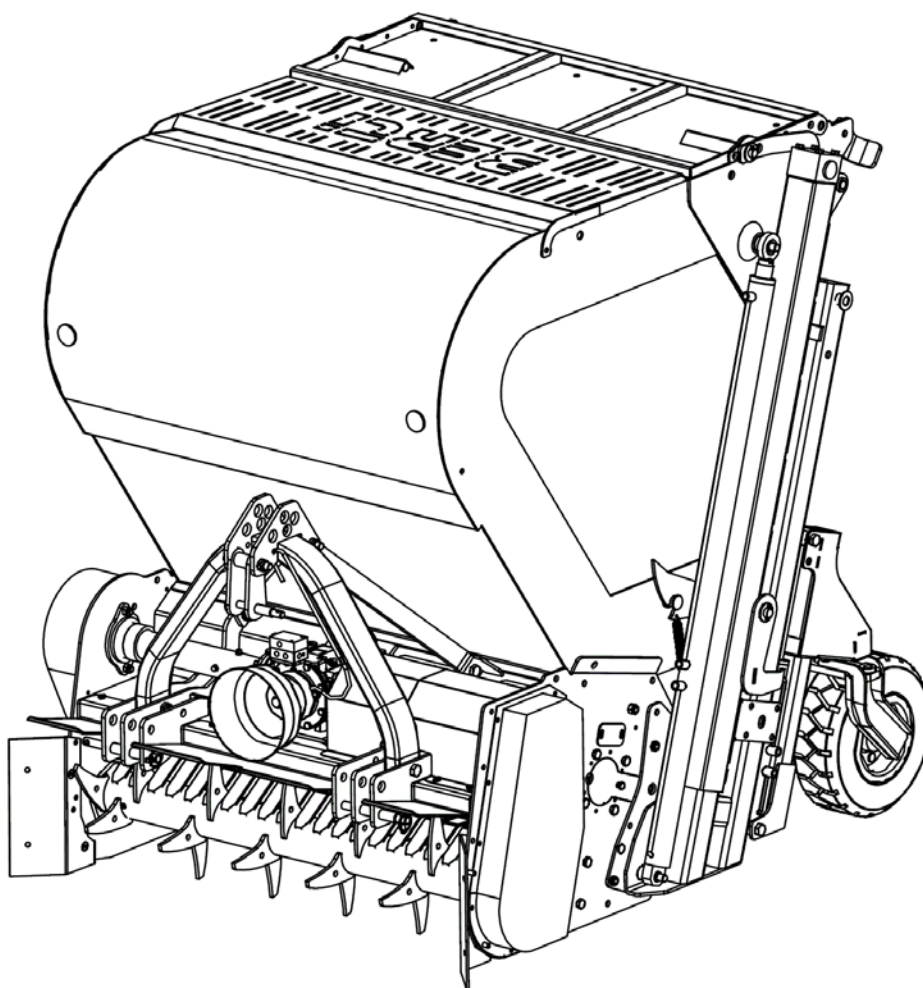


Translation from the original language

USE AND MAINTENANCE MANUAL

PICK-UP MULCHER WITH CONTAINER

Brand: BERTI Macchine Agricole
Model: PICKER/C – PICKER/LC



Read this Manual carefully before using the machine



(.....)

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INTRODUCTION

This instruction manual describes the operating mode and contains all instructions necessary to properly use and maintain (perform ordinary and periodical maintenance operations) the mulcher with container, that will be referred to from now on as machine.

This manual is divided into identifiable chapters, for easy reference.

The indications contained in this manual are intended for a professional user, who must have specific knowledge regarding use of the machine and must be authorised, instructed and appropriately trained,

The use of original spare parts and accessories is recommended. The use of unoriginal parts triggers invalidity of the warranty and may cause dangers, reducing the lifetime and performance of the machine as well as serious damages/injury to persons, property and animals.

In the event of transfer or re-sale, this instruction manual must always accompany the machine. If it is damaged or lost, a copy must be requested from the Manufacturer of the machine or previous owner. The manual is considered an integral part of the machine.



For the USER: Before using the machine you must carefully read this instruction manual in which are indicated the actions to be performed for proper use of the machine, paying particular attention to all the safety-related regulations. Abuse of performance and lack of compliance with the use and safety standards render the user responsible for any damages that may occur to persons, things or animals as a result of the use of the equipment.

The manufacturer of the machine does not directly control the field in which it is used, the method used or the method of maintenance and therefore the user is responsible to respect the rules of common sense in the operating areas, especially in the critical ones, paying utmost attention to its own safety, to the safety of other persons, animals and property, always assessing the danger before performing any operation.

If the user delegates the use of the machine to a third party, it is their responsibility to make sure that the other user has properly read and understood this instruction manual.

This instruction manual must be on hand for immediate consultation, if necessary.

For the DISTRIBUTOR, RESELLER and IMPORTER: the person responsible to deliver the machine to the end user must ensure application to the tractor. Therefore he must read this instruction manual and understand the content before the machine is assigned definitively. It is also his responsibility to train the final user and make sure that the latter has read and understood the indications in the instruction manual.

GLOSSARY

Machine	Pick-up mulcher with container
Tractor	Motorised vehicle used to tow other vehicles, especially agricultural machines.
User	The user is considered as the owner and/or staff, the operator/user in charge of operating, cleaning, maintaining and repairing the machine, able to recognise and therefore avoid the dangers arising from the use of the machine.
Specialised staff	Those persons especially trained and enabled to perform maintenance interventions or repairs that require particular knowledge of the machine, its operation, safety devices and methods of intervention.
Safety staff	Personnel in charge of making sure that no persons are inside the machine operating area.
Manufacturer	Company producing the machine → Berti Macchine Agricole S.p.A.
	DANGER - This signal indicates an imminent and real dangerous situation, that may cause serious injuries or death if not avoided.
	WARNING - This signal indicates a potentially dangerous situation, that may cause serious injuries or death if not avoided. Dangers marked by this signal present a lesser degree of risk of serious injury or death than those indicated by the signal DANGER.
	CAUTION - This signal indicates a potentially dangerous situation, that may cause minor injuries or moderate wounds. The symbol is used to inform that certain actions may cause personal injuries or damage.
	NOTA BENE

1 MANUAL INFORMATION

This manual is an integral part of the machine and must accompany the same in the event of resale and until its demolition. If this manual should be lost or damaged, a copy of it must be requested from the manufacturer ("BERTI machine agricole S.p.A.", via Musi 1/A - 3, Caldiero - Verona., Tel. +39.045.6139711) or from the Retailer.



The presence of this symbol informs the user to pay utmost attention to the subject in case.

Some of the devices described in this manual may not be present on your machine, depending on the chosen set up and the market of destination.

1.1 MANUAL UPDATE

The information, descriptions and illustrations contained in this manual reflect the state of the art of the machine at the moment it was put on the market.

The Manufacturer reserves the right to make modifications to the machine at any time for technical or marketing reasons. These modifications do not oblige the Manufacturer to intervene on machines marketed up to that time and do not invalidate this documentation.

Any subsequent supplements to the manual that the Manufacturer considers appropriate to supply, must be kept together with the manual and considered as an integral part of the same.

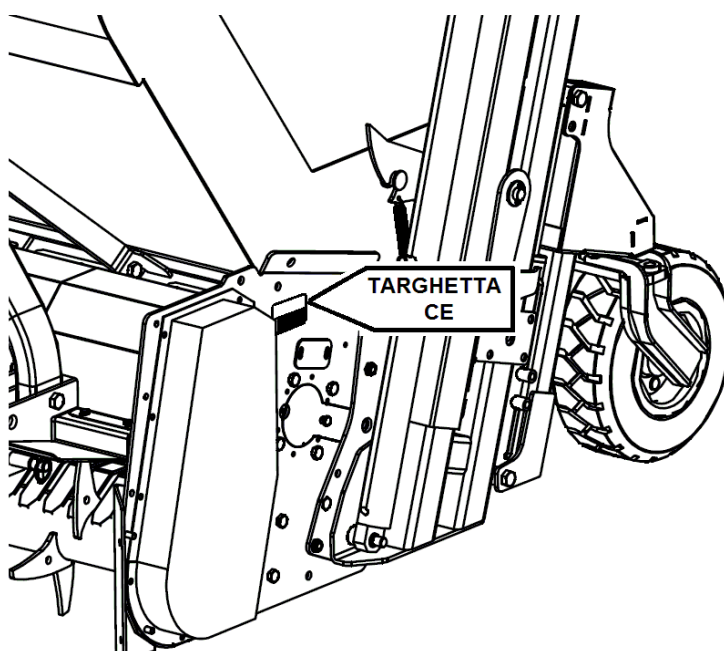
1.2 COPYRIGHTS

The copyright for this manual belongs to the Manufacturer of the machine. This manual contains texts, drawings and technical designs that may not be shared with third parties, either completely or partially, without written authorisation from the Manufacturer of the machine.

1.3 MACHINE IDENTIFICATION PLATE AND CE MARKING

The identification plate is to be found on the left side of the machine, next to the chain transmission. It includes:

CE Marking;
Country of fabrication;
Manufacturer's name and address;
Model and type;
Serial number and year of manufacture;
Weight



The machine is supplied as per standard with:

- The machine use and maintenance manual;
- The manufacturer "EC" declaration of conformity.

1.4 CERTIFICATE OF CONFORMITY OF THE MACHINE

 BERTI BERTI MACCHINE AGRICOLE S.p.A. Via Musi 1/a - 3 - 37042 CALDIERO (Verona) - ITALY Tel. +39.045.6139711 - Fax +39.045.6150251 info@bertima.it - www.bertima.it	 
 Dichiarazione CE di Conformità ai sensi della direttiva 2006/42/CE EC Certificate of Conformity - conforming Directive 2006/42/CE EG Konformitätserklärung entsprechend der EU-Richtlinie 2006/42/CE Déclaration CE de conformité à la directive de la 2006/42/CE	
La Ditta / We / Wir / Nous	BERTI Macchine Agricole S.p.A. 37042 CALDIERO - VERONA - ITALY
dichiara sotto la propria responsabilità nella sua qualità di costruttore, che la macchina a cui si applica questa dichiarazione, è conforme ai requisiti essenziali di sicurezza e di tutela della salute di cui alla <u>Direttiva 2006/42/CE</u>. Per la verifica delle macchine sono state consultate le seguenti norme armonizzate: declare in sole responsibility, in quality of Manufacturer, that the product to which this certificate applies, conforms to the basic safety and health requirements of <u>Directive 2006/42/CE</u>, and according to the European harmonized standards: erklären in alleiniger Verantwortung, als Hersteller, dass das Produkt auf das sich diese Erklärung bezieht, mit den grundlegenden Sicherheits- und Gesundheitsschutzanforderungen der <u>EU-Richtlinie 2006/42/CE</u>, und mit den Anforderungen der gemeinsamen EU-Richtlinien konform ist: déclarons sous notre seule responsabilité, comme Fabricante, que le produit faisant l'objet de la déclaration est conforme aux prescriptions fondamentales en matière de sécurité et de santé stipulées dans la <u>Directive de la 2006/42/CE</u>. Nos déclarons que les normes harmonisées suivantes ont été appliquées: <u>UNI EN 13524-2:2003+A1:2009</u> <u>UNI EN ISO 13657-2:2009</u> <u>UNI EN ISO 13657-1/2:1998</u> <u>UNI EN ISO 12100-2:2010</u> Nonché le seguenti specifiche tecniche: And the following technical specifications: Und die folgende technische Ausstattungen: Et les spécifications techniques suivantes: <u>ISO 11684:1995</u>	
MODELLO -- TYPE XXXXXXXXXX MATRICOLA -- N° DE SERIE XXXXXXXXXX	
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La presente certificazione è parte integrante della macchina This EC certificate is an integral part of the unit Die hier beigelegte Erklärung ist wesentlicher Bestandteil der Maschine Cette déclaration de conformité est partie intégrative de l'appareil	
Cod. Fisc. e Reg.Impr. di VR n° 00068150234 - P.IVA : 00068150234 - R.E.A. VR 84849 - Cap. Soc. € 151.704,00 iv Società soggetta a direzione e coordinamento da parte della società HB Holding Berti S.r.l. R.L. di VR03068950241	

1.5 MACHINE INFORMATION

1.5.1 INTENDED USES

The mulcher with container mod. PICKER has been designed to be used exclusively in the agricultural sector, to mulch orchard and olive grove pruning and woody material up to a diameter of about 4 cm. for PICKER/LC and about 8 cm. for PICKER/C (12cm with forestry rotor).

Ideal for working on tilled and stony land. The material is loaded in the rotor compartment, so it is conveyed to the container through the ventilation produced.

The machine is towed by the tractor through a towing bracket and acts on the ground thanks to its own weight and the rotation of the rotor, driven by the tractor power points via cardan connection.

The machine is not suitable to be used in other sectors than in agriculture.

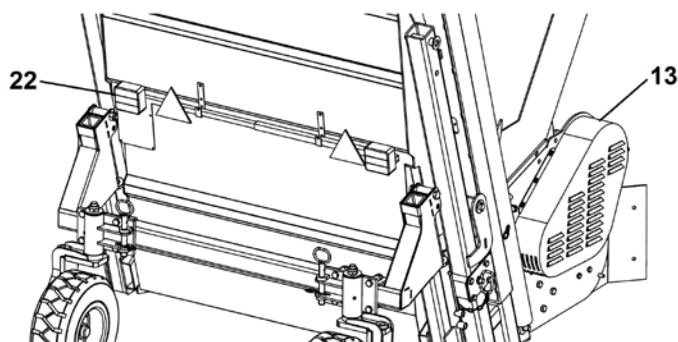
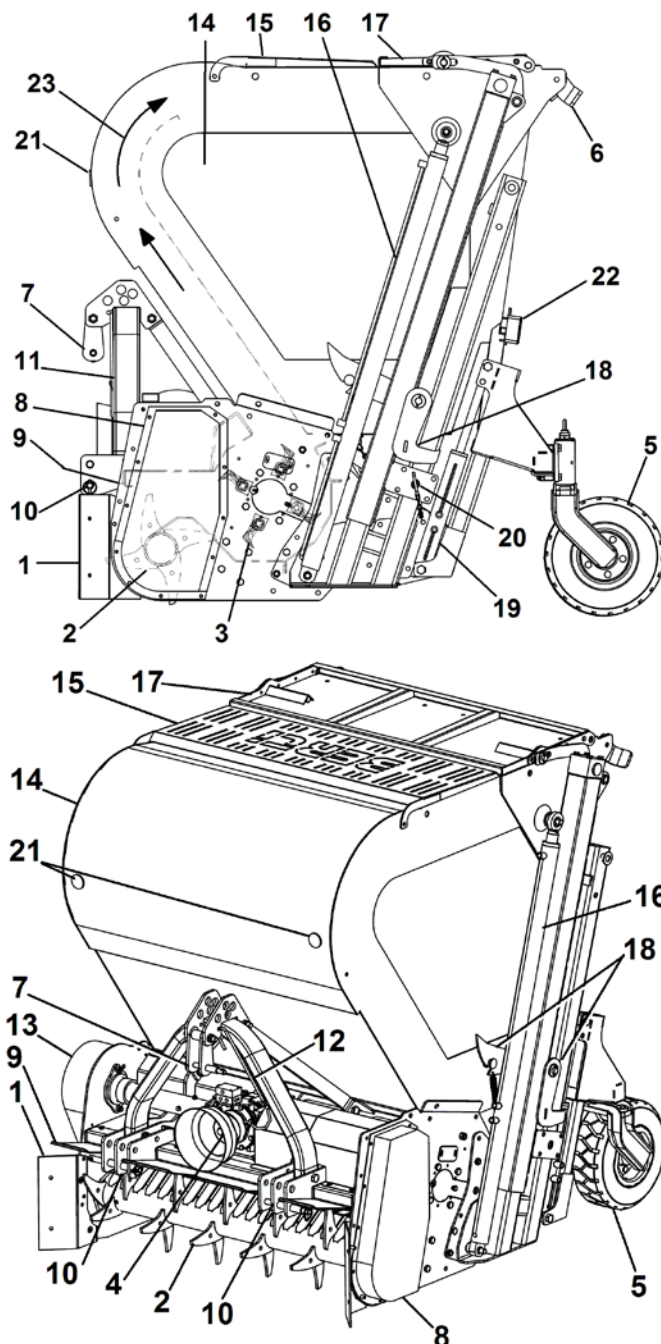
Use is forbidden if coupled with an undersized tractor, an oversized tractor, to knock down trees, if used on ground which do not guarantee stability for the tractor, e.g. steep slopes, next to cliffs, on irregular soil, etc.

1.5.2 DESCRIPTION

On the front part of the machine, a pick-up tool is found. It is made of a teeth rotor 2 feeding the mulching chamber with a high-speed horizontal axis rotor, on which mulching tools 3 are fitted. The mulched material is unloaded on the ground through the selection grid 6, which determines its dimension.

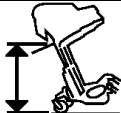
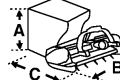
NAMES OF THE PARTS MARKED:

1. Side conveyor fin
2. "PICK-UP" feeding rotor
3. Belt side transmission mulching rotor (pulleys, belts, locking set, automatic belt tightener)
4. Cardan shaft joint to the transmission unit
5. Rear levelling wheels
6. Container overturning stop
7. Oscillating 3rd point connection
8. Pick-up rotor transmission chain casing
9. Upper conveyor fin
10. Connection to the parallels of the tractor
11. Tiller arc
12. Cardan support hood
13. Mulching rotor chain casing
14. Container
15. Container lid
16. Container lifting jack
17. Mulched material unloading slide
18. Lift-release mechanism
19. Rear wheels adjusting jack
20. Container sliding locking pin
21. Front reflectors
22. Removable rear light bar
23. Material loading channel



1.5.3 PICKER/C TECHNICAL SPECS

MOD.		 HP								 m³		
	cm	Min	Max	n°	n°	PTO rpm	Kompact	Normal	Super	Kompact	Normal	Super
PICKER/C 100	100	60	140	14	4	540	-	1480	1590	-	1.5	1.9
PICKER/C 120	120	60	140	16	4	540	-	1560	1720	-	1.8	2.3
PICKER/C 140	140	60	140	18	4	540	1460	1680	1840	1.7	2.1	2.7
PICKER/C 150	150	60	140	20	4	540	1570	-	-	1.85	-	-
PICKER/C 160	160	70	140	22	4	540	-	1790	1950	-	2.4	3.1
PICKER/C 180	180	70	140	24	4	540	-	1860	2030	-	2.7	3.5

MOD.	 cm			Kompact 				Normal 				Super 			
	Kompact	Normal	Super	A	B	C	C**	A	B	C	C**	A	B	C	C**
PICKER/C 100	-	230	305	-	-	-	-	160	130	220	230	210	130	200	200
PICKER/C 120	-	230	305	-	-	-	-	160	150	220	230	210	150	200	200
PICKER/C 140	185	230	305	140	170	220	230	160	170	220	230	210	170	200	200
PICKER/C 150	185	-	-	140	180	220	230	-	-	-	-	-	-	-	-
PICKER/C 160	-	230	305	-	-	-	-	160	190	220	230	210	190	200	200
PICKER/C 180	-	230	305	-	-	-	-	160	210	220	230	210	210	200	200

**Minimum size with pivoting wheels

1.5.4 PICKER/LC TECHNICAL SPECS

MOD.		 HP								 cm			
	cm	Min	Max	n°	n°	PTO rpm	Kg	m³	cm	A	B	C	C*
PICKER/LC 85	85	35	80	12	3	540	910	0.8	200	158	115	166	180
PICKER/LC 115	115	35	80	14	3	540	980	1.1	200	158	145	166	180
PICKER/LC 135	135	40	80	16	3	540	1150	1.3	200	158	165	166	180

**Minimum size with pivoting wheels

1.6 MATERIALS THROWING



The machine processes the material in the mulching chamber and conveys it to the closed container through the loading channel, thus preventing materials from being thrown; however, it is important to be particularly careful:

- Check the container lid is always closed during operation;
- Periodically maintain and clean the machine;
- Make sure that there are no persons, animals or objects in the machine operating area as they may get hurt/damaged.



Even when operating without load, the machine exceeds 80dB(A) and the operators must use hearing protective equipment against the noise generated during operation: use earphones or earplugs.

In compliance with the standards in force, after installing the machine and before starting it, the user must perform the noise emission measurements on the assembly made of tractor-mulcher.

In time there may be an increase in the level of noise from the tractor - mulcher assembly due to phenomena of wear: it is advisable to regularly carry out assessment of risk from exposure to noise.

The use of P.P.E. is mandatory and must ensure the dejection of the noise level registered in compliance with the standards in force.



The vibrations to the tractor-mulcher assembly are included in the vibrations produced by the tractor alone. Excessive vibrations may be caused by a fault in the machine that must be immediately signalled and eliminated to protect the reliability of the machine and/or cause damages to the operator's health. Always work with suitable environmental conditions (e.g. with perfect visibility, terrain able to sustain the weight of the tractor-mulcher assembly, with slopes that allow proper vertical and lateral stability of the tractor-mulcher assembly etc.).

2 ACCIDENT PREVENTION AND SAFETY STANDARDS

2.1 GENERAL SAFETY STANDARDS

A proper use of the machine and compliance with the standards indicated in this manual along with thorough appliance of all precautions to avoid any dangerous situations, will help avoid accidents or damage, extending the machine lifetime and will minimise faults.

The Company "BERTI Macchine Agricole S.p.A." declines any responsibility, objective or subjective, if the indications contained in this instruction manual are not respected.

 PERICOLO	The machine must not be used in sectors other than agricultural and a use different from that specified is considered improper.
	The machine must only be used by one operator driving the tractor. The user must check the proper connection between tractor and mulcher.
	Before getting out of the tractor and before performing any maintenance operations on the mulcher, unplug the power take-off, use the parking brake, turn off the engine, remove the ignition keys from the dashboard and keep them, and wait for 5 minutes inside the cabin to ensure that the rotor and relative tools completely stop.
	It is forbidden to abandon and/or leave the tractor-mulcher assembly while the mulcher is still running.
	During use, the user must have proper visibility of the working areas that present dangers, therefore the mirrors and the windows of the tractor must be properly cleaned.
	During the operating phases, the user must always stay inside the cabin, where he is safe. It is strictly forbidden the operation with the doors/windows open. Projected objects hazard!
	The machine must only be used by authorised, educated and appropriately trained staff. The operator, besides having read and understood the instructions contained in this manual, must also be sufficiently prepared on the proper use of the machine and must have a driving licence and must be an adult. The operator must contact the manufacturer if in doubt regarding use of the machine or interpretation of this manual.
	Never use the machine without knowing its features.
	The manual must always be on hand such that it can be consulted when necessary. If it is lost or damaged, request a replacement copy from the manufacturer.
	The user must use all the safety devices and personal protection equipment (P.P.E.) during machine use, adjustment, repair and handling phases.
	
	During use, if operating with dry products (hay, straw, etc.), the machine may generate dust. It is recommended to periodically check the cab ventilation system filter and to always use suitable protection systems for the respiratory tract, such as dust masks.
	The operator assigned to the machine must not wear clothing that can cause entanglement.
	It is strictly forbidden to use the machine for lifting persons, animals or objects.
	It is strictly forbidden to use the machine for transporting persons, animals or objects.
	It is strictly forbidden to use the flexible tubes as supports; these components are mobile and do not offer proper support.
	The operating area must be thoroughly inspected before using the machine, paying attention to remove any stones, iron residues, steel cables, manholes, strains and all those materials and obstacles without any limitation which may constitute a source of danger, accidents and serious damage to the user, people, animals and things.
	The operator must make sure that no person or animal stops within the radius of action of the same during machine functioning. The user is responsible of stopping the machine immediately and clearing the machine operating area from people and animals. Never activate the machine near to persons or animals within or transiting through the machine working range.

 PERICOLO	If the machine is used in public areas and on roads, take all necessary precautions for the safety of persons, animals and property, for example, using safety personnel, warning signs, placing them at the ends of the machine operating area, according to the laws in force in the country of use.
	Never work in areas with strong counter slope, on slippery surfaces and in areas / zones that reduce the adhesion of the tractor to the ground. Always pay great attention when changing direction.
	Use the machine during the day and under conditions of perfect visibility.
	It is strictly forbidden to operate in adverse environmental conditions, for example during storms, snows, in windy, rainy or cloudy days, etc.
	Avoid working on muddy, sandy or soft terrain.
	Pay attention to the risk of accidental ignition of the electric arc machine with overhead power lines.
	Do not use the machine if you are tired, ill or under the effect of alcohol, medicines or drugs.
	Carefully check the machine each time before starting it.
	Before using the machine, ensure that all the safety devices are correctly positioned and in good working order. If these are broken or damaged, replace them immediately.
	It is strictly forbidden to remove or tamper with the guards and/or safety devices.
	Make sure that the safety pictograms are in good condition, legible and clean. If the pictograms have deteriorated, they must be replaced with other originals obtained from the manufacturer and placed in the position indicated in the instruction manual (paragraph 2.3.2). If dirty, clean them with a damp cloth.
	The signs applied to the machine provide a series of important instructions: comply with them for your own safety.
	It is strictly forbidden to perform any modification that may alter the original condition of the machine.
	Any arbitrary modification made to this machine relieves the manufacturer from any liability for damage or injury, which can happen to the operators, third parties and objects.
	Keep the machine free from foreign materials (debris, tools, other items), which may damage the operation or the operator.

	The following paragraphs list other very important Safety Standards. It is mandatory to read the entire instruction manual before using the machine.
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2.2 FIRE-FIGHTING MEASURES

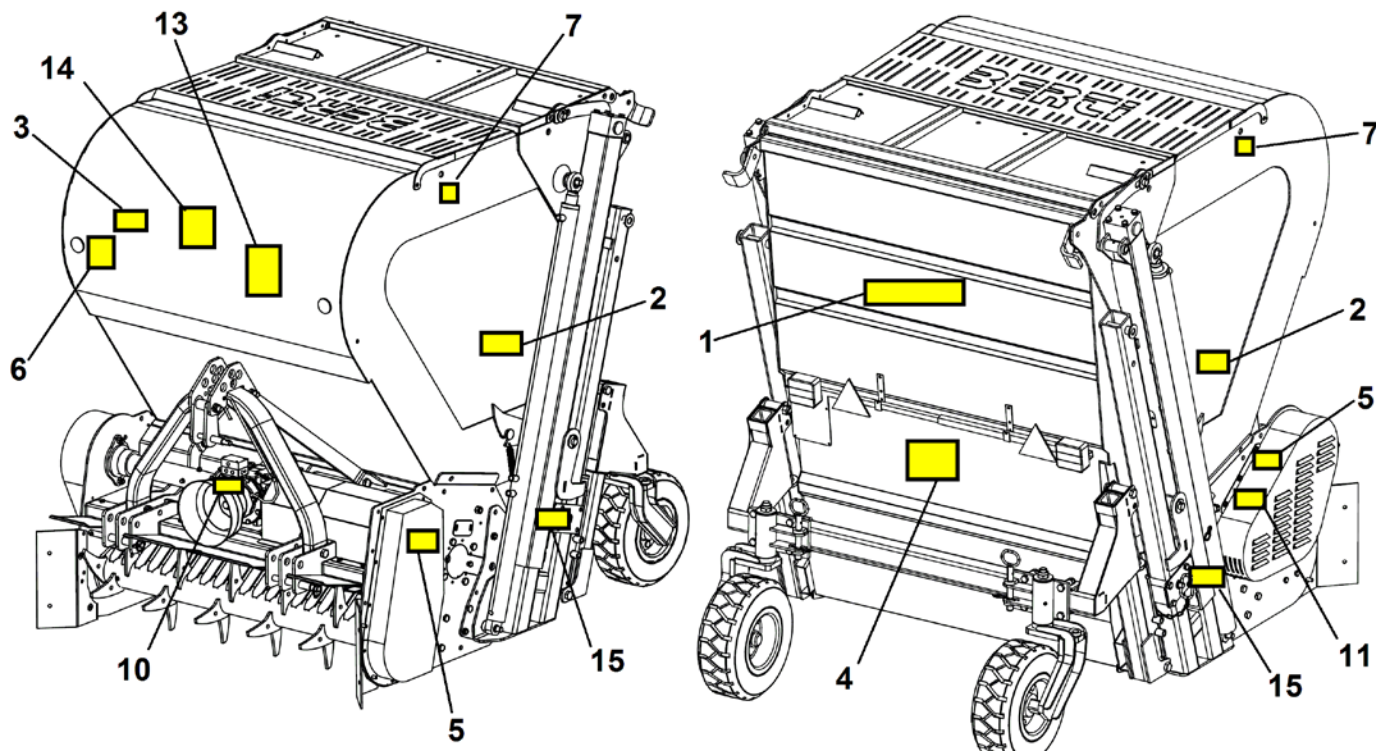
 PERICOLO	Keep in the tractor an extinguisher of proper capacity and maintain periodically. The hand extinguisher may only be used by personnel that know how to use it. The user is therefore responsible for providing proper training via particular courses.
	The personnel that use the machine must know the main intervention techniques in case of fire.
	Do not use the machine in areas that present explosion and/or fire hazard.
	Maintenance residues, such as, straps or replaced materials containing flammable residues must be kept away from sources of ignition and disposed of in accordance with applicable laws in the country of use.
	Use appropriate extinguishing means: e.g. carbon dioxide, foam, chemical powder.
	Do not weld in the proximity of tanks, pipes, cans, electrical cables or flammable materials in general.
	When welding protect flammable parts with appropriate guards.

2.3 SAFETY SIGNS

Make sure that the safety pictograms are in good condition. If the pictograms have deteriorated, replace them with originals obtained from the manufacturer and place them in the position indicated in the operating and maintenance manual. Make that all safety pictograms are legible. Clean them using a cloth, water and soap.

1		ATTENTION: it indicates the following dangers: do not stand between the equipments and the tractor, pay attention to the rotating parts, do not stand behind the tractor, risk of shearing, pay attention to the rotating tools for your hands and feet.
2		ATTENTION: it indicates the following dangers: pay attention to hot parts and to the foldable parts of the machine, pay attention to the ejection of objects.
3		ATTENTION: read the use and maintenance manual carefully, every action on the machine should be executed after having switched off the tractor, removed the ignition key and engaged the hand brake, be careful to pressurised pipes
4		WARNING-DANGER minimum safety distance 50 m.
5		WARNING - DANGER of coming into contact with moving elements. Do not place hands near transmission belts.
6		PERSONAL PROTECTION DEVICES (PPD)
7		LIFTING POINT.
8		OIL LEVEL.
9		GREASING POINTS.
10		540 r.p.m., power take-off rotation direction and speed
11		NOTES ON THE BELT TIGHTENER
12		NOTES ON WARRANTY
13		GENERAL WARNINGS
14		ADJUSTMENT OF THE THIRD POINT
15		IT INDICATES THE LOCKING POINTS

2.4 POSITION OF PICTOGRAMS



3 USE

3.1 INTRODUCTION

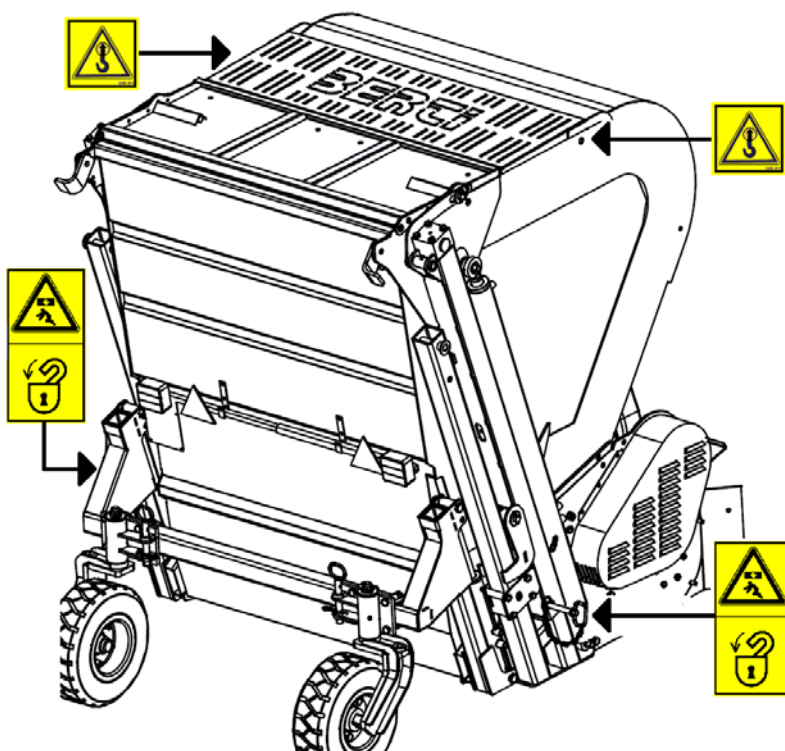
	Before using the machine, the manual must have been read thoroughly, understood and you must have familiarised with the machine. The machine may only be used by expert and properly trained users.
 PERICOLO	Keep all the parts of your body inside the tractor cabin, to reduce to a minimum the exposure to any external dangers such as thrown objects.
	Before getting out of the tractor and before performing any maintenance operations on the mulcher, use the parking brake, turn off the engine, remove the ignition keys from the dashboard, and wait for 5 minutes inside the cabin to ensure that the rotor and relative tools completely stop.
	The safety of the user and of the people around him depends on his judgement and prudence in the use of the machine. It is therefore necessary to be fully aware of its functionality and all Safety Standards relative to its use.
	The user must use all the safety devices and personal protection equipment (P.P.E.) during machine use, adjustment, repair and handling phases.  The machine must always be in good working order and must only be repaired using original spare parts.

3.2 HANDLING AND TRANSPORTATION

Pay maximum attention to safety during loading and unloading operations, which must be performed by qualified staff (in charge of slinging operations and forklifts). Check lifting devices suitability, with reference to the Technical Specs table, page 8. If it is necessary to lift the mulcher, suitable chains and hooks must be used; these have to be hooked to the specific lifting points shown in the pictograms.

To lift the machine, hook its container. Before lifting it, engage the container slide locking pins on both sides and hook the holes marked in the stickers.

A suitable truck having the right power and size must be used to transport the machine. Once uploaded, the mulcher must be secured with lashings.



The operations described may cause dangerous situations; in addition, given the items dimensions and weights, a suitable lifting device must be used.

3.3 TRANSPORTATION ON PUBLIC ROADS



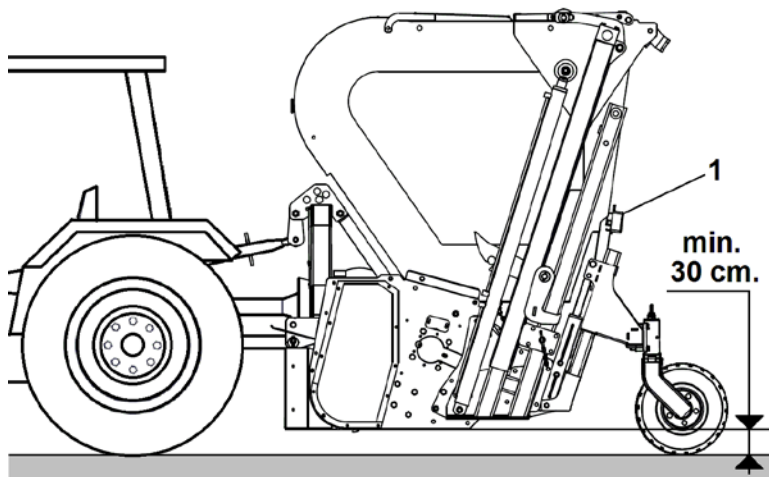
If the machine must be transported on a public road, the road regulations must be strictly respected, paying the utmost attention in choosing the speed.

The means must be provided with orange or yellow blinking light. Before entering on a public road from a non-paved or dirty area, you must thoroughly clean the tires from any residual mud.

During the transport on the road, the mulcher must be kept in transportation position at 30 cm from the ground and the PTO of the tractor must be switched off.

The light bar 1 provided must be connected to the tractor through the 7-poles socket; check its correct functioning - see following chapter.

Before transport, check that all machine parts are integral and in good working order.



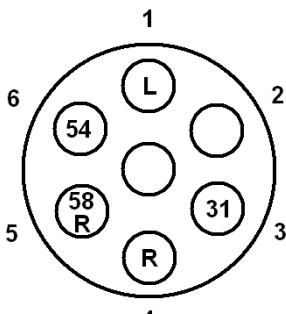
Road transport must be performed with great attention in order to prevent dangers to persons and vehicles in transit.

3.4 ELECTRICAL CONNECTION

For the correct functioning of rear lights, the machine's 7-poles plug must be connected to the tractor's 7-poles socket, **the electrical system must be a 12 volts system.**

Connect the machine's 7-poles plug according to the relevant diagram. Before operating the machine, always make sure all lights are properly working.

In case replacement is needed, use exclusively 12-volt light bulbs, having the same power and size as the original one.

	N°	Use	Colour	
1	L	Left direction indicator	Yellow	
2	31	Weight	White	
3	-	-	-	
4	R	Right direction indicator	Green	
5	58 R	R and L position light and plate light	Brown	
6	54	Stop light	Red	
7	-	-	-	

3.5 MACHINE TRANSPORT PROCEDURE



ATTENZIONE

Before being transported, all machine parts must be in optimal status.

Disengage the P.T.O. and wait for the rotor to stop completely;

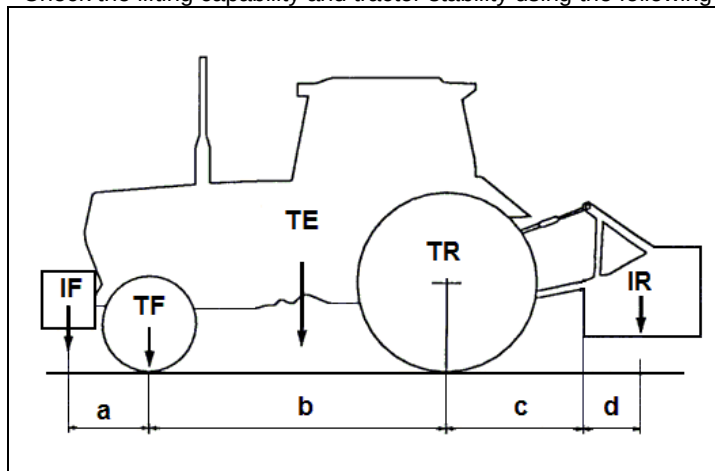
Lift the machine as much as needed (D), so that the transmission elements do not touch the ground.

The machine weight changes the stability of the tractor-mulcher complex, influencing steering and braking capability.

Therefore proceed at a moderate speed.

In particular, remember that the front axis must always be encumbered by a weight equal to at least 20% of the total weight of the tractor-mulcher complex.

Check the lifting capability and tractor stability using the following formula and, if necessary, apply ballasts on the front.



$$I_{F, \min} = \frac{(IR \times (c+d)) - (TF \times b) + (0,2 \times TE \times b)}{a + b}$$

TE = Weight of the tractor (empty)

TF = Front axle load (empty tractor)

TR = Rear axle load (empty tractor)

IR = Rear mulcher weight/rear ballast

IF = Front mulcher weight/front ballast

- Distance from the centre of gravity of the front mulcher/front ballast to the centre of the front axle
- Tractor wheelbase
- Distance from the centre of the rear axle to the centre of the ball of the parallels of the tractor
- Distance from the centre of the ball of the parallels of the tractor to the centre of gravity of the rear mulcher/rear ballast

N.B.: if the machine is mounted on certified agricultural tractors and registered before the 6th May 1997, the following relation should also be checked: $M < 0,3 \times T$

3.6 VISIBILITY



ATTENZIONE

The working areas can be controlled using the rear view mirrors of the tractor and the operator's range of view. While moving in reverse, dark areas may be created that cannot be seen using the rear view mirrors

3.7 CONNECTION OF THE MACHINE TO THE TRACTOR

Before installing the machine, make sure that it is in perfect condition, placed on the ground, levelled and in stable position, that there is a proper amount of lubricant, that all parts subject to wear and/or deterioration are efficient and that the protections are complete and functioning.

 ATTENZIONE	The user must check the proper connection between tractor and mulcher. The lifting capacity and the stability of the tractor must comply with the parameters described in chapter 1.5.3
	Before using the machine, the operator must know the commands and the features of the machine.
	Always keep all the parts of your body inside the tractor cabin, to reduce to a minimum the exposure to any external dangers such as thrown objects.
	Before getting out of the tractor and before performing any maintenance operations on the mulcher, use the parking brake, turn off the engine, remove the ignition keys from the dashboard, and wait for 5 minutes inside the cabin as to make sure that the rotor and relative tools completely stop.
 PERICOLO	It is strictly forbidden to stand between the mulcher and the tractor during the connection phases and any unauthorised persons must be requested to leave the machine operating area.

3.7.1 CONNECTION PROCEDURE



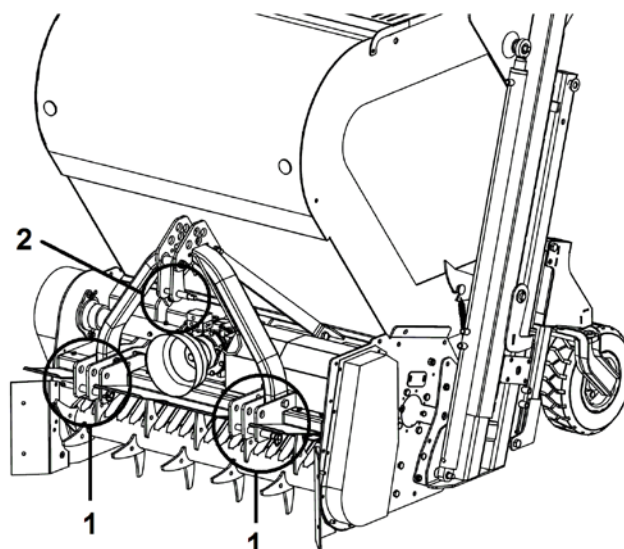
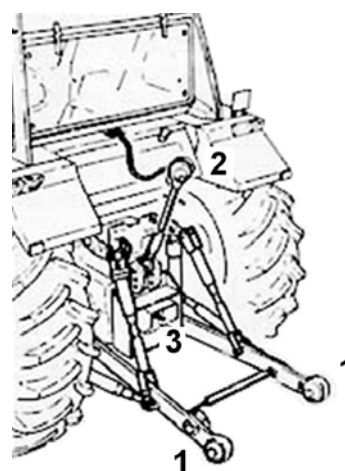
Check the compatibility between the tractor and the machine to be connected (power, connection category, PTO speed, etc.), in compliance with the values specified in the technical specs table, page 9. Coupling the machine with tractors having higher or lower power may cause instability and damages.



During operation, adjustment, maintenance, repair or transportation, the operator must use suitable Personal Protection Equipment (PPE).

After checking the above-mentioned, proceed with the connection of the machine to the tractor following the procedure here below:

- Remove the safety pin and the pins from the connection inlets 1 of the machine
- With the tractor in reverse and activating the elevator, make the lower arms 1 match to the lower corresponding connection inlets 1 of the hoeing machine
- Insert the pins and lock them with the relating safety pins
- Connect the third point of the tractor 2 in the same way, with the corresponding inlet 2 on the machine
- Adjust the third point so as the machine stands horizontally as regards the ground
- Lift and fix every supporting foot of the machine

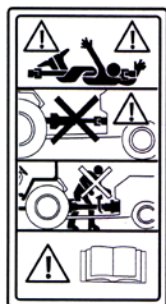


ATTENTION: BE SURE OF HAVING INSERTED THE SAFETY PINS INTO THE PINS OF THE CONNECTION INLETS 1 AND 2



The operations described are very hazardous.
Avoid standing in front of the mulcher during the approach of the working vehicle.
Avoid the presence of uninvolved persons.
During the installation phases, the PTO of the mulcher should be disengaged.

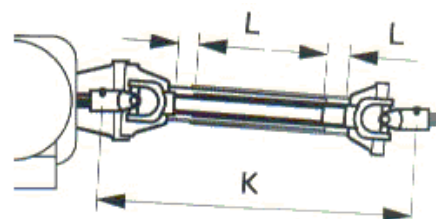
3.8 CONNECTION OF THE CARDAN SHAFT



During operation, the cardan shaft may generate dangerous situations. Therefore you should:

- Read and store the use and maintenance booklet near the cardan shaft;
- Make sure that the cardan shaft is appropriate for transferring the required power;
- Only use the cardan shaft delivered with the machine;
- Make sure that the guards are properly installed, complete and functioning;
- Do not operate with cardan shafts without guards.
- Replace the worn, damaged or missing guards;
- Turn off the engine of the tractor before operating on the cardan shaft or on the machine;
- Do not allow children or unauthorised persons to go near the machine during operation and/or maintenance interventions
- Wear appropriate clothing (non-resistance, not loosening), especially tight clothes (e.g.: overalls with wrist and ankle protection).
- Grease the cardan shaft following the recommendations provided in the instruction manual of the cardan shaft.

When installing the cardan shaft for the first time, measure the distance K between the grooves of the P.T.O. buttons with the machine placed on the ground, levelled and with the multiplier aligned with the P.T.O. of the working machine; if necessary adapt the length of the cardan shaft, making sure that the telescopic tubes are staked by length as to create at the ends a jog L of 40 - 50 mm. This operation must be carried out at the first installation, when parts are replaced and every time the machine is installed on another tractor.



After installing the cardan shaft, fasten the guard on both sides using appropriate chains.

During temporary resting of the machine, after installing the cardan shaft, perform some lifting, and lowering movements on the machine to make sure that the tubes of the shaft are free to slide without any obstacles.

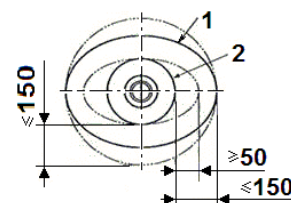
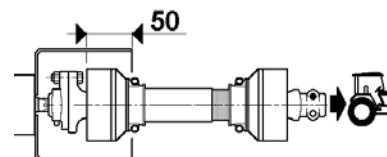
Check that between the guard of the cardan shaft and the guard mounted on the PTO of the machine, a minimum overlap of 50 mm is present, as required from the safety standards.



ATTENZIONE

Check that between the guard of the cardan shaft and the guard mounted on the PTO of the machine a minimum radial space between 50 and 150 mm is present so as to allow a hand to be inserted.

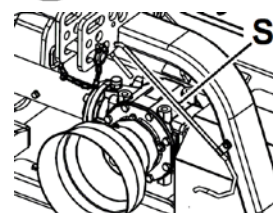
- 1 - Machine protective cap
- 2 - Cardan shaft protective cap



Check the rotating direction of the PTO of the cardan, on the tractor, looking from the rear side, it should rotate in clockwise.



Put the cardan shaft, when not used, on an appropriate S support provided on the three-point tiller to avoid any dirt accumulation, deformation or breakage of the guard.



PERICOLO

DO NOT CLIMB ON THE CARDAN SHAFT, EVEN IF IT IS STOPPED.

3.9 CARDAN SHAFT SPECS

The cardan shaft is the transmission component that drives the mulcher; it must be chosen based on specific criteria that define its length and power.

For length, see chapter 3.8; for power, use the table here beside, containing the minimum power the cardan shaft must bear, on Picker/LC and Picker/C.

Model	kw	HP	
PICKER/LC 85	25	35	Picker LC
PICKER/LC 115	30	40	
PICKER/LC 135	30	40	
PICKER/C 100	45	60	Picker C
PICKER/C 120	45	60	
PICKER/C 140	45	60	
PICKER/C 150	45	60	
PICKER/C 160	60	80	
PICKER/C 180	60	80	

3.10 HYDRAULIC SYSTEM

The machine is provided with hydraulic cylinders to lift/overturn the container and for rear wheels; it may also be fitted with a hydraulic motor to operate the front pick-up rotor (see chapter 3.10.4). All these components are to be connected to the tractor distributors, which guarantee the pressure and flow needed for correct functioning (max pressure of 160/190 bar and minimum flow 60 l/min. to operate the front pick-up rotor).

Check the hydraulic oil level and the compatibility between machine's and tractor's quick couplings; then proceed to connection.



IMPORTANT: connect the pipes of the jacks in pairs in the distributors

Make sure there are no people around the tool; when the machine is high enough above the ground, you can slowly operate the distributors levers to control the hydraulic cylinders and check movements and correct functioning.

If the hydraulic motor is fitted, check the pick-up rotor for correct rotation direction; if needed, invert the hydraulic pipes connection.

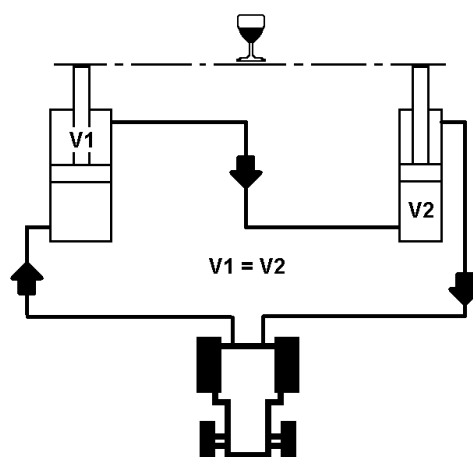
3.10.1 "NORMAL" AND "SUPER" PICKER/C CONTAINER HYDRAULIC SYSTEM

For the PICKER/C model machine, a container lifting hydraulic system has been designed to ensure the movements of the two jacks lifting the container are perfectly parallel.

It does not send oil from the tractor to both container-lifting jacks, but to just one of them, the one having the largest diameter.

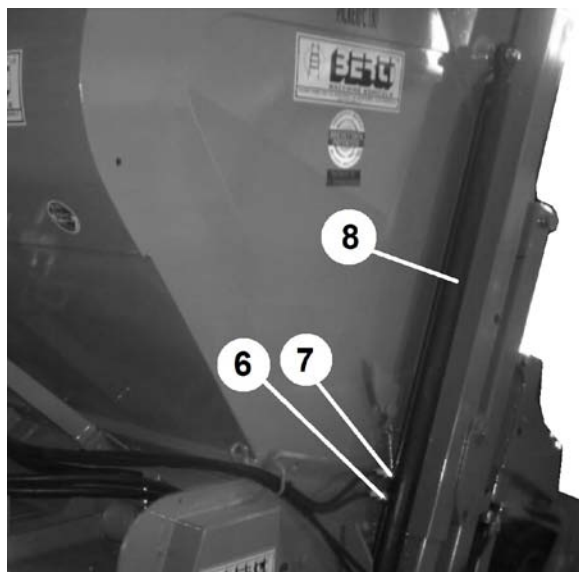
The oil injected into the chamber of the larger jack pulls the rod out and moves the oil from chamber V1 to chamber V2 of the smaller jack. As the volume in chamber V1 and V2 is the same, the rods of the two jacks move exactly the same way. Oil going out the smaller jack's chamber goes back to the tractor. Chambers V1, V2 and their connection pipes create a closed loop which is filled with oil - during the machine's try-out - through the quick connection 5 on the larger jack 1.

The closed loop can be also recharged with oil.



The connections of jacks moving the PICKER/C container must be as follows:

- The lower pipe 2 of the larger jack 1 is connected to the tractor through the connection block 4;
- The upper pipe 3 is connected to the smaller jack 8 in position 6;
- The upper pipe 7 is connected to the tractor through the connection block 4.



3.10.2 "KOMPAKT" PICKER/LC PICKER/C CONTAINER HYDRAULIC SYSTEM

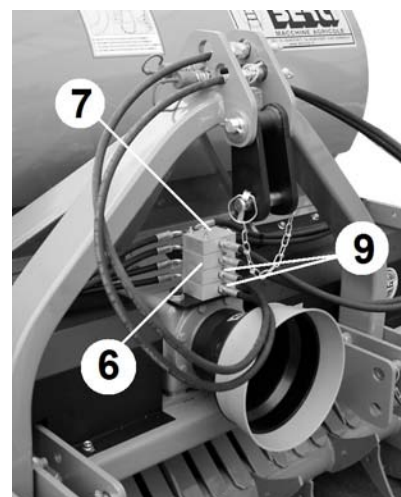
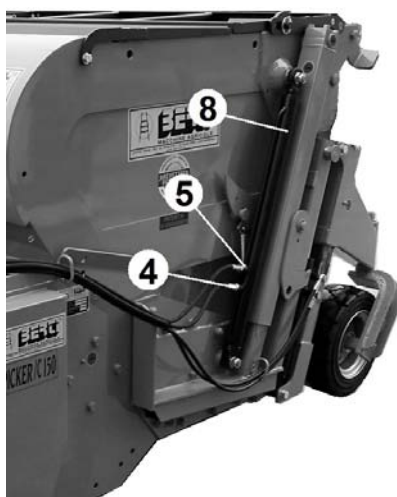
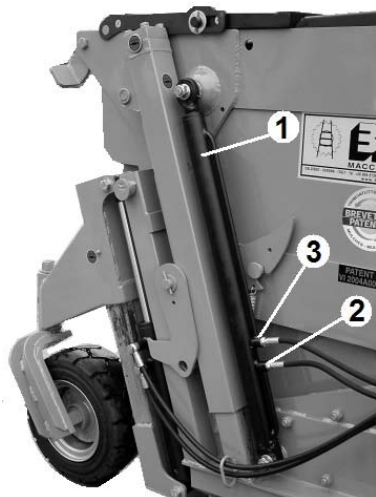
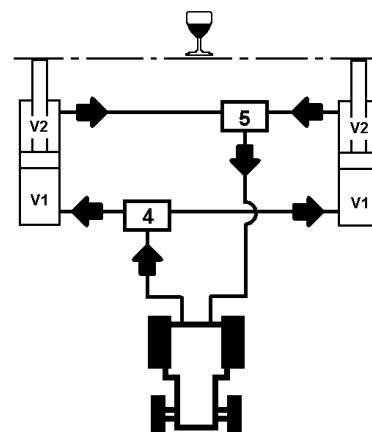
For the PICKER/LC model machine, whose container is lighter than the PICKER/C's, the container lifting hydraulic system is shown here beside. It ensures the movements of the two jacks lifting the container are perfectly parallel.

The oil is sent from the tractor to the V1 chambers of both hydraulic jacks moving the container.

Oil going out from the V2 chambers of the two hydraulic jacks goes back to the tractor.

The connections of jacks moving the container are as follows:

- Jack 1's rod must be fitted upwards. Lower pipe 2 is connected to the tractor through the flow divider 6;
- The upper pipe 3 is connected to the tractor through the flow divider 7.
- The lower pipe 4 of the jack 8 is connected to the tractor through the flow divider 6;
- The upper pipe 5 is connected to the tractor through the flow divider 7.



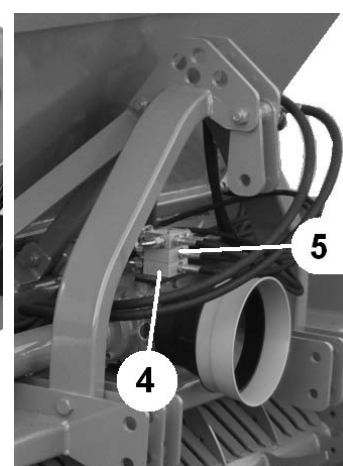
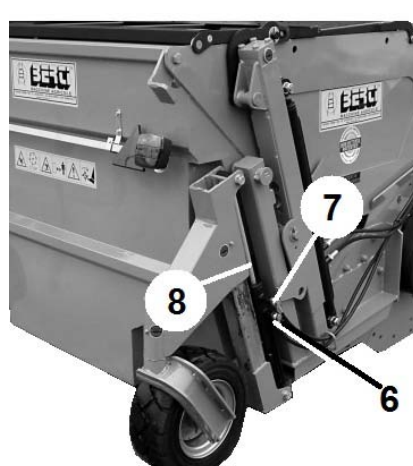
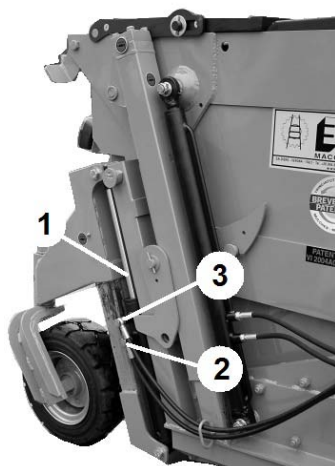
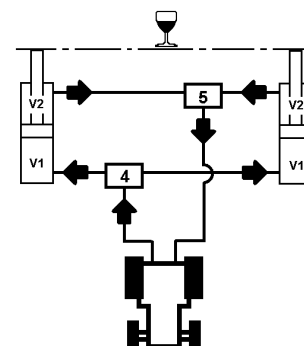
3.10.3 REAR WHEELS HYDRAULIC SYSTEM

Oil is sent from the tractor to V1 chambers of both hydraulic jacks moving the pivoting wheels.

Oil going out from the V2 chambers of the two hydraulic jacks goes back to the tractor.

The connections of jacks moving the pivoting wheels must be as follows:

- Jack 1's rod must be fitted upwards. Lower pipe 2 is connected to the tractor through the flow divider 4;
- The upper pipe 3 is connected to the tractor through the flow divider 5;
- The lower pipe 6 of the jack 8 is connected to the tractor through the flow divider 4;
- The upper pipe 7 is connected to the tractor through the flow divider 5.

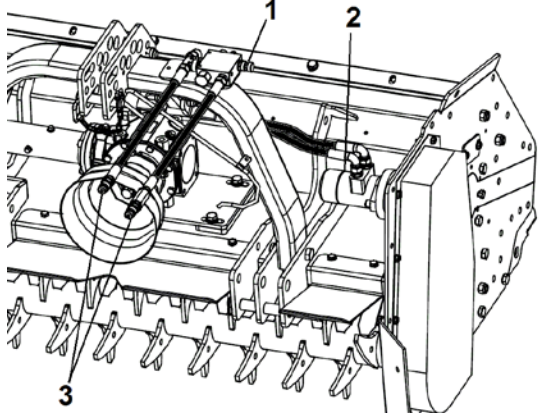


3.10.4 PICK-UP ROTOR HYDRAULIC SYSTEM

Upon request, the machine can be provided with a hydraulic system for the operation of the pick-up rotor, instead of the standard mechanical drive.
Check the hydraulic oil level, that pressure and flow of the tractor's system correspond to the relevant table and that quick couplings are compatible with the machine's ones. Then proceed to connection.



IMPORTANT: connect pipes 3 of the hydraulic motor jacks in pairs to the tractor distributors

	PICKER/LC	PICKER/C	Pinion ratio	
Max pressure bar	160-190	160-190		
Min. flow l/min	50	60	Z13-31 (standard)	
Min. flow l/min	25	30	Z21-24 (optional)	

Use valve 1 to adjust the rotation speed of the hydraulic motor 2 operating the pick-up rotor through a side chain drive (the flow indicated on the table ensures an optimal pick-up rotor revolution number of 110/120 r.p.m.).

Make sure there are no people around the tool; when the machine is high enough above the ground, you can slowly operate the distributors levers to control the hydraulic motor and check the pick-up rotor for correct rotation direction. If needed, invert the connection of hydraulic pipes

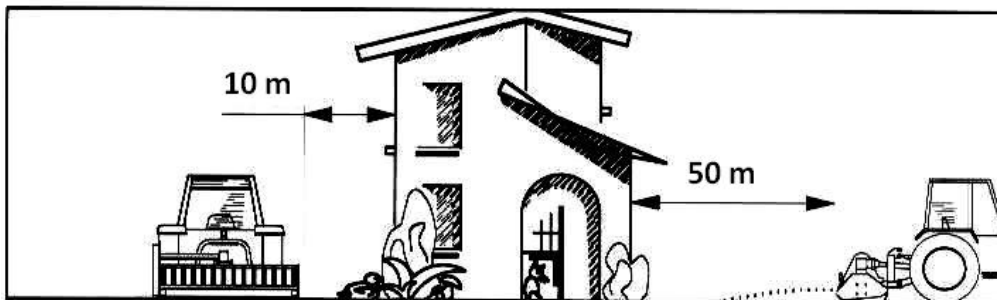
4 STARTING THE MACHINE



Before each start-up, follow that stated below:

ATTENZIONE

- Make sure that there are no persons, animals and things in the machine operating area as there are dangers, such as objects being thrown at high speed, that may cause serious injuries or death.
- Keep a minimum safety distance equal to the machine operating radius of 50 m.



- Do not allow any persons, animals or things to get near and to stand in the machine operating radius.
- Before using the machine, the operator must know the commands and the features of the machine.
- Always keep the guards in perfect state, properly placed and effective.
- The engine of the tractor must be stopped, the parking brake engaged, the PTO disengaged, the ignition key out of the dashboard and placed in a secure place.
- The rotor and relative machine tools must be stopped.
- Always check the machine verifying the nuts fastening, checking for any damage; if any damage is found, it must be repaired before starting the machine and thus restoring the machine to its original state.
- Supervise the operating area removing any stones, metallic pieces, steel cables or any other dangerous materials. Take all the necessary safety precautions as to keep yourself and other persons safe. Protect the cabin or the control area against falling/objects thrown at high speed using anti-break / armoured / shatter-proof windows and fixed guards (e.g. metallic grid) that can resist impacts in compliance to the state of the art technologies. Contact the manufacturer to request any clarifications on the subject.
- Check the position and status of the terrain in the operating area; make sure that they do not affect in any way the stability of the assembly tractor-mulcher.

- Make sure that the safety pictograms are in good condition. If the pictograms have deteriorated, replace them with originals obtained from the manufacturer and place them in the position indicated in the instruction manual. Make that all safety pictograms are legible. Clean them using a damp cloth.
- The user must use all the safety devices and personal protection equipment (P.P.E.) during machine use, adjustment, repair

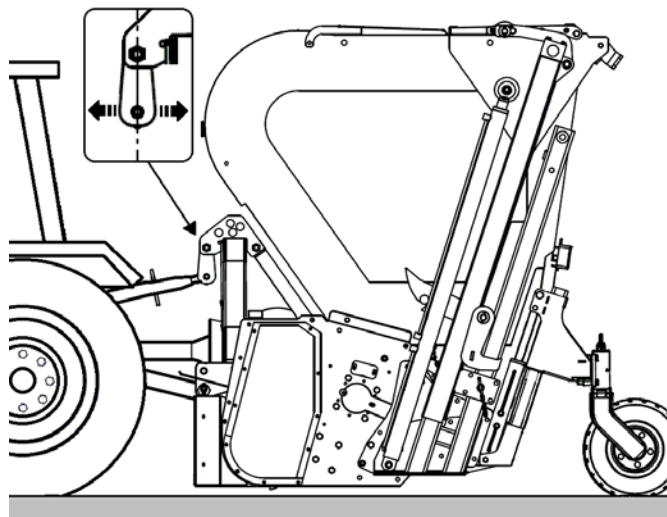


and handling phases.

4.1 WORK PHASES

With the machine correctly coupled with the tractor, approach the working area and proceed as follows:

- 1- Using the lifter and rear wheels controls, adjust the working height and lower the machine until the PICK-UP teeth touch the ground;
- 2- Adjust the third point tie rod so that it can swing the same way on both sides.
- 3- Engage the PTO at 540 revs and gradually accelerate the tractor until it reaches the PTO rotation speed;
- 4- Engage running mode and start the operating process;
- 5- If needed, using the tractor and rear wheels lifter, adjust the working height so as to prevent the PICK-UP teeth from penetrating the ground;
- 6- Check the product mulching and, if need be, adjust the tractor forward speed according to the mulching level required.



N. B.: BEFORE STARTING WORKING OPERATIONS, DISMANTLE THE LIGHT HOLDING BAR FROM THE MACHINE

4.2 EMPTYING OF A FULL CONTAINER

- 1- Release the power take-off;
- 2- Approach the unloading area and the machine you have to unload;
- 3- Make sure the place where the operation is carried out is flat. If it is not, move elsewhere;
- 4- Lift the machine using the parallels lifter and, if it is provided of rear wheels, lower them completely so that the lifting operation is eased. Go closer to the machine to be unloaded, after making sure the height of the sideboards from the ground is not more than 2 metres.
- 5- Disengage the gear and apply the hand-brake;
- 6- Make sure there is nobody in a range of 10 metres around the machine. With the tractor at low revs, use the jack operation lever to a complete lifting and rotation of the container.
- 7- The rotation is complete when the cylinder reaches its stop. During this operation, the slide will be completely open to let the material out.



- 8- When the emptying operation is concluded, use the jack lever again to rotate and lower the container back to its normal position.
- 9- Release the brake, engage the gear and move to the working place to re-start work.

N.B. The phase including container lifting and rotation and slide opening and the reversed phase are carried out automatically operating the control lever of the container jacks.

Stick to the given instructions for discharging on any truck or container whose height is compatible with the height of the lifted container, on the ground or on a hole.

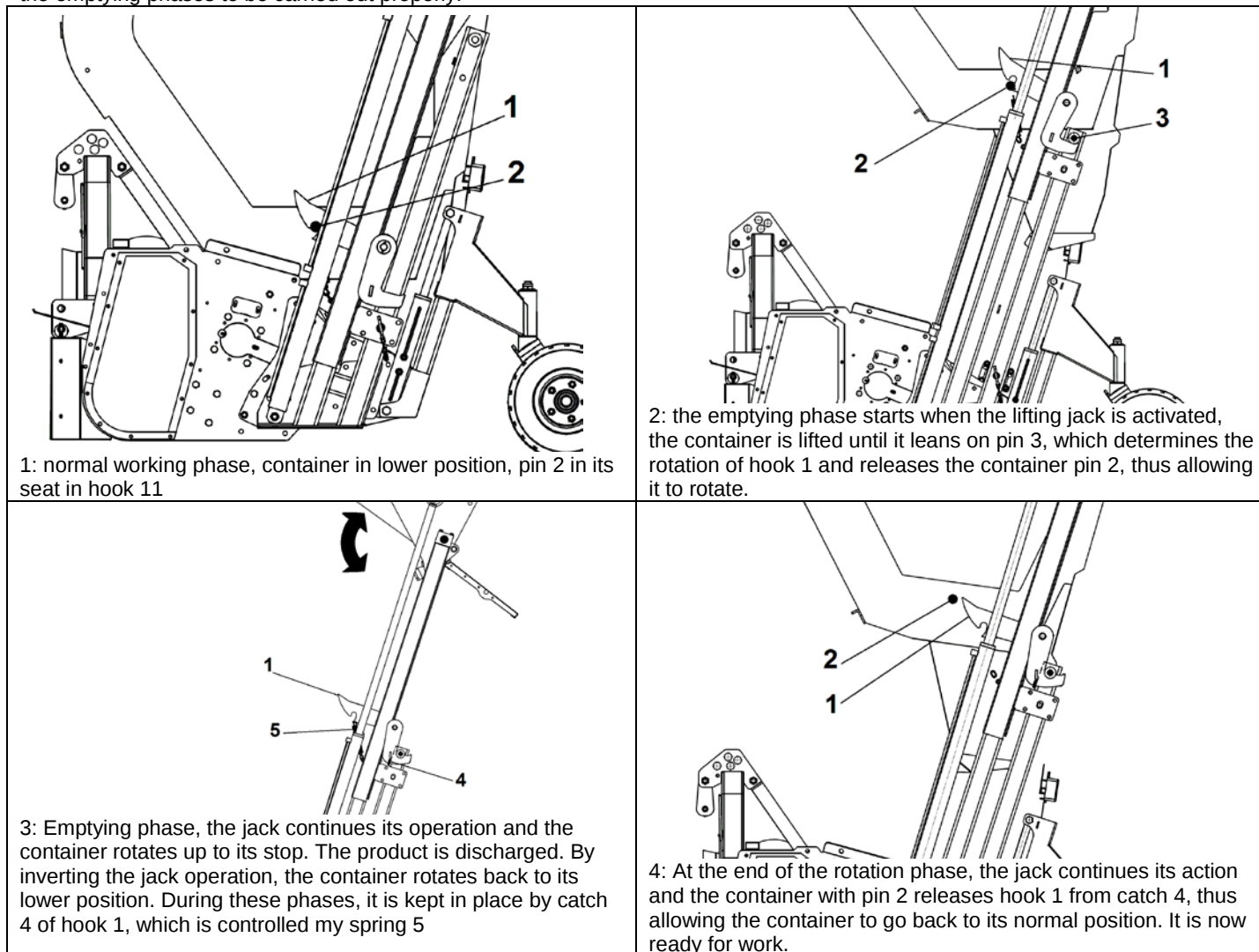


Operations described may cause dangerous situations: prevent unauthorised people from standing in a 10 m range around the machine.

PERICOLO

4.3 DESCRIPTION OF THE EMPTYING PHASES

The machine is fitted with a special device allowing to operate just one jack during the lifting and discharging operations. In order for the emptying phases to be carried out properly:



4.4 JAMMING OF A PICK-UP ROTOR WITH MECHANICAL DRIVE

Large pieces may penetrate the pick-up rotor and block it; in order to avoid drive overloads, some safety devices have been provided. In the mechanical drive version, an automatic torque limiting device is fitted to interrupt transmission in case the torque level is exceeded. The following operations are necessary to re-activate the transmission:



The operations described may cause dangerous situations. Follow these instructions carefully in case of mechanical drive:

PERICOLO

1. Disengage the P.T.O. and wait for the rotor to stop completely;
2. Engage the tractor brake;
3. Turn off the tractor;
4. Remove the obstacle preventing the rotor from rotating;
5. Re-start work

4.5 JAMMING OF A PICK-UP ROTOR WITH HYDRAULIC DRIVE

In the version with hydraulic drive, if jamming occurs, a pressure relief valve, contained in the revolution control valve, intervenes when the torque level is exceeded, thus interrupting the transmission.

In order to re-activate the transmission, it is necessary to invert the rotor rotation direction using the distributor lever, so that the rotation is unblocked and work can re-start.

4.6 DISCONNECTING THE MACHINE

Follow the instructions given carefully to disconnect the machine:

1. Make sure that the operating machine is on flat, stable ground;
2. Make sure the container is completely lowered
3. Disengage the P.T.O. and wait for the rotor to stop completely;
4. Engage the tractor brake;
5. Let the machine rest on the ground and turn off the tractor;
6. Disconnect the tiller locking pin;
7. Disconnect the cardan shaft from the tractor and lean it on the bracket;
8. Disconnect all feeding pipes of the pick-up hydraulic motor.

Put the connection pins and the safety tow pins in the specific case on the tiller, so that it will be easy to find them again.



PERICOLO

Operations described may cause dangerous situations: prevent unauthorised people from standing in the area where the machine will be placed.

4.7 JAMMING OF THE MULCHING ROTOR



Keep in mind that any change of the field conditions, such as the type and the amount of material to be mulched or foreign bodies, may clog the mulcher.

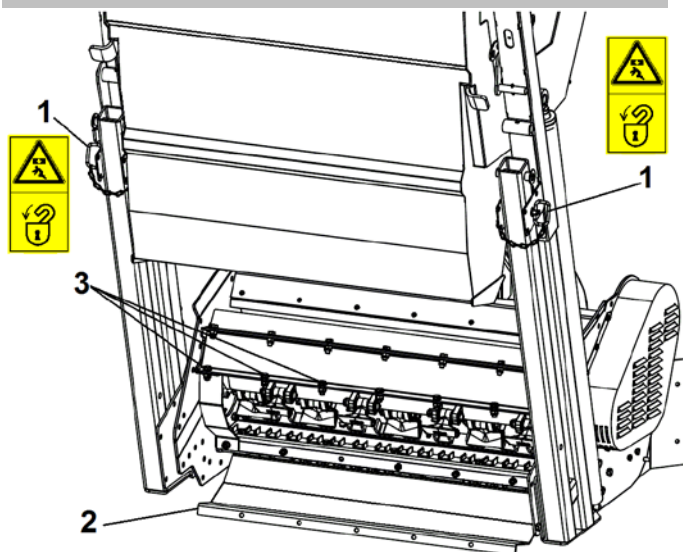
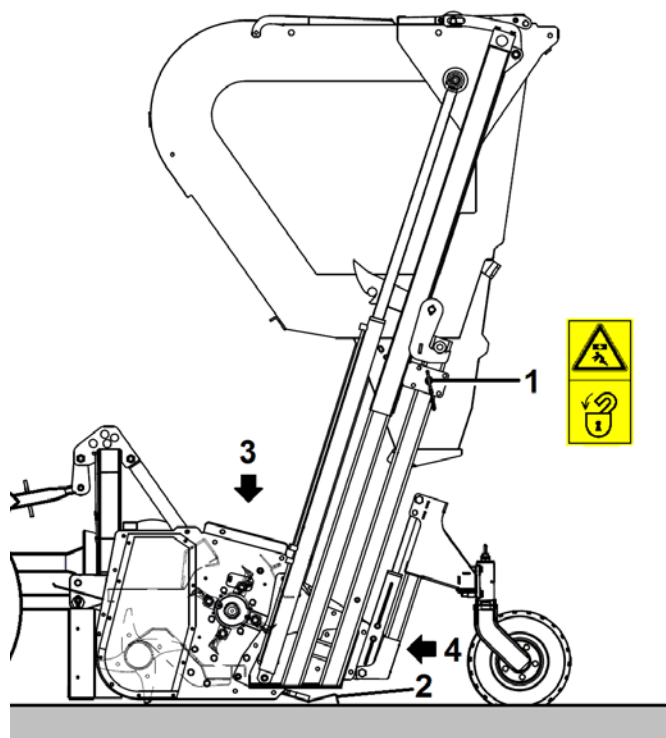
If this is the case, follow this procedure:

- Empty the container completely
- Let the machine connected to the tractor rest on the ground
- Lift the emptied container up to point 1, then insert the locking pins on both sides
- Open rear cover 2, by loosening locking bolts 3
- Clean the rotor through both the rear opening 3 and the upper opening 4,
- visually check the rotor and the cutting elements for damages/wearing (replace the tools damaged, if needed)
- Fit the rear cover 2 back and lock with bolts 3
- Remove the safety catch 1, lower the container and re-start work.



ATTENZIONE

Empty the container completely before carrying out these operations. During these operations, disconnect the PTO and wait for the rotor to stop completely, engage the brake, let the machine rest on the ground, turn the tractor off and remove the key from the dashboard. Always carry out this operation on a stable and flat ground and prevent unauthorised personnel from approaching the machine.



5 ADJUSTMENT

5.1 FORWARD SPEED



Keep in mind that it is necessary to adjust the forward speed of the tractor to the type and quantity of material to mulch, as EXCESSIVE SPEED would overload the transmission elements, causing early wear-out. Should this be the case, the mulched product will be of poor quality, roughly cut and, because of its higher level of inertia, it may exceed the safety limits set.

In the table below, the recommended speeds that should be respected in order to obtain maximum performance are listed:

RECOMMENDED FORWARD SPEEDS (km/h)															
TYPE OF MATERIAL	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	8
Vineyard pruning															
Apple - pear pruning															
Olive - peach pruning															
Bushes - branches															

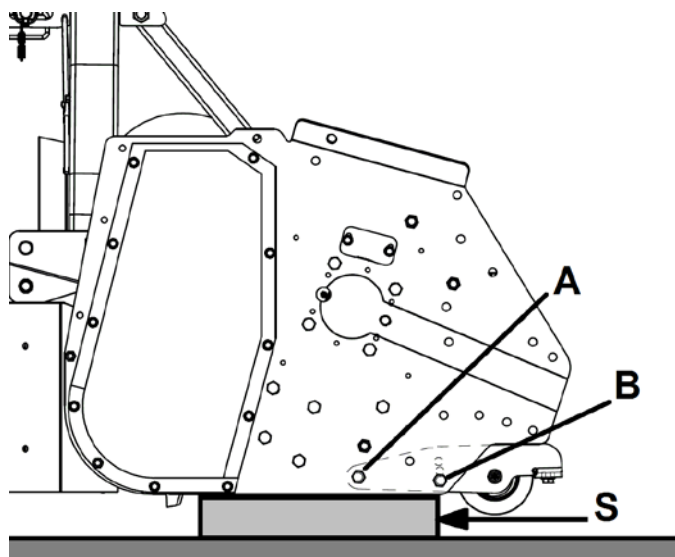
5.2 ROLLER ADJUSTMENT

Follow these instructions if the machine is fitted with a leveller roller:

- 1- Place the machine on a flat surface, with shim S under its sides;
- 2- Make sure the PTO is released, engage the brake and turn the tractor off;
- 3- Unscrew and remove the bolt B;
- 4- Loosen bolt A;
- 5- Rotate the support plate, until a hole on the plate and the hole on the side correspond;
- 6- Fit the bolt B back and tighten it;
- 7- Tighten the bolt A.



These operations must be carried out on both sides of the roller



ATTENTION: before carrying out these operations, make sure the PTO is disconnected, wait for the rotor to stop completely, the tractor must be off and the brake engaged, remove the key from the dashboard. Always carry out this operation on a stable and flat ground and prevent unauthorised personnel from approaching the machine

6 MAINTENANCE



In case of breakdown, the operator must stop the cardan rotation, wait for the cutting elements to stop, remove the key from the dashboard, step off the tractor to determine the problem and carry out the interventions needed.



This instruction manual must have been read and understood thoroughly before performing any maintenance on the machine.

We remind you that all maintenance operations must be carried out by qualified and trained personnel when the machine is off. Maintenance and repair interventions must not be carried out outdoor, but in an equipped workshop.



During operation, adjustment, maintenance, repair or transportation, the operator must use suitable Personal Protection Equipment (PPE).

Waste oil must be collected and not dispersed into the environment: applicable regulations consider it as dangerous waste, which must be taken to specific collection centres. Apply to the nearest Waste Oil Consortium.

The following operations must be carried out before starting any maintenance operation:

- during maintenance operations, the machine must be placed on a compact and flat ground;
- turn off the machine engine, engage the parking brake and remove the key from the dashboard;
- Any maintenance operation can be performed only after the oil temperature is below 60 °C;
- always use the suitable Personal Protection Equipment (safety shoes, safety overalls and gloves, etc.)
- provide all accident prevention systems suitable for the ongoing operations;
- if compressed air is used to clean the machine, use safety glasses;
- when it is necessary to access parts of the machine which cannot be reached standing on the ground and, however, parts which are higher than 1.50 m from the ground, use a ladder or a platform complying to applicable rules;
- do not carry out repairs of which you have no knowledge. Always follow instructions and contact the manufacturer or expert personnel if they are not available.
- attention: replace hydraulic pipes if damaged
- do not use lifting points different from those prescribed;
- make sure that the lifting equipment is suitable to carry out the operations in compliance with safety standards;
- do not keep the tractor engine on in closed spaces which are not fitted with a ventilation system suitable for exhaust gases evacuation.
- avoid repeated and extended contacts between your skin and fuels/lubricants/liquids, as they may cause skin conditions or other diseases;
- do not swallow fuels/lubricants/liquids. In case of accidental contact with eyes, rinse with water and see a doctor, if needed;
- be extremely careful, as the discharged oil/liquids may be hot;
- do not weld in closed spaces which are not properly ventilated;
- do not weld painted surfaces or next to a painted surface, as this may cause the production of toxic vapours. Remove the paint using suitable products, then wash and dry the surface.
- Release pressure from the hydraulic systems before carrying out any intervention;
- do not use your hands to detect leakages of pressurised liquids, as these may penetrate your skin and eyes and cause serious consequences.

6.1 MAINTENANCE OPERATIONS WHICH MAY BE CARRIED OUT BY THE OPERATOR

The interventions described below do not require any specialisation.

The operator must know and carefully respect the instructions. The machine must be turned off and disconnected (see paragraph 4.2).

The periodic controls and the maintenance operations must be performed in the times and ways established and are the operator's responsibility.

Failure to comply with maintenance times and regulations jeopardises the correct operation of the machine and its duration and consequently makes warranty validity null and void.

Intensify the frequency of maintenance in heavy duty operating conditions (frequent stopping and starting, extended winter period, etc....).

Follow these instructions to use and maintain the machine to the best (after the first 4 working hours and then every 50 working hours):

1. Check all bolts, pins, dowels for correct tightening (see table chapter 7.1.1)

6.1.1 TIGHTENING TORQUE TABLES

Table tightening torques for steel screws 8.8

Coarse thread screw	M8	M10	M12	M14	M16	M20	M24
Coupling torque Nm	25	49	86	135	210	410	710
Fine pitch screw	M8x1	M10x1.25	M12x1.25	M14x1.5	M16x1.5	M20x1.5	M24x2
Coupling torque Nm	27	52	95	150	225	460	780

Table tightening torques for steel screws 10.9

Coarse thread screw	M8	M10	M12	M14	M16	M20	M24
Coupling torque Nm	35	69	120	190	295	580	1000
Fine pitch screw	M8x1	M10x1.25	M12x1.25	M14x1.5	M16x1.5	M20x1.5	M24x2
Coupling torque Nm	38	73	135	210	315	640	1100

6.2 GREASING AND LUBRICATION

Periodic and systematic greasing and lubrication of the machine maintain its performance and increase its useful life span

Use a specific greasing pump to grease the parts shown in the stickers.

Only use a manual greasing pump in order to prevent laceration of the bearing seals and the grease passage piping.

ROTOR: Grease every 8 working hours with max 1-2 pumpfuls, in order not to damage the supports' internal seals. On the pulley side, the rotor is lubricated through the specific greaser of the small pipe on the transmission casing.

Grease the sliding guides and all the container's joints

LEVELLING ROLLER grease every 8 working hours on both roller sides; pump grease until it comes out.

Grease the cardan shaft, as described in the relevant use and maintenance manual provided by the cardan shaft producer

Carry out these operations on a flat and stable surface and prevent unauthorised personnel from approaching the machine

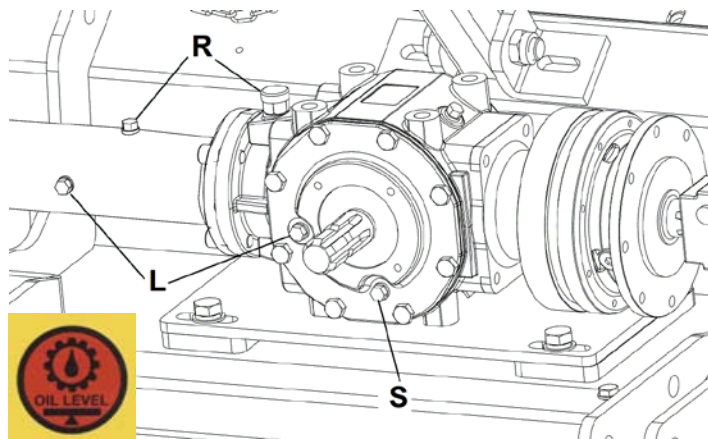


6.2.1 LUBRICATION OF THE TRANSMISSION UNIT

Before taking any action on the transmission unit (gear-motor and extension), properly clean the areas around the caps, to avoid any dirt intrusion inside the units. Follow the schedule given:

- 1- During the first 20 working hours, check oil levels: the oil must reach the level hole L. If needed, add oil from cap R. Then check oil level every 50 hours;
- 2- After the first 40 working hours, replace the transmission unit oil completely using cap S. Repeat this operation every 250 working hours.

Recommended lubricant:
Gear oil ISO VG 460



ATTENZIONE

Waste oil must not be dispersed into the environment: applicable regulations consider it as dangerous waste, which must be taken to specific collection centres. Apply to the "Mandatory Consortium for Waste Oils" for the collection of waste oils.

6.2.3 LUBRICANT TABLE

The following table contains the same information as the sticker on the machine; the reference lubricant is highlighted by a grey background

		LUBRIFICANTI RACCOMANDATI - recommended lubricantS empfohlenen Schmiermittel - lubrifiant recommandé					
	AGIP	IP	ESSO	SHELL	MOBIL	BP	TOTAL
	BLASIA 460	MELLANA OIL 460	SPARTAN EP 460	OMALA 460	MOBILGEAR 634	ENERGOL GR-XP 460	CARTER EP 460
 GREASE	GREASE MU EP 2	ATHESIA EP GREASE 2	BEACON EP 2	ALVANIA GR. EP 2	MOBILUX EP 2	GREASE LT-X EP 2	MULTIS EP 2

6.3 MACHINE HOT POINTS

Before any maintenance intervention, make sure that the potentially hot parts have cooled down.

Be careful to: transmission (motor-gear and extension), hydraulic motor (if any), pulleys and belts, oil-pressure pipes.

6.4 HYDRAULIC SYSTEM



ATTENZIONE

Check the machine visually to make sure that there are no loose fittings, piping with scratches, cuts or other signs of wear. Tighten the loosened fittings and replace the worn or damaged pipes.

6.4.1 HYDRAULIC PIPE REPLACEMENT PROCEDURE

Before replacing a hydraulic pipe, be careful to comply with all safety measures for maintenance interventions; stop the machine and close the hydraulic system valves.

Before removing a hydraulic tube, make sure that any residual pressure was discharged from the system.

Precisely identify the damaged pipe and loosen using an appropriate key the two connection points, paying attention to any possible leakages of hydraulic fluid.



ATTENZIONE

Replace the damaged tube using only original spare parts.

Before installing the new tube make sure that the connection points are in proper state (threads, seals, etc.).

With the proper tools screw clockwise the fittings of the hydraulic tubes that present leakage. Do not tighten excessively so as not to ruin the threading on the fittings.



ATTENZIONE

Waste oil must not be dispersed into the environment: applicable regulations consider it as dangerous waste, which must be taken to specific collection centres. Apply to the "Mandatory Consortium for Waste Oils" for the collection of waste oils.

6.5 TOOL WEAR CHECK

The mulcher tools must be visually checked for any signs of wear. Replace the cutters when an increase in power absorption is detected or the material cutting is not perfect. If the machine is used with tools that are not sharpened, its performance will decrease. The dimensions and the weights of the tools are strictly controlled: if they are replaced, the rotor does not require a new dynamic balancing. Broken tools or tools that are too worn transmit vibrations to the machine. In this case, stop the job immediately and only start again after the tools have been replaced. The 10.9 (UNI 3740) resistance class steel locking screw guarantees a safe anchoring and a suitable duration.



ATTENTION: it is advisable to fit only original tools on the rotor.

6.6 TOOLS REPLACEMENT

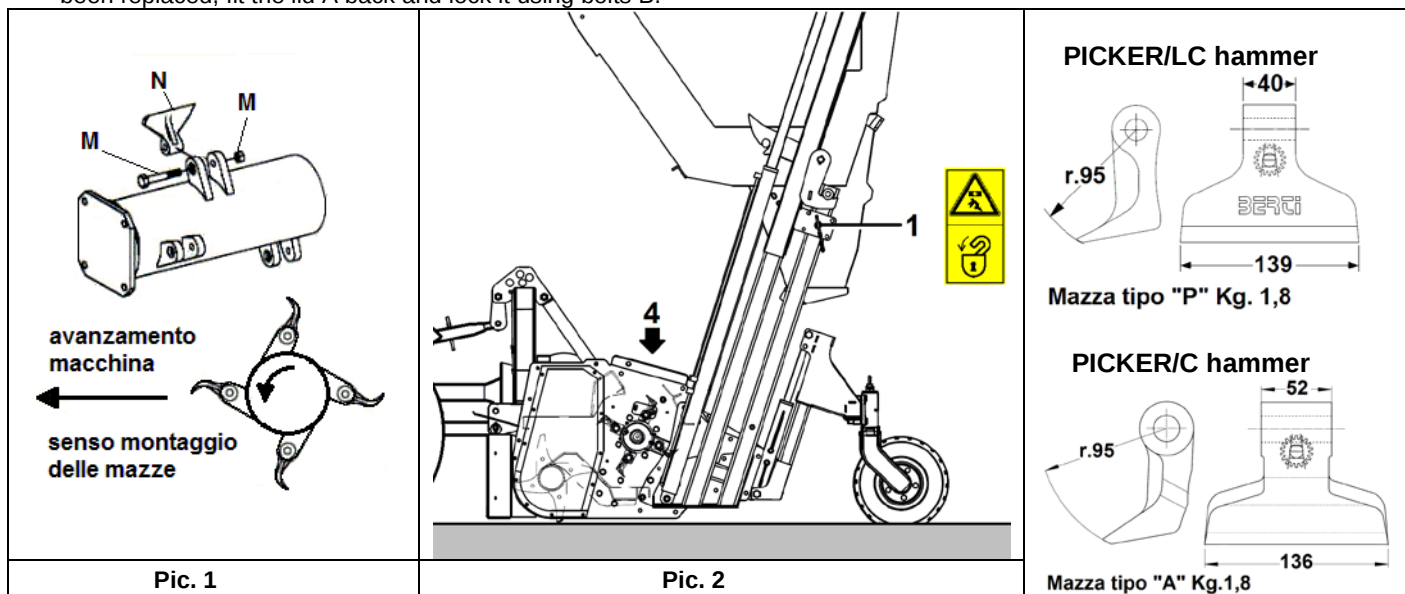


ATTENZIONE

If a tool must be replaced, it is recommended to replace the entire range. Not using original spare parts can cause the machine to vibrate anomalously. Attention: make sure the PTO is disengaged before carrying out the following operations. Work on a stable and flat surface; the tractor must be off and the brakes engaged. Empty the container completely before carrying out these operations

Refer to the drawings when carrying out these operations.

1. Lift the emptied container up to point 1, then insert the locking pins on both sides, as shown in pic. 2;
2. In the position, the rotor can be accessed from compartment 4, pic. 2;
3. Refer to pic. 1 to replace the hammer N, make sure the new hammer has the same rotation direction as the old one. Fit back the bolt M; be careful to insert the screw head into the square seat on the support and tighten strongly. After all hammers B have been replaced, fit the lid A back and lock it using bolts B.

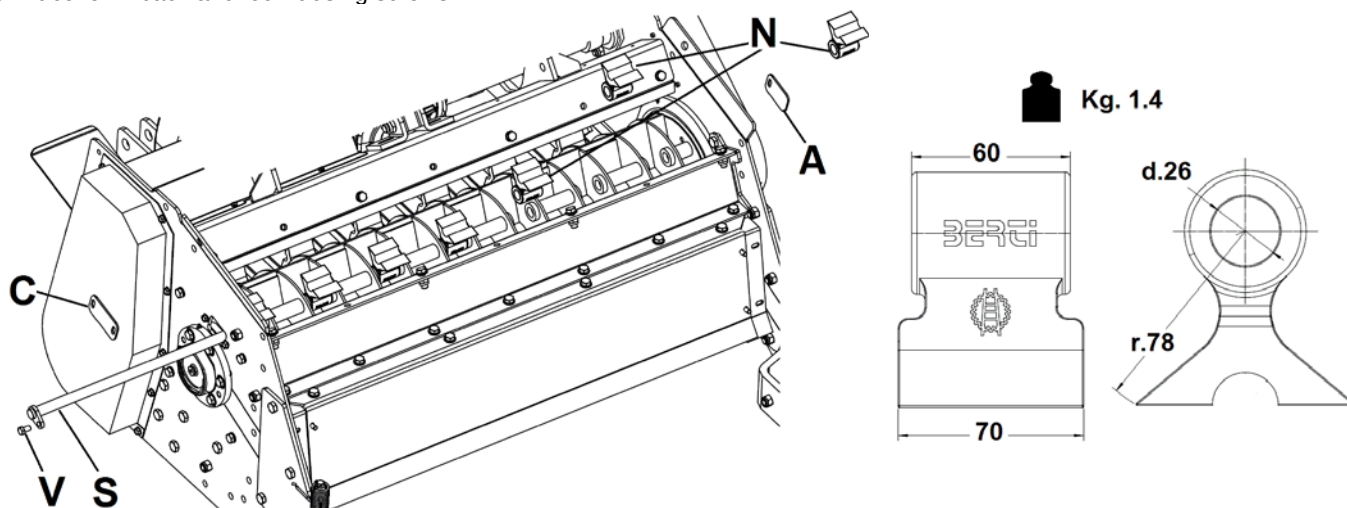


If after replacing the tools, the vibrations persist, proceed with a new dynamic balancing of the rotor at a specialised workshop.

6.7 FORESTRY ROTOR (for Picker/C only)

If the machine is fitted with a "forestry" rotor, execute the following operations, referring to the drawing and in compliance with recommendations and rules given for the standard rotor:

1. Empty the container completely and lock it in the upwards position, as described in par. 6.6 pic. 2.
2. Remove cover A
3. Remove cover C
4. Remove screw V and start slipping off the rod S
5. Meanwhile, retrieve hammers N
6. Fit the new hammers, inserting rod S
7. Lock the rod S using the screw V
8. Repeat the same operation on the other hammer rows
9. Then close cover C
10. Fit cover A back and lock it using screws

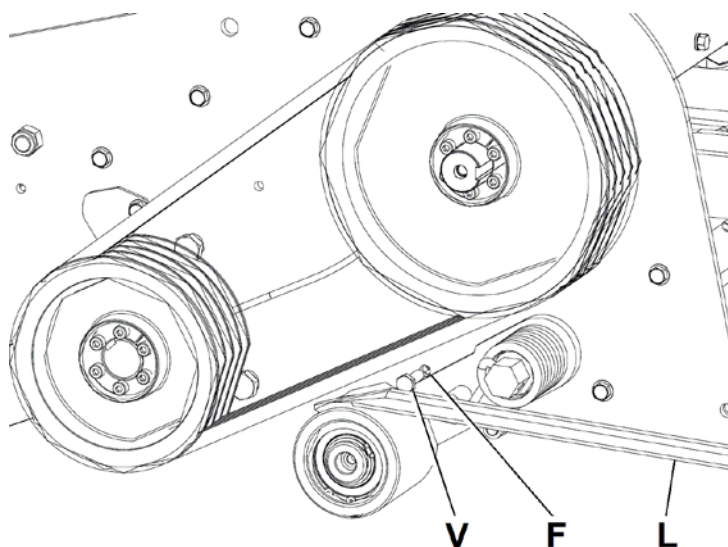


Our spare parts guarantee complete and correct use of your machine again.

6.8 REPLACING THE TRANSMISSION BELTS

The transmission belts replacement operations must be performed while the mulcher is placed on the ground, the tractor stopped, the PTO disengaged, the ignition key out of the dashboard.

1. Remove the transmission covering casing
2. Using a lever L, press the roller and pull outwards until a M10 screw V can be inserted
3. let the belt tightener plate lean against the screw inserted in hole F.
4. Now there is no more pressure on the belts, thus allowing the operator to replace them
5. After completing the replacement, press the sliding roller again until the M10 screw in the hole A can be removed
6. slowly bring the belt tightener roller close to the belts and leave it. The roll sustained the initial pre-load and no further interventions are required;



The V-belts must be mounted without forcing them, without using screwdrivers, crowbars, etc. that may damage the belt itself. Proper assembly allows money and time saving and increases the belt lifetime.

If you need to check the tensioning or to re-tension the belts tightener, refer to the following chapter for instructions

6.9 BELT TENSIONING



Before adjusting the tension of the belts, carefully read and fully understand the instruction manual.



All adjustments must be carried out by authorised workshops and specialised staff.



Place the machine on levelled terrain, with the head resting on the ground, the engine stopped, the parking brake engaged, the PTO disengaged, the ignition key out of the dashboard and properly stored. Thanks to the automatic belt tightener, adjusting the belt tension is no more necessary. The tension may need adjusting in case of:

- Mechanical breakage of the automatic tensioner spring, Fig. 31;
- Loosening of the nuts that fasten the tensioner.

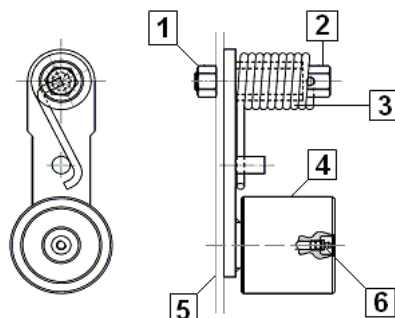


Fig.31

Pos.	Name
1	Self-locking nut M20
2	Hex bolt of 30
3	Tensioning spring
4	Sliding roller
5	Machine side
6	Greaser

1. Remove the transmission protection casing;
2. Check the conditions of the belt tightener and replace the damaged parts, if needed.
3. Slightly loosen nut 1, rotate the tensioner unit on pin 2 and place the belt sliding roller 4;
4. Turn the pin 90° (1/4 turn) if with 2 or 3 belts and 180° (half turn) with 4 or 5 belts, with the correct spring PRE-LOAD, the belts will be tensioned correctly!
5. Lock the belt tightener in the correct pre-load position using nut 1
6. after properly tensioning the belts, check that the belt tensioning unit may rotate freely. Apply pressure to the roll, move it a few centimetres from the belts and release it. The roll must run freely;
7. Remount the crankcase using the appropriate screws.



ATTENTION: DO NOT WORK WITHOUT BELT PROTECTION CASINGS!

6.10 MACHINE CLEANING

Periodically clean the machine using water under pressure, paying particular attention to any flammable residues. Ensure that the hot parts of the machine are free of straw, hay or residues of flammable materials.

6.11 STORAGE - WINTERING

If the machine is immobilised for long periods, store it in a place sheltered from the elements and protect it from damage. Before storing the machine, it is recommendable to clean it carefully and to lubricate all mechanical parts to protect them from rust. Check that the storage temperature is between 0°C and 50°C.

Before resting the machine for long periods, it is advisable to:

- Free the rotor and the tools from shredder residues;
- Clean the machine thoroughly;
- Carry out a general visual control of the machine to identify structural damage, to detect deep paint abrasions, to check that all original safety pictograms are in place, and that they are integral and legible;
- Grease all mechanical parts and fastening pins;
- If possible, store the machine in a covered place, on a level and smooth surface.

Apply to the "Mandatory Consortium for Waste Oils" for the collection of waste oils.



Check that the storage temperature is between 0°C and 50°C.

6.12 FIRST USE AND OPERATION AFTER A LONG PERIOD OF INACTIVITY

Before using the machine for the first time, or after a long period of inactivity, the following operations are needed:

- make sure the machine has not been damaged;
- check the mechanical parts for rust and make sure they are in good conditions;
- verificare lo stato di usura degli utensili;
- ingrassare accuratamente tutte le parti mobili;
- verificare che non vi siano perdite di olio provenienti da raccordi o tubazioni;
- check all protections are intact and positioned correctly.

6.13 SCRAPPING

When scrapping is necessary, the machine must be taken to a suitable dumping ground, in compliance with applicable laws. Before scrapping, separate the plastic and rubber parts, electrical and electronic parts (if present). Recover any used oil and discard at the appropriate collection centres.



ATTENZIONE

Waste oil must not be dispersed into the environment: applicable regulations consider it as dangerous waste, which must be taken to specific collection centres. Apply to the "Mandatory Consortium for Waste Oils" for the collection of waste oils.

Parts consisting only of plastic, aluminium or steel may be recycled if collected by the appropriate centres.

7 SCHEDULED MAINTENANCE TABLE

Description	Controls
GENERAL MACHINE CHECKS	
Rotor greasing	Every 8 working hours
Roll greasing	Every 8 working hours
Container joints and sliding guides greasing	Every 50 working hours
Bolt tightness check	After the first 4 hours and then every 50 hours
Check belts tensioning	After the first 8 hours and then every 50 hours
Tools wear check	Before every job
Tool replacement	When damaged or blunt
Replace transmission belts	When too worn-out
HYDRAULIC PLANT	
Check tightness of hydraulic hoses	At any liquid leakage
Tank oil level check	Before every job
GEAR-MOTORS	
Oil level check	Every 20 working hours
Locking bolts check	After the first 4 hours and then every 50 hours
Oil change	After the first 40 hours and then every 250 hours

8 TROUBLESHOOTING TABLE

ANOMALY	CAUSE	SOLUTION
Uneven mulching	• Worn or damaged tools • Machine incorrectly adjusted • Machine clogged	• Replace the tools • Carry out adjustments • Proceed to cleaning
Machine noise	• Unbalanced rotor • Damaged, worn or missing tools • Worn bearings	• Balancing in specialised workshop • Replace the tools • Replace bearings
Excessive heating of hydraulic engine	• Oil level too low • Oil finished	• Add oil • Replace oil

9 SPARE PARTS

Repairs and replacements must be performed using original spare parts, which must be requested from the Dealer. Please note that the presence of spare parts should be properly accompanied by the following indications:

- machine type;
- serial number;
- Spare part code that can be found in the Spare Parts Catalogue.

Since this is a particular part of a main group (rotor, multiplier unit, guards), it will be necessary to also specify the model and the serial number of the group.

10 WARRANTY

Check on delivery that the machine was not damaged during transportation and that the accessories are complete.

CONDITIONS OF WARRANTY:

- The manufacturer guarantees its products for a period of 12 months from the delivery, stating that the form attached hereto is shipped to the manufacturer and completely filled within 15 days from the delivery date.
- In accordance with the terms mentioned above, the manufacturer is deemed to agree to provide warranty service all parts to be replaced according to his assessment, or in the opinion of its authorized representatives, with respect to defective parts in both the material and the construction. Shipping and labour costs shall in any case be charged to the customer.
- The warranty does not include payment for damages due to improper use of the machine or for parts subject to wear and tear such as: hammers, blades, belts, etc.
- The manufacturer is not responsible for accidents to the operator or third parties arising from improper use of the machine.
- This warranty is void if:
 - a) Maintenance and repairs have been performed by unauthorised individuals or companies.
 - b) The machine has been previously repaired or modified with non-original spare parts.
 - c) If there is confirmation of incorrect operation of the operator;
 - d) The machine was not properly maintained/lubricated;
 - e) The permitted power limit is exceeded;
 - f) Whenever the instructions given in this manual are not followed;
 - g) Any unauthorised modifications were performed.
- Any damages to the machine occurred during or after the period covered by the warranty, do not involve any right to suspend payments for already delivered goods. No breakage or malfunction can be used as a pretext for delaying payment.
- The manufacturer reserves the right to make any modifications to improve its products at any moment and is not obliged to add these modifications to machines that have already been manufactured, delivered or are under construction.
- These general warranty conditions replace and cancel any other previous condition, expressed or implied.

WARRANTY CERTIFICATE:

CERTIFICATO DI GARANZIA GUARANTEE CERTIFICATE GARANTIESCHEIN CERTIFICAT DE GARANTIE CERTIFICADO DE GARANTÍA GARANTIBEVIS GARANTIECERTIFICAAT	 
Nome / Name / Nom / Nombre / Namn / Naam Indirizzo / Address / Anschrift / Adresse / Dřídřevnř / Adress / Adres	Si conferma di aver ricevuto il libretto uso e manutenzione e di essere stati informati circa il trattamento dei dati personali in base al Decreto Lgs. 196/03. We confirm to have received the instructions manual and that we have been informed all the information of the Legislative Decree 196/03 about the treatment of personal information. Wir bestätigen, dass wir das Betriebs- und Wartungshandbuch erhalten haben und dass wir alle Informationen über die Verarbeitung unserer persönlicher Daten (Verordnung 196/03) gelesen haben. Nous confirmons d'avoir reçu la notice d'emploi et d'entretien de l'appareil et d'être informés notamment le traitement de nos coordonnées selon le décret législatif 196/2003. Se confirma la recepción del manual de uso y mantenimiento y haber sido informado acerca del tratamiento de los datos personales en base al Decreto legislativo 196/03. Undertecknad bekräftar mottagandet av användar- och underhållsmanualen och har informerats angående hantering av personuppgifter enligt lagdekret 196/03. Ik bevestig de handleiding voor gebruik en onderhoud te hebben ontvangen en dat ik geïnformeerd werd betreffende de behandeling van mijn persoonlijke gegevens, krachtens het Wetsdecreet 196/03. Firma dell'acquirente / Purchaser's signature / Unterschrift des Käufers / Signature de l'acheteur / Firma del comprador / Kõparens underskrift / Handtekening van de koper Data /Date/Datum/Fecha

NOTES

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