Thank you for choosing our Z562 baling press designed for efficient operation.

The following manual will let you fully use the advantages of our baling press and to optimise the bale wrapping process.

The Manual contains a detailed table of contents followed by descriptions which will allow to easily identify the device and to make the best use of it.

The information regarding safety and comfort of operation, description of coupling with a tractor, technical service activities and storage conditions are listed on the following pages of the manual.

A spare parts catalogue containing the list of the baling press major components allowing for easy ordering is attached to the Manual in a digital form on a CD. A printed version of the catalogue can be purchased at authorised service outlets or directly from the manufacturer.

Both the manual and the spare parts catalogue contain basic information on the product. The elements fitted to the equipment may be slightly different than presented in the manual.

The manufacturer reserves the right to introduce changes without notice.

Legend

Warning:

This is a warning symbol and it indicates that it is required to pay special attention to the operator and bystanders' safety requirements or safe operation requirements.

Information:

This symbol indicates additional information which allows to optimise the device operation.

Environmental protection:

This symbol indicates the need to pay special attention to environmental considerations.

Cross-reference:

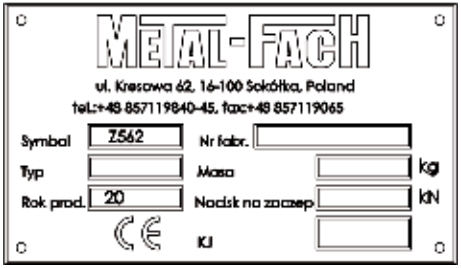
this symbol directs you to a page on which detailed information on a given subject is presented.

Table of contents

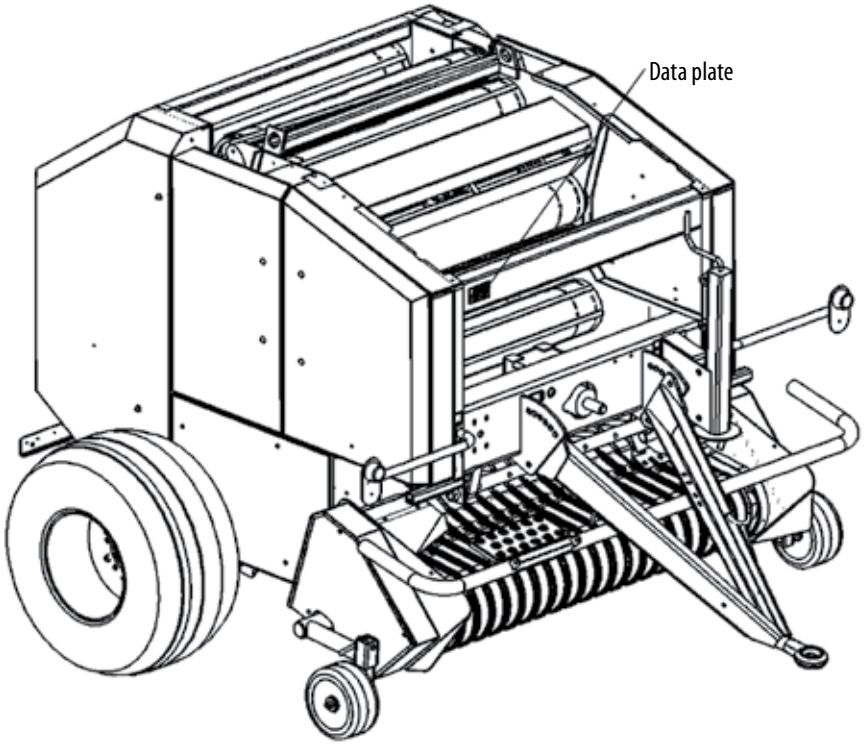
1 Baling press identification, general safety rules
1.1 Baling press identification

The baling press is identified by its nameplate securely fastened to the front guard of the machine.

The information presented on the nameplate is shown on the diagram below.



It is forbidden to drive the baling press on public roads without its nameplate or with an illegible nameplate.



When purchasing the machine check the serial number indicated in the Manual and the warranty sheet against the serial number stamped on the nameplate.

The manual consist a part of the Z562 baling press's equipment.

If the machine is sold to another user, it must be supplied with the operating manual. It is advised that the supplier has a confirmation stating that the manual was transferred together with the machine, signed by the buyer and filed.

Carefully read the operating manual.

If the rules stated in this manual are complied with, it will help prevent hazards and operate the machine efficiently; it will also allow to retain the warranty throughout the period granted by the manufacturer.
Detailed information on the structure, operating principles, technology and other details may be obtained from authorised outlets and the press manufacturer.

It is forbidden for persons who have not read the manual to operate the baling press.

The baling press shall be operated according to its intended use by coupling it with a tractor with the nominal power exceeding 30-70 kW and towing power class of at least 0.9 - 1.4 (depending on the variant), equipped with a PTO (with six keys) and allowing for the external use of the hydraulic power system.

The Z562 baling press is designed for gathering of material raked into embankments into bales: hay (humidity up to 20%) and silage (humidity up to 60%) and post harvest straw and unloading the rolled bales on the ground.

During operation, the operator is not subject to noise which may cause the loss of hearing, as the noise level of the machine does not exceed 70 dB (A) and the operator works inside the tractor cabin.

During the operation of the baling press, the operator is not subject to harmful vibration as the vibration level transferred to the upper limbs does not exceed 2.5 m/s^2, and the vibration level transferred to the body is lower than 0.5 m/s^2 and the operator is positioned in the tractor's cabin.

Grass and other papilionaceous plants prepared for souring and wrapping should be mowed in the early phase of heading (best done in the afternoon). On the next day, after a few hours of drying, the mowed material should be gathered using the wrapping presses. Maximum bale compression must be maintained.

Continuous and systematic care for control and adjustment elements and compliance with the machine‘s maintenance schedule will ensure optimum and long operating life.

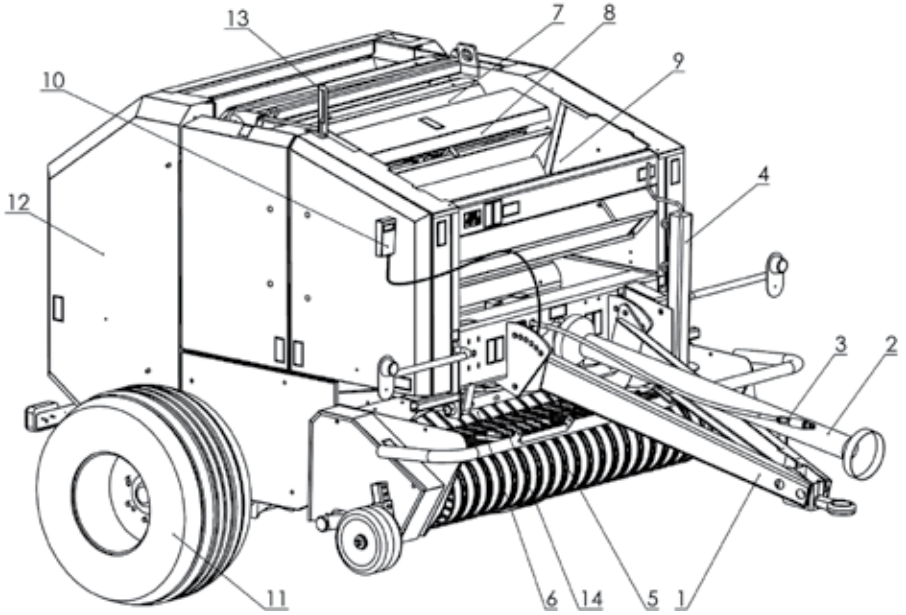
The manufacturer recommends to clean the following daily: net/cord wrapping assembly, rolling shafts and the drive (chains, sprocket wheels, bearing housings).

Any unauthorised changes to the baling press structure absolve the manufacturer from all responsibility for the threats and damage it may cause.

1.2 Z652 baling press construction

The Z562 baling press consists of the following units:

• Drawbar	item 1
• PTO shaft	item 2
• Hydraulic lines	item 3
• Support foot	item 4
• Pickup	item 5
• Collector	item 6
• Rolling shaft	item 7
• Cord wrapper	item 8
• Net wrapper	item 9
• Control panel	item 10
• Driving wheel	item 11
• Cover	item 12
• Indicator	item 13
• Clamp	item 14



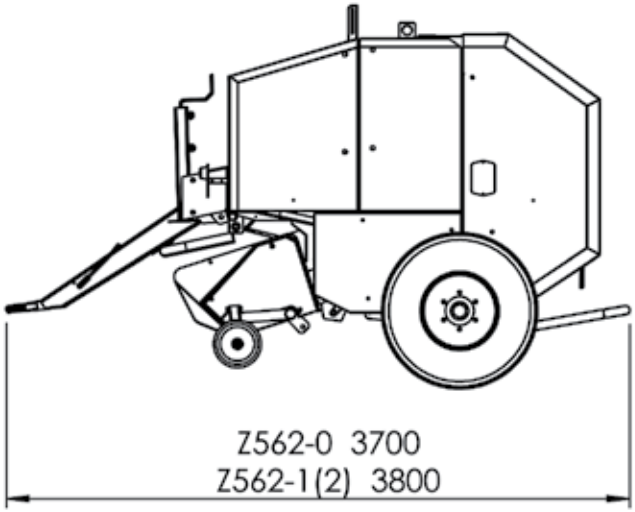
In the front part of the press a pickup (5) is located, used to collect the swath formed into embankments. It works with a collector (6) directing the collected swath to the rolling shafts (7) where it is pressed and rolled. The swath collection process and the bale unloading are presented on a diagram on the next page. When the desired compression level is obtained it is indicated by the position of the indicator (13) in the red field and a sound signal located in the operator's cabin. When the programmed compression level is obtained, the wrapper (8) wraps the bale with cord. When using a net, the wrapping is started manually from the control panel after the mentioned sound signal is heard.
The press is coupled to the tractor using the tow bar (1), the PTO shaft (2) and the hydraulic line (3). The support foot (4) is used to support the machine at rest and to couple and uncouple the machine. The press is equipped with driving wheels (11) used for towing the machine behind the tractor.

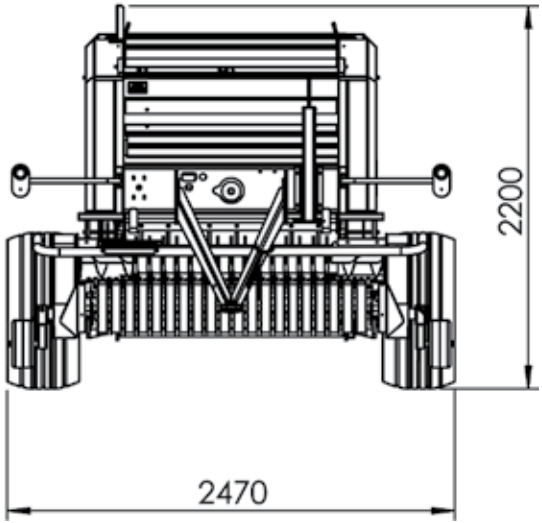
1.3 Z562 baling press characteristics

No.	Details	Units	Z562-0...	Z562-1...	Z562-2...
1.	2.	3.	4.	5.	6.
1.	Press type	–	hitched		
2.	Overall dimensions: length/width/height	mm	3730/2470/2050	3800/2470/2050	3800/2470/2050
3.	Weight	kg	2200	2300	2400
4.	Operating/transport speed	km/h	up to 10 / up to 20		
5.	Minimum tractor power output	kW	35	50	70
6.	Required tractor hydraulic system pressure	Atm./MPa	140/14		
7.	PIC power demand	kW	approx. 25	approx. 40	approx. 60
8.	PTO rotational speed	RPM	540		
9.	Hitch load	kN	4.0		
10.	Operating personnel	–	1 (tractor driver)		
11.	Rolled bale dimensions (diameter x width)	mm	1200x1200		
12.	Bale weight	kg	100-600		
13.	Production efficiency	bales/h	max. 20	max. 40	max. 40
14.	Harvested bank width	mm	up to 1600		
15.	Undercarriage type	–	mono-axial		
16.	Tyres	–	400/60 - 15.5 14 PR		
17.	Tyre pressure	kPa	350		
18.	Drawbar hitch-ring diameter	mm	44		
19.	Coupling with a tractor - through	–	the lower hitch		

No.	Details	Units	Z562-0...	Z562-1...	Z562-2...
20.	Pickup type	–	drum-pin, 4 beams		
21.	Pickup width	mm	1800		
22.	No. of pickup pins	pcs	44		
23.	Rolling assembly – chamber type	–	cylindrical, constant displacement		
24.	Rolling assembly – rolling mechanism	–	automatic wrapping with a single cord **optional – net wrapping**		
25.	Rolling assembly – cord wrapping spacing adjustment	–	4 increments		
26.	Telescopic jointed shaft	type/brand	LFMR S.A. Lublin		
27.	Telescopic jointed shaft	symbol	C-60970, designated with **the KRUS Safety Mark**		
28.	Telescopic jointed shaft	product no.	6R-602-7-BA-K601		
29.	PTO drive-shaft – rated torque: 540	kN	540		
30.	PTO drive-shaft – nominal transmitted power	kW	30		
31.	PTO – minimum shaft length	mm	1010		
32.	PTO – operating speed	RPM	540		
33.	PTO – coupling/clutch type	–	K601/1600 Nm w/shear pin		
34.	Electrical system voltage	V	12		
35.	Light system	–	acc. to the Traffic Code		

1.4 Z562 baling press dimensions

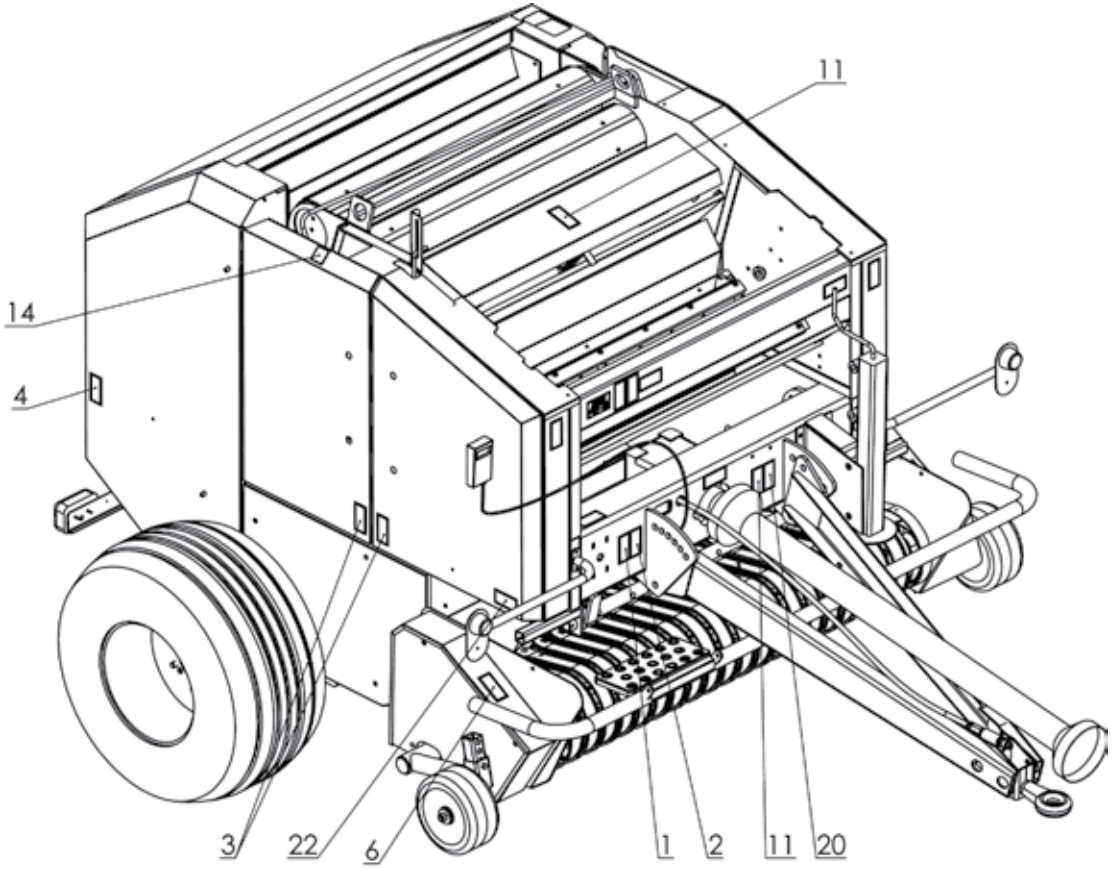




The drawings show the dimensions of the baling press in the working position (in mm).

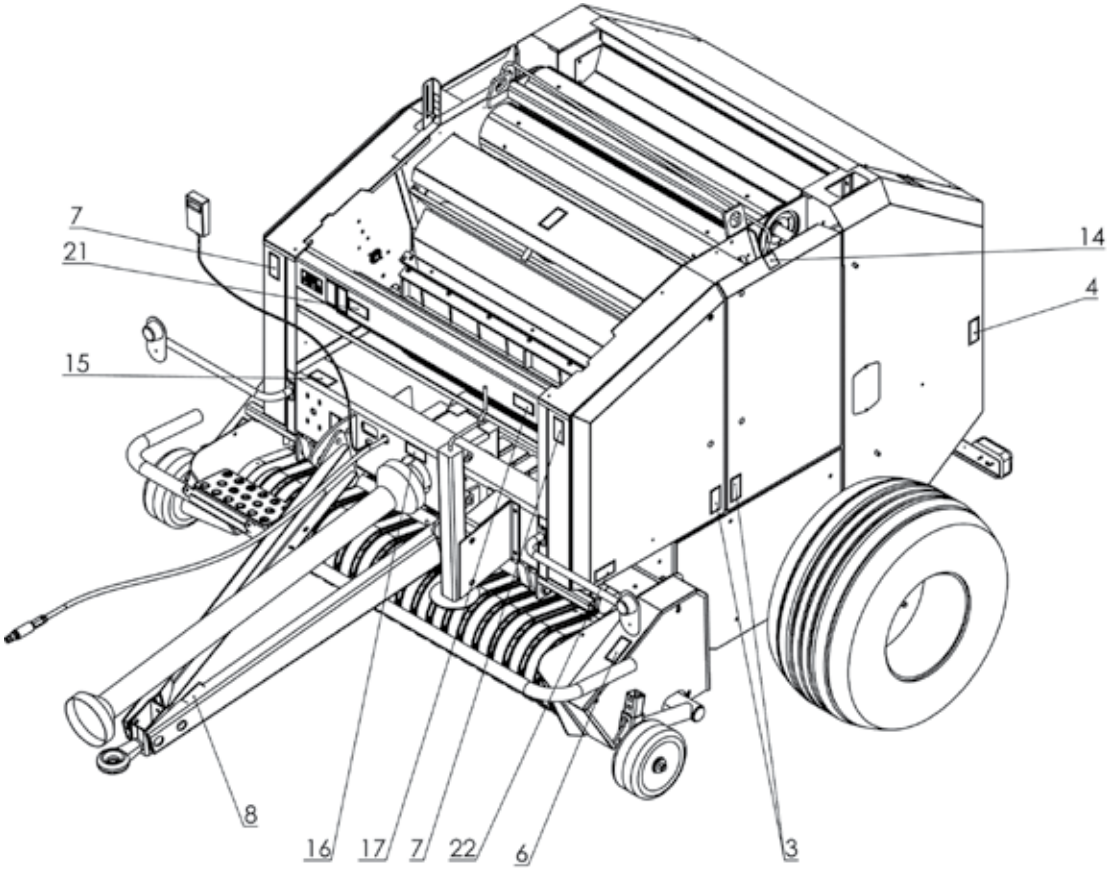
1.5 Location of symbols

Location of symbols - right



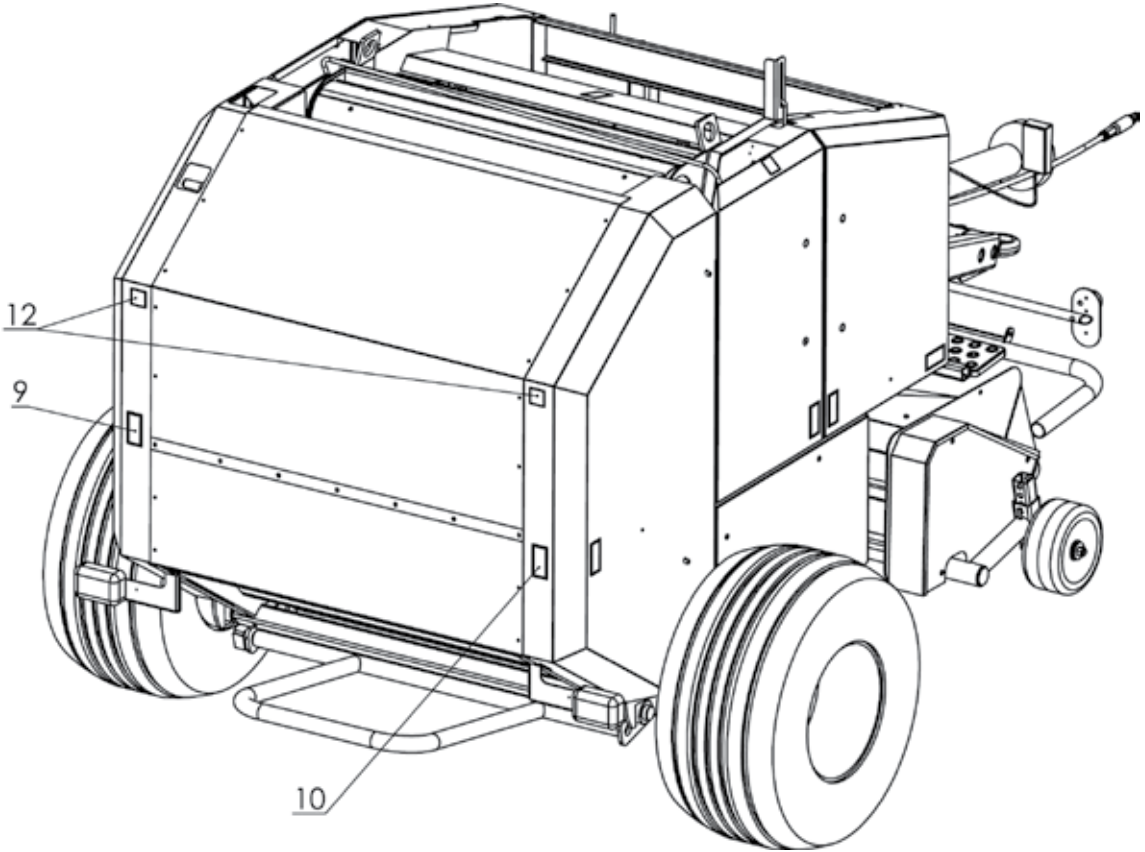
The meaning of symbols is explained in Section 1.6 of the Manual.

Location of symbols - left



The meaning of symbols is explained in Section 1.6 of the Manual.

Location of symbols - rear



The meaning of symbols is explained in Section 1.6 of the Manual.

1.6 Warning Symbols

Warning symbols on the machine (⏩ Section 1.5) inform the operator about the hazards and dangers which may occur during the machine operation. Keep the symbols clean and legible.

Replace illegible symbols with new ones. New symbols can be purchased from the manufacturer.

Symbol 1
Refer to the operating manual before performing this action.

Symbol 2
Turn off the engine and remove the ignition key before servicing or repairs.

Symbol 3
Do not open or remove the safety guards during machine operation.

Symbol 4
Keep a safe distance from the raising guards during machine operation.

Symbol 5
Secure the lifting cylinder before entering into the hazard zone.

Symbol 6
Do not reach into the pickup zone while the tractor engine and PTO are operating.

Symbol 7
Do not approach the working strands during the baling press' operation.

Symbol 8
Do not approach movable, articulated connections while the engine is running.

Symbol 9
Do not stand below the raised cover which is not protected against dropping down.

Symbol 10
Crushing hazard - caused by the rolling bale. Keep a safe distance from the working machine.

Symbol 11
Do not open or remove the safety guards during machine operation.

Symbol 12
Keep a safe distance from the working machine.

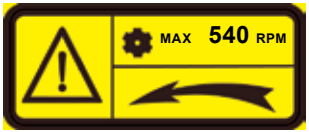
Symbol 13
Main lubrication points of the baling press.

Symbol 14
Lifting sling fixing point.

Symbol 15

Information symbol.

Symbol 16



Information symbol.

Symbol 17

Information symbol.

Symbol 18

Information symbol.

Symbol 19

Information symbol.

Symbol 20
Do not approach the rotating PIC shaft.

Symbol 21
Do not stand on ladders and platforms while the tractor is moving.

Symbol 22

Information symbol.

1.7 General safety rules

1.7.1 During operation and repair of the Z562 baling press the farming health and safety regulations contained in the Regulation of the Minister of Agriculture and Food Economy of 12 January 1998 must be complied with.

1.7.2 Only an adult with a valid agricultural tractor driver's licence and familiarised with the occupational health and safety regulations regarding agricultural equipment and this Manual may operate this machine.

1.7.3 The following manual must be read and adhered to, paying special attention to directions regarding the safe operation of the baling press.

1.7.4 The manual indicates the machine parts which pose a potential threat. Hazardous areas are marked with yellow stickers with warning symbols. Pay special attention to the hazardous areas and strictly adhere to the rules.

1.7.5 The operator must familiarise themselves with the meaning of the symbols.

1.7.6 It is forbidden to operate the baling press without the safety guards installed on moving components.

1.7.7 Every time before the the baling press is started, check the condition and completeness of the machine and positioning of its safety guards.

1.7.8 Before starting the baling press and entering public roads, inspect the attachment of the machine to the tractor, attachment of the wheels and proper connection of the drawbar to the tractor.

1.7.9 All adjustment, repair and maintenance works shall be conducted with the tractor engine turned off and making sure that the machine is secured against accidental start.

1.7.10 Before commencing swath collection and during this process, make sure that there are no bystanders, especially children, nearby.

1.7.11 During the operation of the baling press, allow for free space near the rotating elements. During bale rolling, no people or animals are allowed near the rotating elements.

1.7.12 Exercise extreme caution when working on an inclined land. Note that the bales may roll down slopes.

1.7.13 It is forbidden to operate the baling press with any of the assemblies lifted.

1.7.14 Do not remain between the baling press and the tractor when the tractor engine is running.

1.7.15 Exercise extreme caution when coupling/ decoupling the press with/from the tractor. The machine should be coupled with the tractor equipped with a lower hitch able to withstand the vertical load larger than the vertical load exerted on the baling press drawbar. ⏩ Section 1.3.

1.7.16 During operation, use appropriate protective clothing and shoes with anti-slip soles.

1.7.17 While loading the wrapping cord or net, the tractor engine must be turned off and protected against accidental activation (ignition key removed, parking brake on).

1.7.18 It is forbidden to operate damaged hydraulic lines. The damaged lines must be immediately replaced with new ones. During the replacement of hydraulic lines, use impermeable protective clothing.

1.7.19 The machine hydraulic system shall only be operated from the tractor cabin.

1.7.20 Before driving the machine check the position of the support foot. The support foot should be placed in a transport position.

1.7.21 Follow the traffic code regulations and the manufacturer's recommendations when travelling on public roads. ⏩ Section 8.2.

1.7.22 Before entering public roads, perform a visual inspection of the transported machine.

1.7.23 It is forbidden to stand on the press during machine operation or transport.

1.7.24 While travelling on public roads, it is forbidden to transport swath or silage bales in the press chamber.

1.7.25 It is forbidden to operate the baling press while under influence of alcohol.

1.7.26 It is forbidden to operate the baling press while under influence of drugs or medicines with similar effects.

1.7.27 It is forbidden to operate the machine while under influence of medicines which affect the ability to drive vehicles or reduce psychophysical fitness or cause concentration disorders and increase reaction time.

1.7.28 It is forbidden to drive the baling press near sources of open flame.

1.7.29 It is required to strictly adhere to the fire protection regulations and immediately extinguish any fire which may occur during the baling press use or at its standstill.

1.7.30 Do not approach the working baling press with open flame and do not smoke near the machine.

1.7.31 Every time before commencing work, check if the tractor is equipped with a dry powder extinguisher. If not, place a dry powder fire extinguisher on the tractor.

2 Drive operation

2.1 Drive coupling

The baling press should be coupled with agricultural tractors of the rated power not lower than 35 - 70kW and towing power class 0.9 - 1.4, equipped with two hydraulic system connections, a rear PTO shaft with six keys and the nominal of RPM 540.

The baling press shall be coupled to the lower hitch allowing for the maximum vertical load of 4.0 kN.

Coupling the machine to the tractor's lower hitch.

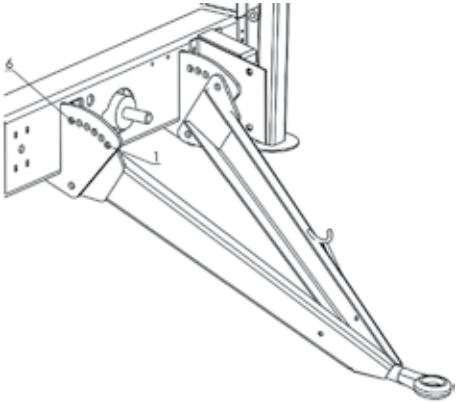
Make sure that there are no bystanders, especially children, in the coupling area.

Before coupling the equipment, place the tractor axis in the machine axis on a hard, flat, level surface. Turn off the tractor engine, remove the ignition key and engage the tractor parking brake. Set the appropriate hitch height by selecting the proper adjustment lug as shown on the diagram.

The height of the drawbar above the ground is given in the table below.

Slot no.	Units	Height of the tow bar above the ground
1	2	3
Slot no. 1	cm	15.50
Slot no. 2	cm	31.00
Slot no. 3	cm	46.50
Slot no. 4	cm	63.00
Slot no. 5	cm	78.50
Slot no. 6	cm	94.00

Couple the hitch-ring with the lower hitch and check whether the machine is properly connected and secured against accidental disconnection.



Only couple the machine to tractors with weight appropriate for the machine.

Make sure that the tractor hydraulic system is tight.

Connect the electric power source. Check if the electric and signalling systems work properly.
Connect the hydraulic power source. Check if the hydraulic systems work properly, especially the baling press door opening and closing mechanism.

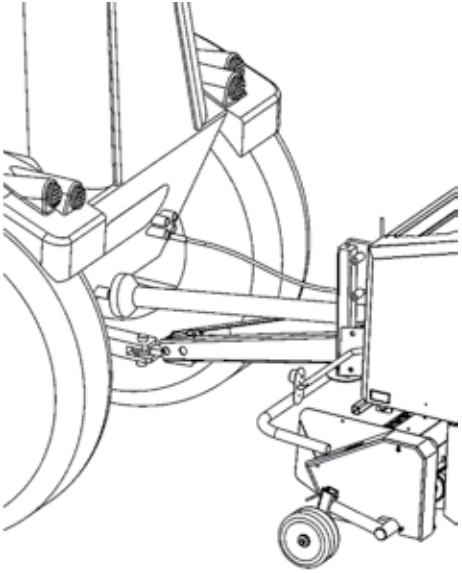
Coupling the press with the rear PTO

Before connecting the telescopic jointed shaft check the direction and speed of shaft revolutions.

Turn off the tractor engine, remove the ignition key and engage the tractor parking brake. Slide the outer socket of the telescopic jointed shaft on the six notch rear PTO. Place the second outer socket on the press' PIC until the locks snap in place. Install the shaft cover chains on both sides of the shaft.

It is forbidden to use telescopic jointed shafts with parameters other than specified by the manufacturer.

It is strictly forbidden to use a telescopic jointed shaft with its guards missing or damaged and without the additional cone guards at the tractor PTO and the machine PIC sides.



Shortening or extending the telescopic jointed shafts may only be performed at specialist service stations.

Every time the telescopic jointed shaft is coupled and every time the machine is put into operation it is required to make sure that the shaft condition is undamaged and the protection pipe and cone are properly attached.

If the safety bolts of the telescopic jointed shaft overload clutch are sheared, replace them with new bolts with the same technical parameters.

The manufacturer suggest to use the machine in straight line runs. It is advised to turn off the drive while the machine is negotiating sharp corners and during transport.

2.2 Disconnecting from the drive

Make sure that there are no bystanders, especially children, in the baling press storage area and its vicinity.

Place the baling press for storage on a hard, flat and level ground. Turn off the tractor engine, remove the ignition key and engage the tractor parking brake.

Disconnect the electric power supply.

Disconnect the hydraulic system.

Lower the main frame support. Disconnect the hitch-ring from the tractor hitch. Make sure that the machine will not move accidentally.

Disconnect and dismantle the telescopic jointed shaft. Place the shaft on the support designed for its storage. Protect the PTO and telescopic jointed shaft couplings with covers.

3 Commissioning

The commissioning of a newly purchased baling press should be performed by a dealer's service representative or a manufacturer's representative in the presence of the operator - owner of the machine.

Before commissioning the baling press, familiarise yourself with the this manual, paying special attention to the fragments regarding the safety of the operator and bystanders.

If there are any doubts regarding safety issues, please contact your sales representative or the manufacturer.

Before each start up of the baling press, the LP02 counter shall be installed in the tractor operator's cabin. ▶▶ Section 5.4.3.

Commissioning the baling press

Take extra caution during commissioning.
The presence of persons under training in the machine's operation zone increases the safety hazard.

During the commissioning of a newly purchased baling press a dealer's service representative or a manufacturer's representative in the presence of the operator - owner of the machine performs the following actions:

3.1 Control of press operation and equipment:
3.1.1. Completeness and technical condition check,
3.1.2. Sound signal device and lighting equipment functional test,
3.1.3. Functional test of the hydraulic system:
- lifting and lowering of the pickups,
- lifting and lowering of the rear chamber,
- lifting and lowering of the shredder blades (optional equipment)

3.1.4. Rear chamber lock engagement and locking test,
3.1.5. Functional test of the pickup,
3.1.6. Functional test of the wrapping mechanism:
- test with cord,
- test with net (optional supply).

3.1.7. Functional test of the central lubrication system (optional supply),
3.1.8. Functional test of the ensilage applicator (optional supply).

3.2. User training in proper operation of the press:

3.2.1 Review of the pickup design and principles of operation:
- adjustment of spring attack angle,
- overload clutch functions,
- clutch installation after the bolts are sheared,
- replacement of the complete overload clutch,
- lubrication of the roller raceways.

3.2.2 Review of the cord wrapping mechanism design and principles of operation:
- review of the principle of operation,
- installation of the cord,
- adjustment of the wrap spacing and cord tension,
- adjustment of the bale compression ratio,
- cleaning the cord feeder.

3.2.3 Review of the net wrapping mechanism design and principles of operation (optional supply):
- review of the principle of operation,
- installing the net,
- adjusting the wrap number,
- adjusting the spring tension for the blade support bracket.

3.2.4 Review of the central lubrication system design and principles of operation (optional supply):
- review of the principle of operation,
- adjustment of the (dosing) pump delivery.

3.2.5 Review of the ensilage applicator design and principles of operation (optional supply):
- review of the principle of operation,
- start up and dosing adjustment.

3.2.6 Review of the rotor and the shredder design and principles of operation (optional supply):
- review of the principle of operation of the rotor,
- review of the principle of operation of the shredder,
- disassembly, blade sharpening and assembly.

3.2.7 Review of the LP02 counter design and principles of operation

3.2.8 Review of the principles of operation of the tractor-baling press unit during baling:
- tractor operation during swath collection along a straight line,
- tractor operation during swath collection along curves and sharp bends,
- explanation of hazards.

3.2.9 Performing the full bale wrapping with cord + net by the user under supervision of the service technician

3.2.10 Review and adjustment of the chain tension

3.2.11 Review of the lubrication procedures and ongoing maintenance of the press

3.2.12 Review of user questions and remarks.

The commissioning is performed by the service without any additional charges.

The service technicain's signature on the warranty card confirms that the commissioning process was performed as described in this section. The customer's signature confirms that the commissioning of the baling press was performed in the presence of the buyer/user.

4 Controls and ongoing adjustments
4.1 Location of the controls

Hydraulic system controls

The baling press hydraulic system is controlled using the tractor's control levers. The control levers are used to adjust the pickup position and opening and closing of the baling chamber. ▶▶ Section 5.2 Hydraulic system

Press control using the counter

For operation and control of press operation the manufacturer supplied the electronic LP02 counter with baling press control functions and information functions.

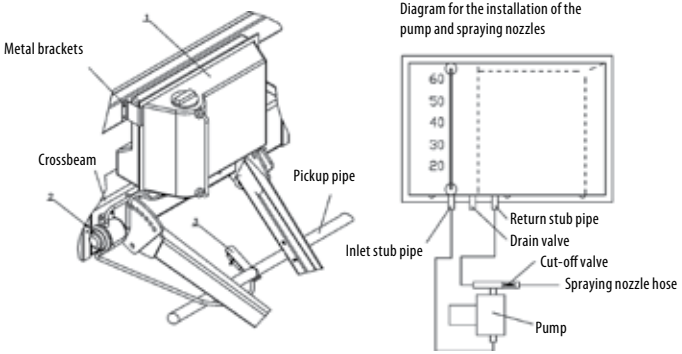
Before starting the baling press, the LP02 counter shall be installed in the tractor operator's cabin. ▶▶ Section 5.4.3.

Description of baling press control using the counter ▶▶ Section 5.4

Ensilage application

The ensilage applicator is offered by the manufacturer as separately purchased optional supply.
The applicator is used for precise dosing of liquid ensilage preparation facilitating the silage forming process.

The applicator is located in a location indicated in the diagram below. If the applicator is purchased separately at a later date the user may install it on his own (checking if the purchased equipment is not missing any parts) or at an authorised reseller or manufacturer.



The applicator consists of the following parts:
- 60 litre tank,
- filler with filtering insert,
- 2 connector pipes,
- drain valve;
- cut-off valve;
- spreading nozzles rated at:
  - 350 ml/min,
  - 600 ml/min,
  - 1000 ml/min,

- inlet hose Ø10 mm, length L=70 cm - 1 pc.
- return hose Ø10 mm, length L=70 cm - 1 pc.
- pressure conduit Ø12 mm, length L=110 cm - 1 pc.
- 12 V electric pump.

Begin the installation of the applicator by installing the pump (item 2) on the crossbar, in a place indicated in the diagram. Then, using M8x30 blots and M8 nuts install the 60 litre tank (item 1). Install the spraying nozzles (item 3) on the pickup pipe. This will allow the dosing of the preparation at the entire width of the harvested material between the machine pickup and the rolling chamber. Connect the inlet hose, return hose and pressure conduit as indicated on the diagram.

Using the plug connect the applicator's power supply to the press electric system. The press is equipped with a socket dedicated for the applicator power supply. It is located under the front cover on the right side of the press.

Turning the press on/off is performed by pressing the on/off button on the counter.

For preparing silage the manufacturer suggests using biological preparations or preparations containing effective microorganisms.

Before starting the pump fill the tank with liquid. Prepare the liquid as specified by the ensilage preparation manufacturer.
Pour the properly mixed preparation through the filtering insert in the tank inlet.

When the tank is full, fully open the stub pipe and switch on the pump using the ON button on the counter. The pump will start sending liquid to the nozzles. The spraying of the material with ensilage begins.
Depending on the collected swath use nozzles with appropriate flow rate:

- deflector nozzle in white body – output 1000 ml/min;
- deflector nozzle in red body – output 600 ml/min;
- deflector nozzle, w/o body – 350 ml/min.

Do not start the pump if the tank is empty. The pump may be destroyed after a period of "dry running".

When the work is finished flush the applicator and filtering insert. Remove all remains of the preparation and all mechanical remains. Remove all residues from the tank through the drain valve.

4.2 Location of ongoing adjustment points

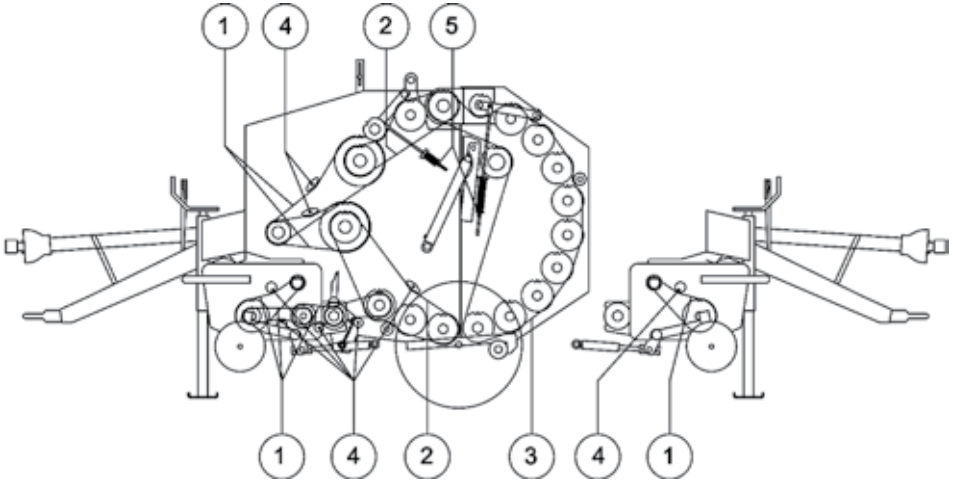
Adjusting the tension of driving chains

Before every use of the press check its general condition and make appropriate adjustments. To do so, start the machine at idle and after a short period of idling turn off the tractor engine and remove the ignition key.

Check the tensioning of the drive chains before each use of the baling press. All chains must be tensioned: during an attempt to yield them by hand they must be tight without any slack.

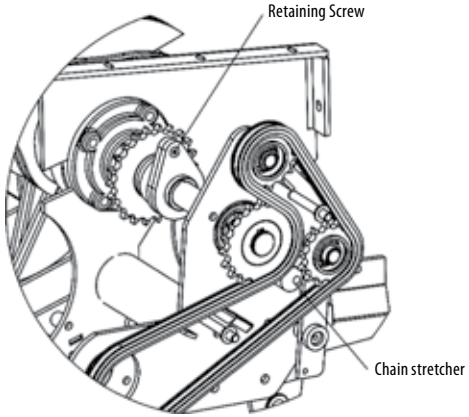
The drive diagram is shown on the picture. The drive chains are indicated with numbers 1, 2 and 3. The tension adjustment is made using the chain stretchers item 4 or adjustment screws with spring item 5.

Proper tensioning protects the chains from damage and prevents machine failure by extending their service life.



Chain tension adjustment for the press pickup with rotor

Pay special attention to tightening of the chain powering the press pickup with rotor. Using the stretcher maintain as high tensioning as possible in the pickup drive chain.



Bale compression ratio adjustment

Adjust the bale compression ratio to the type of collected material.

The compression ratio adjustment is performed using the lever-cable mechanism ⏩ See drawing.

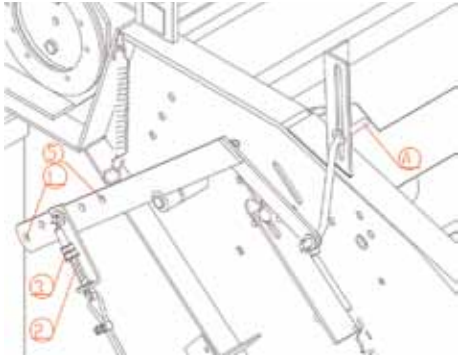
A special compression ratio setting dedicated for hay collection is described in Section 5.5.

Using lever 5 adjust the bale compression ratio to the type of collected material. The highest compression ration is obtained when the cable is placed in opening 1 and the lowest compression ratio is obtained when the cable is placed in opening 5. Additional adjustment of compression ratio is possible by adjusting the length of bolt 7 (using nuts 6). By unscrewing the nut the compression ratio is increased and by tightening the nut the compression ratio is decreased. The adjustment using the nut is made if the compression obtained in opening 1 is too high or if the compression in opening 2 is too low.

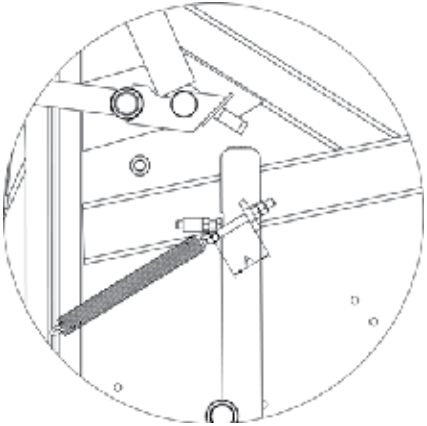
The bale compaction ration should also be adjusted with the tension lever shown in the figure beside. When collecting hay crop silage, set the length A of the tension lever to obtain size 55 - 65 mm.

When collecting straw, set the length A of the tension lever at 65 - 75 mm.

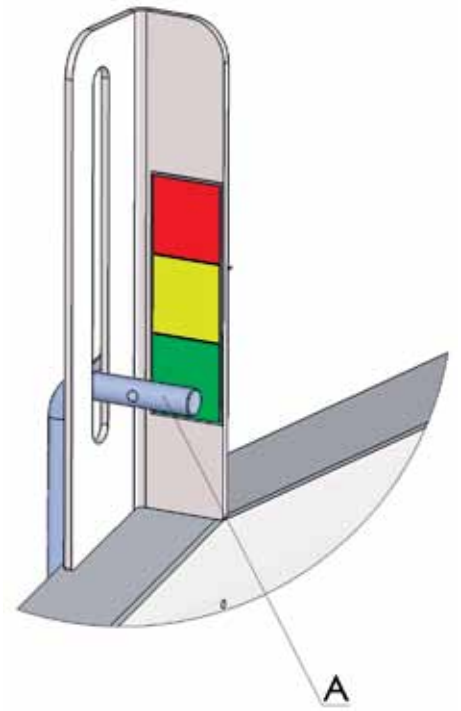
Compression ratio adjustment



Before attempting to adjust the bale compression ratio, turn off the tractor engine and remove the ignition key.



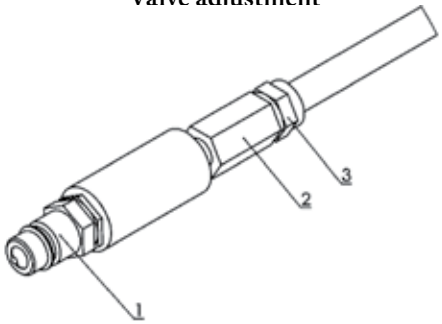
To evaluate the compression ratio the indicator placed on the press is used. The indicator positioned on the red background indicates that the maximum compression ratio is obtained and that swath collection must be stopped.



Cord wrapping spacing adjustment

Depending on the needs the cord spacing and width may be adjusted.
The wrapping spacing is adjusted by running the cord through a wheel of appropriate diameter. ⏩ Section 5.1.1
The wrapping width is adjusted using the limiters in the cord feeder ⏩ Section 5.1.1.

Valve adiustment

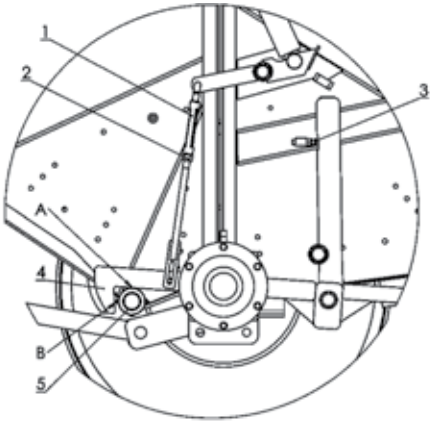


Hydraulic coupling	item 1
Throttle-check valve	item 2
Lock nut	item 3

Raise the baling press cover. Loosen the lock-nut (3). By turning the throttle-check valve adjust the cover closing speed. Check the cover closing speed. If necessary adjust the valve settings. When the desired cover closing speed is obtained tighten the nut (3).

Always observe the OH&S rules when adjusting the cover closing valve. Only use the closing adjustment valve to adjust the cover's closing speed.

Lock adjustment



Adjustment nut	item 1
Lock nut	item 2
Adjustment screw	item 3
Hook	item 4
Bushing	item 5

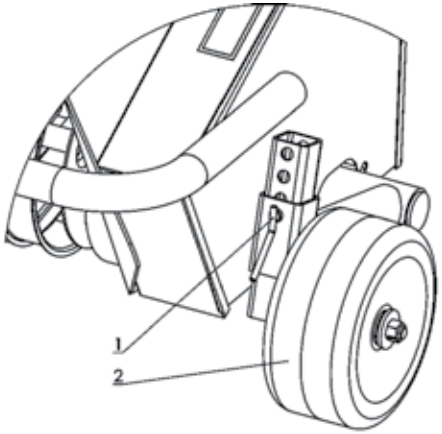
Loosen the lock-nut (2). Place the adjustment nut (1) at a distance A, between 0 mm and 2 mm. Tighten the lock-nut (2).

Loosen the adjustment screw (3) nut located on the right side of the press. Place the adjustment screw (3) at a distance B, between 2 mm and 5 mm.

Check if the adjusted lock works properly. Turn on the hydraulic system by supplying oil to the actuators which open the rear cover until it starts to raise. Stop supplying oil at this moment, leave the tractor cabin and make sure that the raising cover does not cause a collision between the hook (4) and the bushing (5). If a collision occurs close the cover and re-adjust the lock to eliminate the collision.

Improper positioning of the lock or unscrewed adjustment nut (1) may cause damage to the press.

Adjustment of the support wheel



Pin	item 1
Support wheel	item 2

Set the appropriate working height of the pickup by changing the position of the support wheel (2). Use the pin (1) to secure the support wheel and protect it against falling out.

The manufacturer advises to position the pickup teeth at the height of 2 to 3 cm above ground.

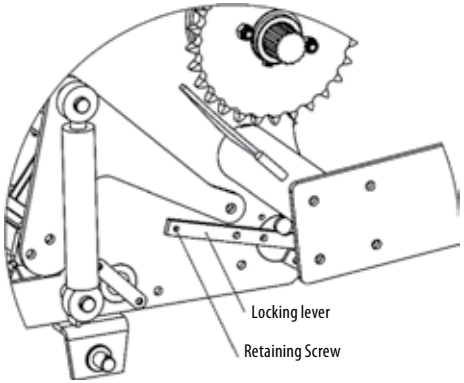
Before reversing raise the pickup to protect the teeth against damage.

Cutter sharpening

After a period of use of the press equipped with a rotor and a cutter (optional supply) the cutter blades require sharpening. To assess the condition of the cutter it must first be raised and placed in operating position. To do so connect the press to the tractor and use the tractor's hydraulic control system ⏩ Section 5.2 to extend the blades. Turn off the tractor engine, remove the ignition key and engage the tractor parking brake. Assess the cutter condition. Every blunted blade must be sharpened.

The manufacturer advises to order blade sharpening at a specialised service station.

The blades may be sharpened by the owner making sure to observe special safety precautions. Before sharpening the blades connect the press to the tractor and use the tractor's hydraulic control system ⏩ Section 5.2 to withdraw the blades. Disconnect press from the tractor. Place the machine over an inspection pit. Lock the wheels using wedges. Remove the locking nut and lower the lock lever as shown on the diagram. Move the cutter shaft towards your body. The shaft will leave the support on the other side of the machine.



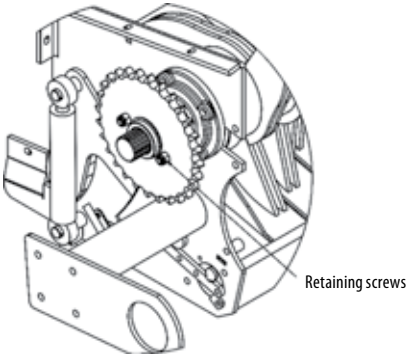
Be especially careful when removing, sharpening and installing the blades. A risk of injury occurs.

Only sharpen the blades on their flat side. It is forbidden to sharpen the blades on the grooved side.

The sharpened blades may be reinstalled with the help of a trained assistant. Place the cutter in an unlocked support and move it towards your body covering a distance which allows for positioning its other end on the opposite side of the machine. Push the cutter shaft as far as it goes. Place the locking lever in its initial position and tighten the locking nut. Connect the press to the tractor and check the operation of the cutter blades.

Overload protection

Rotor overload protection - applies only to rotor equipped presses

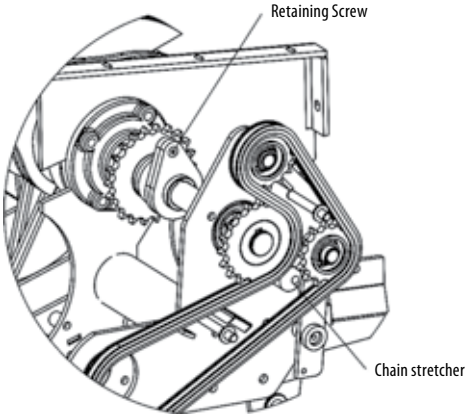


In presses equipped with a rotor the overload protection consists of two bolts. If the bolts are sheared, power is no longer transmitted to the rotor, pickup and screws.

To repair the connection replace the sheared bolts.

Perform the replacement with the tractor's engine off, ignition key removed and the machine protected against accidental movement.

Pickup protection



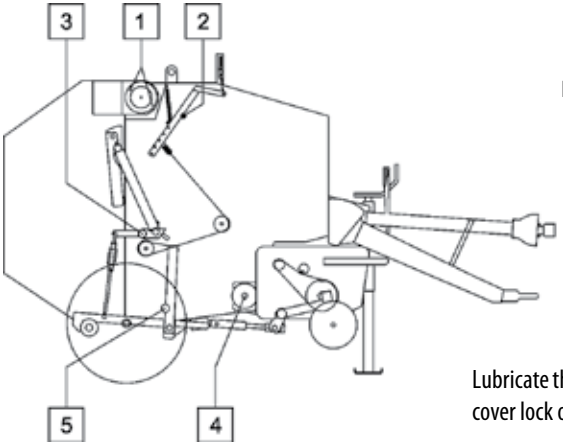
The pickup overload protection consists of a bolt indicated on the diagram above. If the bolt is sheared, power is no longer transmitted to the pickup and screws.

To repair the connection replace the sheared bolt.

Use only shear bolts supplied by the manufacturer to repair the protections. Using improper bolted connections as shear bolts increases the risk of damaging the machine.

If overload protections with different mechanical parameters are used the warranty becomes null and void.

Lubrication point - right side



Lubrication frequency

every 5 hours

every 24 hours

every 40 hours

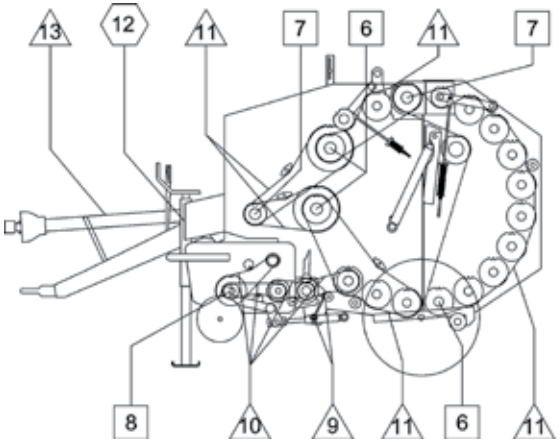
Lubricate the right actuator of the rear cover (2) with the cover lock open.

The drive chains should be lubricated using transmission oil every 5 hours of operation or after rolling 50 bales. Places indicated with a symbol should be lubricated before every use of the press.

Chain lubrication should be performed with the tractor engine off, the ignition key removed and the parking brake engaged.

Secure the oil so that it does not contaminate the environment.

Lubrication point - left side



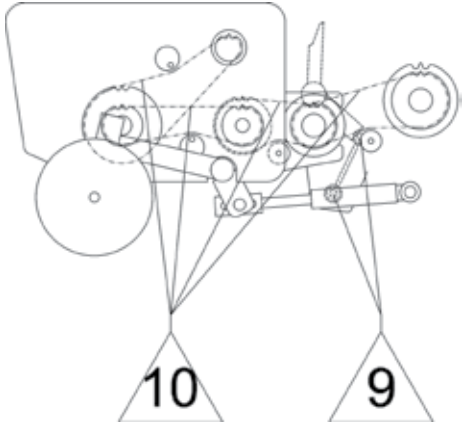
Lubrication frequency

every 5 hours

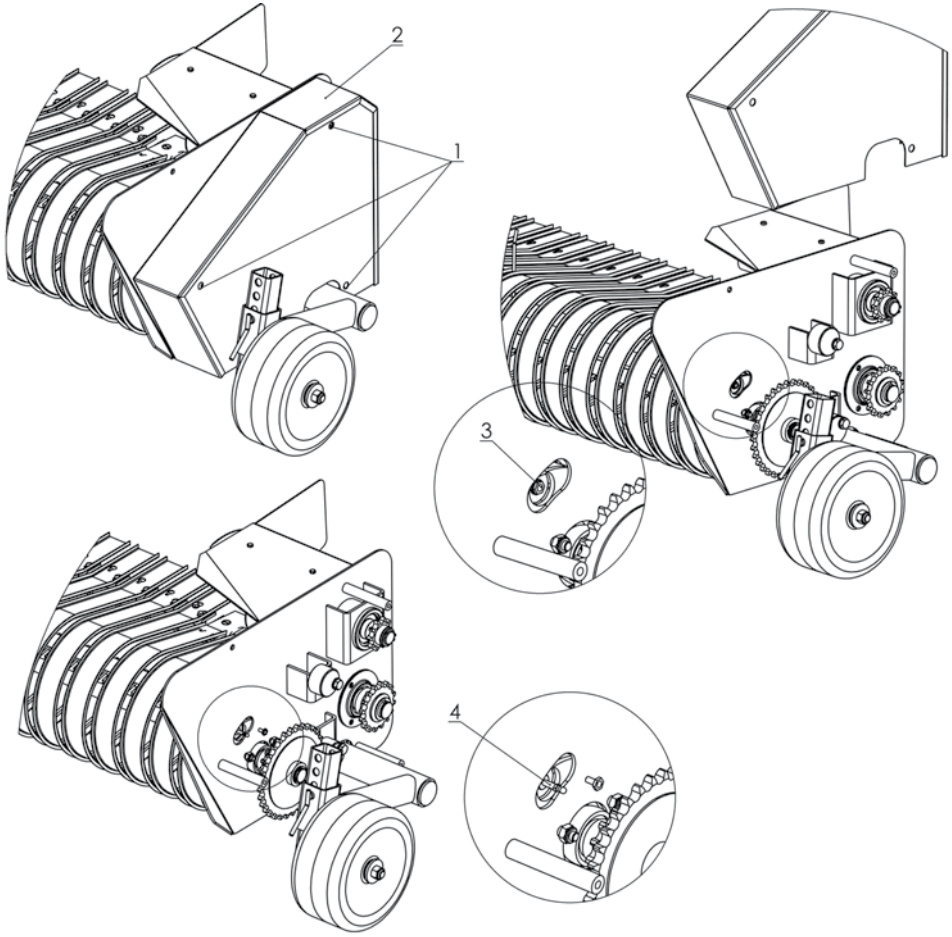
every 24 hours

every 40 hours

Pickup lubricating points



Pickup roller lubricating points



Lubricate the pickup rollers with a grease every 24 hours of operation or after rolling 250 bales, whichever comes first.

To lubricate the pickup rollers, unscrew three bolts (1) and remove the guard (2). Then remove the lock bolt (3) and replace it with a grease nipple (4). Lubricate the pickup rollers. Unscrew the grease nipple and replace the lock bolt again.

Repeat for the remaining three rollers of the pickup.

Chain lubrication should be performed with the tractor engine off, the ignition key removed and the parking brake engaged.

Do maintenance and servicing with oils and greases so that the lubricants do not contaminate the environment.

Central lubrication system (optional supply)

The manufacturer offers a central lubrication system for main drive chains as optional supply.
The standard equipment allows the user to install a central lubricating system at a later date. The installation may be performed by the user or at an authorised service station.

The system consists of a mechanical pump, a 3 l oil tank, directional control valves and nozzles with lubricating brushes which dose oil to the main lubrication points and spread oil homogeneously on the chain surface.

The manufacturer suggests using biodegradable mineral oil without improvers, e.g. SAE 30. At higher temperatures it is advised to use SAE 90 oil.

It is forbidden to use the mechanical pump without oil. Dry running of the mechanical pump may result in its destruction.

After a prolonged standstill of the machine raise the pump several times to remove air from the inlet duct. To adjust the oil dose use the eccentric wheel. The standard setting designated with number 6 should be changed to adjust the dose to the lubricating system working conditions and the used oil.

Directional control valves

Dosing brush

5 Baling press operation

5.1 Wrapping assembly

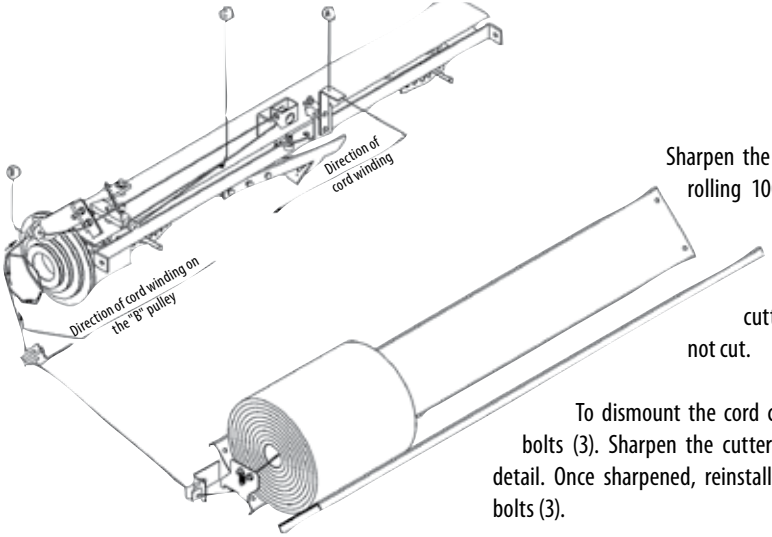
Cord installation

The first cord installation should be performed under the supervision of a dealer's service representative or a manufacturer's service representative.

Before installing the cord turn off the tractor engine, remove the ignition key and engage the tractor parking brake.

The diagram presents the proper cord path. The cord reel should be placed in a box designed for the net bale. Insert the reel as shown on the diagram so that its axis is in parallel to the net box. When starting work insert 2 reels by tying the beginning of the second reel to the end of the first reel (outer layer). Pull the beginning of the cord towards the B pulley and install as shown on the diagram. After the cord is wound properly make a 10 - 15 cm loop as shown in detail C. Tie the cord during reel connection, cord replacement or whenever the cord snaps. Adjust the cord tensioning with clamps 1 and 2.

The manufacturer advises the use of a PP cord for presses with a thickness of 500m/kg.



When collecting hay the manufacturer advises to move the width limiters towards the centre of the baling press.

Wrapping width adjustment

The wrapping width is adjusted using the limiters on both sides of the cord feeder. Setting the limiters near the centre of the press causes the wrapping of the central part of the bale. Placing the limiters at their outermost position causes the wrapping of the maximum bale length. Changes to the wrapping width are made by changing the cord position on the B pulley.

Sharpen the cord cutter (4) after rolling 1000 bales and before every working season.

Also sharpen the cutter when the cord is not cut.

To dismount the cord cutter, unscrew three bolts (3). Sharpen the cutter as shown beside in detail. Once sharpened, reinstall the cutter with the bolts (3).

The wrapping spacing increases as the diameter of the B pulley is increased (the smallest spacing is obtained by installing the cord on the largest pulley).

Cleaning the cord feeder

Clean the inside of the cord feeder after finishing work with the machine.

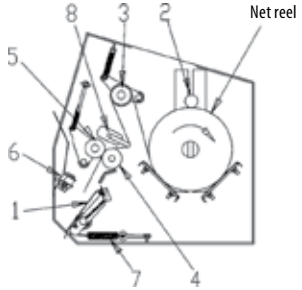
The inside of the cord feeder should be cleared of dust and debris using a thin long rod as shown on the diagram.

Clean the inside of the cord feeder of dust and debris by opening the cover slightly and using a low pressure blast of air. Direct the debris towards the outlet.

Installing the net (optional supply)

The first net installation should be performed under the supervision of a dealer's service representative or a manufacturer's service representative.

Before installing the net turn off the tractor engine, remove the ignition key and engage the tractor parking brake.



To install the net lift and lower the rear cover setting the blade in its waiting position.
The diagram presents the proper net path. The net reel should be placed in a box designed for the net bale. The reel should be placed as shown on the diagram, so that the net on the rear part of the press unwinds to the top. Install the bar (2) serving as the net brake. Run the net through the spreading roller (3), spreading rod (8) and put it on the rubber roller (4) and pressure roller (5) and pull it several centimetres below the knife table (6) as shown on the diagram.

The manufacturer advises to use 2000 - 3000 m net reels with a basis weight of 14 - 16 g/m.

Be especially careful when installing the net. There is a risk of injury caused by a sharp, percussive operating knife or being crushed by the net reel.

Net cutting test

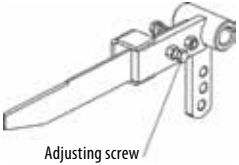
Perform the cutting test during commissioning and after prolonged standstills.
After properly installing the net as described above and pulling it below the knife table check the proper position of the mechanisms and taking maximum care, start the machine at low shaft RPM. After about 30 seconds the knife should hit the table and cut the net over its entire length.

The cutting is considered appropriate is only few uncut fibres remain, which are easily separated from the net remaining on the machine.

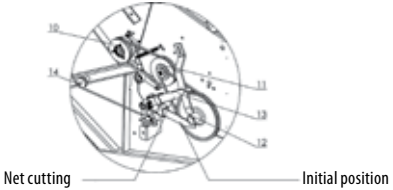
The cutting performance can be improved by sharpening the net cutting blade or by increasing the pull of the springs (7) which tensions the blade console (1).

Adjusting the net wrap number

The bale wrapping length may be set using the adjustment bolt shown on the diagram below.
When the screw is screwed in, the measuring blade (13) retracts from the pulley (12) and the wrapping length decreases. The number of wraps should be adjusted to the specific harvesting conditions. The suggested number of wraps is between 1.5 and 2.5 bale revolutions.



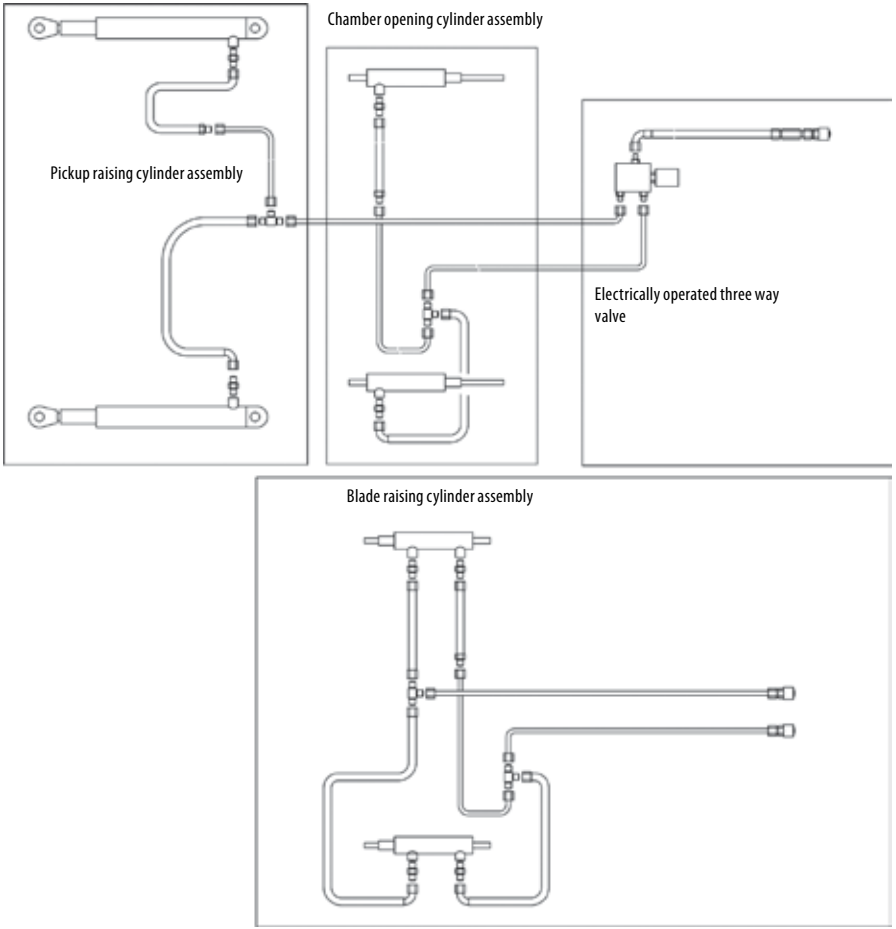
The location of the measurement blade (13) on the press is shown on the diagram below. The measurement blade is controlled in a rotary movement, after it leaves the hub thread of the pulley (12) the blade strikes the table and cuts the wrapping net.



5.2 Hydraulic system

5.2.1 Standard hydraulic system

The baling press hydraulic system is powered by the tractor's hydraulic system.
The rear cover opening/closing circuit and the pickup lowering/raising circuits are connected to the tractor's hydraulic system using a hose supplying the three-way valve and the actuators for opening the chamber and lowering/raising the pickup as shown on the diagram.
The connection of the cutter blades lowering/raising circuit (optional supply) to the hydraulic system is performed using connection hoses as shown on the diagram. This circuit requires a two section external hydraulic power system on the tractor.



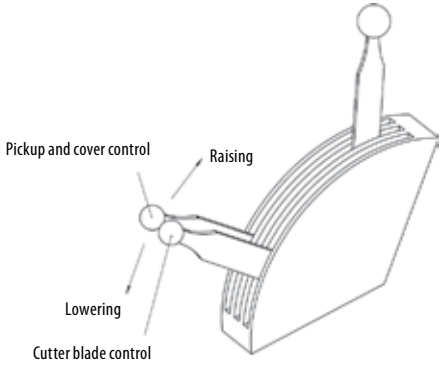
Care must be taken to maintain the hydraulic system in top condition. The oil working under high pressure gets heated up to a temperature which may cause a health hazard.

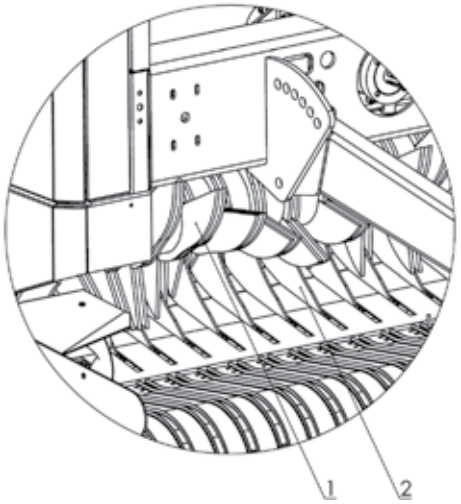
Used or damaged hydraulic hoses must be replaced with new ones.

The connection of the cover lowering/raising circuit into the tractor's hydraulic system is performed using a control lever in the tractor's cabin. This is shown on the diagram.
The selection of rear cover or pickup movement is made on the LP02 counter control panel ⏩ Section 5.4.
Adjustment of the chamber opening speed ⏩ Section 4.2.
The cutter lowering/raising circuit is performed using a control lever in the tractor's cabin. This is shown on the diagram.

Maintain oil purity in the hydraulic power circuit. The oil cleanliness must meet the requirement 20/18/15 according to ISO 4406-1996.

It is advised to use original spare parts which will help maintain the baling press in good technical order for a long time.





Rotor item 1
Cutter blade item 2

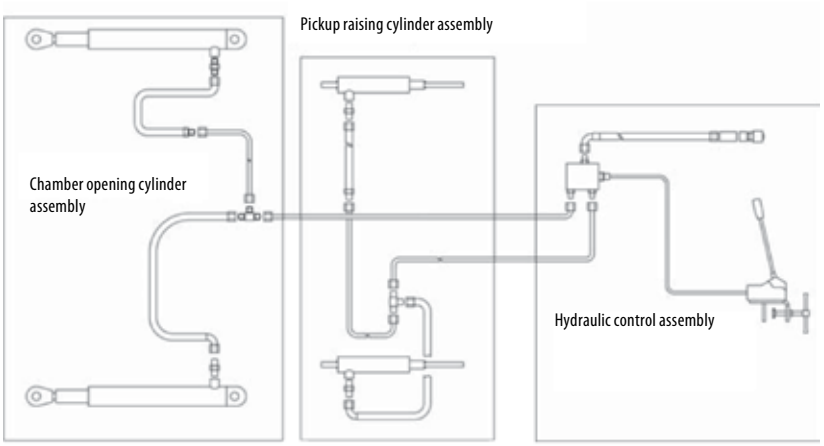
Protect the hydraulic system so that the fluid does not contaminate the environment.

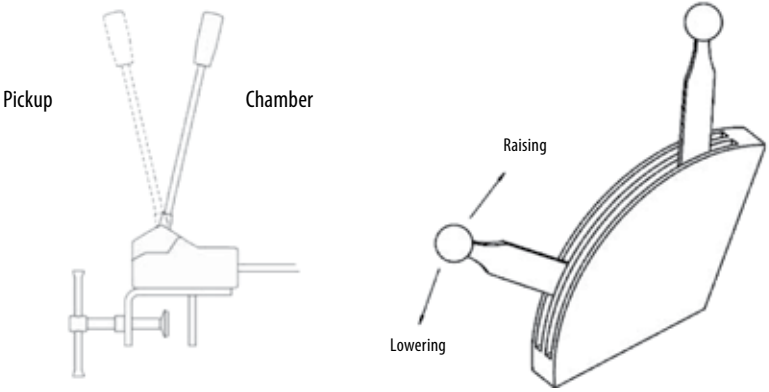
The material collected during movement is cut using 13 blades spaced evenly in the rotor chamber, The cutter blades have individual protections against damage from foreign objects.

Keep the blades in good technical order and check them before starting work with the cutter assembly. Cutter blade sharpening ⏩ Section 4.2.

5.2.2 Optional hydraulic system

The baling press hydraulic system is powered by the farm tractor single-circuit hydraulic system.
The rear cover opening/closing system and the pickup lowering/raising system are connected to the farm tractor hydraulic system with a supply hose. The chamber opening actuators and the pickup lowering/raising actuators are controlled from the hydraulic control system in tractor's cabin. Install the press hydraulic control lever next to the operator's seat as shown in figure beside.
Do the functional test of the hydraulic system by moving the press hydraulic control lever to the position for the press pickup control or the press rear cover control. Having set the press hydraulic lever in the selected position, use the tractor hydraulic control lever to check the performance of the pickup (raising/lowering) and of the rear cover on the baling press.





Care must be taken to maintain the hydraulic system in top condition. The oil working under high pressure, gets heated up to a temperature, which may cause a health hazard.

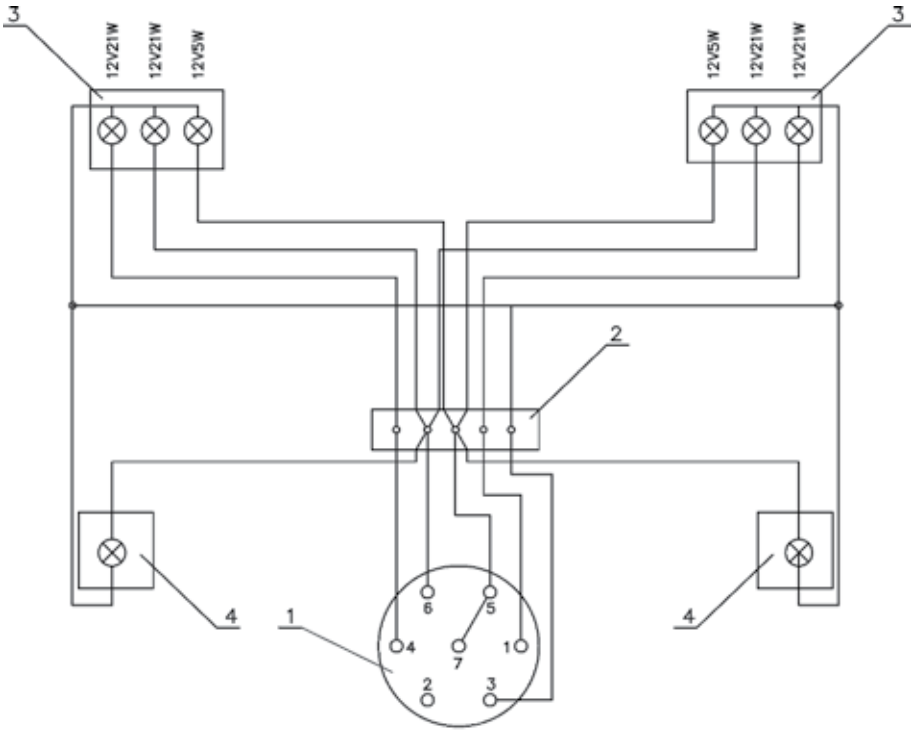
Used or damaged hydraulic hoses must be replaced with new ones.

5.3 Electrical system

The baling press electric system is powered from the tractor's electric system. The connection of the baling press circuit to the tractor's electrical system is performed using a seven-pin connection cable as shown on the diagram.

Connection pin	item 1
Cable loom coupling	item 2
Tail cluster lamp	item 3
Front lamp	item 4

Check if the electrical system and lights operate properly before driving the baling press on public roads.



5.4 LP02 counter

5.4.1 LP02 counter system

The counter is an electronic device intended to operate the METAL-FACH baling press and is used for counting the wrapped bales.

The counter should be installed in the tractor cabin in a place where it is visible and accessible to the operator. ▶▶ Section 5.4.3.

Protect the counter against humidity, excessive vibration and hitting the cabin elements, and especially against falling on a hard surface. The counter can be fixed using its back surface catch.

Protect the counter from water, chemical agents, direct atmospheric precipitation, frost, high temperature exceeding 50°C and direct exposure to sunlight.

The counter kit comprises of:

- Pre-programmed counter in a plastic casing,
- Controller module,
- Bundle of wires,
- Multi-contact connection.

The counter control panel has the functions that correspond to machine's version and to the local market.

The baling press counter has separate options for cord and net wrapping.

The counter allows for programming the operation of applicator and the hydraulic directional control valve

The counter symbols inform about chamber overload, chamber opening, applicator operation, net wrapping system operation, hydraulic directional control valve operation.

It is forbidden to press the buttons on the touch screen with a fingernail or using sharp and hard objects. If this is not adhered to the screen may be irreversibly damaged.

5.4.2 Counter symbols

Operating keys

Applicator

Switching the applicator on/off. Pressing this button turns the applicator. Pressing the button again stops the functioning of the applicator. The green light informs that the applicator is operating.

Wrapping

Switching the wrapping on/off. Pressing and holding the button turns the unit on. Releasing the button turns the bale wrapping unit off. The green light informs, that the wrapping unit is running.

Hydraulic directional control valve

Pressing the button turns the hydraulic directional control valve on. After a set delay time expires, the directional control valve turns off automatically. Pressing the button again before the set time expires turns the directional control valve off.
Green light informs that the hydraulic directional control valve is running.

Reset

Pressing and holding the reset button erases the daily wrap counting data.

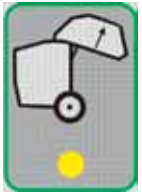
On/off switch

Pressing and holding this button turns on the counter. Pressing it again turns the unit off.

Signal fields

Chamber overload

The red light informs that the chamber is overloaded.



Chamber open

The yellow light informs that the chamber is open.

5.4.3 Connecting and commissioning of the counter

The counter installed in the tractor cabin shall be installed to the baling press system using a 9-pin D-SUB connector. Do not plug in with excessive force. The properly connected plug should be protected against accidental disconnection by tightening the attachment screws located on both sides of the plug.
The counter confirms proper connection with a flashing red dot on the display.

After the on button is pressed the counter performs a display test and checks the power supply voltage.

The counter display will show the indication **8.8.8.8**, all control lights will light up and a sound signal will be activated. Then the display will indicate the power supply voltage **U 12.2** denotes a voltage of 12.2 V.
Every other condition indicates that the counter is damaged.
If the voltage is too low the display indicates **Err1** interchangeably with the voltage value **U 8.5** (denoting a voltage of 8.5 V).

If the voltage is unacceptably high the display indicates **Err2** interchangeably with the voltage value **U 18.5** (denoting a voltage of 18.5 V).

The counter is turned off by pressing the off button. The display will show a flashing red dot and 8.8.8.8. After this massage is displayed, the counter may be disconnected from the power source.
To disconnect the plug unscrew the bots (from both sides of the plug) and holding the plug (not the cable) disconnect the plug.

5.4.4 Counter operation

When the counter is connected to the power supply ⏩ Section 5.3 is started using the On button. The counter display will show the indication **8.8.8.8**, all indicator lights will light up and a sound signal will be activated. Then the display will indicate the power supply voltage **U 12.2** denotes a voltage of 12.2 V.
In the next sequence the counter shows the press operation options:

OP-1 - wrapping with cord (the wrapping button is inactive). The counter emits an interrupted sound signal, a green light is lit on the wrapping button.

OP-2 - wrapping with net, pressing and holding the net wrapping button starts the net wrapping unit. Releasing the button stops the unit operation. The counter displays **0** or the last indication.

The press operation options (cord or net) are programmed after the counter is turned off while the red dot flashes and the indication 8.8.8.8 is displayed ⏩ Section 5.3. Press and hold the Wrapping button and the On/Off button at the same time. The operation option **OP-1** or **OP-2** will be displayed. The selection is made using the Applicator or the Directional control

valve button. The decision is approved using the Wrapping button. The counter is then turned off (red light flashes, 8.8.8.8 is displayed).

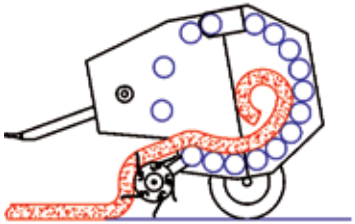
The maximum delay time is programmed after the counter is turned off, the red light is permanently on and 8.8.8.8 is displayed. Press and hold the Directional control valve button and the On/Off button at the same time. The delay time for the directional control valve is displayed, e.g. **tI.30** denoting a delay time TI of 30 seconds.

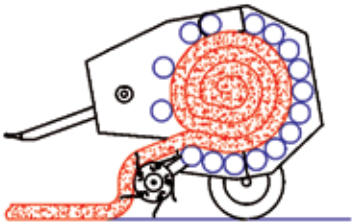
The delay time scope for the directional control valve ranges from 5 to 99 seconds.
The selection is made using the Applicator (-) or the Directional control valve (+) button. The decision is approved using the Wrapping button. The counter is then turned off (red light flashes, 8.8.8.8 is displayed).

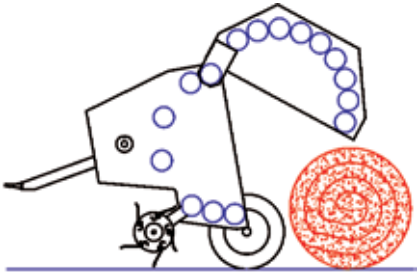
To return to factory settings turn the counter off while the red dot and the indication 8.8.8.8 is displayed. Press and hold the Reset button (red dots blinking, 8.8.8.8.) and the On/Off button at the same time. The display will show the sign **dEFA**. After the buttons are released the counter returns to factory settings and turns off - the display shows the flashing red dot and 8.8.8.8.

Resetting the daily counter is done by pressing and holding the Reset button. Hold the button depressed until the symbol **0** appears on the display.

5.5 Wrapping







Operating principle

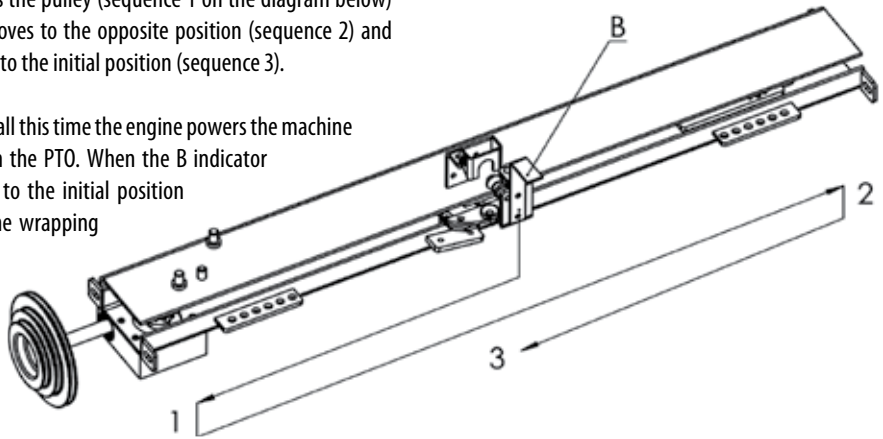
Form the swath into embankments with a width of no more than 1.6 m. The baling press collects the material from the field using a hydraulically operated pickup. The collected material is compressed into a cylindrical bale wrapped using cord or net and then rejected from the wrapping chamber as shown on the diagrams above.

Functional description

The collected material is transferred to the wrapping chamber where the rollers cause it to accumulate and roll into a compressed cylinder. When the operation is finished the indicator shows the A compression level, ⏩ Section 4.2, by reaching the lower position in the yellow field and a sound signal is emitted.

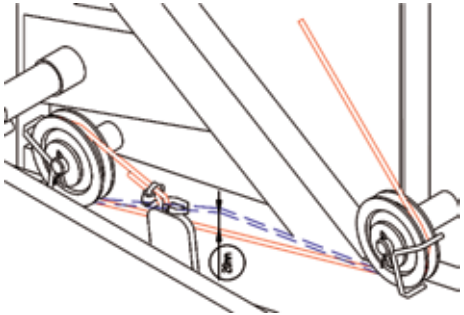
After the signal sounds the bale wrapping commences. When this occurs, stop the tractor (do not turn off the engine) without stopping the PTO. The end of the cord is caught between the revolving bale and the revolving press shaft. The bale wrapping indicator B moves towards the pulley (sequence 1 on the diagram below) then moves to the opposite position (sequence 2) and returns to the initial position (sequence 3).

During all this time the engine powers the machine through the PTO. When the B indicator returns to the initial position open the wrapping chamber. Finally the rolled bale rolls out on the ground and is left behind the operating press.



Hay collection

To prepare the machine for hay collection perform the following actions:
- insert the lever cable in the lever slot no 4 or 5,
- the cord tension suggested by the manufacturer should not exceed 20 mm as shown on the diagram below,
- install the drawbar using the adjustment opening no. 2 ⏩ Section 2.1 (opening no. 3 is used for standard applications),
- remove the clamp, item 14 ⏩ Section 1.2



When the machine is ready for operation and the cord or net has been installed, turn on the tractor's rear PTO drive and start harvesting.

Adapt the tractor's driving speed to the harvesting conditions. The suggested driving speed is between 5 and 10 km/h.

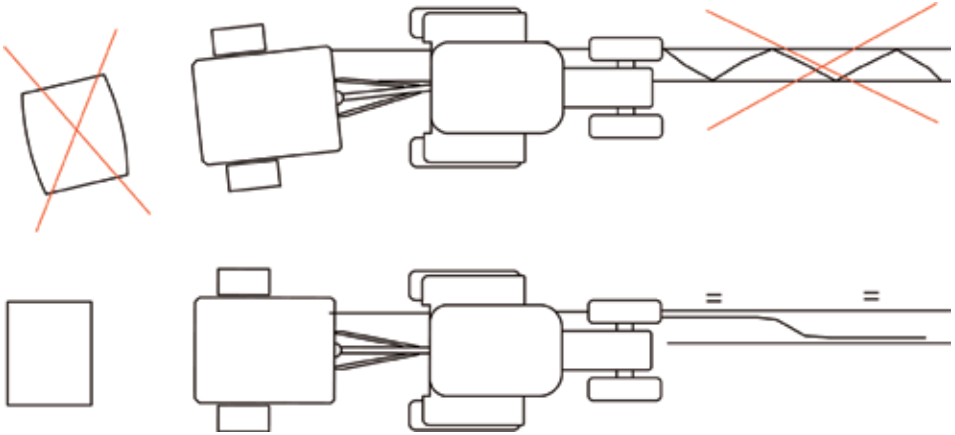
While the machine is operating the pickup supplies swath to the rolling chamber where it is compressed and rolled. The compression ratio indicator is located on the machine's body (on the right side) and informs on the progression of rolling. When the indicator is located in the yellow field the chamber is being filled.

After the control panel emits the sound signal drive another 1 counter and stop before you hear the sound signal indicating the beginning of wrapping of the compressed hay. The control panel will display a moving dashed line as long as the cord is being supplied. When this occurs, stop the tractor-press unit without turning off the PTO.

When the wrapping is complete turn on the hydraulic cover raising. When the cover is being raised the control panel displays a symbol of raising cover. The wrapped bale rolls down the ejector which allows the cover to close and to commence the collection and rolling of swath.

After about four seconds from closing the chamber cover release the control lever of the hydraulic directional control valve, which will allow the mechanical locks to engage and protect the chamber form unauthorised access.

The swath formed into embankments must be collected in accordance to the diagram below. The straight lengths should be adapted to the local conditions.

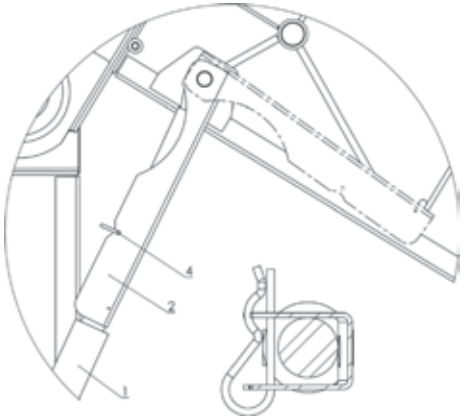


Locking the press cover

Protect the raised cover against dropping down before cleaning the machine and before starting any maintenance procedures.

Lock the press cover in the raised position as shown on the diagram below. To lock the cover use the clamping rings (2) attached to the upper pins of the hydraulic cylinders (3). Move the clamping rings (2) as high as possible so that they hold the piston rods of the extended actuators. Using the pins (4) lock the cover to protect it against accidental lowering.

After the planned tasks are complete remove the clamping rings.



Cleaning the pickup

All overhauls, cleaning and maintenance of the press may be performed only with the tractor PTO turned off, the tractor engine stopped and the ignition key removed.

If the swath gathers over the pickup in the amount larger than the machine's capacity results in machine clogging.

To clear the excess material reverse the tractor-press unit, turn off the tractor engine, remove the ignition key and engage the tractor parking brake. Remove the swath from the pickup and level the embankments. Return to collecting swath.

Note:
Before operation check:

- Whether the baling press drawbar is properly connected to the tractor's lower transport hitch,
- Whether the power hydraulic lines are properly connected,
- Proper connection of the electric system,
- Proper connection of the counter system,
- Proper pickup lifting/lowering,
- Proper opening and locking of the press cover,
- Tightening of the wrapping machine side wheel pins.

The bales should be wrapped only at positive temperatures. The bales should be wrapped in a field or in their storage area.

Do not wrap bales during precipitation.

The rolled bales should be wrapped in foil. The manufacturer suggests to wrap the bales not later than two hours after they are rolled.

Use the bales within 12 months from their wrapping date.

Do not make piles which exceed the dimensions listed below

Baling of higher and wider piles may result in blocking of the machine, or its failure in extreme circumstances.

5.6 Finishing work

After the work is complete, disconnect the counter and secure it against humidity.
Place the machine on a hard, flat, level ground. Disconnect the hydraulic power source and the electric power supply.
Support the press using the support foot.
Disconnect the machine drawbar from the tractor transport hitch.
Disconnect the telescopic jointed shaft and place it on its support. Place covers on the PTO and the telescopic jointed shaft.

It is forbidden to disconnect the baling press from the tractor when there is a bale in the wrapping chamber.

Clean the machine and control its condition, paying special attention to the quality of the paint coat. If it is required to make some touch-ups, it is advised to use the paint repair kit supplied by the manufacturer.
Protect the rubber elements, i.e. hydraulic lines and tyres, against direct sunlight.
The manufacturer advises to store the press in a dry enclosed space or beneath a roof during a prolonged standstill.

6 Periodical inspection

6.1 User inspection

The rolling chains should be lubricated using transmission oil every 5 hours of operation or after rolling 50 bales.
The locations marked with symbol 14 ⏩ Sections 1.5 and 1.6 should be lubricated before each use of the press.
Once per month check the oil level in the intersecting axis gear by removing the overflow orifice plug located in the back Section of the gearbox. If the oil level is too low refill with a 80W90 gear oil.
Replace the oil in the intersecting axis gear every two years as follows:
- place the machine on a hard, flat, level ground,
- place a leak-proof container below the drain plug,
- remove the drain plug, the filler plug and the overflow plug,
- drain the used oil through the drain plug opening into the container,
- after the oil is drained, close the drain plug,
- pour fresh gear oil to the filler plug level,
- close the filler plug and overflow plug.

In order to ensure reliable operation and long life of the driving chains, the manufacturer recommends using a dedicated chain maintenance and cleaning agent. Apply the agent twice per season.
Degrease the chain thoroughly (using e.g. solvents or gasoline) before applying the agent, so that the preparation has direct contact with the chain surfaces. Spray the agent from a distance of 10-20 cm.
Do not lubricate the driving chains with used oil as it contains aggressive components which promote corrosion.
Periodically check the temperature of working bearings. Stop work immediately if the working bearings get too hot.

All overhauls, cleaning and maintenance of the press may be performed only with the tractor PTO turned off, the tractor engine stopped and the ignition key removed.

6.2 Service checks

Periodical service checks shall be performed after every two working seasons of machine use.

7 Authorised service

7.1 Warranty service

The manufacturer issues a warranty on conditions described in the warranty card. During the period covered by the warranty, repairs shall be made at authorised service stations or at the manufacturer's service point.

7.2 Ongoing maintenance

After the period covered by the warranty, authorised service stations perform periodical inspections, adjustments and repairs.

7.3 Ordering of spare parts

Spare parts should be ordered from resellers or directly form the manufacturer stating the name and surname of the user or company name and address, name, symbol, serial number and year of manufacture of the machine, catalogue name of the part, catalogue number, number of drawing or standard, number of ordered items and agreed terms of payment.

8 Press Transport

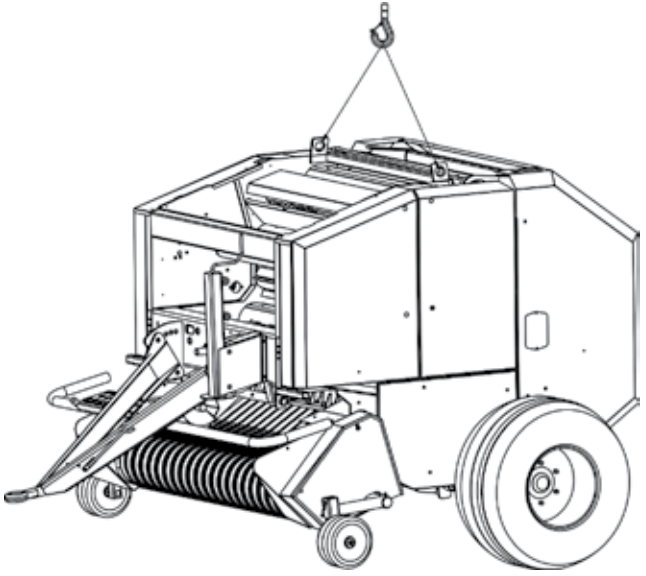
8.1 Transporting a load

The baling press is suitable for road and rail transport using carriers with appropriate load bearing capacity.

The lifting device should be operated by experienced operators with appropriate qualifications.
The lifting sling attachment points are designated on the diagram below.

For loading on a means of road transport, use lifting devices with a lifting capacity appropriate for the baling press weight. Use the frame elements marked on the machine as attachment points (see the symbol).

It is forbidden to transport the baling press with a bale inside the chamber.
The transported baling press must be securely fastened to the carrier vehicle.



8.2 Driving on public roads

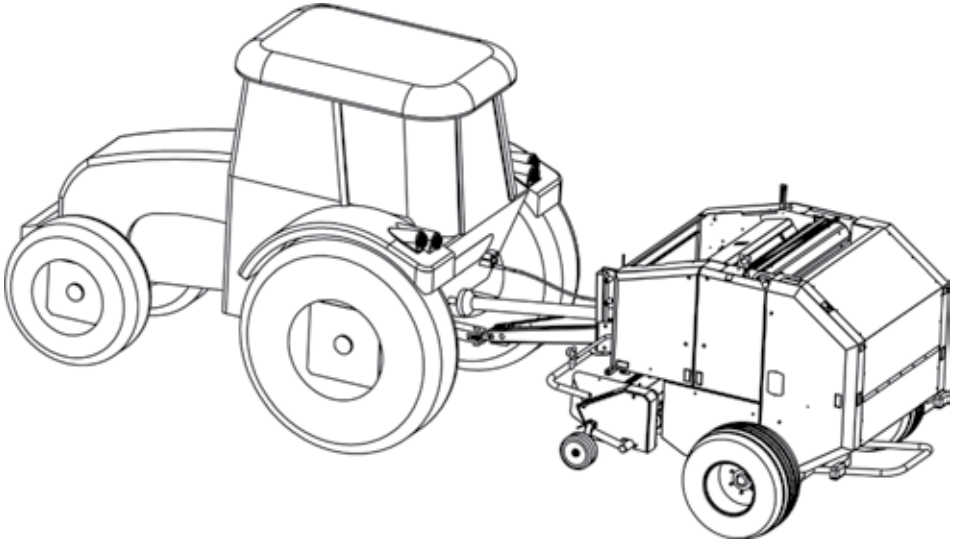
The baling press may be used on public roads as a machine attached to a tractor's lower transport hitch.

The dimensions of the machine prepared for transport ⏩ Section 1.3.

For transporting the machine on public roads, tractors with a rated power not lower than 30 - 70 kW and towing power class not lower than 0.9 - 1.4 equipped with a lower transport hitch may be used.

Before entering a public road:

- Disconnect the telescopic jointed shaft ⏩ Section 2.2,
- Disconnect and properly secure the hydraulic lines,
- Disconnect the counter but leave it in the cabin,
- Place the triangle denoting slow-running vehicles in the stand in the rear grip,
- check the operation of lights and signalling devices,
- Check the tyre pressure.



Every time before entering public roads, check if the baling press is correctly connected to the tractor.

It is forbidden to carry people on transported or working machine.

It is forbidden to transport a rolled bale inside the press chamber.

Before entering public roads, check if the tractor is fully steerable. The load on the front axle must be at least 20% of the tractor's own weight. If this condition is not met, additional weight is required on the front axle.

While driving on public roads, the speed should be adjusted to the existing conditions and not exceeding 20 kph.
Follow the traffic code regulations when transporting the baling press on public roads. If an emergency requires the driver to stop the tractor with a coupled baling press on a public road, the tractor driver should:

- stop the vehicle without causing any danger to the road users,
- stop the vehicle as close to the road edge as possible and parallel to the road axis,
- turn off the engine, remove the ignition key, engage the parking brake and place chocks under the baling press wheels,
- outside a built-up area, the warning triangle should be placed 30 - 50 meters behind the vehicle and the emergency lights must be turned on;
- while driving in a built-up area, turn on the emergency lights and place the warning triangle in the stand on the rear of the machine. Make sure that the triangle is visible to other road users,
- in the event of a breakdown, take the required precautions to ensure safety in the area.

9 Baling press storage

The press counter should be stored in a dry place with the electrical connections protected against soiling and humidity.

The connection cable should be folded and stored in a dry place with the electrical connections protected against soiling and humidity.

Store the baling press on a hard, flat, level surface.

It is advised to store the baling press in a dry location, protecting it against UV rays and other harmful agents.

If the baling press is stored without any canopy roof, protect it with a water-resistant tarpaulin or film.

Store the baling press in an atmosphere free of aggressive agents (e.g. ammonia, chemicals).

Maintain the machine in locations designated with symbols indicating the main lubrication points ▶▶ Sections 1.5 and 1.6 and described in Sections 4.2 and 6.1.

After the working season is over, clean the baling press and check the condition of the protective paint coating. Touch up the damage to the paint coating at a service workshop.

Check the condition and legibility of the nameplate. If the plate is damaged, notify the service station.

Check the condition and legibility of the symbols. If they are damaged, replace them with new ones.

10 Hazards

10.1 Description of residual risks

Residual risk results from incorrect actions of the baling press operator. The greatest hazards occur during the following forbidden actions:

- Coupling the baling press with tractors that do not meet the requirements specified in the operating manual,
- Persons standing under the raised cover which is not protected against accidental dropping,
- Remaining on the press when it is working or in transit,
- Checking the technical condition or cleaning the press when the tractor engine and the machine power system are on,
- Working with open covers,
- Maintenance or repairs of the telescopic jointed shaft conducted with the tractor engine on,
- Using cords taken from a previously rolled bale,
- Using damaged hydraulic lines,
- Baling press operation by an operator standing outside the tractor cabin,
- Machine operation by an operator under influence of alcohol,
- Operating a machine which is damaged or does not have its protective guards in place,
- Transporting a rolled bale inside the press chamber,
- Using the machine against its intended use,
- Leaving the baling press unsecured on an inclined land,
- Standing between the tractor and the machine while the engine is running.

With the aforementioned residual risks, the Z562 bale wrapping machine is regarded as a machine which has been designed and built according to the current state of technology.

10.2 Assessment of residual risks

Follow these guidelines:

- Read and fully understand the Operating Manual.
- Do not stand below the raised lifting components of the machine.
- Do not stand in the machine working area.
- The maintenance and repairs of the baling press should performed at authorised service workshops.
- The baling press should be used by trained and authorised operators.
- Protect the baling press from access by children and bystanders.

Only then can you eliminate the residual risks related to using this baling press and keep it safe to people and the environment.

Note:

The residual risks are present when the aforementioned manufacturer's rules and indications are not followed.

11 Baling press disposal

Disassembly and disposal of the baling press should be performed by specialised service stations familiarised with the construction and functioning of the machine. Only specialised service stations have a complete and up-to-date knowledge of the applied materials and hazards related to their improper transport and storage. The authorised service stations offer both advice and complete machine disposal services.

Use proper tools and auxiliary equipment for the disassembly (jack, wheel puller).

The used oil must be stored in sealed containers. Immediately dispose of the used oil at petrol stations which collect such materials.

Dismantle the machine. Segregate the dismantled components. Pass the dismantled components to relevant collection points.

During disassembly of the baling press use proper protective clothing and shoes.

12 Typical problems and troubleshooting

Item	Problem	Possible cause	Remedy
1	2	3	4
1.	The pickup is clogged.	Too much material is fed to the pickup assembly.	Stop the tractor, turn off the engine and remove the clog.
		High driving speed during harvest.	Decrease the tractor speed mainly when passing over a high bank.
2.	The pickup does not rotate.	The pickup is overloaded. The M6x35-8.8 bolts in the pickup drive overload coupling have been sheared.	Replace the M6x35-10.9 bolts (1 piece) on the left side of the press - see p. 21.
3.	No chains are moving.	The press is overloaded. The M8x40-8.8 bolts of the PTO drive-shaft have been sheared.	Replace the M8x40-8.8 bolts (2 pcs) of the telescopic jointed shaft
4.	The cord was not wound, the cord stops and is not picked up by the bale.	The cord was not installed as shown on the diagram.	Install the cord as shown in the diagram, see Section 5.1.
		The cord was not properly wound on the pulley.	Note the method of installing the cord on the pulley, as per the diagram in Section 5.1.
		The distance of the loop from the roller is too small.	Set the loop distance at 25 - 30 cm from the roller as per Section 5.1.
5.	The cord is wound at the centre only.	The cord between the box and the pulley is slacking.	Tension the cord between the box and the pulley.
		Improper adjustment of the wrapping indicator (A).	Position the feeder as explained in Section 5.1.
6.	The cord wraps around the bale with excessive or insufficient spacing.	The bale wrapping spacing is not adjusted.	Set the bale wrapping spacing using the 3-increment adjustment on the pulley.

13 Accessories

The user may purchase the following optional and additional equipment at an authorised reseller or directly from the manufacturer:

- Spare parts catalogue - printed version.
- Ensilage applicator ⏩ Section 4.1
- Central lubrication system ⏩ Section 4.2
- Cutter assembly ⏩ Section 5.2
- Paint touch-up kit ⏩ Section 5.7.
- Warning triangles for slow-running vehicles ⏩ Section 8.2.

14 Names and abbreviations

Nameplate - plate with information which unequivocally identifies the machine

symbol - information plate

OHS - Occupational Health and Safety

Hitch, lower transport hitch - coupling elements of the tractor ⏩ See the tractor operation manual.

PTO - rear power take-off - part of the tractor ⏩ See the tractor operation manual.

Telescopic jointed shaft - shaft used to transfer torque to the machine

PIC - power take-off shaft - part of the baling press

UV - ultraviolet radiation; invisible electromagnetic radiation which may have a negative influence on human health; UV radiation also has a negative effect on rubber elements.

Towing power class - value which characterises the towing power of a given tractor, class 0.9 refers to the towing power of 9kN. Ursus C 355 and 4011 have such a towing power class.

kW - kilowatt, unit of power

V - volt, unit of voltage

kPa - kilopascal, unit of pressure

kg - kilogram, unit of mass

m - metre, unit of distance

mm - millimetre, auxiliary unit of distance equal to 0.001 m

min - minute, auxiliary unit of time equal to 60 seconds

rev - revolution, type of movement

rpm - revolutions per minute, unit of rotational speed

kph - kilometres per hour, unit of speed

db(A) - A-scale decibel, unit of acoustic pressure

Baling press warranty card

Warranty card
Commissioning card
for the Z562 Baling Press

Metal-Fach
ul. Kresowa 62
16-100 Sokółka

Z562 Baling Press **Serial no.: .....Year/date of manufacture.....**

TO BE FILLED IN BY THE SELLER

Date of sale .....

On behalf of the manufacturer the commissioning was performed by:

.....

the warranty service is provided by: .....

Seller's stamp, legible signatures of the outlet representatives

Name and surname of the Customer.....Signature .....

City, post code.....

Warranty conditions

1. The manufacturer provides a baling press designed and built in compliance with the current standards. The manufacturer guarantees that the supplied baling press is free of manufacturing defects.

2. Metal-Fach Sp. z o.o. provides service for 12 months starting from the date of first sale, provided the wrapping machine is used for its intended purpose and the recommendations contained in the manual are followed.

3. The warranty card and the commissioning card properly filled in at the Dealership and signed by the customer are the confirmation of the manufacturer's warranty; the customer's signature also means the acceptance of the warranty conditions.

Warranty conditions

4. The quality warranty covers the machine defects caused by defective manufacturing, material defects and latent defects.

5. The warranty does not cover the assemblies and parts which are subject to normal wear and tear (e.g. hydraulic power lines).

6. The warranty does not cover any mechanical damage or other damage resulting from improper use, improper maintenance or improper adjustment of the baling press.

7. The warranty does not cover any damage resulting from using polluted or inappropriate oil in the tractor's hydraulic system. The oil cleanliness must meet the requirement 20/18/15 according to the ISO 4406-1996 standard.

8. The warranty does not cover any damage resulting from improper storage of the machine.

9. Any unauthorised modifications in the construction of the machine introduced by the user will result in automatic termination of the warranty.

10. The manufacturer shall not be held responsible for loss, damage or destruction of the product resulting from causes other than defects of the supplied baling press.

11. During the warranty period the manufacturer will repair any defects which occurred as a result of the manufacturer's negligence with the exception of defects listed in Sections 5 - 9.

12. The warranty repair shall be made within 14 working days of the notification/ supply of the baling press to the designated service station or at another time agreed upon.

13. The warranty is extended by the time required to complete the repair.

14. During the warranty period all repairs which are not covered by the warranty are performed by authorised service stations at a full cost chargeable to the user. Before such repairs, the service station will inform the user of the suggested cost, time and scope of the repair.

15. The decision whether to commence a chargeable repair of the baling press with a warranty valid at the time of repair is made by the customer.