

IMPORTANTE

Questo manuale è da considerarsi parte integrante della macchina e deve accompagnare la stessa in caso di rivendita fino alla sua demolizione.

ROTOIMBALLATRICI MINI ROUND BALERS - RUNDBALLENPRESSE PRESSE ROTATIVE - PRENSAS ROTATIVAS

RRX 60 - RRX 60 S

	05 - 2018
<small>Modella : Serial number Bauplanummer - Numéro de machine : Matrícula</small>	<small>Edizione : Edition Ausgabe : Edição : Edition</small>

ITALIANO - Manuale d'uso

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GENERAL AND SAFETY INFORMATION

user manual

Serial number

Edition 0
04 - 2018

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EC DECLARATION OF CONFORMITY

The equipment has been designed and built according to the manufacturer's regular national legislations. However, the equipment may be subjected to periodic review by designated bodies as indicated in Directive

2009/128 / EC of the European Parliament and of the Council of 21 October 2009.



ORIGINALE

I

Dichiarazione "CE" di conformità
(Direttiva 2006/42/CE allegato II tipo A)

La Ditta BOROUP S.p.A. dichiara che la rotolabulatrice (Art. 1 § 2), identificabile dai riferimenti in calce, è conforme ai requisiti essenziali di sicurezza e di tutela della salute come richiesti dalla Direttiva 2006/42/CE nonché ai requisiti della direttiva 2004/108/CE. Per la verifica della conformità di cui alla Direttiva sopra menzionata, sono state consultate le seguenti norme armonizzate: EN ISO 4254-1:2009, EN ISO 4254-1:2013, EN 15811:2009, CEI EN 60204-1:2006,A1:2009 e le seguenti norme e specifiche tecniche nazionali ed internazionali: ISO 11684:1993, EN ISO 3767-2:1998.

GB

Declaration of conformity "CE"
(Directive 2006/42/CE enclosure II type A)

BOROUP S.p.A. declares that the round balers (Art. 1 § 2), recognizable from the references at the foot of the page, is in conformity with the essential security and health protection requirements as requested by the Directive 2006/42/CE and it's also in conformity with the requirements requested by 2004/108/CE Directive. For verifying the conformity to the above mentioned Directive the following armonized rules have been consulted: EN ISO 4254-1:2009, 4254-1:2013, EN 15811:2009, CEI EN 60204-1:2006,A1:2009 as well as the following rules together with the following national and international technical specifications: ISO 11684:1993 and EN ISO 3767-2:1998.

F

Certificat de conformité "CE"
(Directive 2006/42/CE enclosure II type A)

BOROUP S.p.A. déclare que la presse à balles rondes (Art. 1 § 2), identifiable par les références au bas de la page, est conforme aux conditions essentielles de sécurité et de sauvegarde de la santé selon la Directive 2006/42/CE et est conforme aux conditions selon la Directive 2004/108/CE. Pour vérifier la conformité à la Directive susmentionnée, les normes harmonisées suivantes ont été consultées: EN ISO 4254-1:2009, EN ISO 4254-1:2013, EN 15811:2009, CEI EN 60204-1:2006,A1:2009 et les normes suivantes, ensemble avec les spécifications techniques nationales et internationales suivantes ont été consultées: ISO 11684:1993, EN ISO 3767-2:1998.

D

Konformitätserklärung "CE"
(Richtlinie 2006/42/CE Anlage II Typ A)

BOROUP S.p.A. erklärt, daß die Rundballenpressen (Artikel 1 § 2), von den nachstehenden Daten identifizierbar, gemäß den wesentlichen Sicherheits- und Gesundheitsschutz-Erfordernissen, laut der Richtlinie 2006/42/CE und gemäß den Erfordernissen laut EG-Richtlinie und 2004/108/CE ist. Um die Konformität mit der obengenannten EG-Richtlinie zu prüfen, wurden die folgenden Richtlinien nachgeschlagen: EN ISO 4254-1:2009, EN ISO 4254-1:2013, EN 15811:2009, CEI EN 60204-1:2006,A1:2009 und wurden die folgenden Richtlinien und die folgenden technischen nationalen und internationalen Spezifikationen nachgeschlagen: ISO 11684:1993, EN ISO 3767-2:1998.

E

Declaración de conformidad "CE"
(Norma 2006/42/CE anexo II tipo A)

BOROUP S.p.A. declara que la rotolabuladora (Artículo 1 § 2), identificable para las referencias al pie de la página, es conforme a los necesarios requisitos de seguridad y de tutela de la salud según lo que pedido por la declaración 2006/42/CE y es conforme a los necesarios requisitos según lo que pedido por la declaración 2004/108/CE. Para la verificación de conformidad de la Directiva arriba mencionada, se han consultado las siguientes normas armonizadas: EN ISO 4254-1:2009, EN ISO 4254-1:2013, EN 15811:2009, CEI EN 60204-1:2006,A1:2009 y se han consultado las siguientes normas y las siguientes especificaciones técnicas nacionales y internacionales: ISO 11684:1993, EN ISO 3767-2:1998.

Tipo - Type - Type - Type - Tipo

CRX 120 L

Matricola - Serial no - Matricole - Kennnummer - Numero de matricola

HBGRCRX120LXU0508

BOROUP S.p.A.

L'Amministratore Delegato, Gianni Filippi

In data, li 14/09/2018

• Fazzola Tecnica costituita da: • Technical F&E realised by: • Deviser Technique réalisé par: • Technische Realisierung durchgeführt von: • Esperto Tecnico realizzato per:

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PURPOSE OF THE MANUAL

This User Manual, which is an integral part of the equipment, was created by the Manufacturer to provide the necessary information to those who are authorized to interact with it over the expected life span.

This manual contains detailed information on the safety regulations, the operation descriptions and instructions necessary to correctly perform the main operations of ordinary and periodic use and maintenance of the equipment with the relative recommended intervention frequencies.

Any supplements added by the manufacturer must be stored with the manual and considered as an integral part of the same manual.

The instructions contained in this manual are intended for a professional user, who must possess specific skills and knowledge on how to use the equipment, must be authorized, instructed and appropriately trained.

The instructions contained in this User Manual must be read carefully, to learn the correct operation of the equipment and to carry out the necessary maintenance interventions to prevent any injuries or damages to the machine.

The measurements in this User Manual are expressed in the metric decimal system. Use only correct replacement parts and fasteners.

The left and right sides are those looking the direction of progress of the equipment.

These information are provided by the Manufacturer in its original language (Italian) and in English and may be translated into other languages to meet legislative and/or commercial requirements.

This equipment has been designed exclusively for agricultural or similar operations reported here. Any other use will be considered as unforeseen and therefore improper use. The Manufacturer declines all liability for accidents and/or damages caused by improper use of the equipment. The consequences will be the sole liability of the operator. It is also essential, within its intended use, to scrupulously observe the methods of operation and the regular maintenance and repairs indicated.

Use, maintenance and repair of this equipment are reserved exclusively to professional personnel who know their particular characteristics, driving modalities of the tractor used and, in order to prevent possible accidents, they know the relative safety regulations. It is important, to always observe all the regulations on accident prevention, general occupational safety regulations and road traffic regulations.

The use of original spare parts and accessories is always recommended. Non-original parts may be dangerous and cause damage and loss of performance to the equipment.

Please keep it in a safe, easily accessible place so that it will be handy for reference when required.

This manual, in case of transfer or sale, must always be delivered together with the machine.

If it is damaged or lost, request a copy from the machine manufacturer or previous owner. The manual is considered an integral part of the machine.

Some information and illustrations in this manual may not correspond exactly to what you have, but this does not affect their function.

The Manufacturer, in pursuing a policy of constant product development and updating, reserves the right to make changes without the obligation to provide prior notice.

To better stress the importance of some passages or to indicate important specifics, symbols, whose meanings are described as follows, have been adopted.



Danger - Warning

Indicates critically dangerous situations that, if neglected, can result in serious personal safety and health hazards.



Caution - Warning

Indicates that suitable actions must be employed in order to avoid personal safety, health hazards and economic damages.



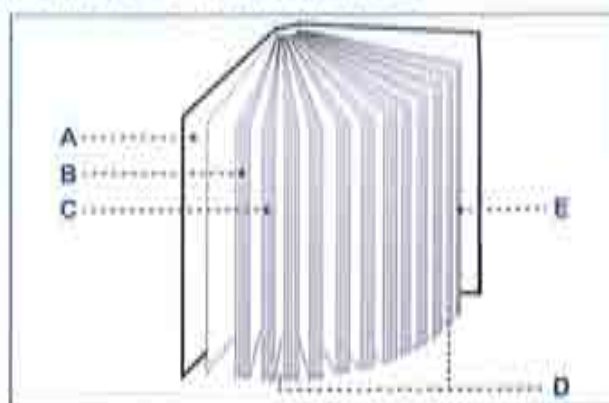
Important

It indicates technical information of particular importance not to be overlooked and precautions to be taken to avoid causing damages to the equipment.

COMPOSITION OF THE MANUAL AND METHOD OF REFERENCE

This instruction manual, barring any differences which do not affect the correctness of the information, consists only of the leaflets concerning the machine in question and the operating units which make it up. The illustration below shows the manual layout.

- A) **Frontispiece:** indicates the model and the commercial description of the machine including the editorial identification data. It also contains a list of the booklets related to the installable components. Some of them may be missing from this equipment.
- B) **Leaflet 1 - General safety information:** contains the information necessary to identify the machine, use the manual as well as all the information regarding safety.
- C) **Leaflet 2 - General description of the machine:** contains the basic principles as well as the manufacturing and operating philosophies.
- D) **Booklets 3 - Information on the installed functional groups:** contains all the information related to each single group installed on the equipment.
- E) **Last leaflet - Technical modifications:** it contains any information on the modifications made to the manual over time.



Parts (C) and (E) may not be present in all manuals.



Important

Read this booklet before the others as it contains general information that the operator needs to learn before moving on to specific equipment explanations.

SERVICE PROCEDURE

Please refer to the Manufacturer's service centres for any need.



Important

For every technical service request regarding the machine, please indicate the data found on the identification plate, the approximate hours of use and the type of fault detected.

DOCUMENTATION ENCLOSED

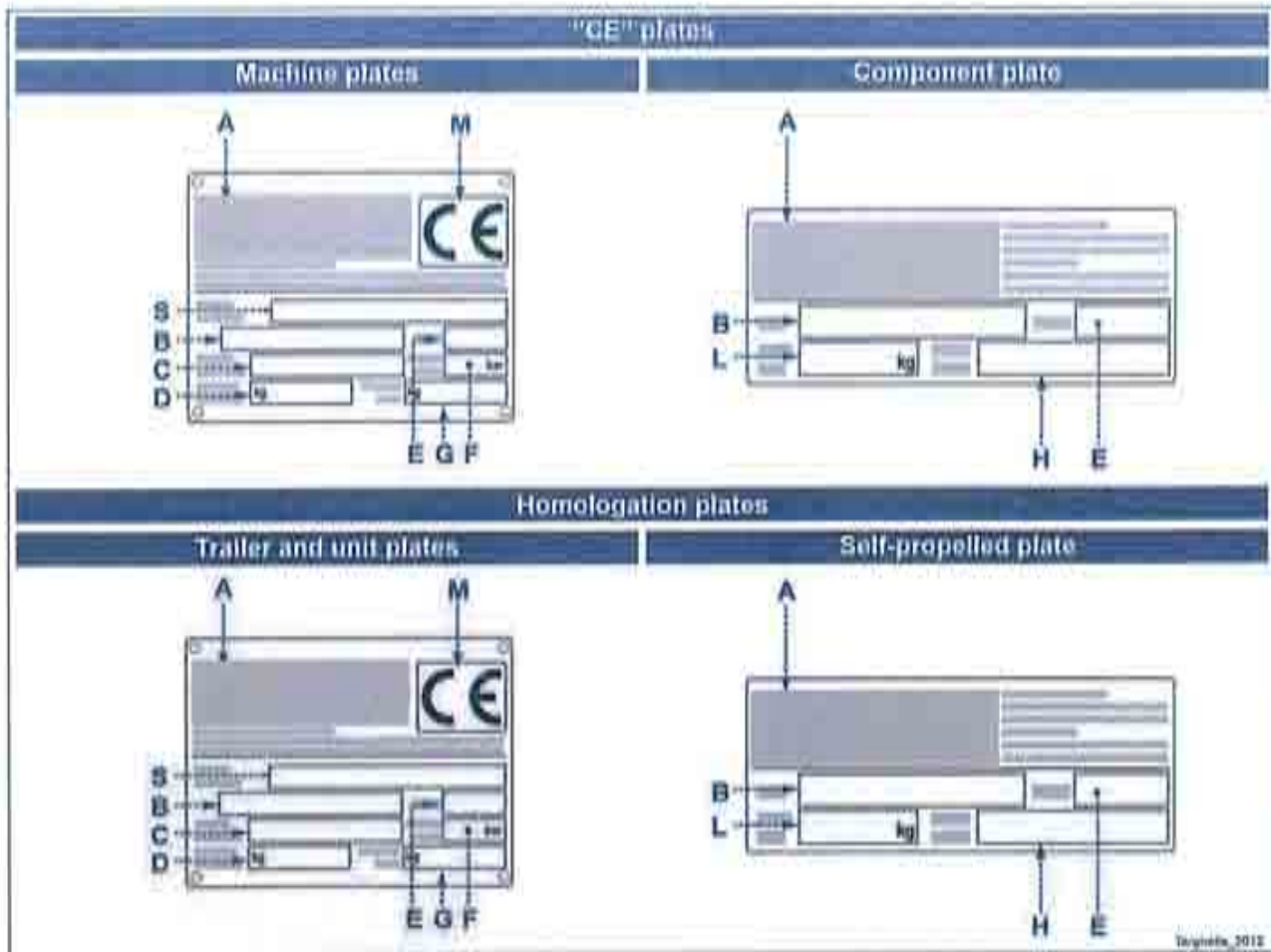
The following documentation is included with this manual.

- If provided for by Machine Directive 2006/42/EC, the CE Declaration of Conformity is supplied with this manual.
- Warranty.

MANUFACTURER AND MACHINE IDENTIFICATION

The ID plates shown are applied directly onto the machine.

It details references and all important operational safety requirements.



- A) Manufacturer ID.
- B) Model
- C) Identification number
- D) Total weight of the maximum configuration
- E) Year of manufacture
- F) Water system maximum pressure (bar)
- G) Empty weight in the maximum configuration (Kg).
- H) Manufacturing order number
- K) Rear axle maximum mass (kg).
- L) Total weight (kg)

- M) EC conformity mark.
- N) Homologation number
- P) Frame number.
- Q) Eyelet maximum mass (kg).
- R) Axle maximum mass (kg).
- S) Assignment
- T) Overall maximum mass (kg).
- U) Front axle maximum mass (kg).
- V) Smoke grade index
- Z) Total power
- Z) Total power

Targem, 2012

GENERAL REGULATIONS

During the design and construction of the machine, the manufacturer has paid special attention to aspects that could place the personal safety and health of the people in charge of operating the machine at risk.

In addition to observing the specific laws in force, the manufacturer has adopted all "exemplary construction technique principles". The purpose of this information is to advise the operators to use extreme caution to avoid risks. However, discretion is invaluable. Safety is also entrusted to the staff who operate the machine.

Carefully read the instructions published in the supplied manual and found directly on the machine while strictly observing those concerning safety.

Time dedicated to reading will prevent unfortunate accidents; remembering what one was supposed to do when the damage is already done is always too late.

Pay attention to the meanings of the symbols on the applied stickers; their shape and colour are significant to safety ends. Keep them legible and observe the shown information.

Never tamper, dodge, eliminate or by-pass the safety

devices installed on the machine. Neglect to respect this requirement may cause serious risk to personal safety and health.

The staff in charge of carrying out any work on the machine during its entire life must have special technical knowledge, particular skills and certified experience in the specific sector. Neglect to observe these requirements may prove hazardous to personal safety and health.

When operating the machine, only use appropriate protective clothing and/or accessories as indicated in the instructions for use provided by the manufacturer and as provided for by the current regulations in terms of safety in the workplace.

Some phases may require the help of one or more assistants. In these cases such persons should be suitably trained and informed on the type of activity being performed, so as not to cause damage to the health and safety of persons.

SPECIFIC SAFETY RULES

The manufacturer declines all liability for the non-observance of the warnings reported in this manual.



Danger - Warning

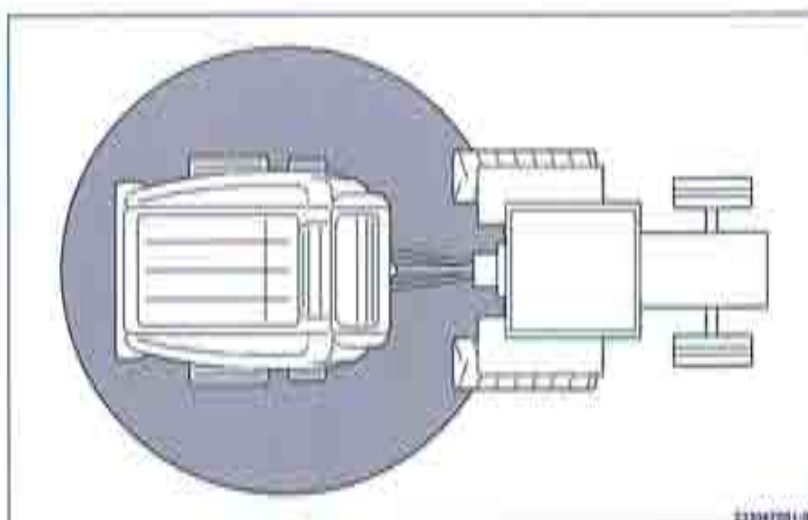
Never leave the equipment unattended while working.

Never leave the tractor unattended with the engine running.

During operation, maneuvers must be carried out taking into consideration the danger zone shown in the figure.

Before putting the machine into operation make sure that there are no persons or animals around the work area, otherwise stop the machine and clear the area.

The person using the round baler is liable towards third parties for any damage caused by the machine inside the radius of action.



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**Danger - Warning**

During operation of the machine it is absolutely forbidden to approach the mechanical parts, touch the moving parts or interpose oneself between them.

Keep your face, hands and feet away from moving parts; stay at a safe distance.

Do not stand behind the machine; the tailgate could open to eject the bale.

The area in front of the pick-up is very dangerous; when the machine is in operation, never introduce the forage using the hands, feet or the help of any other object

**Danger - Warning**

Before accessing the work area of the equipment (danger zone), always carry out the following operations:

- Switch off the power take-off (PTO).
- Engage the tractor parking brake.
- Stop the tractor engine.
- Remove the main switch key.
- Wait for the complete stop of all moving parts.

**Danger - Warning**

During operation it is absolutely forbidden to bring your body near the mechanical parts, touch the moving parts or stand between them. Keep your face, hands and feet away from moving parts and keep a safe distance.

Load the binding net roll only with the tractor switched off.

Unload the bales on flat ground or, in the case of sloping ground, in a suitable position.

**Danger - Warning**

Do not allow the machine to be used by minors or persons who are not competent, or not in good health or who do not have a valid driving license

**Danger - Warning**

Before any intervention it is mandatory to switch off the tractor and remove the key from the dashboard.

**Danger - Warning**

Maneuvers (especially in the absence of visibility) must be carried out with prudence and caution.

**Caution - Warning**

Check that the decals are intact and legible.

Take great care to maintain a minimum safety distance when operating in the vicinity of electrical power lines; the machine is made mainly of metal and therefore if it comes into contact with an electrical line or if there is a discharge between the line and the machine the operator could be electrocuted with possible fatal consequences.

If it is necessary to operate in the vicinity of electrical power lines contact the competent electricity company.

HANDLING AND LOADING SPECIFICATIONS

The equipment may only be loaded onto and transported by hoisting devices having sufficient carrying capacity, anchored at the points specified by the manufacturer.

The staff in charge of loading, unloading and moving the machine must have skills and experience acquired in the specific sector.

During manoeuvres, when using the machine directly, the operator must be informed on the procedures required to carry out these operations safely.

Lifting and transportation must be carried out using suitable means and anchoring the machine in the places provided by the manufacturer. Personnel who are authorised to perform these operations must possess specific skills and experience, to safeguard themselves and others involved.

Before moving the machine with vehicles, make sure

that the machine and its components are suitably anchored to the vehicle and that their volume does not exceed the maximum allowable values. Place the required signals if necessary.

It may be necessary to move the machine frequently. To avoid sudden, uncontrolled movement make sure that all parts which could cause this have been safely locked before transportation.

Road transport is allowed ONLY to approved equipment and to tractor drivers who have the necessary requirements according to the laws in force.

In any case, before starting transportation, block the parts which could cause sudden unexpected movements and check that the volume does not exceed the maximum allowable values. If necessary, arrange proper signalling.

Warnings for transport



Danger - Warning

The transport speed limit is established by the local road traffic rules and the capacity of this machine. Always comply with the rules of the Highway Code when driving on public roads.

When towing this machine at transport speed, do not exceed its gross weight (PTAC).

Some tractors are able to operate at higher speeds than the maximum transport of this equipment. Regardless of the maximum speed the tractor can reach, do not exceed the maximum transport speed of the equipment.

NEVER drive on public or private roads with a bale in the chamber of the round baler.

Always empty the chamber before leaving the field. Make sure that the tailgate is closed and locked in position. Driving on the open road must be done in compliance with the traffic regulations in force in the Country where the machine is used.



Danger - Warning

Exceeding the maximum transport speed of the equipment could cause:

- tractor and equipment loss of control;
- reduction or total absence of braking;
- damages to the tyres of the equipment;
- damages to the structure or components of the equipment.

When towing loads on surfaces in poor condition, in bends or on slopes, proceed with extra caution and reduce speed.

It is very important to remember that the capacity for road holding, maintaining direction and braking may be influenced considerably by the load being towed. Before towing the machine withdraw the parking jack into the position for transport.

Ballast control, wheel distance and tyre inflation

Make sure that the ballast, the wheel distance and the tyres inflation are suitable for the type of tractor and ensure the correct stability of the equipment in all conditions, especially if you were to work on hilly terrain or in adverse conditions.

Also carefully read the instructions in the tractor's use and maintenance manual and, in case of more restric-

tive indications, follow the instructions of the tractor manufacturer.

Repairs to wheels and tyres must be carried out by competent and specialized personnel equipped with the appropriate equipment.

Lighting system and safety devices

Prevent collisions with other road users, with slow tractors with mounted or towed equipment and with self-propelled machines. Frequently check vehicles arriving from behind, especially before bending, and use direction indicators.

Use the front lights, warning flashers and turn indicator both at night and during the day. In general,

observe the rules of the Highway Code for lighting the vehicle and the various signals.

The lights and the various signaling means must be kept clearly visible and in good condition.

Replace or repair damaged or lost lighting and/or signaling devices.

OPERATION AND USE REGULATIONS

The operator must be familiar with the use of the machine and be suitably qualified and experienced for this type of task.

After obtaining the necessary information, when using the machine for the first time, if necessary, the operator can simulate some manoeuvres to get used to the controls and their main functions, especially the starting and braking operations.

The operator must also be provided with a driving license suitable for the use of agricultural tractors.

Only use the machine for the purposes expressly intended by the manufacturer. The improper use of the machine could place the personal safety and health of the staff at risk as well as cause economic damage.

The machine has been designed and constructed to satisfy all the operating conditions indicated by the manufacturer. Tampering with any device to achieve services other than those provided may be hazardous to personal safety and health and provoke economic loss.

Do not use the machine if the safety devices are not perfectly installed or in perfect operating condition. Failure to comply with this requirement could place the personal safety and health of people at risk.

During the preparation and use of all chemicals, appropriate measures must be taken in order to avoid placing people's health and safety at risk and damaging the environment.

Any chemical residue must be disposed of in accordance with the applicable waste disposal regulations in force.

Park the machine in a suitable area, where it does not represent an obstacle or danger to circulation, where access is restricted to authorised staff, with all the necessary measures for safety purposes.

Prevent strangers from approaching the working area when the machine is in use. Should it become necessary, stop it immediately and make the people found in the risk area move away.

Product clogging



Danger - Warning

If the machine during work get clogged, do not attempt to remove the product from the equipment while it is operating.

The machine feeds the product faster than it can be released.

In case of product clogging in the feeding area proceed as indicated.

- Retrocede at least two meters.
- Switch off the power take-off (PTO).
- Engage the tractor parking brake.

- Switch off the tractor and remove the key from the dashboard.
- Wait for the complete stop of all moving parts.
- Switch off the electronic control system.
- Remove the clogged product between the rake and the pick-up teeth.



Caution - Warning



Wear safety gloves whenever operating close

to blades and sharp components.

- Spread the pile by restoring the swath.
- Restart the tractor and proceed slowly until the clogging is completely suctioned.

Cardan shaft



Danger - Warning

If the cardan shaft does not have its own plastic protections, turn off the tractor engine immediately and avoid approaching the cardan shaft as long as it is moving, let alone avoid overriding it with the risk of being hooked by its movement and undergoing very serious damages, even fatals.

It is good practice to wear work clothes that do not have fluttering parts, such as scarves, belts, ties, etc. The improper use of the cardan shaft involves considerable risks for the safety of the operator. Periodically check that the protections are intact. Carefully follow the instructions in the user manual of the PTO shaft; it must be approved and certified according to the regulations of the country of use. Always fix the anti-rotation chains of the guards.

Road use and towing equipment

The road transfer speed must not exceed 25 km/h.

The machine must be towed by an agricultural tractor with a towable mass greater than or equal to the total weight of the machine.



Danger - Warning

If the weight of the equipment incorrectly exceeds the weight of the tractor and you are moving, slow down the tractor gently, avoid rough turning and stop on horizontal terrain or across the slope.

Remember that the greatest danger is the ineffectiveness of the tractor braking system with possible overturning of both the tractor and the equipment in the event of sudden steering.

Night working

The use of the machine in conditions of precarious visibility requires the utmost attention. Check that the tractor's lighting system is adequate, efficient and capable of illuminating at least the danger area of the machine. If the tractor does not have it, the installation must be carried out.

Warnings for the equipment

**Caution - Warning**

The hydraulic couplings shall always be kept clean. To prevent them from becoming dirty or damaged, after use always refit the protective plastic cover provided at the time of purchase.

Check and if necessary replace any damaged tubes or fittings; all flexible tubes should be replaced in any case five years after the date stamped on the tube.

Before re-pressurising the system check that the tubes and connections are tight; use a piece of cardboard or absorbent paper to check for possible leaks.

Before inserting the power take-off make sure that:

- The number of turns and the direction of rotation are correct (refer to the plate on the drawbar of the machine, see file 3).

**Caution - Warning**

Never insert the power take-off before starting the tractor engine.

- Stop the power take-off during U-turns and when steering with a very narrow angle.
- Position the cardan shaft on the appropriate support when the machine is disconnected from the tractor.
- Never start to form a bale if the tailgate is not completely closed; check this condition also on the control unit display.

**Danger - Warning**

Do not use controls, pipes, or other protruding parts of the machine as if they would be handholds.

Assemble, activate and detach the cardan shaft always respecting the information and safety regulations for the use of the cardan illustrated in file 3 and contained in the manual provided by the cardan's manufacturer (delivered with the cardan itself).

It is absolutely forbidden to transport people or animals on the equipment and on the tractor.

ADJUSTMENT AND MAINTENANCE REGULATIONS

Keep the machine in perfect working order, performing maintenance as scheduled by the manufacturer. Good maintenance achieves the best machine performance, longer machine life and constant observance of the safety regulations.

Activate all of the security devices provided and evaluate the necessity to adequately inform personnel operating in the near vicinity before performing maintenance or adjustments on the machine. In particular, confine the neighbouring areas to impede access to the devices that could, if activated, produce unexpected danger conditions provoking hazards to personal safety and health.

All maintenance procedures that require precise technical competence or specific skills must be exclusively performed by qualified personnel with acquired certified experience in the specific field.

To perform maintenance in areas that are not easily accessible or dangerous, establish suitable safety conditions for operators and others according to the laws in force pertinent to work safety conditions.

Do not perform lubrication, repairs or adjustments with the moving equipment.

Disconnect all the transmission components and operate the controls to relieve the pressure.

When maintenance operations involve the access to machine parts that cannot be accessed from the ground, and in any case to positions that are higher than 1.50 m from the ground, use a ladder or platform complying with the regulations in force;

The maximum pressure of the compressed air used in the blowing and cleaning operations must amount to 2 bar. When performing operations with compressed air, protect you eyes with suitable safety goggles with side shields and a mask in order to avoid any personal injury caused by dust particles. The cleaning operations should be performed in ventilated areas;

Replace deteriorated parts with originals. Use oils and lubricants indicated in the manual. All these measures can ensure the preservation of the machine and foreseen safety level.

The hoses and pipes of the hydraulic system must be replaced periodically; the replacement interval depends on the maintenance status of the machine. In any case it shall not exceed 6 years;

Avoid prolonged and repeated skin contacts with fuel, lubricants and liquids as these might cause skin irritation and other problems.

When performing the cleaning operations and when replacing the filters, make sure that the area is properly ventilated in order to prevent the accumulation of toxic vapours.

Pay special attention before removing the caps and covers from tanks, radiators or cylinders: rotate them carefully in order to discharge any possible residual pressure.

Discharge the pressure from the circuits before performing any operation.

Never use your hands to find out leaks of fluids under pressure.

High pressure hydraulic oil can penetrate the skin and cause serious injury. Before detaching any tubes or doing any checks the system should always be depressurised.

If any hydraulic oil under pressure should penetrate the skin go immediately to hospital otherwise there is a serious risk of infection.

Check every day the condition of pipes and fittings and if they show clear signs of wear (cracking, cuts, etc.) or mechanical damage (buckling or flattening), replace them immediately.

Check periodically the tightening of the bolts and nuts.

Check the correct tightening of nuts, screws and bolts frequently.

Check the wear and tear of bearings, rollers, chains and gears frequently and periodically.

Remove any residues and dirt accumulated between all moving parts of the machine.

Do not use high pressure jets to clean the machine it can cause serious damages to the mechanical parts.

Pay attention to the precautions to be taken for welding work.

On trailed machines, before working on electrical components or doing welds on the machine, disconnect the electric cables from the tractor.

Before starting work it is recommended to learn the maintenance procedures. Keep the area clean and dry and keep hands, feet and clothes away from moving parts.

Respect the compliance of the recommended oils.

Warnings for maintenance



Danger - Warning

Before performing any adjustment, maintenance, or service operation on the machine, and before moving away from it, always observe the following precautions:

- Lower the equipment on the ground.
- Stop the machine and unplug the power take-off.
- Place the pick-up on the ground.
- Turn off the engine of the tractor, remove the keys from the dashboard and pull the parking brake.
- Wait for all the moving parts of the equipment to stop.
- Switch off the electronic control system.
- Allow the equipment to cool down and in particular the area of intervention.
- Securely support any part of the machine that needs to be lifted for maintenance. Keep all parts in good condition and properly installed.
- Repair damages immediately.
- Replace worn or broken parts (always use original spare parts).
- Remove accumulations of grease, oil or debris.

Welding instructions

Before doing any welding, proceed as follows.

Remove the equipment from the tractor, remove the forage residues and make sure that there are no plastic materials nearby, to avoid generating fires.

Do not weld in closed or non suitably ventilated areas.

Do not perform welding next to piping, tanks, electric cables and all types of flammable materials.

Do not weld on painted surfaces or close to them in order to avoid the development of toxic vapours. Remove the paint with suitable products, wash the



Important

It is absolutely forbidden to remove or tamper with the safety devices, because they have been designed and realized for the protection of users; in case of damages, replace them before using the machine again.

Perform maintenance operations as indicated in this manual, and have the worn or damaged parts replaced by skilled personnel.

surfaces and let them dry.

Never perform welding operations on wheel rims with the tyre mounted on, so as to avoid explosions or fire.

We recommend always having a fire extinguisher at hand.

At the end of operations, check that no tools, rags or other material are left near moving parts or in risk areas.

FIRE PREVENTION MEASURES

The machine is largely made up of materials obtained from oil. Moreover, the presence of different types of oil and of residues of chemical products makes these materials potentially flammable.

Keep a fire extinguisher with a suitable capacity on the tractor or machine and charge it periodically. Hand-held fire extinguishers can be used only by authorised personnel.

- The personnel using the vehicle should be trained on how to behave in the event of fire.

Warnings in case of fire

Remove the accumulated product regularly to reduce the risk of fire and to prevent material from winding around the mechanical parts of the machine.

If the bale could catch fire:

- Immediately eject the bale and keep the tailgate open.
- Move the tractor and machine away from the product still to be collected and from other flammable material.
- Turn off the fire using the fire extinguisher, recommended as standard and should therefore always be present on the tractor, especially if you are working on a dry product.

- All fuels and most lubricants and hydraulic fluids are flammable.
- Never use petrol additives and other flammable or toxic fluids to clean the mechanical parts. Use instead commercial approved additives that are non-flammable and non-toxic.
- Do not perform welding next to piping, tanks, electric cables and all types of flammable materials.
- If welding is to be performed, protect the flammable parts with shields.

PROTECTION OF PEOPLE AND ANIMALS

Do not allow anyone to pass or stop near a running machine.

While operating, keep people, livestock or pets away from the work area of the machine.

PREPARATION IN CASE OF EMERGENCY

The operator must always be ready to deal with a fire. Always keep a fire extinguisher and a first aid kit handy.

Keep emergency numbers near the phone: firefighters, ambulances and hospital.

PERSONAL PROTECTIVE EQUIPMENT (P.P.E.)





During work wear suitable clothing



Wear sufficiently tight clothes and safety clothing suitable for the type of work, never wear baggy clothes that flap as these could get caught in the mechanisms and moving parts of the machine.

Long hair must be gathered

During maintenance and repairs it is obligatory to use protection gear such as:

-  cut resistant gloves;
-  safety footwear;
-  visor and/or goggles.
-  In the event of work or maintenance that could produce dust or substances harmful to the respiratory system it is advisable to use your P.P.E.

To operate safely, the operator's complete attention is required. Do not wear earphones for radio or music while the machine is being used.

Prolonged exposure to noise can cause injury or loss of hearing. To protect yourself against loud and annoying noises, use an appropriate hearing protector such as headphones or earplugs.



Danger - Warning

Follow the regulations in force in your country regarding the acoustic protections to be adopted.



In some circumstances the noise generated can exceed 85dbA; in these cases it is advisable to use suitable personal protection equipment.

SAFETY AND INFORMATION MARKINGS

Adhesive signs have been affixed to the machine containing important messages regarding personal safety. Their purpose is to call the operators attention to the health and safety at work rules and warn against possible dangerous situations during work and maintenance.

The safety signs typically have black and red pictograms on a yellow background.



Important

They must always be kept clean and legible and must be replaced whenever damaged or peeling off. If the parts of the machine to which they are affixed are replaced or painted they must be replaced as before.



Operator's Manual

Before putting into service, at the beginning of each season and before doing any work on the machine, read and bear in mind the instructions for use and maintenance given in this operator manual.



Safety in maintenance

Before working on the maintenance or repair equipment, or if it is necessary to move away from the tractor, stop the PTO, lock the brakes, switch off the tractor engine, and remove the ignition key from the dashboard. In the case of maintenance and repairs always consult the user manual.



PTO

Equipment suitable for tractors with PTO at 540 rpm/1'. Before inserting the PTO shaft, make sure of the rotation direction (anticlockwise) and check that the maximum speed does not exceed the indicated value.



Tailgate opened

Do not pass by or stand under the tailgate when it is raised (if the appropriate safety stops have not been applied). Risk of crushing.



Maneuvering zone

Do not enter the manoeuvring space between the machine and the tractor when the engine is running. This area is particularly dangerous.

Even in the case of repainting of parts with signs of safety, it is mandatory to restore them as originally.

All the adhesive safety signals present on the machine are shown and described below, also indicating their position on the machine.

Read carefully the meaning of the signals and disclose it to collaborators and anyone who can approach the machine during the work and maintenance phases.

Some of these signals are applied to the machine, their position is indicated in file 3. Their meaning is specified below.



Rotating organs

Before doing any work wait until all the parts of the machine are completely still and use appropriate methods to block any undesired movements.



Supply

Never feed or remove material by hand in front of the pick-up unit when parts are in motion. This could result in the upper limbs, or more seriously the person, becoming trapped.



Hydraulic system

Before doing any work on the hydraulic system consult the operator manual. Oil under pressure can cause serious infections.

**Crushing of the upper limbs**

Do not remove the protections and do not come in contact with organs that can cause crushing of the upper limbs, also due to their dynamic and sudden charge.

**Danger of crushing and/or cutting**

Do not stand near the machine. This could result in the crushing or cutting of lower limbs due to the weight of the machine or lowering of its parts. Keep at a safe distance.

**Tailgate security**

Before entering the bale formation chamber for interventions, block the hydraulic jacks with the appropriate safety locks to avoid being crushed.

**Cutting of the upper limbs**

Danger of cutting hands.

**Tailgate opening**

Do not stand behind the machine to avoid being crushed by sudden maneuvers.

**Electric lines**

Pay close attention when working near electric lines.

**Ejection bale**

Do not stand behind the equipment and keep a safe distance when the bale is ejected.

**Cardan shaft safety adhesive**

Danger of coupling and dragging through the cardan shaft.

**Cardan shaft**

On the cardan an adhesive is applied that recalls the operator to the attention and to the respect of the safety rules for use.

PRECAUTIONS TO AVOID ACCIDENTS

The machine is equipped with protections against foreseeable accidents; however, the operator is always required to:

- Take special care when collecting the product and unloading the bale.
- Do not move the equipment in the presence of people and animals nearby; always pay attention to the range of action of the machine.
- Pay attention so that others (people and animals) do not approach moving parts.
- Never perform checks, repairs, adjustments and maintenance operations with the moving machine.
- Do not use the machine for jobs other than those for which it was designed. The manufacturer declines all liability for any inappropriate use.
- The warranty becomes void in case of changes to the machine without the manufacturer's authorization.
- The operator must always be on the tractor when the machine is working.
- If you need to move away from the tractor, stop the power take-off, lock the brakes, switch off the tractor engine, and remove the ignition key.
- Ground controls must be activated with the machine powered on and stationary. The simultaneous use of ground controls and cabin controls by two different operators is prohibited.
- Maneuvers (especially in the absence of visibility) must be carried out with prudence and caution.
- Check that the decals are intact and legible.
- Always use the original spare parts.

RESIDUAL RISKS

Although various risks have been analyzed and described here and, where possible, the necessary precautions to minimize them have been taken during the processing stages, various residual risks remain on the machine and have been listed below:



Danger - Warning

Danger of crushing, dragging, shearing, death in case of contact with the moving parts of the machine during the working phase.

It is forbidden to cross the working area of the machine during operation.

It is forbidden to get on the machine with moving parts.



Danger - Warning

Danger of impact with the parts of the machine during the working phase.

It is forbidden to cross the working area of the machine during operation.

It is forbidden to get on the machine with moving parts.



Danger - Warning

Danger of crushing, shearing and entanglement in the event of contact with the moving parts of the hydraulic lifting system.

It is forbidden to stand in the working area of such devices.

GUIDELINES FOR ENVIRONMENTAL SAFETY

Each organisation is responsible for applying procedures that must be identified and evaluated and is to check the effect their activities (products, services, etc.) have on the environment.

The procedures to carry out to identify significant environmental impacts must take the following factors into consideration:

- Emissions to the atmosphere
- Liquid discharge
- Waste management
- Soil contamination
- Use of raw materials and natural resources
- Local problems concerning the environmental impact

For this purpose the manufacturer has provided some indications below, that must be taken into account by all of those that, for any reason, work with the machine during its lifespan.

- All packaging components must be disposed of in accordance with the laws of the country where the disposal is made.
- During installation, make sure that there are sufficient changes in the ambient air to prevent concentrations that of air that is harmful for the operators.
- During operating and maintenance do not dispose of pollutants (oils, greases, etc.) into the environment, and dispose of the various products separately in compliance with current laws in this regard.
- Always use watertight containers to discharge fluids. Do not use food or drink containers that can mislead and induce the operator to consume the content. Whenever you drain oil from the various mechanical parts and hydraulic system and any other substance toxic and/or dangerous to the environment try to avoid leaks.
- Do not discharge directly into soil, sewers or water-courses.
- When decommissioning the machine separate all the components according to their characteristics and dispose of them separately.

DISPOSAL OF MATERIAL AND WASTE

Security for the disposal of Waste Electrical and Electronic Equipment (WEEE Directive 2002/96)



Important

Do not scatter polluting materials in the environment, dispose of the same in compliance with current regulations on the matter.

In terms of the EEEW (Electrical and Electronic Equipment Waste) directive, when scrapping, the user is to separate the electrical and electronic components and dispose of them via authorised collection centres, or they must hand them over, still installed, to the seller when making a new purchase.

All the machines, which must be disposed of according to the WEEE Directive 2002/96, are marked by an appropriate symbol.

The illegal disposal of Waste Electrical and Electronic Equipment shall be punished with sanctions governed by the laws applicable in the territory where the infringement is ascertained.



Important

Electrical and Electronic waste may contain hazardous substances that may potentially be harmful to the environment and the health of people. We urge you to dispose of it in the correct manner.

ROUND BALER - SPECIAL LINE

user manual

Serial number

Edition 0
04 - 2018

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IMPORTANT SAFETY NOTE

The information in this Booklet covers the functional aspects of the operating group installed on the equipment. However, in order to protect people from risks, it is necessary to read carefully the general safety rules, reported in

Booklet 1 and those highlighted with the appropriate symbols. It is recalled that prudence is irreplaceable; safety is also in the hands of all operators who interact with the equipment.

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TECHNICAL INFORMATION

EQUIPMENT GENERAL DESCRIPTION

The round baler, from now on defined machine, has been designed and built to be used in an agricultural environment to form bales of straw, hay or silage.

The tractor must be equipped with a power take-off to transmit power to the machine.

Any use of the equipment other than those indicated above is to be considered unauthorized and dangerous.

The descriptions of all the installed components, the indications concerning their position and the technical and performance specifications are in the enclosed

The machine consists of a frame-mounted structure, including all the working mechanisms, it is supported by an axle with wheels for transfer and is equipped with a drawbar with hooking to the tractor.

The electrical system governs the control system and lights for road transport.

booklet.

The information about the components that is not included in this manual is detailed in the relevant instruction manuals.



Important

All the technical descriptions specific to the machine in your possession are reported in this booklet.

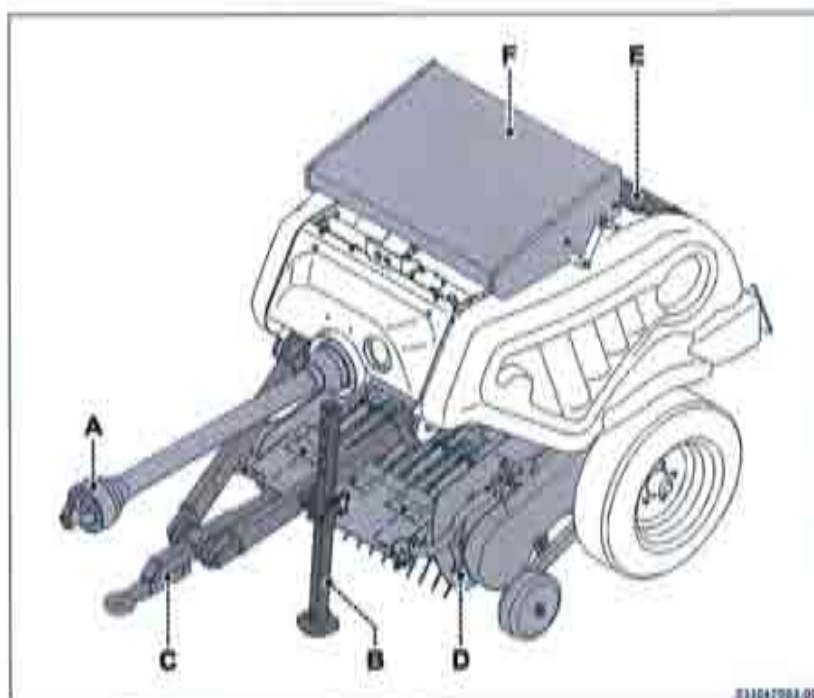
For any general safety information, refer to the booklet 1 "General Safety Information".

The hydraulic system is driven by a hydraulic pump (for models with independent pump) or by grafting the round baler connecting tubes to the double-acting sockets on the tractor (for models with tractor connection).

A cardan shaft connected to the tractor and to the transmission box placed on the machine, transmits the movement to all the organs.

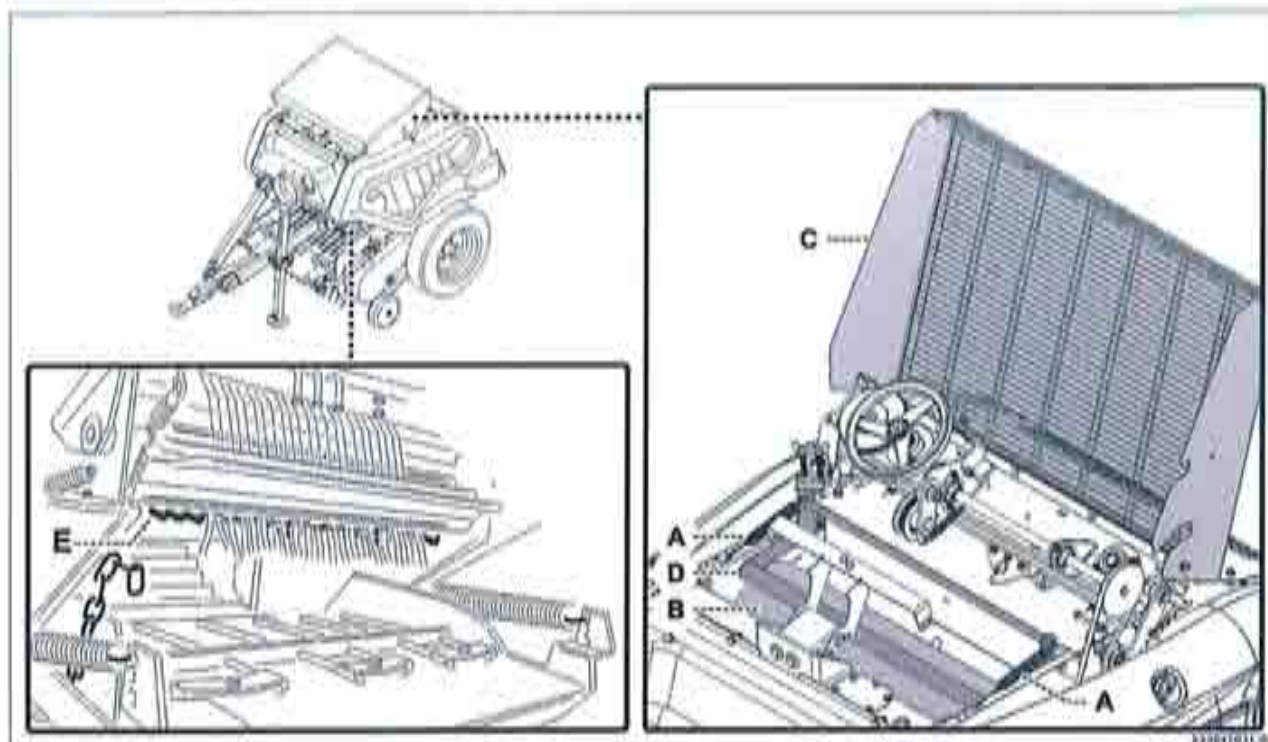
Main parts

- A) Cardan shaft
- B) Rest foot
- C) Draw-bar
- D) Collector (Pick-up)
- E) Rear tailgate
- F) Net and twine binder



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Net binder

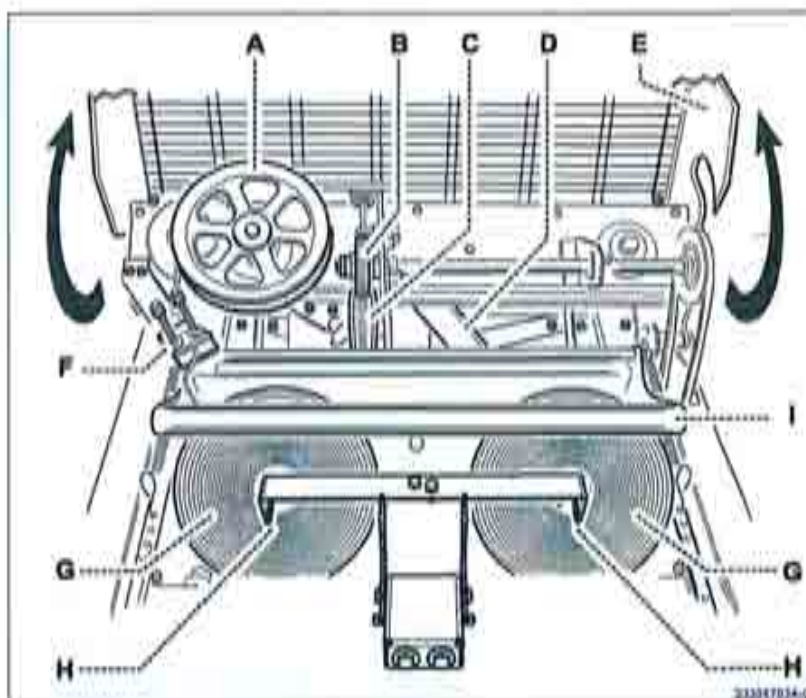


- A) Springs for net brake
- B) Net roll
- C) Crankcase

- D) Pipe to brake net
- E) Knife to cut net

Twine binder

- A) sheave
- B) traction sheave
- C) Idler pulley
- D) Knife that cuts twine
- E) Crankcase
- F) Brake of the twine
- G) Twine roll
- H) Guide bracket for twine
- I) Roll stop tube



IMPROPER USAGE

- Use of the equipment for purposes other than those concerning agriculture is not considered compliant with the manufacturer's instructions. Therefore, the manufacturer shall not be held responsible for any damage arising from such unsuitable use. Furthermore, any consequent damage caused to third parties is the sole responsibility of the user.
- To ensure proper use of the equipment, the user must keep to the instructions given regarding commissioning, working conditions and maintenance detailed in this manual, as well as the directions specified by the manufacturers of the chemical products employed, rules for safe road use and regulations for safety and accident prevention.
- Follow the instructions provided for by the chemical manufacturer concerning the product mixing and distribution, as well as cleaning of the equipment.
- Do not disconnect hoses if pressurized.
- Only use hydraulic hoses that are able to stand a pressure four times higher than the maximum working pressure, as well as being resistant to chemical, mechanical or thermal stress.
- Prior to every use of the equipment, check that it can be moved and operated safely. Make sure that nobody is near the working area. Children and disabled persons must be kept at a distance!
- The user must wear light-fitting clothes.
- To avoid risk of fire, keep the equipment clean.
- Climbing on the machine during movement is prohibited.
- The machine may only be used by operators who have read and understood this manual. In case of doubts on the correct interpretation of the instructions, contact the manufacturer's assistance service to obtain the necessary clarifications.
- Prevent outsiders from approaching the working area when the equipment is in use. If necessary, stop spraying immediately and get the people in the risk area to move away.
- Road circulation is allowed to the homologated machines and with driver in possession of the requisites required by the laws in force. In any case, before starting the transfer, block the parts that could cause sudden and unexpected movements, check that the dimension does not exceed the maximum allowed ones and if necessary prepare the machine with the appropriate signals.

SAFETY RULES



Important

Before starting the machine:

- Carefully read all the general safety regulations listed in Booklet 1
- Carefully read all safety messages in the manual and in the safety signs applied to the machine
- If you do not understand a part of this manual and need assistance, contact your dealer.



Danger - Warning

It is absolutely forbidden the use of the machine to those who have not read and assimilated what is described in this manual.

Learn how to use the machine and controls correctly. Do not allow use by untrained persons who have not read this User Manual.

Periodically check the perfect integrity of the machine as a whole, including all safety and protection devices.

Keep the safety signs in good condition and replace any missing or damaged ones.

Make sure that all the new machine components and repair parts are complete with current safety signals. Replacement safety signals are available from the dealer.

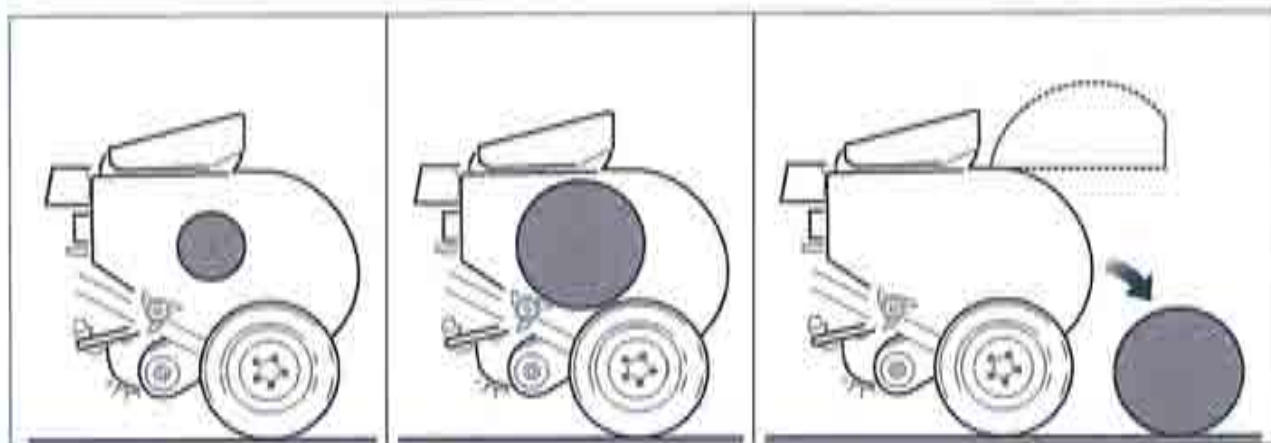
Keep the equipment in correct operating conditions.

All accident prevention guards must be fitted and fixed according to the manufacturer's instructions and must not be tampered with. Any modification made without authorization may compromise the operation and/or safety of the equipment and reduce its life span.

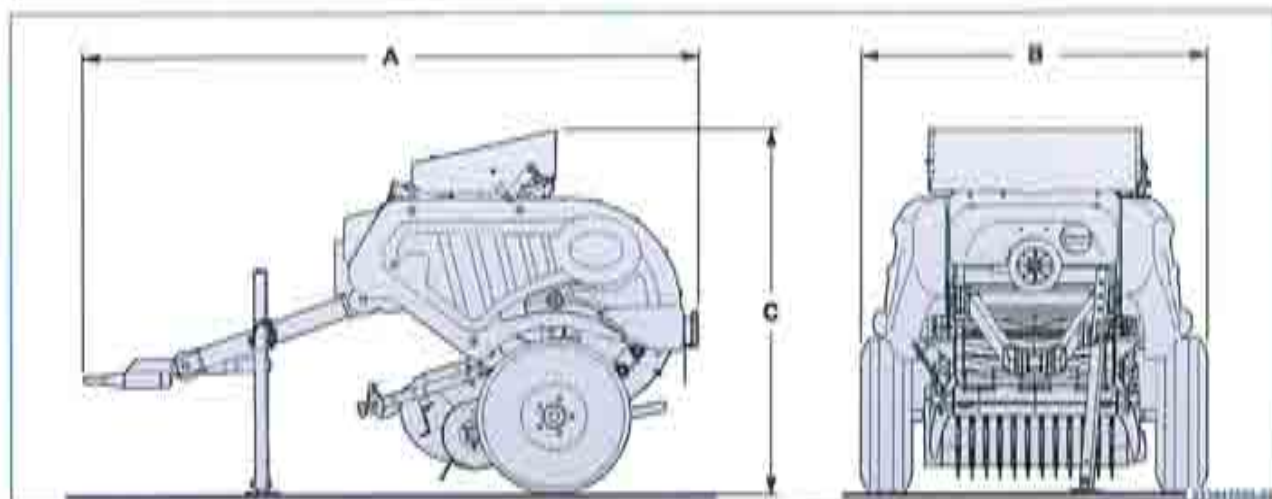
OPERATING PRINCIPLE

The equipment carries out the following operations:

- 1 - The product is collected by the Pick-up and introduced into the constipation chamber.
- 2 - The forage enters the chamber and making it rotate through the rollers, it expands to form a bale of about 57 cm.
- 3 - Once the set pressure is reached, the acoustic alarm is activated, signaling to the operator to stop the tractor and start the binding with net or twine in manual mode.
- 4 - Once the binding is complete, open the tailgate and unload the bale, close the tailgate and start the formation of a new bale.



TECHNICAL SPECIFICATIONS

**Size**

Length (A)	1950 mm
Width (B)	1330 mm
Height (C)	1350 mm

Features

Equipment weight	520 * kg
Weight on the towing eye	70 kg
Track	1150 mm
Oil flow	5 liters min

Tractor requirements

PTO	540 rpm
Minimum required power	15 kw - 20 hp

Binding

Net roll diameter	190 mm
Coil width	600 rpm
Command	Electronic
Maximum number of transportable coils	1

Characteristics of the bale

Diameter	570 mm
Width	630 mm

* The weight of the machine equipped with feed system should be increased by approximately 20 kg.

TYRES



Important

Before replacing a tyre, check that it is approved for the machine in the country of use.

Regularly check the tyre pressure by comparing it with the value specified by the tyre manufacturer.

Tyre table

Tyres	Chassis	Index radius (mm)	Speed (km/h)	Wheel capacity (kg)	Pressure (bar)	Outside diameter (mm)
195x60 / 10					3	

NOISE LEVEL

The noise tests carried out in the field, using a tractor having the rear hatch open and executing the complete processing cycle, have detected a sound level equal to:

75.8 dB (A) \pm 1 dB, for the right ear;

75.8 dB (A) \pm 1 dB, for the left ear;

According to the data collected, in compliance with the Directives 2009/79/CE and 2009/63/CE, the use of individual hearing protection devices is recom-

mended



Important

The cleaning, the regular maintenance of the machine and the periodic lubrication contribute to reduce the sound emissions of the equipment.

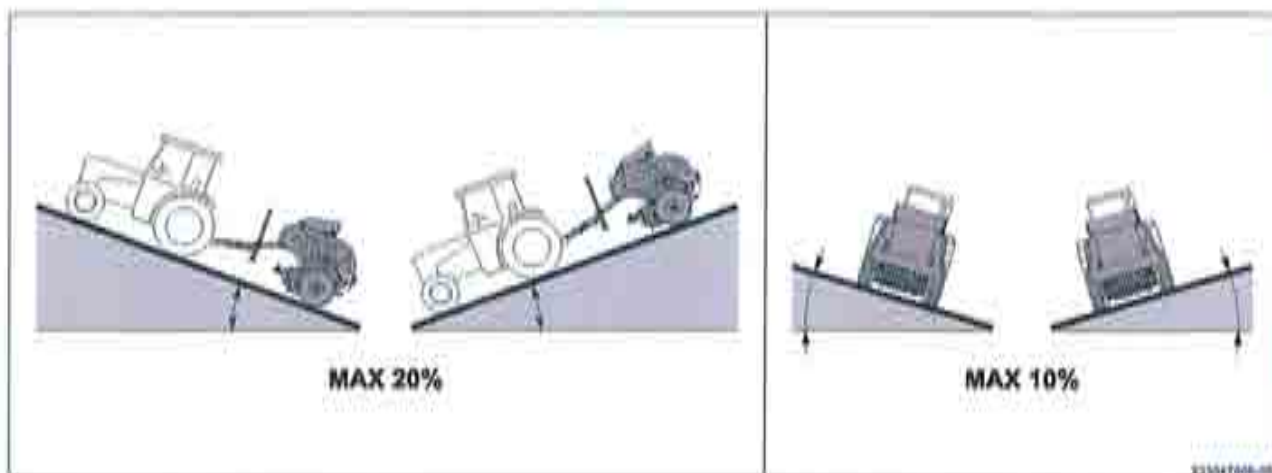
Though there is a correlation between noise emission and levels of exposure, this data cannot be used to determine whether precautions are necessary or not.

There are other factors that may influence the level of exposure to noise, such as—for example—the characteristics of the work environment and the presence of other sources of noise.

The information on the noise level emitted by the equipment will in any case help the user or the employer in drafting the valuation of dangers and risks.

ALLOWABLE SLOPES

The illustration shows the maximum permissible gradient on non-soft grounds, with no valleys and with the machine in running order and at full load.



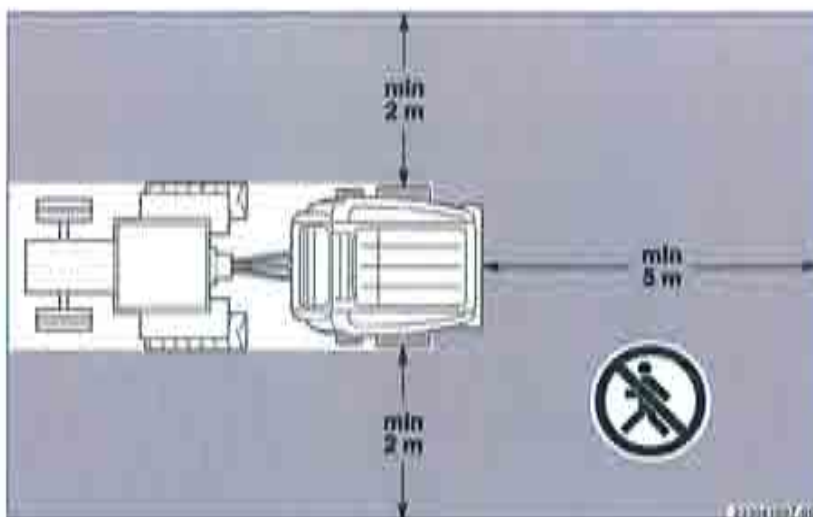
DANGER ZONE

The figure illustrates the danger zones where no-one should be when the machine is in use. It is the operator's duty to keep such zones out of bounds; if necessary, (s)he should turn the engine off and clear out the danger zone.

Before starting work, make sure that the area indicated is always free of people, animals or things.

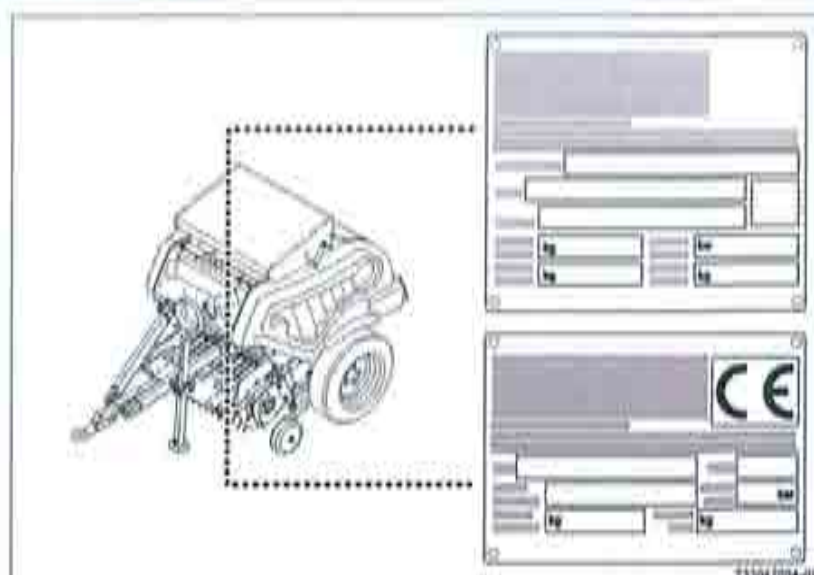
Any approach to the equipment within the indicated area must be carried out with the tractor switched off, the key extracted from the dashboard and stored, handbrake on (ex: loading the net, twine, ect.).

When the engine is running, do not stand between the tractor and the equipment.



POSITION OF IDENTIFICATION PLATES

The figure shows the position of the identification plates.



SAFETY DEVICES

The machine is equipped with various safety devices, to ensure a more correct and risk-free use under normal use conditions.

The illustration shows the position of the devices on the machine.

- A) **Tailgate locking lever:** before any intervention inside or under the open tailgate, the lever must be activated by moving it to the locked position (1).
- B) **Pick-up protections:** The Pick-up is protected laterally by the crankcase and at the top by the steel sheet for short crops that acts as a horizontal protection bar placed at regular intervals by the Pick-up collection springs. During transfers, the raised Pick-up must be fixed using the appropriate safety chain.
- C) **Rest foot:** The rest foot, standard on the machine, is adjustable in height and is equipped with a wide support base on the ground.
- D) **Torque limiter:** the machine is equipped with a safety system, which intervenes when overloads occur due to anomalous situations that put the integrity of the transmission organs at risk. The device is of the shear bolt type.
- E) **wheel wedges:** after having detached the machine from the tractor, place the wheel wedges to one wheel.



Important

Before starting work, check that all the devices are intact and in their place.

- F) **Protective crankcase:** they prevent access to the dangerous areas of the equipment.

On the side guards with gull wing opening, a safety closure is provided that ensures perfect closing of the crankcase to the equipment thus avoiding the accidental opening of the same crankcase during work or transport operations.

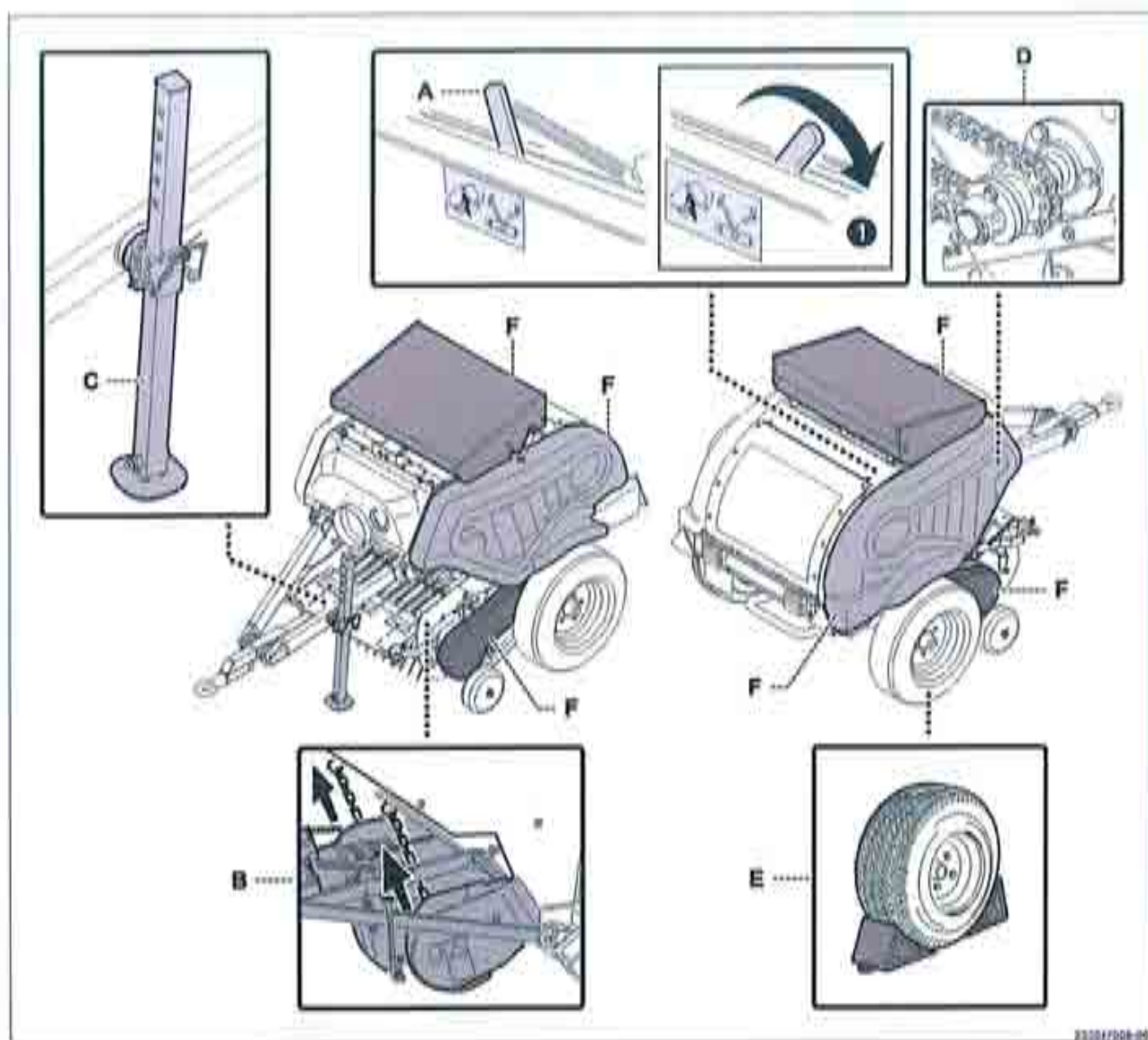
For the opening, use a 13 mm wrench.



Danger - Warning

Before removing one of the protective crankcases, always perform the following operations:

- Switch off the power take-off,
- Switch off the electronic control system;
- Turn off the engine of the tractor, remove the keys from the dashboard and pull the parking brake.
- Wait for the complete stop of all moving parts.
- Switch off the electronic control system.



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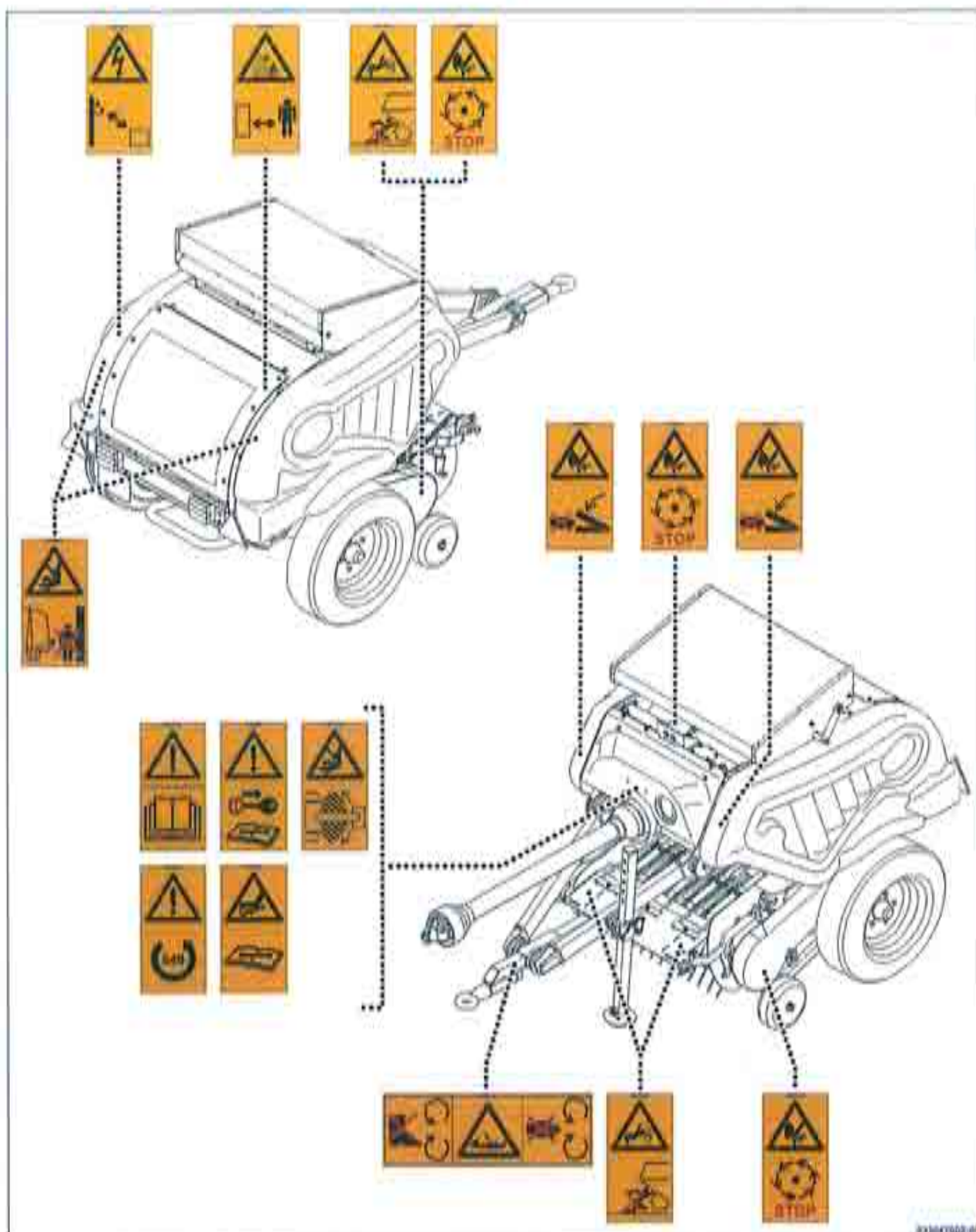
POSITION OF SIGNALS

The figure illustrates the positions of the safety plates, what they mean is described in leaflet 1.



Important

Make sure that the plate is readable, otherwise replace it positioning a new one in the same place.



INFORMATION ABOUT HANDLING AND INSTALLATION

INSTRUCTIONS FOR HANDLING AND LOADING



Important

Safety bolt: to avoid excessive loads on the on the inlet rollers to the bale forming chamber, the machine is equipped with a safety bolt, which comes to break when a certain pressure is reached. In this case it is necessary to replace the broken bolt with a new bolt with the same resistance characteristics.

TRANSPORTING



Danger - Warning

Never use the machine as a means of transport for things, animals or people.

It is forbidden to tow the machine on the road with the bale still in the chamber.

Do not operate the equipment during towing.

When towing, do not make tight turns. If the drawbar hits the tractor tyre it will cause considerable damage.

The equipment can be trailed on the road by a tractor at a speed not exceeding 40Km / h.

The machine must be attached to the rear hook of the tractor through the towing eye fixed to the front drawbar of the equipment with the special towing pin and safety pin.

Connect the electrical system and check the correct functioning of all the direction, parking and stop lights.



Danger - Warning

The towing must always take place in the following conditions:

- Machine discharged
- All components in transport set-up.
- All safety devices inserted.

LIFTING FOR TRANSPORTATION



Important

It is forbidden to use ramps for loading and unloading the machine.

Before raising the machine make sure that it does not contain any bales.

To raise the machine from the ground to the loading level, if there are no loading ramps available, use a crane of sufficient capacity

Use of all four points of attachment for correct safe loading is compulsory.



Important

The attachment points for raising the machine are clearly visible and marked with special adhesives.

Hook the equipment only at the points indicated by the stickers to avoid damaging the equipment.

Lift the equipment with extreme care and move it slowly, without sudden movements.



Danger - Warning

Lifting and transport operations can be very dangerous if not carried out with the utmost care, so we recommend to:

- Make sure that the means available are in good working order and suitable for the load
- Clear and cordon off the area in which transferral is to take place.
- Make sure that the area in which you are working has been cleared and there is an escape route, sufficient space to move out of the way quickly should the load fall.
- Keep unauthorized people at a distance;
- Do not touch suspended loads and remain at a safe distance.

During transport, loads must not be raised more than 20 cm above the ground.



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ROAD TRANSPORTATION LOAD



Important

The personnel carrying out the loading, unloading and handling of the machine must possess the skills and experience acquired and recognized in the specific sector. During maneuvering phases, with the direct use of the machine, the driver must know the procedures necessary to carry out these operations in safety conditions.



Caution - Warning

The surface on which it is intended to load the machine must be perfectly level to avoid possible movements of the load.

Once the machine has been loaded, it is necessary to secure it to the surface on which it stands with cables or chains, using the same attachment points and anchoring points located on the same surface; block the wheels with the chocks.

The manufacturer declines all liability due to damage to the machine caused by incorrect hooking and/or transport operations.



Caution - Warning

Make sure that no component of the machine protrudes beyond the maximum dimensions permitted by transport.

Once the transport has been carried out and before having releasing the machine from all the constraints, check that the state and the position of the same do not constitute danger.

Remove the packaging and proceed with the discharge using the same means, methods, attention and care used for the load.

TOWING THE EQUIPMENT

- Lift the Pick-up in transport position (all high) and support it with the appropriate chain.
- Raise the rest foot to the transport position.
- Do not connect the quick couplings of the machine to the tractor.
- During transport, the cardan shaft must be connected to the tractor and secured with the appropriate chains.
- If it is necessary to tow the machine for a long distance, it can be loaded on trucks or on railway carriages.

INFORMATION ABOUT ADJUSTMENTS

INSTRUCTIONS FOR ADJUSTMENTS



Danger - Warning

Before carrying out any setting or adjustment, activate all the safety devices required and consider whether it may be necessary to provide proper information to the operators and to the staff working near the machine. In particular, provide proper signs in the areas surrounding the machine and do not allow anyone to access any devices that, when activated, may cause unexpected dangerous conditions, resulting in damages to personal safety and health.



Danger - Warning

Before performing any adjustment, maintenance, or service operation on the machine, and before moving away from it, always observe the following precautions:

- Lower the equipment on the ground.
- Stop the machine and unplug the power take-off.
- Place the pick-up on the ground.
- Turn off the engine of the tractor, remove the keys from the dashboard and pull the parking brake.
- Wait for all the moving parts of the equipment to stop.
- Switch off the electronic control system.
- Allow the equipment to cool down and in particular the area of intervention.
- Securely support any part of the machine that needs to be lifted for maintenance. Keep all parts in good condition and properly installed.
- Remove accumulations of grease, oil or debris.
- At the end of operations, check that no tools, rags or other material are left near moving parts or in risk areas.

PRESSURE REGULATION ON THE BALE

The safety valve (1) and the shut-off valve (2) are installed on the hydraulic block.

Proceed as follows:

Valve 1

The safety valve serves to open the machine in the event of a pressure higher than the maximum calibration value.

The machine is supplied with the valve already calibrated at 80 bar.

In the event that the machine opens at a lower or higher value than the calibration one, it is necessary to intervene on the valve during the working phase.

- Loosen lock nut.
- Act on the screw to adjust the pressure.
- Tighten the locknut.

Valve 2

The machine is supplied with the valve already calibrated at about 40 bar.

If this were not the case, adjust the valve keeping the tractor engine at medium-high speed, close the tailgate, read the pressure on the pressure gauge; the pointer must stop on the blue sector of the pressure gauge. To adjust the pressure, loosen the locknut, turn the screw and once the adjustment has been made, tighten the locknut.

Adjust the red pointer on the pressure gauge to the pressure of the bale you wish to obtain before tying as shown in the figure.

1 - BLUE COLOR

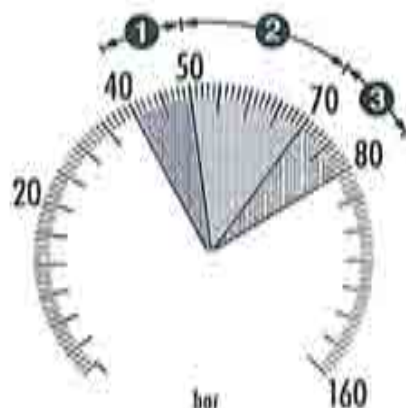
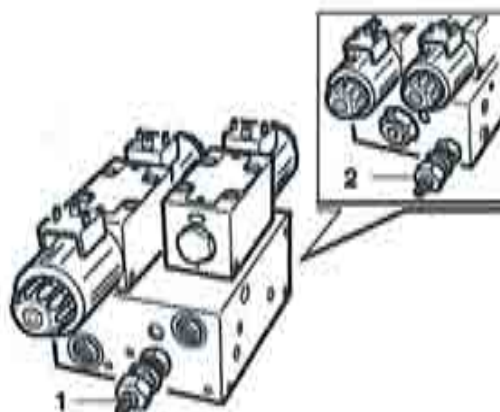
Closing pressure (40 - 50 bar)

2 - GREEN COLOUR

Medium tying pressure (50 - 70 bar)

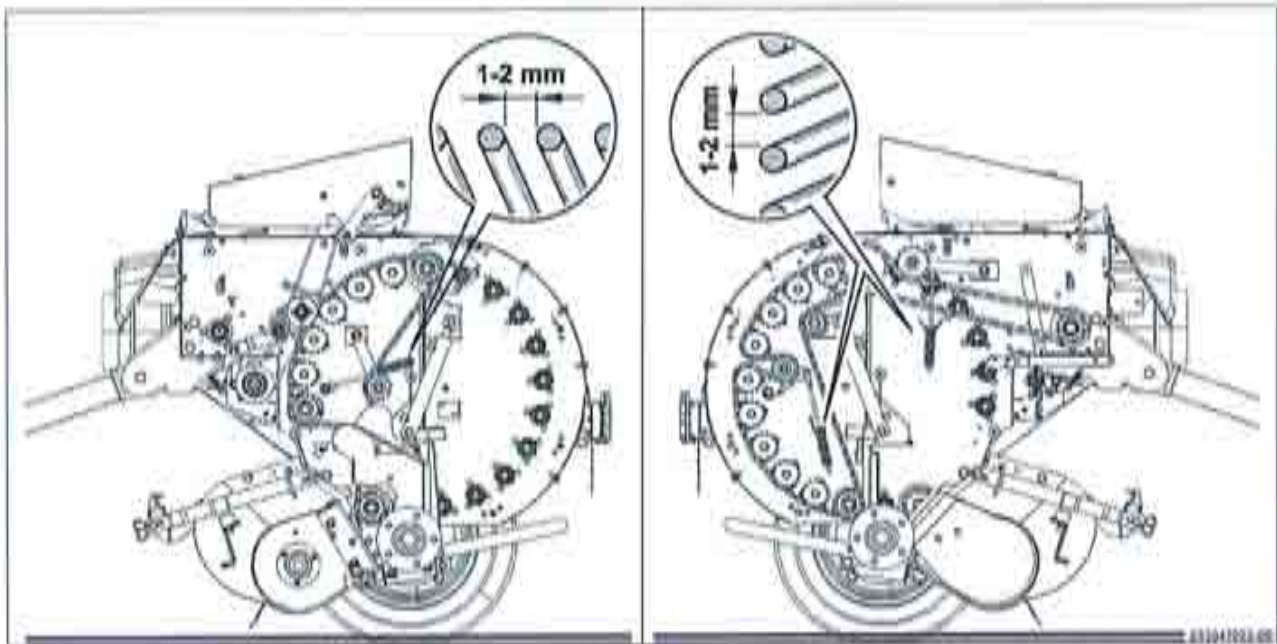
3 - RED COLOUR

High tying pressure (70 - 80 bar)



CHAIN ADJUSTMENT

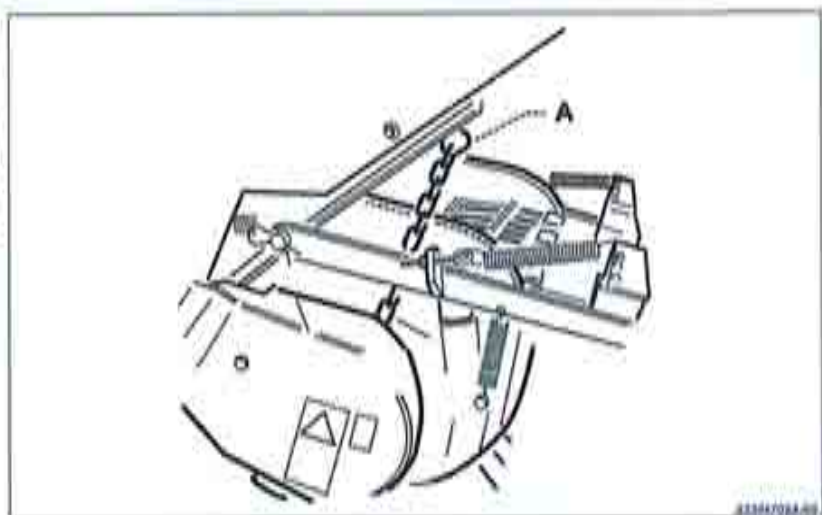
Keep the adjustment of the chain tensioners, checking that the light between the turns of the springs is always 1 to 2 mm.



HEIGHT ADJUSTMENT FROM THE GROUND OF THE PICK-UP

The Pick-up is supported by a chain (A) which establishes the working height from the ground.

Choose the ring that best suits the needs, in any case the recommended height from the end of the springs of the collector on the ground, must be minimum 2 cm.

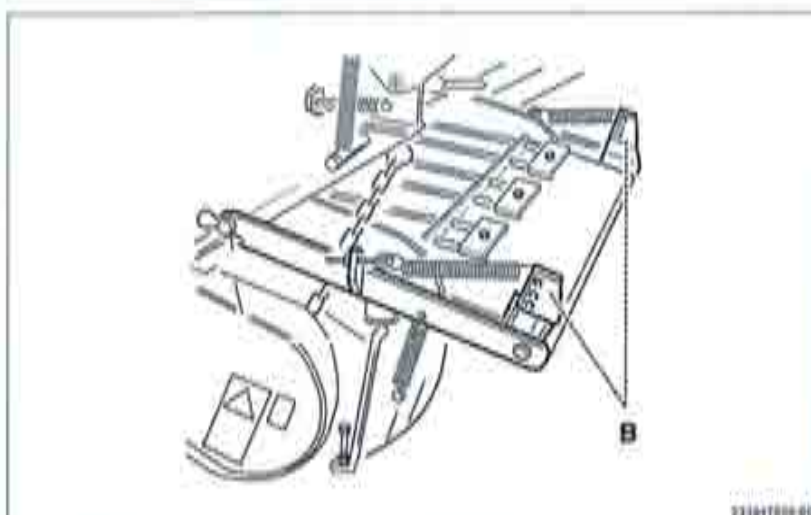


ADJUSTMENT OF THE BAR TENSION FOR SHORT CROPS

The short crops bar, mounted above the Pick-up, is held in tension on the forage that passes, through a lever and spring system.

It is possible to vary this compression by acting on the two lateral springs that can be anchored in one of the series of holes (B) obtained in the ears welded to the bar itself.

Make sure that the selected holes match on both sides.



DRAWBAR ADJUSTMENT



Danger - Warning
Danger of crushing hands.

To adjust the height of the drawbar, so that the equipment is correctly aligned, proceed as follows:

Loosen the nuts (D) on both sides to allow the circular toothed sectors to rotate.

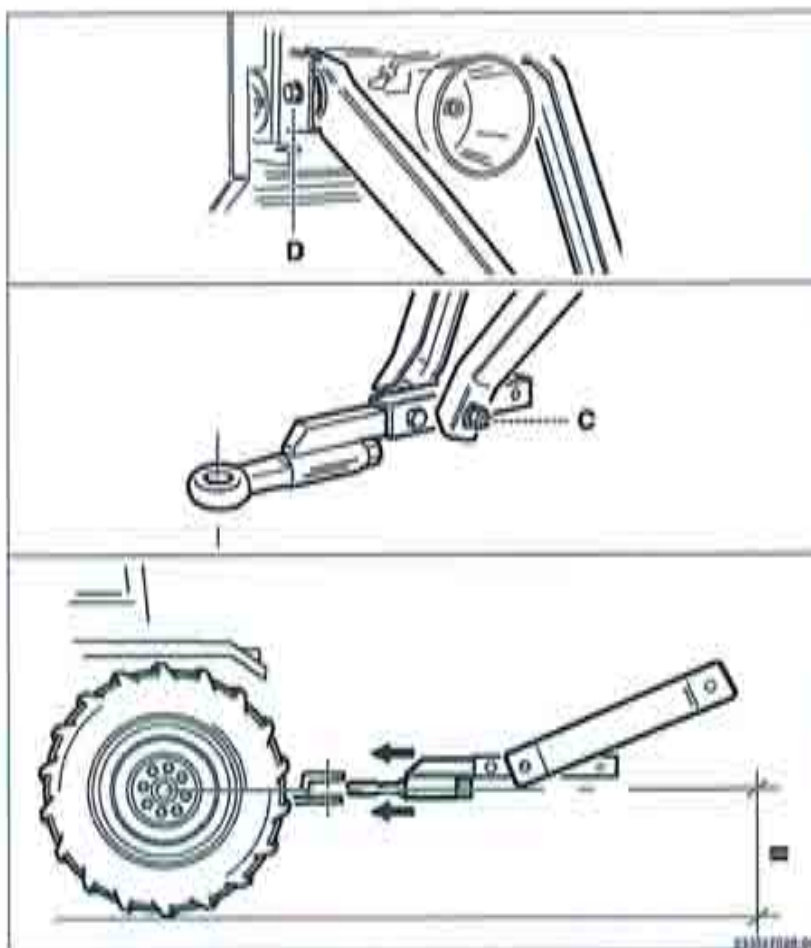
Align the machine horizontally according to the towing device of the tractor.

Tighten the nuts (D) and tighten properly.

Loosen the nut (C) to allow any rotation of the circular toothed sectors.

Align the towing eye horizontally at the height of the tractor towing device.

Screw the nut (C) and tighten properly.

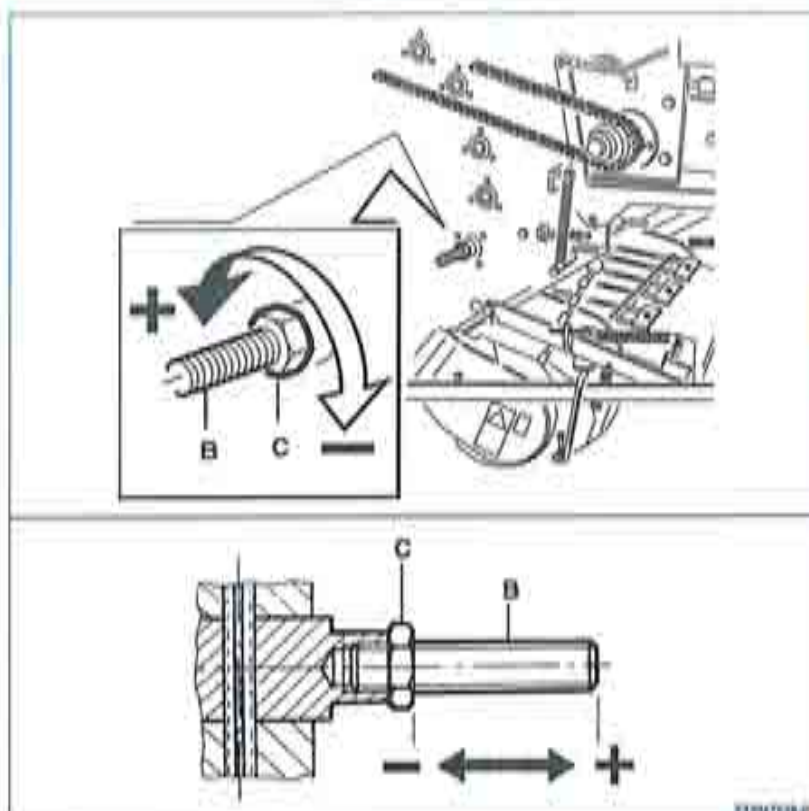


ADJUSTMENT OF THE NUMBER OF NET WINDINGS

The register (B) is placed on the right side of the machine.

To adjust the number of turns related to the binding of the bale, loosen the nut (C) and screw the register to decrease the quantity, or unscrew the register to increase the amount of net on the bale.

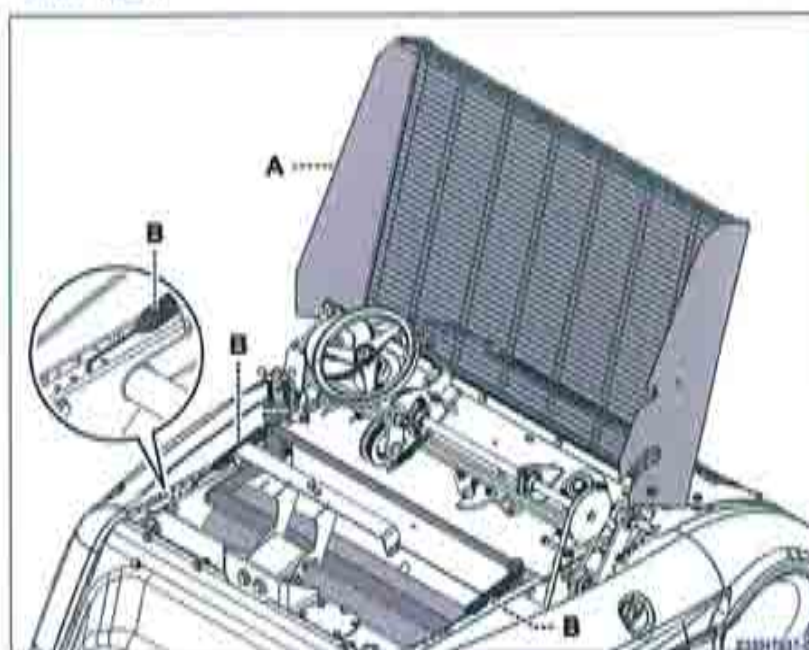
Tighten the nut (C) when the adjustment is complete.



BRAKING REGULATION OF THE NET

To increase or decrease the braking pressure on the net coil, work on the two springs (B).

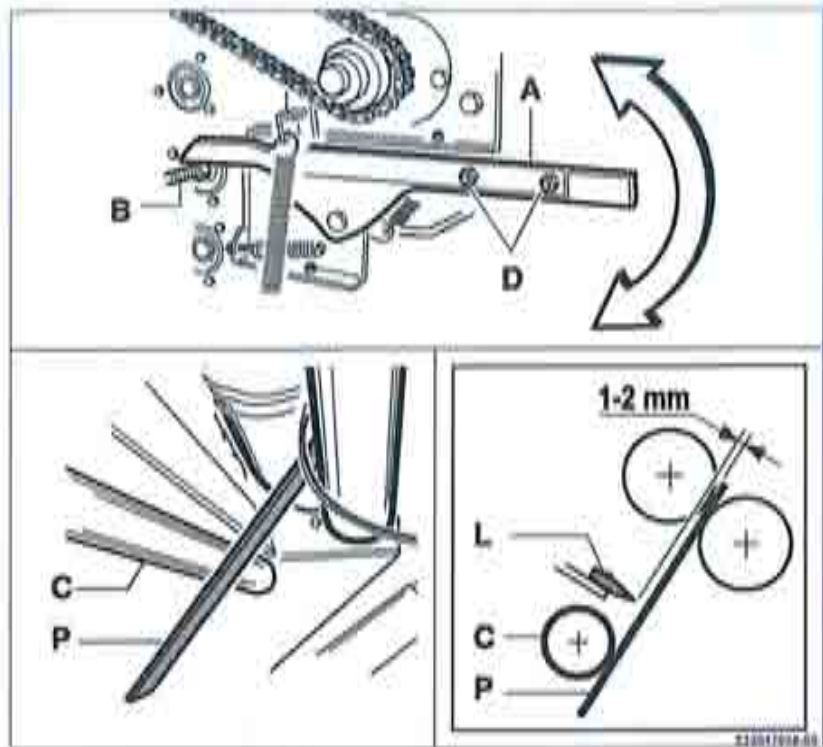
- Open the crankcase (A).
- Position the springs (B) according to the need on the holes provided on the sides.
- Close the crankcase (A) once the adjustment has been completed.



ADJUSTMENT OF THE KNIFE TO CUT THE NET

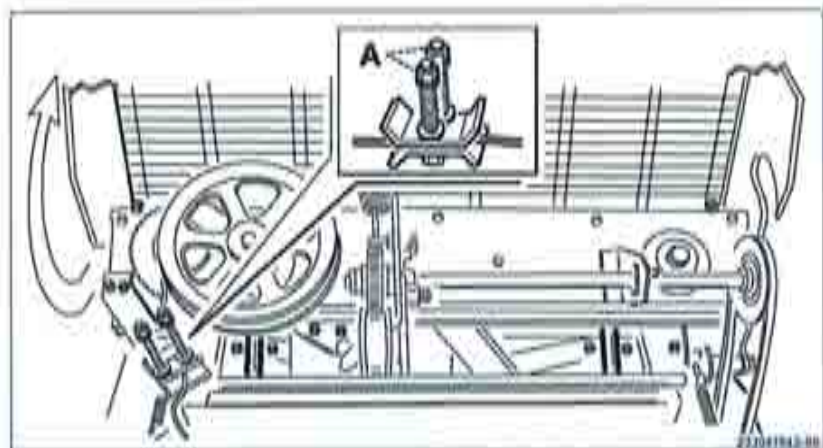
In case the net is torn and not cut, check the position of the knife blades.

- Remove the right side crankcase.
- Lower the lever (A) until the stop (B) rests on the register.
- Place a 1-2 mm plate (P) between the two rollers and tilt it until it touches the tube (C). Make sure that there is a 1-2 mm gap between the plate and the blade (L) of the knife.
- If the blade touches the plate, adjust the lever (A) by acting on the screws (D) and rotate it downwards or upwards as required.
- Tighten the screws, release the lever and reposition the crankcase.



TWINE BRAKING ADJUSTMENT

To maintain the correct tension of the twine and to avoid slipping, or too much preload, it is possible to adjust the tension of the springs through the corresponding nuts (A).



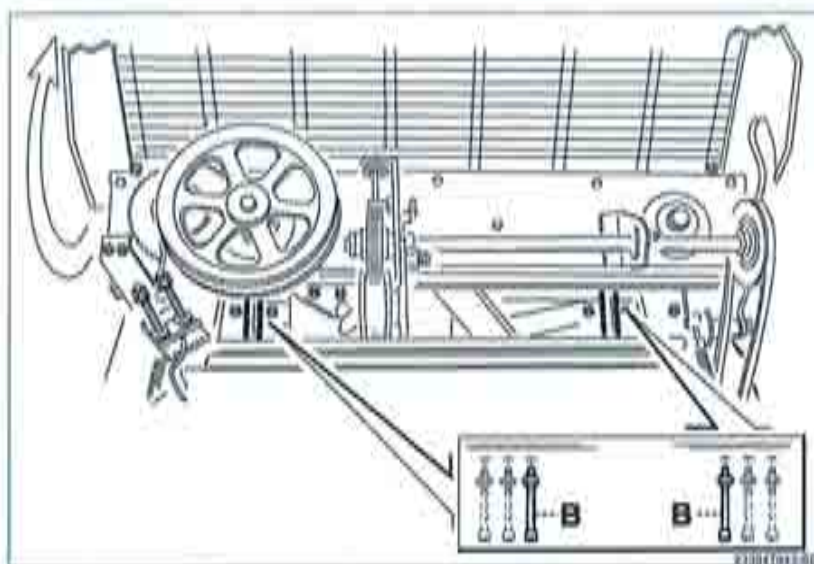
ADJUSTMENT OF THE QUANTITY OF TWINE ON THE HEADS.

- Loosen the nut and unscrew the screw (B) and screw it into one of the three available holes; same on the other side

- Tighten the locknut.

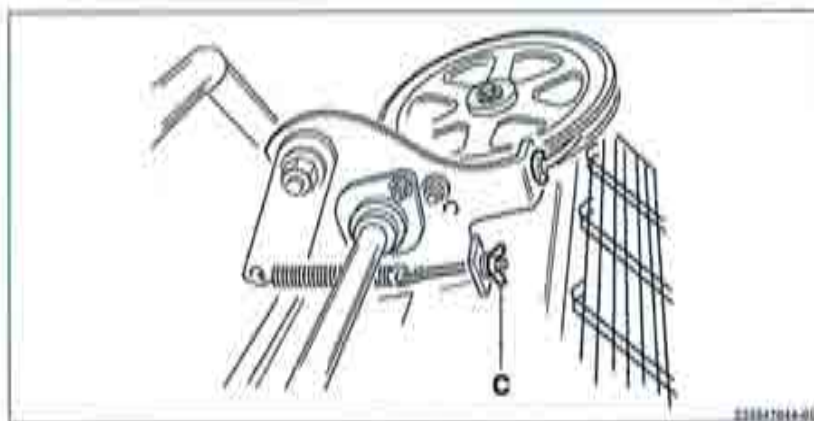
Placing the screws at the end of the machine increases the amount of twine on the heads.

Positioning the screws towards the center of the machine reduces the amount of twine on the heads.



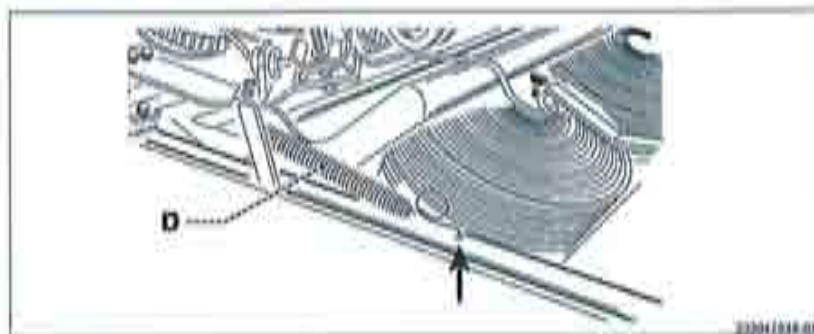
IDLER PULLEY SPRING ADJUSTMENT

To maintain the correct tension of the twine on the drive pulley, adjust the tension of the idler pulley spring through the nut (C); screwing the tension increases, while unscrewing the tension of the spring decreases.



SPRING ADJUSTMENT OF THE COIL STOP TUBE

After positioning the coils, adjust the spring (D) in the indicated hole



INFORMATION ABOUT USE

INSTRUCTIONS FOR USE AND OPERATION



Important

The incidence of accidents related to the use of the machine depends on multiple factors that are not always easy to prevent and control. Some accidents may depend on unforeseeable environmental factors; others are caused by the behaviours of the staff using the machine. Apart from being authorised and properly informed, if necessary, when using the machine for the first time, operators must simulate some manoeuvres in order to get familiar with con-

trols and main functions. Use the machine exclusively for the purpose intended by the manufacturer. Do not tamper with any device to obtain a different performance. Before using the machine, make sure that the safety devices are correctly installed and in perfect working conditions. Apart from complying with these requirements, operators must apply all safety regulations in force and carefully read the description of the various controls and the instructions on how to operate the machine.

ROAD TRANSPORT

The machine is approved for road traffic and is therefore supplied with an homologation plate and related documents.

The maximum circulation speed is determined by the local road code and tire size. Consult the paragraph "Tyres" at pag. 9 to determine the maximum allowed speed for each tyre and for the machine.

Road circulation is allowed for authorised machines. Operators must comply with the requirements set forth by the regulations in force. In any case, before road circulation begins:

- lock the parts that may cause sudden and unexpected movements,
- make sure that the equipment does not exceed the maximum permitted overall dimensions,
- if necessary, provide the equipment with the special signals.

Before accessing a public road after travelling on gravel or dirty roads, any mud residues must be carefully cleaned off tyres in order to avoid dirtying the tarmac.

CONNECTION TO THE TRACTOR



Important

Be very careful when carrying out tractor hooking operations and adjustments. Make sure that you have read and learned all the basic safety regulations contained in Booklet 1 and in the paragraph "Safety rules" of this booklet.

Use a tractor that has the suitable characteristics for towing the machine in use.

Make sure that there are no objects resting on the machine and that there are no persons and / or animals nearby.

The drawbar of the equipment is supplied with a pivoting towing eye.



Caution - Warning

Before adjusting the drawbar, check that:

- tyre inflation is correct,
- the tailgate is closed.

The drawbar of the equipment can be adapted in high from the ground to the towing device of the tractor.

At the end of the adjustment, the towing eye must always be parallel to the ground.

Drawbar adjustment

The drawbar of the machine can only be adapted to the tractor vertically.

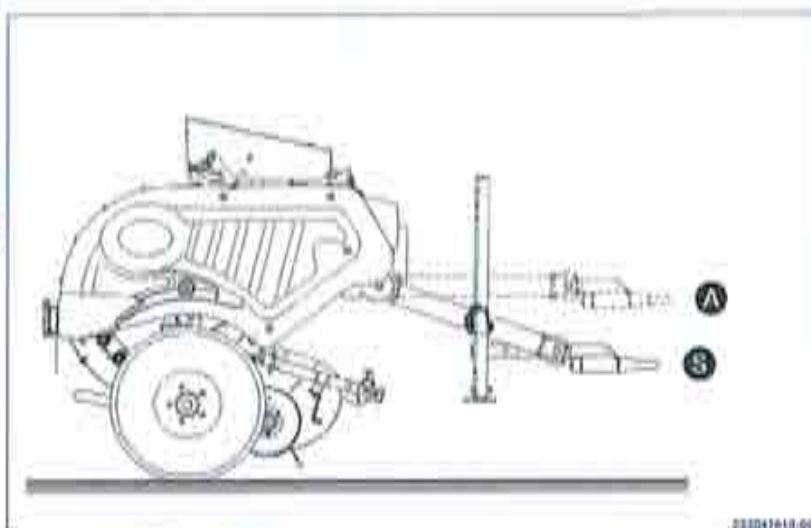
In the up position it can be used in the "HIGH" attachment of the tractor.



Danger - Warning

In Italy it is forbidden to use the HIGH attack (position A) for road circulation.

For road circulation it is necessary to reset the drawbar of the machine with the STANDARD connection (S position).



Danger - Warning

To avoid accidents caused by unexpected movements, firmly place the machine on a level and horizontal ground.

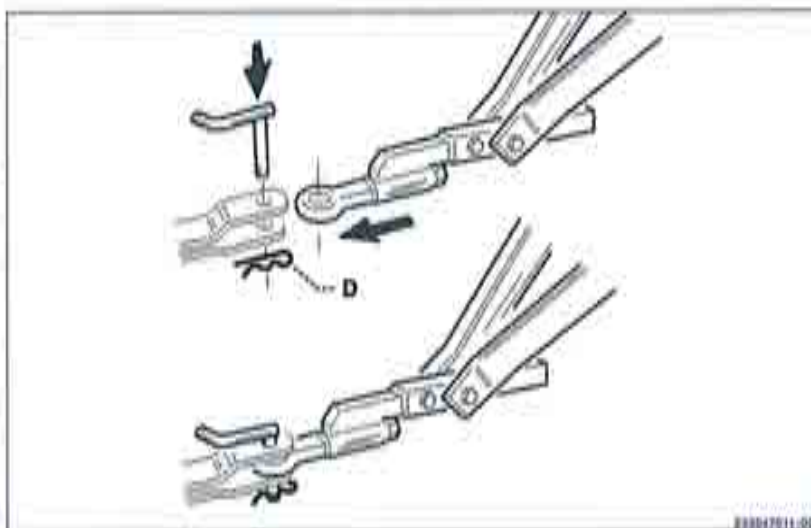


Important

However, check that you have learned all the basic safety rules contained in the Booklet 1 and in the paragraph "Safety rules" of this file.

Connection to the tractor

- Hook the equipment to the rear hook of the tractor checking that the equipment is in a stable and horizontal position and that the towing eye is at the same height as the towing device of the tractor (see "Drawbar adjustment").
- Insert the pin (D) into the towing eye and secure it with the safety pin.
- Then raise the rest foot.
- Remove any wedges from under the wheels.
- Make sure that the tailgate and the crankcases are tightly closed and locked.
- Make sure the Pick-up is in the up position.



Important

Always comply with the local road code regulations when driving on public roads.

Remember that it is compulsory to have the vehicle registration document and have applied a duplicate number plate in the appropriate space on the equipment.

Grafting of the cardan shaft

**Danger - Warning**

The cardan is a transmission organ provided with the "EC" certificate.

Each cardan is supplied with a use and maintenance manual. Follow and strictly observe all the information and safety regulations for the use of the cardan contained in this booklet.

Never connect the telescopic shaft when the tractor is running.

Never use an iron hammer to connect or disconnect the telescopic shaft from the PTO shaft.

Lift the cardan shaft and place it on the splined hub of the PTO shaft. Press the pawl and, being very careful, completely insert the cardan shaft. Check that it is firmly locked on the power take-off.

Pull the cardan to check that the safety pawl has been inserted.

Repeat the operator with the equipment PTO.

Fix the anti-rotation chains of the shaft guards as shown in the figure.

- Turn off the tractor. Clean the grooved profiles from any dirt or paint. The cardan joint, tractor side, is highlighted by a safety adhesive placed on the cardan itself.

- Thoroughly clean the power take-offs.

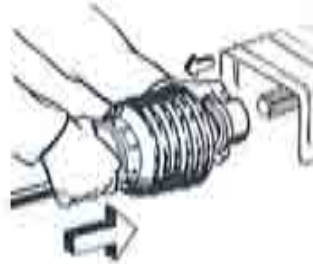
**Caution - Warning**

The grooved profiles of the telescopic shaft and PTO must always be free of paint, dirt, chaff and burrs.



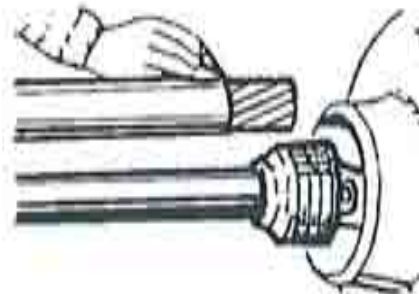
**Important**

Check the correct positioning of the protections and their status. They must be intact, perfectly closed and locked.

**Cardan shaft length adjustment**

Depending on the needs of the user and the characteristics of the tractor, the length of the PTO shaft can be adjusted. If necessary, proceed as follows:

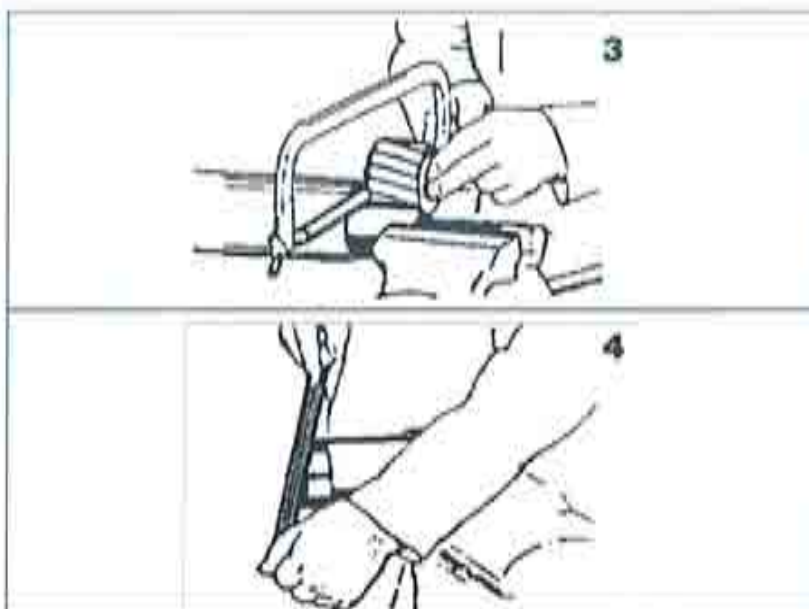
Overlap the inside part on the outside one in the shorter working position.



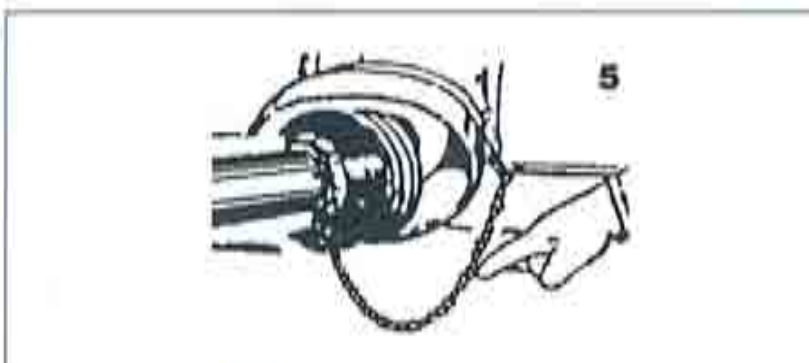
If necessary, cut the cardan guards and tubes of the required amount.



Carefully deburr the cut ends, grease and reassemble everything.



Assemble the chains in order to leave the right distance for the movements of the cardan.



Danger - Warning

These operations must be done with the equipment resting on the ground, the tractor switched off with the ignition key off and the parking brake applied.

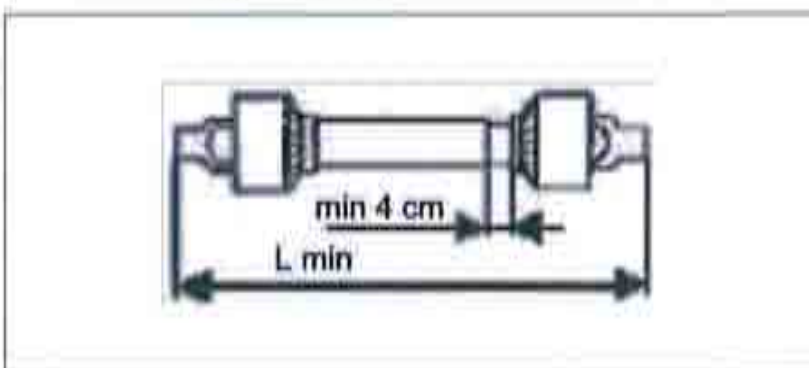


Caution - Warning

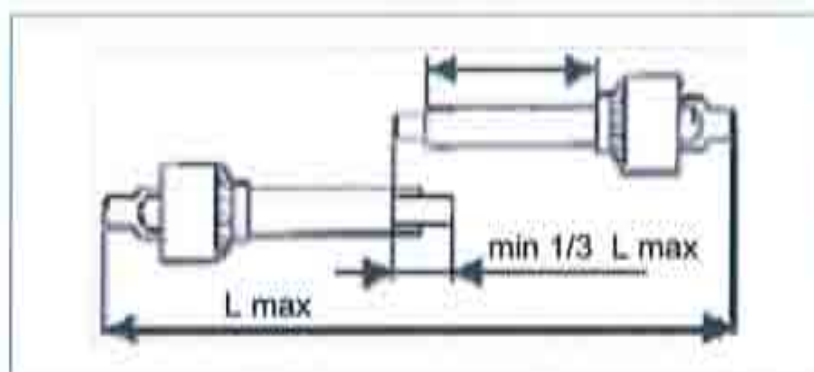
The machine starts up from 300 rpm of the power take-off.

For a good use it is advisable to never exceed 450 rpm during work.

Check that the length never exceeds the minimum distance between the machine and the tractor (risk of jamming). The minimum distance must be 4 cm.



When the PTO shaft is pulled off to its maximum, in all working conditions the telescopic tubes must overlap for at least 1/3 of their length.



Before starting to work:

- Make sure that the safety buttons or screws are correctly inserted into the splines of the power take-offs, and check that the guard turns freely, otherwise grease it;
- Make sure that on the protections the appropriate safety chains are present to prevent the protections from rotating with the cardan shaft;
- Check the protection guard often and if they are not perfectly intact, replace them immediately with new ones.



Danger - Warning

After any maintenance performed on the cardan shaft, always reset the protection guard on the cardan itself.

The company declines all liability for the non-observance of these warnings.

Connection of the seven-contact socket for trailer

Connect the plug of the road traffic lights to the seven-contact socket on the tractor.

The electric cable of the headlights for road circulation of this equipment meets the requirements of ISO 1724.



Connection to the hydraulic system of the tractor



Danger - Warning

The maximum working pressure in the flexible hydraulic hoses of the equipment is around 20.000kPa (200 bar). To avoid injuries due to splashes of pressurized fluids:

- Before connecting or disconnecting the hydraulic hoses or the pipes of other fluids, stop the engine and release the hydraulic system pressure;
- Close all joints before pressing again.



Important

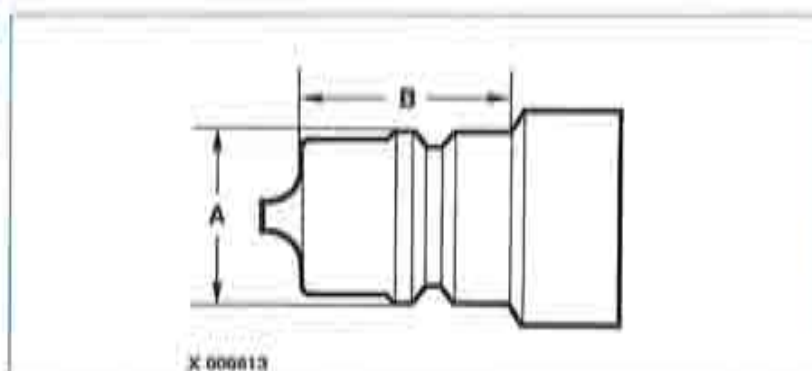
All hydraulic connections must be free of impurities, dust and sand. Protect the openings with plugs until they are connected. Foreign material can damage the hydraulic system.

The machine is equipped with ISO hydraulic connections.

If these are not suitable for tractor couplings, consult your dealer for the correct coupling.

(A) = diameter 23.65 - 23.74 mm

(B) = length 24 mm



Tractor power take-off regime selection

To select the tractor power take-off regime, refer to the label on the front of the machine.

The direction of rotation is that indicated by the adhesive safety signal.

Machine with power take-off at 540 rpm

The tractor's PTO shaft must have six splines and a dimension of 3.5 cm.

Consult the tractor use and maintenance manual to install the appropriate PTO shaft and to adjust the regime of the tractor shaft.

Control unit installation

The following instrumentation is present in the electrical equipment box supplied with the machine:

- power cord;
- control terminal;

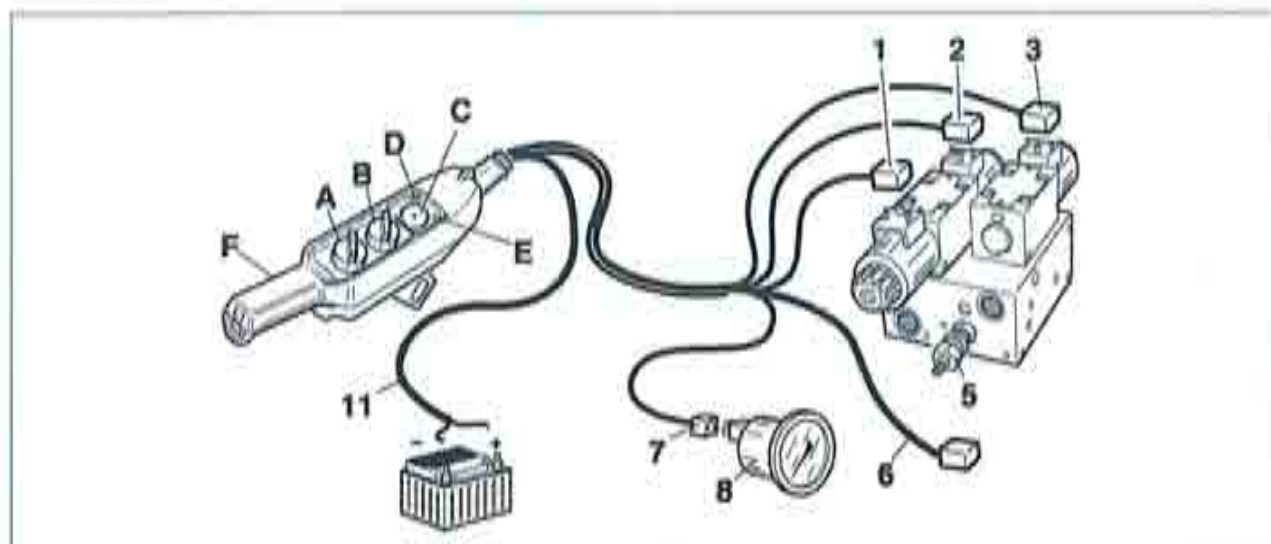


Important

Stop the power take-off during U-turns and when steering with a very narrow angle.

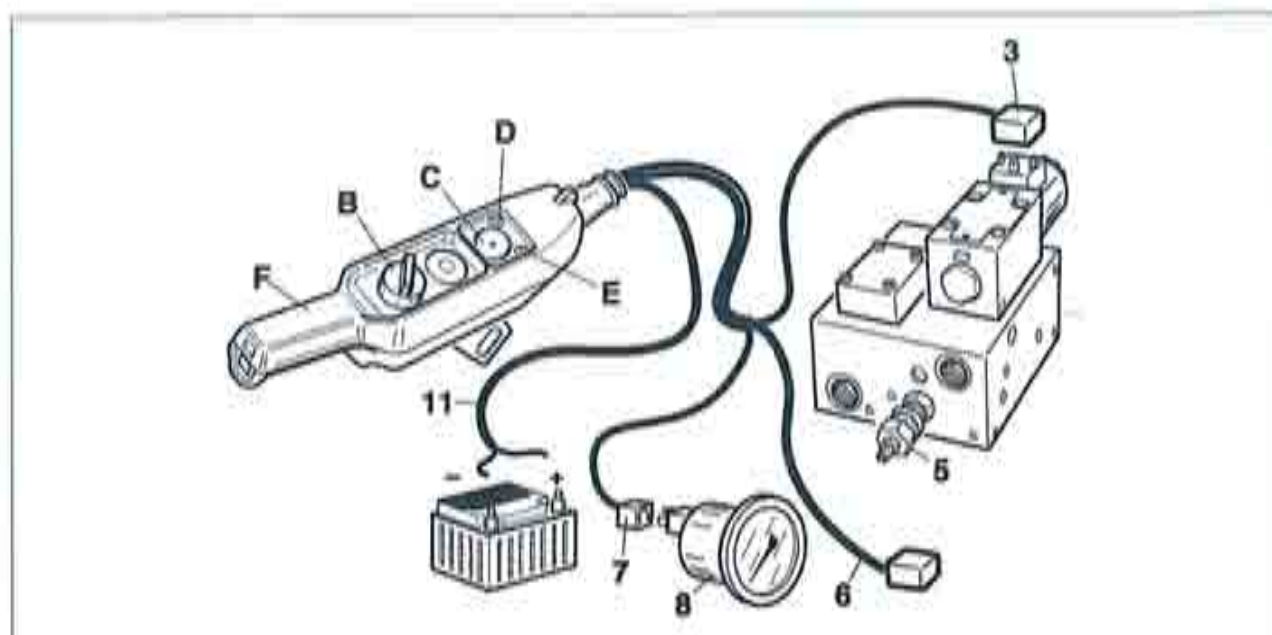


Scheme for independent pump



Ref.	Name
A	Tailgate opening/closing switch and pick-up ascent/descent.
B	Tailgate and/or pick-up selector.
C	Acoustic signal.
D	Plant start-up light.
E	Solenoid 3 tensioning indicator through selector B
F	Pushbutton
1	Solenoid valve connection cable
2	Solenoid valve connection cable
3	Solenoid valve connection cable
6	Predisposition cable for the net binding
7	Connection cable to the pressure gauge
8	pressure gauge
11	Connection cable to the tractor battery

Scheme for hydraulic circuit with connection to the tractor



Ref.	Name
B	Tailgate and/or pick-up selector.
C	Acoustic signal.
D	Plant start-up light
E	Solenoid 3 tensioning indicator through selector B
F	Pushbutton
3	Solenoid valve connection cable
6	Predisposition cable for the net binding
7	Connection cable to the pressure gauge
8	pressure gauge
11	Connection cable to the tractor battery

DAILY CHECK

Check the general condition of the machine every day: the wear status of the crowns, supports, bearings, chains, pins, shafts and all the moving and rotating parts of the machine.

Perform a complete greasing operation.



Important

Before using the equipment again, make sure that there are no patches of oil on the ground; in this case **DO NOT OPERATE** the machine.

Check where the oil leak is, and only after having ascertained the extent of the damage contact the authorized service center.



Danger - Warning

Perform the daily check operations only when the machine is not operating.

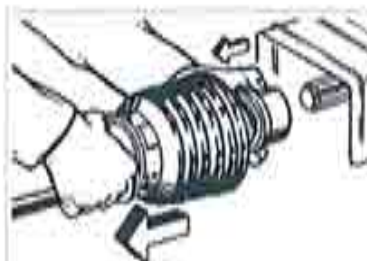
DETACHMENT FROM THE TRACTOR

Proceed as follows:

- Switch off the power take-off.
- Engage the tractor parking brake.
- Stop the tractor engine.
- Remove the main switch key.

To properly disconnect the cardan shaft from the power take-off shaft, refer to the operator's basic manual for the telescopic shaft.

Reinstall all the protections if removed.



PREPARATION FOR WORK AND ADJUSTMENT OPERATIONS

The following operations must be performed only and exclusively by operators who have read and understood all the parts of this manual, especially the safety section.

Once all the connections described above have been carried out.

Check that the belts are not glued to the paint of the rollers.

- Turn on the tractor without engaging the PTO and check the correct operation of the various service movements of the equipment.

Check the operation of the hydraulic system such as opening and closing the tailgate, raising and lowering the pick-up (remember to bring the stop cock lever to OPEN position in order to raise the pick-up).

- Check the operation of the electrical connection to the terminal by switching on the control system.

Check the operation of the electrical system, the direction, parking and stop lights.

- Close the tailgate and operate the power take-off.

Before starting the working phase, always check that the machine is in order, that the lubricating oils are at

an appropriate level and that all the parts subject to wear and/or deterioration are fully efficient.



Danger - Warning

Unless otherwise specified in this manual, the following steps must always be performed before work preparation and adjustment work:

- Switch off the power take-off,
- Engage the tractor parking brake,
- Stop the tractor engine,
- Switch off the electronic control system;
- Remove the main switch key,
- Wait for the complete stop of all moving parts.



Caution - Warning

The machine must always be connected to the tractor before any operation, either empty or with bale.



Caution - Warning

Before operating the power take-off, check that no

TRIAL RUN

Consider the production of the first fifty bales as a run-in period (until when the paint in the pressing chamber has become smooth).

Before use, lubricate the telescopic components of the cardan thoroughly.



Important

If any slippage occurs during operation, switch off the PTO and reinsert it at low speed until the coupling engages and then work again with the PTO at rated speed.

BALE FORMATION



Danger - Warning

To avoid being dragged into the machine with consequent fatal accidents: NEVER attempt to manually feed the product or the net in the machine or unclog the supply area while the machine is running. The machine feeds the product faster than it can be released.

Switch on the control system before starting work. Always before starting the working phase, check that the binder arm is in the rest position and that the respective cutting devices are unloaded.

- Position yourself on the swath and lower the pick-up.



Important

Make sure that the tailgate is closed.

- Insert the power take-off, operate the tractor at the nominal power take-off speed and start feeding the machine as described in the paragraph "Recommendations for use" at pag. 42.



Important

NEVER exceed 200 bar pressure to avoid damaging the equipment.

BINDING AND UNLOADING OF THE BALE



Danger - Warning

Before opening the tailgate and unloading the bale:

Make sure you are on flat ground or in a suitable position in case of sloping terrain, and not in proximity to people.

Remove any people near the machine, especially behind the tailgate.

Open the chamber to unload the bale.

Wait for the bale to come out and make sure it has moved away before closing the tailgate.



Danger - Warning

Never start collecting with the tailgate open, even with only an open hook.

Unblockage of the product

If a clogging occurs, the safety system on the machine intervenes. Proceed as indicated.



Danger - Warning

Absolutely do not try to free the pick-up with the engine running or rotating parts in motion.

- Disengage the power take-off.
- Retrocede at least two meters.
- Turn off the tractor and roll out the forage pile to restore the swath.
- Check for possible ingestion of foreign bodies, that no damage has occurred.
- Return to the driving position and restart the engine.
- Insert the power take-off and slowly proceed to reabsorb the swath.

ACCESSORIES AND KIT

To improve the performance and operations of the machine, or according to customer needs, you can use a series of accessories and kits to be applied to the machine.

Accessories

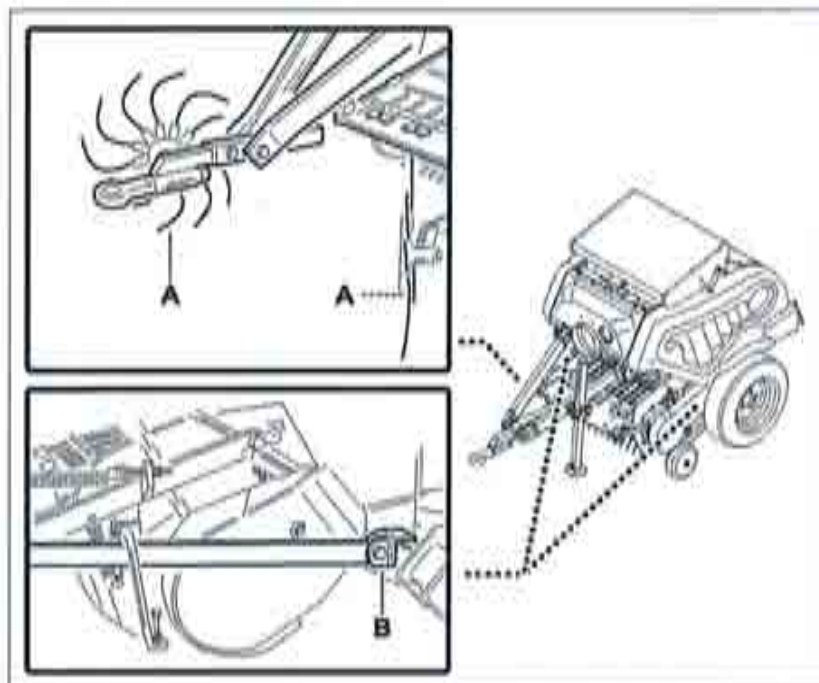
These are all optional devices that, if requested at the time of purchase of the equipment, are mounted on the machine by the Manufacturer.

Kit

These are all optional devices that can be purchased and assembled later by the operator. These kits have the necessary instructions to be assembled and disassembled from the machine, whenever necessary, according to your working needs:

- Bale ejector: facilitates the removal of the bale from the closing radius of the tailgate, once ejected; it is not recommended for use on sloping ground.
- Gathering wheels: These are two wheels (A) provided with flexible teeth that facilitate the collection of the forage on wide or malformed swaths and are placed on the wheel axle where the attachment (B) for fixing is set up.

Consult your dealer or our Spare Parts Service to check which accessories and/or kits are most suitable for the model of round baler you have purchased.



DESCRIPTION OF CONTROLS

From the driver's seat it is possible to operate all the operating and transfer commands of the machine. The following are the commands, the position and their function.

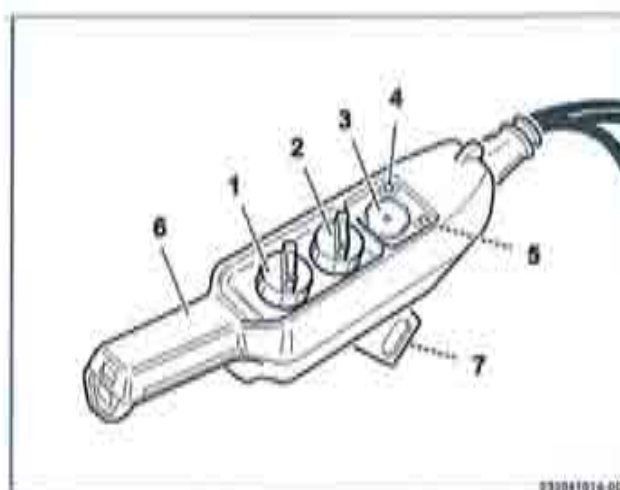
Control panel for independent pump

Ref.	Name
1	Tailgate opening/closing switch and pick-up ascent/descent.
2	Tailgate and/or pick-up selector.
3	Acoustic signal.
4	Plant start-up light
5	Solenoid 3 tensioning indicator through selector B
6	Pushbutton
7	counter bracket



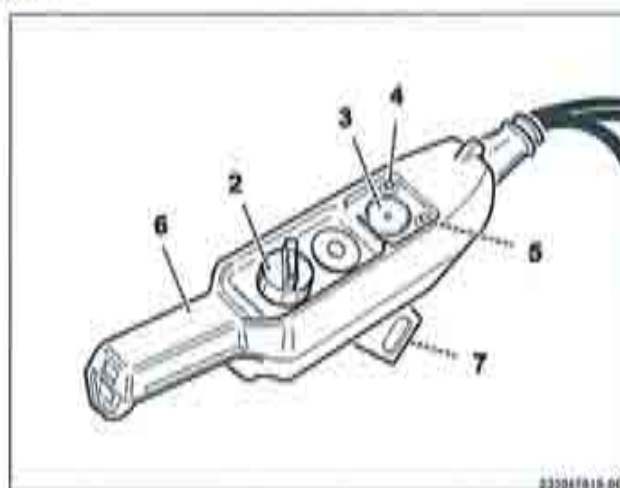
Important

Some button controls have a safety device for preventing accidental operation. This safety device should be unlocked before using buttons.



Control panel for hydraulic circuit with tractor connection

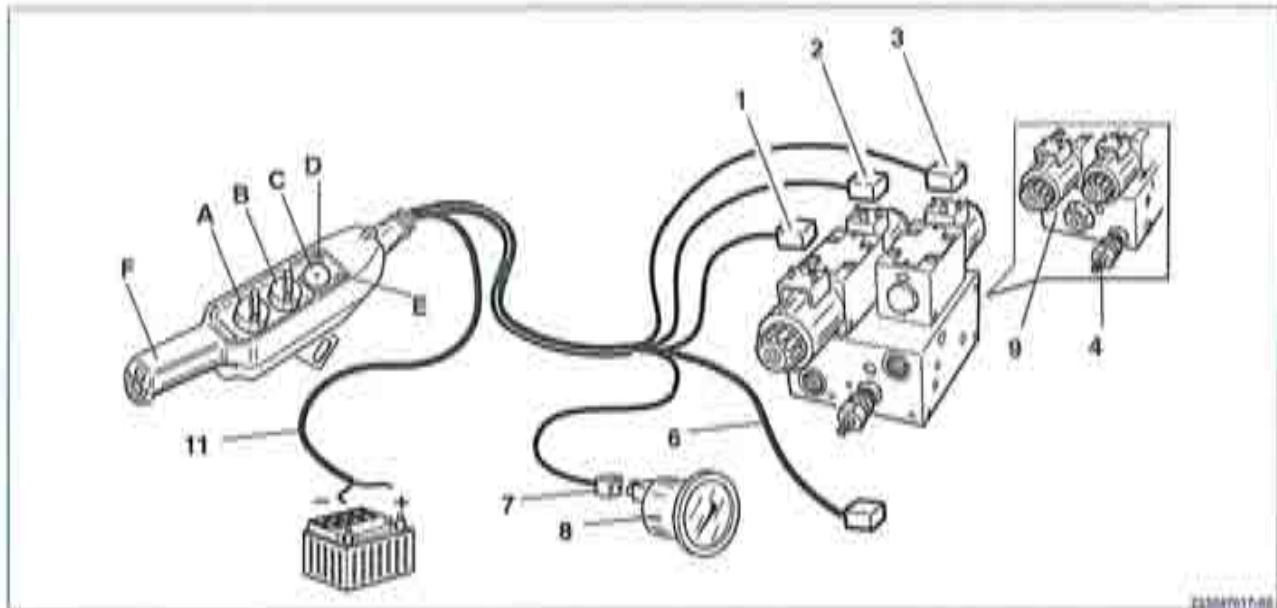
Ref.	Name
2	Tailgate and/or pick-up selector.
3	Acoustic signal.
4	Plant start-up light
5	Solenoid 3 tensioning indicator through selector B
6	Pushbutton
7	counter bracket



Important

It is strongly recommended to check that the female socket with which you connect the panel power supply is connected directly to the battery with cables having a minimum section of 4 mmq.

HYDRAULIC CIRCUIT FUNCTIONS WITH INDEPENDENT PUMP



The complete hydraulic configuration consists of a solenoid valve with two solenoids (1-2) to control the functions (tailgate and Pick-up) and a solenoid valve with a solenoid (3) to select the two functions (tailgate and pick-up).

When the warning light (E) is off, the tailgate can be opened or closed using switch (B).

When the indicator light (E) is on (using button (A)), it is possible to raise or lower the pick-up using switch (B).

**Important**

It is advisable to keep the button (A) in the Pick-up position (warning light (E) on) only when the Pick-up must be activated to prevent overheating.

On the block are also mounted:

- The valve (4) that adjusts the closing pressure of the compression chamber (about 40 bar).
- The safety valve (5) serves to open the machine in the case of a pressure higher than the maximum calibration value.

The machine is supplied with the valve already calibrated on 80 bar. In the event that the machine opens at a lower or higher value than the calibration one, it is necessary to intervene on the valve during the working phase. This adjustment is performed in the same way as the closing valve.

Closing valve: serves to adjust the closing pressure of the machine. The valve must be adjusted by keeping the tractor engine at a medium-high speed, closing the machine and reading the pressure on the pressure gauge; the pointer must stop on the blue colored sector. To adjust the pressure, loosen the locknut, turn the screw and once the adjustment has been made, lock the locknut.

- Control valve (9): controls the opening and closing speed of the machine and the sealing of the closure during packaging

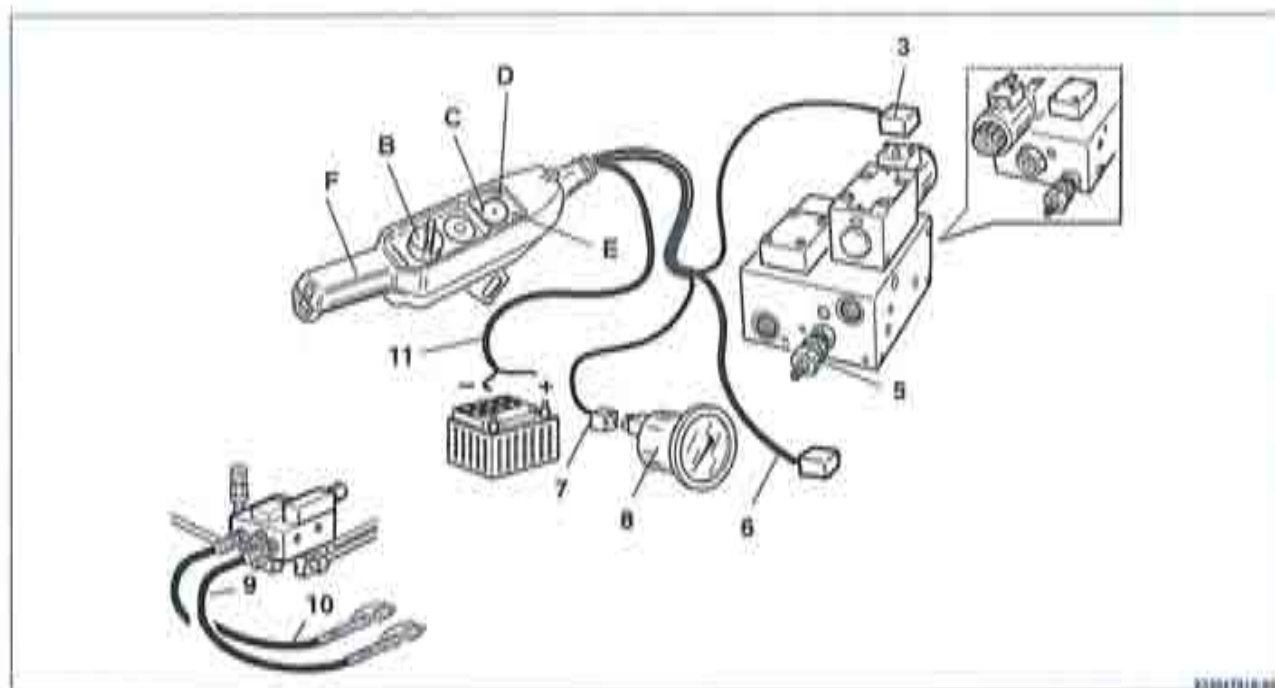
N.B.: if with the passage of time you notice a decrease in the closing pressure when the machine is stationary, it is only an adaptation of the moving parts and not a defect. A stop valve for the tailgate cylinders is also mounted on the hydraulic circuit.

- The predisposition cable (6) for the automatic binder.
- The cable (7) connecting the pressure gauge.
- The electric pressure gauge (8) with manual adjustment of the initial binding pressure.

When this pressure is reached, the acoustic signal sounds.

- The cable (11) connecting the tractor battery.

HYDRAULIC CIRCUIT FUNCTIONS WITH TRACTOR CONNECTION



In this case it is necessary to connect the equipment to the tractor's hydraulic outlets using the flexible hoses (9) and (10).

With respect to the "Hydraulic circuit functions with independent pump" section, the switch (A) and the solenoid valve (1-2) are eliminated.

A double-acting distributor is required on the tractor.

To open and close the tailgate, oil is sent directly from the tractor by acting on its distributor.

No command is activated on the control panel.

To operate the pick-up, it is necessary to act on the switch (B) to activate the solenoid valve (3) and send oil from the tractor.

To get the ascent and descent of the pick up

**Important**

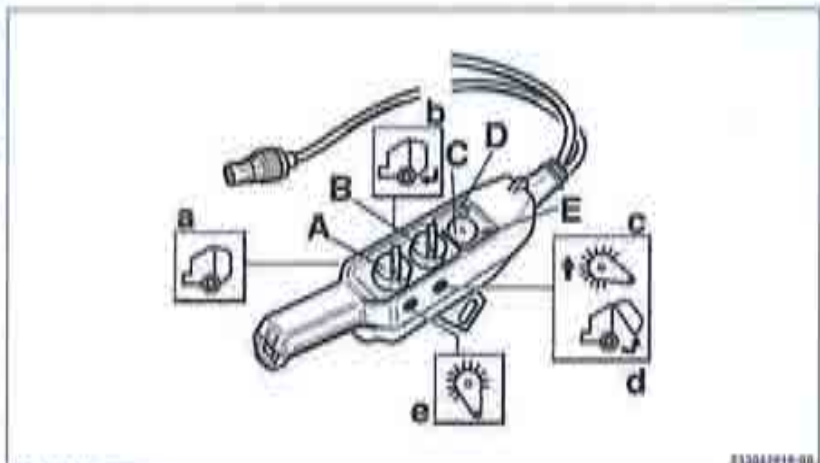
It is advisable to keep the button (B) in the Pick-up position only when the Pick-up is required.

EQUIPMENT START-UP

**Important**

Before starting using the machine it is mandatory to have learned all the basic safety regulations contained in the Booklet 1 and in the paragraph "Safety rules" of this booklet.

- Check that the indicator light (D) is on. Press the compression chamber into closing pressure by moving the switch (B) to the left (symbol (b)) and checking that the warning light (E) is off.
- Turn the switch (A) to the left (symbol (a)) and reach the closing pressure (about 40 bar).
- Lower the Pick-up by first turning the switch (B) to the right (symbol (c)), the warning light (E) comes on. Then turn the switch (A) to the right (symbol (e)).



- Engage the power take-off and rotate at 540 rpm. Advance regularly.
The weight of the bale is closely linked to the speed of advancement. The lower the speed, the greater the weight.
It is very important that the forage swaths to be collected are small and adequate to the size of the mini-press to avoid dangerous overloads.
- When the optimal tying pressure is reached, which can be detected by the green sector on the pressure gauge and by the acoustic signal, insert the net by pulling the right rope or introduce the string by pulling the left rope.
- Hold the tension for a few seconds until the bale continues to drag the net or string independently.
- Stop the tractor and release the rope, waiting for the binding cycle to be completed automatically.
- When the cut is completed, open the chamber and make sure that the bale has gone out and moved away before closing.

**Caution - Warning**

If you are working on sloping fields, position the machine on a flat stretch and unload the bale transversely to the slope.

RECOMMENDATIONS FOR USE

To ensure maximum efficiency during the collection and packaging of the various products, it is advisable to operate as described here:

Conditioning

To ensure a uniform moisture content of stems and leaves it is important that the forage is conditioned. High crops, which are difficult, elastic and resistant, must be conditioned to make the stems broken in order to annul their resistance to rolling when the bale is in formation, and also for their problematic tendency to interfere between the belts.

Swaths

The filling of the compression chamber determines the shape and density of the bale.

An optimal condition for a correct and uniform filling of the chamber is determined by the width of the swath, which must be as close as possible to the width of the compression chamber.

The preparation of the swaths is very important for a good formation of bales. When the fodder is cut and dried properly you can proceed to the formation of the swaths.

The swaths can be single or double, and the width is equal to the pick-up size of your machine, to exploit the entire equipment's capacity.

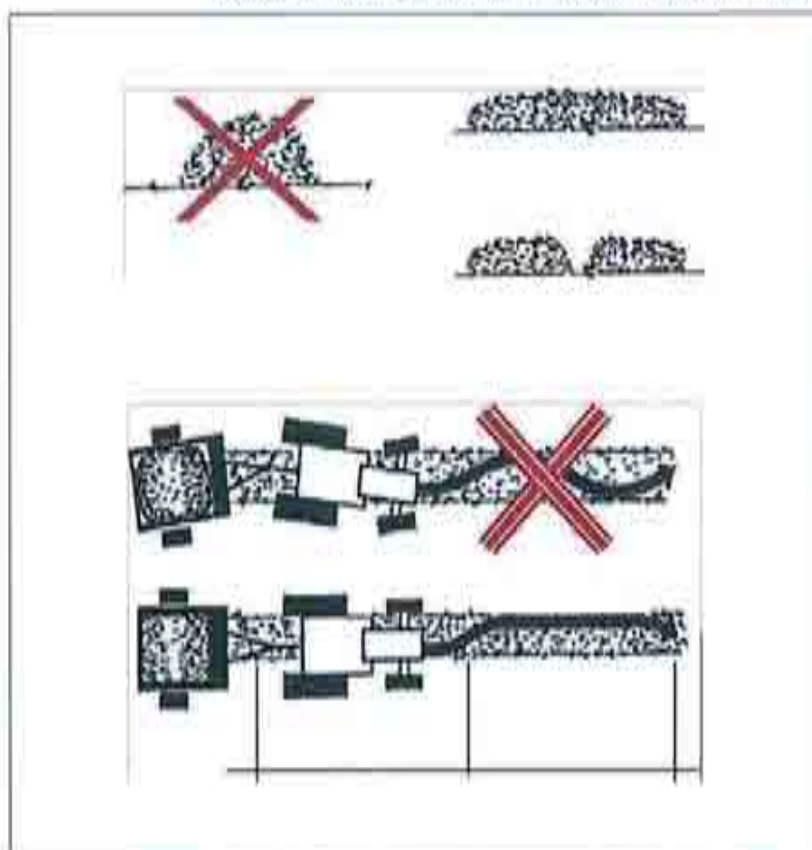
When forming double swaths, it is important that they are left side by side and not stacked on top of each other.

The single swaths can be 0,50 - 0,60m wide, but in this case a "zig-zag" guide is required, to feed the press in order to exploit the entire width of the collection and form a bale of the right proportions.

To pack the corn stalks, it is recommended to overburden (not excessively) for a better bale formation and density. Further information in the paragraph "Preparation of hay for packing" at pag. 44.

With too large swaths an excessive lateral pressure is caused with forage spills and a difficult expulsion of the bale. In the case of small swaths it is necessary to proceed for alternate sections on the right and on the left, 10 meters long.

A different alternation compromises the correct formation of the bale, generating the classic "barrel" shape.



The ideal swath width is calculated relative to the width of the collector.

The swaths of width equal to the collector are the best since they do not require a serpentine or criss-cross passage.

Narrow swath

Feed the product on one side of the collector for $6 + 8$ seconds. Then, steer over the swath and feed the product on the other side for the same interval. Reduce the time of progress in a straight line for heavy swaths and increase it for light swaths.

Swath of average size

It is advisable to avoid, if possible, the swaths of average size.

On a swath of this type, when the operator uses a zig-zag guide to direct the product to the ends of the col-

lector, the product is continuously fed towards the center. As a result, the material will be more concentrated in the center of the bale than on the sides. The result is the formation of barrel-shaped bales.

Use of equipment with corn stalks

To prolong the life of the collection teeth it is advisable to cut the stalks before pressing.

To increase the feed opening, lower the collector (the teeth should not touch the ground).

Higher productivity can be achieved by packing smaller swaths at higher feed rates. Make sure that the nominal power take-off speed is maintained.

Use of equipment with silage and wet products

Always start the bale with the collector centered on the swaths.

Before entering the swath, reduce the tractor engine speed to low idle. Choose a gear that allows feed

speeds from 6 to 10 km/h with the PTO at rated speed.

To ensure a regular feeding, make sure that the draw-bar does not touch the swath.

Working speed

The pressing speed cannot be fixed but depends on several factors such as: fodder material to be packaged of different qualities, swath size, fodder moisture, conditions of the soil in which it operates. Indicatively, without prejudice to the observations indicated above, an acceptable speed range between 5 and 15 km/h can be assumed.

It is good practice to start and finish bales at reduced speed.

Swath size

Well-formed and uniform bales are obtained by feeding swaths of the same width as the collector or half the width or less of the width of the collector.

Avoid medium width swaths. When the operator moves to the side, on a swath of this size, to direct the product to the ends of the collector, the product is con-

tinuously fed towards the center. As a result, more material will be fed towards the center of the bale than towards the ends. The result of this are barrel-shaped bales with a low density at the ends and a high density at the center.

Preparation of hay for packing

The product to be packaged can be prepared in different ways, depending on the preferences and equipments available. The best bales are formed with the product cut, conditioned and ranged in swaths of appropriate size. This allows the operator to follow the swath and direct the material into the press in an appropriate manner to produce compact and uniform bales.

The bale formation technique accepts a moisture content of up to 18%.

If the humidity is too high, the product will deteriorate.

If the humidity is too low, excessive crushing and loss of leaves will occur.

If the humidity is too low, excessive shattering and loss of leaves will occur.

Do not over-condition the product, especially legumes such as alfalfa and clover.

If the bales must be stored outside, the excessive crushing of the stems will favor the absorption of moisture. Even insufficient conditioning can cause deterioration, particularly when treating products on the trees and others with a sturdy stem.

NOTE: Excessively dry and slippery products, sometimes encountered in corn stalks, some herbs and various wheat straws can be packed satisfactorily if the product is long enough to hold the bale together.

Preparation of silage for pressing

The product can be cut and prepared with the usual equipment such as the mower or mower conditioner and a tedder rake.

Produce uniform swaths. A flat and complete swath is preferable. The best conservation results are obtained when the pressed product contains 40 - 50% of dry product.

Preparation of straw for packing

If possible, make sure that when the wheat is harvested, the straw is not over-crushed by the combine-harvester's threshing mechanism. If the straw is already very dry and short, do not move the swath

before packing. A full and correct sized swath, produced by a large combine harvester, gives better results than a very small one.

CHECKS DURING USE

- After 5 hours of work check that the bolts are not loose and tighten if there are any loose bolts.
- Check the tension of the bale forming chain and the drive chains. If necessary, record the voltage (see "Chain adjustment" on page 20).
- Check that the chains are lubricated or oil them every 10 hours thereafter.



Danger - Warning

Do not allow anyone to approach the equipment when it is operating.

RECOVERY AND CONSERVATION OF THE NET ROLL

The net rolls must be removed from the equipment and stored in the respective boxes, in a dry and protected environment.

Keep these boxes in a protected environment from the possible attack of rodents.

NET LOADING

Proceed as follows:

- Open the crankcase (A).
- Lift the bracket (B).
- Lift the net braking pipe (C) and position the net coil (D) in the housing according to the path shown in the figure.
- Pay attention to the rotation direction of the coil represented by the arrow in the figure. To facilitate the net exit between the rollers, pull the rope (F) (for net binding) or the rope (G) (for twine binding), so that the knife (E) is not inserted.
- Cut the net as shown in the figure.



Important

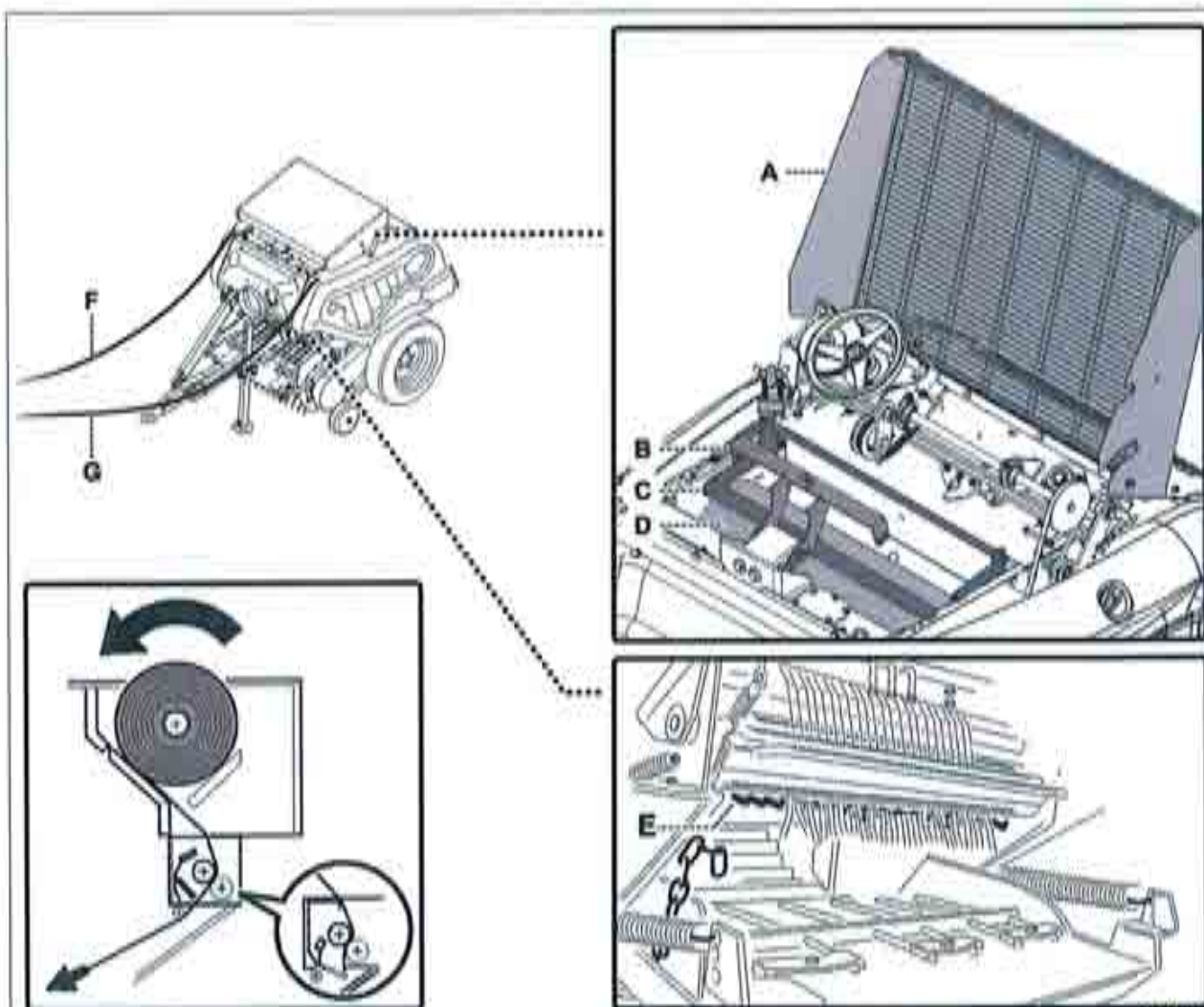
Handle the net rolls carefully without causing injury.



Important

The knife (E) will automatically engage with the first turns of the PTO.

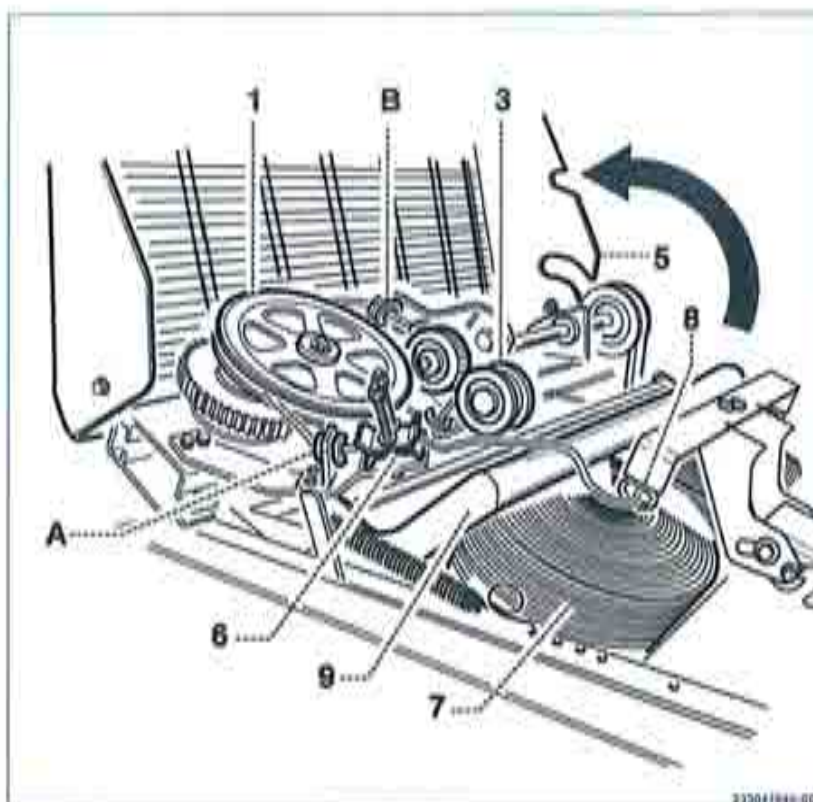
- Reposition the bracket (B) and close the crankcase (A).



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TWINE COILS LOADING

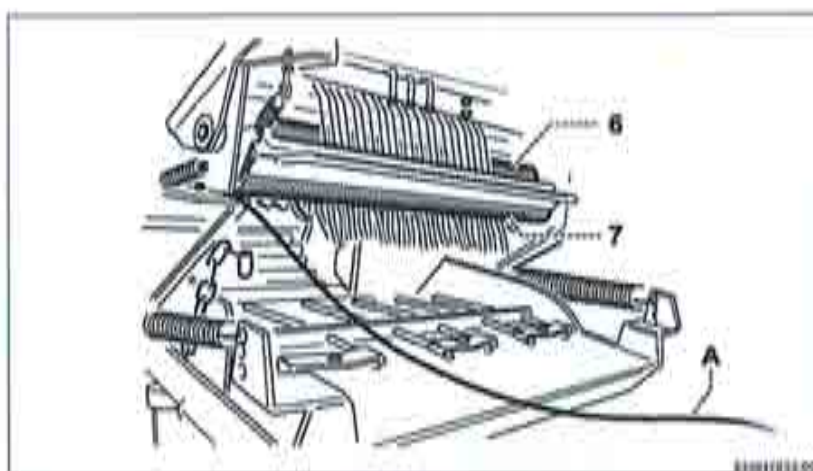
- Open the crankcase (5).
- Lift the coils stop tube (9) and load coils (7) suitable for tying into the housing.
- Connect the coils: the inside of the left coil with the outside of the other right coil. The joining mode must be as small as possible to pass easily through the eyelets.
- Take the inner end of the right coil and insert it into the ring of the bracket (8), then insert it into the twine brakes (6) in the eyelet (A).
- Make a complete turn with the twine on the pulley (1), insert it in the eyelet (B), pass the string between the two pulleys. To facilitate this operation, raise the idler pulley (3).
- Put the string in the eyelet (C).
- Place the string in the hole and allow it to enter the pressing chamber as shown in the figure.
- Close the crankcase and hook it with the appropriate safety hooks.



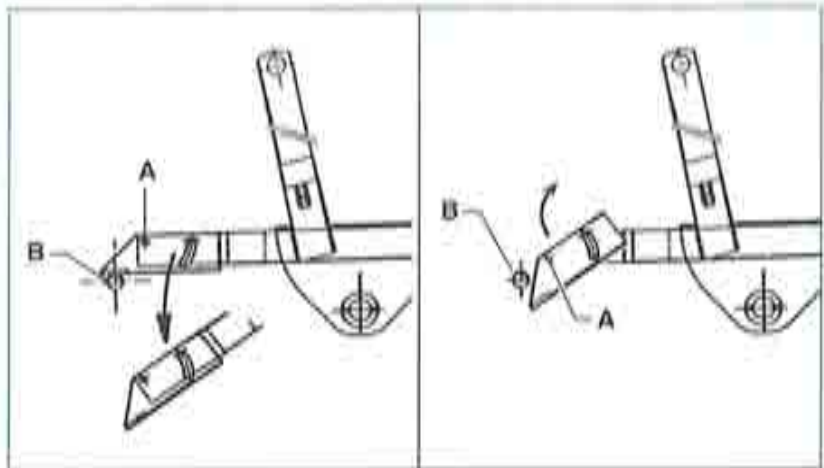
NET BINDING

When the set pressure is reached, the acoustic alarm is activated, signaling to the operator to stop the progress of the tractor and start the binding to the net.

- Pull the rope (A). The rollers (6) and (7) begin to rotate, which pull the net close to the bale and then the bale will drag the net.
- Release the rope immediately when the bale drags the net, to avoid excessive consumption of the rope.



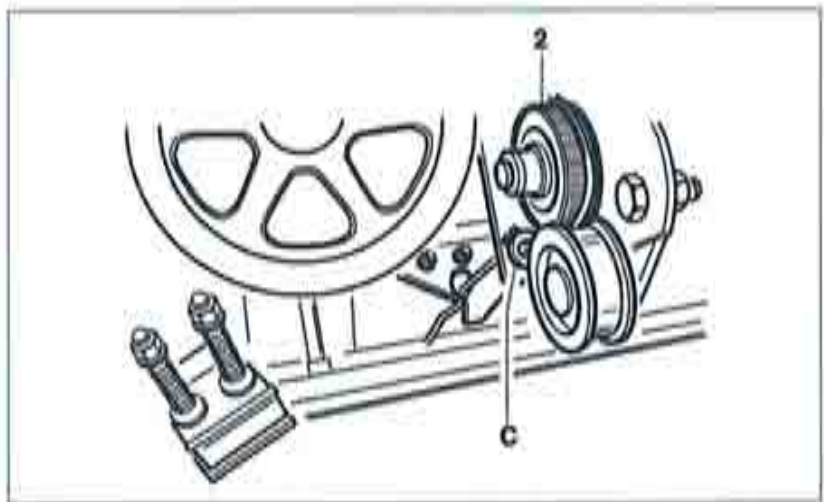
From this point on, the completion of tying and cutting is automatic; the stop (A) rests on the register (B) which, rotating, determines the sliding of the stop (A). At the end of the run, the stop falls from the register and causes the insertion of the knife by cutting the net as shown in the figure.



TWINE BINDING

When the set pressure is reached, the acoustic alarm is activated, signaling to the operator to stop the progress of the tractor and start the twine binding.

- Pulling the rope (left side), you start rotating the drive pulley (2), which drags the twine near the bale and then the bale will drag the twine.
- Release the rope. From this point on, the completion of tying and cutting is automatic.



EQUIPMENT STORAGE



Danger - Warning

Before carrying out any cleaning work on the equipment, pay attention to all the basic safety regulations contained in the Booklet 1 and in the "Safety rules" section of this booklet.

To avoid accidents caused by unexpected movements, firmly place the machine on a level and horizontal ground.

Do not carry out maintenance with the machine in motion, but only if the equipment is stationary and with all the moving parts completely stopped. If the machine is connected to the tractor:

- Switch off the power take-off.
- Engage the tractor parking brake.
- Stop the tractor engine.
- Remove the main switch key.
- Turn off the control system.

If the machine is disconnected from the tractor, lock the wheels to avoid any movement.



Important

Regular and accurate maintenance extends the life of the machine and ensures operator safety.



Important

Never lift the equipment off the ground.



Danger - Warning

If maintenance is to be carried out with the open machine tailgate or inside the bale formation chamber, keep the tailgate open by blocking both legs of the jack (on both sides) with the tailgate safety catches by inserting the relevant plugs.

Always use this safety rules with the tailgate open.



Important

To avoid causing serious damage to the equipment structure, before closing the tailgate, remember to remove the safety catch by moving the lever on the tailgate safety device to its original position. Move away from the tailgate before closing it.

PROLONGED INACTIVITY OF THE MACHINE

Make sure that the machine is completely discharged.

Drain the hydraulic circuit pressure.

Store the equipment in a dry place, protected from the elements and on a suitable and level surface.



Caution - Warning

Place the equipment in a place protected from atmospheric agents, protect it to prevent damage and ensure that it is accessible only to workers. Check that the storage temperature is between 0 °C and 60 °C.

Perform scheduled maintenance

apply an anti-rust treatment on all non-painted parts;

To avoid sudden unwanted movements use the chocks under the wheels or, if your machine is equipped with it, operate the hydraulic parking device. Make sure that all the protections on the machine are in the correct position.

Thoroughly clean the equipment; dirt attracts moisture, and as a result metal parts can rust.

Remove the control terminal and store it in a sheltered place protected from weather, dust, moisture, insects and rodents.

Carry out a careful check and if necessary replace the damaged or worn parts.

Perform an accurate lubrication of each foreseen point; sprinkle all unpainted or stripped metal parts with anti-rust, or oil, or grease to protect them from rust.

Remove the cardan shaft from the machine and store it in a dry and protected place. For further information read the instruction and maintenance manual attached to the same cardan.

Grease the binder blade.

Clean and oil all the chains.

Grease all exposed parts of the rods of the cylinders and of the electric actuators.

Clean the straps and check the condition of the clamps.

Protect the round baler with a plastic sheet

If the operations described here are carried out with care, you will have the advantage of having an equipment in optimal conditions when resuming work.

In case of dismantling of the equipment, follow the anti-pollution and disposal regulations of the lubricants in your country.

RE-COMMISSIONING

Before returning the machine to service after a long period of inactivity, perform a thorough inspection of the main components to ensure their efficiency. In particular we recommend to:

- Lubricate all grease points and all sliding surfaces with water repellent grease.
- Check the oil level.
- Check overall condition of the equipment.
- Check that the controls are in working order.
- Check that main screws are fastened tightly.
- Check and replace worn or damaged parts.
- Carry out all the necessary maintenance operations;

- Check the general conditions of the hydraulic hoses;
- Check the efficiency of all safety devices.
- Perform the general cleaning.
- Check tyre pressure.
- Start the system, bring it to the maximum pressure level and check for any liquid leaks.
- Check and reset the oil level in the pump, if necessary.
- Check the correct operation of the pressure gauges because the quantity of the sprayed product depends on the correct pressure in the circuit.

INFORMATION ABOUT MAINTENANCE

MAINTENANCE INSTRUCTIONS



Important

All the operations described here must be carried out strictly at the beginning and at the end of each season.

Regular and accurate maintenance extends the life of the machine and ensures operator safety.

All the assemblies with screws must be tightened in accordance with the values in the "Tightening torque table" table at pag. 53, unless otherwise informed.

For this machine the resistance class 8.8 represents the standard and the minimum quality used.

Before carrying out any maintenance work, activate all the safety devices and consider whether it may be necessary to provide appropriate information to the operators and the staff working near the machine. In particular, provide proper signs in the areas surrounding the machine and do not allow anyone to access any devices that, when activated, may cause unexpected dangerous conditions, resulting in damages to personal safety and health.

Moreover, consult the General Safety Rules appearing in File 1.



Caution - Warning

All maintenance work, except when otherwise stated, must be conducted while the engine is off, and with the key totally removed. Those authorised to carry out maintenance work must take all precautions to ensure the safety of all persons involved, in compliance with the requirements of current legislation pertaining to safety in the workplace.



Caution - Warning

All maintenance interventions must be effected in well-lighted conditions.



Caution - Warning

At the end of operations, check that no tools, rags or other material are left near moving parts or in risk areas.



Important

Replace worn parts using original spare parts. Use the oils and greases recommended by the manufacturer. This will ensure the functionality of the machine and the level of safety expected. Do not disperse polluting liquids, worn parts and maintenance residues in the environment. Dispose of them in compliance with current legislations.

When the maintenance operation involves access to parts of the machine that can not be reached by standing on the ground, and in any case at points higher than 1.50m from the ground, use a ladder or a platform that complies with current regulations.



Caution - Warning

Perform maintenance and replacement operations at least four hours after stopping the engine to avoid contact with hot parts of the machine.



Danger - Warning

The maximum pressure of the compressed air used in the blowing and cleaning operations must amount to 2 bar. When performing operations with compressed air, protect you eyes with suitable safety goggles.

When using compressed air to clean the filters, wear safety glasses with side shields and a mask, so as to avoid personal injury caused by dust particles.

**Danger - Warning**

Prior to effecting any interventions on tyres or wheel rims, deflate the tyre completely to avoid sudden explosions.

When inflating tyres, keep to the side with respect to the tyre shoulder.

**Caution - Warning**

Pay special attention before removing the caps and covers from tanks, radiators or cylinders; rotate them carefully in order to discharge any possible residual pressure.



When discharging the pressure, keep away from the machine and always wear safety goggles. Slowly loosen the discharge screw by a few turns in order to allow the condensate or fluid to come out. Discharge the pressure from the circuits before performing any operation.

Do not use the hands to identify pressurised fluid leakages. Pressurised fluid leakages can penetrate the skin and eyes causing very serious consequences.

**Important**

Do not keep the vehicle's engine running in closed rooms not equipped with a ventilation system capable of expelling hazardous gases present in the air.

Avoid prolonged and repeated skin contacts with fuel, lubricants and liquids as these might cause skin irritation and other problems.

Do not ingest fuel/lubricants/fluids.

**Caution - Warning**

To avoid accidents caused by unexpected movements, firmly place the machine on a level and horizontal ground.

Perform maintenance operations **ONLY** if the equipment is not moving.

Never lift the equipment off the ground.

RECOMMENDATIONS FOR LUBRICATION

Before carrying out any lubrication work on the machine, pay attention to all the basic safety regulations contained in Booklet 1 and in the "Safety rules" section of this booklet.

To avoid accidents caused by unexpected movements, firmly place the machine on a level and horizontal ground.

Perform lubrication and maintenance **ONLY** if the equipment is not moving. Before any operation:

Switch off the power take-off.

Engage the tractor parking brake, or lock the wheels of the equipment if it is disconnected from the tractor.

Stop the tractor engine.

Remove the main switch key.

Regular and accurate maintenance extends the life of the machine and ensures operator safety.

Never lift the equipment off the ground.

MAINTENANCE SCHEDULE TABLE

For a quick and clear consultation the various maintenance and lubrication interventions described in the present booklet are listed here.

The following operations must always be carried out at the beginning and at the end of each season.

Pay attention to all the basic safety regulations, contained in the booklet 1 "General safety information", and to all the specific rules contained in this brochure

in the paragraphs "Safety rules" and "Maintenance instructions" before carrying out any intervention of maintenance on the equipment.

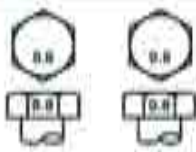

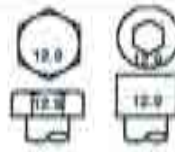
Recommended maintenance intervals refer to normal operating conditions. Perform maintenance more frequently if the round baler works in adverse conditions.

Grease all the points provided for by the greasing decal	30 working hours
Grease the cam profile of the pick-up	10 working hours
Grease the cardan shaft (for more information on the maintenance of the PTO shaft, refer to the instructions in the booklet attached to the cardan shaft).	30 working hours
Check the oil level in the transmission box.	30 working days/1000 bales produced
Replace the transmission box oil.	Annually
Check the general condition of the machine: supports, bearings, crowns, chains, pins, shafts and all moving parts.	Daily
Check the welds.	Annually
Check the correct tightening of bolts.	30 working days
Check that there are no oil leaks in the hydraulic system.	Daily
Replace the oil filter in the tank.	120 working hours
Replace the hydraulic pipes	5 years
Check the bearings of the roll-holder and the bushings of the spring bearing bars of the reel-holder.	7 working days
Check the cams and the collection tines of the pick-up.	30 working days
Periodically check the operation of the hydraulic system.	
Check the good condition of the adhesive safety signs / pictograms periodically.	
Periodically check the functioning of the electric lighting system for road transport.	
Check the good condition of all the crankcases and safety devices periodically.	
Check the tyre pressure periodically.	

TIGHTENING TORQUE TABLE

The value "8.8" represents the standard and the minimum quality used.

Diameter and tightening torques for material qualities according to DIN EN ISO 898:

												
Bolt Ø	Class 8.8 or 9.8				Class 10.9				Class 12.9			
screw	Lubricated (1)		Dry (2)		Lubricated (1)		Dry (2)		Lubricated (1)		Dry (2)	
Size	N m	lb-in	N m	lb-in	N m	lb-in	N m	lb-in	N m	lb-in	N m	lb-in
M6	8.9	79	11.3	100	13	115	16.5	146	16.5	137	19.5	172
M8	22	194	27.5	243	32	23.5	40	29.5	37	27.5	47	35
M10	43	32	55	40	63	45	80	69	75	55	95	70
M12	75	55	95	70	110	80	140	105	130	95	165	120
M14	120	88	150	110	175	130	220	165	205	150	260	190
M16	190	140	240	175	275	200	350	255	320	235	400	300
M18	265	195	330	245	375	275	475	350	440	325	560	410
M20	375	275	475	350	530	390	675	500	625	460	790	580
M22	610	375	650	480	725	535	920	680	850	625	1080	800
M24	650	480	820	600	920	680	1150	850	1080	800	1350	1000
M27	950	700	1200	885	1350	1000	1700	1250	1580	1160	2000	1475
M30	1290	950	1630	1200	1850	1350	2300	1700	2140	1580	2700	2000
M33	1750	1300	2200	1625	2500	1850	3150	2325	2900	2150	3700	2730
M36	2250	1650	2650	2100	3200	2350	4050	3000	3750	2770	4750	3500

The above values are for general use only and are based on the resistance of the screw or bolt. DO NOT use these values if a different torque value or a different tightening procedure is required for a specific application. For stainless steel screws or nuts on U-brackets, see tightening instructions for the specific application. Tighten the plastic insert or seamed steel lock nuts by tightening the nut to the dry torque shown in the table, unless different instructions are given for the specific application.

The safety pins are designed to break if subject to certain loads. Always replace them with safety screws with identical property class. Replace the screws with another of the same or higher class. If you use a high-end screws, this must be tightened to the torque of the original screws. Make sure that the threads of the nuts and bolts are clean and that the bolts are fed perfectly. If possible, lubricate bare or galvanized nuts and bolts (except locking nuts, bolts or wheel nuts), unless different instructions have been provided for the specific application.

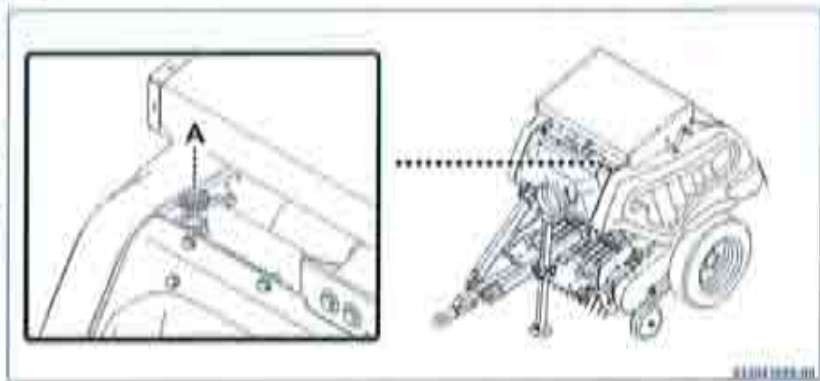
(1) "Lubricated" means coated with a lubricant such as engine oil, fasteners with phosphate or oil coating, or M20 or larger fasteners with galvanizing.

(2) "Dry" means regular or galvanized without lubrication, or galvanized M6 to M18 fasteners.

TOP UP THE OIL IN THE TANK

Periodically check the oil level in the hydraulic circuit, if the level is low, top up and proceed as follows:

- Clean the cover from dirt or processing residues to prevent them from entering the tank.
- Unscrew and remove the cap (A) and add the oil in the tank until reaching the maximum level.
- Tighten the cap (A).



EQUIPMENT CLEANING



At the end of each working day it is necessary to clean all the equipment. To do this, wear all the individual protections (rubber gloves, boots, glasses, etc.) necessary to avoid contact with the product.

Proceed as follows for spraying:



Caution - Warning

Do not direct pressurised water jets towards electrical parts to avoid damaging them.

Keep the transmission parts clean in order not to damage bearings and seals.

All gears and chains must be kept clean.

Never let the cylinders come in contact with corrosive chemical agents, to avoid altering the surface of the piston.

Check that all the sockets, plugs, wiring and sensors on the round baler are clean of any land or product deposits; clean them with a damp cloth.

Clean the display of the terminal with a damp cloth and a mild detergent to avoid deleting the panel printings.



Important

Do not use abrasive products, solvents or alcohol and do not use high pressure water jets, especially on wiring.

FIRST USE



Important

Each new equipment must be checked after the first 30 hours of operation, verifying:

The correct tightening of all the nuts and bolts.

The tension of all the transmission chains.

The absence of oil leaks from all the components of the hydraulic system.

The tyre inflation pressure.

The correct lubrication of the transmission components.

Observe the compliance of the recommended lubricants.

Spare parts must correspond to the requirements defined by the Manufacturer.

Use only original spare parts.

LUBRICANTS

Grease

In general, use grease: AGIP GR MU EP0.

Some types of grease thickeners are not compatible with others. Consult your supplier before mixing other types of grease.

Oil

Use an oil of suitable viscosity for the temperature expected between one oil change and another.

In the transmission box, use oil: AGIP BLASIA EP 150

In the tank of the automatic oiling system of chains, use oil: AGIP OSO 100.

Alternative and synthetic lubricants

The conditions of some geographical areas may require lubricants other than those indicated in this manual.

Some type of coolant or lubricant may not be available in the area where the equipment is used; for advice or information consult the dealer.

Preservation of lubricants

Comply with the laws in force in your country concerning the use and disposal of oils and/or lubricants.

The equipment will operate at maximum efficiency only if clean lubricants are used.

Use clean containers for transferring lubricants. Keep lubricants and their containers in an area protected from dust, moisture and other contaminants. Arrange

Synthetic lubricants can be used as long as they meet the performance requirements.

Second refining products can be used if the resulting lubricant meets the performance requirements.

the containers on one side to prevent accumulation of water or dirt on the cap.

Make sure all the containers are well labeled to identify their contents.

Dispose of all old receptacles and any remaining lubricant properly.

Mixing of lubricants

As a general rule, avoid mixing different types and brands of oil. Lubricant manufacturers add additives to their oils to meet certain characteristics and performance.

The mixing of oils can interfere with the behavior of these additives and degrade the characteristics of the lubricant.

For advice or information, consult the dealer.

Lubricant table

Use	Type
Transmission box oil	Agip blasia ep 150
Automatic chain lubrication tank oil (optional)	Agip oso 100
Grease for greasing points indicated by decal	Agip gr mu ep0

MANUAL OILING OF THE CHAINS

All the chains that are not oiled by the automatic oiling system (optional), must be lubricated manually, using a solution composed of oil and grease.

Perform maintenance operations only when the machine is not operating. Before any operation:

Switch off the power take-off.

Engage the tractor parking brake.

Stop the tractor engine.

Remove the main switch key and wait until all moving parts of the machine are completely stopped.

PICK-UP MAINTENANCE



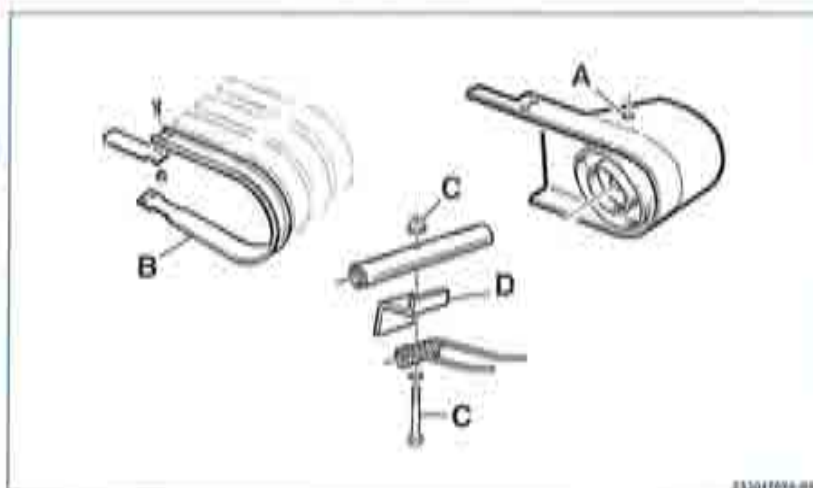
Danger - Warning

Never operate on the Pick-up with the tractor on.

At the beginning of each season, grease the cam using the grease nipple which you can reach from the opening (A).

To replace the spring, remove the band (B) corresponding to the broken spring. Unscrew the screw-nut (C) which blocks the spring.

Reassemble positioning the plate as shown.



UNSCHEDULED MAINTENANCE

Although the equipment has been designed and built to work in difficult environmental conditions, it is necessary, after some years of life, to carry out extraordinary maintenance operations to keep it in perfect working order and to safeguard general safety.

This kind of operation must be carried out by skilled and specialized technicians, at adequately equipped garages.

Due to the aging of the rubber, it is recommended to replace the flexible hydraulic pipes every 5 years.

For any breakage or malfunction contact the manufacturer's assistance service directly.

INFORMATION ON TROUBLES

TROUBLES, CAUSES, REMEDIES

The purpose of the following information is to identify and correct possible faults and malfunctions that may occur when using the machine.

However, if the proposed solutions do not solve the problem, it is advisable to contact the Dealer or directly our Assistance Service, who will be able to provide the technical advice needed to solve the problem.

Transmission - chamber - collector

Troubles	Cause	Remedy
Clogging of the collector	Working speed too high.	Reduce the speed
	Swaths too high and wide	Reduce speed and regularize swaths.
	Wrong driving technique.	Follow the correct driving instructions.
	The machine does not work horizontally.	Adjust the towing drawbar.
Creation of the bale with a cone-shaped	The chamber fills more from one side than the other	Alternate exactly the filling from one side to the other of the swath. When the pressing process is almost complete, the speed must be slowed down.
	Net or twine broken at one end of the bale.	check the good quality of the binding materials
Creation of the barrel-shaped bale.	Chamber filling from the central area of the pick-up.	During pressing proceed alternately, from one side to the other of the swath.
	Net or twine broken or frayed at the center of the bale.	increase the number of binding turns
		check the good quality of the binding materials
Irregular, incomplete collection of forage	the springs are high compared to the ground	lower the pick up
	broken springs	light load on the pick up
	high working speed	Replace springs. reduce the speed

Net binding

<i>Troubles</i>	<i>Cause</i>	<i>Remedy</i>
The net inserted correctly tears at the beginning of the winding.	roller too braked	Loosen the brake springs
The net is not cut correctly.	The knife is worn out.	Replace the knife.
	The blade alignment is not uniform.	Align the knife using the fixing screws.
The net does not completely cover the edges of the bale	During the winding the braking of the net is not correct.	Check and, using the springs, restore the pressure.

Twine binding

<i>Troubles</i>	<i>Cause</i>	<i>Remedy</i>
The twine does not start to tie	The guide brackets of the twine are too tight	Adjust the spring settings on the tension brackets
	Incorrect route of the twine	Insert the twine correctly
	Twine tangled in the twine box compartment	Untie the knots
The twine is not cut correctly	Damaged blade	Sharpen or replace the blade
	Badly positioned blade	Register the blade

Various

<i>Troubles</i>	<i>Cause</i>	<i>Remedy</i>
The tailgate does not close	the forage prevents the hooks area	remove the forage from the hooks area
The tailgate does not open	insufficient hydraulic pressure	check the hydraulic system of the tractor

INFORMATION ABOUT REPLACEMENTS

INSTRUCTIONS ON COMPONENT PART REPLACEMENT

Prior to any maintenance operation, enable all safety devices and consider whether it is necessary to properly inform the operator and the nearby staff. In particular, properly mark the surrounding areas and prevent anyone from accessing all those devices that, if activated, may cause unexpected risks to equipment safety and personal health.

If worn components must be replaced, use original parts only. The manufacturer cannot be held responsi-

ble for damages to persons or components arising from the use of non-original parts or for unscheduled maintenance that may modify the equipment safety requirements without the manufacturer's prior authorization.

To order spare parts, follow the instructions provided in the relevant catalogue.



Danger - Warning

Before performing any adjustment, maintenance, or service operation on the machine, and before moving away from it, always observe the following precautions:

- Lower the equipment on the ground.
- Stop the machine and unplug the power take-off.
- Place the pick-up on the ground.
- Turn off the engine of the tractor, remove the keys from the dashboard and pull the parking brake.
- Wait for all the moving parts of the equipment to stop.
- Switch off the electronic control system.
- Allow the equipment to cool down and in particular the area of intervention.
- Securely support any part of the machine that needs to be lifted for maintenance. Keep all parts in good condition and properly installed.
- Remove accumulations of grease, oil or debris.
- At the end of operations, check that no tools, rags or other material are left near moving parts or in risk areas.

REPLACEMENT OF THE PICK-UP SECURITY



Important

In case of cutting the pawl on the safety of the Pick-up, replace it with an original spare part to be requested exclusively from the Manufacturer.

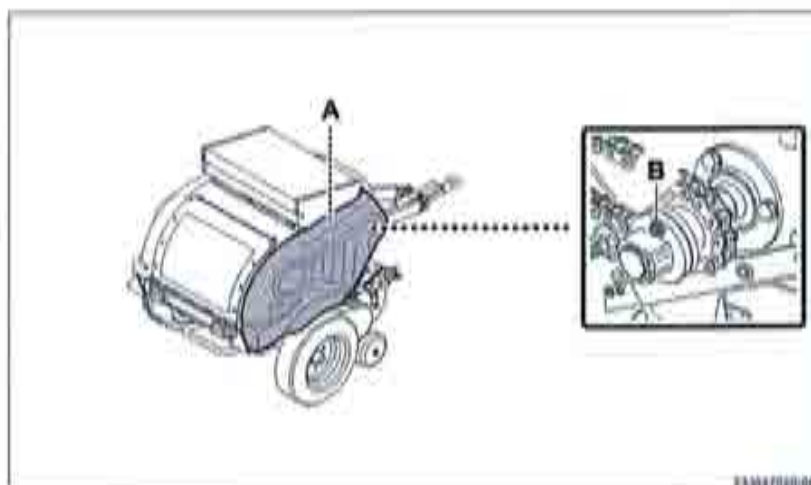
REPLACING THE TORQUE LIMITER BOLT

The machine is equipped with a safety system that intervenes when overloads occur, due to anomalous situations that put the integrity of the transmission organs at risk.

The device is of the shear bolt type.

Proceed as follows:

- Remove the guard (A).
- After eliminating the causes of the fault, make the two flange holes coincide by manually rotating the PTO.
- Replace the screw (B) with TE 6x40 UNI 5737 type 8.8.
- Remove accumulations of grease, oil or debris.
- Refit the guard (A).



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GEAR UNIT OIL REPLACEMENT

The first time replace the gear unit oil (A) after the initial 20 working hours.

Replace the oil periodically every 500 hours of work or at least once a year if the total prescribed hours are not reached.

- Unscrew the drain plug located under the gear unit and collect the oil in a container.
- Unscrew the filler cap located at the top of the gear unit, tighten the drain plug appropriately.
- Enter the oil in the prescribed quantity (do not exceed, there is danger of overheating) and tighten the filler cap.

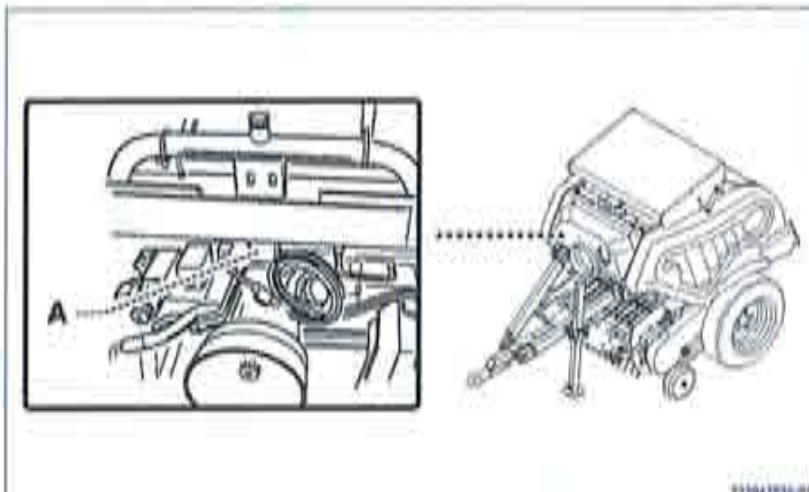


Important

The oil must not be thrown away but must be disposed of in compliance with the laws in force because it is highly polluting.

Check the level periodically. If you notice leaks or abnormal level decrease, replace the oil seals and gaskets.

To avoid possible sludge deposits, replace the warm oil.



KNIFE REPLACEMENT THAT CUTS NET

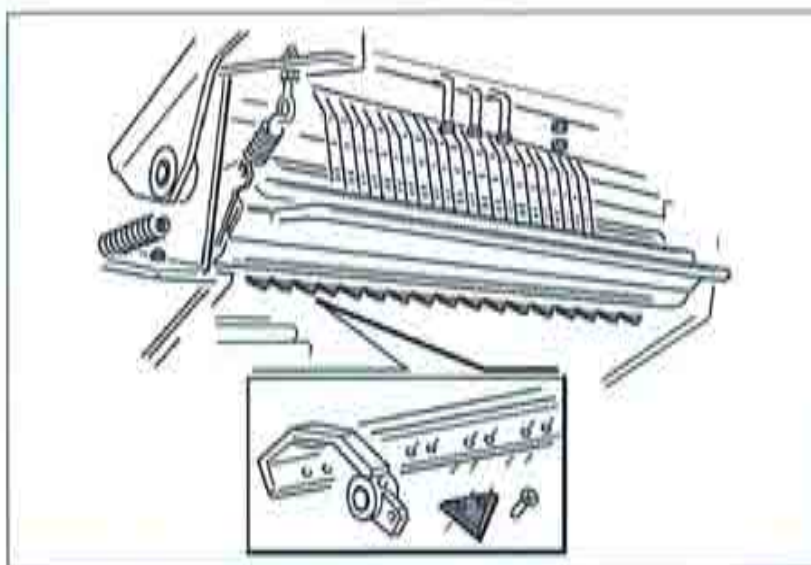


Danger - Warning

Danger of cutting! Be careful not to touch the blades directly and wear suitable protective gloves.

Knife that cuts net consists of blades that cannot be sharpened, so they must be replaced.

Remove the rivets that fix the blade, replace it with the new one and fix it with rivets.



KNIFE REPLACEMENT AND SHARPENING THAT CUTS TWINE



Danger - Warning

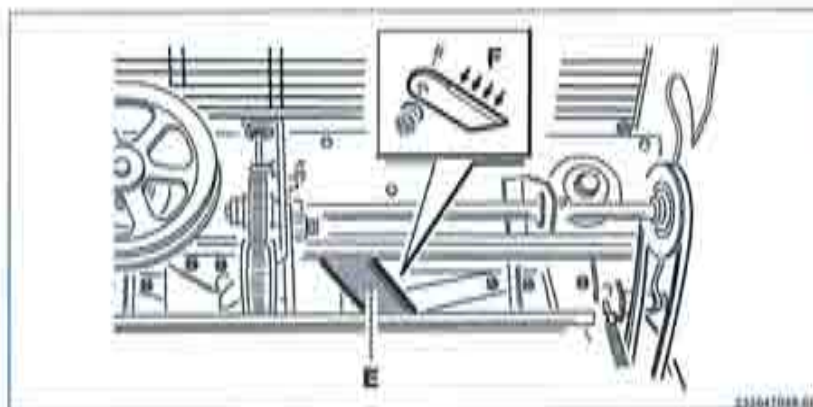
Danger of cutting! Be careful not to touch the blades directly and wear suitable protective gloves.

- Unscrew the nut and remove the knife (E).
- Perform sharpening only on the highlighted side (F). Do not sharpen on the other side, otherwise the twine will be torn and not cut.
- Reassemble the knife and tighten the nut.



Danger - Warning

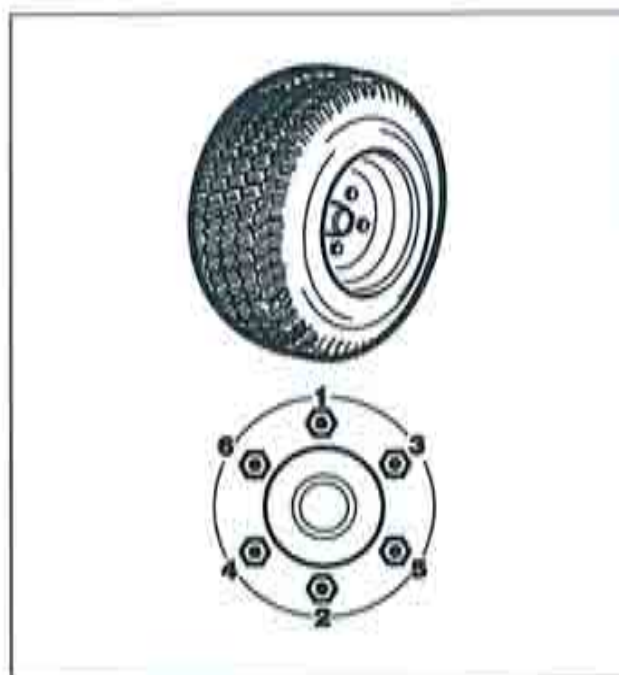
Always use protective eyewear during the sharpening phase.



TYRE REPLACEMENT

Proceed as follows:

- Lock the machine with 2 chocks to be placed under the wheel opposite the one to be replaced.
- Ensure the solidity of the ground.
- Be sure of the solidity of the ground.
- Provide yourself with a hydraulic jack or lifter with a minimum capacity of 2000 and an iron plate of width and thickness suitable to be placed under the jack.
- Place the jack under the axle and raise the machine as necessary to extract the wheel. Lock the jack against any fluid leaks and make sure that the system is completely stable.
- Replace the wheel and tighten the fixing nuts by tightening them to a torque of 310 Nm.
- Lower the machine by removing the tools used for lifting.
- Tighten the nuts crosswise following the diagram shown in the figure.
- Check the correct inflation pressure. If necessary, restore.



REPLACING A HYDRAULIC TUBE

Before proceeding with the replacement of a hydraulic pipe, pay attention to adopt all the safety measures required for maintenance work, to stop the equipment and close the valves of the hydraulic system.



Danger - Warning

Prior to removing a hydraulic tube, make sure to have bled any residual pressure from the circuit.

Identify the damaged tube precisely and use an appropriate spanner to loosen the two connection points, while being careful about possible hydraulic fluid leakage.

Replace the damaged tube exclusively with original spare parts.

Ensure that the attachment points (threads, seals, etc.) are in good condition prior to mounting the new tube.

Use appropriate spanners to turn clockwise any hydraulic tube fittings that leak.



Important

Do not tighten excessively so as to avoid ruining the threads of the fittings.

DISPOSING OF THE EQUIPMENT



Important

This operation must be made by expert operators, in the respect of safety norms on work and waste disposal. In order to avoid any injury to operators and the people nearby, do not leave the tools unattended in the working areas.

Before discarding the equipment, carefully clean it by washing it inside and outside.

The discharge of the washing residues to the environment without precautions is forbidden as it pollutes the water of the aquifers.

Do not throw away non-biodegradable products, such as lubricant oils, batteries and non-iron components (foam, PVC, resins etc.). These products must be disposed in the respect of environment protection laws.

Before giving the tools to the authorised personnel (waste collectors or dischargers), it is absolutely necessary to deposit the tools in zones closed to non-authorised personnel.

The used oil must be suitably recovered and must not be discharged to the environment. According to the current regulations, used oil is classified as hazardous waste material and as such it must be sent to the special collection centres.

The parts made up only of plastic, aluminium and steel can be recycled provided that they are collected by the special centres.