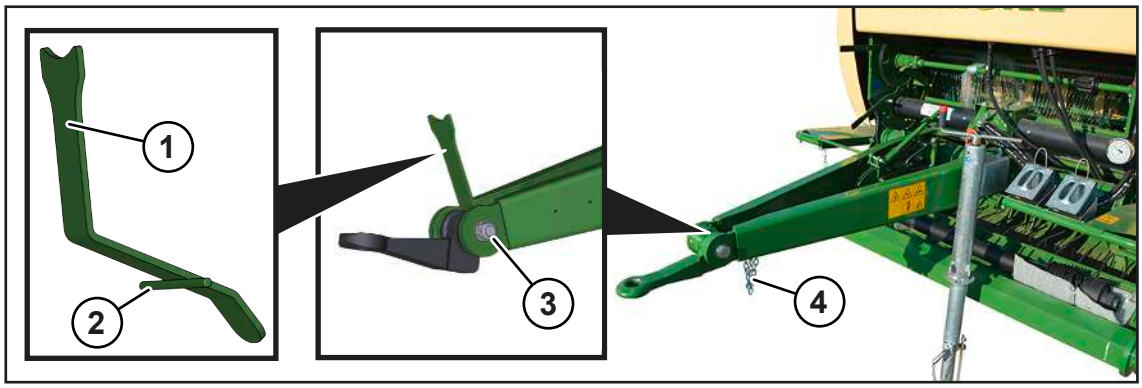
RPG000-086

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.

6.7.4 Mounting universal shaft bracket



RPG000-133

The universal shaft bracket (1) is only required if the drawbar is in the bottom hitching.

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 27*.

✓ The universal shaft chain (4) and the chain holder have been removed.

- Take the universal shaft bracket (1) out of the storage compartment.
- To mount the universal shaft bracket (1), remove the screw connection (3).
- Clamp the ends of the bolt (2) on both sides in the boreholes in the drawbar beams.

NOTE! These are the boreholes of the universal shaft chain which was removed beforehand.

- ▶ Mount the screw connection (3). Torque: *see Page 199*.
- ➡ The universal shaft can be deposited with the bottom hitching of the drawbar on the universal shaft bracket (1), *see Page 176*.

7 Commissioning

⚠ 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 15*.

⚠ 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 27*.

⚠ WARNING

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

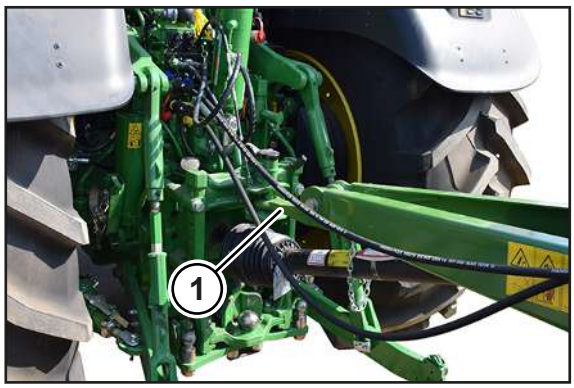
If the connection lines of the machine have been incorrectly connected to the tractor or have been improperly installed, they may pull off or be damaged. This may result in serious accidents. If connection lines are interchanged, functions may inadvertently be actuated which may also result in serious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

For version with "Drawbar eye"

WARNING! Increased risk of injury! Ensure that there is no one between the tractor and the machine while connecting the machine (especially while driving the tractor backwards).

- Reverse the tractor 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 27*.
- Secure the hitching device according to the operating instructions of the tractor manufacturer.

For version with "Ball drawbar eye"

WARNING! Increased risk of injury! Ensure that there is no one between the tractor and the machine while connecting the machine (especially while driving the tractor backwards).

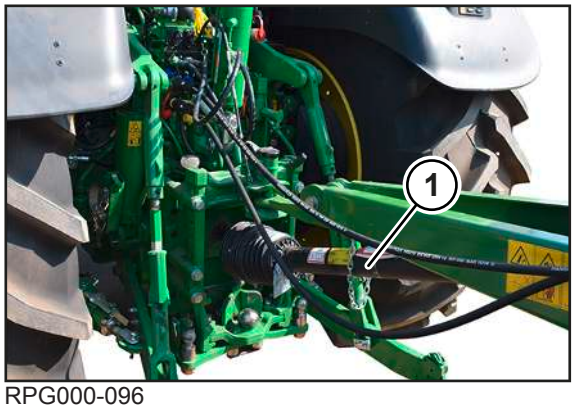
- Drive the tractor backwards onto the drawbar and move the ball-head hitch of the tractor under the ball-head attachment of the machine.
- **For version with "Mechanical support jack":** Lower the drawbar using the support jack until the ball drawbar eye is positioned on the ball-head attachment.
- **For version with "Hydraulic support jack":** Actuate the double-acting control unit (green, 5+) to lower the drawbar using the support jack until the ball drawbar eye is positioned on the ball-head attachment.
- Shut down and safeguard the machine, *see Page 27*.
- 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 19*.

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 27*.



RPG000-096

- Push the universal shaft (1) onto the tractor PTO shaft and secure against turning by attaching the supporting chain in a suitable location.

7.3 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 225* 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.

RPG000-117

Control units which can be locked in neutral position against unintentional operation must be used on the tractor.

To connect the hydraulic hoses (1) correctly, the hydraulic hoses (1) are marked with numbers.

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

Additional explanations of the markings on the handles can be found on the label (2) on the machine.

- ▶ Depressurise the tractor hydraulics.
- ▶ Shut down and safeguard the machine, *see Page 27*.
- ▶ Clean and dry the connections of the hydraulic quick connector.

Opening/closing the hydraulic connection for the tailgate

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

Lifting/lowering the hydraulic connection for pick-up

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

Hydraulic connections for the support jack (for version with "Hydraulic support jack")

- ▶ Connect the hydraulic hose lines (green 5+, green 5-) to a double-acting control unit of the tractor.

Hydraulic connection for the drop floor of feed rotor

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

7.4 Connecting hydraulic brake (export)

A hydraulic brake may be required on the machine to meet country specific standards. A brake valve is required on the tractor for the hydraulic brake. The corresponding hydraulic hose is connected to the brake valve on the tractor. The brake is activated by actuating the brake pedal.

- ✓ The machine has been shut down and secured, *see Page 27*.
- ▶ Connect the hydraulic hose of the hydraulic brake to the connection for the hydraulic brake on the tractor.

7.5 Coupling the hydraulic auxiliary brake

For "hydraulic auxiliary brake" version

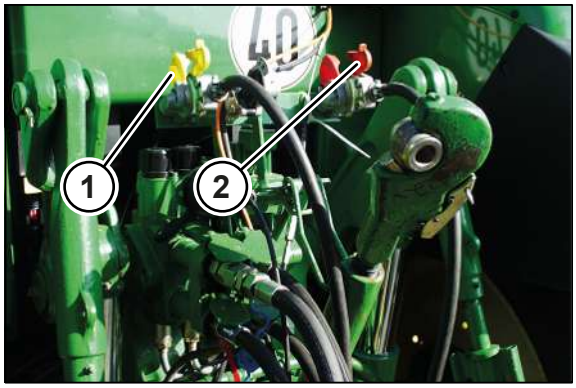
For certain operating conditions it is advisable to install a hydraulic auxiliary brake to machines which normally do not require a separate brake for road transport.

For this an additional single-action control valve is required. The brake is activated by actuating the control valve.

The pressure can be adjusted with the machine's pressure limiting valve. The pressure limiting valve is set to approx. 50 bar.

7.6 Connecting/disconnecting compressed air connections for the compressed air brake

The machine features a dual-line compressed air braking system. The coupling heads are connected to the machine for attachment of the supply line (2) (red coupling head) and brake line (1) (yellow coupling head) of the tractor.



BP000-101

✓ The machine has been shut down and secured, *see Page 27*.

Connecting

Observe the correct order when connecting the compressed air lines.

- Firstly, connect the brake line (1) (yellow coupling head).
- Then connect the supply line (2) (red coupling head).

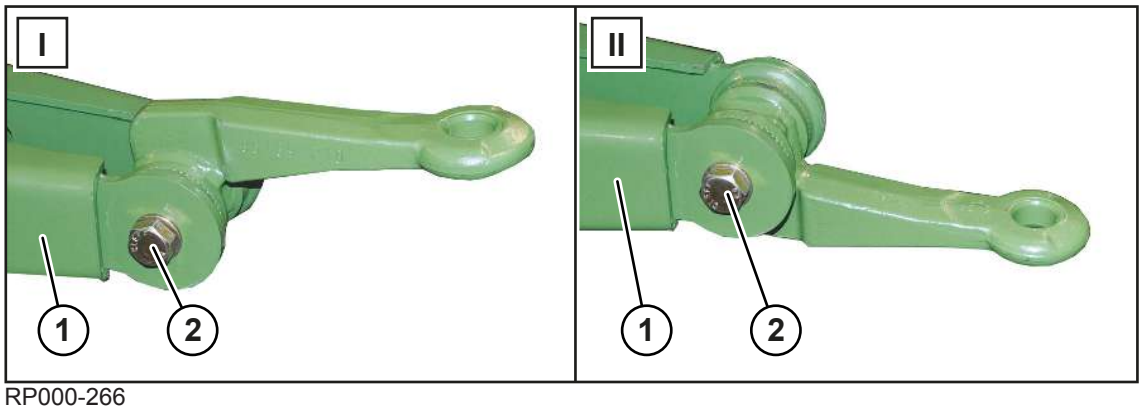
Disconnecting

Observe the correct order when disconnecting the compressed air lines.

- Firstly, disconnect the supply line (2) (red coupling head).
- Then disconnect the brake line (1) (yellow coupling head).

7.7 Adjusting drawbar eye

For "drawbar eye bottom" version



RP000-266

In order to obtain more universal shaft clearance, the drawbar eye can be mounted in position (I) or (II) on the drawbar (1). Only drawbar eyes for version with "Drawbar eye at bottom" can be rotated.

- ▶ Remove the screw connection (2).
- ▶ Rotate the drawbar eye into the desired position (I) or (II) and use the screw connection (2) to mount it on the drawbar (1).
- ▶ Ensure that the toothed disc connections mesh.

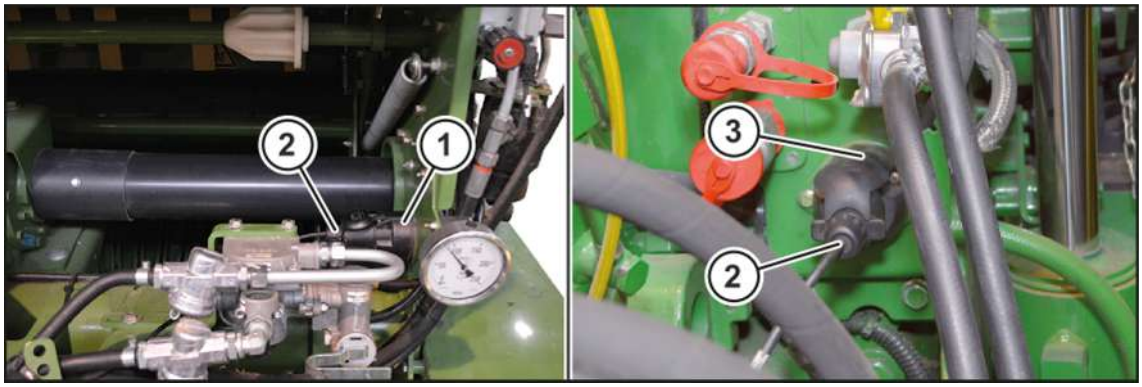
7.8 Connecting the road lighting

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 27*.
- ▶ 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.

7.9 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.

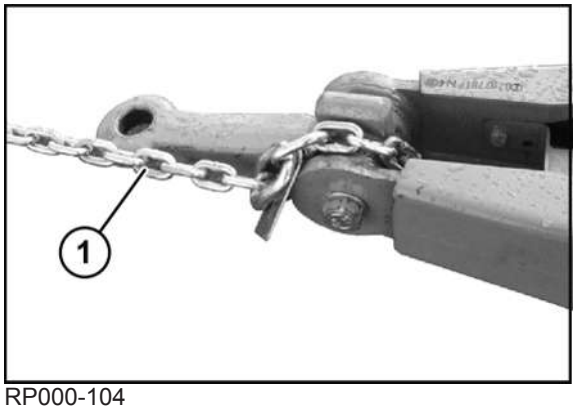
- ▶ Install the safety chain in such a way that, when cornering, it is not tensioned and does not come into contact with the tractor wheels or other parts of the tractor or machine.

INFO

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

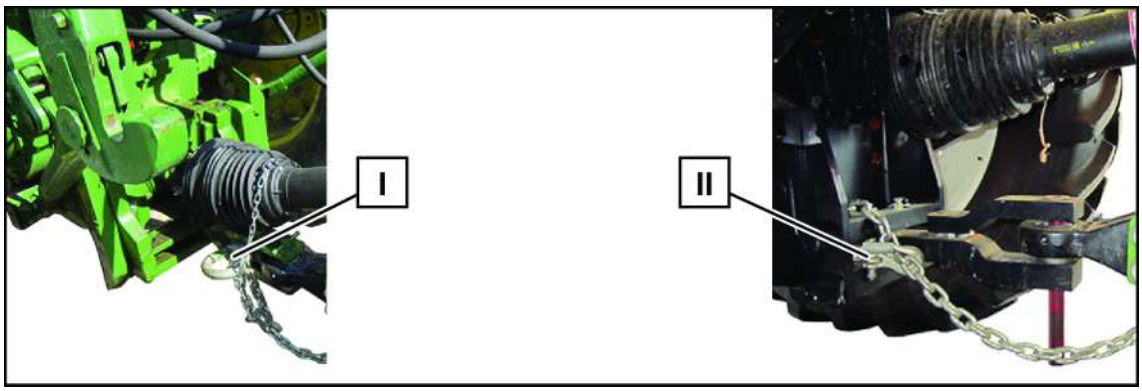
The safety chain serves as an additional safety precaution for trailed devices in case these come loose from the hitch during transport. Attach the safety chain with the respective mounting parts to the hitching device holder of the tractor or to another specified coupling point. The safety chain should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

✓ The machine has been shut down and secured, *see Page 27*.



RP000-104

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



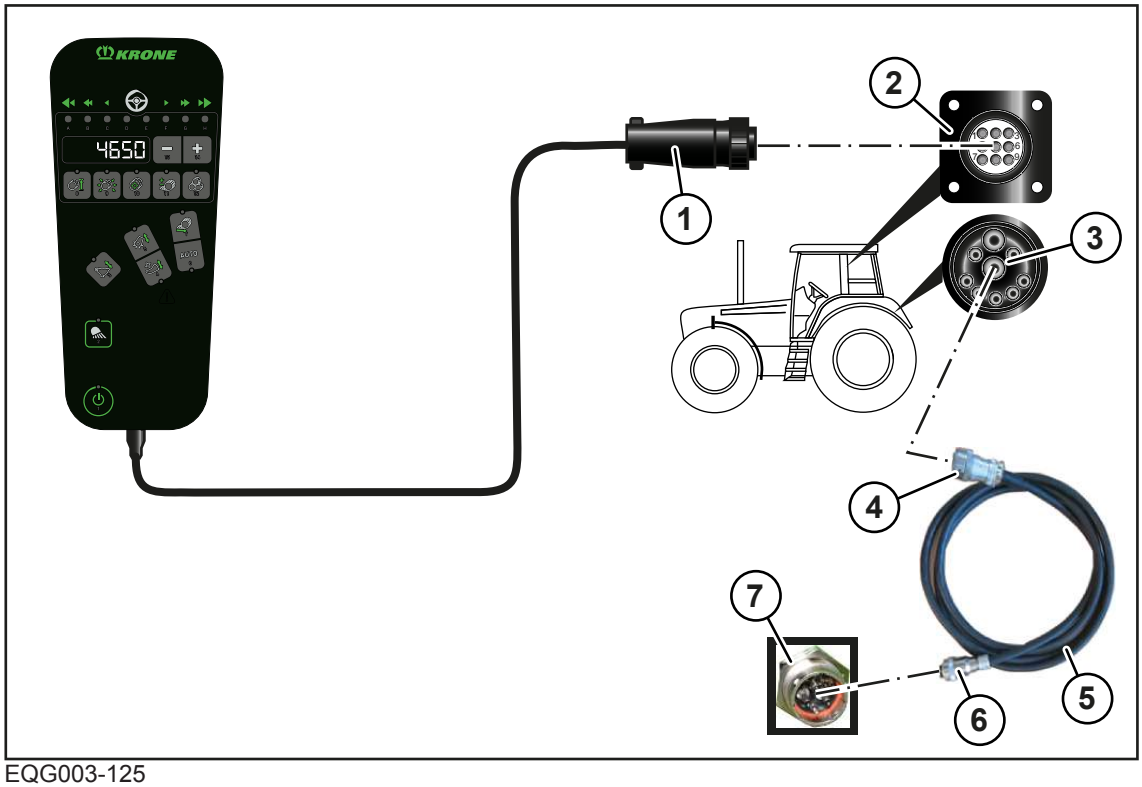
BP000-106

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

7.10 Connecting the KRONE DS 100 operation unit

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.

Tractors with integrated ISOBUS system



EQG003-125

✓ The machine has been shut down and secured, *see Page 27*.

Connection terminal to tractor

▶ Connect the 9-pin plug (1) of the terminal to the 9-pin socket (2) (In-cab).

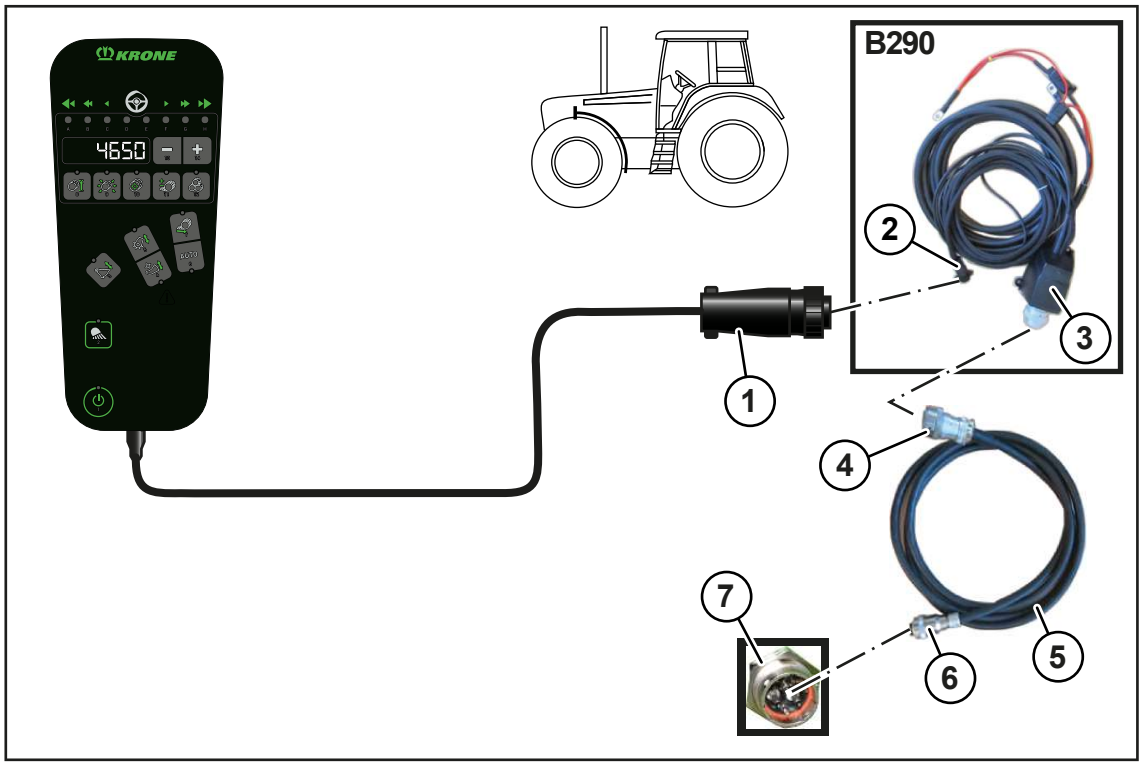
Connection tractor to machine

INFO
The cable (5) can be ordered by quoting the order number 20 086 886 *.

▶ Connect the 9-pin plug (4) of the cable (5) to the 9-pin ISOBUS socket (3) of the tractor.

▶ Connect the 11-pin plug (6) of the cable (5) to the 11-pin socket (7) of the machine.

Tractors without ISOBUS system



EQG003-124

✓ The machine has been shut down and secured, *see Page 27*.

✓ The accessories kit B290 “KRONE tractor retrofitting” is mounted.

Connection terminal to tractor

▶ Connect the 9-pin plug (1) of the terminal to the 9-pin socket (2) (In-cab).

Connection tractor to machine

INFO
The cable (5) can be ordered by quoting the order number 20 086 886 *.

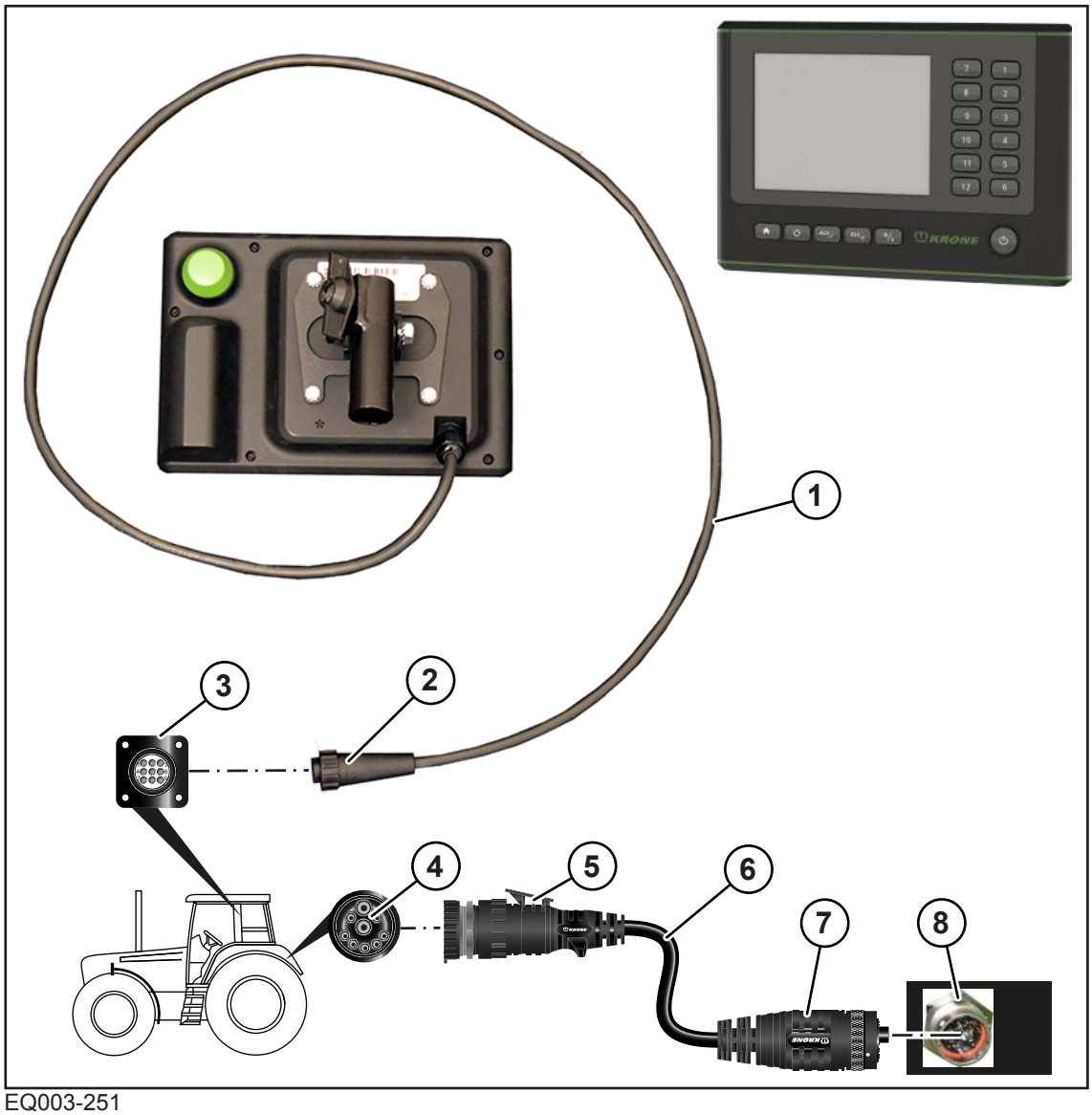
▶ Connect the 9-pin plug (4) of the cable (5) to the 9-pin ISOBUS socket (3) of the tractor.

▶ Connect the 11-pin plug (6) of the cable (5) to the 11-pin socket (7) of the machine.

7.11 Connecting KRONE terminal DS 500

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.

Tractors with integrated ISOBUS system



EQ003-251

✓ The machine has been shut down and secured, *see Page 27*.

Connection terminal to tractor

▶ Connect the 9-pin plug (2) of the cable (1) to the 9-pin socket (3) (In-cab).

Connection tractor to machine

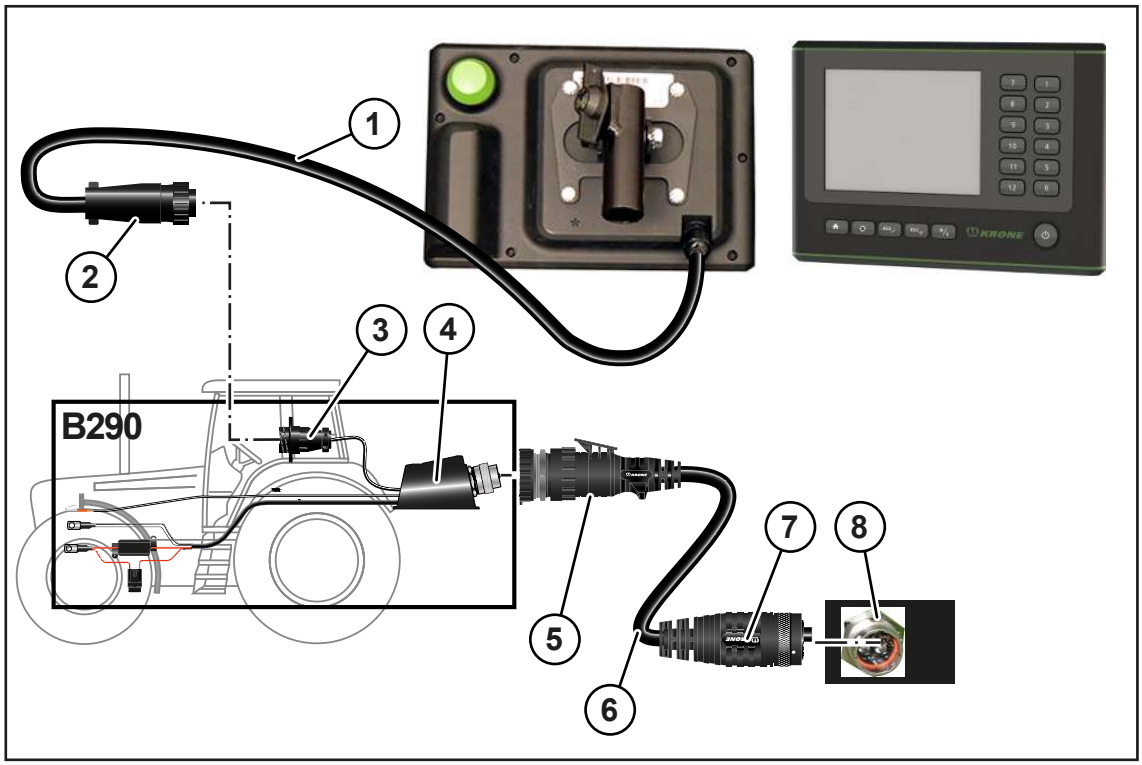
INFO

The cable (6) can be ordered by quoting the order number 20 086 886 *.

▶ Connect the 9-pin plug (5) of the cable (6) to the 9-pin ISOBUS socket (4) of the tractor.

▶ Connect the 11-pin plug (7) of the cable (6) to the 11-pin socket (8) of the machine.

Tractors without ISOBUS system



EQ003-252

✓ The machine has been shut down and secured, *see Page 27*.

✓ The accessories kit B290 “KRONE tractor retrofitting” is mounted.

Connection terminal to tractor

▶ Connect the 9-pin plug (2) of the cable (1) to the 9-pin socket (3) (In-cab).

Connection tractor to machine

INFO

The cable (6) can be ordered by quoting the order number 20 086 886 *.

▶ Connect the 9-pin plug (5) of the cable (6) to the 9-pin ISOBUS socket (4) of the tractor.

▶ Connect the 11-pin plug (7) of the cable (6) to the 11-pin socket (8) of the machine.

7.12 Connecting the KRONE ISOBUS terminal (CCI 800, CCI 1200)

NOTICE

Short circuit caused by impurities and moisture in the plug connection

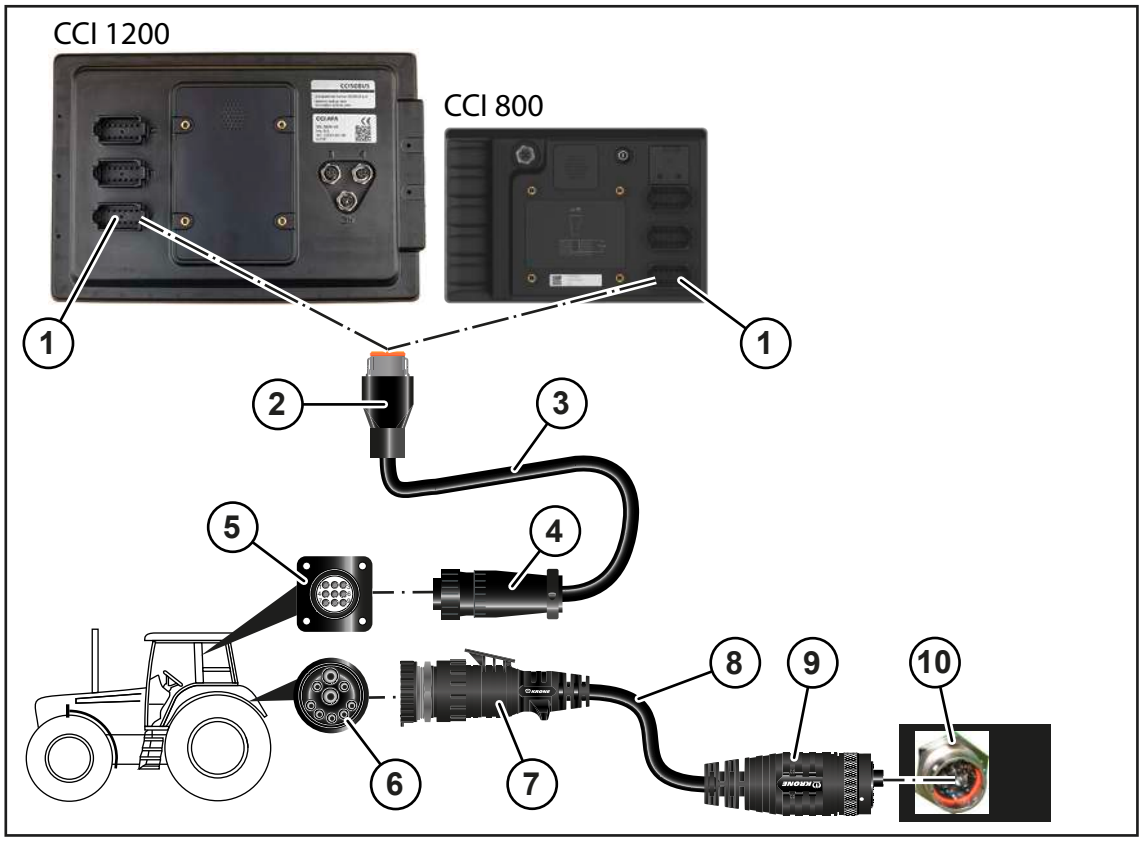
The machine may be damaged by a short circuit.

▶ Make sure that the plugs and sockets are clean and dry.

INFO

To mount the terminal in the tractor cabin, observe the provided operating instructions of terminal.

Tractors with integrated ISOBUS system



EQ001-173

✓ The machine has been shut down and secured, *see Page 27*.

Connection terminal to tractor

- Connect the 12-pin plug (2) of the cable (3) to the 12-pin socket (1) of the terminal.
- Connect the 9-pin plug (4) of the cable (3) to the 9-pin socket (5) (In-cab).

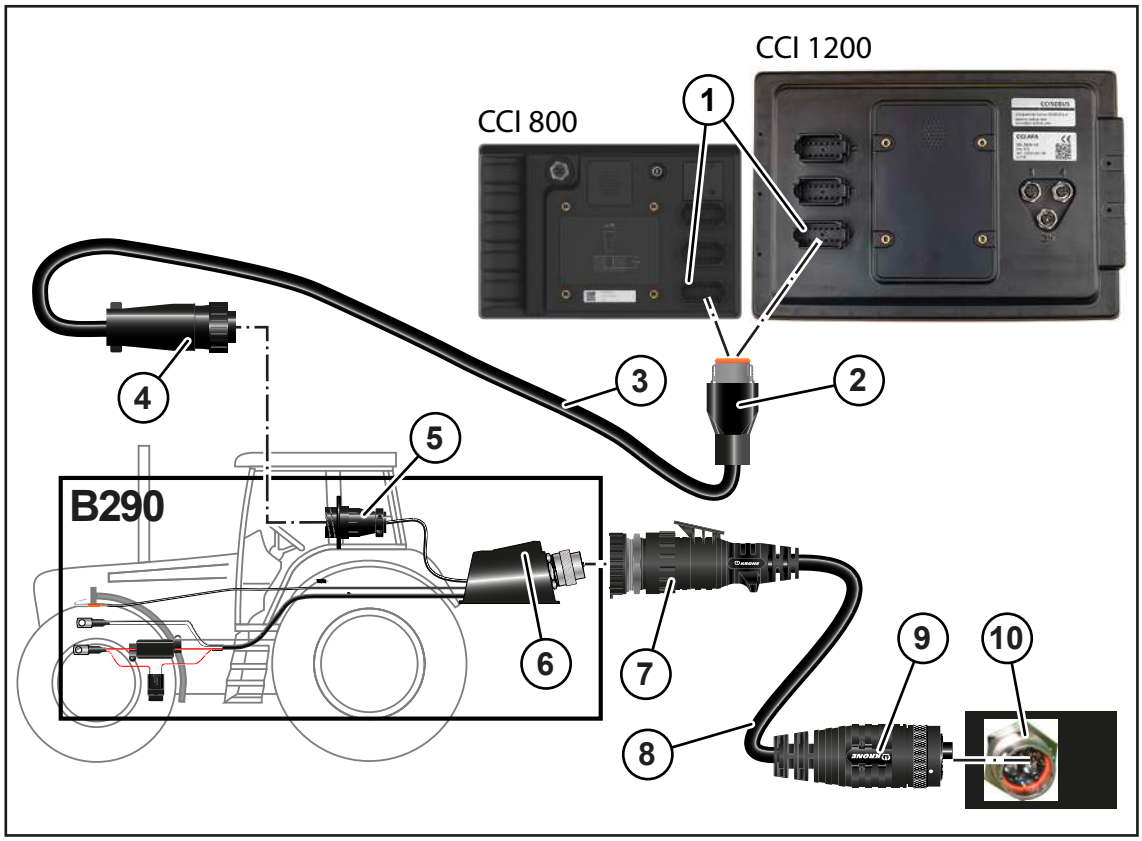
Connection tractor to machine

INFO

The cable (8) can be ordered by quoting the order number 20 086 886 *.

- Connect the 9-pin plug (7) of the cable (8) to the 9-pin ISOBUS socket (6) of the tractor.
- Connect the 11-pin plug (9) of the cable (8) to the 11-pin socket (10) of the machine.

Tractors without ISOBUS system



EQ001-181

✓ The machine has been shut down and secured, *see Page 27*.

✓ The accessories kit B290 “KRONE tractor retrofitting” is mounted.

Connection terminal to tractor

- ▶ Connect the 12-pin plug (2) of the cable (3) to the 12-pin socket (1) of the terminal.
- ▶ Connect the 9-pin plug (4) of the cable (3) to the 9-pin socket (5) (In-cab).

Connection tractor to machine

INFO
The cable (8) can be ordered by quoting the order number 20 086 886 *.

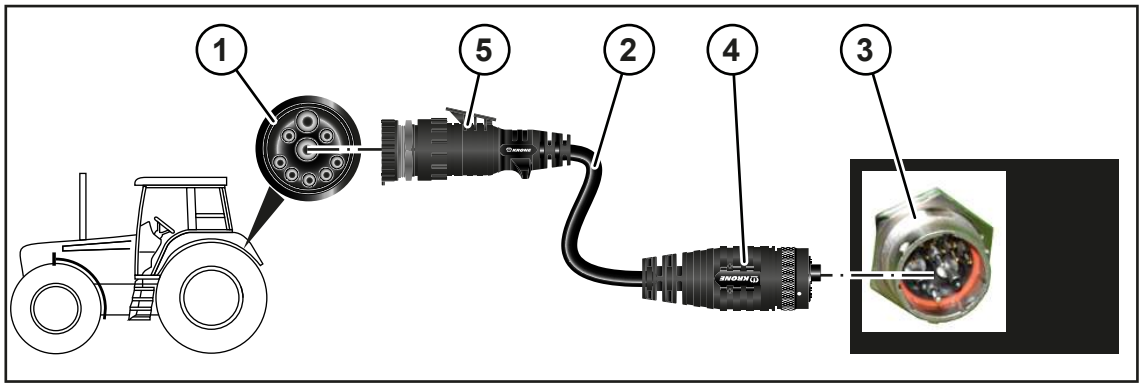
- ▶ Connect the 9-pole plug (7) of the cable (8) to the 9-pole ISOBUS socket (6) of the tractor.
- ▶ Connect the 11-pole plug (9) of the cable (8) to the 11-pole socket (10) of the machine.

7.13 Connecting foreign ISOBUS terminal

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.

INFO

To mount the terminal in the tractor cabin, observe the provided operating instructions of terminal.



EQ001-146

✓ The machine has been shut down and secured, *see Page 27*.

Connection tractor to machine

- Connect the 9-pole plug (5) of the cable (2) to the 9-pole ISOBUS socket (1) of the tractor.
- Connect the 11-pole socket (4) of the cable (2) to the 11-pole socket (3) of the machine.

Connection terminal to tractor

INFO

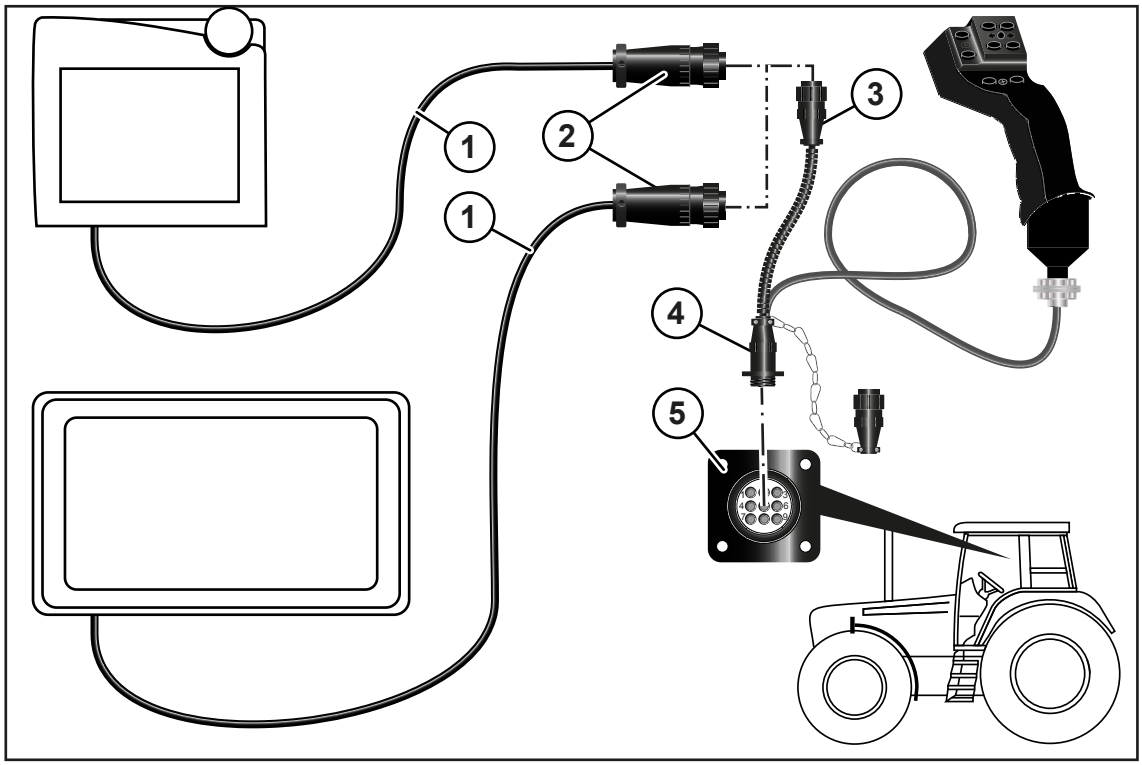
For further details on terminal connection, observe operating instructions of ISOBUS terminal manufacturer.

7.14 Connecting joystick

INFO

Follow the supplied joystick operating instructions for attachment of the joystick in the tractor cabin.

KRONE ISOBUS terminal on tractors with integrated ISOBUS system



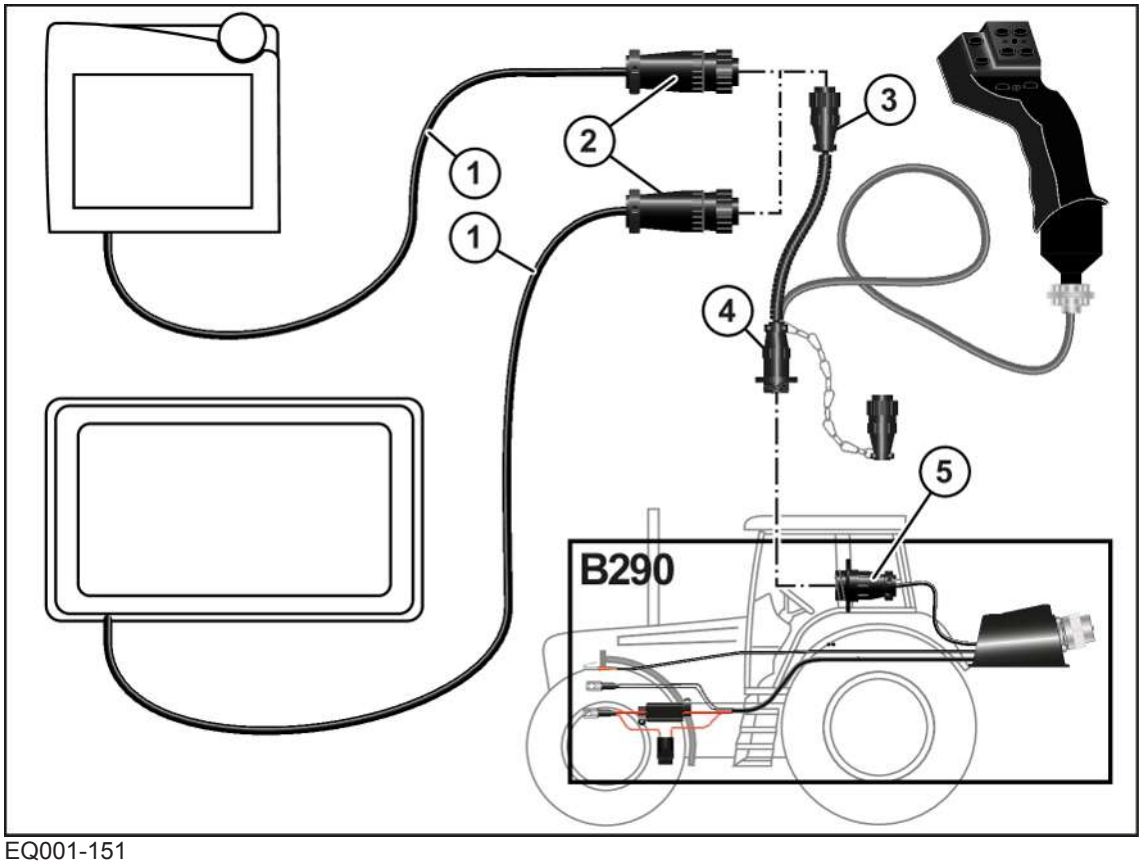
EQ001-150

✓ The machine has been shut down and secured, *see Page 27*.

▶ Connect the 9-pin plug (2) of the cable (1) to the 9-pin socket (3) of the joystick.

▶ Connect the 9-pin plug (4) of the joystick to the 9-pin socket (5) (In-cab).

KRONE ISOBUS terminal on tractors without integrated ISOBUS system



EQ001-151

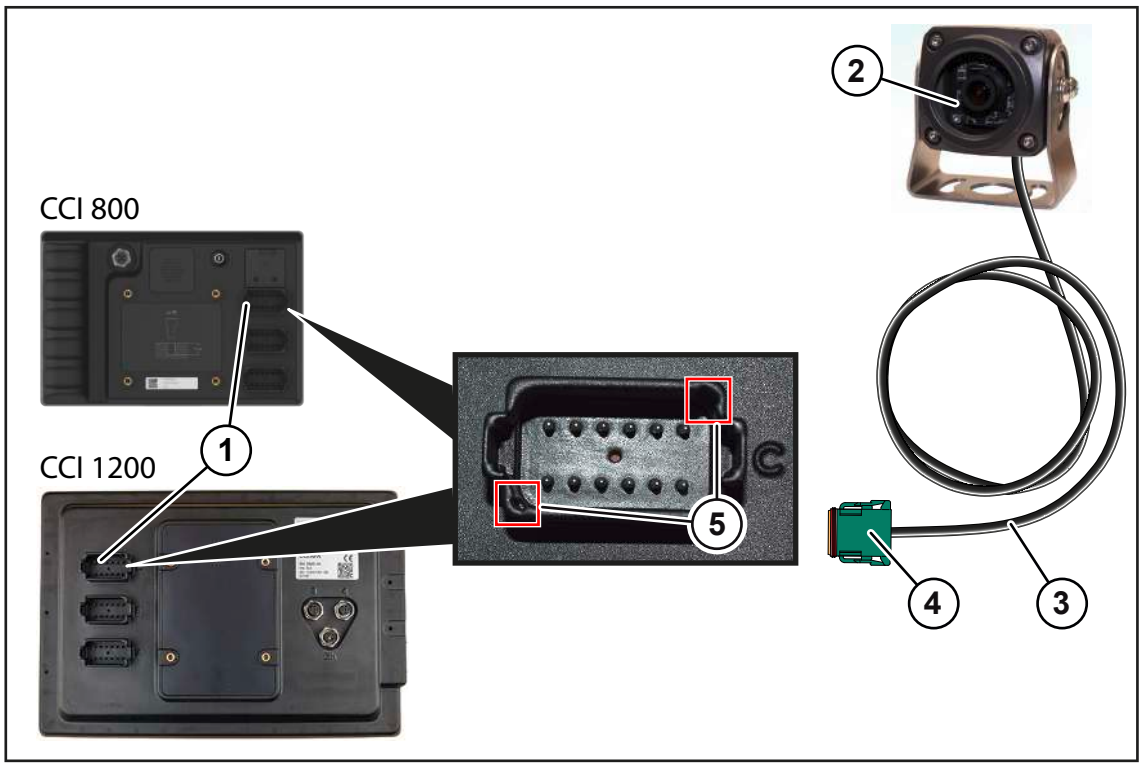
✓ The machine has been shut down and secured, *see Page 27*.

✓ The accessories kit B290 “KRONE tractor retrofitting” is mounted.

▶ Connect the 9-pin plug (2) of the cable (1) to the 9-pin socket (3) of the joystick.

▶ Connect the 9-pin plug (4) of the joystick to the 9-pin socket (5) (In-cab).

7.15 Connecting the camera to the KRONE ISOBUS terminal CCI 800 or CCI 1200



EQ000-212

- Insert the plug (4) on the camera (2) cable (3) into the connection C (1) of the KRONE ISOBUS terminal CCI 800 or CCI 1200 .
- To connect the plug (4) correctly, ensure that it is aligned with the marked points (5).

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 15*.

⚠ 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 27*.

⚠ 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.

⚠ WARNING

Risk of accident due to inadequate brake force

If the brake force controller has been incorrectly set, there is a risk of accidents.

- When driving on public roads, ensure that full load (1/1) is set on the brake force regulator, *see Page 84*.
- When working for example on wet fields, deceleration may be reduced.

8.1 Preparation before baling

- ✓ The pick-up is in working position, *see Page 85*.
- ✓ The crop press roller unit has been correctly set according to the amount of crops, *see Page 88*.
- ✓ The wrapping material has been correctly inserted.
  Net wrapping: *see Page 90*
  Chamber film wrapping: *see Page 93*
- ✓ The customer counter has been set to 0, *see Page 157*.
- ✓ The tailgate is closed.
- ✓ The working screen has been selected, *see Page 134*.

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 baling pressure. ▶ 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 a round bale, the bale chamber must be filled evenly. Here, the swath width is important. The swath width is ideal if the swath has exactly the same width as the bale chamber.

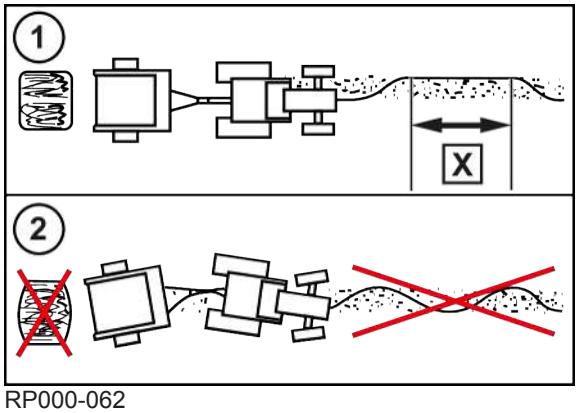
If swaths are too wide

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, *see Page 181*.

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

If the crops are very wet and have little structure, this may increase slippage of the bale formation conveyor. This can be reduced by taking the following measures:

- ▶ Reduce the baling pressure, *see Page 181*.

For short and brittle straw

- ▶ Reduce the baling pressure, *see Page 181*.
- ▶ Start the tying cycle earlier than indicated.
- ▶ 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 during the work must be adapted to the following conditions:

- Type of crops
- Moisture content of crops
- Swath height
- 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.

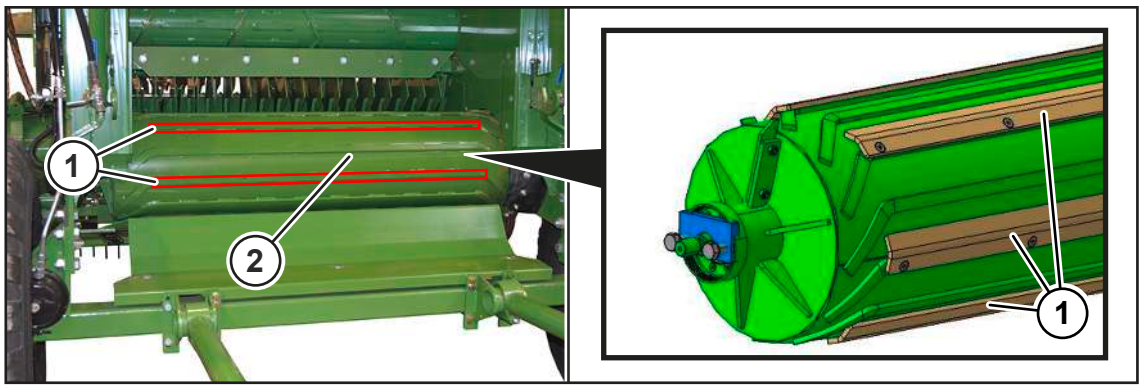
8.3 Improving bale chamber filling

8.3.1 Reducing the pressure on the side walls of the bale chamber

If very heavy crops without structure are picked up, the round bales may become very hard and press on the side walls of the machine. Then reliable rotation of the round bale can be increased in the bale chamber by taking the following measures:

- ▶ To reduce the pressure on the side walls, do not drive too far to the right or left.
- ▶ Reduce the baling pressure, *see Page 181*.

8.3.2 Mounting additional driver guide rails on the starter roller



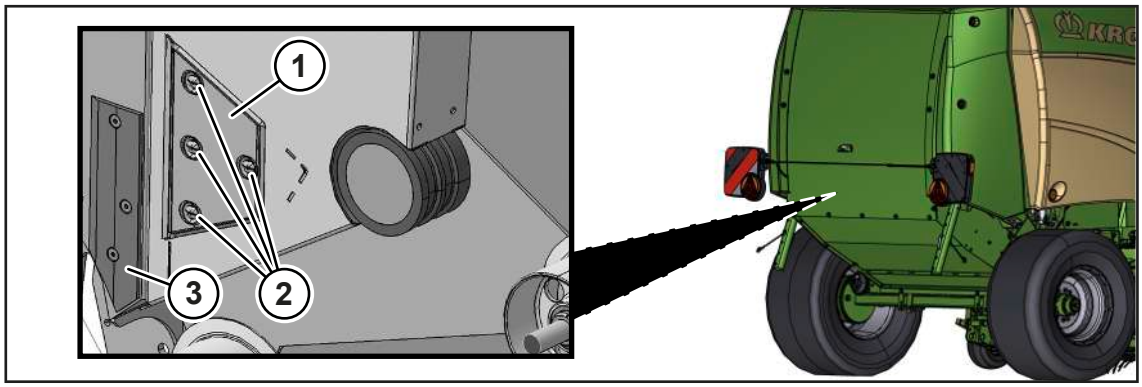
RP000-285

To increase reliable rotation of the round bales, 6 additional driver guide rails (1) can be mounted on the starter roller (2).

The driver guide rails (1) on the starter roller must be mounted inside the bale chamber.

For ordering and installation, contact your KRONE service partner.

8.3.3 Mounting additional deflector sheets in the tailgate



RPG000-060

If the finished round bales do not fall out of the bale chamber, 2 deflector sheets (1) can be mounted on the right and left in the machine tailgate. Contact your KRONE service partner to order them.

✓ The tailgate is opened and secured, *see Page 81*.

✓ The machine has been shut down and secured, *see Page 27*.

▶ Mount the deflector sheets (1) on the insides of the bale chamber by screwing the screw connections (2) into the available boreholes.

If the finished round bales are still not falling out of the bale chamber following installation of the deflector sheets (1):

▶ Remove the slide sheets (3) from the right and left sides of the machine housing.

8.4 Completing the baling process, starting tying cycle and ejecting round bales

- Read off the status of the bale chamber filling on the terminal, *see Page 130*.
- Stop the tractor.
- Start the tying process in automatic mode or start it in manual mode.
- Wait until the tying process is complete.
- **Special feature of version with "Net and chamber film wrapping" and active chamber film wrapping:**
  When starting chamber film wrapping, pick up crops until the film is caught by the round bale and the film roll starts to rotate.
- Open the tailgate and eject the round bale.
- Close the tailgate.
- Start the next baling process.

8.5 Operating the support jack

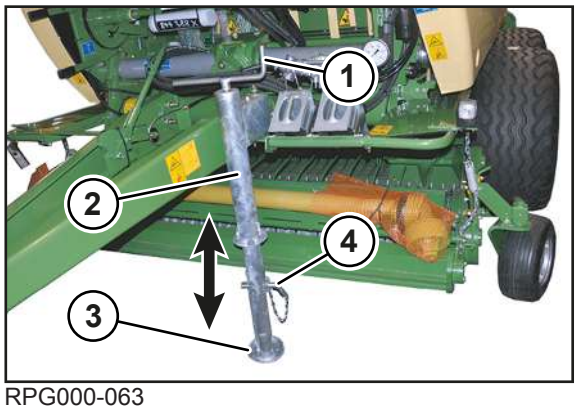
INFO

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

The support jack is used to keep the machine stable when it is not connected to the tractor. The support jack must be used whenever the machine is parked.

✓ The machine has been shut down and secured, *see Page 27*.
✓ The machine is connected to the tractor, *see Page 58*.

For version with "Mechanical support jack"



RPG000-063

Moving the support jack into support position

- Turn the crank handle (1) several revolutions anti-clockwise.

WARNING! Crush hazard due to the support jack! Keep hands and feet out of the danger zone of the support jack.

- Pull out the securing pin (4), extend the parking support (2) and secure the position using the securing pin (4).
- Turn the support jack (2) anti-clockwise firmly down onto the ground using the crank handle (1) until the drawbar is relieved.

Moving the support jack into transport position

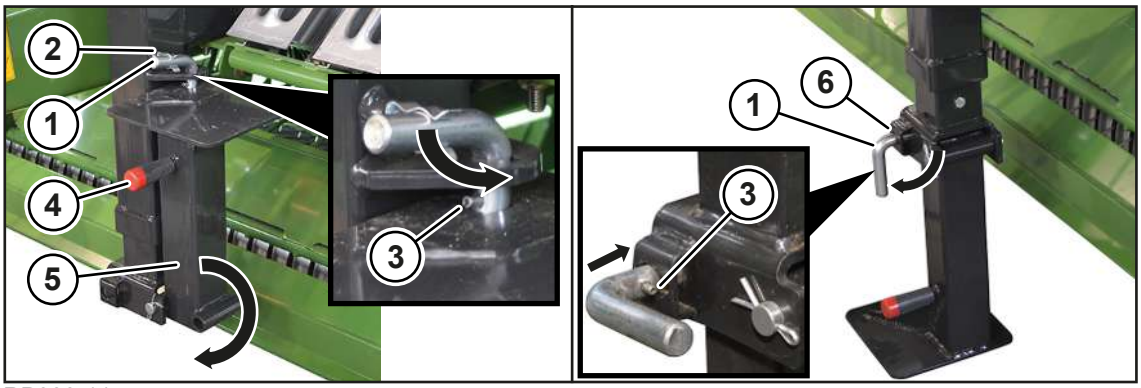
- Turn the crank handle (1) several revolutions clockwise until the support plate (3) is relieved.

WARNING! Crush hazard due to the support jack! Keep hands and feet out of the danger zone of the support jack.

- Pull out the securing pin (4), push in the support jack (2) and secure the position with the securing pin (4).
- Turn the support jack (2) clockwise all the way up using the crank handle (1).
- Rotate the support plate (3) so that the flat side points towards the pick-up.

For version with "Hydraulic support jack"

Moving support jack into support position



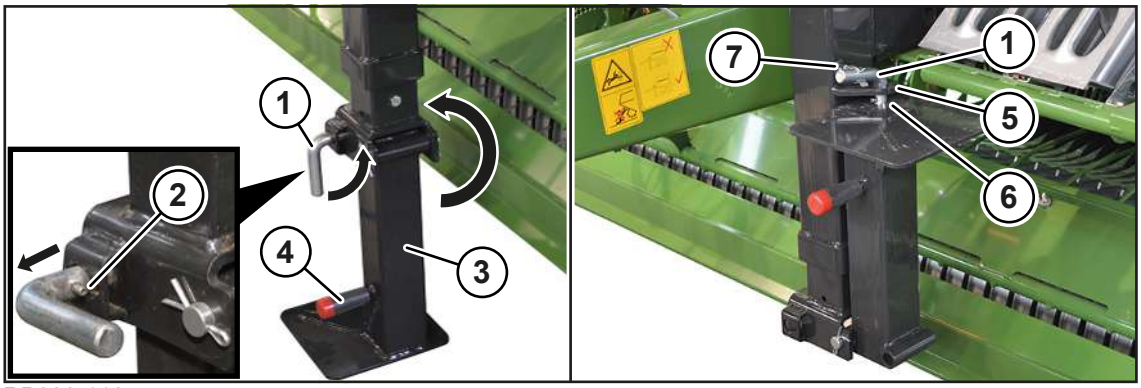
RP000-117

- Detach the bolt (1) from the locking spring (2) and turn it by 90° to the right so that the locking pin (3) is no longer locked.
- Pull out the bolt (1).

WARNING! Crush hazard due to support jack swinging down! Fold the support jack up or down using the handle (4) only.

- Fold down support jack (5) by 180°.
- Guide the bolt (1) with handle to the right into the opening (6) and turn it by 90° to the left so that the locking pin (3) locks.
- Actuate the double-acting control unit (green, 5-) until the support jack (5) is firmly on the ground and the drawbar eye is relieved.

Moving support jack into transport position



RP000-116

- ▶ Actuate the double-acting control unit (green, 5+) until the support jack (3) has been retracted.
- ▶ Turn the bolt (1) by 90° to the right so that the locking pin (2) is no longer locked.
- ▶ Pull out the bolt (1).
- ▶ Fold up the lower part of the support jack (3) by 180°.

WARNING! Crush hazard due to support jack swinging down! Swivel the support jack up or down using the handle (4) only.

- ▶ Insert the bolt (1) through the boreholes (5, 6) and secure it in the locking spring (7).

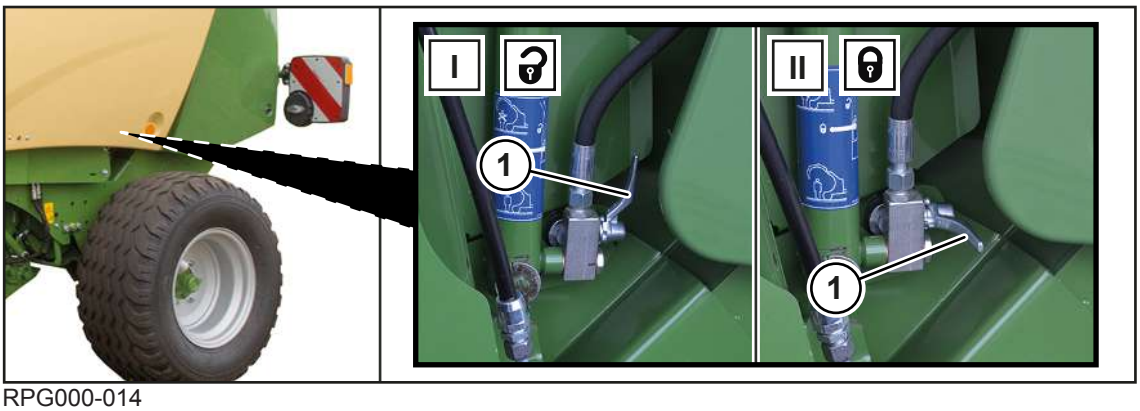
8.6 Using the stop cock of the tailgate

⚠ *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 tailgate stop cock (1) is located on the left side of the machine near the tailgate.

- ✓ The machine has been shut down and secured, *see Page 27*.

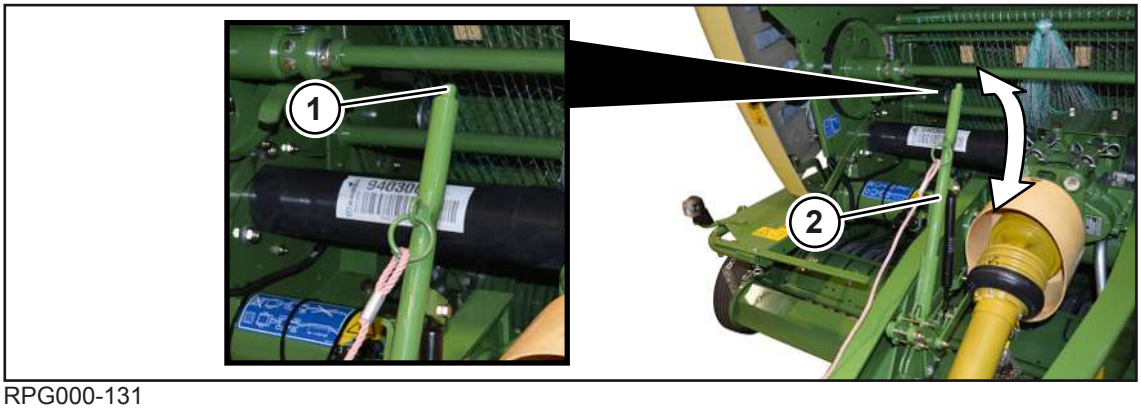
Opening the stop cock

- ▶ 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.

8.7 Releasing/applying the parking brake



RPG000-131

The parking brake (2) is located on the front side of the machine on the drawbar. The parking brake (2) is used to secure the machine from unintentionally rolling away, .

In order to prevent the machine from rolling away, also use the wheel chocks, *see Page 83*.

The figure shows the parking brake applied.

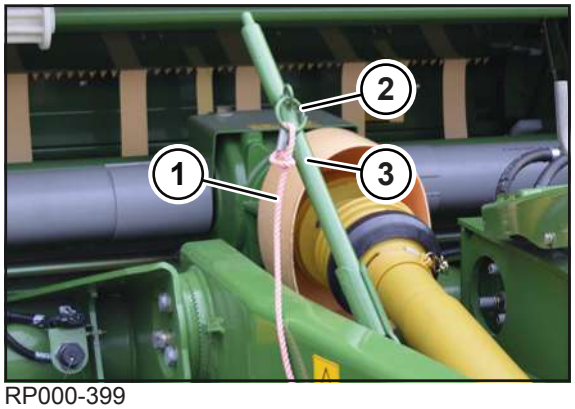
Applying the parking brake (2)

- ▶ Apply the parking brake (2) until the resistance has increased noticeably.

Releasing the parking brake (2)

- ▶ Push in the key (1) and press parking brake (2) all the way down.

Attaching safety cable of the parking brake

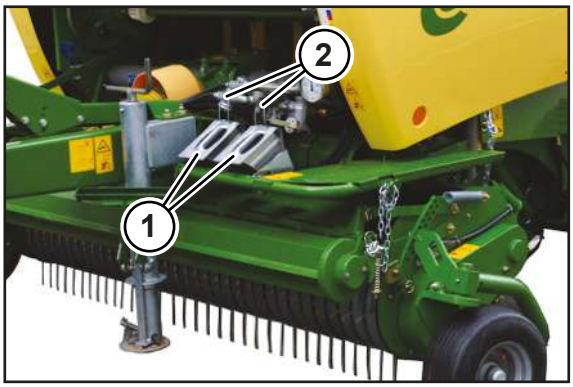


RP000-399

The safety cable (1) applies the parking brake (3) if the machine breaks away from the tractor while it is driving.

- To attach the safety cable (1) to the machine, attach the safety cable (1) to the parking brake (3). To do this, pull the safety cable (1) through the smaller loop of the safety cable (1) and through the ring (2).
- To attach the safety cable (1) to the tractor, attach the other end of the safety cable (1) to a suitable point at the back of the tractor.
- Ensure that the safety cable (1) cannot slip or become detached.

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.

For "Parking brake" version: In order to prevent the machine from rolling away, use the parking brake in addition to the wheel chocks (1), *see Page 82*.

- ✓ The machine is parked on a stable, horizontal and even surface.
- ✓ The machine has been shut down and secured, *see Page 27*.
- 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

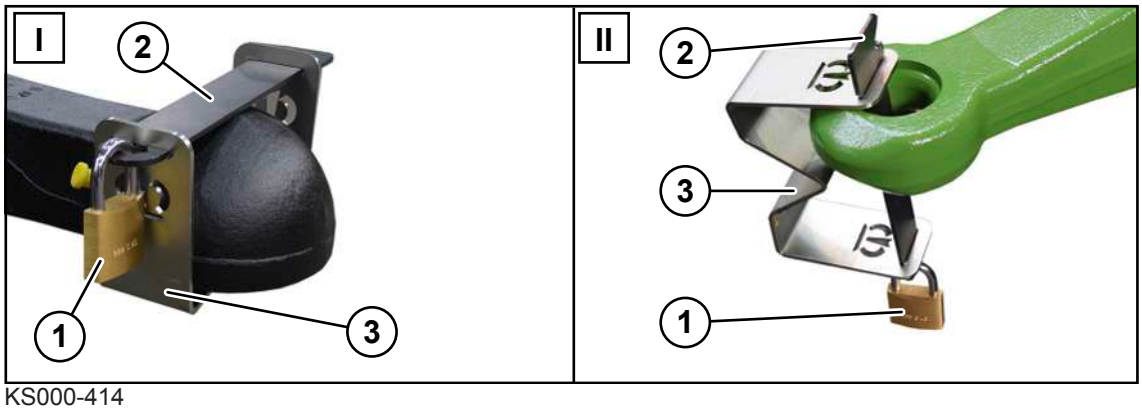
- Place the wheel chocks (1) so tightly in front of and behind the same wheel that the machine is prevented from rolling away.

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 175*.

For version with "ball-head attachment" or "drawbar eye attachment"



KS000-414

I Version with ball-head attachment

II Version with drawbar eye attachment

Removing

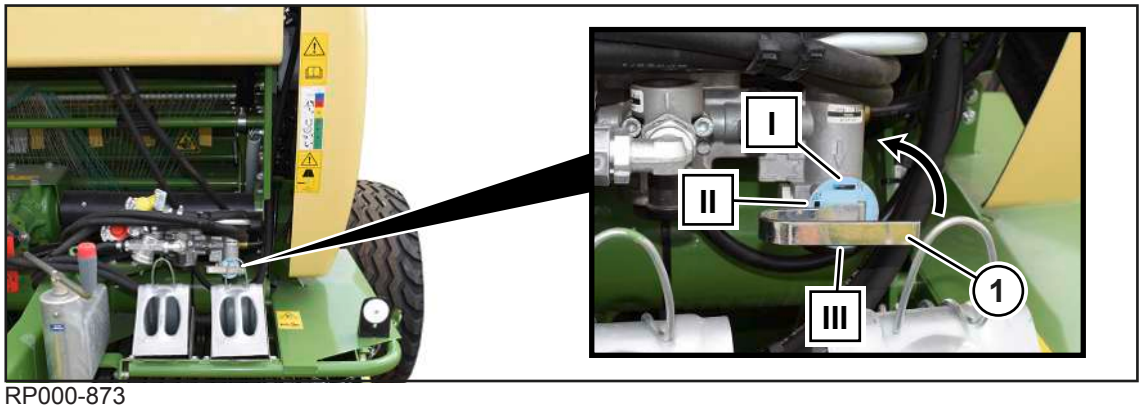
- Remove the padlock (1), the latch (2) and the bracket (3) and take them with you.

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 Operating brake force regulator

For version with "Single axle with compressed air brake" or "Tandem axle with compressed air brake"



RP000-873

The brake force regulator (1) regulates the brake force of the compressed air brake. The brake force may be reduced under certain conditions in use. When driving on public roads, the brake force regulator (1) must be set to full load (I). The following positions are possible:

Position	Brake force
(I)	Full load (1/1)
(II)	Half load (1/2)
(III)	switched off (0)

- Turn the brake force regulator (1) in the direction of the arrow to the required position.

8.11 Pick-up

8.11.1 Bringing the pick-up to transport/working position

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.

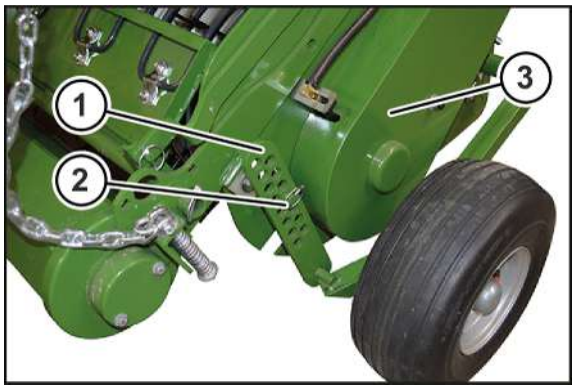
- **For "Operation unit DS 100" version:** To preselect the pick-up, press the  key, *see Page 102*.
  - ⇨ The indicator lamp above the key lights up.
- To preselect the pick-up, press the  key on the terminal, *see Page 129*.
  - ⇨ The key switches to  .
- To lower the pick-up into the working position, actuate the control unit on the tractor (yellow, 3+).

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 "Operation unit DS 100" version:** To preselect the pick-up, press the  key, *see Page 102*.
  - ⇨ The indicator lamp above the key lights up.
- To preselect the pick-up, press the  key on the terminal, *see Page 129*.
  - ⇨ The key switches to  .
- To lift the pick-up into the transport position, actuate the control unit on the tractor (yellow, 3+).

8.11.2 Setting the pick-up working height



RPG000-151

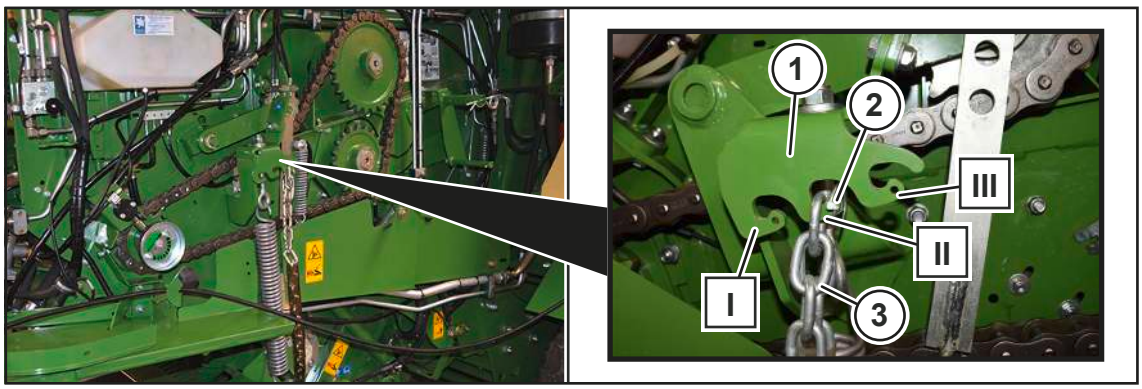
The working height of the pick-up (3) must be set so that the distance between the tines and the ground is approx. **20-30 mm**. Also the working height of the pick-up (3) must be adjusted to the ground conditions.

✓ The drawbar height has been set correctly, *see Page 52*.

Make the following setting on the right and left sides of the pick-up in the same way:

- Lift the pick-up (3) hydraulically, *see Page 85*.
- Shut down and safeguard the machine, *see Page 27*.
- Remove the linch pin (2).
- Push the perforated bar (1) to the required position and secure it with the linch pin (2).
- Lower the pick-up (3) hydraulically, *see Page 85*.
- Shut down and safeguard the machine, *see Page 27*.
- Check whether the distance between the tines and the ground is approx. **20-30 mm**.
- If required, re-adjust the perforated bar (1).

Setting the pick-up working height more precisely



RPG000-127

If ground conditions are extreme, the height of the pick-up can also be set via the chain (3). To do this, the pick-up can be set higher or lower by one complete chain link or even more precisely via the chain holder (1).

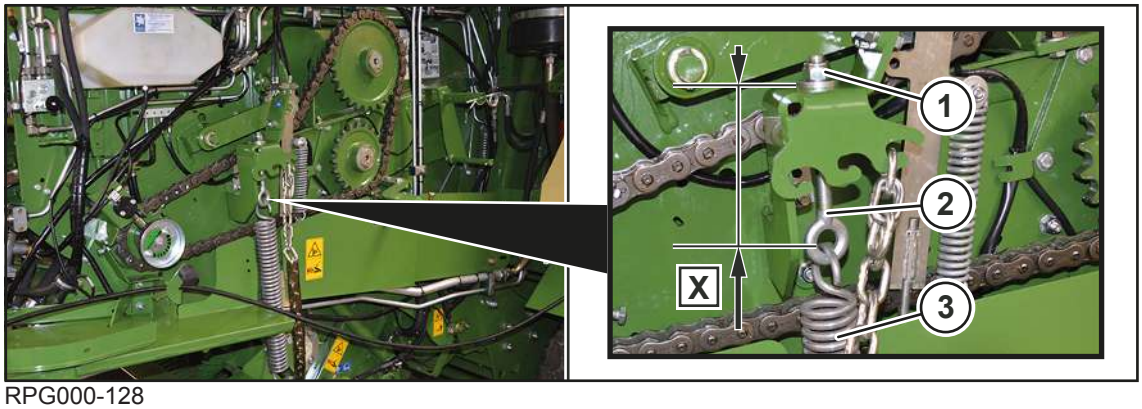
When used in straw, the pick-up should be set as high as possible off the ground. Then use the chain (3) to adjust the guide wheels of the pick-up so that they do not touch the ground.

✓ The machine has been shut down and secured, *see Page 27*.
✓ The pick-up is fully raised in transport position, *see Page 85*.
✓ The guide wheels are folded upwards.

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

- ▶ Open the side hood.
- ▶ Remove the linch pin (2).
- ▶ Attach the chain (3) higher or lower by one complete chain link or attach the required chain link in position (I), (II) or (III).
- ▶ Mount the linch pin (2).
- ▶ Check whether the drawbar height of the machine must be adjusted to the tractor, *see Page 52*.

8.11.3 Adjusting the bearing pressure relief for the pick-up



RPG000-128

To be able to negotiate uneven ground better, the pick-up is relieved on both sides of the machine with the aid of a spring (3). The spring (3) can be set on the ring screw (2).

KRONE recommends the following setting:

- Dimension X (left side of machine): **150 mm**
- Dimension X (right side of machine): **42 mm**

✓ The machine has been shut down and secured, *see Page 27*.

✓ The guide wheels have been adequately relieved.

▶ On the right and left sides of the machine check whether the aforementioned dimensions match.

▶ If required, screw in or unscrew the nut (1) until the aforementioned dimension X has been set.

8.12 Crop press roller unit

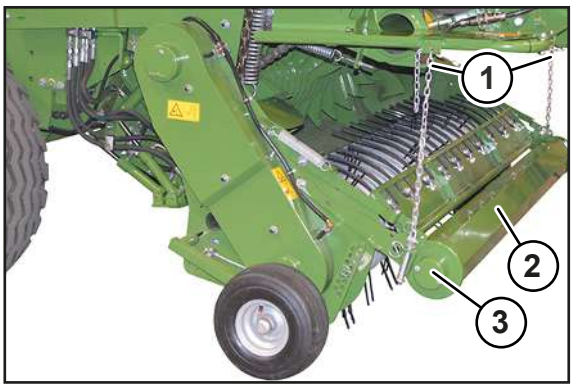
⚠ *WARNING*

Risk of injury if the machine is used without a crop press roller unit

The crop press roller unit is used for accident protection! If the machine is operated without a roller crop guide, people can be seriously injured or killed.

▶ Never operate the machine without a crop press roller unit.

8.12.1 Setting the crop press roller unit



RPG000-110

The crop press roller unit (3) guides the crops at the intake via the pick-up.

The height of the crop press roller unit (3) must be set so that the operating crop press roller (2) continuously touches the swath.

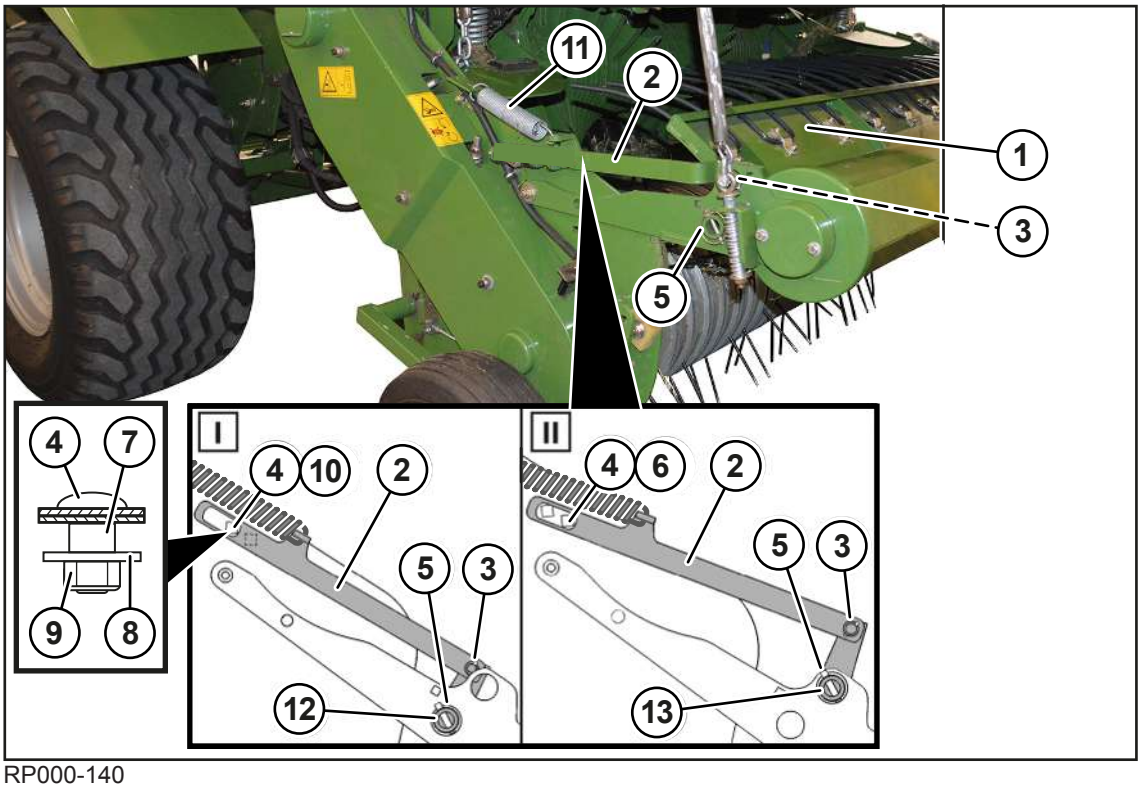
Adjusting the height of the crop press roller unit

Make the following setting on the right and left side of the pick-up in the same way:

✓ The machine has been shut down and secured, *see Page 27*.

► Attach the chain (1) to the swath correspondingly higher or lower.

8.12.2 Setting the baffle sheet on the crop press roller unit



RP000-140

The height of the baffle sheet (1) on the crop press roller unit can be adjusted to the swath. Position (I) has been set at the factory. If the crops are very moist, it is recommended to move the baffle sheet into position (II).

✓ The machine has been shut down and secured, *see Page 27*.

Moving the baffle sheet (1) from position (I) to position (II)

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

▶ To remove the bracket (2):

- pull out the linch pin (3),
- loosen the round-head screw (4),
- remove the spring (11) and
- remove the bracket (2).

▶ Remove the linch pin (5).

▶ Move the baffle sheet (1) in the upper borehole (13) and secure with the linch pin (5).

▶ To mount the bracket (2):

- insert the round-head screw (4) into the front rectangular borehole (6) and fasten with spacer tube (7), disc (8) and locknut (9),
- place the bracket (2) on the bolt (3) and secure with the linch pin (3) and
- mount the spring (11).

Moving the baffle sheet (1) from position (II) to position (I)

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

▶ To remove the bracket (2):

- pull out the linch pin (3),
- loosen the round-head screw (4),
- remove the spring (11) and
- remove the bracket (2).

▶ Remove the linch pin (5).

▶ Move baffle sheet (1) into the lower borehole (12) and secure with the linch pin (5).

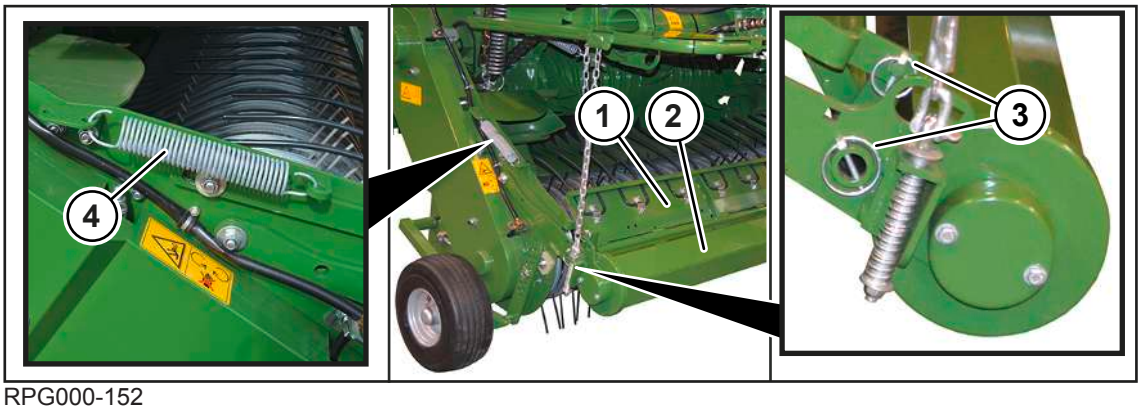
▶ To mount the bracket (2):

- insert the round-head screw (4) into the front rectangular borehole (10) and fasten with spacer tube (7), disc (8) and locknut (9),
- place the bracket (2) on the bolt (3) and secure with the linch pin (3) and
- mount the spring (11).

8.12.3 Removing/mounting the baffle sheet on the crop press roller unit

In operation the baffle sheet must have been mounted on the crop press roller unit. The baffle sheet on the crop press roller unit can be briefly removed in the event of crop blockages.

Removing crop blockages: *see Page 98*



RPG000-152

✓ The machine has been shut down and secured, *see Page 27*.

Dismounting

- Remove the linch pins (3) from the right and left sides of the pick-up.
- Remove the spring (4) from the right and left sides of the pick-up.
- Push the baffle sheet (1) to one side and remove.

Mounting

- Place the baffle sheet (1) on the crop press roller (2) and secure with the linch pins (3) on the right and left sides of the pick-up.
- Mount the spring (4).

8.13 Lifting/lowering the feeder rotor floor

In case of crop blockage, the feeder rotor floor can be lifted.

- **For "Operation unit DS 100" version:** To preselect the feeder rotor floor, press the 

key.

- **For the other terminals:** Press the  key to preselect the feed rotor floor, press the key.

Lifting the feed rotor floor

- Actuate the control unit (yellow, 3+).

Lowering the feed rotor floor

- Put the control unit (yellow, 3+) to float position.

For "Operation unit DS 100" version: When the feeder rotor floor is lowered, the warning lamp  below the 

key emits light.

8.14 Net wrapping

For version with "Net wrapping"

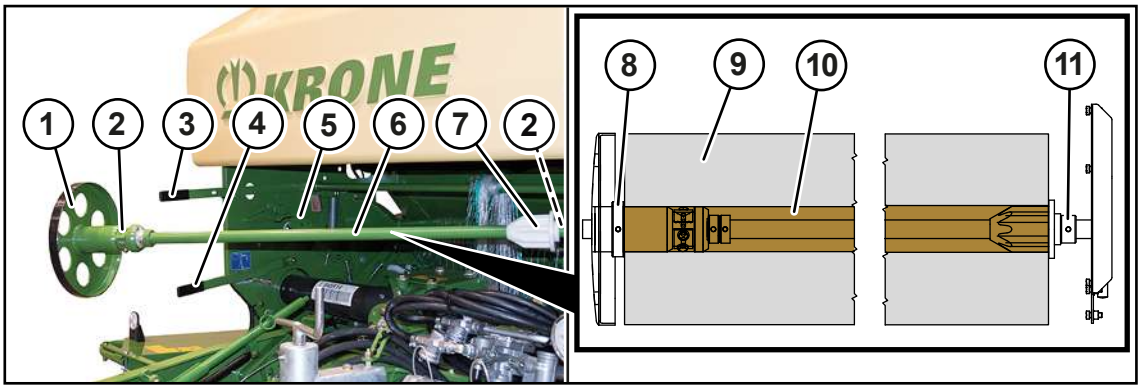
8.14.1 Inserting the net roll

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 27*.

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

▶ Raise the lever (4).

▶ Swivel the roll holder (6) and brake disc (1) forwards.

▶ Remove the brake disc (1).

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

▶ Push the net roll (9) onto the roll holder (6) and push on the support (7).

▶ Push the brake disc (1) with the sleeve clamps (2) anti-clockwise all the way into the sleeve (10) of the net roll (9).

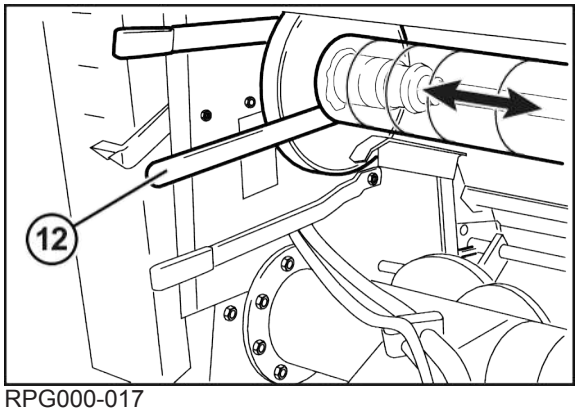
⇨ The net roll (9) is permanently locked in the roll holder (6).

▶ Swivel the roll holder (6) back into the machine and lift it into the lock using the lever (4).

▶ Actuate the wrapping material brake lever (3) so that the roll holder (6) engages with the wrapping material brake.

▶ When swivelling in the roll holder, ensure that the tension lever (5) is under the net roll (9).

▶ Check that the net roll (9) is aligned centrally. To do this, measure the distances to the left and right side walls.



RPG000-017

If the net roll (9) has still not been centrally aligned:

- Loosen both threaded pins (8, 11).
- Use a mounting lever (12) to push the net roll (9) in the required direction of the arrow until the net roll (9) is positioned in the centre.
- Push both threaded pins (8, 11) each with a distance of 2-3 mm onto the sleeve (10) and fix them in this position.

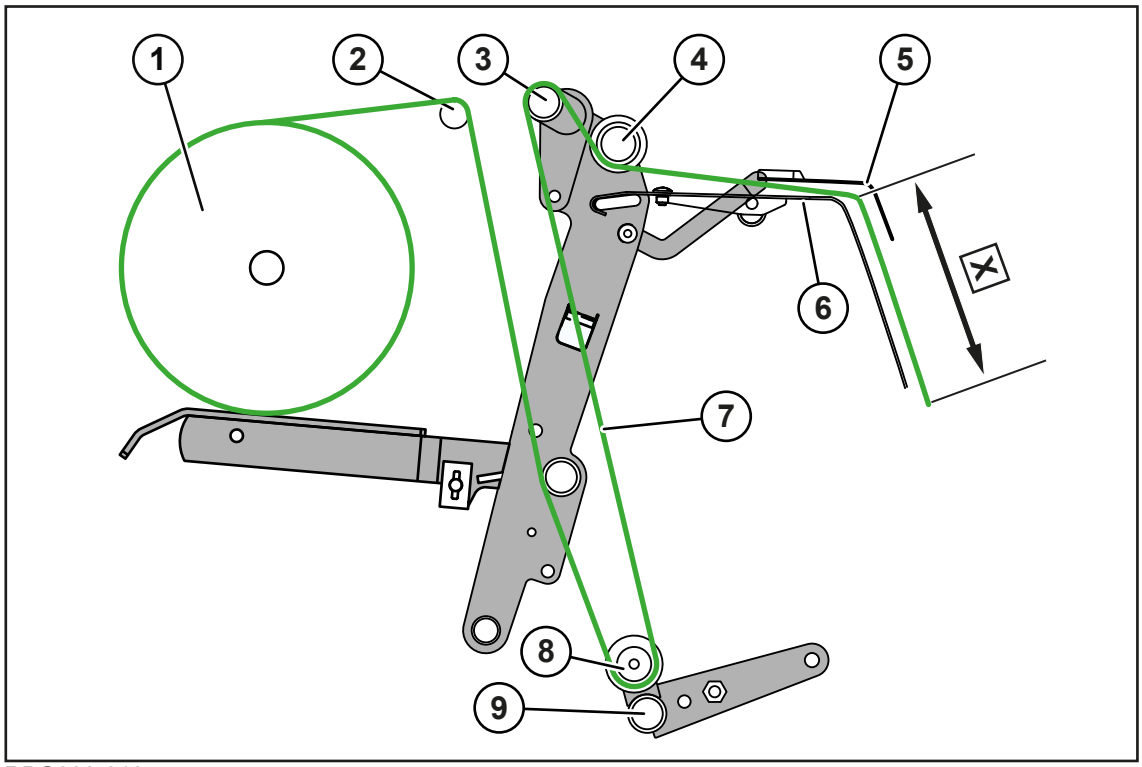
8.14.2 Insert net

⚠ WARNING

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

You may injure your fingers and hands when inserting the wrapping and tying material or working in the range of the cutting unit of the tying unit.

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



RPG000-018

✓ The machine has been shut down and secured, *see Page 27*.
✓ The roll holder has been swivelled forwards.

- Unwind a section of the net (7) from the net roll (1) and guide it over the deflection shaft (2) and under the deflection roll on the cross tube (8).
- Place the net (7) over the spreading bracket (3).
- Place the net (7) under the spreading roll (4) on the retaining sheet (6).
- Guide the net (7) under the synthetic cloth (5). Ensure that the net projects **X=170–200 mm** over the edge of the retaining sheet (6).
- Spread the net (7) to a width of approx. **500 mm** so that the drivers of the feed roller can pick the net up over its full width.

If the net tension is insufficient and the net is not pulled far enough to the outside of the round bale:

- Place the net (7) under the deflection tube on the cross tube (9).

To set the feed, cutting and tying position, *see Page 168*.

To set the number of net layers, *see Page 149*.

8.15 Net and chamber film wrapping

For the "Net and chamber film wrapping" version

8.15.1 Inserting a net or film roll

To ensure that the sleeve clamp can completely catch in the sleeve of the net or film roll, the sleeve should be made of cardboard. If a sleeve is made of plastic with grooves, the sleeve clamp can dig into the grooves and transfer the brake force from the brake disc to the net or film roll. Therefore, plastic sleeves without grooves are not recommended.

If sleeves are made of cardboard, ensure in particular that they are stored correctly. Moisture or high air humidity may cause cardboard sleeves to soften and impair the tying function. Also observe the specifications of the wrapping material manufacturer on the package.

INFO

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

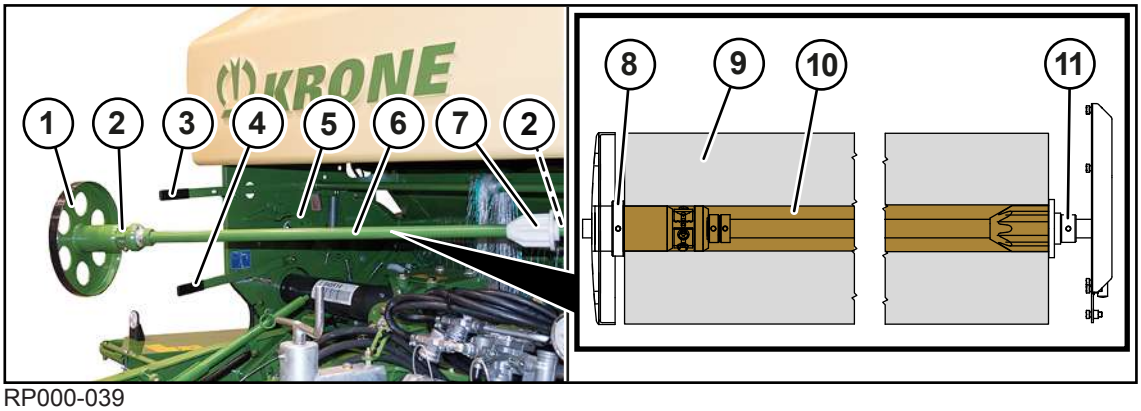
- ✓ The machine has been shut down and secured, *see Page 27*.
- ✓ The remaining net rolls in the storage compartment are secured with the retaining rod.

Before inserting a film roll:

- Before inserting the film, check the film roll for damage.

If the film roll is damaged:

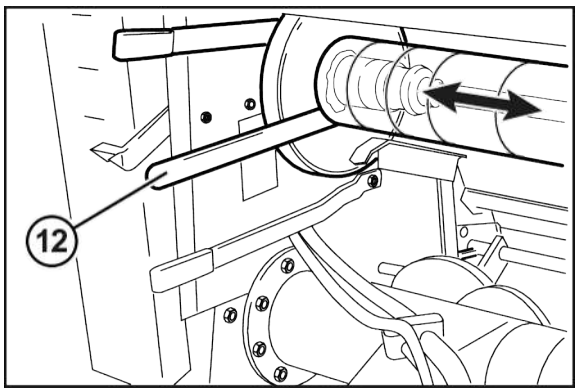
- Unwind the damaged film and cut it off.
- Cut off the bulges at the side of the film roll.



RP000-039

- Raise the lever (4).
- Swivel the roll holder (6) and brake disc (1) forwards.
- Remove the brake disc (1).
- Take a new net or film roll out of the package. Ensure that the beginning of the roll faces towards the machine and can be pulled out from above.
- Push the net or film roll (9) onto the roll holder (6) and push on the support (7).

- Push the brake disc (1) with the sleeve clamps (2) anti-clockwise all the way into the sleeve (10) of the net or film roll (9).
  - ⇨ The net or film roll (9) is permanently locked in the roll holder (6).
- Swivel the roll holder (6) back into the machine and lift it into the lock using the lever (4).
- Actuate the wrapping material brake lever (3) so that the roll holder (6) engages with the wrapping material brake.
- When swivelling in the roll holder, ensure that the tension lever (5) is under the net or film roll (9).
- Check that the net or film roll (9) is aligned centrally. To do this, measure the distances to the left and right side walls.



RP000-040

If the net or film roll (9) has not been centrally aligned:

- Loosen the 2 threaded pins (8, 11).
- Use a mounting lever (12) to push the net or film roll (9) in the required arrow direction until the net or film roll (9) has been positioned in the centre.
- Push the 2 threaded pins (8, 11) each with a distance of 1–2 mm onto the sleeve (10) and fix them in this position.

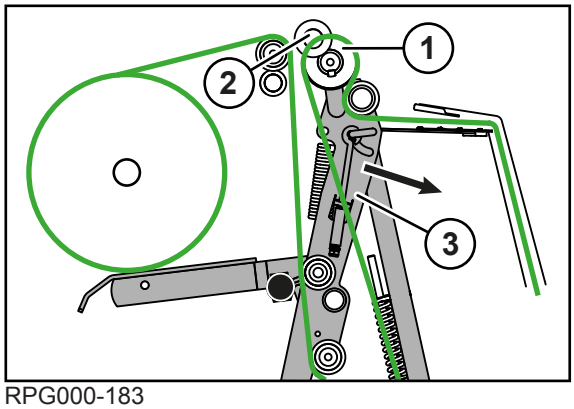
8.15.2 Inserting the net or film

WARNING

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

You may injure your fingers and hands when inserting the wrapping and tying material or working in the range of the cutting unit of the tying unit.

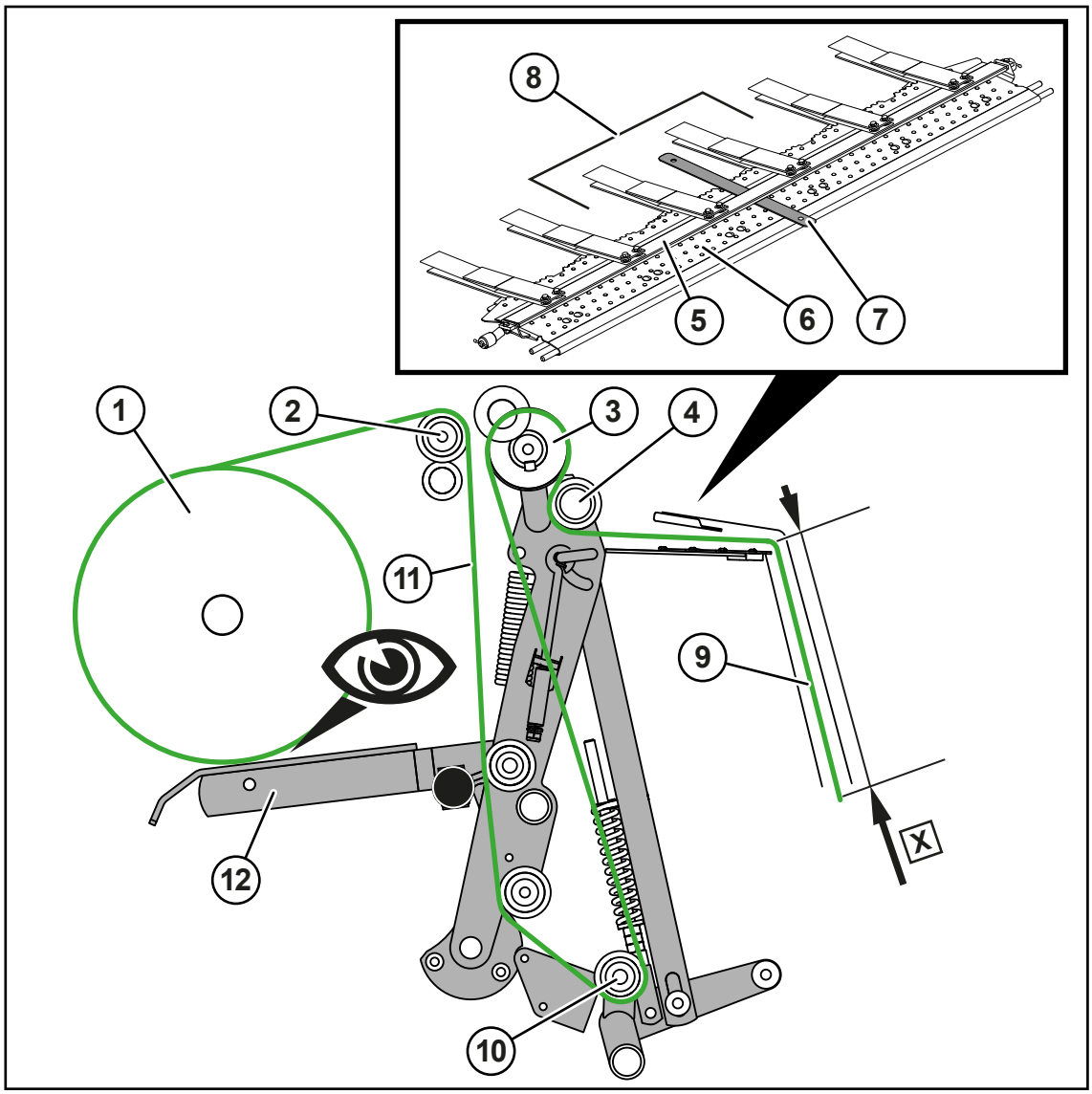
- Always wear protective gloves when inserting the wrapping and tying material and when working in the range of the cutting unit.
- When working in the range of the cutting unit, work particularly carefully and prudently.



RPG000-183

✓ Net or chamber film wrapping has been selected on the terminal, *see Page 151*.

▶ Move the feed rocker arm (3) on the terminal in the feed position direction of arrow until there is a distance of approx. 5 cm between the pressure shaft (2), covered with red foam, and the conical roller (1), *see Page 152*.



RP000-183

The feed plate (7), which is required to insert the wrapping material, is in the storage compartment on the right side.

Pre-settings for net wrapping:

- The tension lever (12) must touch and guide the wrapping material roll (1). To do this, the tension lever (12) must be released, *see Page 188*.
- The conical roller (3) must be locked to prevent it from rotating during net wrapping, *see Page 189*.

Pre-settings for chamber film wrapping:

- The tension lever (12) must not touch the wrapping material roll (1). To do this, the tension lever (12) must be locked, *see Page 188*.
- The conical roller (3) must be released to ensure that it rotates during chamber film wrapping, *see Page 189*.

✓ The machine has been shut down and secured, *see Page 27*.
✓ The roll holder has been swivelled forwards.
✓ The conical roller (3) has been locked or released depending on the set net or chamber film wrapping, *see Page 189*.
✓ The tension lever (12) has been locked or released depending on the set net or chamber film wrapping, *see Page 188*.

▶ Unwind a section of the wrapping material (11) from the wrapping material roll (1) and guide it over the deflection roll (2) and under the deflection roll on the cross tube (10).

▶ Place the wrapping material (11) over the conical roller (3).

▶ Place the wrapping material (11) under the spreading roll (4) on the retaining sheet (6).

▶ Using the supplied feed plate (7), push the wrapping material (11) between the retaining sheet (6) and the synthetic cloth (5).

▶ Ensure that the wrapping material (11) is spread over an area (8) of at least 2 feed strips.

▶ Ensure that the wrapping material (11) projects over the edge of the retaining sheet (6)with one of the following lengths:

- For net: **X=170–200 mm**
- For film: **X=230–260 mm**

To check the position of the feed rocker arm, *see Page 181*.

To set the number of net layers, *see Page 149*.

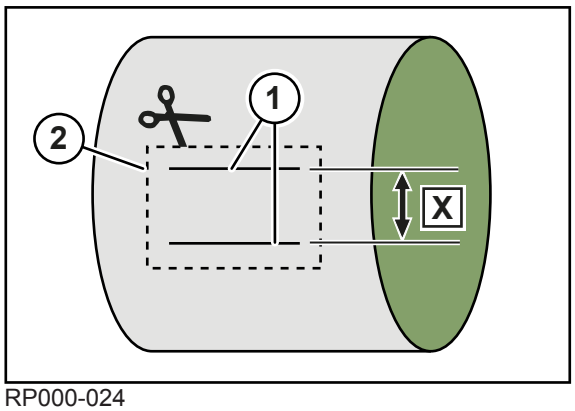
To set the number of film layers, *see Page 149*.

8.15.3 Notes on operation

- When chamber film wrapping starts, it is necessary to continue collecting crops until the film is caught by the round bale and the film roll is turning.
- If possible, for initial operation, use a complete net roll first and tie the round bales with net. This way provides for previous removal of any sharp edges or paint residues.
- KRONE recommends not to use chamber film wrapping for straw bales. There is a risk of condensation forming, resulting in mould.
- Tie the round bale with the appropriate film tension, *see Page 97*.
- KRONE recommends 3.5-4 film layers to ensure optimum chamber film wrapping, *see Page 149*. The dryer the crops, the more film layers will be required.
- KRONE recommends no fewer than 2.5 net layers for optional net wrapping, *see Page 149*. Otherwise, depending on the quality of the net and crops, the expansion force of the crops cannot be absorbed by the net.
- A machine with chamber film wrapping can still tie round bales with net. In doing so, ensure that the the conical roller and the tension lever are set differently.
  - Setting the locking of the conical roller: *see Page 189*
  - Locking/releasing tension lever: *see Page 188*

8.15.4 Checking the tension of the inserted film

The round bale must be tied with the appropriate film tension. KRONE recommends a pre-tension of 5-15%. You can check whether this pre-tension of 5-15% has been obtained as follows.



RP000-024

✓ A round bale is pressed with chamber film wrapping and set down in the field.
✓ The machine has been shut down and secured, *see Page 27*.

▶ Use a marker pen to draw 2 horizontal lines (1) on the film at a distance of **X=100 mm**.

▶ Cut out the section (2) around the 2 lines which you have drawn. Ensure that you cut out all film layers.

▶ Allow all film layers of the cut-out section (2) to rest for at least 3 minutes.

▶ Measure the distance X between the lines (1) which you have drawn.

➡ If the distance X is between 86 and 95 mm, the pre-tension has been correctly set.

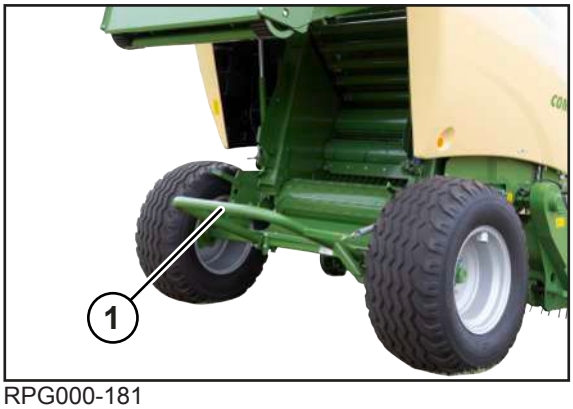
Measured value X	Pre-tension	Evaluation
< 86 mm	> 15%	The pre-tension is too strong. Reduce the brake force on the wrapping material brake, *see Page 186*.
86 mm	15%	Correct
95 mm	5%	Correct
> 95 mm	< 5%	The pre-tension is too weak. Increase the brake force on the wrapping material brake, *see Page 186*.

INFO

KRONE recommends 3.5-4 film layers to ensure optimum chamber film wrapping, *see Page 149*. The minimum required film layers depend on the condition of the crops.

For round bales with a diameter greater than 130 cm and/or very dry or very wet crops, KRONE recommends using at least one additional film layer.

8.16 Using the bale ejector



RPG000-181

The round bale is automatically conveyed out of the bale chamber by the bale ejector (1) onto the field.

NOTICE
Machine damage due to an incorrectly positioned bale ejector The connecting rod can be bent if the bale ejector is not positioned on the axis after ejection. After the round bale has been laid down, the bale chamber is closed and whilst new crops are being taken in, the bale ejector must be positioned again on the axis. ▶ Have the setting of the bale ejector be checked by a KRONE service partner.

8.17 Removing crop blockages

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

- ▶ Lower the rotational speed.
- ▶ While the PTO shaft is running, reverse and actuate the control unit in the tractor (yellow, 3+) several times to lift and lower the pick-up.
- ▶ Ensure that the crop press roller unit does not collide with the chassis when raised.

If this does not remove the crop blockage:

- ▶ Shut down and safeguard the machine, *see Page 27*.

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.

8.17.2 Crop blockage in the pick-up

- ▶ Lower the rotational speed.
- ▶ While the PTO shaft is running, reverse and actuate the control unit in the tractor (yellow, 3+) several times to lift and lower the pick-up.
- ▶ Ensure that the crop press roller unit does not collide with the chassis when raised.

If this does not remove the crop blockage:

- ▶ Shut down and safeguard the machine, *see Page 27*.
- ▶ Remove the baffle sheet, *see Page 89*.

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

- Manually remove the accumulated crops.
- Mount the baffle sheet, *see Page 89*.

8.17.3 Crop blockage under feed rotor

To remove the accumulated crops from under the feed rotor, proceed as follows:

- Switch off the PTO shaft.
- Reverse.
- Ensure that the tractor is in straight alignment with the machine.
- Lower the feeder rotor floor, *see Page 90*. Move the control unit (yellow, 3+) into the float position until the PTO shaft is switched on.
- Switch on the PTO shaft and test at idling speed whether the crop blockage is being removed.

If this does not remove the crop blockage:

- Shut down and safeguard the machine, *see Page 27*.

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

- Manually remove the accumulated crops.

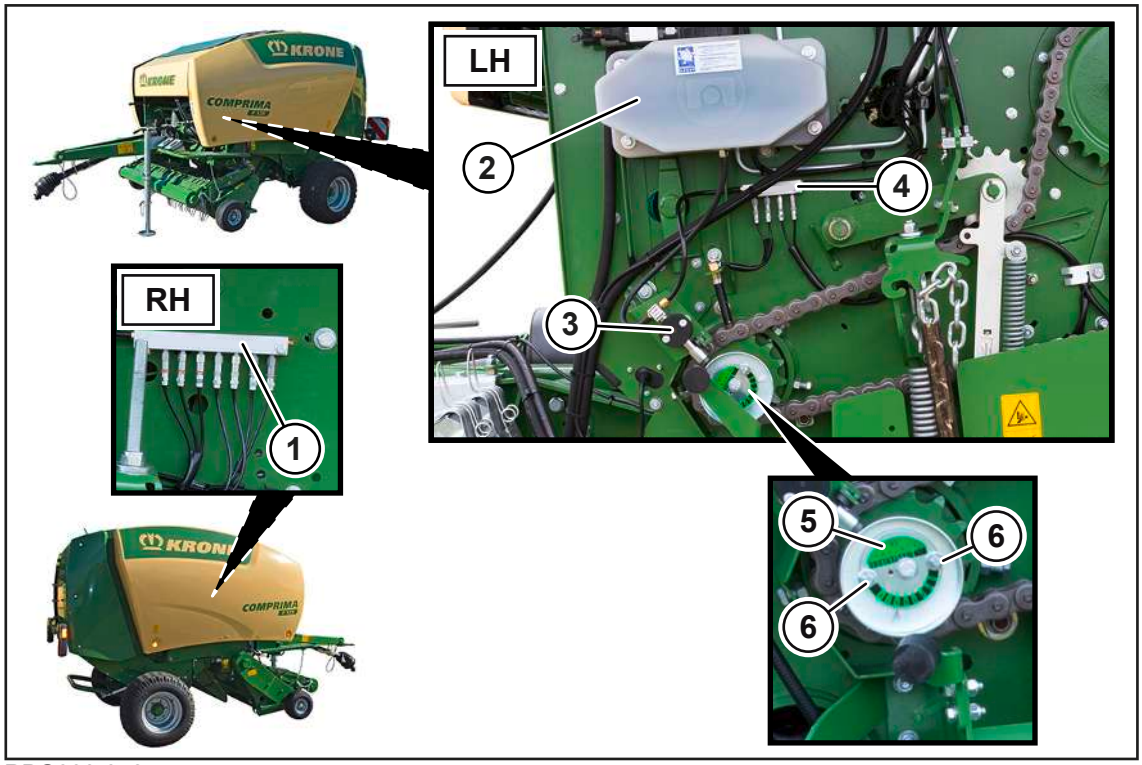
8.17.4 Crop blockage in the baling element

- Switch on the PTO shaft.
- Open the tailgate.
- Shut down and safeguard the machine, *see Page 27*.
- Close the stop cock, *see Page 81*.

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

- Manually remove the accumulated crops from the baling element.
- Open the stop cock, *see Page 81*.
- Switch on the tractor engine and the PTO shaft.
- Close the tailgate.
- Resume baling.

8.18 Operating the central chain lubrication system



RPG000-078

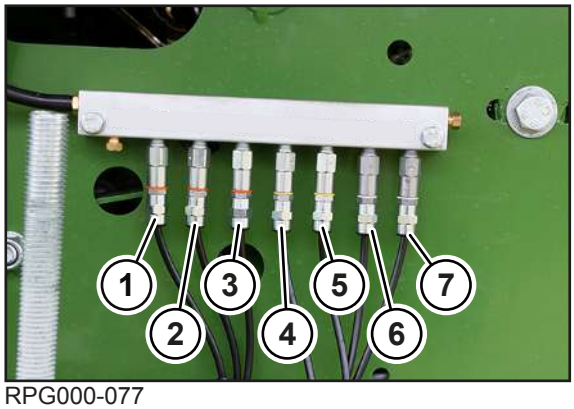
The central chain lubrication system is located on the left side of the machine behind the front side hood. The rails with the dosing units (1) and (4) are located on the right and left sides of the machine.

With each revolution of the drive shaft, the pump (3) pumps oil out of the tank (2) via the rails with the dosing units (1) and (4) to the brushes on the drive chains.

Different dosing units are integrated in the rails for each lubrication point. The oil quantity can be adjusted using the eccentric cam (5) on the drive roll. In doing so, the oil quantity is adjusted for all dosing units in the entire machine.

To service the central chain lubrication system, *see Page 219*.

Dosing units on right side of machine

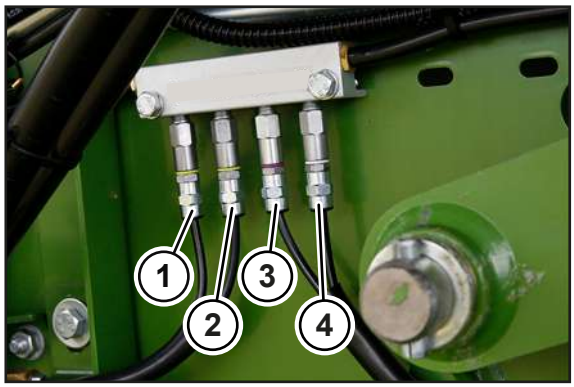


RPG000-077

The dosing units on the rail on the right side of the machine oil the chains of the following machine components:

Pos.	Designation
1	Roller drive starter roller
2	Roller drive starter roller
3	Spur wheels
4	Intake
5	Intake
6	Pick-up drive
7	Pick-up/auger conveyor

Dosing units on left side of machine



RP000-405

The dosing units on the rail on the left side of the machine oil the chains of the following machine components:

Pos.	Designation
1	Bale formation conveyor drive
2	Bale formation conveyor drive
3	Roller drive feed roller
4	Pick-up/auger conveyor

Setting oil quantity

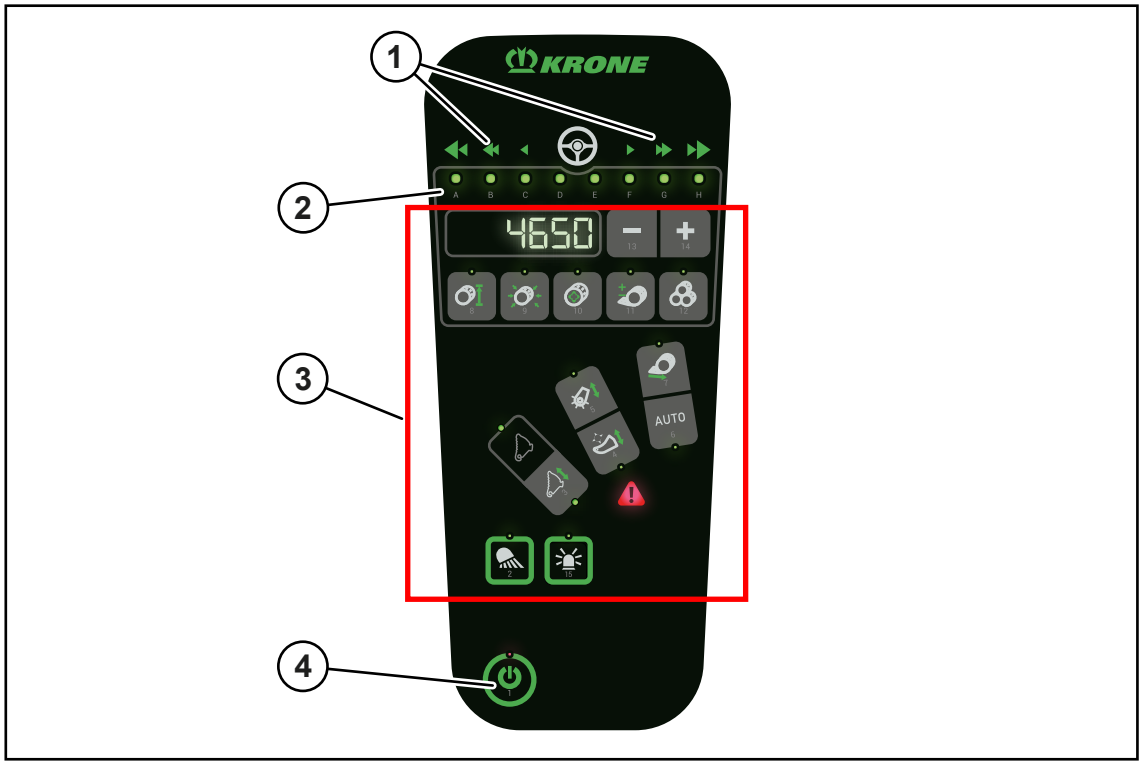
- ▶ Loosen the screws (6).
- ▶ Turn the eccentric cam (5) until the arrow is on the required oil quantity.
- ▶ Tighten the screws (6).

9 KRONE operation unit DS 100

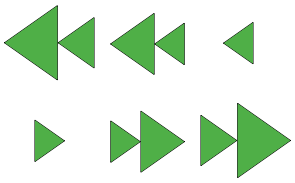
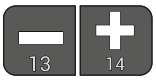
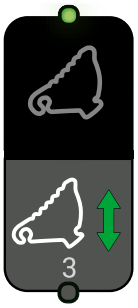
For version with "Net wrapping"

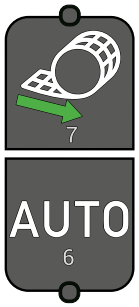
NOTICE
Penetration of water in the operation unit could lead to malfunction. As a result, the machine can no longer be operated safely. ▶ Protect the operation unit from water. ▶ If the machine is not used for an extended period of time (for example in winter), the terminal must be stored in a dry place. ▶ For installation and repair work, especially for welding jobs on the machine, interrupt the voltage supply to the operation unit.

9.1 Overview



EQ003-241

Pos.	Icon/designation	Explanation
1		Direction display arrows, *see Page 105*
2	LEDs A-H	The LEDs indicate the direction or the progress of the tying cycle on the working screen. Additionally, the LEDs can indicate different settings.
3		Display for various indications and settings
		Various settings can be made via the Plus and Minus keys.
		Key not assigned
		• Setting the baling pressure, *see Page 108* • Setting advance signaling, *see Page 107* • Setting the sensitivity of direction display, *see Page 108*
		Key not assigned
		• Setting the number of net layers, *see Page 109* • Setting the tying start delay, *see Page 110*
		Display customer counter, *see Page 111*
		Key not assigned
		• Preselect pick-up to be able to move pick-up into transport/working position via the control unit, *see Page 85* • Preselect feed rotor floor to be able to lift/lower the feed rotor floor via the control unit, *see Page 90*

Pos.	Icon/designation	Explanation
		• Start tying process in manual mode • Switch the automatic mode of tying on/off, *see Page 106*
		Switching working lights on/off, *see Page 107*
		Switching warning beacon on/off, *see Page 107*
4		Switching the operation unit on/off, *see Page 104*

9.2 Switching the operation unit on/off

When the operation unit is connected to the power supply of the tractor, the operation unit is switched on automatically. For connecting the operation unit, *see Page 65*.

When the operation unit is switched on:

- All indicator lamps and the background lighting emit light briefly and an acoustic signal is sounded.
- If an indicator lamp does not light up, this lamp is defective.
- The operation unit is ready for operation and is in road travel screen mode.

INFO

If another terminal is connected to the machine and a function is enabled on this terminal which the DS 100 operation unit cannot show on the display, it is no longer possible to press the keys on the DS 100 operation unit. The indicator lamp above the  key flashes.

► To exit this state, press the  key and hold for approx. 1 second.

⇨ The operation unit is in road travel screen mode.

9.3 Call road travel screen

After the operation unit is switched on , it is in road travel screen mode. In road travel screen mode, only the indicator lamp above the  key emits light.

► To change from working screen to road travel screen, press the  key and hold for approx. 1 second.

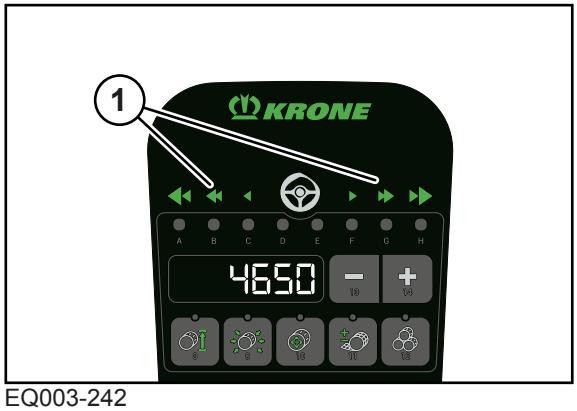
9.4 Accessing the working screen

The working screen can show the following data:

- The display shows the actual baling pressure as a %.
- During filling of the bale chamber, the LEDs A-H serve as direction display, *see Page 105*.
- During the tying cycle, the LEDs A-H show the process of the tying.

▶ To change from road travel screen to working screen, press the key.

9.5 Direction display



EQ003-242

The direction display (1) shows the driver to which side and to what extent he must correct his direction when driving over the swath in order to ensure the bale chamber is filled evenly.

The LEDs below the icons emit light to indicate the direction of travel. The icons have the following meaning:

Icon	Explanation
LED C/D	Step 1: The bale chamber is filled slightly too much on the left side. Steer the tractor to the left to pick up the swath on the right of the bale chamber.
LED B/C	Step 2: The bale chamber is filled too much on the left side. Steer the tractor to the left to pick up the swath on the right of the bale chamber.
LED A/B	Step 3: The bale chamber is filled very heavily on the left side. Steer the tractor to the left to pick up the swath on the right of the bale chamber.
LED A	Step 4: The bale chamber is filled very heavily on the left side. Steer the tractor to the left to pick up the swath on the right of the bale chamber.
LED D/E	Swath is picked up in the middle
LED E/F	Step 1: The bale chamber is filled slightly too much on the right side. Steer the tractor to the right to pick up the swath on the left of the bale chamber.

Icon	Explanation
 LED F/G	Step 2: The bale chamber is filled too much on the right side. Steer the tractor to the right to pick up the swath on the left of the bale chamber.
 LED G/H	Step 3: The bale chamber is filled very heavily on the right side. Steer the tractor to the right to pick up the swath on the left of the bale chamber.
 LED H	Step 4: The bale chamber is filled very heavily on the right side. Steer the tractor to the right to pick up the swath on the left of the bale chamber.

How the bale chamber is optimally filled by the pick-up, *see Page 76*.

- If the swath is the same width as the bale chamber, pick up the swath as centrally as possible.
  - ⇨ The D and E LEDs light up.
- If the swath is too narrow, pick it up alternatingly on the left and right sides. Ensure that you do not move too far to the left  or right  .

9.6 Start tying

Start tying process in manual mode

Once the bale chamber has been filled, the indicator lamp above the  key flashes, and the tying cycle can be started manually.

- To start the tying cycle, press the  key.
- ➡ The indicator lamp above the key emits light. The LEDs A-H indicate the progress of the tying cycle.

Switching automatic tying on/off

- To switch automatic tying on, press the  key.
- ➡ The indicator lamp under the key lights up. The next tying cycles are started as soon as the set bale chamber filling level is reached.
- To switch automatic tying off, press the  key.
- ➡ The indicator lamp below the key goes out. The next tying cycles must be started manually via the  key.

9.7 Switching the working lights on/off

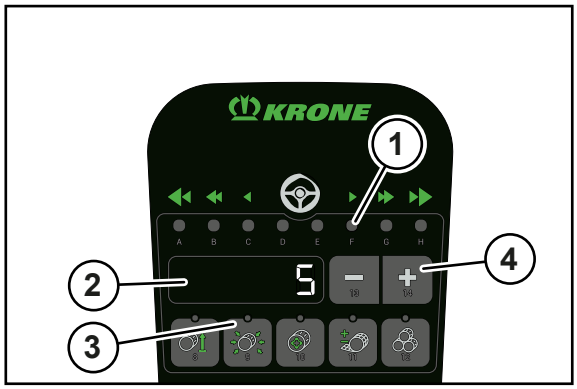
- ▶ To switch on the working lights, press the key.
- ➡ The indicator lamp above the key emits light.
- ▶ To switch off the working lights, press the key.
- ➡ The indicator lamp above the key goes out.

9.8 Switching warning beacon on/off

- ▶ To switch on the warning beacon, press the key.
- ➡ The indicator lamp above the key emits light.
- ▶ To switch off the warning beacon, press the key.
- ➡ The indicator lamp above the key goes out.

9.9 Setting advance signaling

Pre-signaling is used to warn if the round bale in the bale chamber is near completion. On the operation unit, you can set the filling at which advance signaling starts.

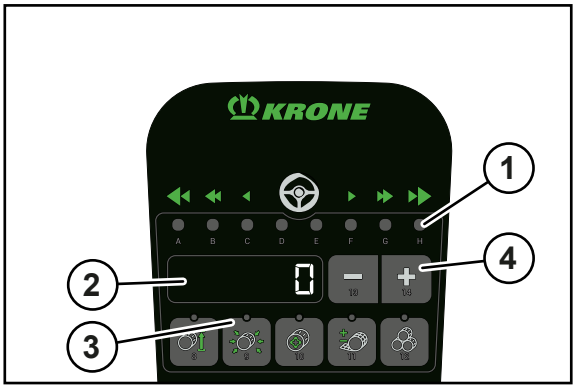


EQG003-117

Advance signaling can be set as a % on the working screen on the operation unit.

- ▶ To call the "Pre-signaling" menu, first press the key (3) and then the AUTO key once.
  - ⇨ The indicator lamp above the key and the LED F (1) emit light.
  - ⇨ The display (2) shows the set advance signaling as a %.
- ▶ To change the value, press the keys (4).
- ➡ The value is saved automatically.
- ▶ To return to the working screen, press the key (3) again.

9.10 Setting the sensitivity of the direction display



EQG003-118

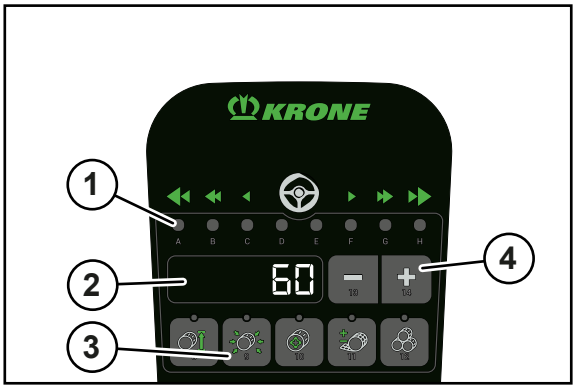
This menu is used to set the sensitivity of the direction display on the working screen.

The direction display indicates whether the swath is picked up in the centre by the pick-up and provides information about the required direction of travel. The higher the number on the display (2), the more sensitive the direction display is set. The higher the sensitivity of the direction display is set, the stronger the motion indication appears in the form of arrows on the working screen.

How the bale chamber is optimally filled by the pick-up, *see Page 76*.

- ▶ To call the "Sensitivity of direction display" menu, first press the key (3) and then the AUTO key twice.
  - ⇨ The indicator lamp above the key and the LED H (1) emit light.
  - ⇨ The display (2) shows the set sensitivity of the direction display.
- ▶ To change the value, press the keys (4).
- ➡ The value is saved automatically.
- ▶ To return to the working screen, press the key (3) again.

9.11 Setting the baling pressure



EQG003-116

At the operation unit, the baling pressure in % can be set for the round bale in the working screen.

▶ Press the key (3) to call the "Baling pressure" menu.

⇨ The indicator lamp above the key and the LED A (1) emit light.

⇨ The display (2) shows the set target baling pressure in %.

▶ To change the value, press the keys (4).

➡ The value is saved automatically.

▶ To return to the working screen, press the key (3) again.

Releasing the baling pressure

The baling pressure can be released for maintenance work at the baling belts or in the bale chamber.

✓ The working screen has been selected, *see Page 105*.

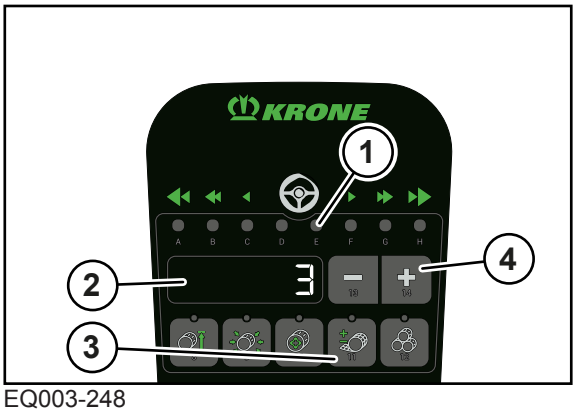
▶ Press the key (3) and hold it for approx. 5 seconds.

➡ The baling pressure is released and the indicator lamp above the key flashes.

▶ To build up the baling pressure, once more press the key (3) and hold it for approx. 5 seconds.

➡ The baling pressure is built up and the indicator lamp above the key goes out.

9.12 Setting the number of net layers



EQ003-248

On the operation unit, between 1.5 and 5.0 net layers can be set in the working screen. The display shows the net layers in tenths, for example 35 at 3.5 network layers.

▶ To call the "Number of net layers" menu, press the key (3).

⇨ The indicator lamp above the key and the LED E (1) emit light.

⇨ The display (2) shows the set number of net layers.

▶ To change the value, press the  keys (4).

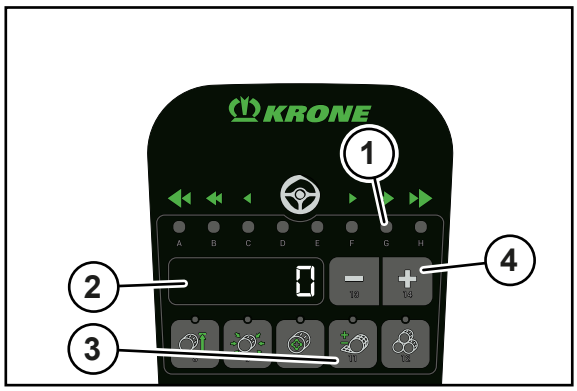
➡ The value is saved automatically.

▶ To return to the working screen, press the  key (3) once more.

9.13 Setting the tying start delay

Tying start delay is used to set the period of time which is required between completion of round bale in the bale chamber and triggering the tying cycle. The tying start delay is set in milliseconds.

Setting range: 0-8,000 ms



EQ003-249

On the operation unit, the tying start delay can be set in milliseconds (ms) in the working screen.

▶ To call the "Tying start delay" menu, first press the  key (3) and then the  key once.

⇨ The indicator lamp above the  key and the LED G (1) emit light.

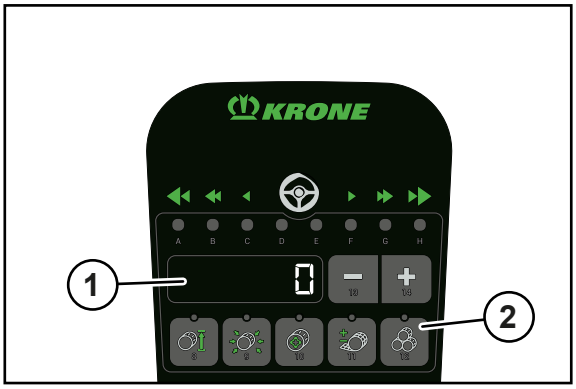
⇨ The display (2) shows the set tying start delay in ms.

▶ To change the value, press the  keys (4).

➡ The value is saved automatically.

▶ To return to the working screen, press the  key (3) once more.

9.14 Displaying the customer counter



EQ003-250

The customer counter shows the number of the pressed round bales in the display (1). 8 different customer counters can be indicated and saved. Each LED from A-H corresponds to one customer counter. The respective LED emits light when the customer counter has been selected, and flashes when the corresponding customer counter is activated.

After scrolling through to LED H, the display (1) shows the total counter.

- ▶ To call the "Customer counter" menu, press the key (2).
  - ⇨ The indicator lamp above the key and the corresponding LED emit light.
  - ⇨ The display (1) shows the number of the pressed round bales.
- ▶ To scroll between the customer counters, press the key to scroll up and the AUTO key to scroll down.
  - ⇨ One after another, the LEDs emit light, and the corresponding number of pressed round bales is indicated in the display (1). After LED H, all LEDs emit light and the display (1) shows the total counter.
- ▶ To call the total counter directly, press the key and hold for approx. 1 second.
- ▶ To activate the customer counter which is currently displayed, press the key.
  - ⇨ The LED of the activated customer counter flashes.
- ▶ To change the number of round bales, press the key.
- ▶ To set the indicated customer counter to 0, press the key and hold for approx. 1 second.

9.15 Sensor test for digital and analogue sensors

⚠ WARNING

Danger of injury in the danger zone of the machine

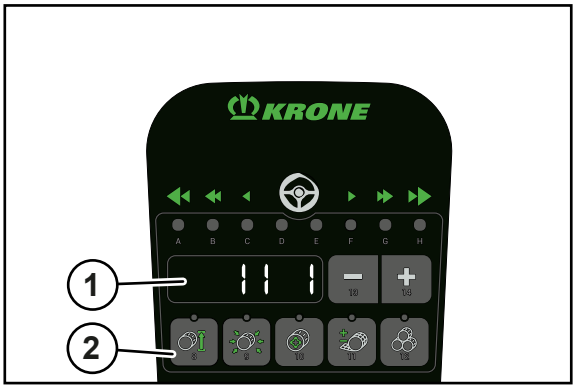
If the PTO shaft runs during the sensor test, machine parts may start to move unintentionally. Thus there is a risk of serious injuries or death.

- ▶ Turn off PTO shaft.

In the sensor test, the sensors installed on the machine are checked for faults. Furthermore the sensors can be correctly set in the sensor test. There is no guarantee the machine is working correctly until after the sensors have been adjusted.

Access to the sensor test for digital sensors is possible in road travel screen mode only, *see Page 104*.

- ▶ To call up the diagnostics section, press the key and hold it while pressing the key.



EQ003-530

- ▶ To access the "Sensor test" menu, press the key (2).
  - ⇨ The indicator lamp above the key emits light.
  - ⇨ **Digital sensors:** The display (1) shows the sensor number on the left and the status of the sensor on the right.
  - ⇨ **Analogue sensors:** The display (1) indicates the sensor number on the left and the current voltage in 1/10 V on the right (e.g. 1.5 = 15 V).

The following status displays for digital sensors are possible:

Status	Display	Sensor status
1	Is lit and a warning sounds	Sensor is attenuated (metal in front of the sensor)
2	Is lit	Sensor is not attenuated
20	Flashes	Short circuit
21	Flashes	Cable break
26	Flashes	General fault

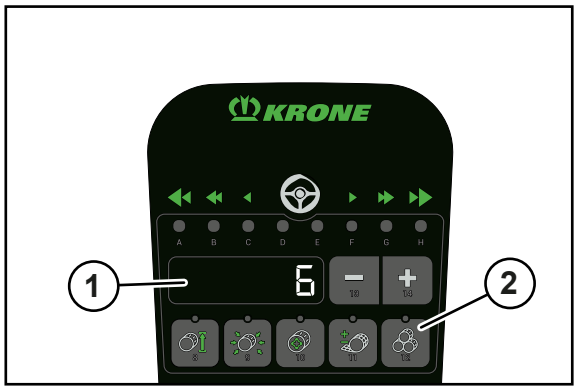
The following sensors can be displayed:

No.	Designation	Sensor type
B01	Speed of bale chamber	digital
B02	Tying process active	digital
B05	Slip floor conveyor	digital
B08	Feed rotor floor top position	digital
B09	Filling display left	analogue
B10	Filling display right	analogue
B11	Tailgate lock hook left	digital
B12	Tailgate lock hook right	digital
B61	Tying 1 (passive)	analogue

An overview of the position of the sensors, actuators and control units is provided in the circuit diagram.

- ▶ To switch between the sensors, press the key to scroll up and the AUTO key to scroll down.
- ▶ To eliminate an error on the sensor, *see Page 234*.
- ▶ To quit the diagnostics section, press the key and hold for approx. 1 second.

9.16 Calibrating sensors



EQ003-529

✓ The "Sensor test" menu has been selected, *see Page 112*.

- ▶ To access the "Calibrate sensors" menu, press the key.
  - ⇨ The indicator lamp above the key flashes and the indicator lamp above the key is lit.
  - ⇨ The display shows the currently measured voltage of the selected sensor is indicated in 1/10 V.
  - ⇨ One of the LEDs A-E is lit.

The LEDs A-E stand for the following sensors:

LED	Sensor		Additional
A	B09	Filling display left	
B	B10	Filling display right	
C	B61	Tying 1 (passive)	Set feed position of the feed rocker arm
D	B61	Tying 1 (passive)	Set end position of the feed rocker arm
E	B82	Direction indicator	

- ▶ To switch between the sensor calibrations, press the  key to scroll up and the 

key to scroll down.

Calibrating sensor B61 "Tying 1 (passive)"

- ▶ Call sensor B61.
- ▶ To change the value, press the 

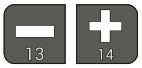
keys.
  - ⇨ As soon as the sensor value is within a valid range, the indicator lamp under the  key is lit.
- ▶ To save the value, press and hold down the  key.
- ➡ The sensor has been calibrated and a confirmation tone sounds.

Calibrating the remaining sensors

The remaining sensors must be mechanically set on the machine if they display an error in the sensor test.

An overview of the position of the sensors, actuators and control units is provided in the circuit diagram.

Set feed position of the feed rocker arm

- ✓ The LED C is lit.
- ▶ To move the feed rocker arm in the direction of the feed position, press the 

keys.
- ▶ To save the value, press and hold down the  key.
- ➡ The sensor has been calibrated and a confirmation tone sounds.

Set end position of the feed rocker arm

✓ The LED D is lit.

▶ To move the feed rocker arm in the direction of the end position, press the  keys.

▶ To save the value, press and hold down the  key.

➡ The sensor has been calibrated and a confirmation tone sounds.

9.17 Actuator test for digital and analogue actuators

⚠ WARNING

Risk of injury due to non-observance of the safety routines

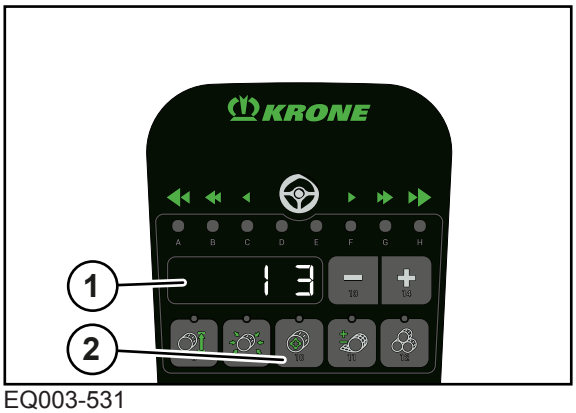
If the relevant safety routines are not observed, persons may be seriously injured or killed.

▶ The safety routines must be read and observed to avoid accidents, *see Page 27*.

The actuator test is used to test the actuators installed on the machine. An actuator can only be tested when current is flowing through it. Therefore, in the "Actuator test" menu, the actuator must be controlled manually for a short time in order to determine possible errors in the actuator system.

The actuator test can be called up from the road traffic screen only, *see Page 104*.

▶ To call up the diagnostics section, press the  key and hold it while pressing the  key.



EQ003-531

▶ To access the "Actuator test" menu, press the  key (2).

⇨ The indicator lamp above the key emits light.

⇨ The display (1) shows the actuator number on the left and the status of the actuator on the right.

The following status displays for actuators are possible:

Status	Display	Actuator status
3	Is lit	Actuator ON
4	Is lit	Actuator OFF
20	Flashes	Short circuit
21	Flashes	Cable break
26	Flashes	General fault

The following actuators can be displayed:

No.	Designation
E20	Working lights net roll (for the “Working lights” version)
E22/E23	Maintenance lighting side hood left/right
K01	Pick-up
K03	Lifting/lowering the feeder rotor floor
M01	Motor tying 1 (passive)

An overview of the position of the sensors, actuators and control units is provided in the circuit diagram.

- To switch between the actuators, press the  key to scroll up and the 

key to scroll down.

Switching actuators on/off

- Press the 

key to switch the indicated actuator on.
- Press the 

key to switch the indicated actuator off.

Increase/decrease the currents of the analogue actuators

With the analogue actuators Q30 and Q41, the mA values of the current can be increased or decreased .

- Select the required actuator.
  - ⇨ The currently set current is indicated in the display in mA.
- Press the 

key to increase the current of the indicated actuator.
- Press the 

key to reduce the current of the indicated actuator.

9.18 Error messages

The error messages can be indicated in the working screen or road travel screen.

If an error message is pending, the LEDs A-H flash.

The display shows the error number of the error message.

- ▶ To indicate the FMI of the error message, press the key.

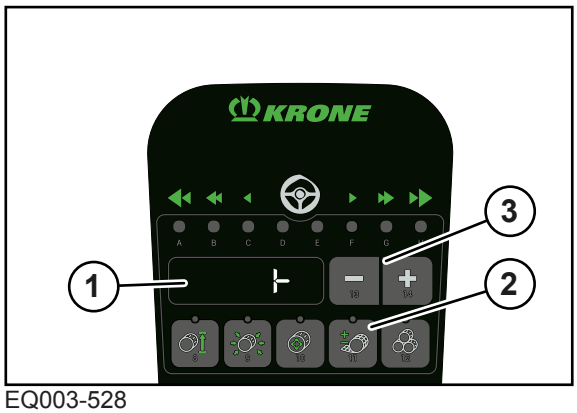
For an explanation of the configuration of an error message, *see Page 232*.

Acknowledging error message

- ▶ Note down the error number.
- ▶ Press the 13 or 14 key.
- ➡ The acoustic signal stops and the error message is no longer indicated.
- ▶ Eliminate the disturbance; see Chapter "Error list" in the supplement to the operating instructions (software).

If the fault occurs again, the error message will be displayed again.

9.19 Manual operation of the tying system



EQ003-528

When the tying system is manually operated, the feed rocker arm can be manually moved.

For an overview of the positions of the feed rocker arm, *see Page 181*.

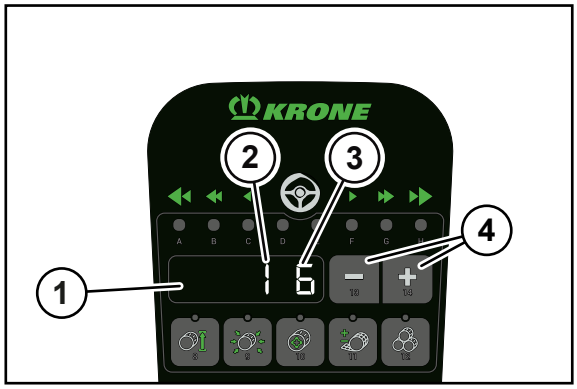
- ▶ To access the "Manual operation" menu, press the key (2) and hold down for approx.4 seconds.
  - ⇨ The indicator lamp above the key flashes.
  - ⇨ The display shows the current position of the feed rocker arm.

The following displays are possible:

Display	Explanation
	The feed rocker arm is in the limit position.
	The feed rocker arm is in the feed position.
	The feed rocker arm is between the limit and feed position. This display is also shown while the feed rocker arm is moving.

- ▶ To move the feed rocker arm to the limit position, press the  key and hold down until  is displayed.
- ▶ To move the feed rocker arm to the feed position, press the  key and hold down until  is displayed.
- ▶ To move the feed rocker arm to the tying position, press the  key and hold down.
- ▶ To return to the working screen, press the  key and hold down.

9.20 Setting user preferences



EQG003-123

The following is set in the user settings:

- volume,
- background lighting for day or night design,
- display lighting for day or night design

. Additionally, day or night design can be activated.

✓ The road travel screen is open, *see Page 104*.

- ▶ To call the "User settings" menu, press the  key and the  key (4) simultaneously.
- ➡ The display (1) shows the number of the setting (2) and the set value (3).

Number of the setting (2)	Setting type	Value range (3)
1	Volume	0-10
2	Background lighting day design	0-10
3	Background lighting night design	0-10
4	Display lighting day design	1-10
5	Display lighting night design	1-10
6	Day or night design	d for day n for night

- ▶ To change between the settings, press the  or  key.
- ▶ To change the value, press the  keys (4).
- ➡ The value is saved automatically.

10 KRONE Terminal DS 500

NOTICE
Penetration of water in the terminal could lead to malfunction. As a result, the machine can no longer be operated safely. ▶ Protect the terminal from water. ▶ If the machine is not used for an extended period of time (for example in winter), the terminal must be stored in a dry place. ▶ For mounting and repair jobs, especially for welding jobs on the machine, disconnect the power supply to the terminal.

10.1 Touchable display

To provide menu guidance and entry of values/data, the terminal is equipped with a touch-capable display. By touching the display, you can call up and change values in blue font.

10.2 Switching terminal on/off

EQ003-253

▶ Before switching on the terminal for the first time, check that the connections are correct and tight.

INFO
When the terminal is switched on for the first time, the machine configuration is loaded into the terminal and saved in the terminal memory. Loading may take a few minutes.

Switching ON

▶ Press and hold down the key (1).

⇨ If the machine is not connected, the display shows the main menu after switching on.

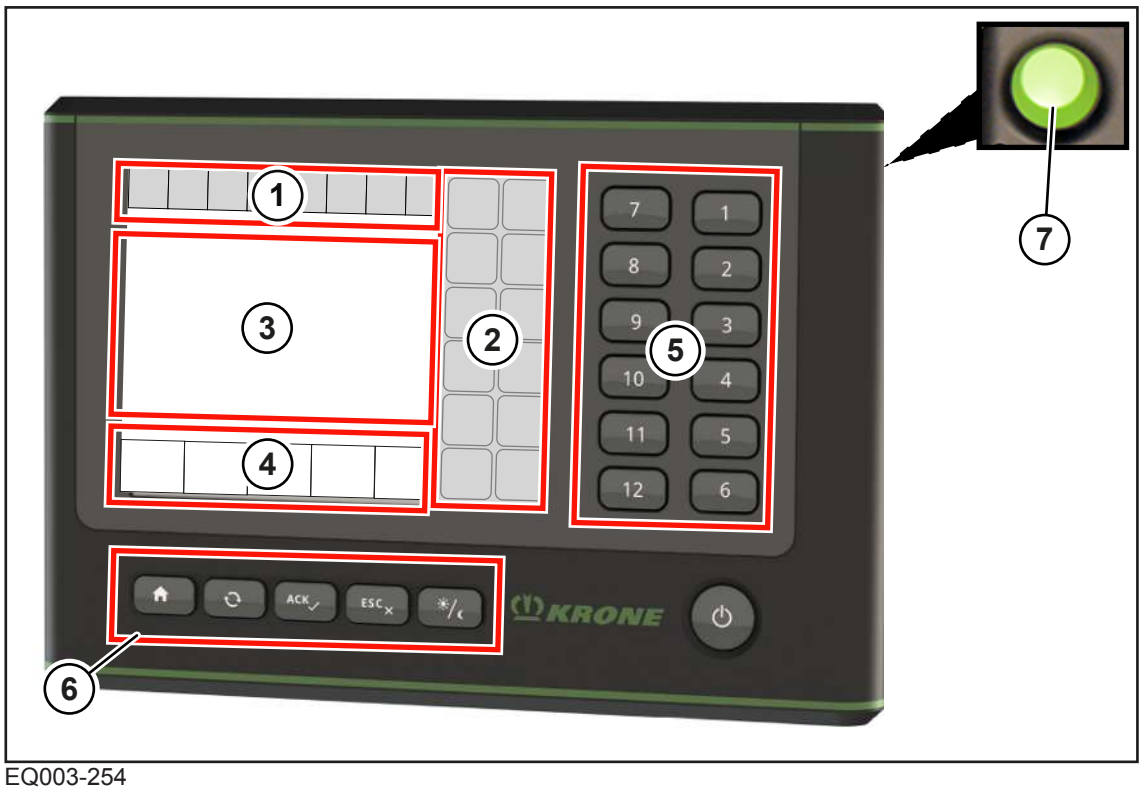
⇨ If the machine is connected, the display shows the road travel screen after switching on.

➡ The terminal is ready to operate.

Switching off

▶ Press and hold down the key (1).

10.3 Design DS 500



EQ003-254

The KRONE machine application is divided into the following areas:

Status line (1)

The status line (1) indicates current states of the machine (depending on how it is equipped), *see Page 128*.

Keys (2)

The machine is operated by pressing the keys (2) via touch function, *see Page 129*.

Main window (3)

Values (figures) shown in blue in the main window can be selected using the touch function.

There are the following main window views:

- Road travel screen, *see Page 104*
- Working screen, *see Page 130*
- Menu level, *see Page 145*

Information bar (4)

The information bar shows information on the working screen, *see Page 133*.

Keys (5)

Alternatively, the machine is operated by pressing the keys (5) without the touch function.

Keys (6)

The keys (6) can be used to open the main menu or the working screen and to confirm the error messages and set the brightness.

Icon	Designation	Explanation
	Main menu	Open the main menu of the terminal.
	Swap key	Switch between the main menu and the working screen of the terminal. With more than one machine mask, the views switches to the next one.
	ACK (acknowledgement key)	Confirm error messages.
	ESC (back key)	Leave the menu without saving.
	Brightness	Switch from day to night design and vice versa.

Scroll wheel (7)

Alternatively, the values (figures) shown in the main window (3) can be selected and set using the scroll wheel (7). The scroll wheel (7) can also be used to navigate between the individual menus.

Turning the scroll wheel to the right:

- Increase the value.
- Navigate to the next value in the menu.
- Navigate to the next menu.

Turning the scroll wheel to the left:

- Reduce the value.
- Navigate to the previous value in the menu.
- Navigate to the previous menu.

Press the scroll wheel:

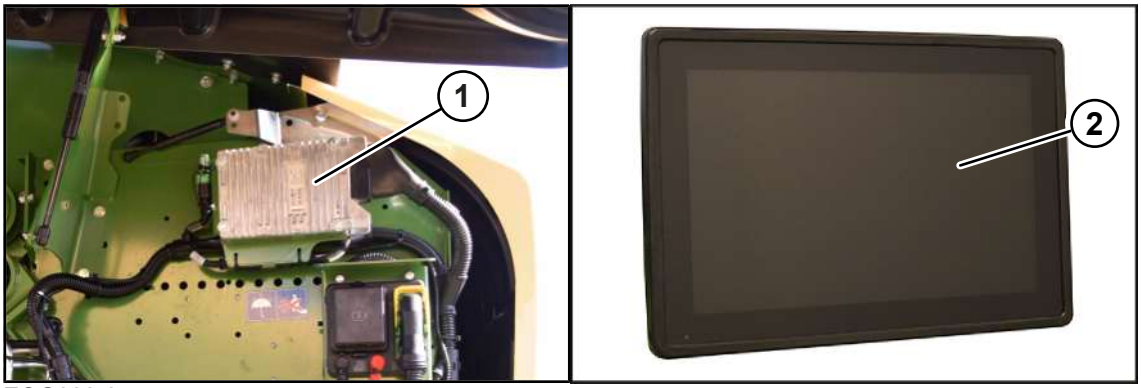
- Select the value.
- Save the value.
- Open the menu.

11 KRONE ISOBUS terminal (CCI 800, CCI 1200)

NOTICE
Penetration of water in the terminal could lead to malfunction. As a result, the machine can no longer be operated safely. ▶ Protect the terminal from water. ▶ If the machine is not used for an extended period of time (for example in winter), the terminal must be stored in a dry place. ▶ For mounting and repair jobs, especially for welding jobs on the machine, disconnect the power supply to the terminal.

The ISOBUS system is an internationally standardised communications system for agricultural machines and systems. The designation of the associated series of standards is: ISO 11783. The agricultural ISOBUS system enables information and data to be exchanged between tractor and unit of different manufacturers. For this purpose, both the required plug connections and the signals are standardised which are required for the communication and transmission of commands. The system also enables machines to be operated with operation units (terminals) which are already available on the tractor or have been attached e.g. to the tractor cabin. The relevant information can be found in the technical documents of the operation device or on the units themselves.

KRONE machines, which have ISOBUS equipment, are coordinated with this system.



EQG000-057

The electronic equipment of the machine consists essentially of the job computer (1), the terminal (2) and the control and function elements.

The job computer (1) is located on the right side of the machine under the side hood.

Functions of the job computer (1):

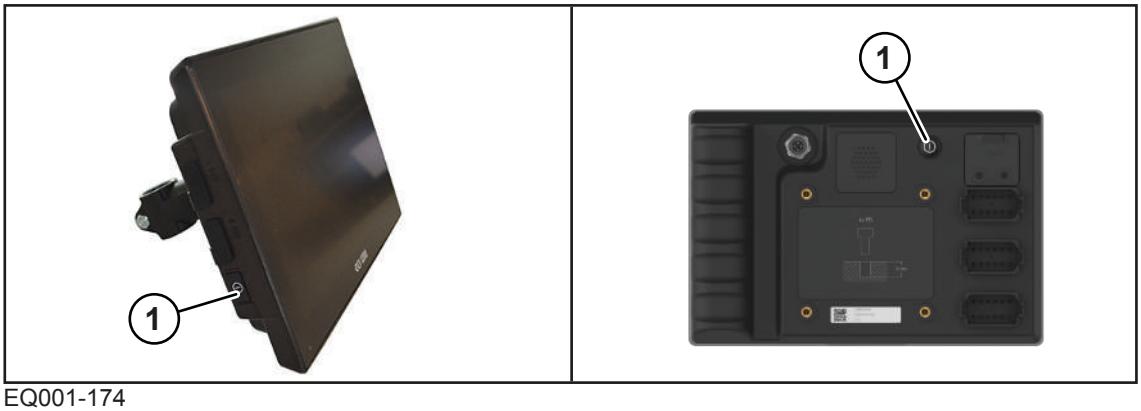
- Control of actuator system installed on the machine.
- Transmission of error messages.
- Evaluation of sensor system.
- Diagnostics of sensor system and actuator system.

The driver gets information by means of the terminal (2) and settings for the operation of the machine are performed which are gathered by the job computer and further processed.

11.1 Touchable display

To provide menu guidance and entry of values/data, the terminal is equipped with a touch-capable display. By touching the display, you can call up and change values in blue font.

11.2 Switching terminal on/off



EQ001-174

KRONE ISOBUS terminal CCI 1200	KRONE ISOBUS terminal CCI 800

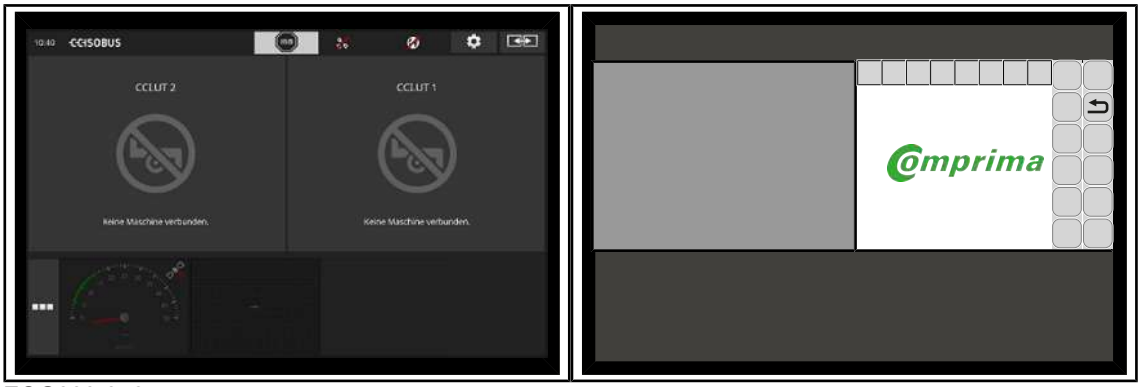
- Before switching on the terminal for the first time, check that the connections are correct and tight.

> ***INFO***
>
> When the terminal is switched on for the first time, the machine configuration is loaded into the terminal and saved in the terminal memory. Loading may take a few minutes.

Switching ON

- Press and hold down the key (1).
  - ⇨ If the machine is not connected, the display shows the main menu after switching on.
  - ⇨ If the machine is connected, the display shows the road travel screen after switching on.
- ➡ The terminal is ready to operate.

If machine is not connected: “Main menu” If machine is connected: “Road travel screen”



EQG000-056

The display appears in landscape mode after starting the terminal. Refer to the CCI terminal operating instructions if you want the display in portrait rather than landscape mode or if you wish to expand the terminal applications to full view.

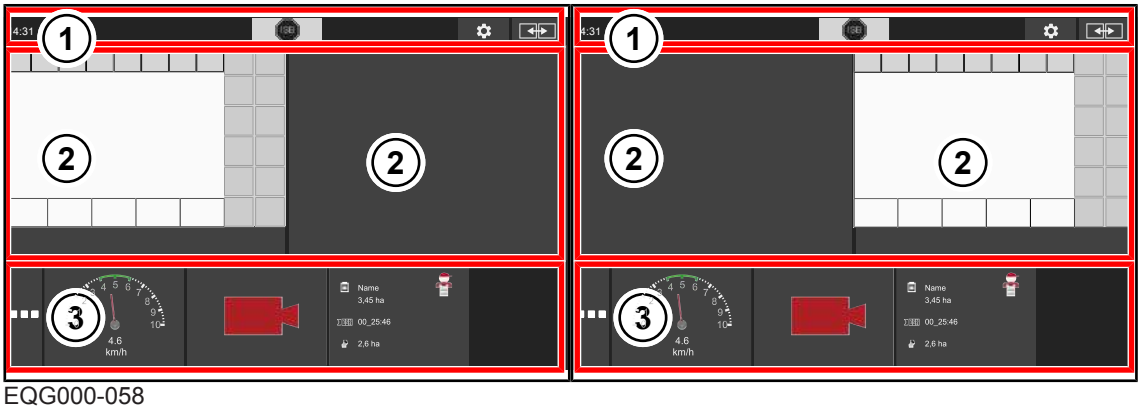
Switching off

- Press and hold down the key (1).

INFO

- For more details on how the terminal functions, follow the terminal operating instructions.

11.3 Design of display



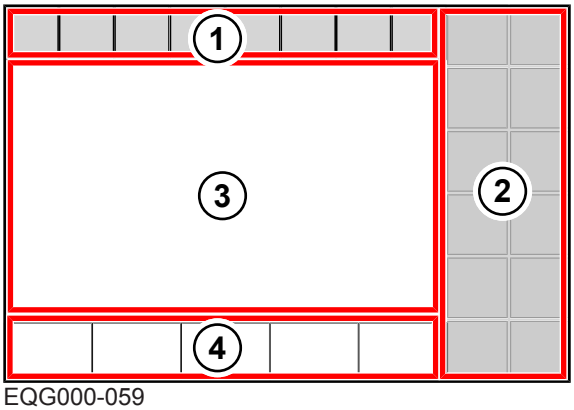
EQG000-058

Pos.	Designation	Explanation
1	Status line	
2	Main view left/right	When operating the machine, KRONE recommends positioning the machine application in the main view.
3	Information view	Additional applications (apps) can be selected from the App menu and displayed in the Information view. The apps can be dragged and dropped into the Main view.

INFO

- For more details on how the terminal functions, follow the terminal operating instructions.

11.4 Design of the KRONE machine application



EQG000-059

The KRONE machine application is divided into the following areas:

Status line (1)

The status line (1) indicates current states of the machine (depending on how it is equipped), *see Page 128*.

Keys (2)

The machine is operated by pressing the keys (2) via touch function, *see Page 129*.

Main window (3)

Values (figures) shown in blue in the main window can be selected using the touch function.

There are the following main window views:

- Road travel screen, *see Page 104*
- Working screen, *see Page 130*
- Menu level, *see Page 145*

Information bar (4)

The information bar shows information on the working screen, *see Page 133*.

11.5 Setting units on the terminal

The units, e.g. metric or imperial, can be set on the terminal in the menu "User settings". This setting is accepted after the terminal has been restarted as well as for the machine software.

The procedure and other settings can be found in the operating instructions for the terminal.

12 Foreign ISOBUS terminal

⚠ *WARNING*

Risk of injury caused by utilization of foreign terminal or other operation units

When using terminals and other operation units which have not been delivered by KRONE mind that the user:

- ✓ assumes the responsibility for the use of KRONE machines when using the machine on operation units (terminal / other operating elements) which have not been delivered by KRONE.
- ✓ only connects such systems (if possible) which have passed a AEF/DLG/VDMA test (so-called ISOBUS COMPATIBILITY TEST).
- ✓ has to follow the operating and safety instructions of the supplier of ISOBUS operation unit (e.g. terminal).
- ✓ must ensure that the used operating elements and machine controls concerning IL (IL = Implementation Level; describes compatibility levels of different software versions) must fit together (condition: IL same or higher).
- ▶ Before using the machine, make sure that all machine functions are performed according to the enclosed operating instructions.

INFO

KRONE ISOBUS systems regularly pass the ISOBUS COMPATIBILITY TEST (AEF/DLG/VDMA test). The operation of this machine at least requires implementation level 3 of ISOBUS system.

The ISOBUS system is an internationally standardised communications system for agricultural machines and systems. The designation of the associated series of standards is: ISO 11783. The agricultural ISOBUS system enables information and data to be exchanged between tractor and unit of different manufacturers. For this purpose, both the required plug connections and the signals are standardised which are required for the communication and transmission of commands. The system also enables machines to be operated with operation units (terminals) which are already available on the tractor or have been attached e.g. to the tractor cabin. The relevant information can be found in the technical documents of the operation device or on the units themselves.

KRONE machines, which have ISOBUS equipment, are coordinated with this system.

12.1 Varying functions to KRONE ISOBUS terminal

The job computer provides information and control functions of the machine on the display of the external ISOBUS terminal. Operation with an external ISOBUS terminal is similar to operation with the KRONE ISOBUS terminal. Before commissioning, refer to the mode of operation of the KRONE ISOBUS terminal in the operating instructions.

A major difference to the KRONE ISOBUS terminal is the arrangement and number of keys with functions determined by the selected external ISOBUS terminal.

The values for the baling pressure are set on the third-party ISOBUS terminal via the touch function, see supplied terminal operating instructions.

13 Terminal machine functions

⚠ WARNING

Personal injuries and/or machine damage caused by non-compliance of error messages

If error messages are ignored and the malfunction is not remedied, people may be injured and/or the machine may be damaged seriously.

- ▶ Remedy the malfunction when the error message is displayed, *see Page 232*.
- ▶ If the malfunction cannot be remedied, consult a KRONE service partner.

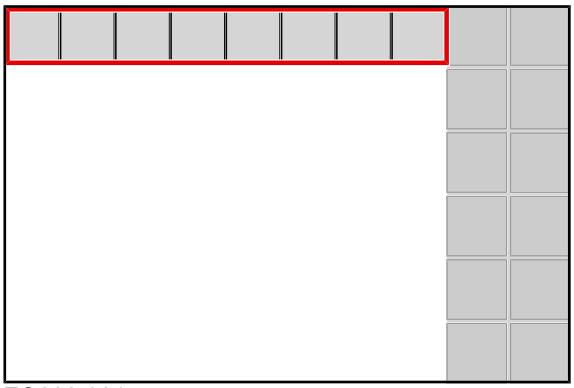
13.1 Status line

INFO

Using a terminal with a resolution of less than 480x480 pixels.

On terminals with a resolution of less than 480x480 pixels, only 7 fields are displayed in the status line. Thus, not all icons for the status line are shown.

On terminal with a resolution of more than/equal to 480x480 pixels, 8 fields are shown in the status line.



EQ000-901

Icons displayed with shading ( ) can be selected. If an icon with shading is selected:

- a window with further information opens or
- a function is activated or deactivated.

The status line shows the current states of the machine (depending on how it is equipped):

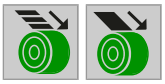
Icon	Explanation
	There are one or more error messages. For version with "Touch-capable display": If this icon is pressed, the pending error messages open in sequence, *see Page 232*.
	Pre-signalling set.
For version with "TIM 1.0"	
	TIM status: The machine is being registered and authenticated with the tractor.

Icon	Explanation
	TIM status: The machine has been registered and authenticated. By pressing the key  , the TIM status switches to  .
	TIM status: The machine waits for confirmation of the tractor. Confirmation on the terminal or on another control panel on the tractor causes the TIM status to switch to  .
	TIM status: The machine and the tractor are successfully connected. The machine automatically takes over control of the TIM functions on the tractor, *see Page 137*.
	**Flashing:** 2 TIM functions are currently active, one TIM function of which has been overridden. The connection is restored by pressing the key  and then confirming on the tractor.
For "Working lights" version	
	Switched on.
	Switched off.

13.2 Keys

The keys that are available depend on the machine configuration. The keys listed below are not always available.

Dimmed keys are currently not available.

Icon	Designation	Explanation
	Feeding wrapping and tying material in manual mode.	Press the key to feed wrapping material to the round bale.
	Switching tying to automatic operation.	The previously selected mode of operation, "Manual operation" or "Automatic operation", is shown on the key. Press the key to change the mode of operation.
	Switching tying to manual operation.	
	Pre-select pick-up.	The setting previously selected, pick-up or feed rotor floor, is displayed. Press the key to change the setting.
	Preselect feed rotor floor.	
	Switching working lights off.	The previously selected setting "Working lights switched off" or "Working lights switched on" is displayed on the key. Press the key to change the setting.
	Switch the working lights on.	

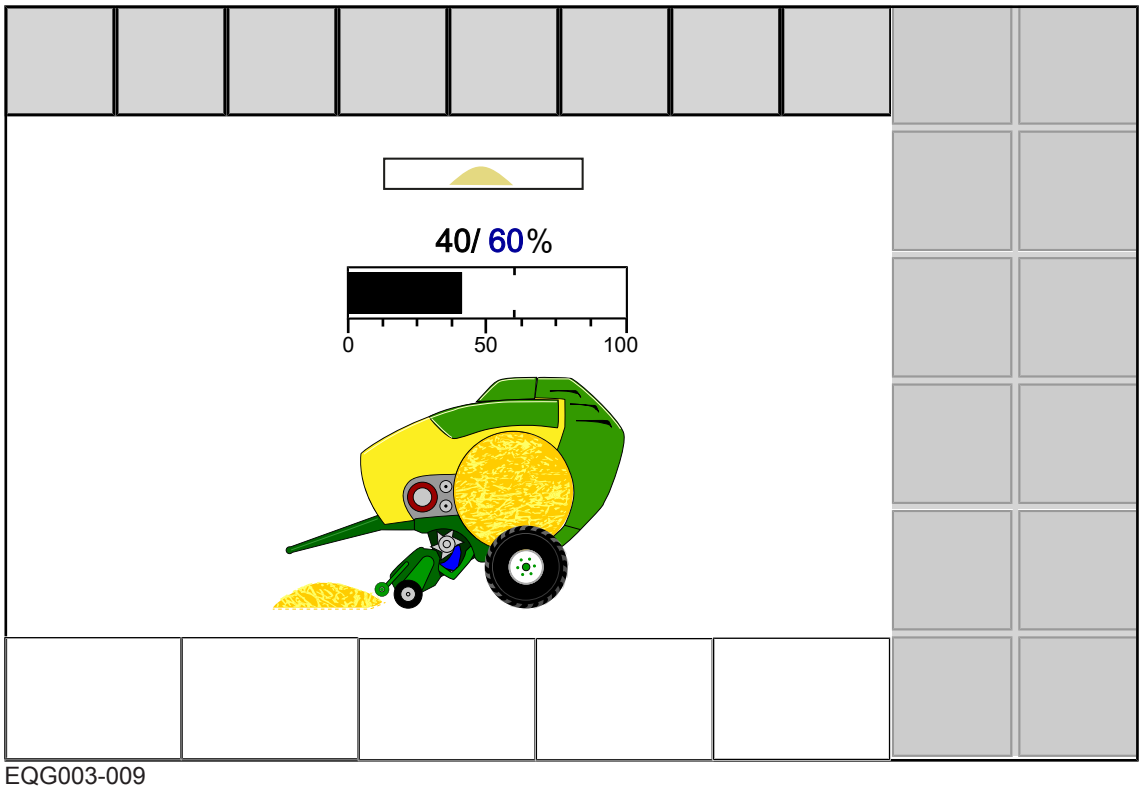
Icon	Designation	Explanation
	Switch the warning beacon off.	(Warning beacon only for certain countries) The previously selected setting "Warning beacon switched off" or "Warning beacon switched on" is displayed on the key. Press the key to change the setting.
	Switch the warning beacon on.	
	Menu level on the terminal.	Press the key to open the menu level on the terminal, *see Page 145*.
	Open the Counters menu.	Press the key to open Menu 13 "Counters", *see Page 157*.
	Scrolling display pages.	

For version with "TIM 1.0"

The keys can be used to operate the following functions. If the key is greyed out, the function is not available.

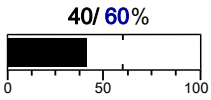
Icon		Explanation
		Start TIM functions (can be selected only when tailgate closed).
		Pause TIM functions. In doing so, registration and authentication are **not** disconnected between tractor and machine.

13.3 Displays on the working screen

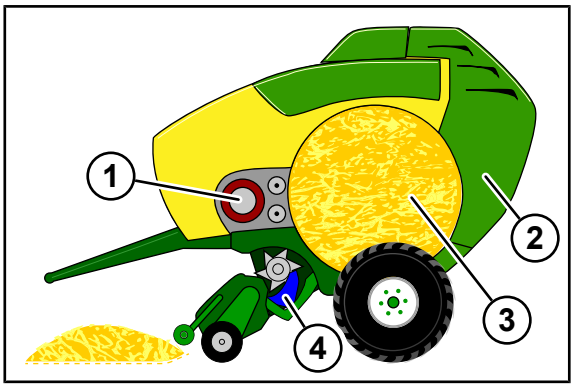


EQG003-009

The available icons comply with the equipment of the machine. The following represented icons are not always available.

Icon	Explanation
	**For version with "TIM 1.0":** A TIM function is active on the machine.
	Direction display.
	Direction display arrows: Arrows appear during operation on the left and right sides of the direction display. The arrows have three different sizes, numbered from 1 to 3. The arrows show the driver to which side and to what extent he must correct his direction when driving over the swath in order to ensure the bale chamber is filled evenly. If the direction of travel is not corrected, the arrow displayed starts flashing and an acoustic signal sounds. Detailed information on the direction display, *see Page 133*
	Set and display the baling pressure. The baling pressure can be set directly on the working screen, *see Page 136*.
	**For version with "TIM 1.0":** TIM function "Opening and closing tailgate at the end of the tying cycle" has been activated. The TIM function can be switched off individually via the checkbox, e.g. if the machine is in an unfavourable position for ejecting the round bale. To configure the TIM software, *see Page 162*

Round baler

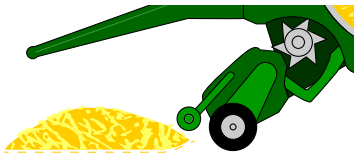
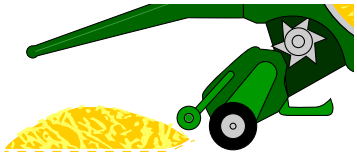


EQG003-122

The round baler in the centre of the working screen shows

- the progress of the baling process by means of the expanding round bale (3),
- the progress of the tying process by means of the net roll (1) and by means of the red net running around the round bale,
- the positions of the feed rotor floor (4)
- and the bale ejection by means of the opening tailgate (2).

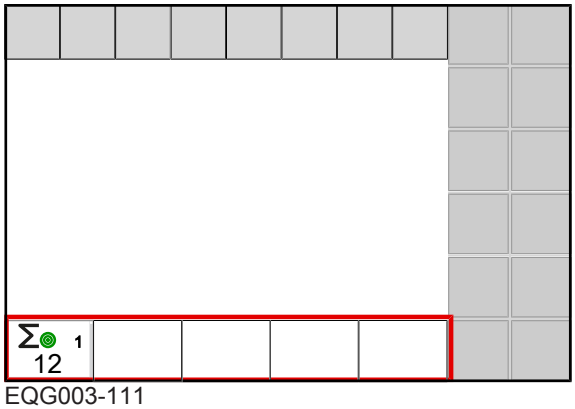
The feed rotor floor (4) can show the following positions:

	The feed rotor floor is in the top position.
	The feed rotor floor is in the bottom position. Crop blockages can be removed, *see Page 98*.

Icons during net or chamber film wrapping

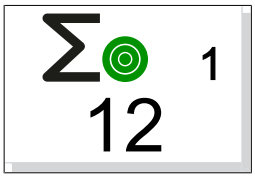
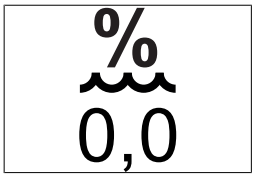
Icon		Explanation
		Value of bale diameter/baling pressure has been reached (flashing).
		Net/film is fed.
		Net/film is not pulled.
		Net/chamber film wrapping is running.
		Net/chamber film wrapping has stopped.
		Net/film is cut off.
		Net/film was not cut off.
		Net/chamber film wrapping is complete.
		Net/film is pulled without a tying cycle having been actuated.

13.4 Displays on the information bar

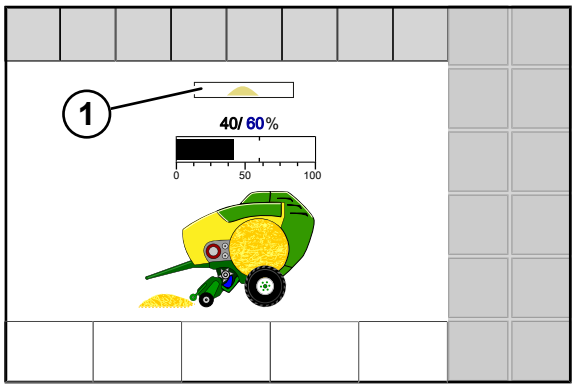


EQG003-111

The available icons comply with the equipment of the machine. The following represented icons are not always available.

Icon	Designation	Explanation
	Customer counter	The selected customer counter is displayed and shows the current total of pressed round bales. If the display is pressed, Menu 13-1 "Customer counter" opens, *see Page 157*.
	Moisture measurement	The current degree of moisture of the crops is displayed. For settings in the moisture measurement, see Menu 12-1 "Error message for moisture measurement", *see Page 155*. or Menu 12-2 "Correction value for moisture measurement", *see Page 156*.

13.5 Direction display



EQG003-105

The direction display (1) shows the driver to which side and to what extent he must correct his direction when driving over the swath in order to ensure the bale chamber is filled evenly.

The following displays are possible:

Icon	Explanation
	Swath is picked up in the middle
	Step 1: The bale chamber is filled slightly too much on the left side. Steer the tractor to the left to pick up the swath on the right of the bale chamber.
	Step 2: The bale chamber is filled too much on the left side. Steer the tractor to the left to pick up the swath on the right of the bale chamber.
	Step 3: The bale chamber is filled very heavily on the left side. Steer the tractor to the left to pick up the swath on the right of the bale chamber.
 Arrow flashes	Step 4: The bale chamber is only filled on the left side. Steer the tractor to the left to pick up the swath on the right of the bale chamber.
	Step 1: The bale chamber is filled slightly too much on the right side. Steer the tractor to the right to pick up the swath on the left of the bale chamber.
	Step 2: The bale chamber is filled too much on the right side. Steer the tractor to the right to pick up the swath on the left of the bale chamber.
	Step 3: The bale chamber is filled very heavily on the right side. Steer the tractor to the right to pick up the swath on the left of the bale chamber.
 Arrow flashes	Step 4: The bale chamber is only filled on the right side. Steer the tractor to the right to pick up the swath on the left of the bale chamber.

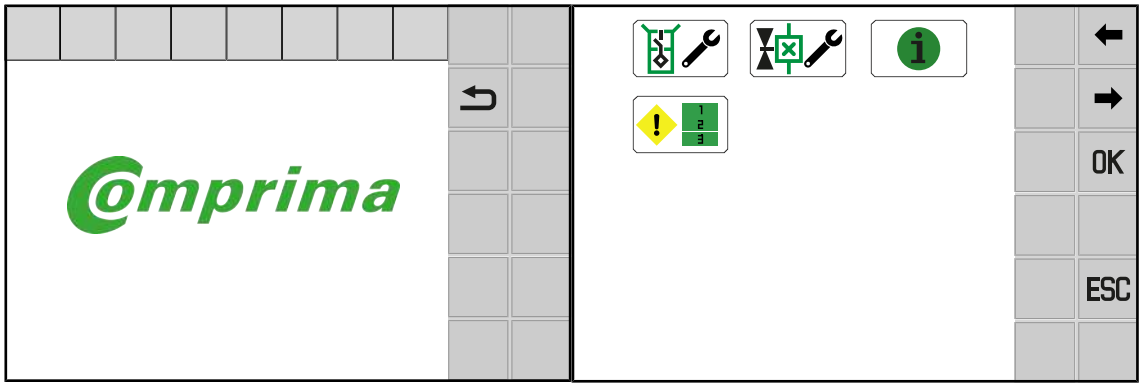
For more information on how the bale chamber is filled, *see Page 76*.

- If the swath is the same width as the bale chamber, pick up the swath as centrally as possible  .
- If the swath is too narrow, pick it up alternately (on left/right). Ensure that you do not move too far to the left  or right  .

13.6 Accessing the working screen

Road travel screen

Example menu



EQG003-045

From the road travel screen

▶ Press .

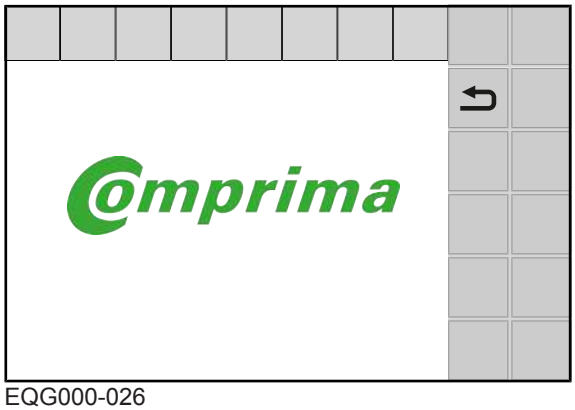
➡ The working screen is shown, *see Page 130*.

In each menu

✓ A menu is displayed.

▶ Press and hold ESC for a moment.

13.7 Automatic call of the Road travel screen

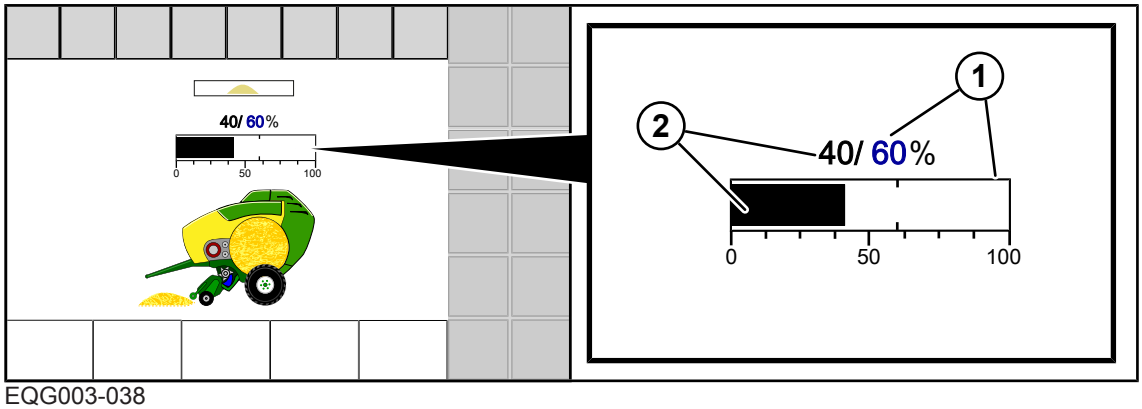


EQG000-026

The terminal switches automatically to the Road travel screen after roughly five minutes when the following requirements are met:

✓ The PTO shaft is switched off.
✓ The tailgate is closed.
✓ The machine is in field mode.

13.8 Adjusting the baling pressure



EQG003-038

1 Set target baling pressure as %

2 Actual baling pressure as %

Adjusting the baling pressure via the scroll wheel

- ▶ Select the blue value to be changed using the scroll wheel.
  - ⇨ The icon is shown in reverse colours.
- ▶ Press the scroll wheel.
  - ⇨ An input field opens.
- ▶ To increase or reduce the value, turn the scroll wheel.
- ▶ To save the value, press the scroll wheel.
  - ⇨ The setting is accepted, the input field closes.

Adjusting the baling pressure via the touch-capable display

- ▶ Touch the blue value you want to change.
  - ⇨ An input field opens.
- ▶ Enter the desired value and press OK.
  - ⇨ The value is saved and the input field is closed.

13.9 Operating TIM 1.0 (Tractor Implement Management)

For version with "TIM 1.0"

13.9.1 Mode of operation of TIM 1.0

⚠ *WARNING*

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

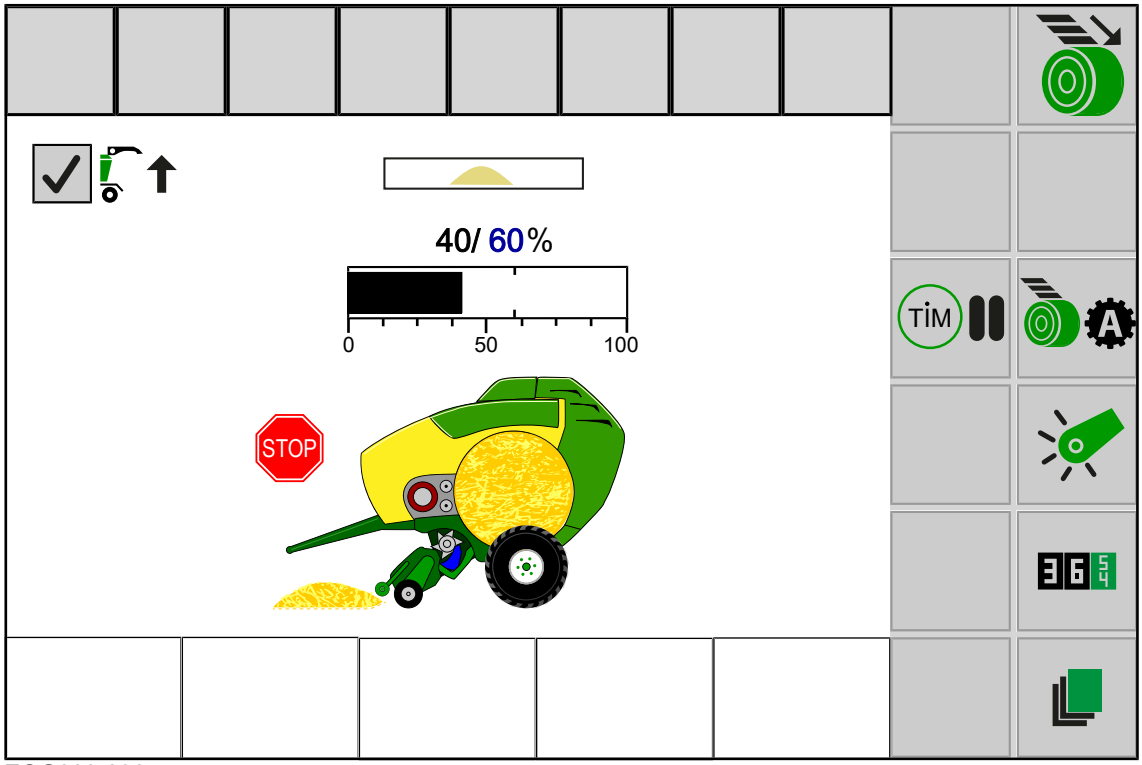
If round bales are deposited on a slope, they may start moving on their own. Once round bales have started moving, their weight and cylindrical shape may cause serious accidents and injure people.

- 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.

TIM 1.0 (Tractor Implement Management) uses data exchange between the ISOBUS job computers on machine and tractor so that the machine can control the tractor and therefore take pressure off the driver.

When the tying cycle starts, the tractor is automatically stopped by TIM. When the tying cycle is complete, the tailgate is automatically opened by TIM, the round bale is ejected and the tailgate is closed. To bale the next round bale, the driver only has to approach the tractor. Then the tractor driver must independently drive at a speed adjusted to visibility, weather or ground conditions.

13.9.2 TIM displays and keys on the working screen



EQG003-096

The following TIM displays are possible:

Icon	Explanation
	**For version with "TIM 1.0":** TIM function "Opening and closing tailgate at the end of the tying cycle" has been activated. The TIM function can be switched off individually via the checkbox, e.g. if the machine is in an unfavourable position for ejecting the round bale. To configure the TIM software, *see Page 162*
	**For version with "TIM 1.0":** A TIM function is active on the machine.

The following status displays could appear in the status line:

Icon	Explanation
For version with "TIM 1.0"	
	TIM status: The machine is being registered and authenticated with the tractor.
	TIM status: The machine has been registered and authenticated. By pressing the key  , the TIM status switches to  .
	TIM status: The machine waits for confirmation of the tractor. Confirmation on the terminal or on another control panel on the tractor causes the TIM status to switch to  .
	TIM status: The machine and the tractor are successfully connected. The machine automatically takes over control of the TIM functions on the tractor, *see Page 137*.
	**Flashing:** 2 TIM functions are currently active, one TIM function of which has been overridden. The connection is restored by pressing the key  and then confirming on the tractor.

The keys can be used to operate the following functions. If the key is greyed out, the function is not available.

Icon		Explanation
		Start TIM functions (can be selected only when tailgate closed).
		Pause TIM functions. In doing so, registration and authentication are **not** disconnected between tractor and machine.

13.9.3 Activating TIM functions

If the machine was switched off and is switched on again, registration and authentication between tractor and machine are automatically restored. The same control unit is used for the TIM function "Opening and closing tailgate at the end of the tying cycle" which was used the last time the machine was commissioned.

To activate the TIM functions, only the connection between machine and tractor must be established.

✓ In menu 14-5 "Configuring TIM software"(*see Page 162*)
- the required TIM functions were selected and

- registration and authentication were run on the tractor.

✓ The TIM status on the working screen is on  .

▶ Press  .

▶ Confirm the TIM functions on the terminal or on another control panel on the tractor.

➡ The TIM status switches to  . The machine automatically takes over control of the TIM functions on the tractor.

If no TIM status is displayed on the working screen, the TIM functions must be selected and registered and authenticated via menu 14-5 "Configuring TIM software", *see Page 162*.

INFO

In the case of the TIM function "Stop tractor when the tying cycle starts", the tractor must be driven at a speed of at least 0.5 km/h before the TIM function can be confirmed on the tractor.

INFO

If 2 TIM functions are active and one of them is overridden, the TIM status  flashes.

If only one TIM function is active and is overridden, the TIM status switches to 

▶ To restore the connection, press the key  .

13.9.4 Pausing TIM functions

If TIM is not to be used for the time being, TIM can be paused. In doing so, registration and authentication are retained between tractor and machine.

✓ The TIM status on the working screen is on  .

▶ Press  .

➡ The TIM functions are paused and must be operated manually via the tractor control units.

The TIM status switches to  .

▶ To reactivate the TIM functions, *see Page 138*.

It is also possible to deactivate only the individual TIM function "Opening and closing tailgate at the end of the tying cycle", e.g. if the machine is in an unfavourable position for ejecting the round bale.

- ▶ To deactivate the TIM function "Opening and closing tailgate at the end of the tying cycle", select the checkbox by checking  next to the icon  .
- ➡ The checkbox is empty  and the TIM function has been deactivated.
- ➡ In addition the key  appears on the display in order to be able to start tailgate opening and bale ejection manually.

13.10 Operating machine via joystick

13.10.1 Auxiliary functions (AUX)

There are terminals which support the additional function “Auxiliary” (AUX). By means of this function, programmable keys of peripheral equipment (e.g. joystick) can be assigned with functions of the connected job computers. A programmable key can be assigned with several different functions. If key assignments are saved, the display shows corresponding menus when switching on the terminal.

The following functions are available in the “Auxiliary” (AUX) menu:

Icon	Explanation
	**For "TIM 1.0" version:** Putting down round bales
	Start tying
	Select type of operation for tying: Automatic or manual mode
	Increasing baling pressure
	Reducing baling pressure

13.10.2 Auxiliary assignment of a joystick

INFO

If a joystick on the tractor side is to be configured with functions from the operating terminal, the joystick must feature AUX functionalities.

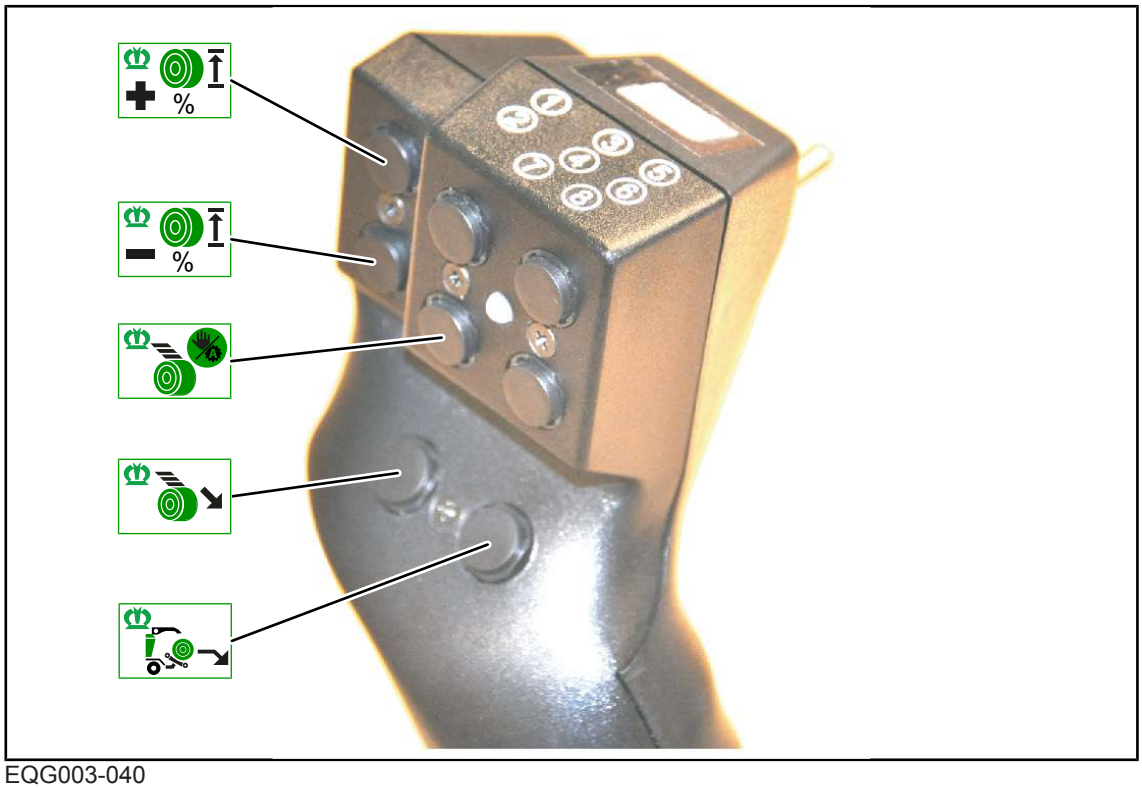
For further information, see the operating instructions for the terminal and tractor used.

INFO

The examples below represent a recommendation. The assignment of the joystick can be adapted to own desires.

For further information, please refer to the operating instructions of the used terminal.

Recommended configuration of a WTK joystick

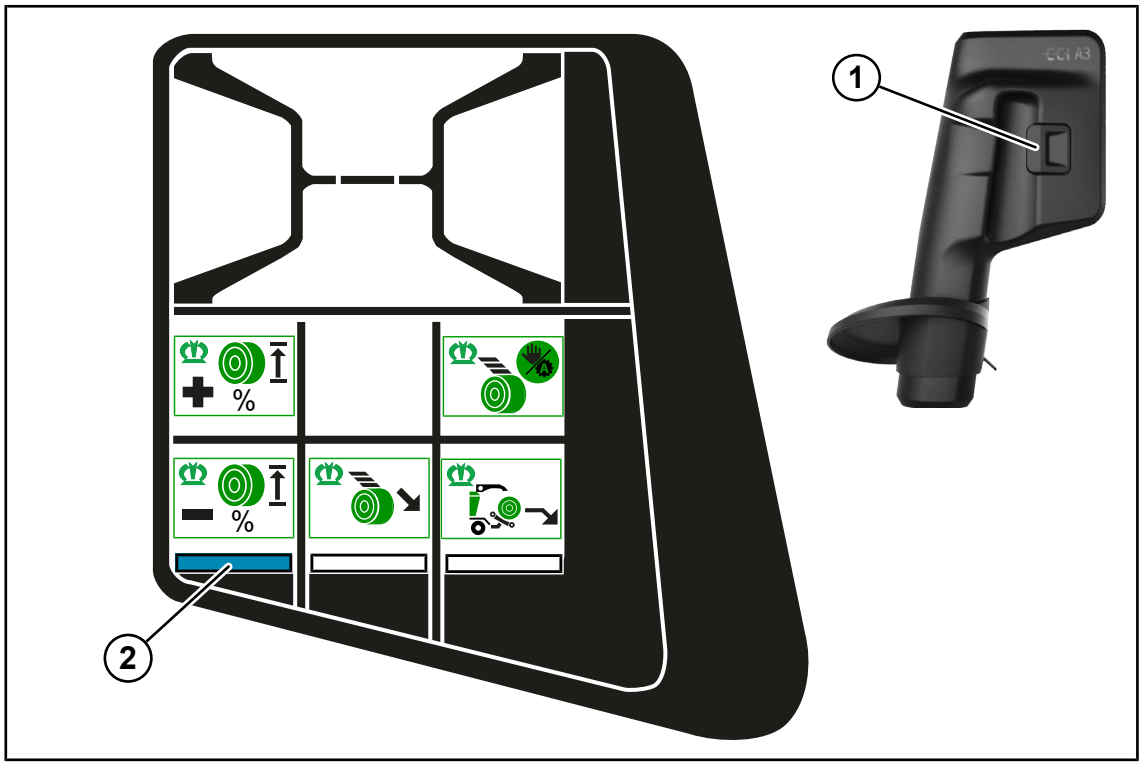


EQG003-040

The keys on the WTK joystick can be assigned on 2 levels.

- ▶ Change between the levels using the switch (2).
- ➡ The LED (1) is lit green or red.

Recommended configuration of an AUX joystick CCI A3



EQG003-143

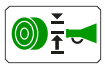
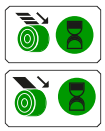
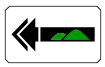
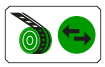
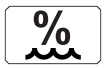
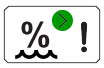
The indicator lamp (2) shines, showing that operating level 1 is active.

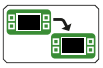
- Actuate the switch (1) on the rear of the joystick to display the next operating level.

14 Terminal menus

14.1 Menu Structure

The menu structure is divided into the following menus depending on the machine configuration.

Menu	Sub-menu	Designation
1 		Number of wrapping material layers, *see Page 149*
3 		Pre-signalling, *see Page 149*
4 		Tying start delay, *see Page 150*
7 		Sensitivity direction display, *see Page 150*
8 		Selection type of tying (for version with "Net wrapping and chamber film wrapping"), *see Page 151*
10 		Manual operation, *see Page 152*
12 		Moisture measurement (for version with "moisture measurement"), *see Page 154*
	12-1 	Error message for moisture measurement, *see Page 155*
	12-2 	Correction value for moisture measurement, *see Page 156*
13 		Counter, *see Page 157*
	13-1 	Customer counter, *see Page 157*

Menu	Sub-menu	Designation
	13-2 	Total counter, *see Page 159*
14 		ISOBUS, *see Page 160*
	14-5 	KRONE SmartConnect, *see Page 161*
	14-6 	Configuring TIM software (for "TIM 1.0" version), *see Page 162*
	14-9 	Switching between terminals, *see Page 163*
15 		Settings, *see Page 164*
	15-1 	Sensor test, *see Page 165*
	15-2 	Actuator test, *see Page 168*
	15-3 	Software information, *see Page 171*
	15-4 	Error list, *see Page 171*

14.2 Recurrent icons

To navigate in the menu level/menus, the following icons appear again and again.

Icon	Designation	Explanation
	Up arrow	Move up to select something.
	Down arrow	Move down to select something.
	Right arrow	Move right to select something.

Icon	Designation	Explanation
	Left arrow	Move left to select something.
	Disk	Save the setting.
	ESC	Leave the menu without saving. By pressing the key a little longer, the previously viewed working screen is selected.
	DEF	Reset to factory setting.
	Disk	The mode or value is saved.
	Plus	Increase the value.
	Minus	Reduce the value.

14.3 Selecting a menu Level

▶ To bring up the menu level from the working screen, press  .

➡ The display indicates the menu level.

Return from the menu pages to the main menu:

▶ Keep pressing  until the main menu appears.

For an overview of the menus: *see Page 143*.

14.4 Selecting a menu

Calling up menu

The menus are selected depending on used terminal (touch sensitive or not touch sensitive).

For version with "Touch-sensitive and not touch-sensitive terminal"

By means of adjacent keys

▶ To select a menu, press the keys next to  or  until the desired menu is selected.

⇨ The selected menu is highlighted in colour.

▶ To call up the menu, press the key next to  .

➡ The menu opens.

> ***INFO***
>
> For version with "Touch-sensitive terminal", the icons can be pressed directly.

By means of the scroll wheel

- ▶ Select the desired menu by means of scroll wheel.
  - ⇨ The selected menu is highlighted in colour.
- ▶ To call up the menu, press the scroll wheel.
- ➡ The menu opens.

For version with touch-sensitive terminal

By pressing the icons

- ▶ To call up a menu, press the icon (e.g. ) in the display.
- ➡ The menu opens.

Leaving the menu

- ▶  or press the adjacent key.
- ➡ The menu closes.

14.5 Changing value

Values must be entered or changed for the settings in the menus. The values are selected depending on used terminal (touch-sensitive or not touch-sensitive).

For version with "Touch-sensitive" and "Not touch-sensitive terminal"

- Via scroll wheel.

Additionally for "Touch-sensitive terminal" version

- By pressing  or  .
- By tipping the blue value on the display.

  If a numerical value is tapped, an input mask opens. For further information on entering values see the supplied terminal operating instructions.

Examples:

By means of the scroll wheel

- ▶ Choose the desired value by using the scroll wheel.

⇨ The value is highlighted in colour.

- ▶ Press the scroll wheel.
  ⇨ An input mask opens.
- ▶ Turn the scroll wheel to increase or reduce the value.
- ▶ Press scroll wheel to save the value.

➡ The setting is saved and the input mask closes.

Using the value

- ▶ Tap on the value.
  ⇨ An input mask opens.
- ▶ Increase or reduce the value.
- ▶ In order to save the value, press OK.

➡ The setting is saved and the input mask closes.

14.6 Changing mode

It is possible to select between different modes in individual menus.

- ▶ To select the next mode, press ➡.
- ▶ To select the previous mode, press ⬅.
- ▶ To save, press 💾.

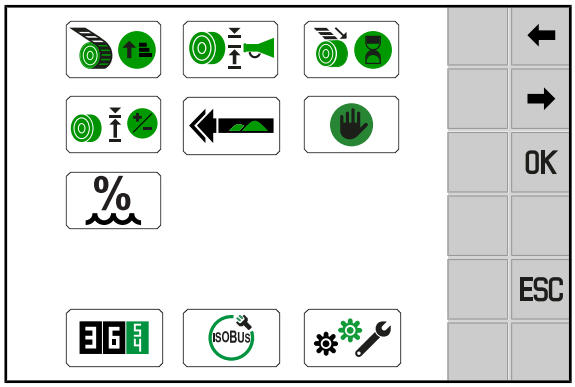
➡ An acoustic signal sounds, the set mode is saved and the 💾 icon is briefly displayed in the upper line.

- ▶ To leave the menu, press ESC.

14.7 Tying in the menu level

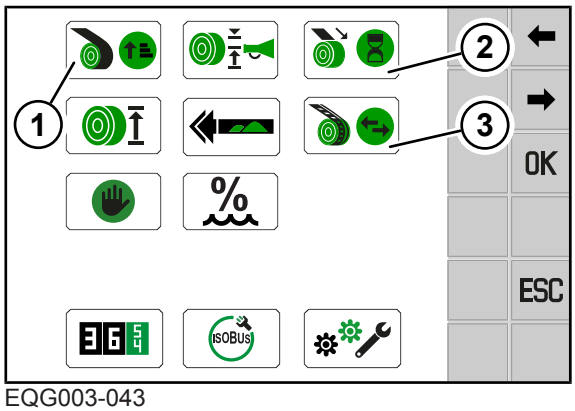
✓ For The menu level is active, *see Page 145*.

For the “Net wrapping” version



EQG003-008

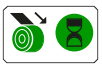
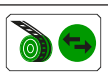
For "Net and chamber film wrapping" version and selected chamber film wrapping



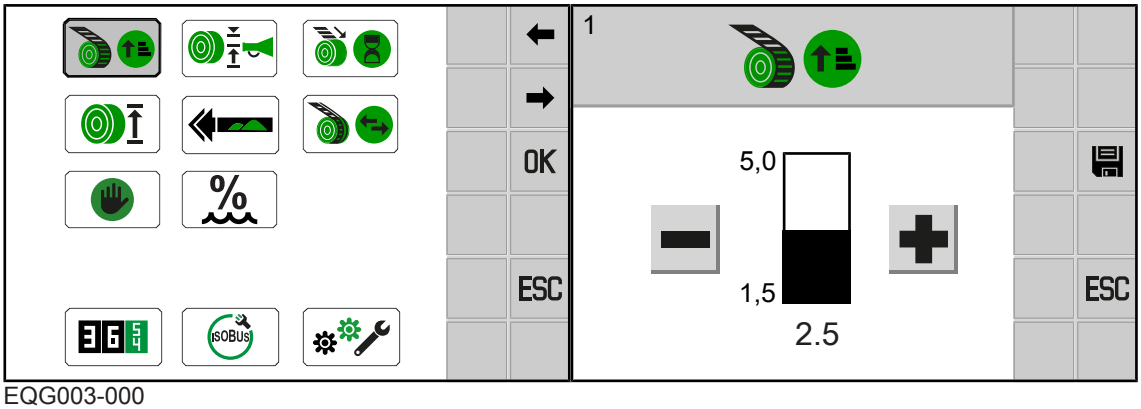
EQG003-043

Depending on the equipment of the machine and the selected tying method, the tying menu items (1), (2) and (3) can look different on menu level.

For the "Net and chamber film wrapping" version

Pos.	Icon	Explanation
1		Number of net layers (if ‘net’ has been selected as the type of tying under (3))
		Number of film layers (if ‘film’ has been selected as the type of tying under (3))
2		Tying start delay net wrapping (if ‘net’ has been selected as the type of tying under (3))
		Tying start delay chamber film wrapping (if ‘film’ has been selected as the type of tying under (3))
3		Select type of tying (net or film)

14.8 Menu 1 "Number of tying material layers"



EQG003-000

✓ For The menu level is active, *see Page 145*.

▶ To open the menu, press  .

➡ The display shows the "Number of tying material layers" menu.

Selecting the number of tying material layers

▶ Increase or reduce the value, *see Page 146*.

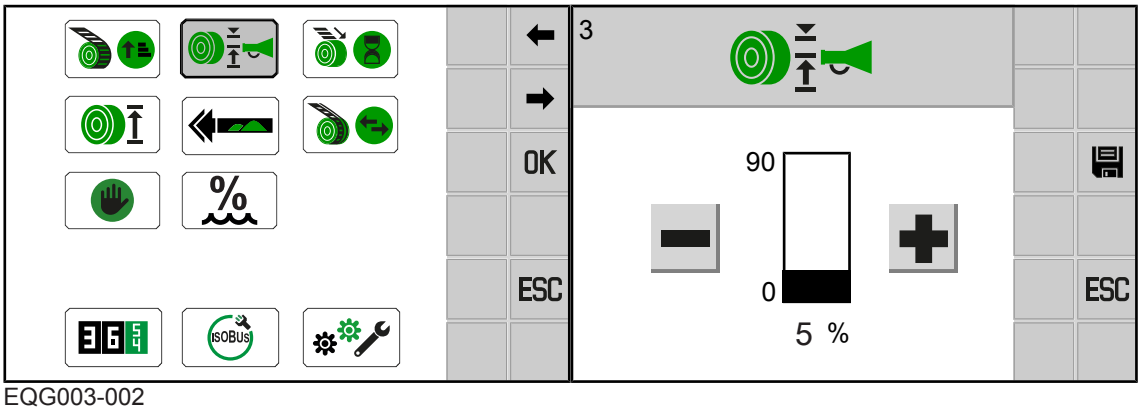
▶ In order to save the value, press  .

INFO

KRONE recommends 3.5 – 4 film layers for optimum chamber film wrapping. The minimum required film layers depend on the condition of the crops.
With round bales whose diameter measures more than 130 cm and/or very dry or very wet crops, KRONE recommends at least one additional film layer.

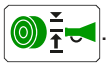
14.9 Menu 3 “Advance signalling”

Pre-signalling is used to warn if the round bale in the bale chamber is near completion. On the terminal you can set the filling for which pre-signalling starts.



EQG003-002

✓ For The menu level is active, *see Page 145*.

▶ To open the menu, press  .

➡ The display shows menu “Advance signalling”.

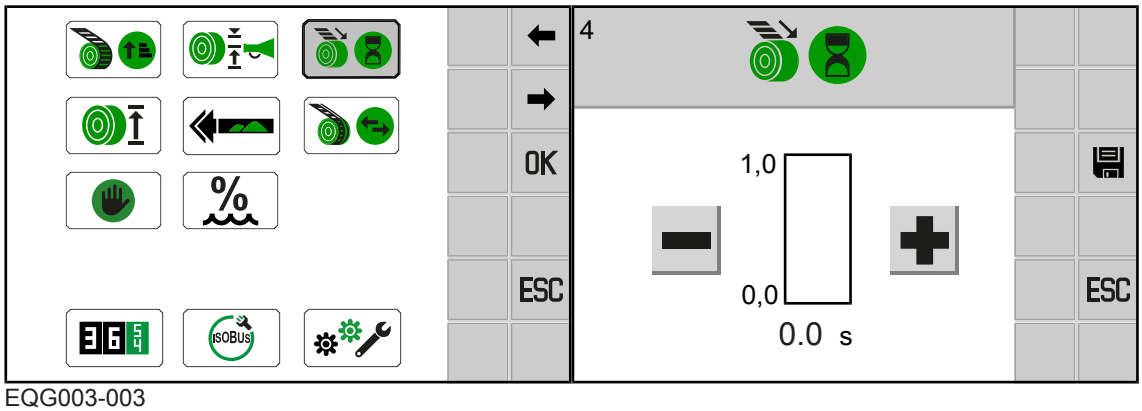
Setting advance signalling

- ▶ Increase or reduce the value, *see Page 146*.
- ▶ In order to save the value, press  .

14.10 Menu 4 "Tying start delay"

Tying start delay is used to set the period of time which is required between completion of round bale in the bale chamber and triggering the tying cycle. The tying start delay is set in seconds.

Setting range: 0.0–1.0 s



EQG003-003

- ✓ For The menu level is active, *see Page 145*.
- ▶ To open the menu, press  .
- ➡ The display shows the "Tying start delay" menu.

Setting the tying start delay

- ▶ Increase or reduce the value, *see Page 146*.
- ▶ In order to save the value, press  .

Special feature of chamber film wrapping

The tying start delay is automatically set to 0.0 s for chamber film wrapping. KRONE recommends this setting.

At high driving speeds, the tying start delay can be set to a minimum for chamber film wrapping:

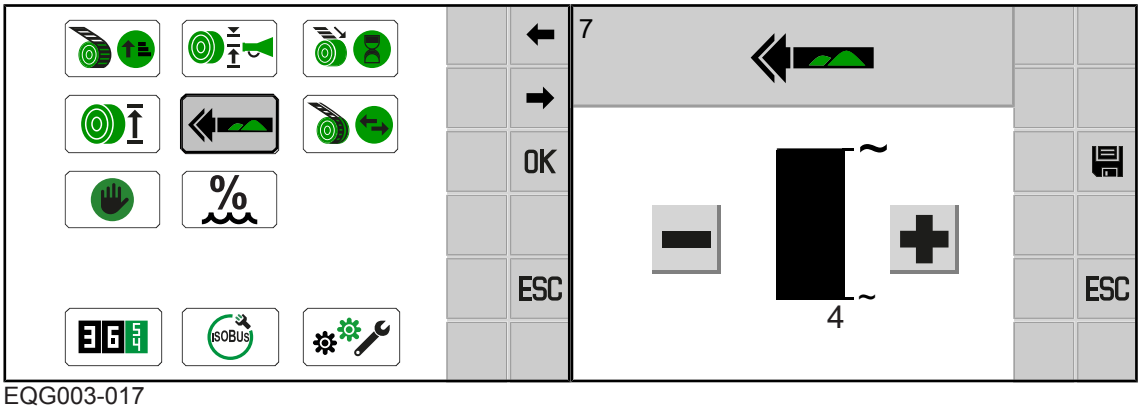
- ▶ Increase or reduce the value, *see Page 146*.
- ▶ In order to save the value, press  .

14.11 Menu 7 “Sensitivity of direction display”

This menu is used to set the sensitivity of the direction display.

The direction display indicates whether the swath is picked up in the centre by the pick-up and provides information about the required direction of travel. The higher the bar on the display, the more sensitive the direction display is set. The higher the sensitivity of the direction display is set, the stronger the motion indication appears in the form of arrows on the working screen.

How the bale chamber is optimally filled by the pick-up, *see Page 76*.



EQG003-017

✓ For The menu level is active, *see Page 145*.

▶ To open the menu, press .

➡ The display shows the "Sensitivity of direction display" menu.

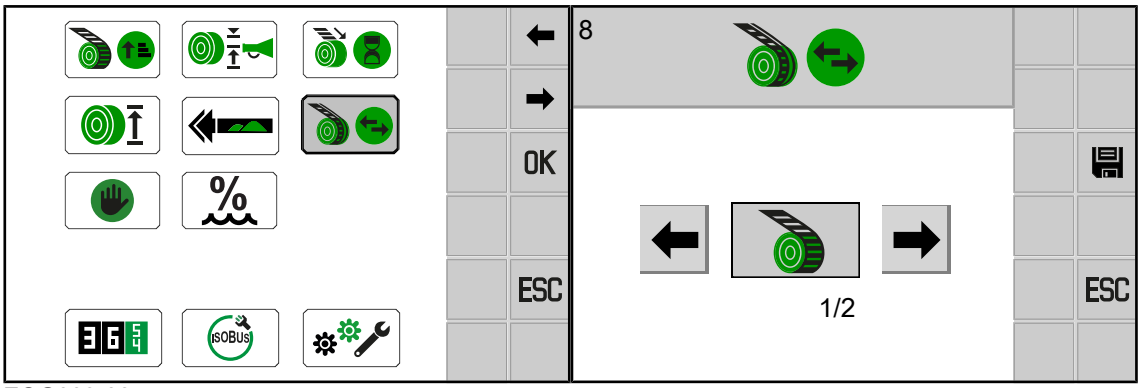
Setting the sensitivity of the direction display

▶ Increase or reduce the value, *see Page 146*.

▶ In order to save the value, press .

14.12 Menu 8 “Type of tying” (for the “Net and chamber film wrapping” version)

The desired tying method is switched to in this menu. After this, only tying functions for this selected tying method can be operated in the terminal.



EQG003-005

✓ For The menu level is active, *see Page 145*.

▶ To open the menu, press .

➡ The display shows menu “Type of tying”.

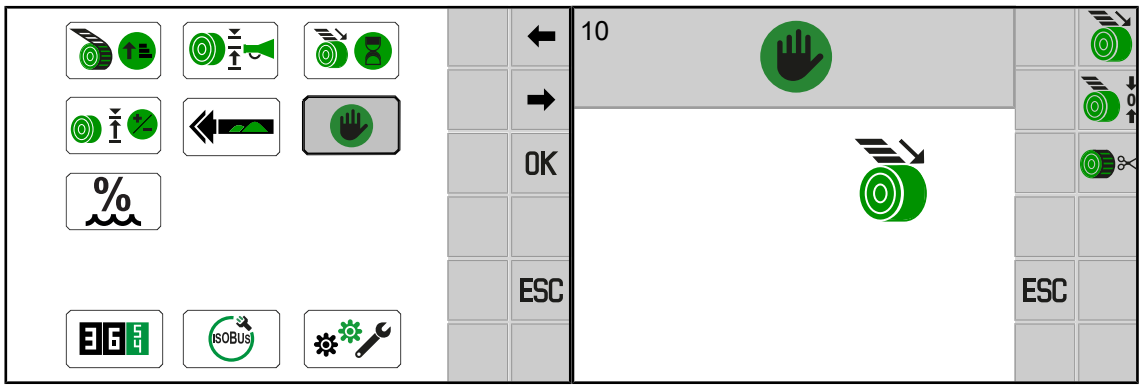
Changing the mode

▶ Select and save the mode, *see Page 147*.

The following modes can be selected:

Icon	Explanation
	Net wrapping
	Chamber film wrapping

14.13 Menu 10 "Manual operation" (for "Net wrapping" version)



EQG003-006

✓ For The menu level is active, *see Page 145*.

▶ To open the menu, select  .

➡ The display shows the "Manual operation" menu.

The following status displays may appear on the display:

Icon	Explanation
	Net motor is in feed position.
	Net motor is in the tying position.
	Tying actuator is in end position.
	The position is not defined.

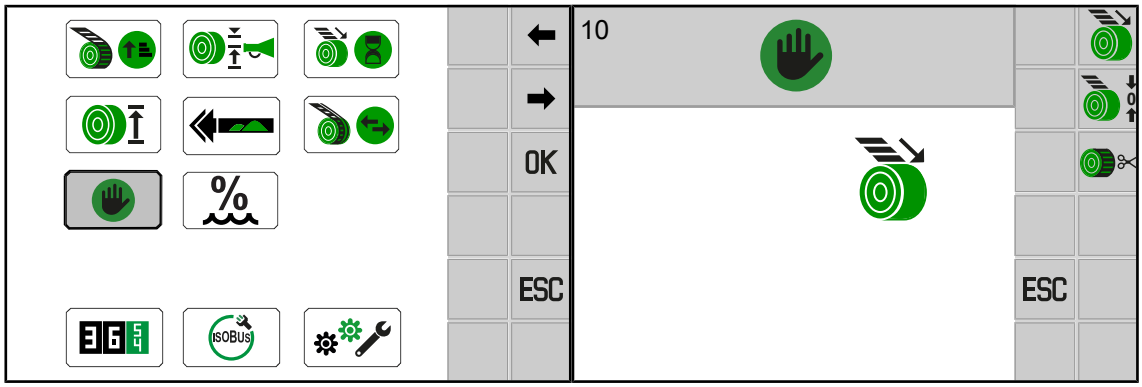
Use the keys on the sides to operate the following functions:

Icon	Explanation
	Move actuator for wrapping process to feed position
	Move actuator for wrapping process into tying position
	Moving the tying actuator to the end position

Moving the tying actuator

- ▶ To move the tying actuator into the feed position, press  .
- ▶ To move the tying actuator to the tying position, press  .
- ▶ Press  to move the tying actuator the end position.

14.14 Menu 10 “Manual operation” (for the “Net and chamber film wrapping” version)



EQG003-007

✓ For The menu level is active, *see Page 145*.

- ▶ To open the menu, press  .

➡ The display shows the "Manual operation" menu.

The following status displays may appear on the display:

Icon		Explanation
		Actuator for wrapping process (net/film) in feed position
		Actuator for wrapping process (net/film) in tying position
		Actuator for wrapping process (net/film) in end position
		Position not defined

Use the keys on the sides of the terminal to operate the following functions:

Icon		Explanation
		Move actuator for wrapping process (net/film) to feed position
		Move actuator for wrapping process (net/film) into tying position
		Move the actuator for wrapping process (net/film) in end position

Moving the actuator for wrapping process

Among other items, this function can be used to adjust the feed rocker arm, *see Page 181*.

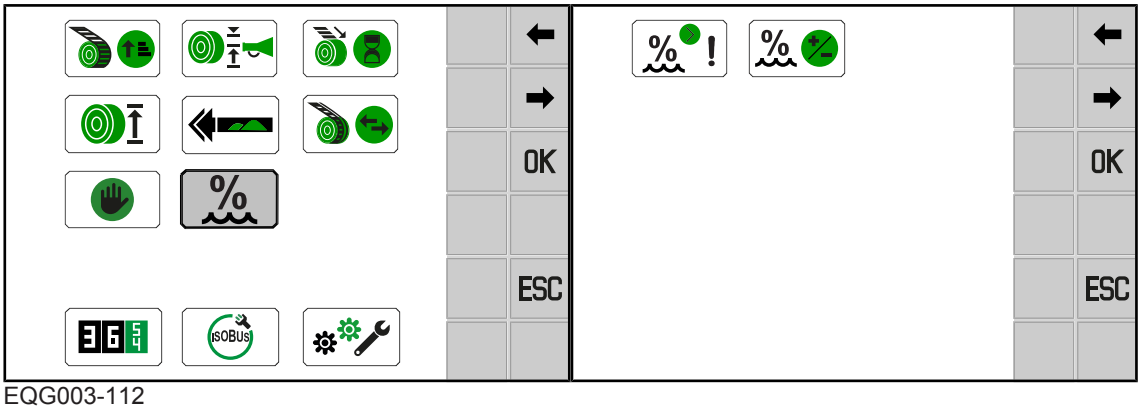
✓ The PTO shaft is switched on.

▶ To move the actuator for wrapping process into the feed position, press  or  .

▶ To move the actuator for wrapping process into the tying position, press  or  .

▶ Press  or  to move the actuator for wrapping process to the end position.

14.15 Menu 12 "Moisture measurement"



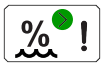
EQG003-112

✓ For The menu level is active, *see Page 145*.

▶ To open the menu, select  .

➥ The display shows the "Moisture measurement" menu.

The "Moisture measurement" menu is divided into the following menus:

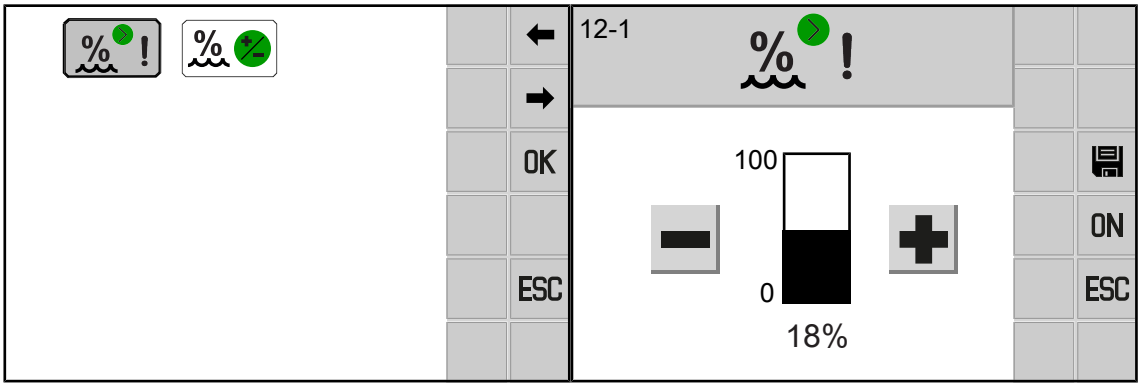
Menu	Sub-menu	Designation
12 		Moisture measurement (for version with "moisture measurement"), *see Page 154*
	12-1 	Error message for moisture measurement, *see Page 155*
	12-2 	Correction value for moisture measurement, *see Page 156*

14.15.1 Menu 12-1 "Error message for moisture measurement"

The error message 522078-15 "Moisture measurement upper limit" warns if the crops are too moist; see the supplement to operating instructions (software), chapter "Error list". The degree of moisture, i. e. when the error message is to appear, can be selected in this menu.

The error message for the display can also be deactivated or re-activated.

The lower limit value has been permanently set ex works and cannot be changed.



EQG003-141

✓ Menu 12 "Moisture measurement" has been selected.

▶ To open the menu, press  .

➡ The display shows the "Error message for moisture measurement" menu.

Setting upper limit value

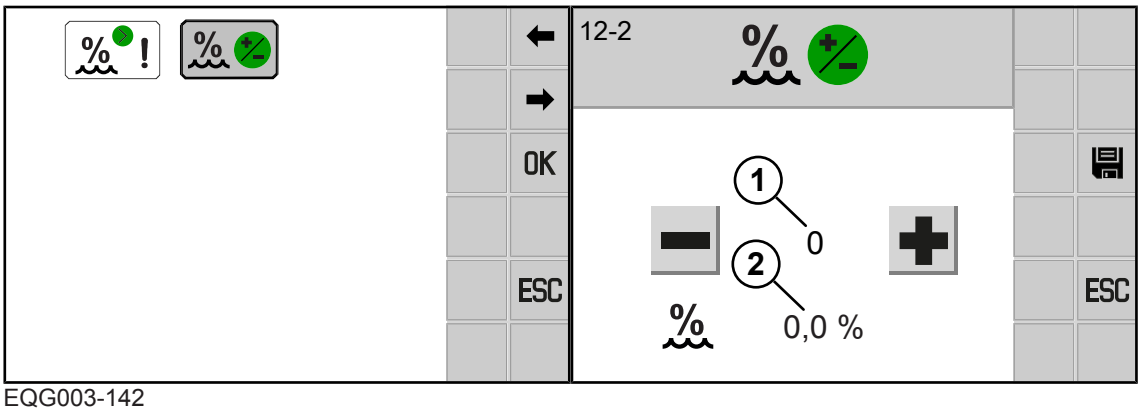
▶ Increase or reduce the value, *see Page 146*.

▶ In order to save the value, press  .

Deactivating/activating error message

- ▶ In order to deactivate the error message, press ON.
- ➡ The display on the key switches from ON to OFF.
- ▶ In order to activate the error message, press OFF.
- ➡ The display on the key switches from OFF to ON.

14.15.2 Menu 12-2 "Correction value for moisture measurement"



EQG003-142

- ✓ Menu 12 "Moisture measurement" has been selected.
- ▶ To open the menu, press %.
- ➡ The display shows the "Correction value for moisture measurement" menu.

Determining the moisture

- ▶ Using a calibrated moisture measuring system, determine the moisture of the crops.
- ➡ If the measured value matches the value (2) on the display, the moisture measurement has been correctly set.
- ➡ If the measured value does not match the value (2) on the display, the correction value (1) must be set.

Setting the correction value (1)

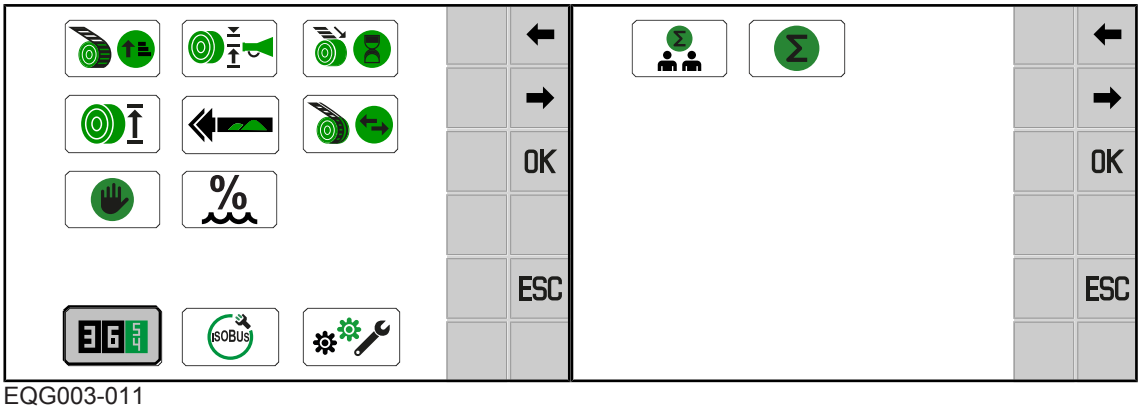
The correction value (1) to be set can be determined as follows:

Value (2) – measured value of the external moisture measuring system=correction value (1)

Values between +10 and -10 can be set.

- ▶ Increase or reduce the value, *see Page 146*.
- ▶ In order to save the value, press .

14.16 Menu 13 "Counters"



EQG003-011

✓ For The menu level is active, *see Page 145*.

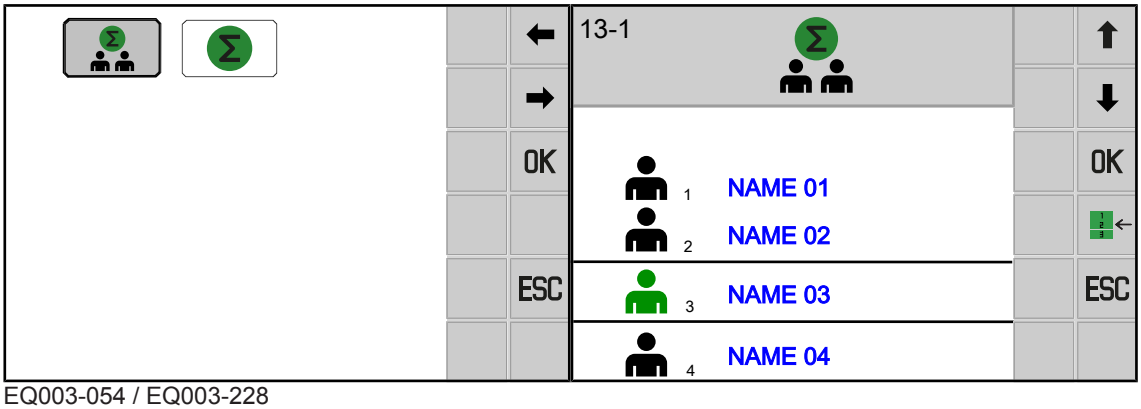
▶ To open the menu, press .

➡ The display shows the menu "Counter ".

The "Counter" menu is divided into the following submenus:

Menu	Sub-menu	Designation
13		Counter, *see Page 157*
	13-1	Customer counter, *see Page 157*
	13-2	Total counter, *see Page 159*

14.16.1 Menu 13-1 “Customer counter”



EQ003-054 / EQ003-228

✓ Menu 13 “Counter” is called.“ *see Page 157*.

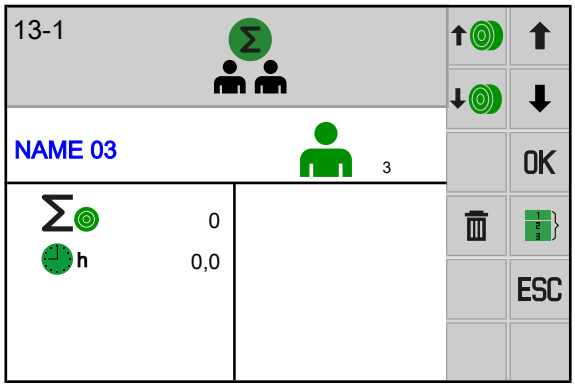
▶ To open the menu, press .

➡ The display shows menu 13-1 "Customer counter".

The menu displays a customer list. The names shown in blue can be adjusted, *see Page 146*.

- ▶ Navigate through the customer list using ⬆ or ⬇.
- ▶ To activate a customer counter, navigate to the required customer and press OK.
- ➡ The required customer counter is shown as: .
- ▶ To open the detailed view of a customer, navigate to the required customer and press .

Detailed view of a customer



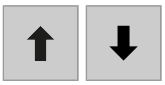
EQG003-106

The icons displayed in the menu have the following meaning:

Icon	Explanation
1	Activated customer counter 1 ... 20
	Total of pressed round bales for the respective customer
h	Operating hours counter for the corresponding customer

Use the keys on the sides of the terminal to operate the following functions:

Icon	Explanation
	Increase number of bales
	Reduce number of bales
	Setting displayed customer counter to zero

Icon	Explanation
	Navigating between the detailed views of the customers
	Activating displayed customer counter
	Returning to the complete overview of all customers

Changing the number of bales

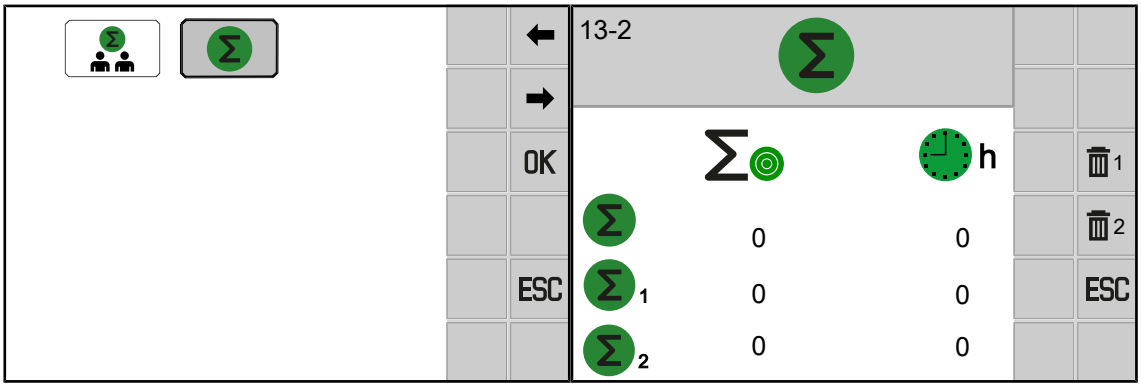
The number of bales can be manually changed in the customer counter. The particular customer counter does not have to be activated for this.

- ▶ To increase the number of bales, press  .
- ▶ To reduce the number of bales, press  .

Setting customer counters to zero

- ▶ To set the customer counter to zero, hold down  for at least 2 seconds.

14.16.2 Menu 13-2 "Total counter"



EQG003-013

✓ Menu 13 “Counter” is called.“ *see Page 157*.

- ▶ To open the menu, press  .

➡ The display shows menu 13-2 "Total counter".

The icons that appear in the working screen have the following meaning:

Icon	Explanation
	Total counter (cannot be deleted)
	Season counter 1 (can be deleted)
	Season counter 2 (can be deleted)
	Total of pressed round bales
	Operating hours counter

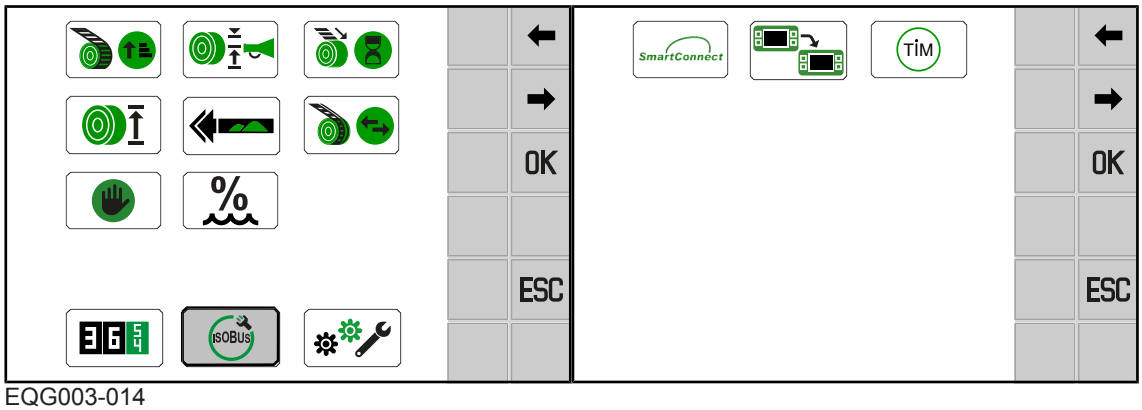
Use the keys on the sides of the terminal to operate the following functions:

Icon	Explanation
	Setting season counter 1 to zero
	Setting season counter 2 to zero

Set season counter 1 or 2 to zero

- ▶ To set season counter 1 to zero, press  .
- ▶ To set season counter 2 to zero, press  .

14.17 Menu 14 "ISOBUS"



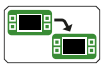
EQG003-014

✓ The menu level is open, *see Page 145*.

- ▶ To open the menu, press  .

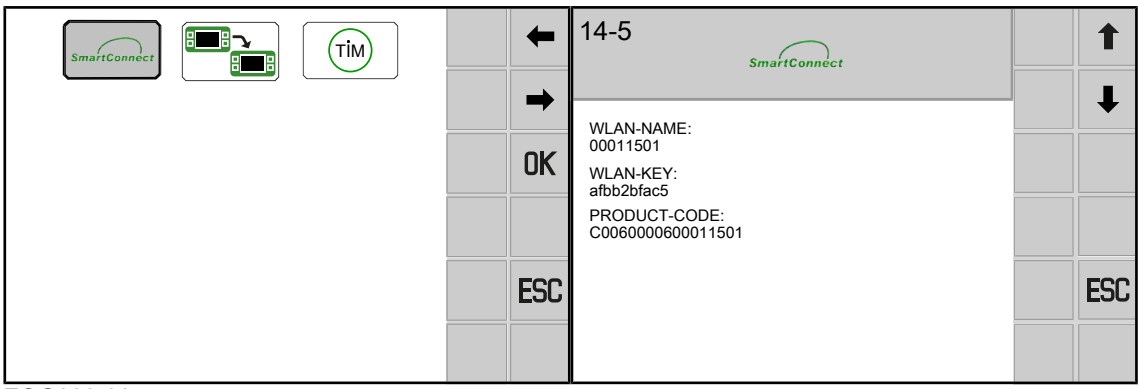
➡ The display shows the "ISOBUS" menu.

Depending on the machine equipment, the "ISOBUS" menu is divided into the following submenus:

Menu	Sub-menu	Designation
14 		ISOBUS, *see Page 160*
	14-5 	KRONE SmartConnect, *see Page 161*
	14-6 	Configuring TIM software (for "TIM 1.0" version), *see Page 162*
	14-9 	Switching between terminals, *see Page 163*

14.17.1 Menu 14-5 "KRONE SmartConnect"

The access data for the KRONE SmartConnect (KSC) can be seen in this menu.



EQG000-064

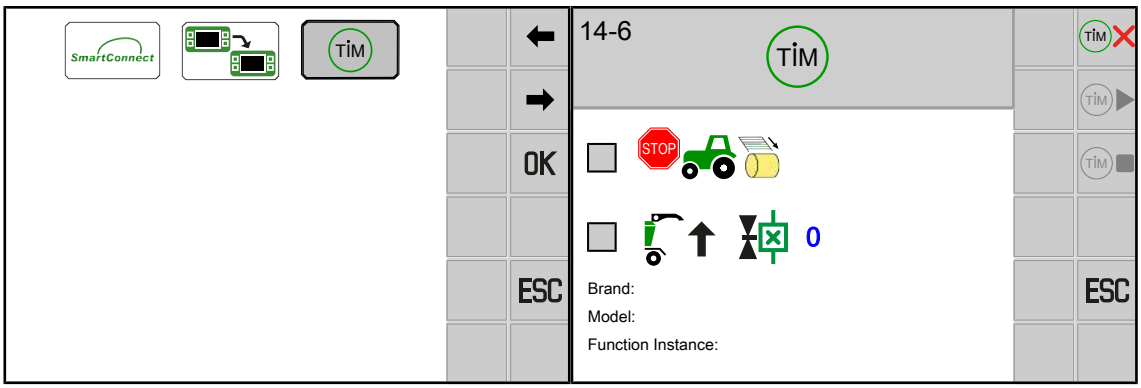
✓ One or more KRONE SmartConnects have been installed.

✓ The menu 14 “ISOBUS” has been selected, *see Page 160*.

▶ To open the menu, press  .

➡ The display shows the "SmartConnect" menu.

14.17.2 Menu 14-6 "Configuring TIM software" (for "TIM 1.0" version)



EQG003-015

✓ The menu 14 “ISOBUS” has been selected, *see Page 160*.

▶ Select TIM to open the menu.

➡ The display shows the "Configuring TIM Software" menu.

The following displays are in the menu:

Icon	Explanation
	TIM function "Stop tractor when the tying cycle starts".
	TIM function "Opening and closing tailgate at the end of the tying cycle".
	Control unit number of the tractor which is used to open and close the tailgate.
Brand: Model: Function Instance:	When a tractor has logged into the ISOBUS system, the designations and the type of tractor appear here.

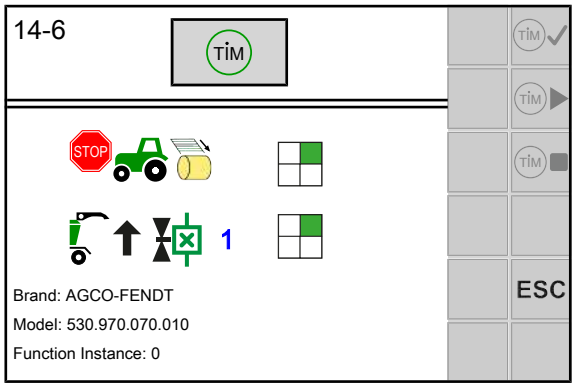
The keys can be used to operate the following functions. If the key is greyed out, the function is not available.

Icon		Explanation
		The tractor is not connected to the machine via TIM. If TIM functions have been selected, the key switches to  .
		Start registration and authentication of the TIM functions.
		Start TIM functions (can be selected only when tailgate closed).
		Stop TIM functions. In doing so, registration and authentication are also disconnected between tractor and machine.
		Pause TIM functions. In doing so, registration and authentication are **not** disconnected between tractor and machine.

Selecting TIM functions

- ▶ Select the checkbox  next to the icon  and/or  .
- ▶ Select  and input the control unit number of the tractor, *see Page 146*.
- ▶ To start establishing a connection between tractor and machine, press  .
- ➡ Registration and authentication of the TIM functions are started.

Connecting machine and tractor to each other



EQG003-095

When the TIM functions have been preselected, the checkboxes disappear and the TIM status  is indicated on the display. The machine is being registered and authenticated with the tractor.

The TIM status switches to  .

- ▶ To activate TIM on the machine, press the key  .
- ➡ The TIM status switches to  . The machine waits for confirmation of the tractor.
- ▶ Confirm the TIM activation on the terminal or on another control panel on the tractor.
- ➡ The TIM status switches to  . The machine automatically takes over control of the TIM functions on the tractor, *see Page 137*.

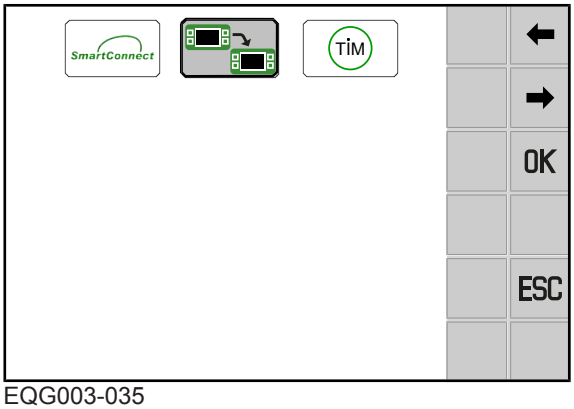
14.17.3 Menu 14-9 "Switching between terminals"

INFO
This menu is only available if several ISOBUS terminals are connected.

When the user switches terminals for the first time, the configuration of the machine is loaded into the next terminal. The loading process can take a few minutes. The configuration is stored in the memory of the next terminal.

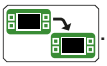
Up to the next call, the machine is no longer available in the previous terminal.

When restarting, the system makes attempts to start the last used terminal. If the last used terminal is no longer available (e.g. because it was dismounted), the restart is delayed as the system searches for a new terminal and loads the specific menus into the terminal. The loading process can take a few minutes.

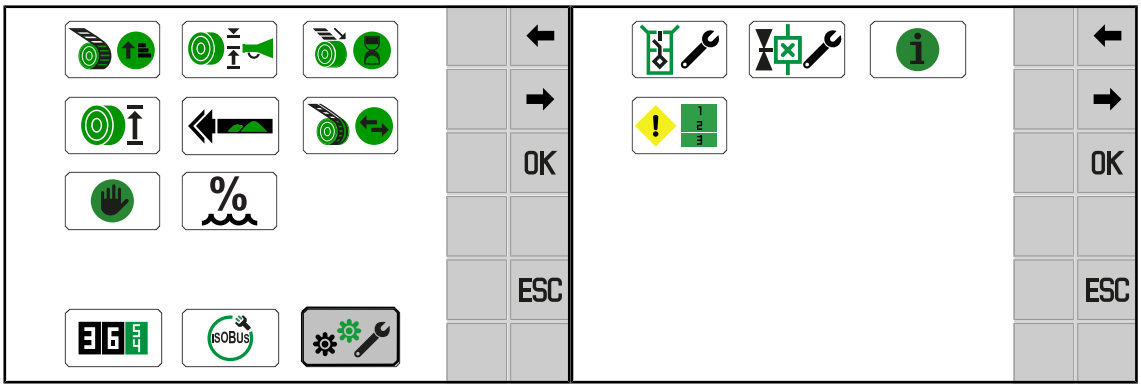


EQG003-035

✓ The menu 14 “ISOBUS” has been selected, *see Page 160*.

▶ To change to the next terminal, press  .

14.18 Menu 15 "Settings"



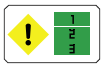
EQG003-036

✓ For The menu level is active, *see Page 145*.

▶ To open the menu, select  .

➡ The display shows the "Settings" menu.

The "Settings" menu is divided into the following submenus:

Menu	Sub-menu	Designation
15 		Settings, *see Page 164*
	15-1 	Sensor test, *see Page 165*
	15-2 	Actuator test, *see Page 168*
	15-3 	Software information, *see Page 171*
	15-4 	Error list, *see Page 171*

14.18.1 Menu 15-1 "Sensor test"

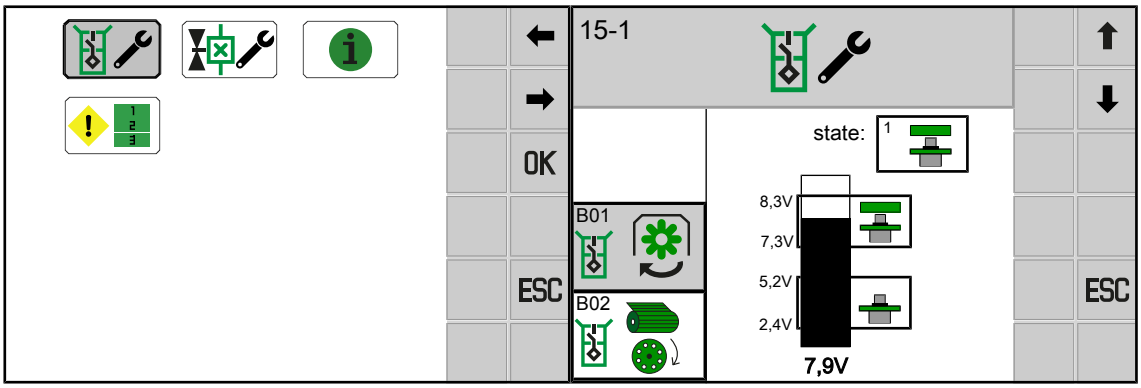
⚠ WARNING

Danger of injury in the danger zone of the machine

If the PTO shaft runs during the sensor test, machine parts may start to move unintentionally. Thus there is a risk of serious injuries or death.

- ▶ Turn off PTO shaft.

In the sensor test, the sensors installed on the machine are checked for faults. Furthermore the sensors can be correctly set in the sensor test. There is no guarantee the machine is working correctly until after the sensors have been adjusted.



EQG003-030

✓ Menu 15 “Settings” is called, *see Page 164*.

▶ To open the menu, press  .

➡ The display shows the "Sensor test" menu .

The following keys can be available in the menu:

Icon	Designation
	Choose previous sensor
	Choose next sensor
	Exit menu

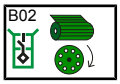
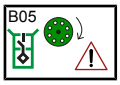
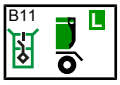
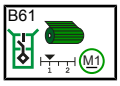
Settings for inductive proximity switches (NAMUR):

The minimum and maximum setting value with attenuated sensor (metal in front of the sensor) are shown in the upper part of the bargraph. The current setting value (actual value) is displayed under the bar display.

The distance from the sensor to the metal must be adjusted so that in the attenuated state the bar is in the upper marking. Then check whether the bar is in unattenuated state in the lower marked area.

Possible sensors (depending on the machine configuration)

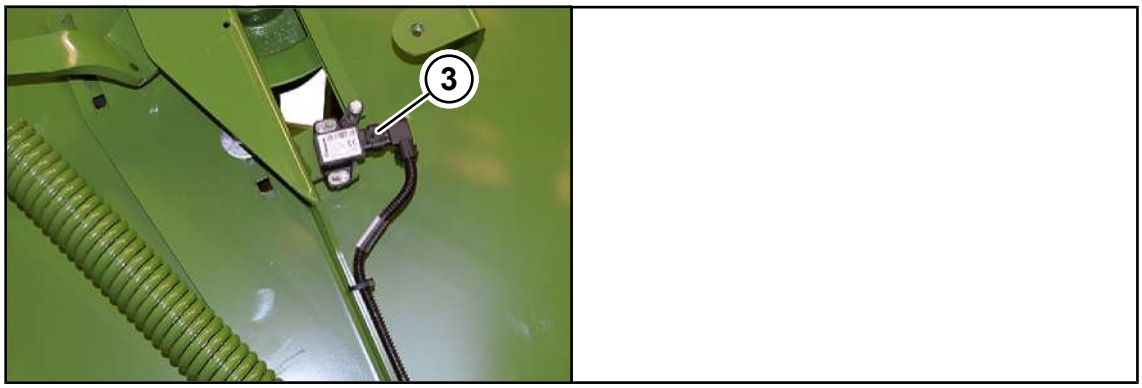
An overview of the sensors, actuators and control units is in the circuit diagram.

No.	Sensor	Designation
B01		Speed of bale chamber
B02		Tying process active
B05		Slip floor conveyor
B08		Feed rotor floor top position
B09		Filling display left
B10		Filling display right
B11		Tailgate lock hook left
B12		Tailgate lock hook right
B61		Tying 1 (passive)

Possible status displays of the sensors

Icon	Designation
0 OK	Sensor ready for operation
1 	Sensor attenuated (metal in front of the sensor)
2 	Sensor unattenuated (no metal in front of the sensor)
7 	Cable break or short circuit
8 Error	Defective sensor or job computer
20	Cable break
21 	Short circuit

14.18.1.1 Adjusting sensor B09/B10 “Filling display left/right”



EQG003-041

The sensor (3) is located behind the rear side guard:

- B09 on the left side of the machine
- B10 on the right side of the machine.

The green bar in menu 15-1 “Sensor test” shows the saved value. The black bar shows the current value of the sensor. As soon as a new value is saved, the green bar is adjusted to the black one.

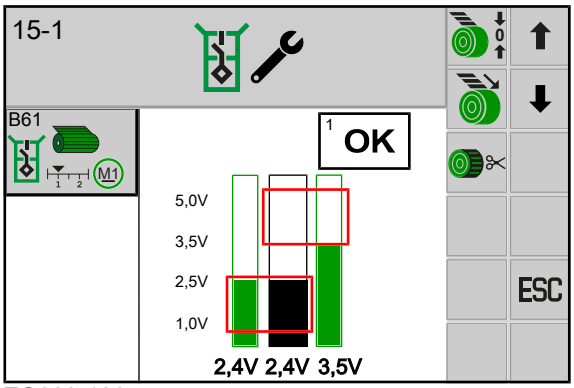
✓ The bale chamber is closed and empty.
✓ Menu 15-1 “Sensor test” is open.
✓ Sensor B09 or B10 has been selected.

If the bar (2) is not inside the rectangle (1) when the bale chamber is closed and empty, adjust sensor B09 or B10 mechanically:

- ▶ Loosen the screw connections of the sensor and move it in the oblong hole until the bar (2) is inside the rectangle (1) of the bargraph in the display.
  - ⇨ An audio signal sounds if the bar (2) is inside the rectangle (1).
- ▶ Tighten the screw connections on the sensor.
- ▶ Press OK.
- ➡ The set position is saved.

> ***INFO***
>
> Saving is only possible if the bar (2) is inside the rectangle (1) of the bargraph.

14.18.1.2 Adjusting sensor B61 “Tying 1 (passive)”



EQ003-106

✓ Menu 15-1 “Sensor test” is open.
✓ The sensor B61 "Tying 1 (passive)" has been selected.

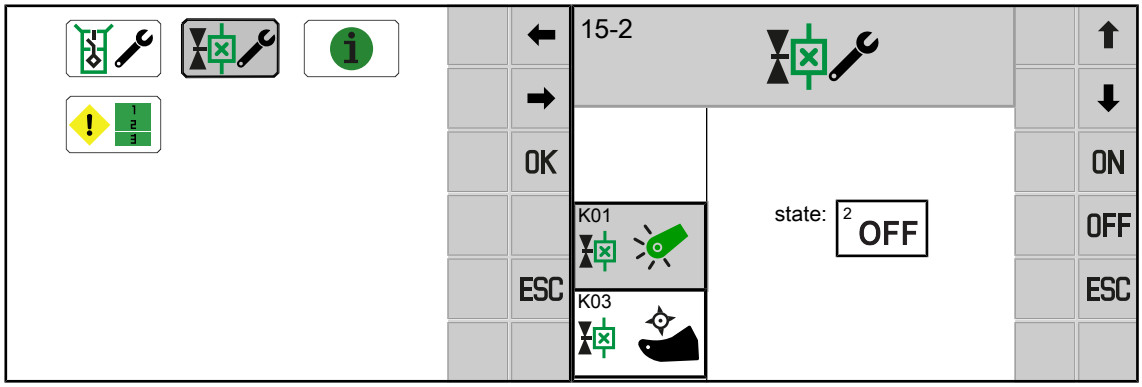
Saving is only possible when the bar is in the lower or upper red rectangle of the bargraph.

To set the feed and end positions, *see Page 181*.

14.18.2 Menu 15-2 "Actuator test"

> ***⚠ WARNING***
>
> **Risk of injury due to non-observance of the safety routines**
>
> 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 27*.

The actuator test is used to test the actuators installed on the machine. An actuator can only be tested when current is flowing through it. Therefore, in the "Actuator test" menu, the actuator must be controlled manually for a short time in order to determine possible errors in the actuator system.



EQG003-031

✓ Menu 15 “Settings” is called, *see Page 164*.

▶ To open the menu, press .

⇨ A warning opens which refers to the operating instructions.

▶ Observe the safety routine "Run actuator test", *see Page 28*.

▶ Confirm with OK.

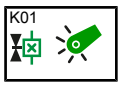
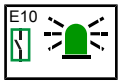
➡ The display shows the "Actuator test" menu.

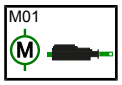
The following keys can be available in the menu:

Icon	Designation
	Choose previous sensor
	Choose next sensor
ON	Switching on the actuator
OFF	Switch off the actuator
ESC	Exit menu

Possible actuators (depending on how the machine is equipped)

An overview of the sensors, actuators and control units is in the circuit diagram.

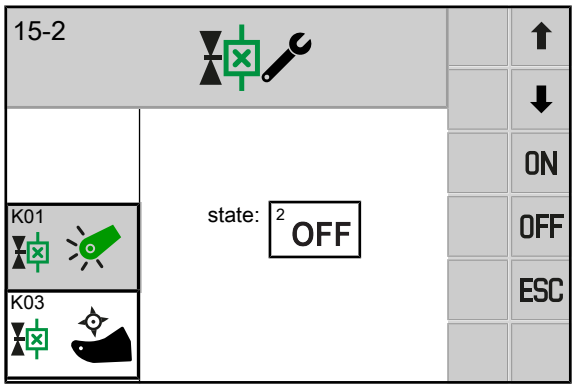
No.	Actuator	Designation
K01		Pick-up
K03		Lifting/lowering the feeder rotor floor
E10		Warning beacon (for certain countries)

No.	Actuator	Designation
E20		Working lights net roll (for the “Working lights” version)
E20/ E21		Working lights net roll (for version "Net wrapping and chamber film wrapping” and "Working lights")
E21		Working lights chamber film wrapping (for the “Net and chamber film wrapping” version)
E22/ E23		Maintenance lighting side hood left/right
M01		Motor tying 1 (passive)

Possible status displays of the actuators

Icon	Designation
1 ON	Actuator ON
2 OFF	Actuator OFF
3 	General actuator error
4 FUSE 	No supply voltage Possible cause: Fuse defective.

Diagnostics for digital actuators

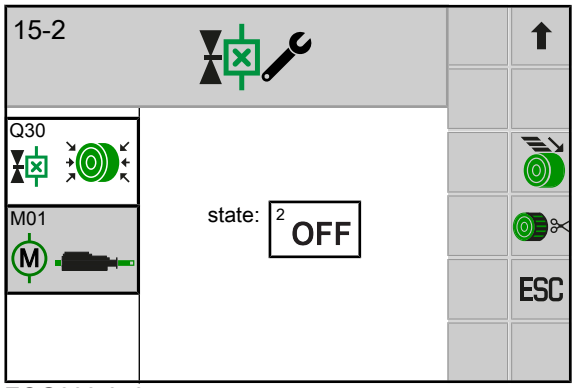


EQG000-019

Errors are only displayed if the actuator is turned on and a test for the actuator in question is available. The LED on the plug can also be checked directly on the actuator.

- ▶ Press ON to switch the actuator on.
- ▶ Press OFF to switch the actuator off.

Diagnostics of actuator for wrapping process

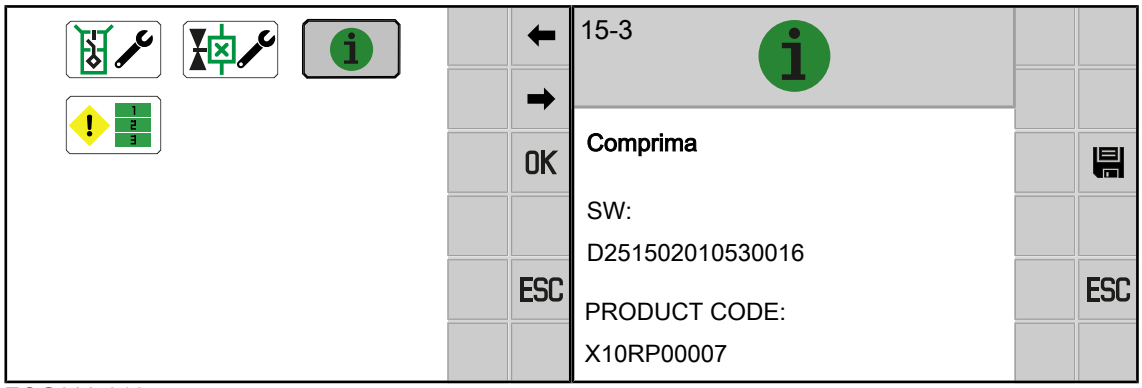


EQG000-053

The actuator for wrapping process M01 can be tested by moving it into the feed or cutting position.

- ▶ To move the actuator for wrapping process into the feed position, press  .
- ▶ To move the actuator for wrapping process into the cutting position, press  .

14.18.3 Menu 15-3 "Software info"



EQG000-016

✓ Menu 15 “Settings” is called, *see Page 164*.

- ▶ To open the menu, press  .

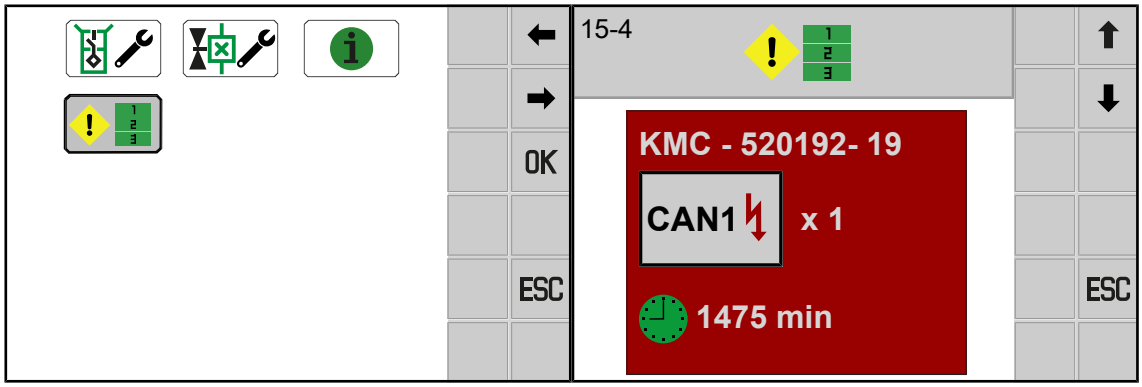
➡ The display shows the "Software info" menu.

Display area

Icon	Designation
SW	Overall software version of the machine

14.18.4 Menu 15-4 "Error list"

All active and non-active errors are shown in this menu. The errors are shown with a number indicating how often the error occurred and the time on the operating hours counter when the error last occurred.



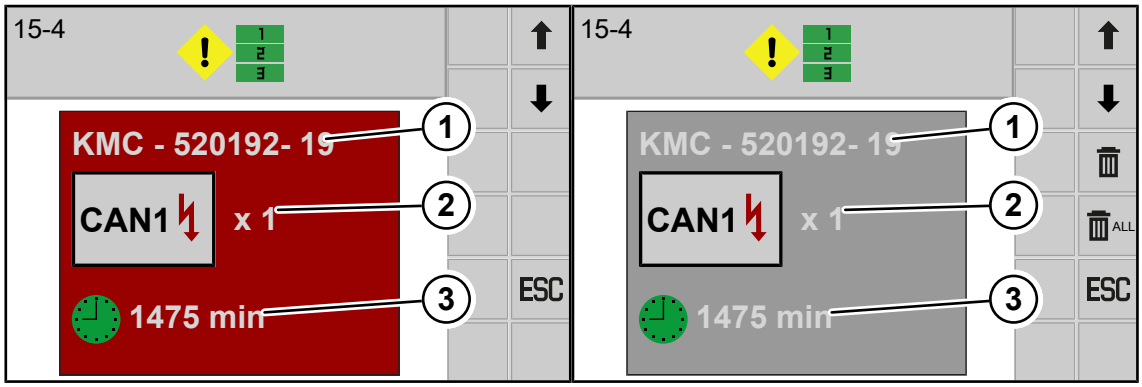
EQG000-060

✓ Menu 15 “Settings” is called, *see Page 164*.

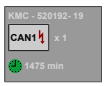
▶ To open the menu, press  .

➡ The display shows menu "Error list".

Display area



EQ001-085 / EQ001-209

Icon	Designation	Explanation
	Active error	• Cannot be deleted
	Non-active error	• Can be deleted
(1)	Error number	• Meaning, cause and remedy of error message *see Page 234*.
(2)	Number	• How often the error has occurred.
(3)	Operating hours counter time	• The time on the operating hours counter when the error last occurred.
	Delete individual errors	• The selected error is deleted. • Only non-active errors can be deleted.
	Delete all errors	• All inactive errors are deleted.

Recurring icons *see Page 144*.

Delete individual errors

Only non-active errors (highlighted grey) can be deleted.

- ▶ To select the error to be deleted, press  or  .
- ▶ To delete the error, press  .

Delete all errors

Only non-active errors (highlighted grey) can be deleted.

- ▶ To delete all errors, press  .

15 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 15*.

⚠ 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 27*.

⚠ 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.

⚠ WARNING

Risk of accident due to inadequate brake force

If the brake force controller has been incorrectly set, there is a risk of accidents.

- When driving on public roads, ensure that full load (1/1) is set on the brake force regulator, *see Page 84*.
- When working for example on wet fields, deceleration may be reduced.

15.1 Preparing the machine for road travel

- ✓ All items listed in chapter "Start-up" have been fulfilled, *see Page 58*.
- ✓ The control units on the tractor are in neutral position and locked.
- ✓ The machine has been shut down and secured, *see Page 27*.
- ✓ All guards are properly closed and locked.
- ✓ The wheel chocks are secured in the supports / holders on the machine, *see Page 83*.
- ✓ The support jack is in the transport position, *see Page 79*.
- ✓ The road lighting has been connected, tested and is functioning properly, *see Page 63*.
- ✓ The pick-up is fully raised in transport position, *see Page 85*.
- ✓ 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 46*.
- ✓ The brake is functioning properly.
- ✓ **For version with "Single axle with compressed air brake" or "Tandem axle with compressed air brake"**: The brake force regulator has been set to full load (1/1), *see Page 84*.
- ✓ **With "Parking brake" version:** The parking brake is released, *see Page 82*.
- ✓ The retaining rod in the storage compartment has been mounted and secures net or film rolls in the compartment.
- ✓ The permitted maximum speed of the machine is known and is maintained.
- ✓ **For version with "Operation unit DS 100":** The road travel screen has been called up, *see Page 104*.
- ✓ **For the remaining terminals:** The road travel screen has been called up, *see Page 104*.

15.2 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.

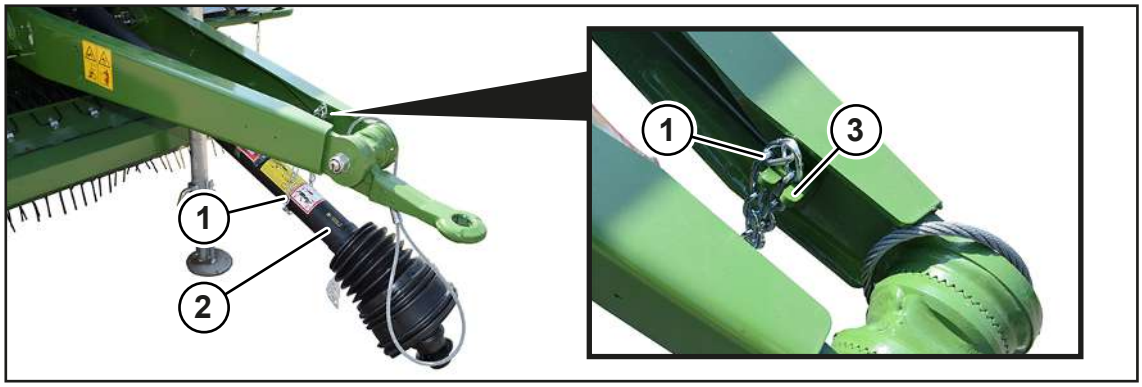
- ▶ Before uncoupling the machine from the tractor, completely close the tailgate.
- ▶ Shut down and safeguard the machine, *see Page 27*.
- ▶ Bring the support jack in support position, *see Page 79*.
- ▶ On the tractor side, loosen the supporting chain of the universal shaft, disengage the universal shaft, place it on the universal shaft support in case of lower suspension or suspend it from the universal shaft chain in case of upper suspension.
- ▶ 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 63*.
- ▶ Remove the power supply cable for the terminal.

- 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 83*.

15.3 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 retaining chain or with the universal shaft bracket.

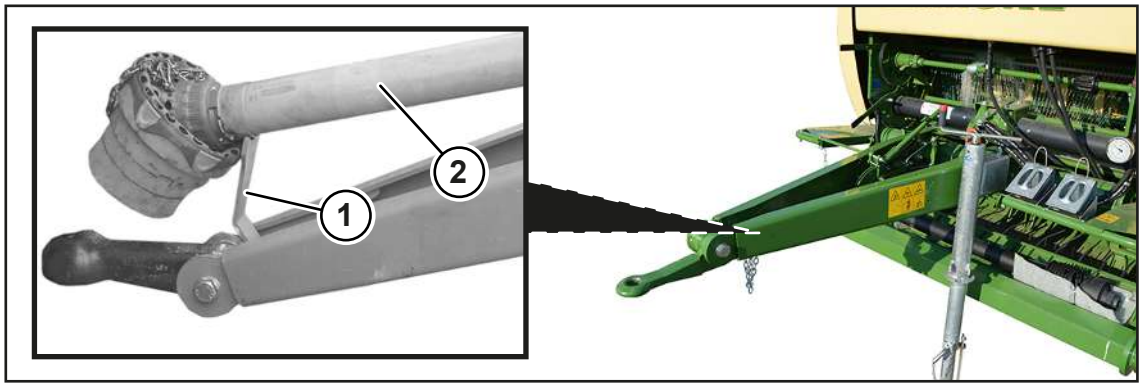
With top suspension of the drawbar



RPG000-118

- Insert the universal shaft (2) into the universal shaft chain (1).
- Attach the universal shaft chain (1) to the support (3).

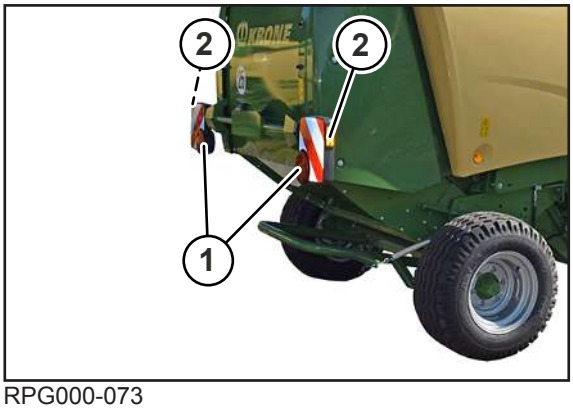
With bottom suspension of the drawbar



RPG000-137

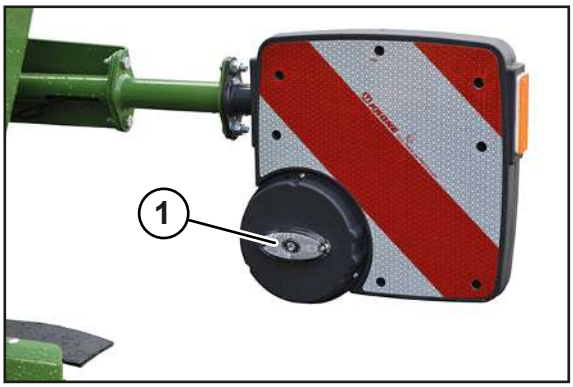
- Fold out the universal shaft bracket (1) and place the universal shaft (2) on the universal shaft bracket (1).

15.4 Checking road travel lighting



RPG000-073

- Connecting road travel lighting to the vehicle electrical system, *see Page 63*.
- Check whether the rear lamps (1) are functional.
- Clean the rear lamps (1) and the side reflectors (2).



RPG000-074

The 2 reflectors (1) are located on the rear of the rear lamps.

- Clean the reflectors (1).

15.5 Preparing the machine for shipment

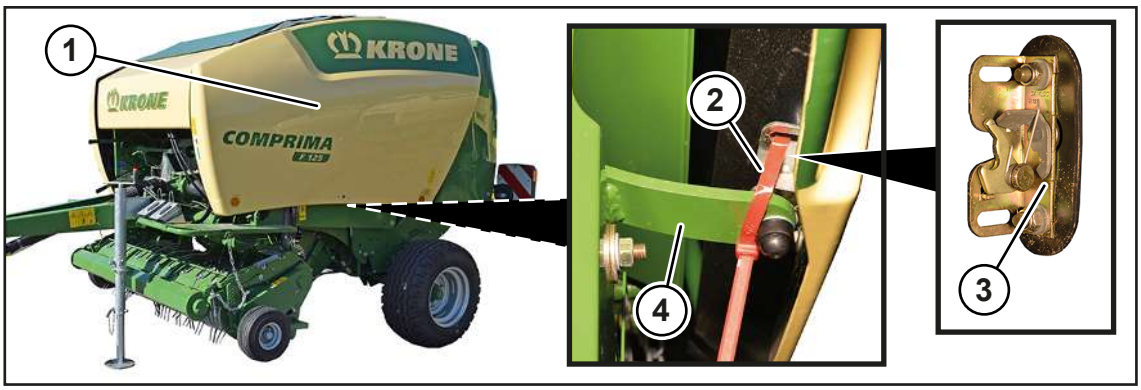
⚠ *WARNING*

Risk of accident due to unsecured machine parts

If the machine is not secured properly for transportation on a lorry or train, the parts may come loose unintentionally due to the airstream. This may result in serious accidents or damage to the machine.

- Carry out the following measures to secure moving machine parts.

15.5.1 Securing the side hoods

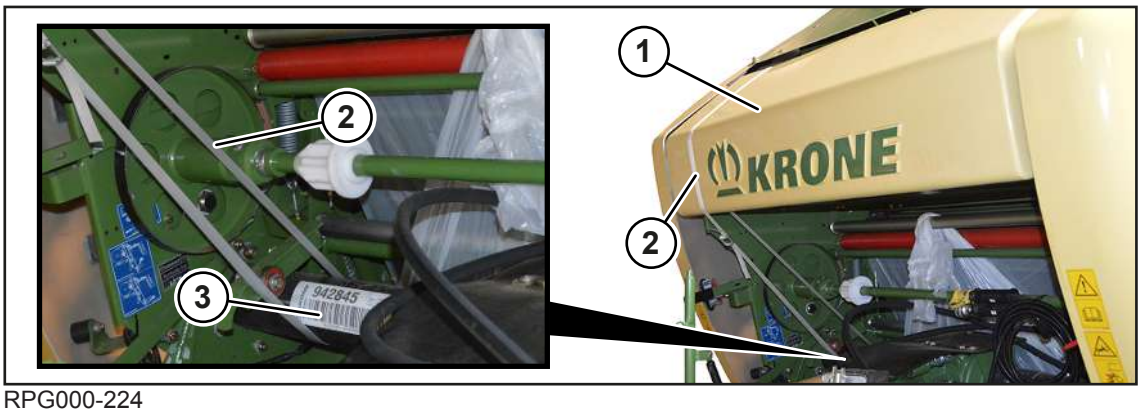


RPG000-070

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

- Open the side hood (1).
- Guide a cable tie (2) through the openings of the flap lock (3).
- Carefully close the side hood (1).
- Lay the cable tie (2) around the lock holder (4) and tighten it.

15.5.2 Securing the storage compartment flap



RPG000-224

- To secure the storage compartment flap (1), place a strap (2) around the storage compartment flap (1) and the protective tube (3) and tighten.

15.5.3 Lifting the machine

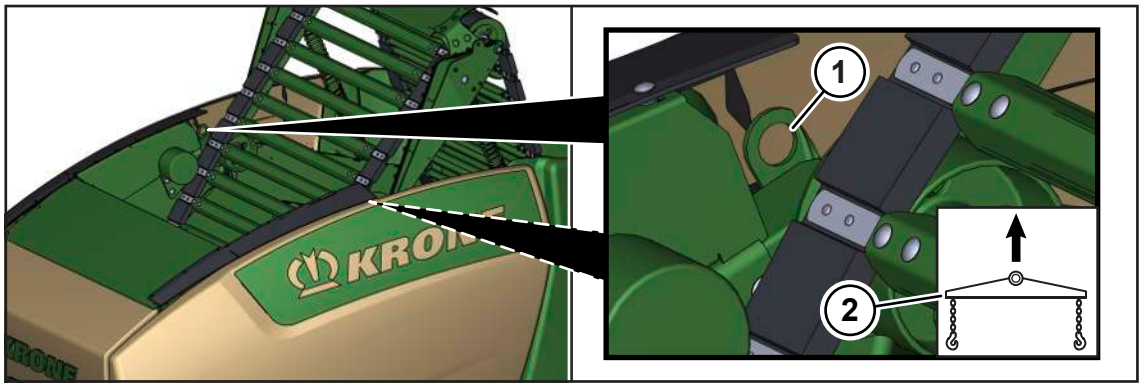
⚠ WARNING

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 46*.
- 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 27*.

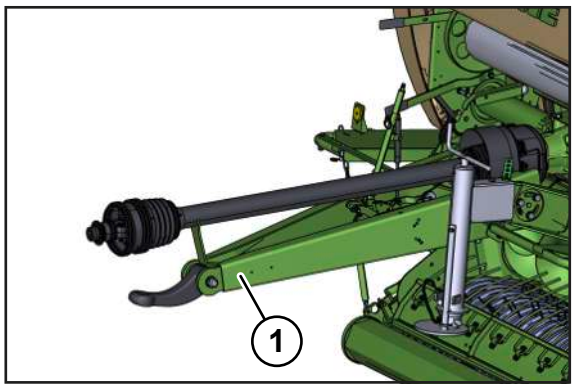
The machine is equipped with 3 suspension points.



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 43*.

✓ The machine has been shut down and secured, *see Page 27*.

- Close the tailgate.
- Lift the pick-up into the transport position, *see Page 85*.
- 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 79*.

15.5.4 Lashing the machine

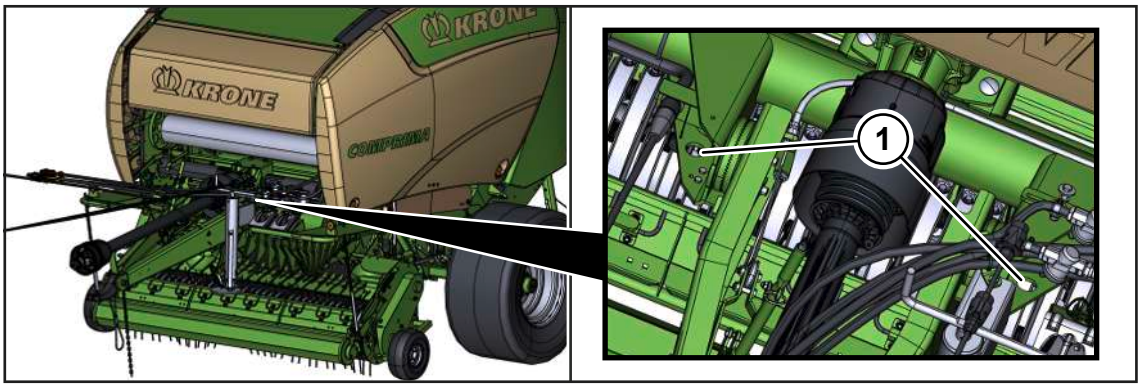
⚠ WARNING

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.

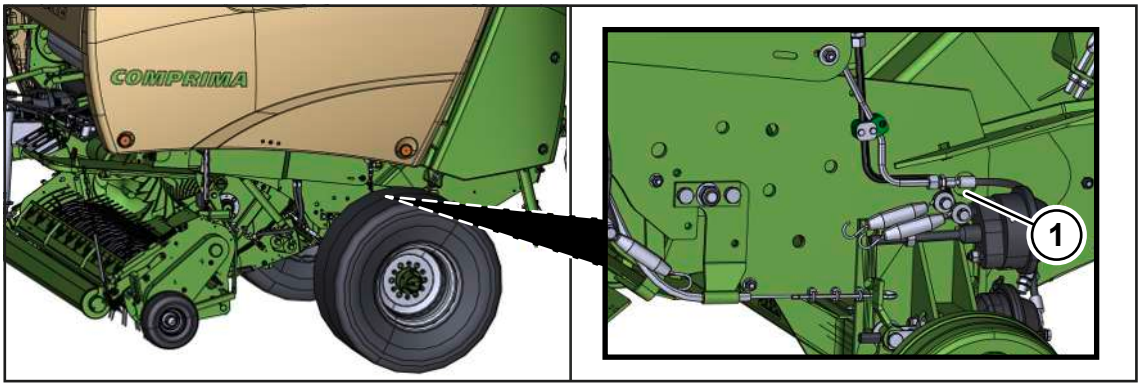
- Before transporting the machine, secure it properly to the designated lashing points using suitable lashing material.

The lashing points on the machine are identified with an information label, *see Page 34*.



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)

16 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 15*.

⚠ 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 27*.

16.1 Setting the baling pressure

For "KRONE DS 100 operation unit" version

▶ Adjust the baling pressure via the operation unit, *see Page 108*.

For "Comfort 1.0" version

▶ Set the baling pressure via the terminal, *see Page 136*.

16.2 Checking and setting the position of the feed rocker arm

The position of the feed rocker arm is set via the sensor B61 "Tying 1 (passive)", *see Page 168*.

The following procedure is used to move the feed rocker arm with operation unit or terminal to the desired position.

For version with "operation unit DS 100"

Moving the feed rocker arm with the DS 100 operation unit - see manual tying operation, *see Page 117*.

For the remaining terminals

✓ The PTO shaft is switched on.

▶ Open menu 10 "Manual operation" on the terminal, *see Page 152*.

▶ Press  to move the feed rocker arm to the saved feed position on the round bale.

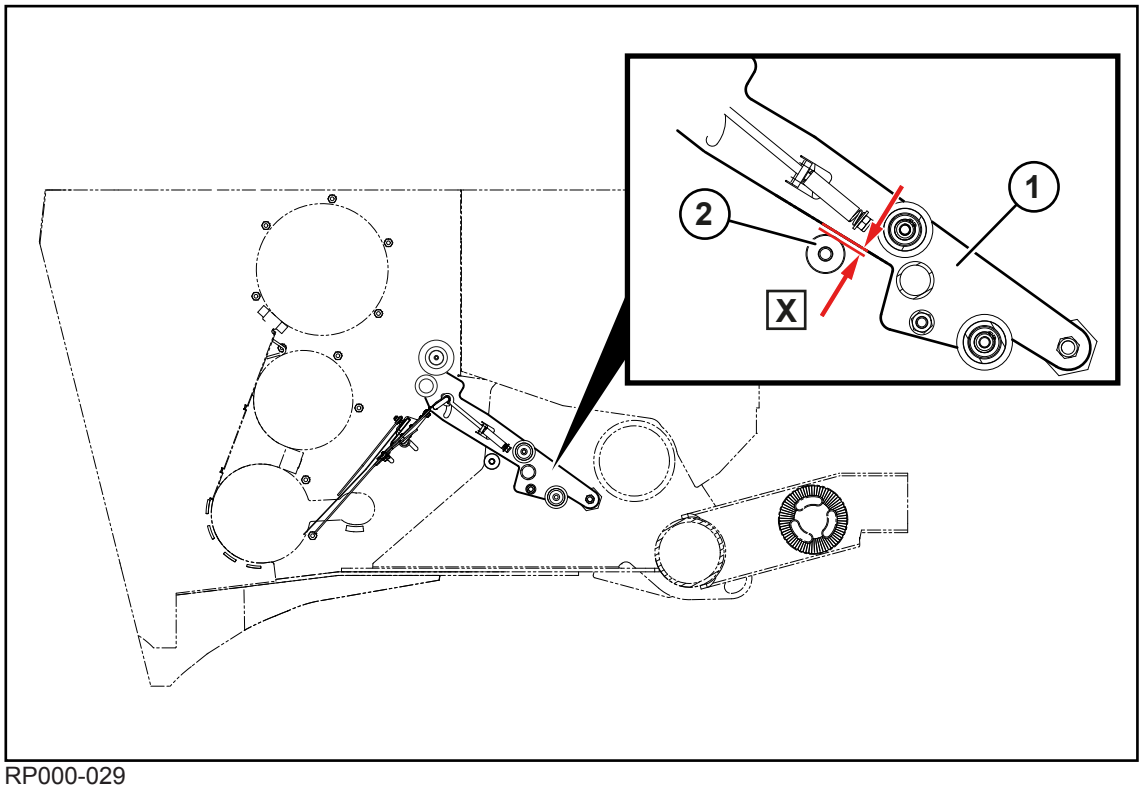
▶ Press  to move the feed rocker arm to the saved end position.

A new feed or end position must be saved if the feed or end position is not correct. This can only be done in menu 15-1 "Sensor test".

- Open menu 15-1 "Sensor test" on the terminal, *see Page 165*.
- To move the feed rocker arm in the direction of the feed position, press  .
- To move the feed rocker arm in the direction of the end position, press  .
- Press  .

➡ The set position is saved.

16.2.1 Checking and adjusting the feed position



RP000-029

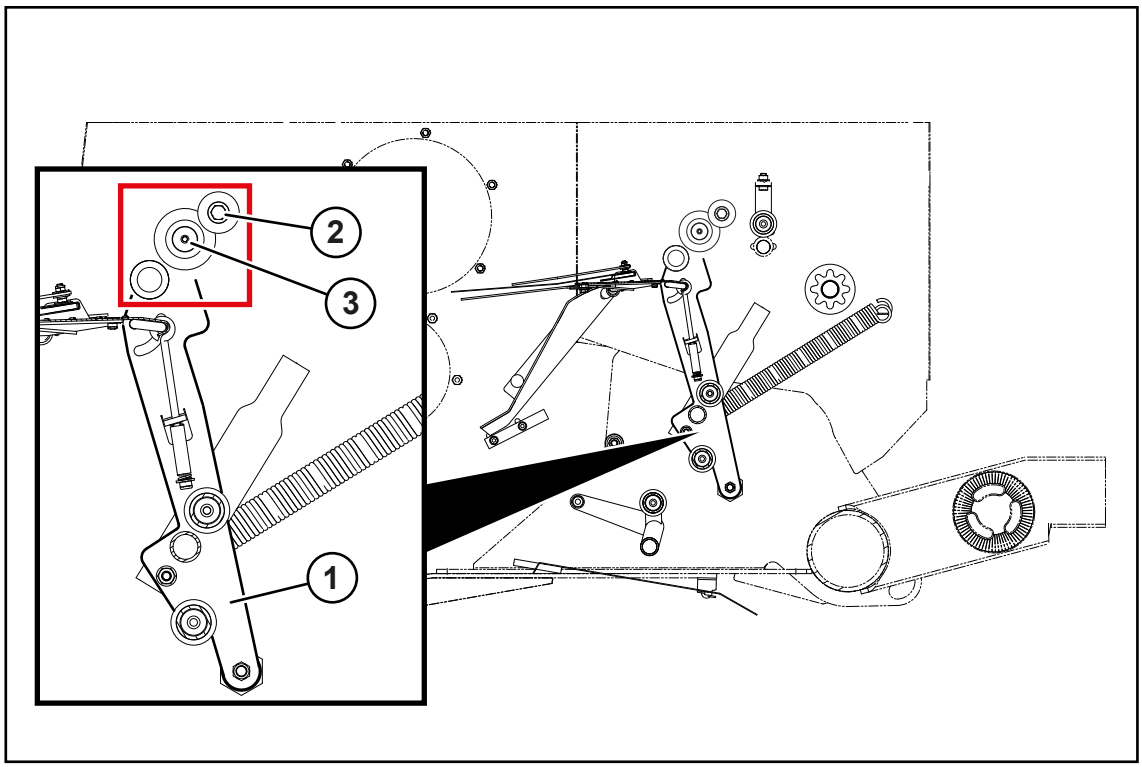
The feed position has been optimally set when the distance between the feed rocker arm (1) and stop (2) is **X=3–5 mm**. As a result, the wrapping material is optimally accepted by the round bale.

- Move the feed rocker arm (1) to the saved feed position on the round bale.
- Switch off the tractor, remove the ignition key and take it with you.
- Check whether there is a distance of **X=3–5 mm** between the feed rocker arm (1) and the stop (2).

If the distance is not **X=3–5 mm**, set and save the feed position again as follows:

- Start the tractor.
- Move the feed rocker arm in the direction of the feed position until the feed rocker arm (1) has approached the stop (2) up to a distance of **X=3–5 mm**.
- Save the new position.

16.2.2 Checking and setting end position for chamber film wrapping



RP000-028

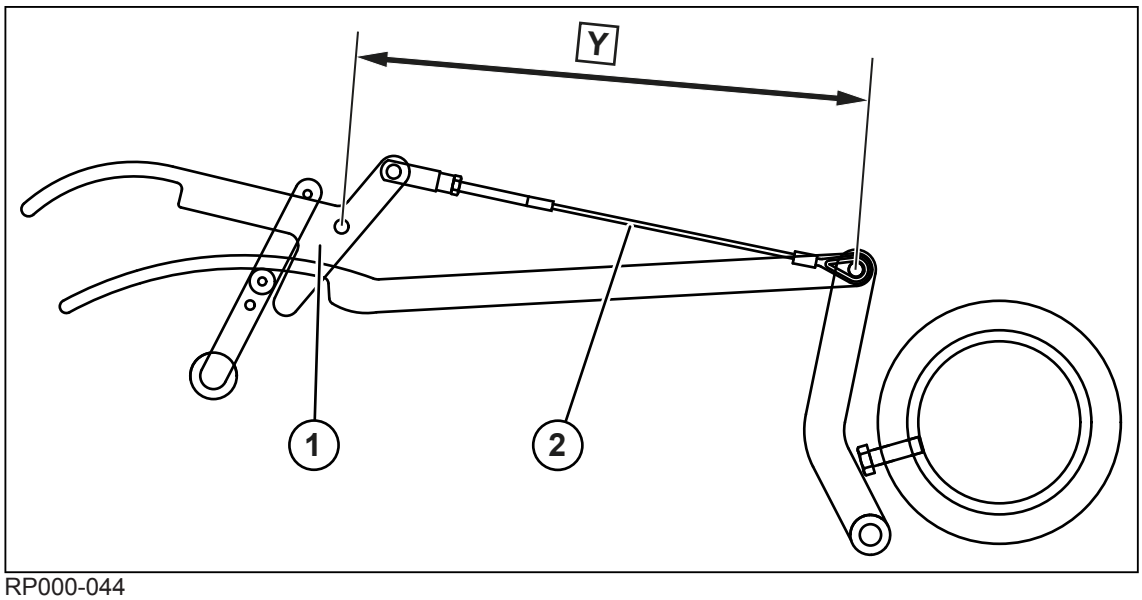
The end position has been optimally set, with chamber film wrapping activated, when the feed rocker arm (1) is in the end position on the insulation of the pressure shaft (2). As a result, the film is clamped and held in position.

- Open menu 10 "Manual operation" on the terminal, *see Page 152*.
- Move the feed rocker arm (1) to the saved end position.
- Switch off the tractor, remove the ignition key and take it with you.
- Check whether the conical roller (3) is positioned on the insulation of the pressure shaft (2) and whether the film jams between the insulation of the pressing shaft (2) and the conical roller (3).

If the film is not jammed between the insulation of the pressure shaft (2) and the conical roller (3):

- Start the tractor.
- Move the feed rocker arm in the direction of the end position until the conical roller (3) is positioned on the insulation of the pressure shaft (2) and the film is clamped between the insulation and conical shaft.
- Save the new position.

16.2.3 Checking and setting end position for net wrapping



RP000-044

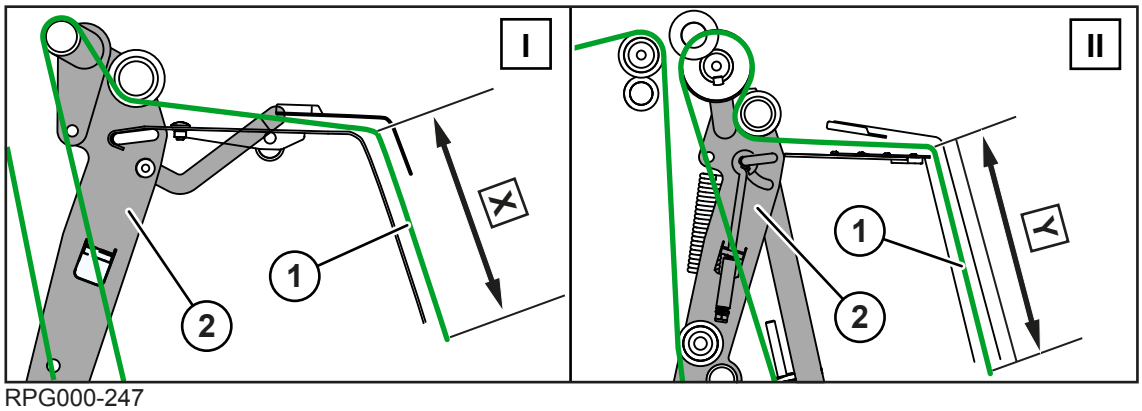
The end position has been optimally set when **Y=410 mm**.

- Open menu 10 "Manual operation" on the terminal, *see Page 152*.
- Move the feed rocker arm (1) to the saved end position.
- Switch off the tractor, remove the ignition key and take it with you.
- Check whether the dimension is **Y=410 mm** .

If the dimension Y is not **Y=410 mm**, set and save the end position again as follows:

- Start the tractor.
- Move the feed rocker arm in the direction of the end position until the dimension is **Y=410 mm**.
- Save the new position.

16.3 Setting wrapping material overhang

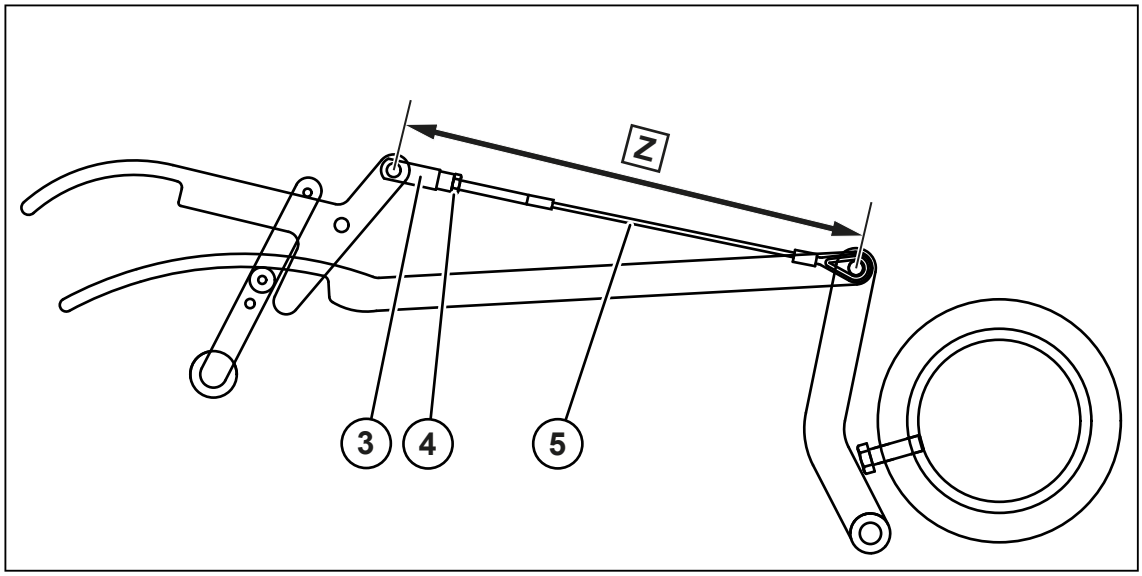


RPG000-247

I For version with "Net wrapping"

II For version with "Net wrapping and chamber film wrapping"

After each tying process, the net should overhang by **X=170–200 mm** or the film by **Y=230–260 mm**.



RP000-878

Net wrapping: Dimension preset by KRONE **Z=365 mm**

Chamber film wrapping: Dimension preset by KRONE **Z=370-375 mm**

If the wrapping material overhang (1) is not **X=170–200 mm** or **Y=230–260 mm**, the wire rope (5) must be adjusted as follows.

The greater the dimension Z of the wire rope (5), the greater the wrapping material overhang (1).

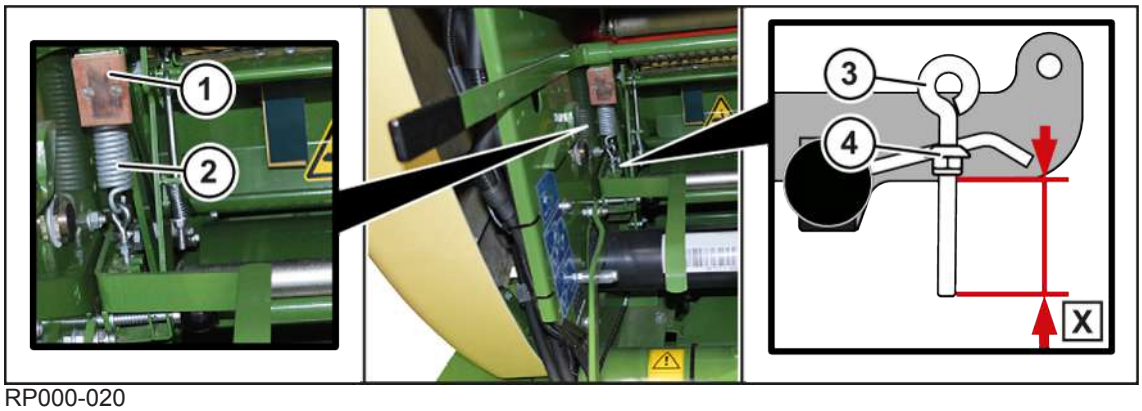
The smaller the dimension Z of the wire rope (5), the smaller the wrapping material overhang (1).

✓ The feed rocker arm is in the end position, *see Page 181*.

▶ Adjust the wire rope (5) to the required length using the nut (4) and pawl (3).

16.4 Setting wrapping material brake

For version with "Net wrapping"



RP000-020

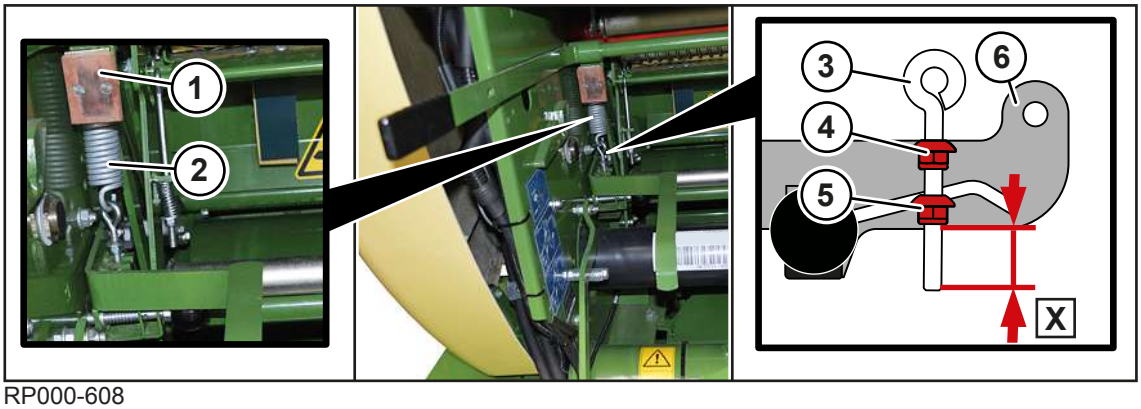
The wrapping material brake is located on the right side of the machine under the storage compartment.

The spring (2) is mounted in such a way that the brake pad (1) is pressed onto the brake disc (not shown in the picture). This ensures that the wrapping material brake decelerates the feeding of the wrapping material to the round bale. If the net was wrapped around the round bale too loosely or too tightly, the brake force can be set with the nut (4) on the eyelet bolt (3).

Default dimension set by KRONE: **X=40 mm**

✓ The machine has been shut down and secured, *see Page 27*.
✓ The roll holder has been swivelled forwards.
▶ To increase the brake force, increase the dimension X.
▶ To reduce the brake force, reduce the dimension X.

For the "Net and chamber film wrapping" version



RP000-608

The wrapping material brake is located on the right side of the machine under the storage compartment.

The spring (2) is mounted in such a way that the brake pad (1) is pressed onto the brake disc (not shown in the picture). This ensures that the wrapping material brake decelerates the feeding of the wrapping material to the round bale.

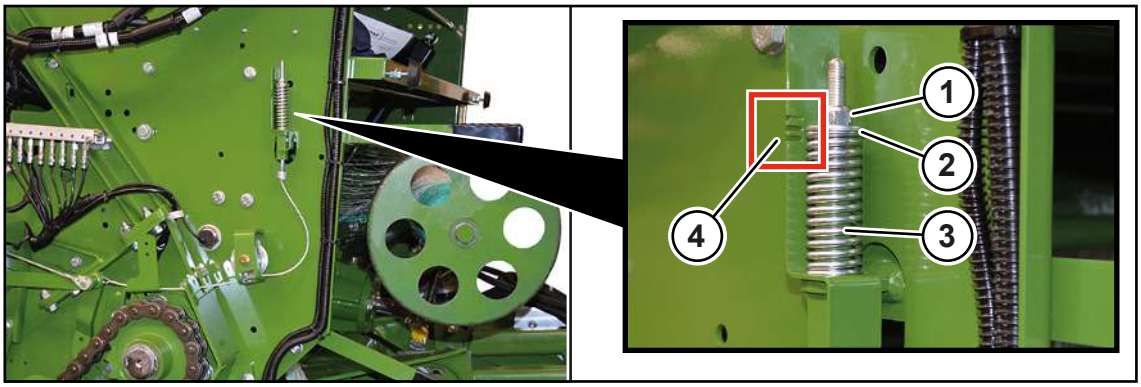
If the stretching of the film is too strong or too weak or if the net around the round bale has been tied too strong or too weak, it is possible to increase or reduce the brake force of the wrapping material brake by means of the nut (5) at the eyelet bolt (3). To check the stretching, *see Page 97*.

The pre-set dimension X for net wrapping and chamber film wrapping is **X=21 mm**.

If "KRONE excellent" net or film is not used for the tying, the brake force may have to be adjusted at the eyelet bolt (3).

✓ The machine has been shut down and secured, *see Page 27*.
✓ The roll holder has been swivelled forwards.
▶ To increase the brake force, increase the dimension X or hook the eyelet bolt (3) into the upper cone (4), if necessary.
▶ To reduce the brake force, reduce the dimension X.

16.5 Setting the brake force release when feeding wrapping material



RP000-019

Particularly when the chamber film wrapping is set, there is a risk that the film will overturn on the film roll instead of being fed to the round bale. If this happens, the brake force release should be adjusted for the feed process.

When the wrapping material is guided to the round bale, the brake force should be reduced so that the wrapping material can be pulled more easily off the round bale.

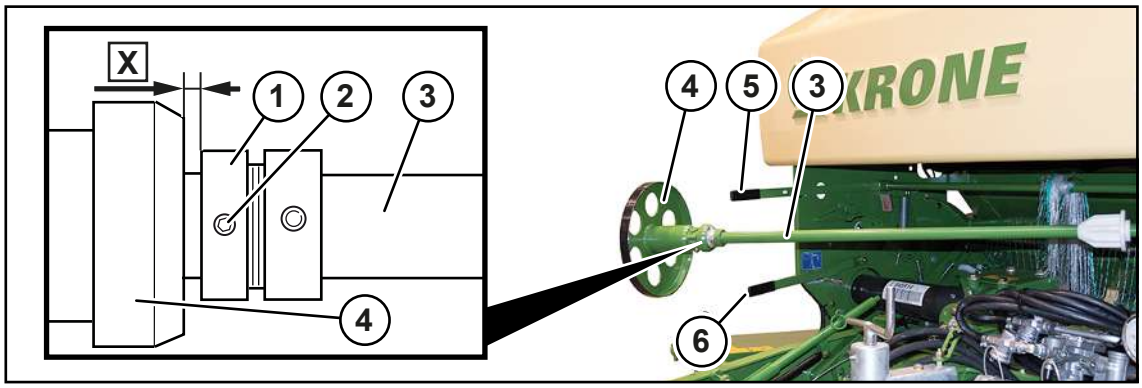
This brake force release during the feed process can be set on the spring (3) on the right side of the machine behind the side hood.

The more the spring (3) is tensioned, the greater the brake force release during the feed process.

✓ The actuator for wrapping process is in the feed position, *see Page 153*.
✓ The machine has been shut down and secured, *see Page 27*.
▶ Check that the disc (2) is located above the spring (3) at the level of the central notch (4).
▶ To change the tension of the spring (3), loosen or tighten the nut (1).

Notches (4)	Spring tension (3)	Wrapping material for the feed process
top	low	The wrapping material can be pulled with difficulty.
central	medium	The wrapping material can be pulled with medium strength. KRONE recommends this setting as an optimum brake force release during the feeding of the wrapping material.
bottom	strong	The wrapping material can be pulled easily.

16.6 Checking and setting the axial play of the brake disc at the wrapping material brake



RP000-023

The axial play of the brake disc (4) on the wrapping material brake must be adjusted, etc., before setting the sensor B02 "Tying process active ", *see Page 165*.

The axial play must be **X=1–2 mm**.

▶ To release the wrapping material brake, press the lever (5) downwards.
▶ Measure the axial play X of the brake disc (4) to the adjusting collar (1).

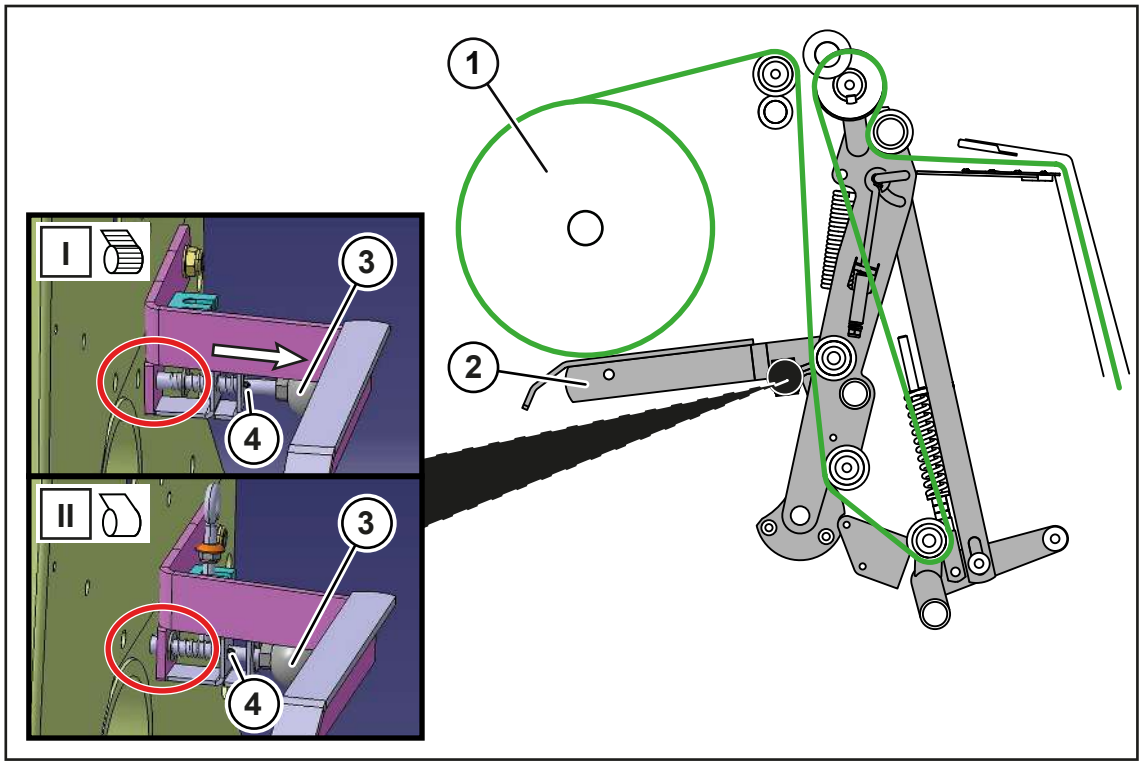
If the axial play is not **X=1–2 mm**:

▶ Raise the lever (6).
▶ Swivel the brake disc (4) with the roll holder (3) forwards and pull off the brake disc (4).
▶ Loosen the threaded pin (2) and dismount the adjusting collar (1).

- Use shim rings to set the required axial play X.
- Mount the adjusting collar (1) and tighten the threaded pin (2).
- Push the brake disc (4) onto the roll holder (3) and swivel it back into the machine.

16.7 Locking/releasing the tension lever

For the "Net and chamber film wrapping" version



RP000-187

Position (I) (net wrapping)

The locking pin with ball head (3) is released (shown with a red border in the figure). The tension lever (2) is positioned on the net roll (1).

Position (II) (chamber film wrapping)

The locking pin with ball head (3) is locked in the side wall (shown with a red border in the figure). This keeps the tension lever (2) in bottom position to prevent it from touching the film roll (1).

Setting the chamber film wrapping (from position (I) to position (II))

- To lock the locking pin with ball head (3), turn the ball head clockwise until the roll pin (4) moves through the slot.
- At the same time, move the tension lever (2) downwards to the borehole.

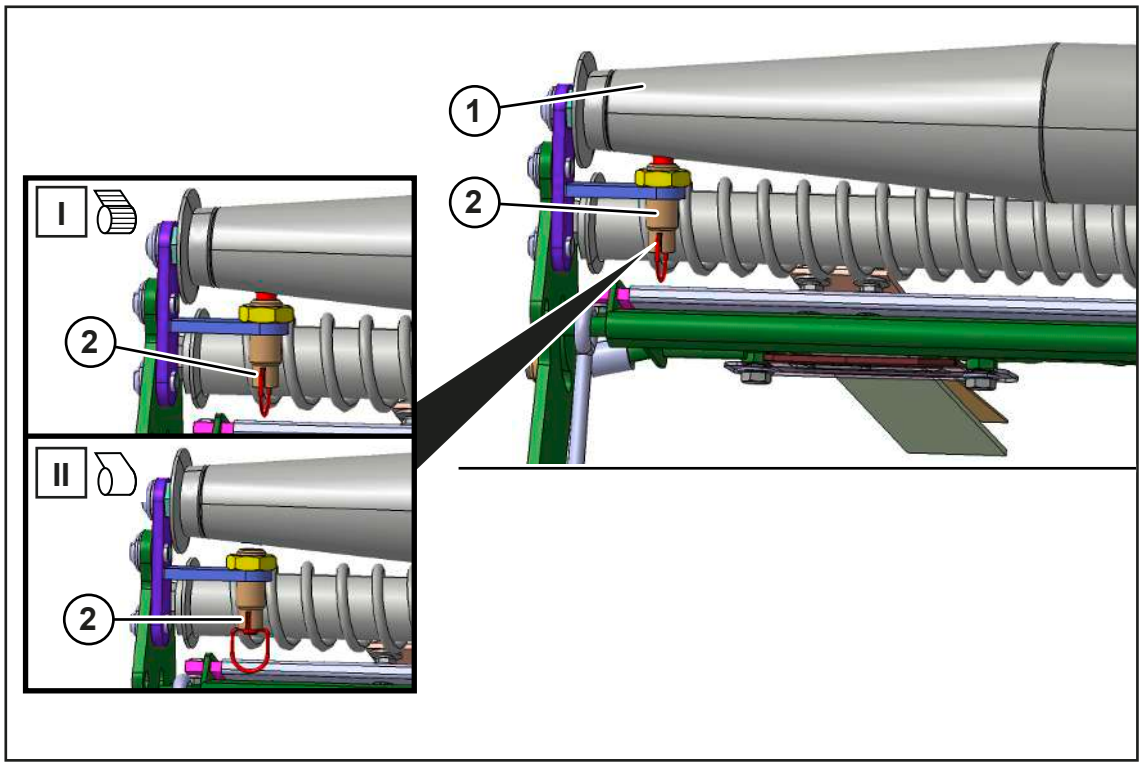
➡ The compression spring automatically presses the bolt into the borehole.

Setting the net wrapping (from position (II) to position (I))

- To release the locking pin with ball head (3), turn the ball head anti-clockwise and pull the bolt in the direction of the arrow until the roll pin (4) moves through the slot and the bolt has engaged.

16.8 Setting the lock of the tapered roller

For the "Net and chamber film wrapping" version



RP001-166

Position (I) (net wrapping)

The locking bar (2) locks the conical roller (1) to prevent it from rotating during net wrapping.

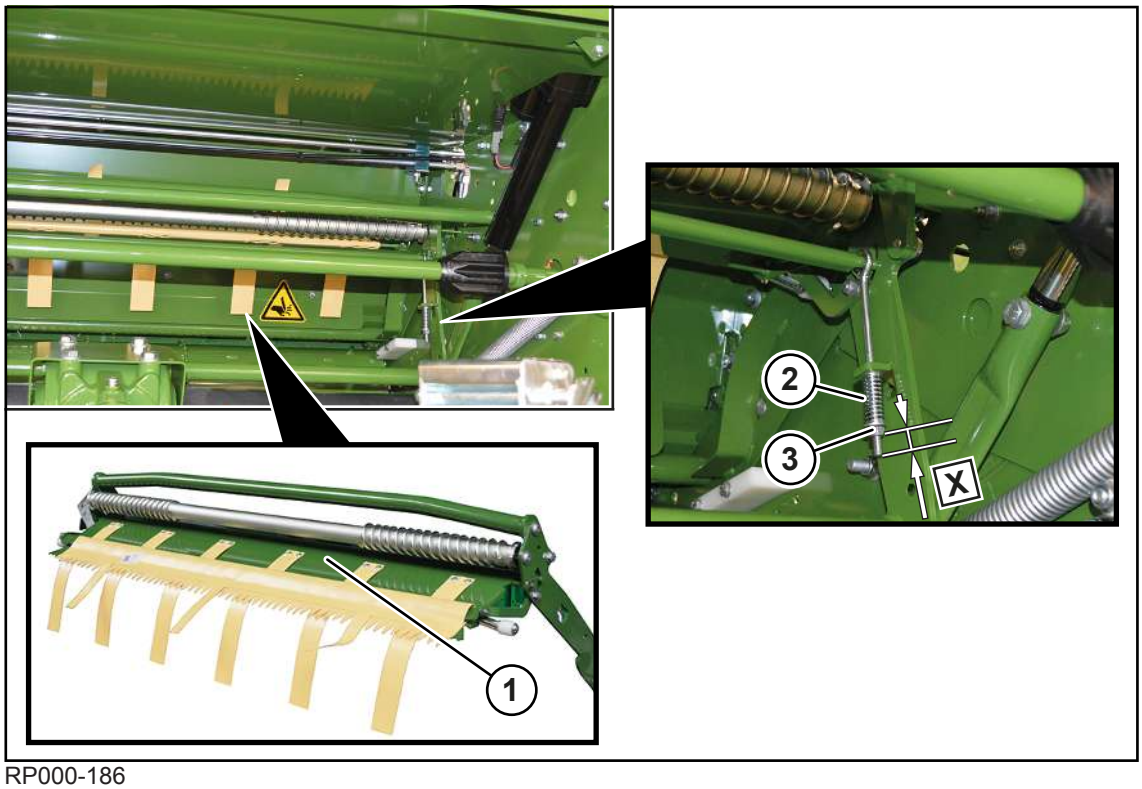
Position (II) (chamber film wrapping)

The locking bar (2) releases the conical roller (1) to ensure that it rotates during chamber film wrapping.

- To lock the conical roller (1) for net wrapping, pull the locking bar (2) and turn it anti-clockwise until it engages in position (I).
- To release the conical roller (1) for chamber film wrapping, pull the locking bar (2) and turn it clockwise until it engages in position (II).

16.9 Checking the retaining comb for net wrapping

For version with "Net wrapping"



RP000-186

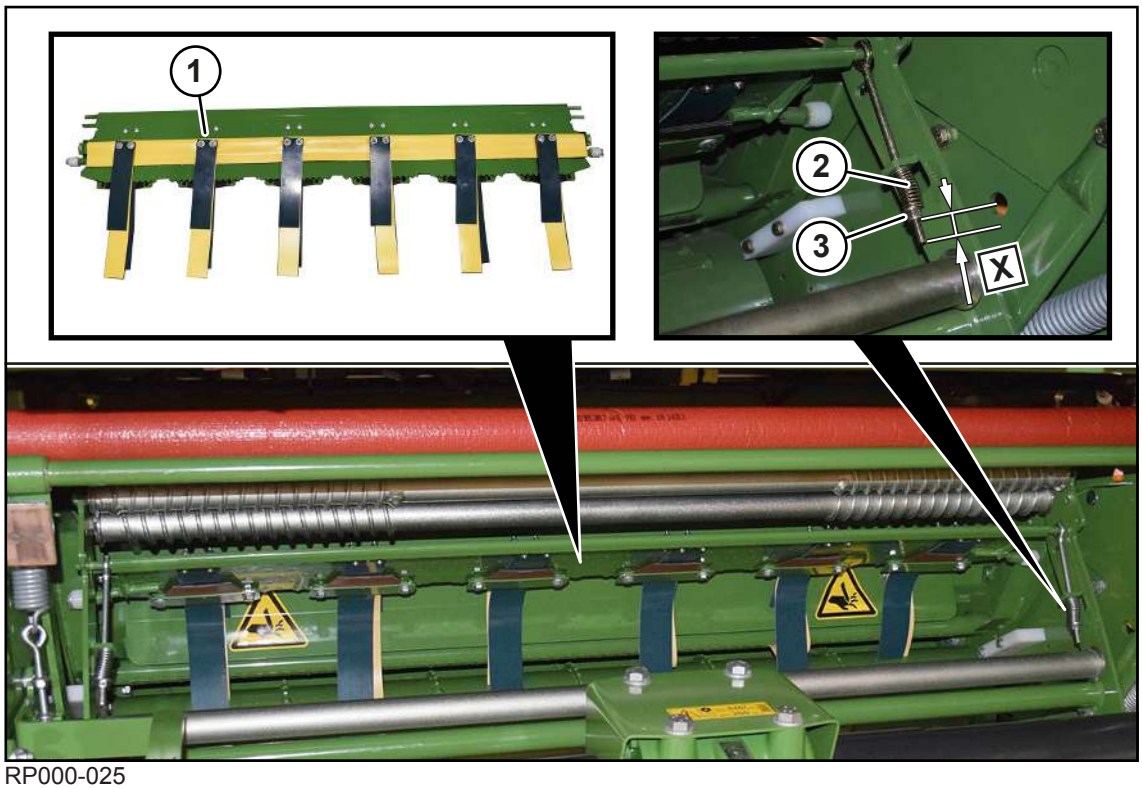
The retaining comb (1) is located on the front of the machine under the storage compartment.

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

- Check whether the dimension X on the spring (2) is **X=15 mm**.
- If the dimension is not **X=15 mm**, set the dimension on the nut (3).

16.10 Checking the retaining comb for chamber film wrapping

For the "Net and chamber film wrapping" version



RP000-025

The retaining comb (1) is located on the front of the machine under the storage compartment.

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

- Check whether the dimension X on the spring is **X=5 mm**.
- If the dimension is not **X=5 mm**, set the dimension on the nut (3).

16.11 Setting the working lights

For "working lights 1.0" version

The interior working lights on the side hoods on the left- and right-hand side of the machine can be set as required. The working lights are turned on and off using the keys  and  in the terminal, *see Page 129*.

RPG000-101

- Turn the light (1) so that the desired area is illuminated.

17 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 15*.

⚠ 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 27*.

17.1 Maintenance table

17.1.1 Maintenance – Before the season

Checking oil level	
Main gearbox	*see Page 204*
Chain lubrication unit	*see Page 219*

Components	
Adjust drive chains	*see Page 213*
Tighten screws/nuts on the machine	*see Page 199*
Retightening wheel nuts	*see Page 203*
Check tyre pressure	*see Page 203*
Cleaning bushing and drawbar eye	*see Page 207*
Change filter on the central chain lubrication system	*see Page 220*
Drain condensation water out of the compressed air tanks of the compressed air brake	*see Page 222*
Adjusting the scraper on the deflection shafts	*see Page 211*
Adjusting the scraper on the fixed deflection rolls	*see Page 211*
Prepare brake disc of the wrapping material brake	*see Page 52*
Lubricate the machine according to the lubrication chart	*see Page 196*
Actuate tying cycle and check functions	*see Page 79*
Check hydraulic hoses	*see Page 225*
Cleaning deflection pipes or conical tying roller	*see Page 205*
Check the electrical connection cables and, if necessary, have them repaired or changed by a KRONE service partner	

17.1.2 Maintenance – After the season

Components	
Clean the machine	see Page 205
Lubricate the machine according to the lubrication chart	see Page 196
Lubricate the universal shaft	see Page 199
Grease the threads of the setting screws	
Drain condensation water out of the compressed air tanks of the compressed air brake	see Page 222
Cleaning drive chains	see Page 208
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.	
Protecting brake disc of the wrapping material brake from corrosion	see Page 208
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	

17.1.3 Maintenance – once after 10 hours

Components	
Retightening wheel nuts	see Page 203
Tighten the screw connections on the drawbar	see Page 208
Check tyre pressure	see Page 203
Have the slack adjuster of the brake system checked	Only by KRONE service partner, see manual for service technicians
Check the hydraulic hoses for leaks and, if necessary, have them replaced by a KRONE service partner.	see Page 225
Cleaning bushing and drawbar eye	see Page 207

17.1.4 Maintenance – once after 50 hours

Changing oil	
Main gearbox	see Page 204

17.1.5 Maintenance – Once after 500 round bales

Components	
Adjusting the scraper on the deflection shafts	see Page 211
Adjusting the scraper on the fixed deflection rolls	see Page 211

17.1.6 Maintenance – every 10 hours, at least daily

Checking oil level	
Main gearbox	see Page 204

Components	
Clean the machine	see Page 205
Check function of the brake system	
Cleaning bushing and drawbar eye	see Page 207
Check dosing units of the central chain lubrication system and clean if required	see Page 220

17.1.7 Maintenance – every 50 hours

Components	
Tighten screws/nuts on the machine	see Page 199
Tighten the screw connections on the drawbar	see Page 208
Retightening wheel nuts	see Page 203
Check tyre pressure	see Page 203
Drain condensation water out of the compressed air tanks of the compressed air brake	see Page 222

17.1.8 Maintenance – every 500 hours

Changing oil	
Main gearbox	see Page 204

17.1.9 Maintenance – Every 2 years

Components	
Have compressed-air tanks checked by KRONE service partner	
Have pneumatic brake cylinders serviced by KRONE service partner	

17.2 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 49*.
- Do not use graphite-containing lubricating greases.
- Do not mix different lubricating greases.

NOTICE

Environmental damage caused by consumables

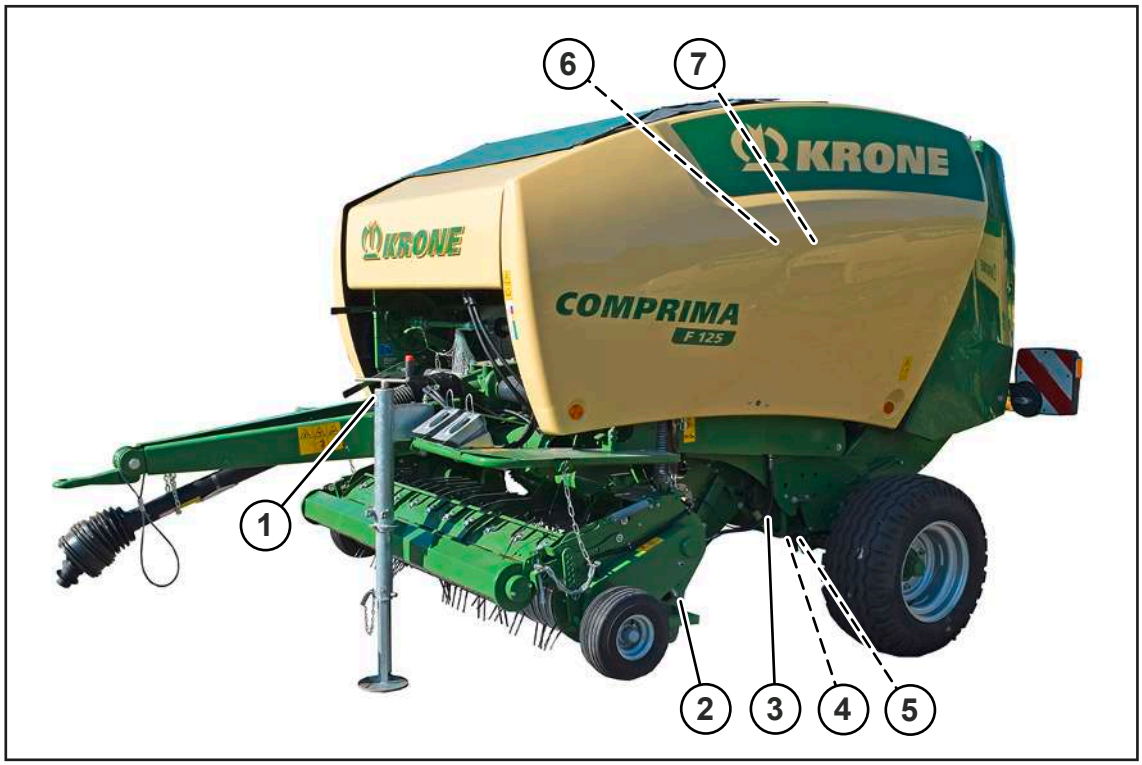
If consumables are not stored and disposed of properly, they may escape into the environment. As a result, the environment will be damaged, even by small quantities.

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

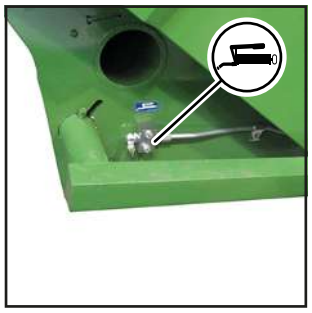
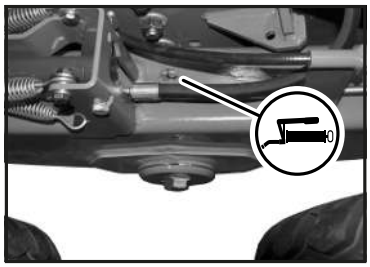
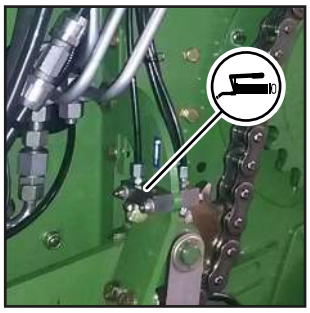
The information on maintenance intervals is based on average load of the machine. In case of an increased load and under extreme working conditions, the time periods must be reduced. The types of lubrication are marked by means of icons in the lubrication chart, refer to table.

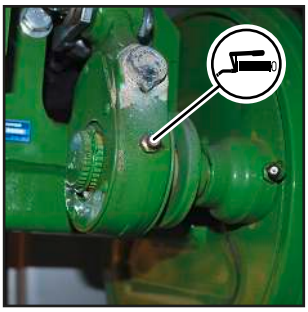
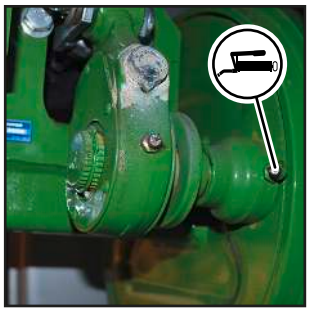
Type of lubrication	Lubricant	Comment
Grease 	Multi-purpose grease	▶ Apply two strokes of lubricating grease from the grease gun per grease nipple. ▶ Remove excess lubricating grease at the grease nipple.
Lubricating 	Multi-purpose grease	▶ Remove old lubricating grease. ▶ Apply a coat of new lubricating grease thinly with a brush. ▶ Remove excessive lubricating grease.

Left side of machine



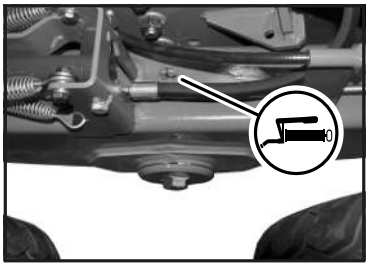
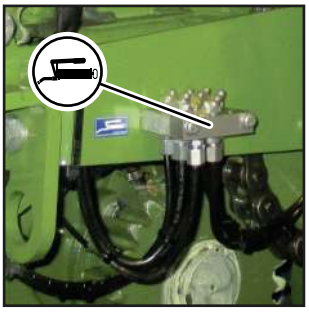
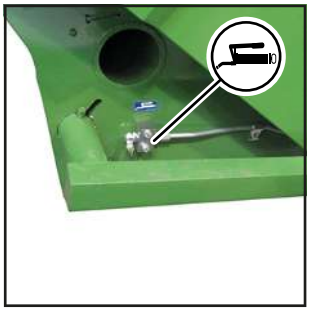
RPG000-029

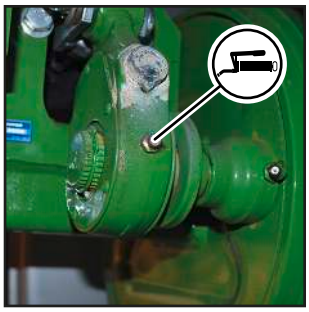
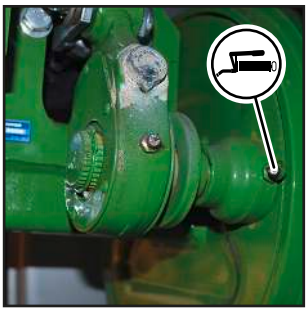
Every 20 operating hours		
(2) 	(3) For "Tandem axle" version“ 	(6) 
(7) 		

Every 50 operating hours		
(1)	(4)	(5)
		
		Use a different lubricating grease for this lubrication point, *see Page 49*.

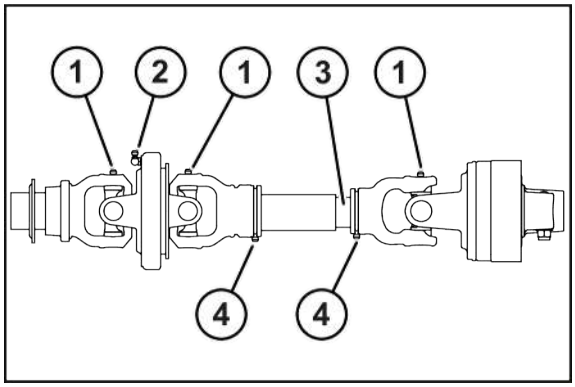
Right and rear side of machine

RPG000-030

Every 20 operating hours		
(3) For "Tandem axle" version“	(4)	(5)
		

Every 50 operating hours		
(1) 	(2)  Use a different lubricating grease for this lubrication point, *see Page 49*.	

17.3 Lubricating the universal shaft



RP000-176

✓ The machine has been shut down and secured, *see Page 27*.

- ▶ 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 48*.

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

Pos.	Lubricant quantity	Lubrication interval
(1)	18 g	50 hours
(2)	30 g	
(3)	20 g	
(4)	6 g	

17.4 Tightening torques

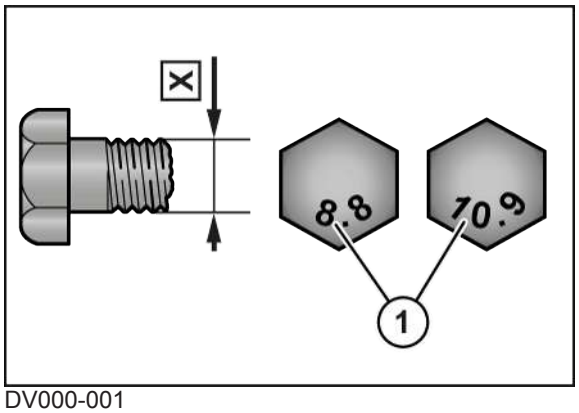
Deviating tightening torques

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.



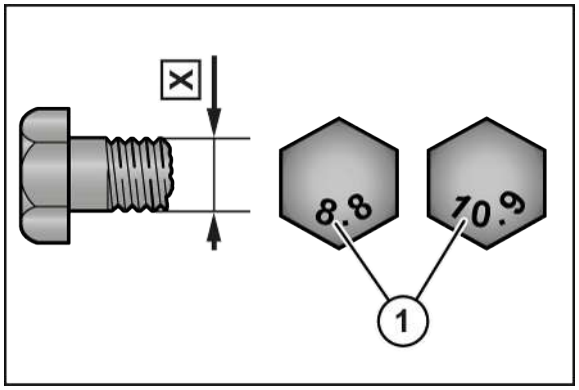
DV000-001

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

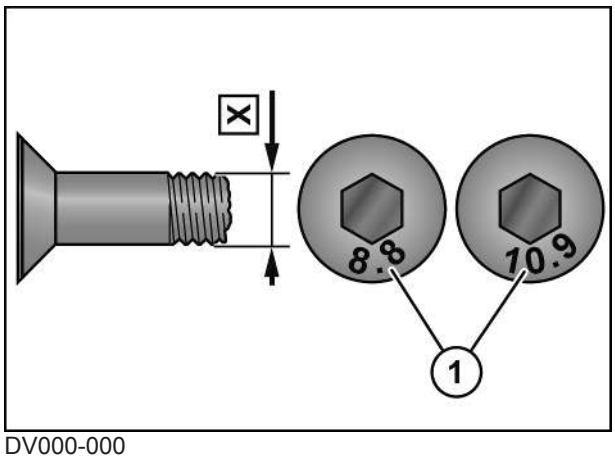
X Thread size 1 Strength class on screw head

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.

17.5 Checking/maintaining tyres

✓ The machine has been shut down and secured, *see Page 27*.

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 193*.

Checking/adapting the tyre pressure

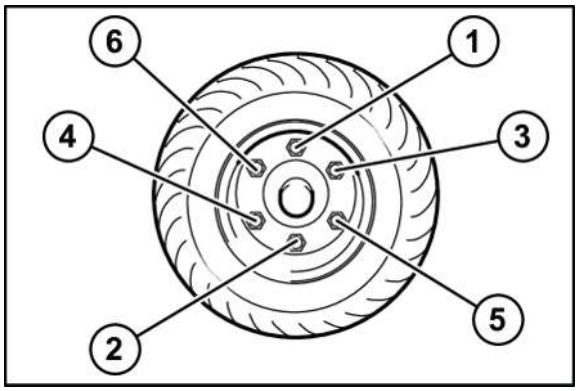
▶ Check the tyre pressure, *see Page 46*.

➡ 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 193*.

Retighten wheel nuts



DVG000-002

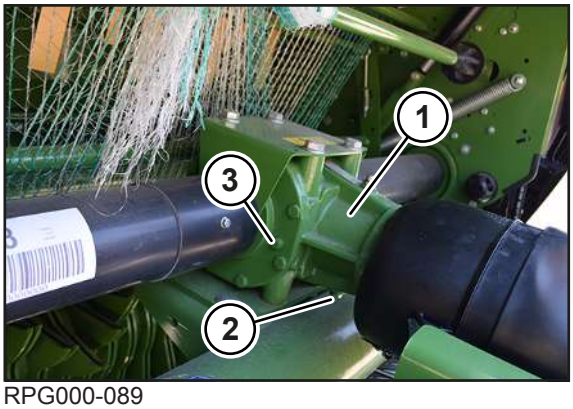
▶ Retighten the wheel nuts crosswise (as shown) with a torque wrench, tightening torque *see Page 203*.

Maintanance intervals, *see Page 193*.

Tightening torque: wheel nuts

Thread	Key size	Amount of bolts per hub	Maximum tightening torque	
			black	galvanised
M12x1.5	19 mm	4/5 units	95 Nm	95 Nm
M14x1.5	22 mm	5 units	125 Nm	125 Nm
M18x1.5	24 mm	6 units	290 Nm	320 Nm
M20x1.5	27 mm	8 units	380 Nm	420 Nm
M20x1.5	30 mm	8 units	380 Nm	420 Nm
M22x1.5	32 mm	8/10 units	510 Nm	560 Nm
M22x2	32 mm	10 units	460 Nm	505 Nm

17.6 Servicing the main gearbox



RPG000-089

The main gearbox (1) is located behind the drawbar in the front area of the machine. The locking screw of the inspection and filling hole (3) is located on the side of the main gearbox. The locking screw (2) for the oil drain is located on the underside of the main gearbox (1).

Maintenance intervals: *see Page 193*

Amount and type specifications of the oil: *see Page 48*

- ✓ The machine is horizontal on stable and level ground.
- ✓ The machine has been shut down and secured, *see Page 27*.
- ✓ The drawbar height has been set correctly, *see Page 52*.

Checking oil level

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 28*.

- ▶ Remove the locking screw from the inspection and filling hole (3).
  - ⇨ The oil must reach the inspection and filling hole (3).

If the oil reaches the inspection and filling hole (3):

- ▶ Screw the locking screw into the inspection and filling hole (3), tightening torque *see Page 202*.

If the oil does not reach the inspection and filling hole (3):

- ▶ Top up with fresh oil via the inspection and filling hole (3) up to the inspection and filling hole (3).
- ▶ Screw the locking screw into the inspection and filling hole (3), tightening torque *see Page 202*.

Changing the oil

- ✓ A suitable container is available for escaping oil.

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 28*.

- ▶ Remove the locking screw from the inspection and filling hole (3).
- ▶ Remove the locking screw (2) from the oil drain.
- ▶ Collect the oil in a container.

- ▶ Screw in the locking screw (2), *see Page 202*.
- ▶ Pour in fresh oil via the inspection and filling hole (3) up to the inspection and filling hole (3).
- ▶ Screw the locking screw into the inspection and filling hole (3), tightening torque *see Page 202*.

17.7 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.

- ▶ Never direct the water jet of a high-pressure cleaner at bearings, electric/electronic components or safety labels.
- ▶ Replace missing, damaged and unrecognisable safety labels.

✓ The machine has been shut down and secured, *see Page 27*.

▶ After each use, clean the following areas on the machine:

- the complete area around the tying,
- the drive wheels and the upper compression roller in the front bale chamber.

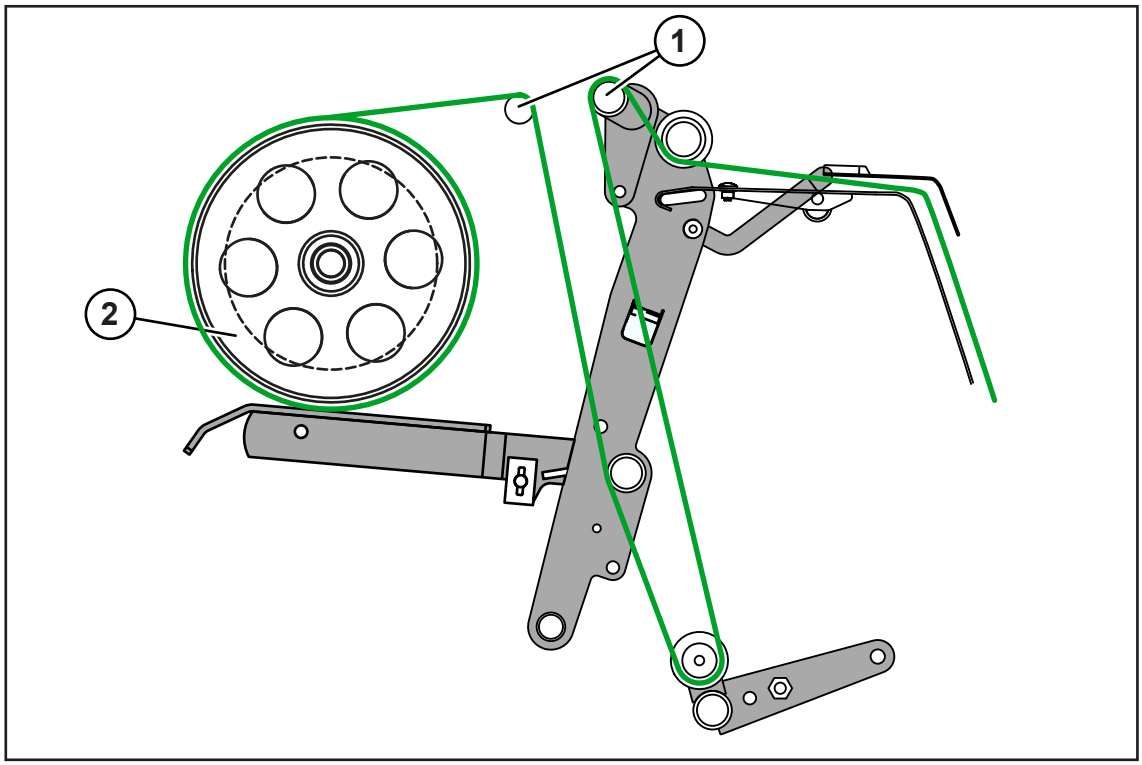
▶ Also after each use, clean all moving parts on the brake linkage and brake lever with compressed air, e.g. piston rod, brake lever and slack adjuster. This can prevent mechanical blockages.

▶ If required, repeat the cleaning several times a day.

17.8 Cleaning deflection pipes or conical tying roller

The maintenance intervals can be found in the maintenance table, *see Page 193*.

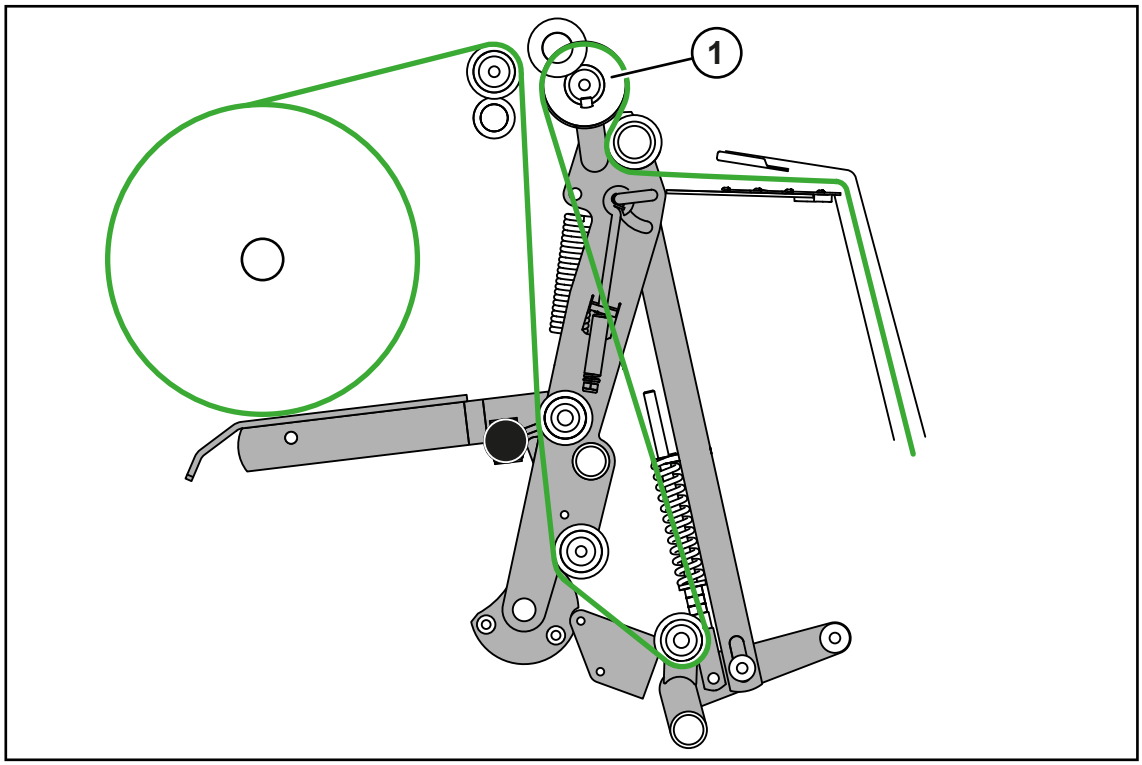
For version with "Net wrapping"



RP000-467

- Remove any corrosion from all fixed deflection pipes (1) and from the brake surface of the brake disc (2) in the tying unit.

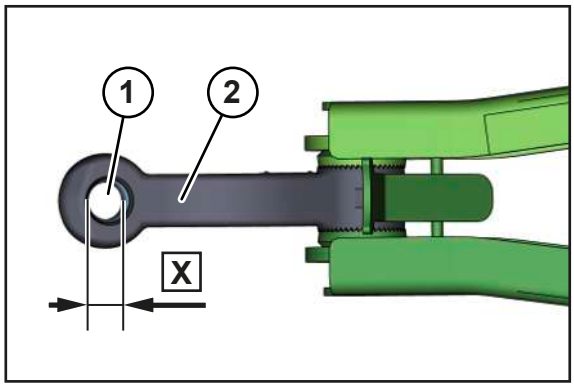
For the "Net and chamber film wrapping" version



RP000-468

- Check the conical roller (1) for any corrosion and remove the corrosion as required.
- Remove any corrosion from the brake surface of the brake disc (not shown here) on the wrapping material brake.

17.9 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.

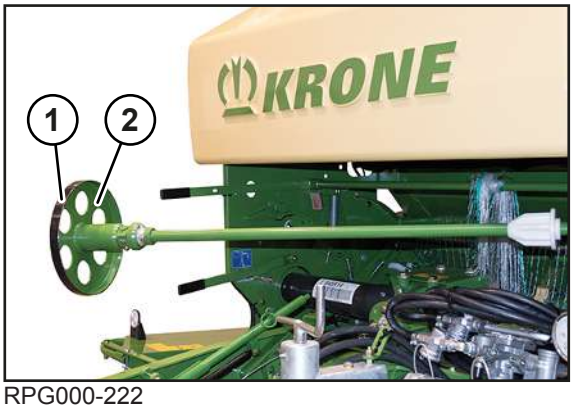
- To minimize wear, clean the bushing (1) and the drawbar eye (2) several times a day and coat with grease.

17.10 Cleaning drive chains

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

- Clean the drive chains with a high-pressure cleaner and leave to dry.
- Wet the cleaned and dried chains with engine oil.
- Start up the machine to distribute the engine oil on all contact surfaces.
- Shut down and safeguard the machine, *see Page 27*.
- Check the chains and sprocket wheels for wear.

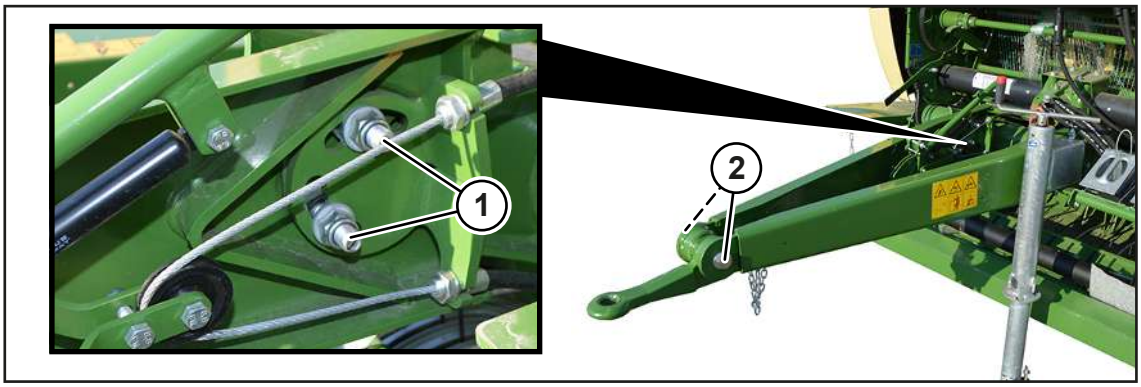
17.11 Protecting brake disc of the wrapping material brake from corrosion



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.

17.12 Checking the screw connections on the drawbar



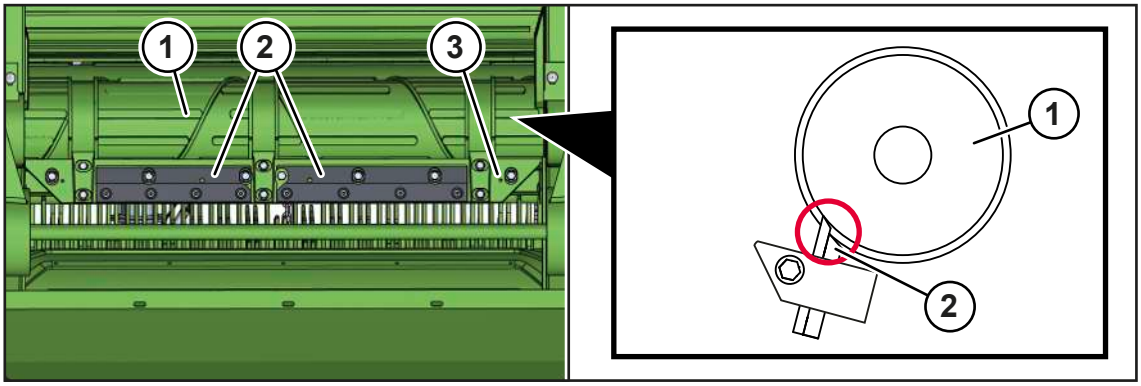
RPG000-088

- Check whether the screw connections (1) or (2) have been tightened to the correct tightening torque.
- Tighten the screw connections (1) on the drawbar to the tightening torque **210 Nm**.
- Tighten the screw connections (2) on the drawbar eye to the tightening torque **730 Nm**.

Maintenance interval, *see Page 193*.

17.13 Setting the scraper and stone deflector

17.13.1 Setting the scraper to the spiral roller



RPG000-249

The scraper (3) on the spiral roller must be in close contact with the spiral roller (1) so that the wrapping and tying material does not wrap around the spiral roller during the tying cycle. With open tailgate, the scraper (3) can be reached from the rear machine side.

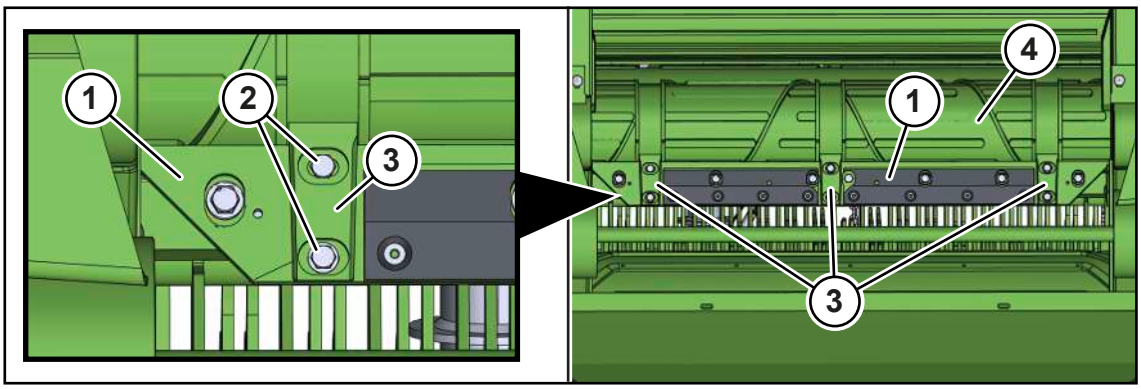
Also shown here and in the following is black plastic plating (2) which is present only for the version with net and chamber film wrapping.

✓ The tailgate is open and the tailgate is hydraulically locked, *see Page 81*.

▶ Ensure that the scraper (3) is in close contact with the spiral roller (1).

▶ If the scraper (3) is not very close to the spiral roller (1), set the scraper (3) as described below.

Loosening scraper reinforcer



RP000-302

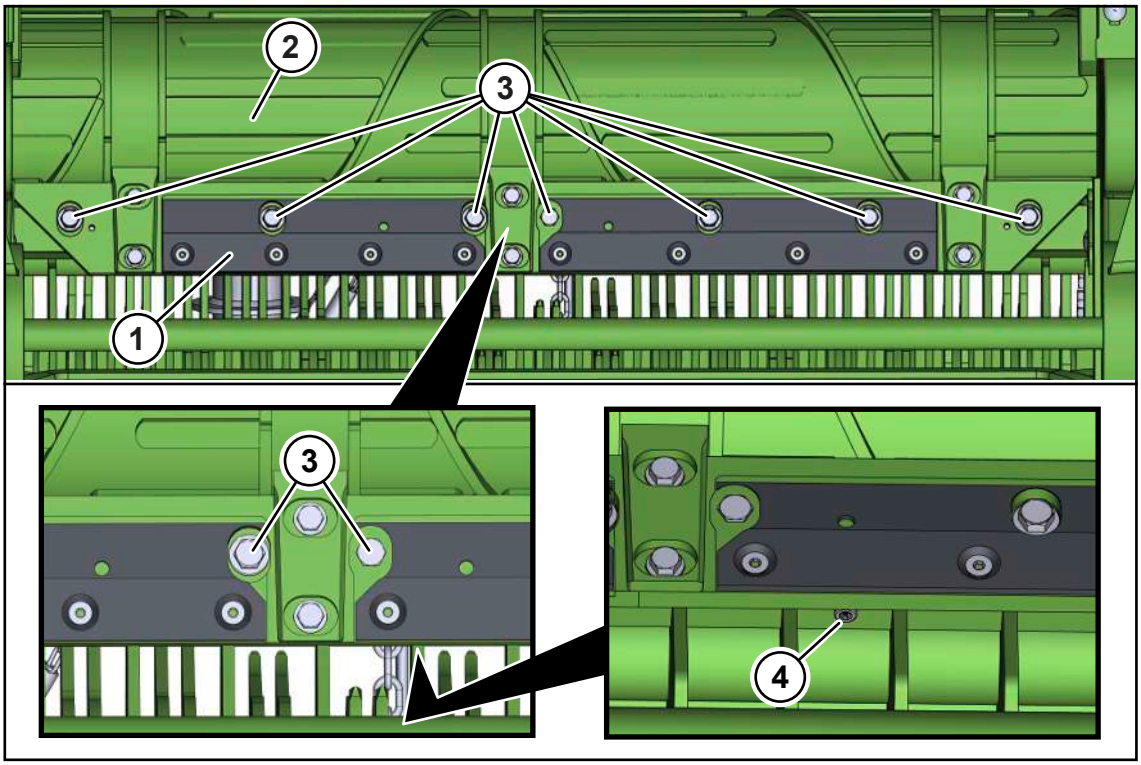
In the "Net and chamber film wrapping" version only, 3 additional scraper reinforcers (3) are mounted on the scraper rail (1). These scraper reinforcers (3) and the two-piece scraper rail (1) shall be in contact with the spiral roller (4).

To set the scraper rail (1), loosen the scraper reinforcers (3):

▶ Loosen the screw connections (2).

➡ The scraper reinforcers (3) can be moved slightly up or down in the oblong hole.

Setting the scraper rail



RPG000-248

To adjust the scraper rail (1), the 7 screw connections (3) must be loosened first. Next, use the setting screws (4) to move the scraper rail closer to the spiral roller.

For "Net wrapping" version: The scraper rail (1) is equipped with 2 setting screws (4) on a one-piece scraper rail.

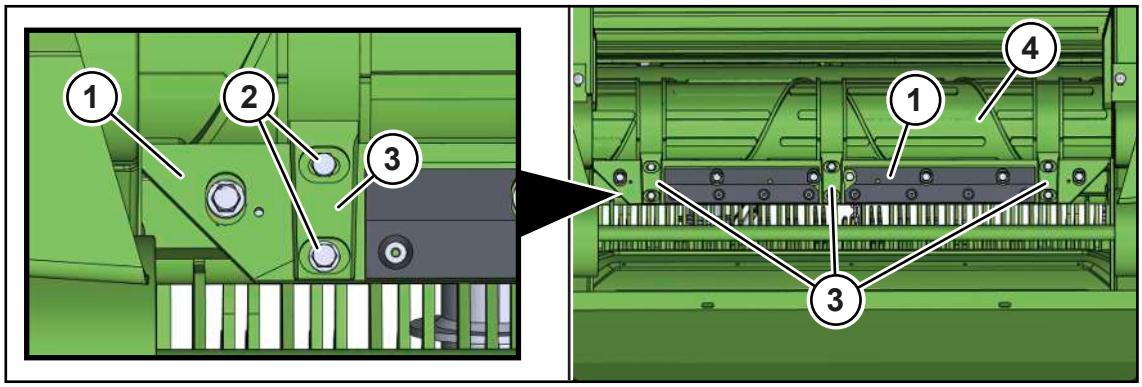
For "Net and chamber film wrapping" version: The scraper rail (1) is equipped with 4 setting screws (4) on a two-piece scraper rail (shown here).

- ▶ Loosen all 7 screws (3) at the scraper rail (1).
- ▶ Loosen the lock nuts of the setting screws (4).
- ▶ Rotate the setting screws (4) clockwise to move the scraper rail (1) closer to the spiral roller (2).
  - ⇨ The scraper rail (1) approaches the spiral roller (2).

When the scraper rail is in contact with the spiral roller:

- ▶ Tighten the screw connections (3).
- ▶ Tighten the lock nuts of the setting screws (4).

Setting and tightening the scraper reinforcer



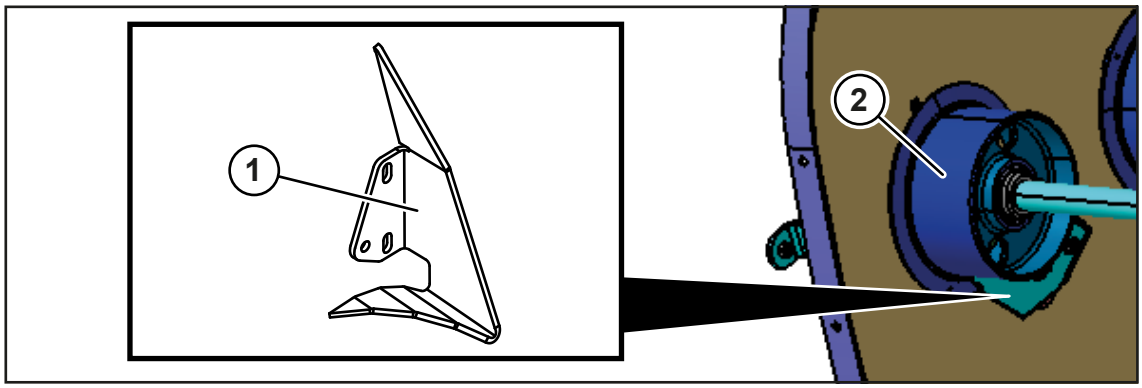
RP000-302

In version "Net and chamber film wrapping" only, 3 additional scraper reinforcers (3) are mounted at the scraper rail (1). These scraper reinforcers have to be adjusted and tightened after the scraper rail has been adjusted.

- ▶ Place the scraper reinforcer (3) on the spiral roller (4).
- ▶ Tighten the screw connections (2), tightening torque, *see Page 199*.

17.13.2 Adjusting the scraper on the deflection shafts

All scrapers on the deflection shafts in the bale chamber must be regularly checked and adjusted.



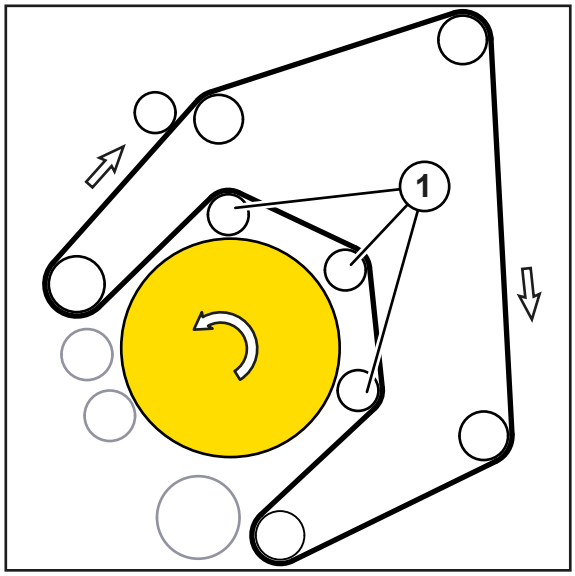
RPG000-232

Proceed as follows for all scrapers:

- ▶ Set the scraper (1) so that
- the outside distance (to the side wall) between deflection roll (2) and scraper (1) is **0-1 mm** and
- the inside distance (to the bale chamber) between deflection roll (2) and scraper (1) is **1-2 mm** .

17.13.3 Adjusting the scraper on the fixed deflection rolls

All scrapers on the fixed deflection rolls must be regularly checked and adjusted. The following image shows the position of the fixed deflection rolls (1) in the bale chamber on which scrapers are mounted.



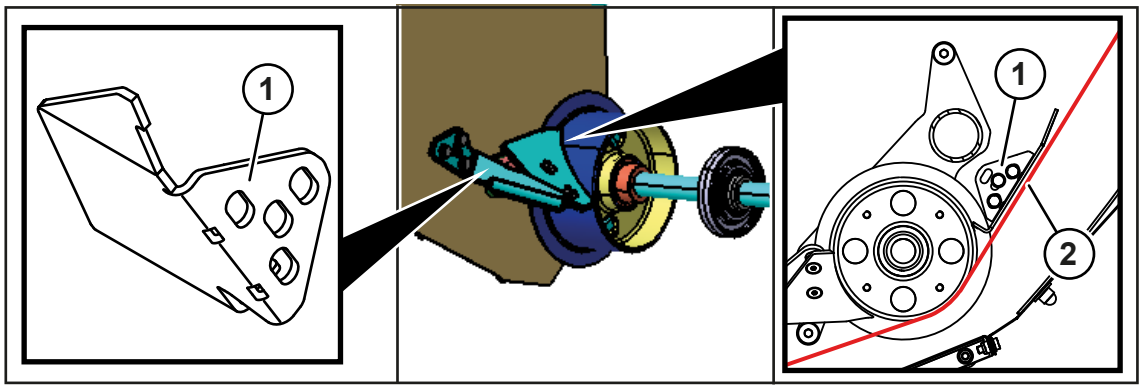
RP000-311

Proceed as follows for all scrapers:

- Adjust the scraper on the deflection rolls (1) so that the distance between deflection roll (1) and scraper is **0-0.5 mm**.

17.13.4 Setting the stone deflectors

All stone deflectors on the deflection shafts must be regularly checked and adjusted.



RP000-312

Proceed as follows on all stone deflectors:

- Set the stone deflector (1) parallel and at a distance of **5-10 mm** from the bale formation conveyor (2).

17.14 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.

17.15 Adjust drive chains

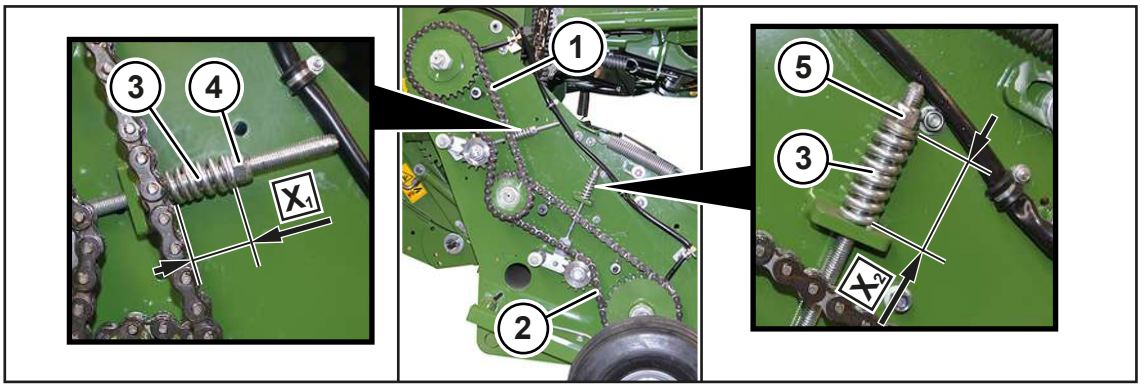
⚠ WARNING

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 20*.
- Before working on any drive chains, shut down and safeguard the machine, *see Page 27*.

17.15.1 Drive chain of the pick-up



RP000-160

The drive chain of the pick-up main drive (1) and the drive chain of the pick-up (2) are located on the pick-up on the right side of the machine behind the pick-up guard. The drive chains (1, 2) are tensioned with the tension springs (3).

The dimension X_1 and X_2 of the tensioned spring length must be **X_1=60 mm** and **X_2=60 mm**.

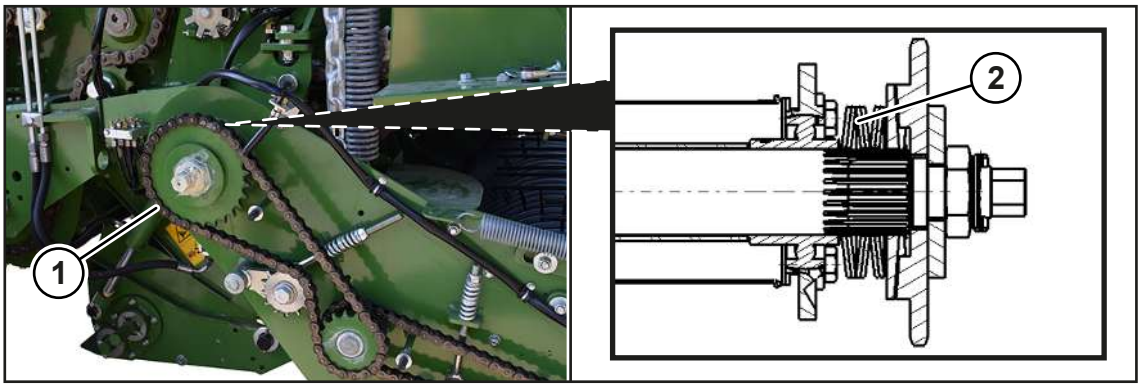
Setting the drive chain

- ✓ The machine has been shut down and secured, *see Page 27*.
- ✓ The pick-up is lowered to working position, *see Page 85*.
- ✓ The pick-up guard on the right side of the machine has been removed.
- ✓ The drive chains (1) and (2) and the pick-up guard have been cleaned.
- ▶ To increase the chain tension, turn nut (4) and (5) clockwise until the dimension **X_1=60 mm** and **X_2=60 mm** has been set.
- ▶ To reduce the chain tension, turn nut (4) and (5) anti-clockwise until the dimension **X_1=60 mm** and **X_2=60 mm** has been set.

INFO

The drive chain is supplied with oil via the central chain lubrication system, *see Page 100*.

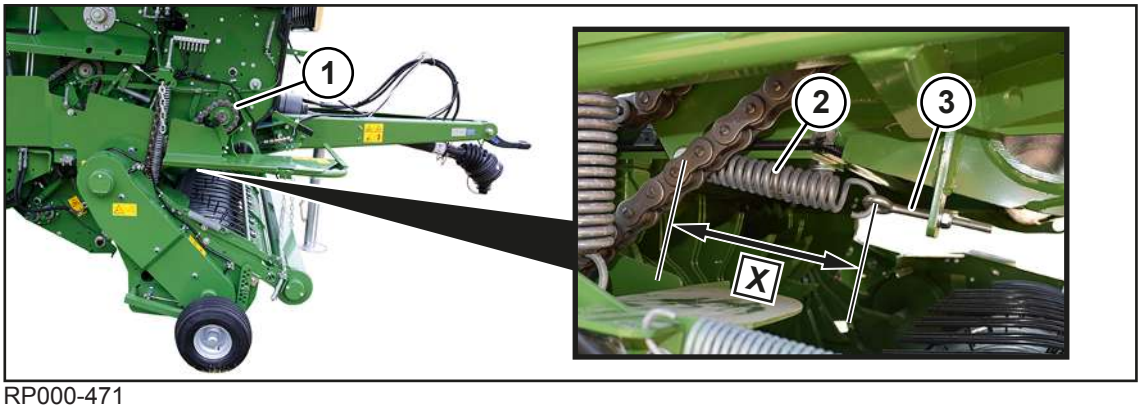
Spring discs of the pick-up drive



RP000-472

- After repairing the pick-up drive (1), ensure that the disc springs (2) are arranged as shown.

17.15.2 Drive chain of the intake



RP000-471

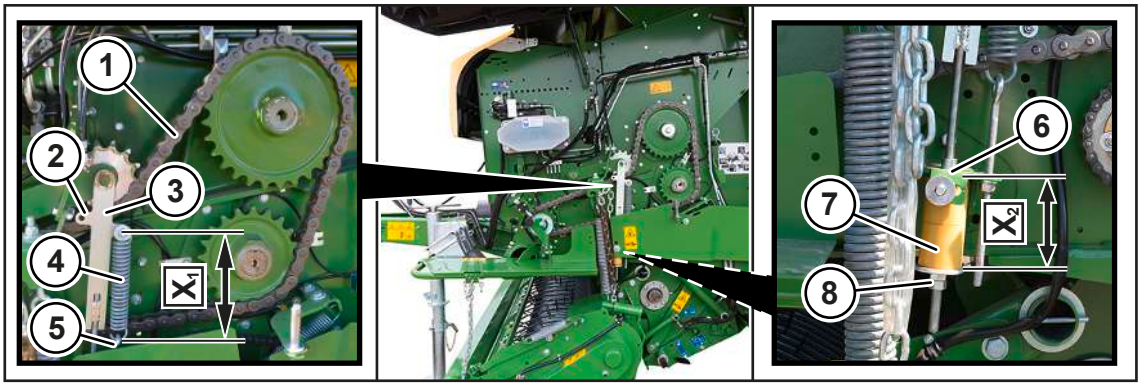
The drive chain (1) of the intake (starter rollers/feed roller) is located on the right side of the machine.

The dimension X of the tensioned spring length (2) must be **X=200 mm**.

- ✓ The machine has been shut down and secured, *see Page 27*.
- ✓ The right side hood is open.
- To tension the drive chain (1), use the nut on the eyelet bolt (3) to set the dimension **X=200 mm**.

> ***INFO***
>
> The drive chain is supplied with oil via the central chain lubrication system, *see Page 100*.

17.15.3 Drive chain of the bale formation conveyor



RPG000-132

The drive chain (1) of the bale formation conveyor drive and the upper compression roller are located on the left side of the machine.

The dimension X_1 of the tensioned spring length (4) must be **X_1=220 mm**.

The dimension X_2 of the stop rubber (7) must be within a range of **X_2=105-110 mm**.

Setting drive chain

✓ The machine has been shut down and secured, *see Page 27*.

✓ The left side hood is open.

▶ To tension the drive chain (1), use the nut on the eyelet bolt (5) to set the dimension **X_1=220 mm**.

If the spring tension cannot be set to the dimension X_1 in this way:

▶ Remove the support (3).

▶ Turn and mount the support (3) vertically by 180°.

▶ Mount the spring (4) on the borehole (2).

▶ Use the nut on the eyelet bolt (5) to set the dimension **X_1=220 mm**.

Setting the stop

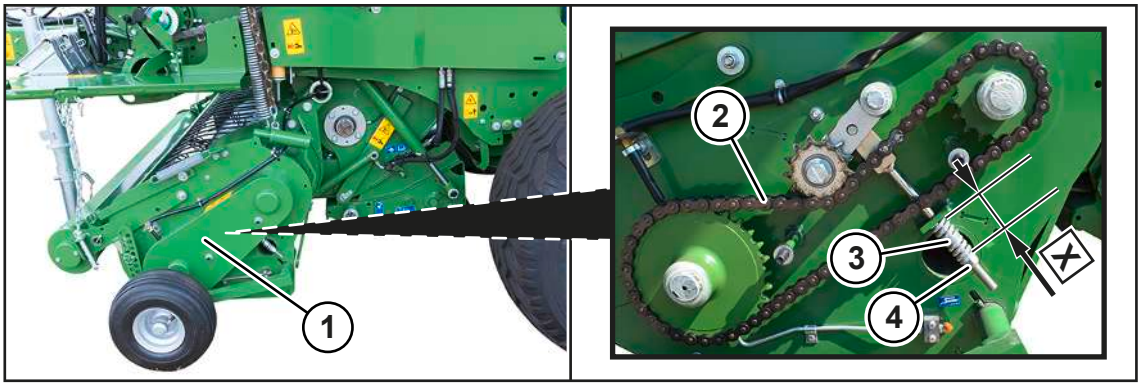
▶ To set the stop, use the nut (8) to set the dimension **X_1=105-110 mm**.

▶ Ensure that the support (6) and stop rubber (7) do not touch each other and that there is a slight gap.

INFO

The drive chain is supplied with oil via the central chain lubrication system, *see Page 100*.

17.15.4 Drive chain of the auger conveyor



RP000-473

The drive chain (2) of the left auger conveyor is on the left side of the machine behind the pick-up guard (1).

The dimension X of the tensioned spring length (3) must be **X=60 mm**.

✓ The machine has been shut down and secured, *see Page 27*.

✓ The pick-up guard (1) has been removed.

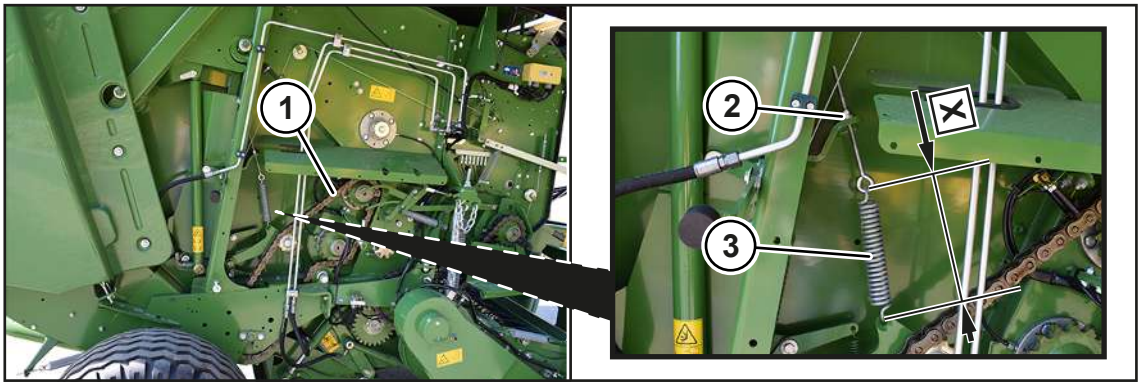
✓ The drive chain (2) and the pick-up guard have been cleaned.

▶ To tension the drive chain (2), use the nut (4) to set the dimension **X=60 mm**.

INFO

The drive chain is supplied with oil via the central chain lubrication system, *see Page 100*.

17.15.5 Drive chain of the starter roller and the lower compression roller



RP000-474

The drive chain (1) of the starter roller and lower compression roller is located on the right side of the machine.

The dimension X of the tensioned spring length (3) must be **X=220 mm**.

✓ The machine has been shut down and secured, *see Page 27*.

✓ The right side hood is open.

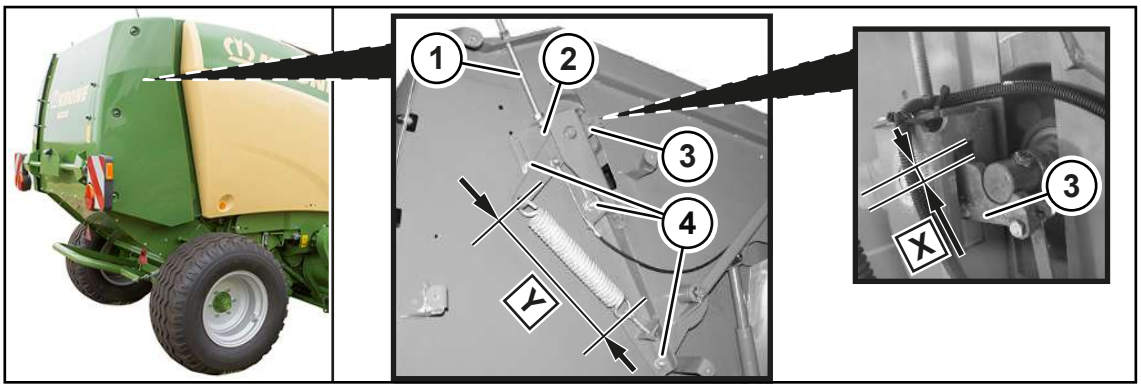
▶ To tension the drive chain (1), use the nut (2) to set the dimension **X=220 mm**.

INFO

The drive chain is supplied with oil via the central chain lubrication system, *see Page 100*.

17.16 Checking and setting the bale formation conveyor tension

Checking and setting the bale formation conveyor tension



RP000-401

The following values apply for the bale formation conveyor tension in a tensioned and untensioned state.

Bale formation conveyor tension	Spring tension – dimension Y
untensioned	460 mm
tensioned	490–500 mm

The bale formation conveyor can be retensioned via the setting screw (1). The bale formation conveyor is tensioned correctly when the dimension between the clamping lever (3) and support (2) is **X=10 mm**.

This dimension **X=10 mm** is only a guide for setting. **X must be 5 mm** after the trial run.

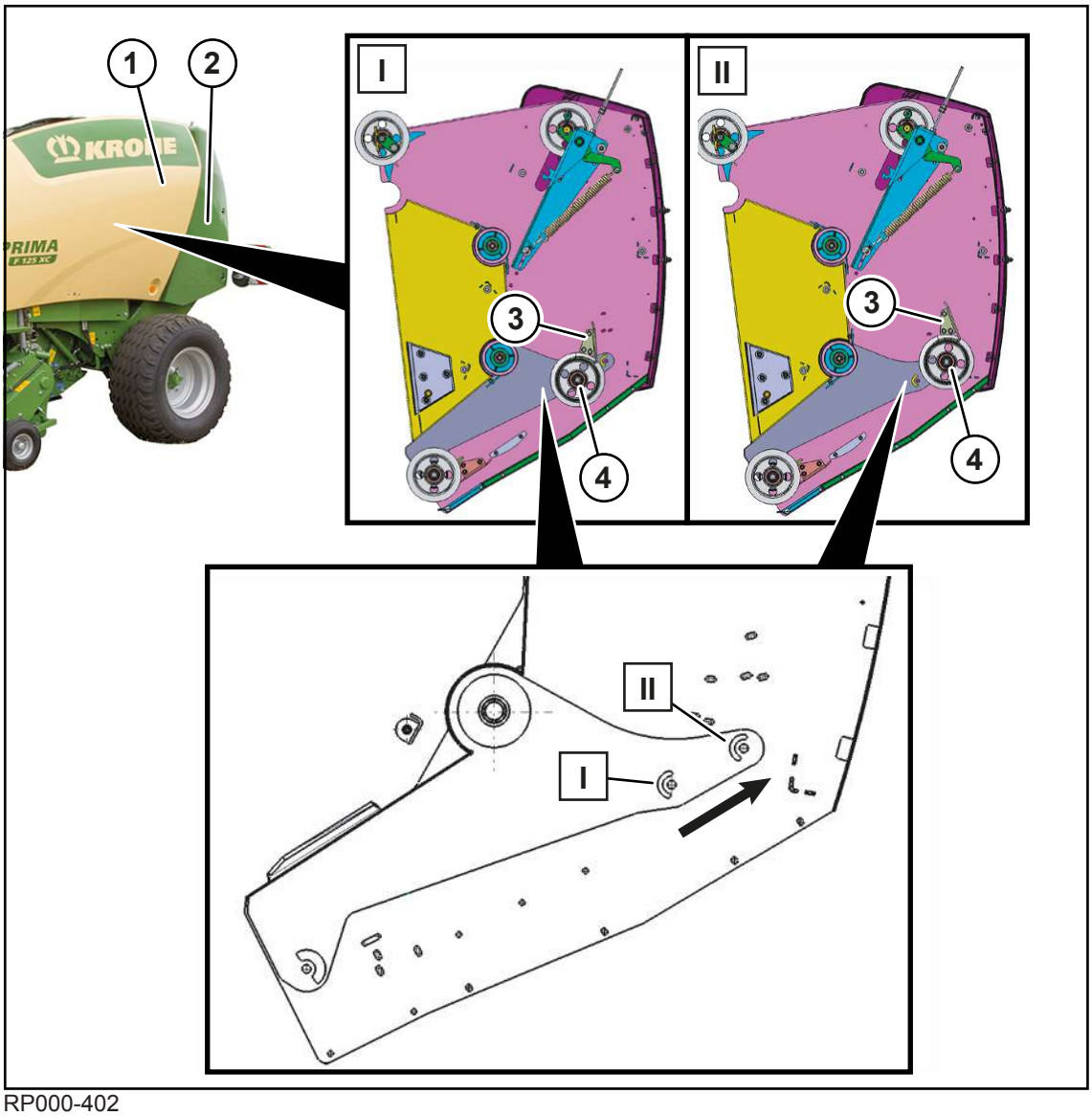
If X is not **10 mm**, make the following setting on the right and left sides of the machine in the same way:

- ✓ The rear side guard is dismounted.
- ✓ The bale formation conveyor is tensioned, even if not correctly.
- ✓ The machine has been shut down and secured, *see Page 27*.
- ▶ Loosen the screws (4).
- ▶ Pull up the support (2) using the setting screw (1) until the dimension **X=10 mm** is reached. Make sure that setting of the right and left side of the machine is done equally and alternatively in stages.
  - ⇨ After a test run, X is reduced to **5 mm**.
- ▶ Tighten the screws (4).
- ▶ Check whether the spring dimension is **Y=490–500 mm**.

If the dimension **X=10 mm** cannot be achieved in this way:

- ▶ Move the screws (4) to the other boreholes located to the previous boreholes.

Relocating the deflection roll/shaft



RP000-402

If the bale formation conveyor cannot be tensioned sufficiently by means of the above-described method, or if the bale formation conveyor tension decreases, you can relocate the deflection roll/shaft (4) to increase the tension path.

Position [I]: Deflection roll/shaft (4) and scraper (3) in original position

Position [II]: Deflection roll/shaft (4) and scraper (3) in new position for tensioning the bale formation conveyor

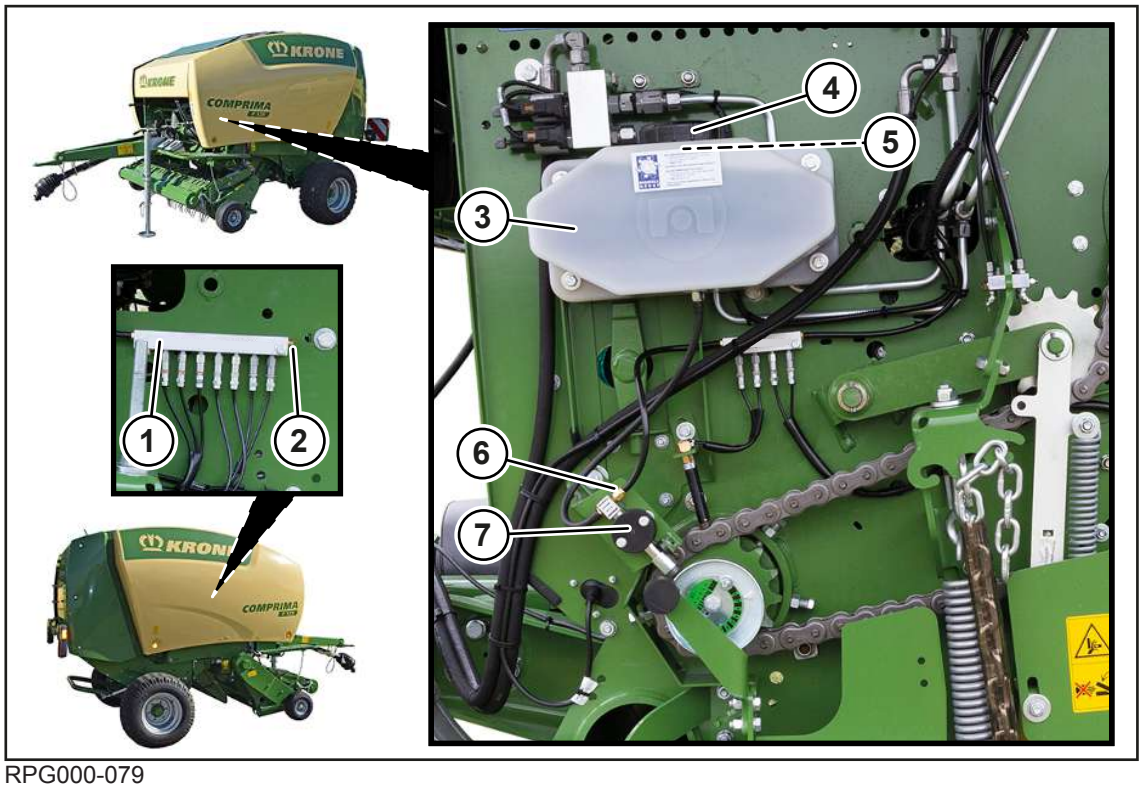
- Unlock the side hood (1) on the left side of the machine and fold it up.
- Dismount the side guard (2) on the left side of the machine.
- Remove the scraper (3) from position [I] and mount it in position [II].
- Unscrew the threaded pin to remove the adjusting ring at the screw connection of the deflection shaft (4).
- Remove the screw connection of the deflection shaft (4).
- Remove the deflection roll/shaft (4) from position [I] and mount it in position [II].

- ▶ Push the adjusting ring onto the deflection shaft (4) and secure with the threaded pin.
- ▶ Mount the side guard (2).
- ▶ Close the side hood (1).

17.17 Servicing chain lubrication unit

NOTICE
Damage to the machine due to the use of incorrect and contaminated lubricants Unauthorised or contaminated lubricants in the central chain lubrication unit will cause malfunctions in the central chain lubrication unit and damage the bearing positions. ▶ When working on the central chain lubrication unit, use clean and suitable tools. ▶ Use authorised lubricants only. ▶ Ensure that dirt or dirty lubricant cannot get into the central chain lubrication unit.

17.17.1 Checking oil level, topping up oil and changing filter



RPG000-079

✓ The machine has been shut down and secured, *see Page 27*.

Checking oil level and topping up oil

- ▶ Read off the oil level on the reservoir (3).
- ▶ If the oil level is too low, top up the oil via the opening (4), *see Page 49*.

Bleeding central chain lubrication system

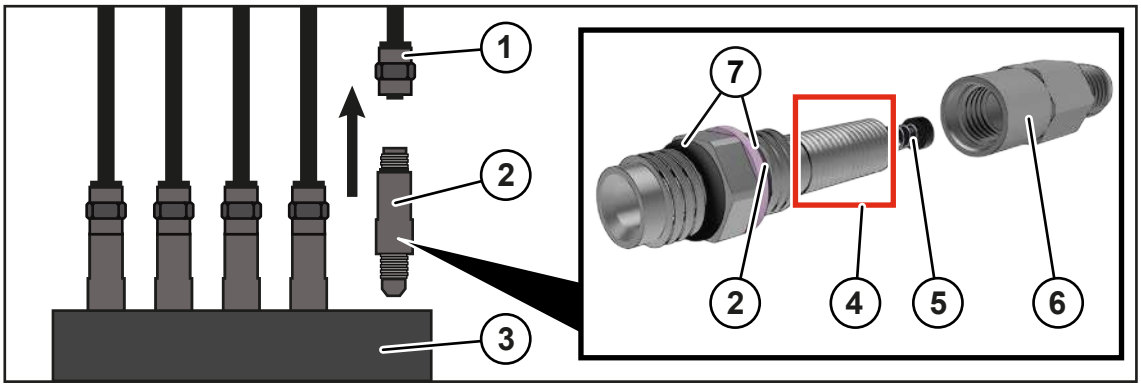
If the reservoir (3) is empty, the central chain lubrication system must be bled:

- On the reservoir (3) top up the oil via the opening (4), *see Page 49*.
- Remove the hose from the connection (6) of the pump (7) and wait until oil runs out.
- When oil has run out, connect the hose to the pump (7).
- Open the bleed screw (2).
- Operate the pump (7) manually until the oil flowing out of the distributor block (1) is without air bubbles.
- Close the bleed screw (2).

Changing the filter

- ✓ The reservoir (3) is mostly empty.
- Remove the cover (4).
- Remove the filter (5) from the reservoir (3).
- Mount a new filter (5).
- Mount the cover (4).
- Fill the reservoir (3) with oil, *see Page 219*.

17.17.2 Cleaning the dosing units



RP000-231

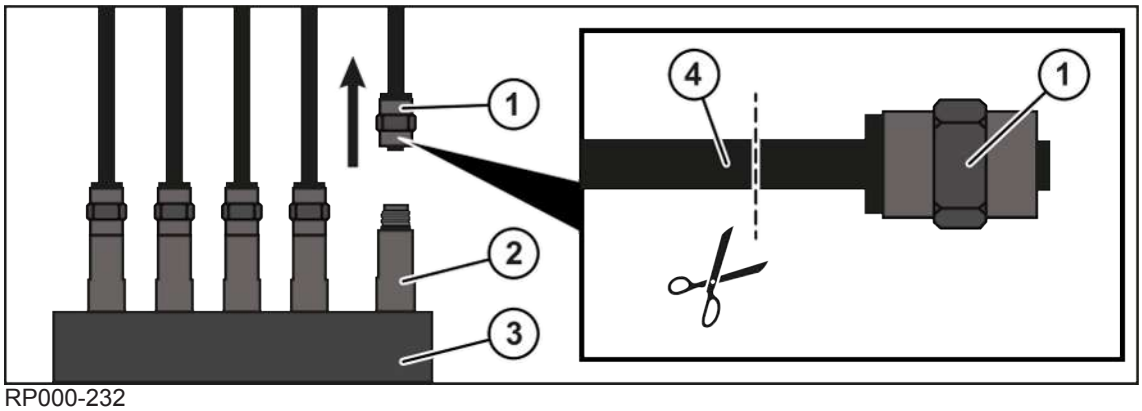
If individual dosing units (2) on the central chain lubrication system are blocked, clean these dosing units and the surrounding area, see also Maintenance table, *see Page 193*.

The distributor block (3) with the dosing units (2) of the central chain lubrication system are located on the right and left sides of the machine behind the front side hood.

- ✓ The machine has been shut down and secured, *see Page 27*.
- ✓ The front side hood is open.
- Unscrew the cap nut (1) from the dosing unit (2).
- Unscrew the dosing unit (2) from the distributor block (3).
- Unscrew the cap (6) from the dosing unit (2).
- Carefully remove the spring and the shut-off valve (5). Ensure that the spring is not damaged.
- Clean all components with a suitable cleaning agent. In particular, clean the area (4) which is presumably the dirtiest.
- Ensure that the rubber seals (7) are not cleaned with a strong cleaning agent.

- ▶ Mount the spring and the shut-off valve (5).
- ▶ Screw on the cap (6) hand-tight.
- ▶ Insert the dosing unit (2) into the distributor block (3) and screw on hand-tight.
- ▶ Screw the cap nut (1) onto the dosing unit (2) and screw on hand-tight.

17.17.3 Replacing the hose on the dosing unit



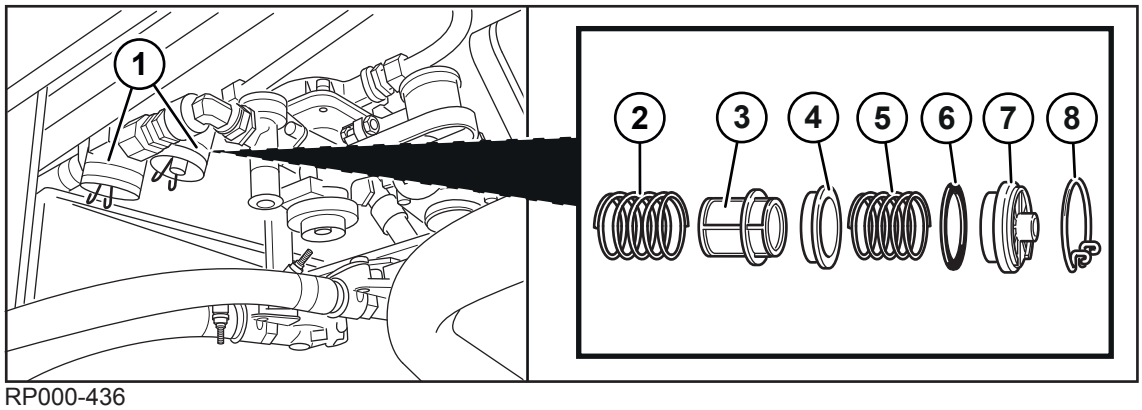
RP000-232

If hoses (4) on the dosing units (2) are damaged, they must be replaced.

- ✓ The machine has been shut down and secured, *see Page 27*.
- ✓ The front side hood is open.
- ▶ Unscrew the cap nut (1) from the dosing unit (2).
- ▶ Cut through the hose (4) above the cap nut (1).
  - ⇨ The hose (4) is shortened with each cut. Therefore, do not cut any further than the piece which is damaged.
- ▶ Pull the defective hose (4) out of the cap nut (1) and dispose of.
- ▶ Screw the cap nut (1) onto the dosing unit (2) hand-tight.
- ▶ Insert the new end of the hose (4). Ensure that the hose (4) has been completely inserted into the cap nut (1).

17.18 Servicing compressed air brake (for version with "Compressed air brake")

17.18.1 Cleaning air filter



RP000-436

1 Air filter complete
2 Spring
3 Filter element
4 Spacer
5 Spring
6 Seal ring
7 Cover cap
8 Clasp locking ring

The air filters (1) clean the compressed air and guard the compressed air brake from malfunctions. The compressed air brake remains functional in both directions of flow even when a filter element (3) is blocked.

Removing filter element

✓ The machine has been shut down and secured, *see Page 27*.
▶ Remove the clasp locking ring (8).
▶ Take out the cover cap (7).
▶ Take out the seal ring (6).
▶ Take out the spring (5).
▶ Take out the spacer (4).
▶ Take out the filter element (3) with the spring (2).

Cleaning air filter

✓ The filter element has been removed, *see Page 222*.
▶ Blow out the intrior of the filter housing, the filter element and the remaining components with compressed air.
▶ In the case of stubborn dirt, clean the components with water.

Installing filter element

✓ The machine is shut down and safeguarded, *see Page 27*.
▶ Insert the filter element (3) with the spring (2).
▶ Insert the spacer (4).
▶ Insert the spring (5).
▶ Insert the seal ring (6).
▶ Insert the cover cap (7).
▶ Mount the clasp locking ring (8).

17.18.2 Drain condensation water from the compressed air tank

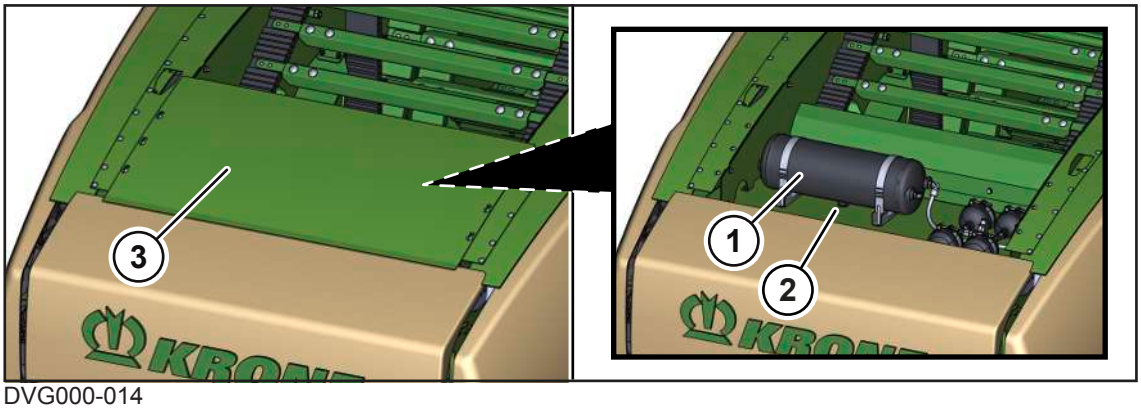
⚠ *WARNING*

Risk of injury from corroded or damaged compressed air reservoirs

Damaged or corroded compressed air reservoirs may burst and cause serious injuries.

▶ Observe the inspection intervals according to maintenance table, *see Page 193*.
▶ Have damaged or corroded compressed air reservoirs replaced immediately by a specialist workshop.

NOTICE
Damage to compressed air reservoir caused by water in the compressor unit Water in the compressor unit leads to corrosion which damages the compressed air reservoir. ▶ Check and clean drain valve according to maintenance table,*see Page 193*. ▶ Immediately replace a defective drain valve.



DVG000-014

The compressed-air reservoir stores the compressed air that is pumped by the compressor.

Condensation water may settle in the compressed air reservoir (1) during operation. The compressed-air reservoir (1) must be emptied regularly, *see Page 193*.

The drain valve (2) is on the underside of the compressed air reservoir (1).

▶ Shut down and safeguard the machine, *see Page 27*.

▶ Dismount the guard (3).

WARNING! Risk of eye injury due to spurting condensation water! Wear suitable protective goggles.

✓ A suitable container is available for escaping condensation water.

▶ Open the drain valve (2).

➡ Allow compressed air and condensation water to escape out of the compressed-air tank (1).

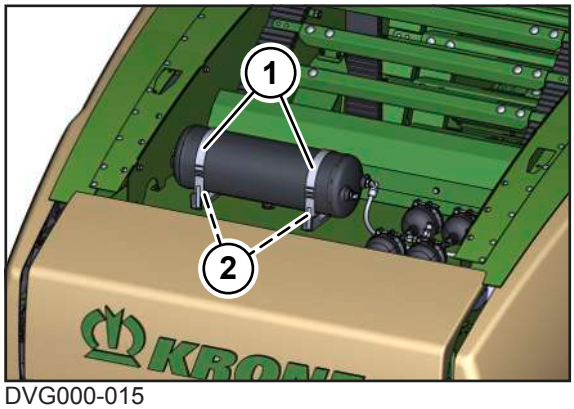
▶ Visually inspect the drain valve (2) to ensure that it is not defective or soiled.

➡ If the drain valve (2) is defective and is no longer sealed, immediately have the drain valve (2) replaced by a KRONE service partner.

➡ If the drain valve (2) is soiled, clean the drain valve (2).

17.18.3 Retighten tensioning straps at the compressed air tank

For an overview of the tightening torques, *see Page 199*.



DVG000-015

- Shut down and safeguard the machine, *see Page 27*.
- Check that the tensioning straps (1) are firmly attached.

If the compressed-air tank cannot be turned by hand, the tensioning straps (1) have been correctly set.

If the compressed-air tank can be turned by hand, the tensioning straps (1) must be retensioned.

- To tension the tensioning straps (1), tighten the nuts (2).

17.19 Servicing the hydraulic system

⚠ *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.

17.19.1 Checking hydraulic hoses

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.

18 Malfunction, 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 15*.

⚠ 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 27*.

18.1 Disturbances at the pick-up or during picking up of crops

Malfunction: The pick-up cannot be lowered.

Possible cause	Remedy
There was no switchover to pick-up on the terminal.	▶ Pre-select pick-up on the terminal by pressing the  key.
The hydraulic hose has not been inserted in the tractor.	▶ Correctly connect the hydraulic hose for the pick-up, *see Page 60*.
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 86*.

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 tractor driver is driving too fast.	▶ Reduce the driving speed. ▶ Slow down at the beginning of the baling process until the picked up crops roll into the bale chamber.
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 52*.
The crop press roller unit has been set too low.	▶ Set the crop press roller unit higher, *see Page 87*.

To remove the crop blockages,see Page 98.

Malfunction: Short crops are not correctly pulled in.

Possible cause	Remedy
The machine is hooked in too low at the front.	▶ Check the setting of the drawbar. ▶ If required, have the drawbar height adjusted by the KRONE service partner, see Page 52.

18.2 Disturbances during or after the baling process

Malfunction: The bale formation conveyor is rotating slower than it should. Slippage is occurring.

Possible cause	Remedy
The baling pressure is too high.	▶ Reduce the baling pressure, see Page 181.
The rotational speed is too high.	▶ Reduce the rotatonal speed.
The sensor B01 "Speed of bale chamber" is defective.	▶ Check the sensor and cabling for damage, see Page 234.

Malfunction: The direction display during the baling process reacts too sensitively.

Possible cause	Remedy
The sensitivity of the direction display has been set too high on the terminal.	▶ Set the sensitivity of the direction display on the terminal, see Page 150.

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 76. ▶ Do not drive too far to the side.
The baling pressure is too high.	▶ Reduce the baling pressure, see Page 181.

Malfunction: The tailgate cannot be completely closed.

Possible cause	Remedy
The stop cock for the tailgate is closed.	▶ Open the stop cock, see Page 81.
The springs on the tailgate lock have been set too weak.	▶ Set the tailgate lock, see Page 235.

Malfunction: The tailgate cannot be opened.

Possible cause	Remedy
The hydraulic hose line for "Opening/closing tailgate" has not been correctly connected.	▶ Connect the hydraulic hose line for "Opening/closing tailgate", see Page 60.

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 76*.
The tractor with machine was driven too quickly at the end of the baling process.	▶ Slow down at the end of the baling process.
Net wrapping: The number of net layers is too low.	▶ Increase the number of net layers via the terminal, *see Page 149*.
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 *.

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 76*.
The number of layers of wrapping material is too low.	▶ Increase the number of layers. Net wrapping: *see Page 149*. Chamber film wrapping: *see Page 149*
The wrapping material brake has been set too forcefully.	▶ Adjust the wrapping material brake, *see Page 185*.

18.3 Disturbances at the tying unit or during the tying cycle

Malfunction: The wrapping material (net or film) stops when tying is activated. The wrapping material tears after tying starts or during the tying process.

With this malfunction an error message is displayed on the terminal.

CAUTION! Risk of injury on sharp parts! Always wear suitable protective gloves when you remove contamination at the cutting unit.

Possible cause	Remedy
The wrapping material brake has been set too forcefully.	▶ Check and adjust the wrapping material brake, *see Page 185*. ▶ Check whether the claws on the brake disc are functional and whether, as a result, the cardboard tube of the net roll is held properly in place.
The cutting unit has fallen into the net.	▶ Remove deposits from the cutting unit. ▶ Check the setting of the cutting unit. ▶ Check whether the cutting unit is engaged/clamped during the feed process.
The cutting unit is not engaged.	
The cutting unit has been set too deep.	
The rotational speed is too high.	▶ Check the rotational speed. It must not be higher than 540 rpm.

Malfunction: The wrapping material (net or film) is not transported directly after tying starts.

With this malfunction an error message is displayed on the terminal.

Possible cause	Remedy
The wrapping material roll is empty.	▶ Change the wrapping material roll. For "Net wrapping" version: *see Page 90*. For "Net and film wrapping" version *see Page 93*.
The wrapping material roll has the wrong dimensions.	▶ Only use wrapping material rolls with the prescribed dimensions, *see Page 47*.
The wrapping material roll has not been correctly inserted into the roll holder.	▶ Insert the wrapping material roll according to the description. For "Net wrapping" version: *see Page 90*. For "Net and film wrapping" version: *see Page 93*.
The wrapping material has not been correctly inserted.	▶ Insert the wrapping material according to the description. For "Net wrapping" version: *see Page 92*. For "Net and film wrapping" version: *see Page 94*.
The wrapping material overhang is too short.	▶ Check the wrapping material overhang. Ensure that it is at least 250 mm. ▶ If the wrapping material overhang is too short, adjust the wire rope, *see Page 184*.
The wrapping material brake does not release.	▶ Adjust the wrapping material brake, *see Page 185*. ▶ Check the axial play of the wrapping material brake, *see Page 187*.
The brake force release has not been set correctly.	▶ Check and set the brake force release during the feed process, *see Page 186*.
The wrapping material is pulled earlier even though the feed rocker arm is not yet in the feed position.	▶ Check the sensor B02 "Tying process active". ▶ Check the sensor B61 "Tying 1 (passive)" and set the feed position, *see Page 181*.
The rotational speed is too high.	▶ Check the rotational speed. It must not be higher than 540 rpm.

Malfunction: The wrapping material (net or film) is not, or not cleanly, cut.

With this fault an error message is displayed on the terminal.

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 is blunt.	▶ Remove deposits from the cutting unit. ▶ If required, have the cutting unit replaced by a KRONE service partner.
The cutting unit is not actuated.	▶ Remove deposits from the cutting unit. ▶ Check that the blade lever rotates. ▶ Check and adjust the wrapping material overhang, *see Page 184*.
The actuator for wrapping process is defective.	▶ Check the actuator for wrapping process.
The ratchet on the cutting unit does not move upwards.	▶ Check the wire rope on the cutting unit and, if required, shorten.

Malfunction: The wrapping material (net or film) is damaged during the tying process.

Possible cause	Remedy
There are deposits or minor damage on the machine components, the sharp edges of which damage the wrapping material.	▶ Check and clean the components along the path of the wrapping material. ▶ Remove sharp edges from along the path of the wrapping material. ▶ If the malfunction persists, contact the KRONE service partner.

Malfunction: The wrapping material (net or film) does not, or not completely, cover one or both of the outer edges.

Possible cause	Remedy
The wrapping material (net or film) is not correctly braked during the tying cycle.	▶ Adjust the wrapping material brake, *see Page 185*.
The wrapping material (net or film) has become caught on the blade of the cutting unit.	▶ Check the setting of the cutting unit.
The net or film roll is not centrally aligned with the machine.	▶ Correctly insert the net or film roll and centrally align with the machine. For version with "Net wrapping": *see Page 90* For version with "Net and chamber film wrapping": *see Page 93*.
There is a blockage in the outer area of the wrapping material path.	▶ Remove crop soiling from the scraper or the tying unit.
Chamber film wrapping: There are no edge formers in the machine.	▶ Have the "Edge former" retrofit kit mounted by the KRONE service partner.

Malfunction: The wrapping material (net or film) tears when the net roll or film roll diameter is reduced.

Possible cause	Remedy
The wrapping material brake has not been correctly set.	▶ Adjust the wrapping material brake, *see Page 185*.

Malfunction: For "Version with net wrapping and chamber film wrapping" and activated chamber film wrapping: The film wraps around the spiral roller.

Possible cause	Remedy
The distance between the scraper rail, including scraper reinforcers and the spiral roller, is too large.	▶ Set the scraper to the spiral roller, *see Page 209*

Malfunction: For "Version with net wrapping and chamber film wrapping" and activated chamber film wrapping: The film wraps around the upper compression roller.

Possible cause	Remedy
The crop holding fixture was stopped too early.	▶ After the tying process starts, pick up crops until the film is caught by the round bale and the film roll is rotating.
The upper compression roller has sharp edges.	▶ Remove the sharp edges.

18.4 Malfunctions on the chain lubrication unit

Malfunction: The oil consumption is too low.

Possible cause	Remedy
The nozzles of the central chain lubrication are soiled so that the oil pump pressure is too low.	▶ Clean the dosing units of the central chain lubrication system, *see Page 220*. ▶ Clean the oil pump, *see Page 219*.
The pressure is too low, as the oil pump is not pressed in for the complete stroke.	▶ Increase the oil quantity, *see Page 219*. ▶ Have the oil pump dismounted and cleaned or replaced by a KRONE service partner.
The oil is too thick.	▶ Use recommended oil, *see Page 48*.
The central chain lubrication system is contaminated.	▶ Clean the entire central chain lubrication system.

Malfunction: The oil consumption is too high.

Possible cause	Remedy
The main tube is torn.	▶ Have the main tube repaired or replaced changed by a KRONE service partner.
The oil is too thin.	▶ Use recommended oil, *see Page 48*.

Malfunction: The machine is dry.

Possible cause	Remedy
There is no pressure. The oil pump is not functioning.	▶ Have the oil pump dismounted and cleaned or replaced by a KRONE service partner.
There is no pressure. The main tube is torn.	▶ Have the main tube repaired or replaced changed by a KRONE service partner.
There is no pressure. The system has no oil.	▶ Vent the chain lubrication unit, *see Page 220*.
The system is blocked, as the main tube is jammed.	▶ Have the main tube repaired or replaced changed by a KRONE service partner.

Malfunction: The oil pump is not pressed for the complete stroke.

Possible cause	Remedy
The dosing units are blocked.	▶ Cleaning the dosing units, *see Page 220*.
The oil is too thick.	▶ Use recommended oil, *see Page 48*.

18.5 Faults of the electrics/electronics

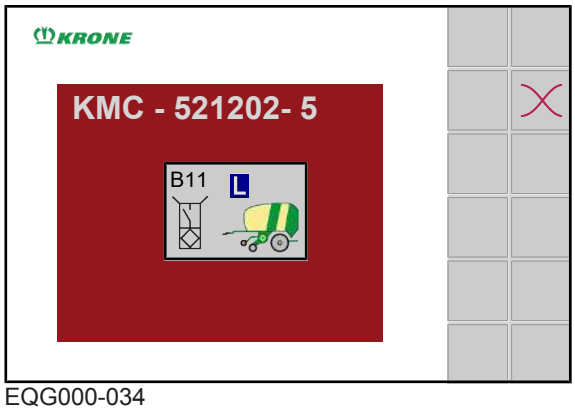
18.5.1 Error Messages

⚠ WARNING

Risk of injury to persons and damage to machines if error messages are ignored

If error messages are ignored and the fault is not rectified, there is a risk of injury to persons and/or severe damage to the machine.

- ▶ Eliminate the disturbance when an error message is displayed; see Chapter "Error list" in the supplement to the operating instructions (software).
- ▶ If the fault cannot be rectified, contact KRONE service partner.



EQG000-034

The display shows an error message when a disturbance occurs on the machine. At the same time, an audible signal sounds (continuous horn signal). For a list of the error messages see Chapter "Error list" in the supplement to the operating instructions (software).

Configuration of an error message

The error message is configured according to the following sample: e.g. error message

"520192-19 CAN1 "

520192	19	CAN1
SPN (Suspect Parameter Number) = error number	FMI = type of error, *see Page 233*	Icon

Acknowledging error message

- ▶ Note down the error message.
- ▶ Briefly press on  .
- ➡ The acoustic signal stops and the error display is no longer indicated. If the fault occurs again, the error message will be displayed again.
- ▶ To acknowledge the error message until the operating terminal is next started, press and hold down the  key for 5 seconds.
- ▶ Eliminate the disturbance; see Chapter "Error list" in the supplement to the operating instructions (software).

Acknowledged and still pending error messages can be displayed again via the "Error list" menu or the status line.

18.5.1.1 Possible error types (FMI)

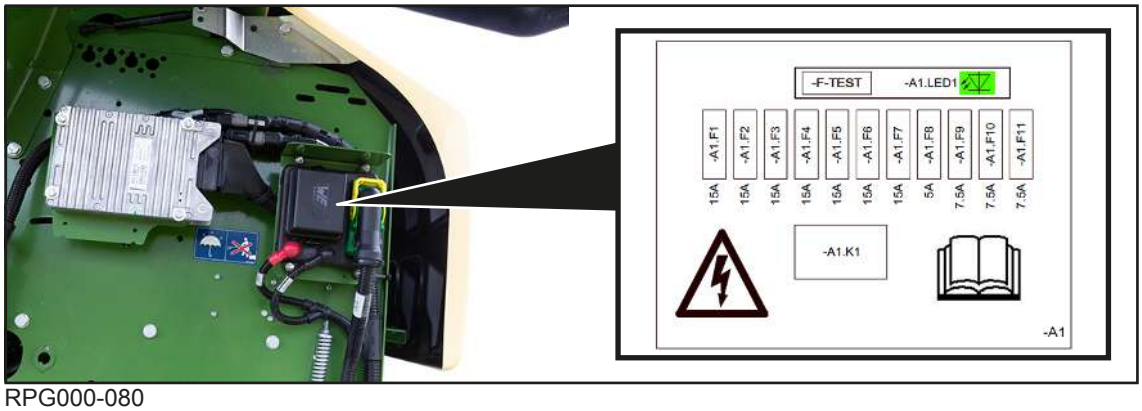
There are different types of errors which are shown under the term FMI (Failure Mode Identification) with an appropriate code.

FMI	Meaning
0	The upper limit value was greatly exceeded.
1	The lower limit value was far below the required one.
2	The data is not permitted.
3	There is an overvoltage or a short circuit to supply voltage.
4	There is an undervoltage or a short circuit to ground.
5	A cable is broken or amperage is too low.
6	There is a short circuit to ground or amperage is too low.
7	The mechanics do not respond or the expected result was not achieved.
8	The frequency is not permitted.
9	There is an abnormal update rate.
10	There is an abnormal rate of change.
11	The error cause is unknown.
12	There is an internal error.
13	The values of the calibration are outside the value range.
14	Particular instructions are required.
15	The upper limit value has been reached.
16	The upper limit value has been exceeded.
17	The lower limit value has been reached.
18	The lower limit value has not been reached.
19	There is a CAN communication failure.
20	The data deviates upwards.
21	The data deviates downwards.
31	The condition has been fulfilled.

18.5.2 Overview of fuses

The circuit board with the fuses is located on the right side of the machine behind the side hood.

As indicated on the circuit diagram, the following fuses are on the circuit board:



RPG000-080

Designation	Explanation	Designation	Explanation
A1.F1	Reserve 15 A	A1.F7	PWR plug X551 15 A
A1.F2	KMC A10 PWR UB1 15 A	A1.F8	KMB A30 / A31 PWR UB 5 A
A1.F3	KMC A10 PWR UB2 15 A	A1.F9	KMC A10 ECU_PWR 7.5 A
A1.F4	Reserve 15 A	A1.F10	ISOBUS-expansion ECU PWR 7.5 A
A1.F5	ISOBUS-expansion PWR 15 A	A1.F11	ECU plug X551 7.5 A
A1.F6	Reserve 15 A		

18.5.3 Remedying sensor/actuator error

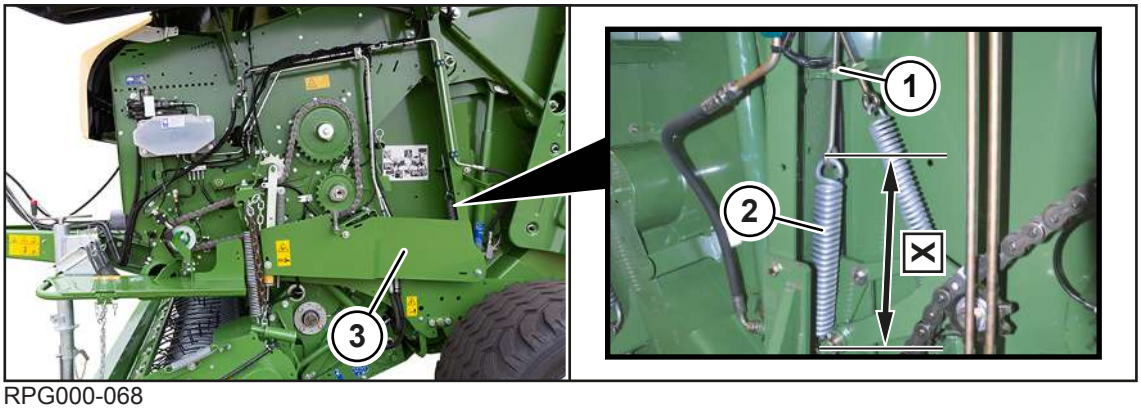
Components must be repaired or replaced by a qualified specialist workshop only.

Before contacting the dealer, collect the following information about the error message:

- ▶ Note the error number and the respective FMI (*see Page 232*) that are shown on the display.
- ▶ Shut down and safeguard the machine, *see Page 27*.
- ▶ Check sensor/actuator externally for damage.
- ➡ If the sensor/actuator is damaged, replace the sensor/actuator.
- ➡ If the sensor/actuator is not damaged, continue with the next test step.
- ▶ Check connector cable and plug connection for damage and tightness.
- ➡ If the connector cable/plug connection is damaged, replace the connector cable/plug connection.
- ➡ If the sensor/actuator is not damaged, continue with the next test step.
- ▶ Perform an actuator test in case of an actuator error to identify the actuator status, *see Page 168*.
- ▶ If a sensor is defective, run a sensor test to identify the sensor status, *see Page 165*.

The more information the dealer has, the easier it is to eliminate the cause of the error.

18.6 Setting the tailgate lock



RPG000-068

If the tailgate no longer closes fully, the tailgate lock must be set on the spring (2).

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

✓ The safety guard (3) is dismounted.

▶ Check dimension X of the spring (2).

⇨ If the dimension is **X=340 mm**, the setting is correct.

⇨ If the dimension X is not **X=340 mm**, the tailgate lock must be set.

▶ To set the tailgate lock, release or tighten the nut (1) until the dimension is **X=340 mm**.

18.7 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 46*.

▶ Note the information on the suspension points provided.

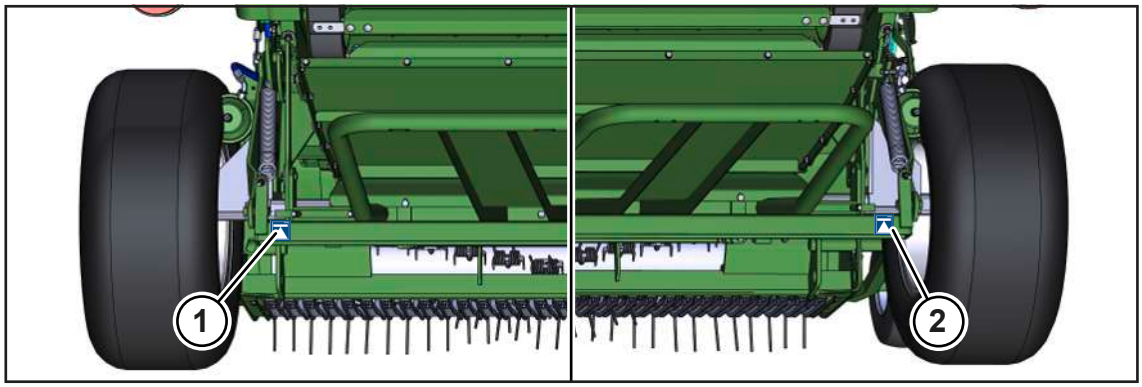
▶ Make sure the lifting means are properly secured.

▶ Never stay under the suspended machine.

▶ If work has to be performed under the machine, securely support the machine, *see Page 27*.

The car jack contact points are located on the left and right on the single axle or tandem axle and a marked with a sticker.

Example image of a single axle:

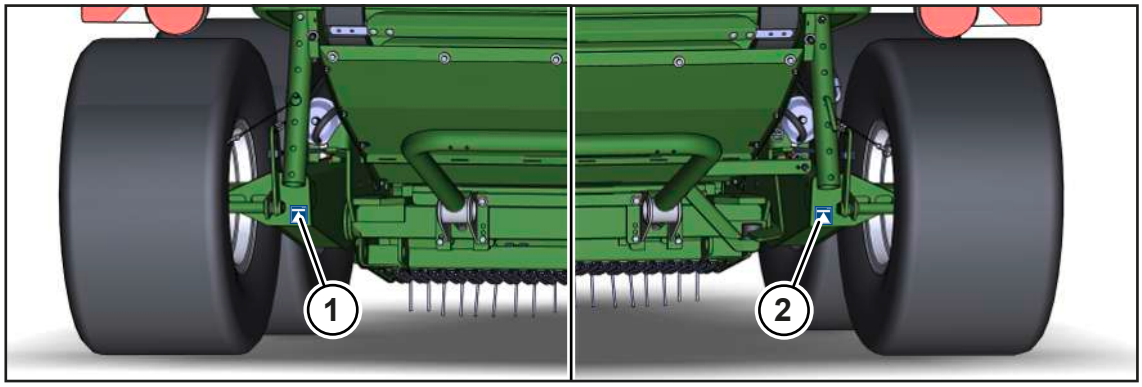


RPG000-177

1 Car jack contact point at rear left

2 Car jack contact point at rear right

Example image of a tandem axle:



RP000-869

1 Car jack contact point at rear left

2 Car jack contact point at rear right

19 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 directives and the concerning valid laws must be observed.

Metal parts

- All metal parts must be brought to a metal recycling centre.
- The parts must be freed from operating fluids and lubricants (gearbox oil, oil from hydraulic system, ...) before being scrapped.
- The operating fluids and lubricants must be brought separately to an environmentally friendly disposal point or recycling centre.

Operating fluids and lubricants

- Operating fluids and lubricants (diesel fuel, coolant, gearbox oil, oil from hydraulic system, …) must be brought to a disposal point for waste oil.

Synthetic materials

- All synthetic materials must be brought to a recycling centre for synthetic materials.

Rubber

- Rubber parts (hoses, tyres, …) must be brought to a rubber recycling centre.

Electronic scrap

- All electronic parts must be brought to a disposal point for electronic scrap.

20 Appendix

20.1 Hydraulic diagram

Legend for the following hydraulic diagram

1 Standard equipment

2 "Cutting unit" version

3 For version with "Hydraulic support jack"

List of the actuators and icons for the following hydraulic diagram

An overview of the position of the sensors, actuators and control units is provided in the circuit diagram.

	–	Tailgate on the bale chamber
	K01	Pick-up
	K03	**Without "Cutting unit" version:** Lifting/lowering the feeder rotor floor **For version with "cutting unit":** Raising/lowering blade cassette
	K20	Blade group B (for the “Hydraulic blade group control system” version)
	K21	Blade group A (for the “Hydraulic blade group control system” version)
	–	Hydraulic support jack

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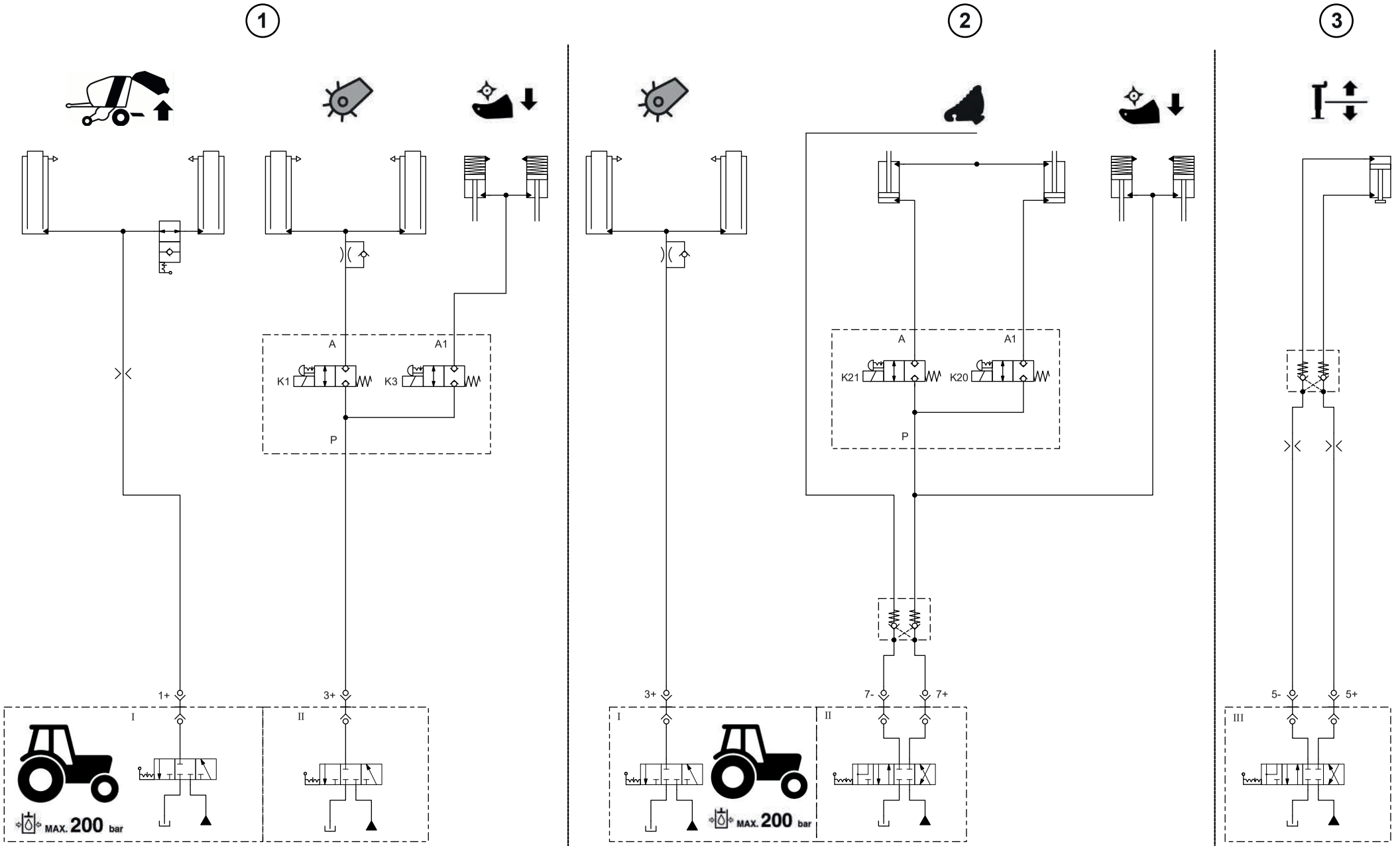

SERIE

Funktion		K1	K3
	⬆	•	
	⬇	•	
	⬆		•
	⬇		•

OPTION

Funktion		K20	K21
	⬆ A		•
	⬆ B	•	
	⬇	•	•
	⬆		
	⬇		

150 102 161 01

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22 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: RP701-10

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

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V.6