

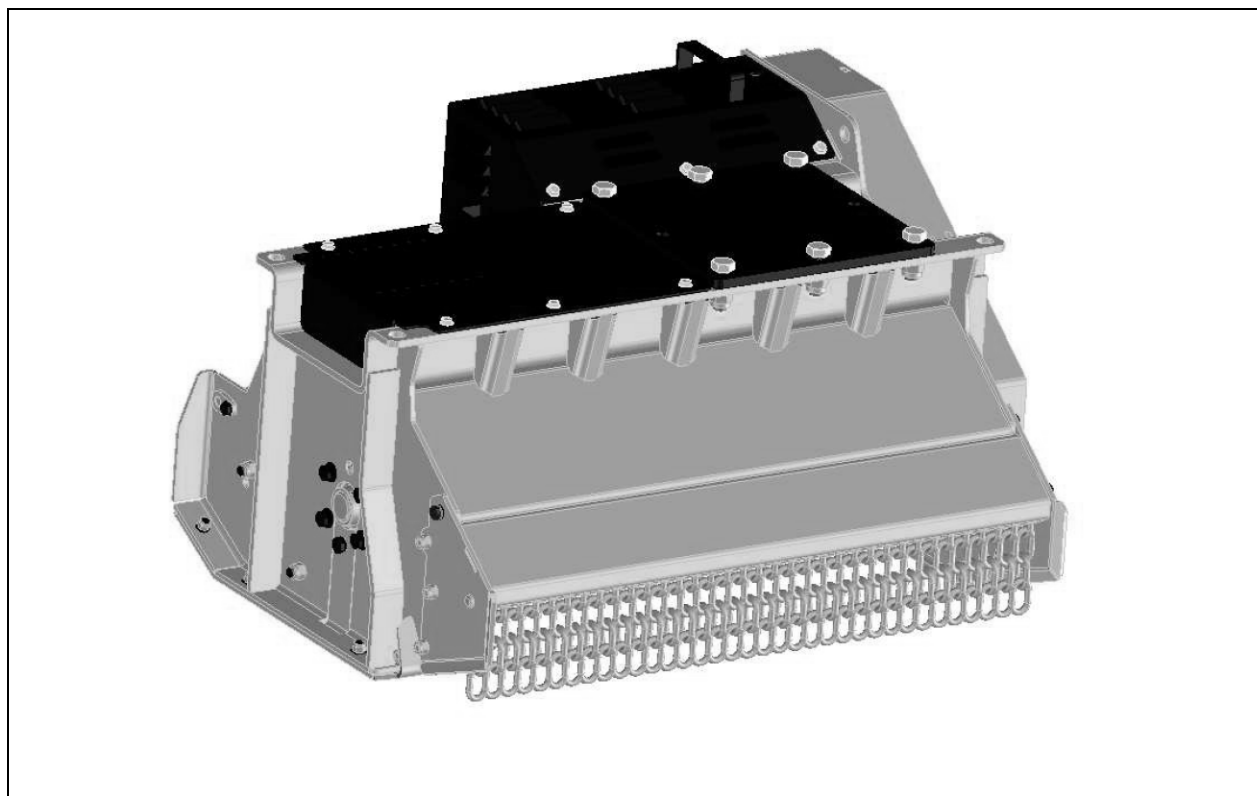
ORIGINAL VERSION



INSTRUCTION MANUAL

HYDRAULIC HEDGE MOWER

Mark: BERTI Macchine Agricole
Model: RA/SB



📖 Read this manual thoroughly before using the machine 📖

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INTRODUCTION

This instruction manual contains the description of operation and the instructions necessary for performing the main operations, routine and periodic maintenance of the hydraulic hedge mower correctly, which will hereon be called 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 is recommended. As well as invalidating the warranty, use of non-original spare parts could be dangerous, reducing lifespan and duration of the machine and causing serious injury/damage to persons, animal and objects.

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.



ATTENZIONE

For the USER: before starting to work with the machine purchased, it is mandatory to read this instruction manual, which states all of the operational technical indications relative to the correct use of the machine, paying particular attention to all provisions concerning safety. The abuse of performance and the failure to comply with the Safety Standards and use make the operator liable for damage/injury caused to the equipment, objects, persons and animals.

The machine manufacturer does not have direct control over application, method of use and maintenance and it is therefore the user's responsibility to use common sense in the operating areas, doing everything possible to safeguard his own safety and that of third parties, animals and objects, evaluating the hazard every time before starting to work.

Whenever the user delegates use of the machine to another user, he is responsible for having this instruction manual read thoroughly and checking that it has been understood and implemented.

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







ATTENZIONE

For the DEALER, the RETAILER and the IMPORTER: the person assigned to delivering the machine to the final user must perform application to the working vehicle. Therefore he must read this instruction manual and understand the content before the machine is assigned definitively. He is also responsible for training the final user and making sure that he has understood everything stated in the instruction manual.

GLOSSARY

Machine	Hydraulic hedge mower/mulcher.
Working vehicle	Mini and midi tracked and wheeled excavators, rigid and articulated excavator loaders.
User	The user is considered as the operator, user, owner and/or staff assigned to running the machine, cleaning it, performing maintenance and repairs and that can recognise hazards deriving from use of the machine, and therefore prevent them.
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	Staff assigned to moving persons away from the working range of the machine.
Manufacturer	Company that produces the → Berti Macchine Agricole S.p.A. hydraulic hedge mower
Mulcher system	It is an additional system that is installed on the working vehicle by the user, which allows to guarantee constant oil flow rates to the machine on pressure variation, both with the working vehicle at a standstill or moving.
Standard interface bracket	Meaning the connection composed of frame, pins, shims and safety pins. This component is optional and can be made by the manufacturer on the basis of specifications supplied by the user.
Quick interface bracket	This means the quick-coupling connection. This component is optional and is supplied by the user.
Self-levelling support	It is an articulated quadrilateral that allows the machine to follow the conformation of the land.
Machine working range	The working range, fixed at 250 mt. delimits the machine working area and must be considered a " dangerous area ". Persons, animals and objects must remain outside the machine working range.

 <p>PERICOLO</p>	<p>DANGER - This sign indicates an imminent and real hazardous situation which, if not prevented, leads to serious injury and even death.</p>
 <p>ATTENZIONE</p>	<p>ATTENTION - This sign indicates a potential hazardous situation which, if not prevented, could lead to serious injury and even death. Hazards identified by this sign therefore represent a smaller risk of serious injury or death with respect to those indicated by the DANGER sign.</p>
 <p>CAUTELA</p>	<p>CAUTION - This sign indicates a potential hazardous situation which, if not prevented, could lead to slight injury or moderate wounds. The symbol is used to warn that determined practices can lead to consequential events that could cause wounds and personal damage.</p>
	<p>NOTA BENE</p>

1. INFORMATION REGARDING THE INSTRUCTION MANUAL

This manual is an integral part of the machine and must accompany the same in the event of re-sale and until its demolition. If the manual is lost or damaged, request a copy from the manufacturer ("BERTI Macchine Agricole S.p.A.", via Musi 1/A – 3, Caldiero – Vr. Tel. +39.045.6139711) or from the Dealer.



The presence of this symbol, in its three versions, indicates that maximum attention must be paid to the subject discussed.

Some devices described in the manual may not be present on your machine. This is due to the set-up selected and the market to which the machine is destined.

1.1. MANUAL UPDATES

The information, descriptions and illustrations contained in the manual correspond with the current technology at the time of marketing the machine.

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. COPYRIGHT

The copyright for this manual belongs to the Manufacturer. This manual contains technical texts, drawings and illustrations, which must not be disclosed or transmitted to third parties in full or partially, without the written authorisation of the Manufacturer.

1.3. MACHINE IDENTIFICATION PLATE AND CE MARK

The machine has an identification plate, which states:

- "CE" Mark;
- Country of manufacturer;
- Name and address of the manufacturer;
- Model and type;
- Serial number with year of manufacturer;
- Mass (* without standard or quick interface bracket).

The machine is supplied as per standard with:

- Machine use and maintenance manual;
- Manufacturer's "CE" Declaration of Conformity.



Figure 1

Composition of the serial number:

- the first 5 fields indicate a progressive number;
- the second two fields indicate the year of manufacture of the machine;
- the last three fields are descriptive.

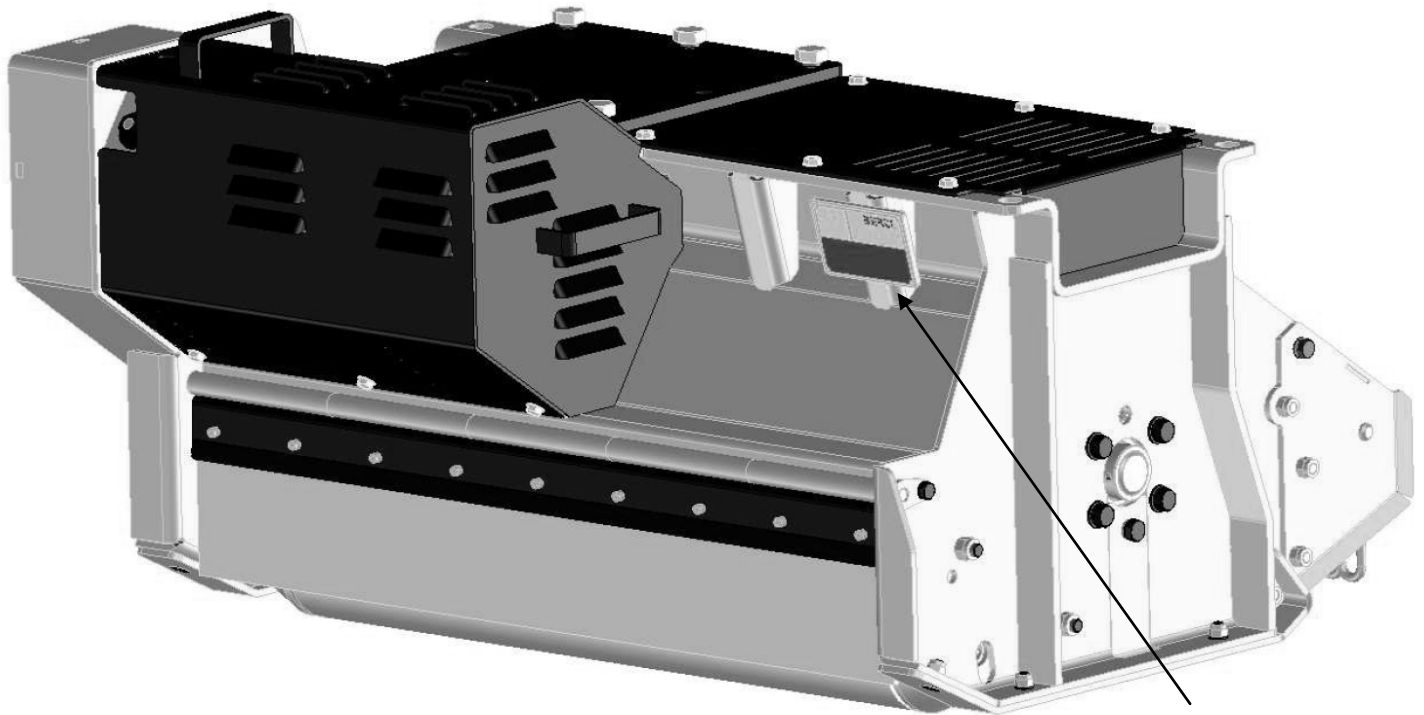







Figure 2

Position of the plate

1.4. MACHINE DECLARATION OF CONFORMITY

 						
<p>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</p>						
	<p>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</p>					
<p>La Ditta / We / Wir / Nous</p>	<p>BERTI Macchine Agricole S.p.A. 37042 CALDIERO - VERONA - ITALY</p>					
<p>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:</p>						
<p>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:</p>						
<p>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:</p>						
<p>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 déclarations que les normes harmonisées suivantes ont été appliqué:</p>						
<p><u>UNI EN 13524:2003+A1:2009</u> <u>UNI EN ISO 13857:2009</u> <u>UNI EN ISO 3767-1/2:1998</u> <u>UNI EN ISO 12100:2010</u></p>						
<p>Nonchè le seguenti specifiche tecniche: And the following technical specifications: Und die folgende technische Ausstellungen: Et les spécifications techniques suivantes:</p>						
<p><u>ISO 11684:1995</u></p>						
<table border="1"><tr><td>MODELLO -- TYPE</td><td>RA/SB 95</td></tr><tr><td>MATRICOLA -- N° DE SERIE</td><td>XXXXXXXXXXXX</td></tr></table>			MODELLO -- TYPE	RA/SB 95	MATRICOLA -- N° DE SERIE	XXXXXXXXXXXX
MODELLO -- TYPE	RA/SB 95					
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<p>legale rappresentante e custode del fascicolo tecnico legal representative and custodial of the technical pamphlet Gesetzlicher Vertreter und Hüter des technischen Heft Représentant juridique et dépositaire du dossier technique</p>		<p>BERTI® Macchine Agricole S.p.A. BERTI MARIO Amministratore Unico</p>				
<p>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</p>						
<p>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 VR03066950241</p>						

1.5. INFORMATION REGARDING THE MACHINE

1.5.1.DECLARED USE

The RA/SB machine model applied to a working vehicle can only be used in the road maintenance sector, for cleaning ditches, for the maintenance of green areas in general, e.g. for mowing grass, scrub and small shrubs up to a diameter of about 5 - 6 cm.

The machine is carried by the working vehicle via standard or quick interface bracket (Optional in agreement with user specifications) and operates on the ground in virtue of its own weight and rotation of the rotor, activated by the working vehicle power take-off through hydraulic hoses. Any use away from the ground is prohibited.

DO NOT USE THE MACHINE DIFFERENTLY TO THE INDICATIONS SUPPLIED

Use is prohibited if coupled to a working vehicle with features different to those listed in paragraph 1.5.3, if not in compliance with that stated in chapters 1-2-3-4-5 of this instruction manual, on land with stones, scrap iron, iron wire and any other material that is not of vegetable origin on the surface, to fell trees, to grind stumps, on land that causes precarious balance for the working vehicle, (e.g. steep uphill or downhill travel, steep slopes, in the vicinity of a precipice, on very uneven land etc...) and in all those situations, without any exception, that can cause general dangerous conditions and serious consequences for the user, objects, persons and animals.



PERICOLO

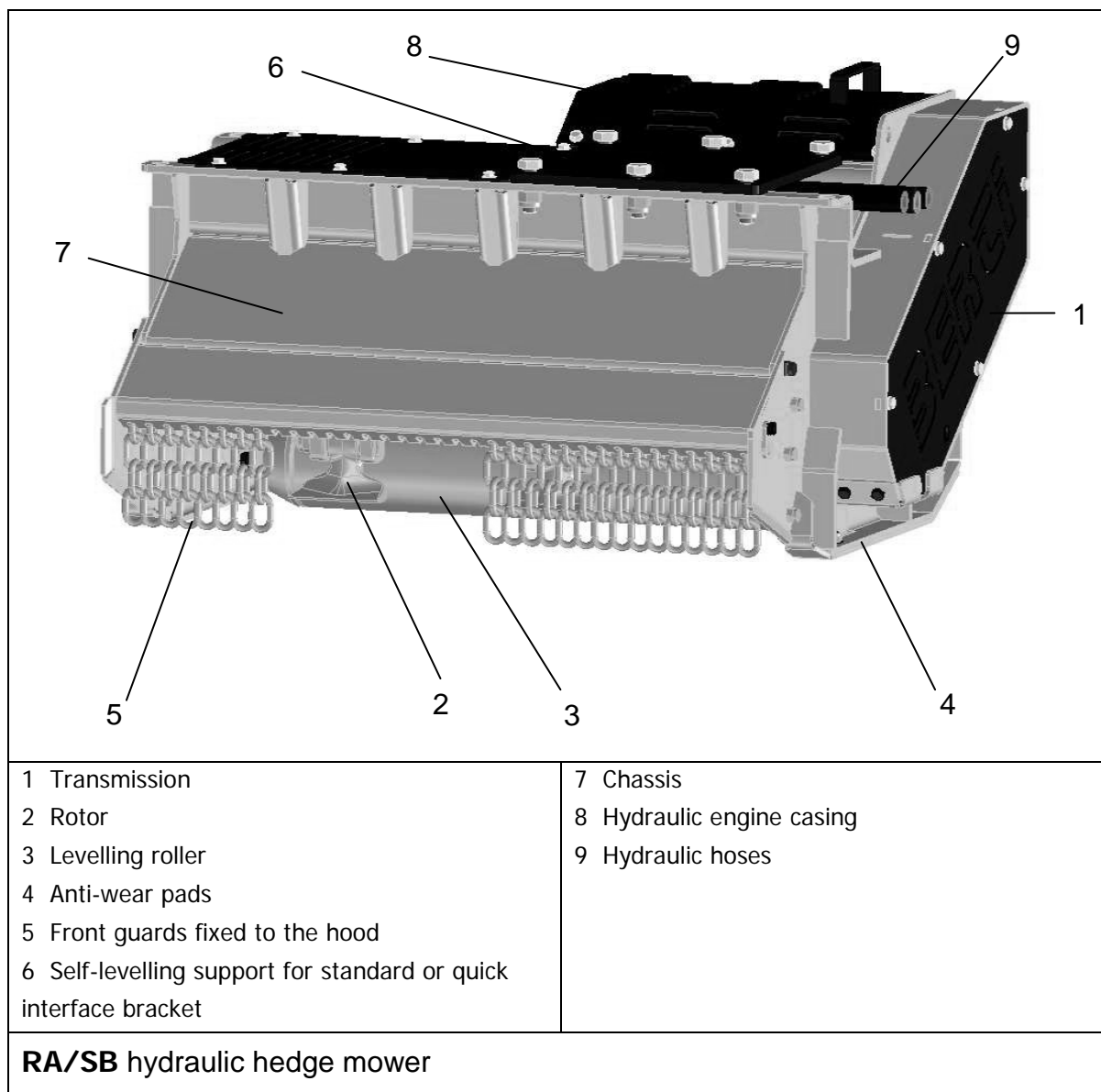
Any use of the machine different to that indicated in the instruction manual is considered unauthorised and dangerous.

1.5.2.DESCRPTION

The machine has a working tool that is made up from a horizontal axle rotor, which mounts the mulching tools, which turn at high speed.

This is composed of:

- a chassis;
- a self-levelling support for standard or quick interface bracket;
- a hydraulic circuit (composed of: hydraulic engine, "Berti Fluid Box" valves block, hydraulic hoses);
- lateral belt transmission (pulleys, belts, locking sets, hydraulic engine transmission);
- a rotor;
- a series of mulching tools;
- a rear roller.



1.5.3.TECHNICAL DATA

The machine is suitable for application to working vehicles with power between 43 and 55 kW (58 - 74 CV) and operational weight of 7 – 9 tonnes.

MODEL: RA/SB		95	115	125
Total width	cm	115	135	145
Working width	cm	95	115	125
Length	cm	93	93	93
Height	cm	60	60	60
Weight *	Kg	420	460	475
Number of tools (hammers)	n.	8	10	12
Number of tools (blades)	n.	24	30	36

Maximum pressure at machine engine	bar	180 – 200	180 – 200	180 – 200
Maximum work flow rate to the hydraulic engine **	l/min	60 – 65	60 - 65	60 - 65
Number of belts	n.	3	3	3
Machine inlet height (equal to the height of the material to be worked)	cm	16	16	16

Tabella 1

* Without standard or quick interface bracket;

** Values referring to standard hydraulic engine assembly with 34 cm³/ rev displacement..



PERICOLO

It is prohibited to work without the front hood or however with this in different positions with respect to those indicated and represented in the instruction manual in chapter 3 paragraph 3.6. The risk of projection is high.



In order to obtain machine maximum work performance, the working vehicle must be equipped with a priority type feed system, from hereon called mulcher, which guarantees constant oil flow rates (on pressure variation) also during movements (slewing, traversing etc.). Use of the hammer flail unit is recommended as an alternative, which must be calibrated in order to allow correct machine operation.

All working vehicle calibrations are the user's responsibility and must be such to guarantee the machine the specific oil flow rates and pressure indicated in the table above.

For further information regarding use, refer to chapter 3.

1.6. PROJECTION OF MATERIALS



PERICOLO

Materials can be projected by the machine in certain work situations. Pay particular attention:

- check that all guards are present, in the correct position and efficient;
- perform regular cleaning and maintenance on the machine;
- check there are no persons, animals or objects within the working range of the machine, which could be seriously damaged.



PERICOLO

It is prohibited to use the machine if the working vehicle, to which it is coupled, does not have a cab with shatterproof/strengthened/laminated windows and fixed guards (e.g. metal grid). The final user is responsible for supplying the working vehicle with suitable guards that resist the impact of material/objects projected at high speed by the machine according to the state-of-the-art of current technology and to contact the manufacturer to request all clarifications on the subject.

1.7. NOISE LEVEL AND VIBRATIONS



PERICOLO



The machine exceeds 80 dB (A) also in idle running periods and hearing must be protected from the noise generated during work processes: use hearing protection or ear plugs.

It is mandatory for the user to measure sound emission from the working vehicle - machine unit following installation and always before commissioning the machine, in compliance with that envisioned by the Laws in force.

The noise level of the working vehicle - machine unit may increase through time due to wear: it is recommended to periodically evaluate the risk of exposure to noise.

The use of PPD is mandatory and they must guarantee the reduction of the noise level recorded in compliance with the Laws in force.








The vibrations at the machine - working vehicle system lie within the context of the vibrations produced by the working vehicle only. Excessive vibration can be caused by a machine fault, which must be signalled immediately and eliminated so as not to jeopardise machine reliability and/or damage the operator's health. Always work in suitable environmental conditions (e.g. with perfect visibility, with ground able to support the weight of the working vehicle - machine unit, with gradients that allow suitable vertical and lateral stability of the working vehicle - machine unit etc.).





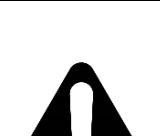





2. SAFETY AND ACCIDENT-PREVENTION STANDARDS










2.1. GENERAL SAFETY STANDARDS











Correct use of the machine, strict observance of the Standards indicated in this instruction manual and the rigorous application of all precautions aimed at preventing dangerous situations, contribute to averting accidents or injuries, ensure better and longer operation of the machine and reduce faults to a minimum.

"BERTI MACCHINE AGRICOLE S.P.A." declines any objective and subjective liability in cases where the regulations indicated in this manual have not been applied and respected.








 PERICOLO	<p>The machine is not designed to be used in sectors other than the road maintenance sector and any use different to that specified is considered improper.</p>
 PERICOLO	<p>The machine must be used by a single operator driving the working vehicle.</p>
 PERICOLO	<p>It is mandatory for the user to check the correct working vehicle - machine coupling. The liftable weight of the working vehicle in the most unfavourable condition (e.g. maximum lateral reach with blade/outrigger lifted) must be greater than the weight of the machine, including standard or quick interface, to install.</p>
 PERICOLO	<p>Before climbing down from the working vehicle and before every maintenance operation on the machine, block the working vehicle safety lever, switch the working vehicle engine off, remove the ignition key from the dashboard and keep it in a safe place and wait inside the cab for 5 minutes for the rotor and relative tools to come to a complete standstill.</p>
 PERICOLO	<p>It is prohibited to abandon and/or leave the working vehicle-machine unit when the working vehicle is running.</p>
 PERICOLO	<p>It is prohibited to use the machine if the working vehicle, to which it is coupled, does not have a cab with laminated/shatterproof/strengthened windows and fixed guards (e.g. metal grid). The final user is responsible for supplying the working vehicle with suitable guards that resist the impact of material/objects projected at high speed by the machine according to the state-of-the-art of current technology and to contact the manufacturer to request all clarifications on the subject.</p>
 PERICOLO	<p>During use, the user must have sufficient visibility of the work areas deemed dangerous. Therefore it is good practice to keep the working vehicle mirrors and windows in an excellent state.</p>

 PERICOLO	<p>During the work phases, the user must always remain protected inside the cab. It is prohibited to work with doors/windows open. Projected objects hazard!</p>
 PERICOLO	<p>The machine must only be used by authorised, educated and appropriately trained staff. As well as having read the instructions contained in this manual, the user assigned must have understood and assimilated the same, must have had sufficient preparation regarding the correct use of the machine, must have a driving license and be an adult. The operator must contact the manufacturer if in doubt regarding use of the machine and interpretation of this manual.</p>
 PERICOLO	<p>Never use the machine without knowing its features.</p>
 PERICOLO	<p>The manual must always be readily available so that it can be consulted when necessary. If it is lost or damaged, request a replacement copy from the manufacturer.</p>
 ATTENZIONE	<p>The user must use the safety devices and personal protection devices (PPD) during use, maintenance, regulation, repairs and handling of the machine.</p> 
 PERICOLO	<p>The machine may emit dusts during use with dry products (hay, straw, etc.). 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.</p>
 PERICOLO	<p>The operator assigned to the machine must not wear clothing that can cause entanglement.</p>
 PERICOLO	<p>It is prohibited to use the machine to lift persons, animals or objects.</p>
 PERICOLO	<p>It is prohibited to use the machine to transport persons, animals or objects.</p>

 PERICOLO	It is prohibited to use the flexible hoses as handholds. These components are mobile and are not a stable support.
 PERICOLO	The work area must be inspected before using the machine, removing any stones, scrap iron, steel cables, manholes, stumps and all materials and obstacles without limits, which can constitute a source of danger, accident and serious injury/damage to the user, persons, animals and objects.
 PERICOLO	The user must make sure that no person or animal stops within the machine work range during operation of the same. The user is responsible for stopping the machine immediately and clearing persons and animals from the work range. Never activate the machine near to persons or animals within or transiting through the machine working range.
 PERICOLO	If the machine is to be used on roads and public areas, all precautions must be taken to protect persons, animals and objects, for example using safety staff, warning signs, positioning them at the limits of the machine working range, in compliance with the Laws in force in the country of use.
 PERICOLO	Never work in areas with steep counterslopes, on slippery land and in areas/zones that reduce working vehicle adherence to the ground. Always pay great attention when changing direction.
 PERICOLO	Use the machine during the day and with perfect visibility.
 PERICOLO	It is prohibited to work in adverse weather conditions such as storms, snow, high winds, rain, fog etc.
 PERICOLO	Do not operate the machine on muddy, sandy or soft ground.
 PERICOLO	Pay attention to the risk of unintentional contact of the machine with high voltage overhead lines.

 PERICOLO	<p>Do not use the machine when ill, tired or under the influence of medication, drugs or alcohol.</p>
 PERICOLO	<p>Carefully check the machine each time before starting it.</p>
 PERICOLO	<p>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.</p>
 PERICOLO	<p>It is prohibited to remove or tamper with all guards and/or safety devices.</p>
 PERICOLO	<p>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.</p>
 ATTENZIONE	<p>The signs applied to the machine provide a series of important instructions: comply with them for your own safety.</p>
 PERICOLO	<p>It is prohibited to make any modification that alters the original state of the machine.</p>
 PERICOLO	<p>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.</p>
 PERICOLO	<p>Keep the machine clean, eliminating foreign materials (debris, tools, various objects), which may damage its functioning or harm the operator.</p>
	<p>The following paragraphs list other very important Safety Standards. It is mandatory to read this instruction manual entirely before using the machine.</p>








2.2. FIRE PREVENTION MEASURES







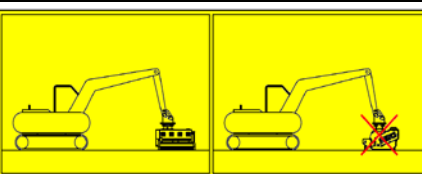

 ATTENZIONE	Keep an extinguisher with suitable capacity on board the working vehicle and periodically service the same. The extinguisher must only be used by staff capable of operating it, therefore it is the user's responsibility to supply training courses.
 ATTENZIONE	It is mandatory that staff assigned to operating the machine is informed regarding the principal procedures in the event of fire.
 ATTENZIONE	Do not use the machine in areas with risk of explosions and/or fire.
 ATTENZIONE	Maintenance residues, e.g. cloths or material replaced containing inflammable substances must be kept away from sources of ignition and disposed of in compliance with the Laws in force in the country of use.
 ATTENZIONE	Use suitable extinguishing equipment: e.g. Carbon dioxide, foam, chemical powder.
 ATTENZIONE	Do not weld in the proximity of tanks, pipes, cans, electrical cables or flammable materials in general.
 ATTENZIONE	When welding protect flammable parts with appropriate guards.

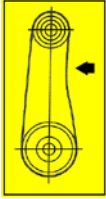




2.3. SAFETY SIGNS

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.

2.3.1. DESCRIPTION OF PICTOGRAMS POSITIONED ON THE MACHINE

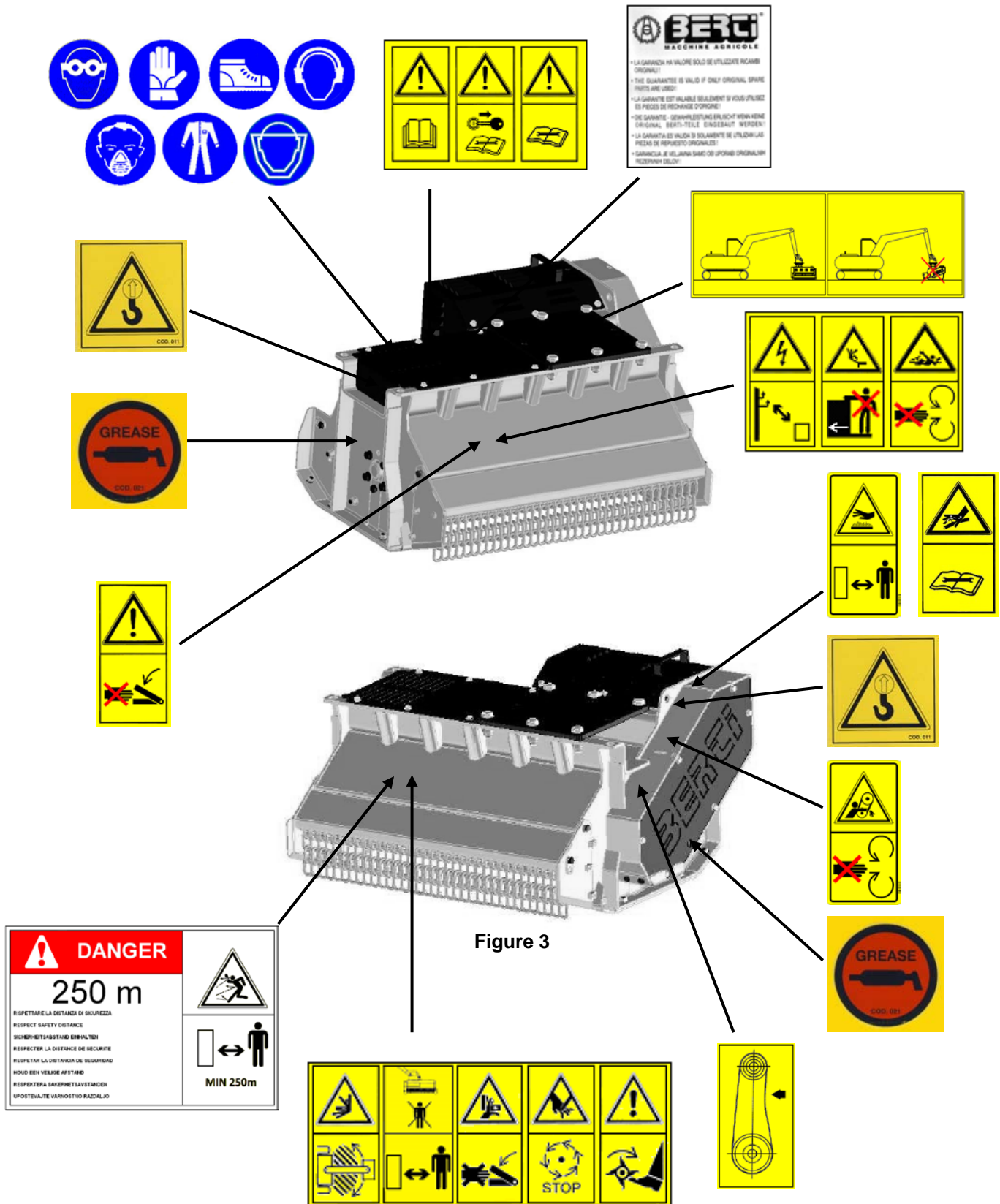
	<p>ATTENTION: adjustment and maintenance operations must be performed in fully equipped workshops after the use and maintenance manual has been read. For further information, refer to chapter 3 - 4 of this instruction manual.</p>
	<p>ATTENTION – DANGER: Pressurised fluids. Before performing any operation on the machine, read the instruction manual.</p>
	<p>ATTENTION: it is prohibited to climb onto or be transported by the machine.</p>
	<p>ATTENTION - DANGER of shearing hands.</p>
	<p>ATTENTION - DANGER of shearing hands. Stay at a safe distance.</p>
	<p>ATTENTION - DANGER of crushing between the working vehicle and the hedge mower.</p>
	<p>ATTENTION – DANGER of contact with moving parts. Do not place hands near transmission belts.</p>

	<p>ATTENTION - DANGER of entanglement and dragging. Do not place hands and feet near to moving parts.</p>
	<p>ATTENTION - DANGER of burns. Keep at a safe distance.</p>
	<p>ATTENTION – DANGER of contact with moving parts. Wait for moving parts to stop.</p>
	<p>ATTENTION – DANGER of contact with rotating tools. Keep at a safe distance.</p>
	<p>ATTENTION - DANGER of electrocution. When using the arm, pay maximum attention to overhead electricity lines.</p>
	<p>ATTENTION-DANGER: it is prohibited to stop under the machine due to possibility of sag of the suspended parts. Keep at a safe distance.</p>
	<p>ATTENTION-DANGER: hitch the hedge mower correctly. It is prohibited to use the machine with the projection facing the working vehicle.</p>
	<p>ATTENTION – DANGER: respect the safety distance of 250 m.</p>

	<p>TENSIONED BELTS</p>
	<p>WARRANTY: is valid only if you use original spare parts.</p>
	<p>PERSONAL PROTECTION DEVICES (PPD)</p>
	<p>GREASING POINTS</p>
	<p>LIFTING POINT</p>








2.3.2. POSITION OF THE PICTOGRAMS ON THE MACHINE

The pictograms are applied as per layout:




3. USE

3.1. INTRODUCTION

	<p>Before using the machine, the manual must have been read thoroughly, understood and you must have familiarised with the machine. Use is recommended by skilled and suitable trained persons.</p>
 ATTENZIONE	<p>Always keep all body parts inside the working vehicle cab, to minimise the possibility of exposure to any external dangers, for example the projection of materials.</p>
 PERICOLO	<p>Before climbing down from the working machine, block the working vehicle safety lever, switch the working vehicle engine off, remove the ignition keys from the dashboard and keep them in a safe place and wait inside the cab for 5 minutes for the rotor and relative tools to come to a complete standstill.</p>
 ATTENZIONE	<p>The safety of the user and the persons present in the vicinity depend on his capacity of judgment and caution when using the machine. It is therefore necessary to be fully aware of its functionality and all Safety Standards relative to its use.</p>
 ATTENZIONE	<p>The user must use the safety devices and personal protection devices (PPD) during use, maintenance, regulation, repairs and handling of the machine.</p> 
 ATTENZIONE	<p>The machine must always be in good working order and must only be repaired using original spare parts.</p>

3.2. HANDLING AND TRANSPORT

Pay maximum attention to safety during loading and unloading operations, which must be performed by qualified staff. If the machine is lifted, it is mandatory to use the appropriate lifting points indicated in the pictograms (figure 4-5). Always perform a visual check before moving the machine so as to prevent unstable parts creating dangerous situations.

 CAUTELA	<p>Never lift or handle the machine by fastening it to the rotor!</p>
-----------------------------------------------------------------------------------------------	-----------------------------------------------------------------------



ATTENZIONE

The manufacturer declines all liability regarding injury/damage to persons, animals and objects deriving from incorrect machine handling using means of lifting and transport with capacities lower than the mass values stated in the table in the **1.5.3. TECHNICAL DATA** paragraph.
Once the machine is loaded onto the means of transport it must be fastened using the relevant anchorage devices.

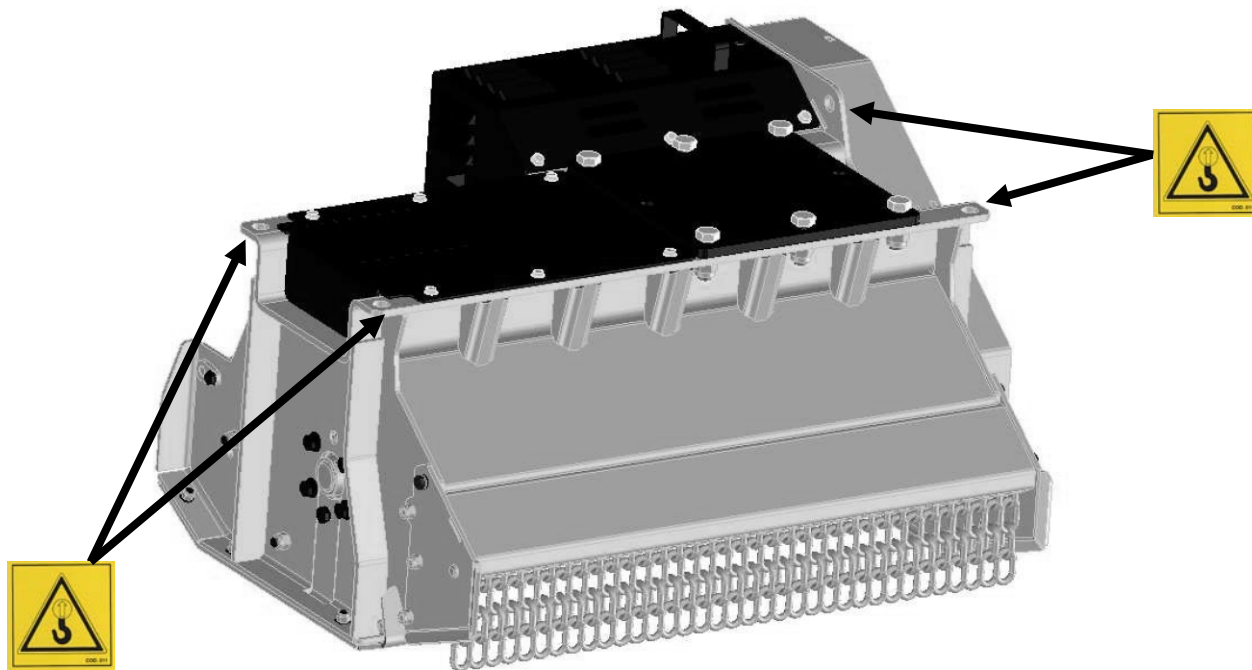


Figure 4

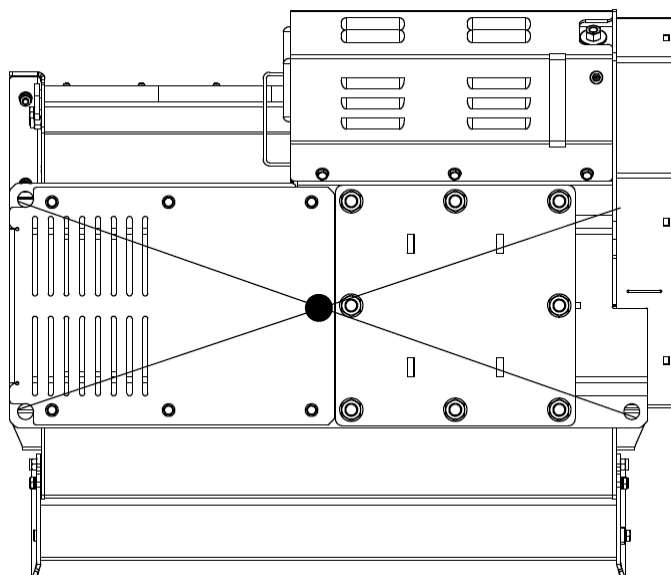




Figure 5


3.2.1. TRANSIT ON PUBLIC ROADS

When travelling on public roads, the working vehicle mulcher/hammer flail must be disengaged and the rotor and machine tools must be at a standstill. Before transport, check that all machine parts are integral and in good working order.

 ATTENZIONE	Road transport must be performed with great attention in order to prevent dangers to persons and vehicles in transit.
 ATTENZIONE	During transport, the machine must be fastened down well and always remain within the clearance of the working vehicle.



3.3. VISIBILITY

The work areas can be controlled with the working vehicle rear view mirrors and the operator's sight.

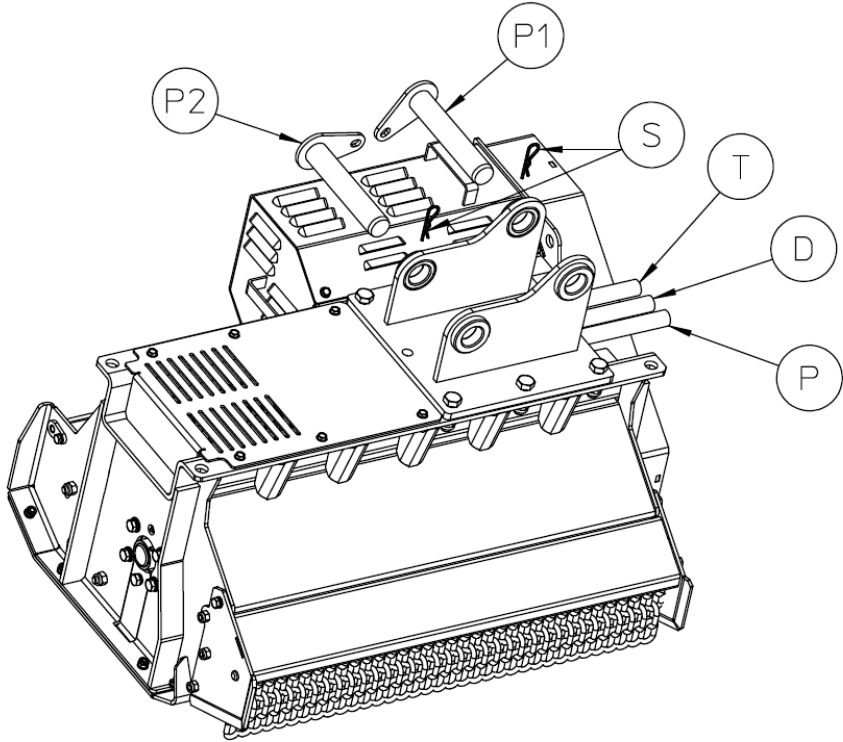


 ATTENZIONE	When reversing dead spots may be created, which are not visible in the rear view mirrors.
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3.4. HITCHING THE MACHINE TO THE TRACTOR

Before installing the machine, check that it is in perfect working order, resting on the ground and in a stable position. Check that the lubricants are at the correct level and that all parts subject to wear and/or deterioration are perfectly efficient and that the guards are integral and functioning.

 PERICOLO	It is mandatory for the user to check the correct working vehicle - machine coupling. The liftable weight of the working vehicle in the most unfavourable condition (e.g. maximum lateral reach with blade/outtrigger lifted) must be greater than the weight of the machine, including standard or quick interface bracket, to install.
 ATTENZIONE	It is prohibited to stop between the machine and the working vehicle during the hitching phase and all unauthorised persons must be moved away from the machine working range.

3.4.1.HITCHING PROCEDURE USING STANDARD INTERFACE BRACKET

	<ol style="list-style-type: none"> 1. Slide the safety pins out S (figure 6); 2. Slide out P1 and pin P2 (figure 6) placing them on a safe and clean surface in a way to: <ol style="list-style-type: none"> a. prevent damage in case of falls; b. not obstruct the assembly operations; c. prevent them becoming dirty in case of falls;
	 <p style="text-align: center;">Figure 6</p>
 <p style="text-align: center;">PERICOLO</p>	<ol style="list-style-type: none"> 3. Slowly approach the working vehicle to the machine and smoothly insert the end part of the working vehicle arm into the machine standard interface bracket until it is completely aligned with the hitch holes. This is a delicate operation that requires time. Alignment must be checked by the user in conditions where it is impossible for the working vehicle to move;
	<ol style="list-style-type: none"> 4. Switch the working vehicle off, discharge the mulcher/hammer flail pressure of the same, put the working vehicle safety lever in locked position, remove the ignition key and climb down. With the working vehicle off, close the working vehicle mulcher/hammer flail cocks (if present);
	<ol style="list-style-type: none"> 5. Insert pins P1 and P2 and the safety pins S into the relevant seats;
	<ol style="list-style-type: none"> 6. Clean the working vehicle mulcher/hammer flail connections using a cloth in order to remove all possible contaminating agents;
	<ol style="list-style-type: none"> 7. Clean the machine hydraulic hose connections using a cloth in order to remove all possible contaminating agents;
	<ol style="list-style-type: none"> 8. Connect the machine oil supply pipe P with the working vehicle mulcher/hammer flail flow line (figure 7,8);
	<ol style="list-style-type: none"> 9. Connect the machine oil return pipe T with the working vehicle mulcher/hammer flail return line (figure 7,8);
	<ol style="list-style-type: none"> 10. Connect the machine hydraulic engine drain pipe D (not present if a hydraulic engine without draining is used) to the working vehicle draining line (figure 7,8);
	<p>The drain pipe must not have constrictions along its length. Do not use quick couplings, if possible.</p>

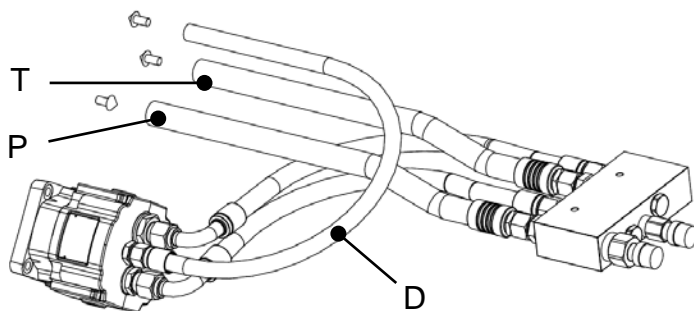


Figure 7

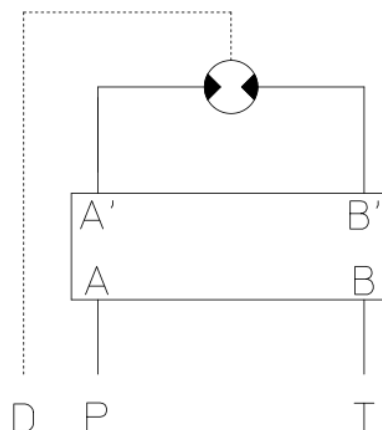


Figure 8

- a. D: Machine hydraulic engine drain pipe (not present if a hydraulic engine without draining is used);
- b. P: Machine oil supply pipe from the working vehicle;
- c. T: Machine oil return pipe to the working vehicle.

11. Open the working vehicle mulcher/hammer flail cocks (if present);
12. Lift the machine from the ground and make a few movements with working vehicle lifting to make sure that hitching has been successful. Put the machine back on the ground, making sure not to crush it and switch the working vehicle off;
13. The machine is ready for start-up.

3.4.2. HITCHING PROCEDURE USING QUICK INTERFACE BRACKET



PERICOLO

1. Slowly approach the working vehicle to the machine and carefully insert the operating vehicle male part of the quick interface into the female part of the machine quick interface (figure 9) until completely hitched;

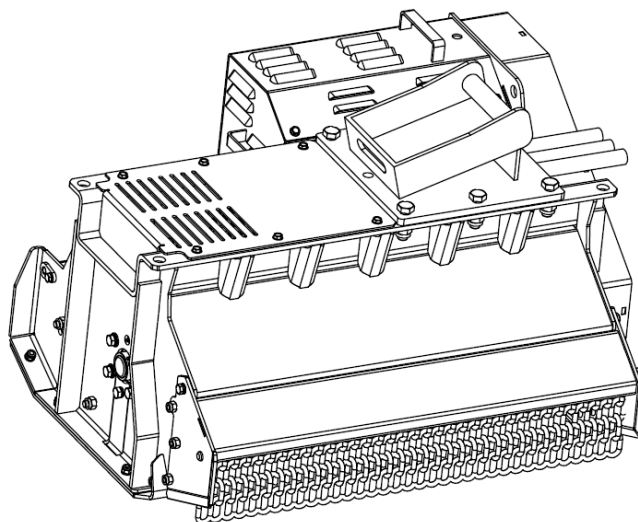

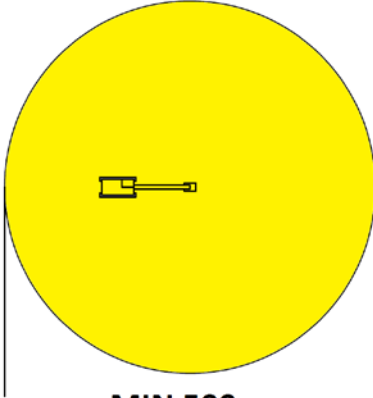
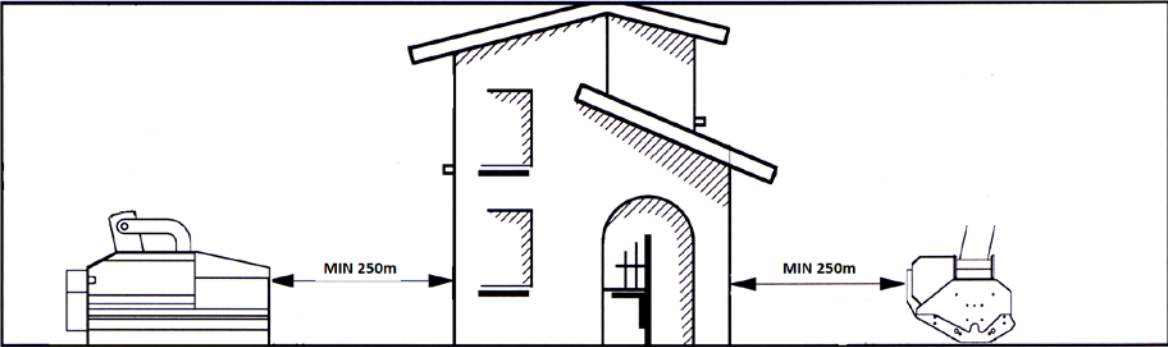





Figure 9

2. Switch the working vehicle off, discharge the mulcher/hammer flail pressure of the same, put the working vehicle safety lever in locked position, remove the ignition key and climb down. With the working vehicle off, close the working vehicle mulcher/hammer flail cocks (if present);
3. Perform the standard hitching procedure from point 6 to point 13 of paragraph 3.4.1.

3.5. STARTING THE MACHINE

 ATTENZIONE	<p>Before each start-up, follow that stated below:</p>
	<ul style="list-style-type: none"> - Make sure that there are no persons, animals and objects within the work range of the machine as there are dangers present, e.g. the projection of objects at high speed, which can cause serious injury and even death. Remain at a minimum safe distance, equal to the machine's work range of 250 m. <div style="text-align: center;">  MIN 500m Figure 10 </div> <div style="text-align: center;">  Figure 11 </div>
	<ul style="list-style-type: none"> - Do not allow persons, animals or objects to approach or stop in the machine's work range.
	<ul style="list-style-type: none"> - Always keep the guards integral, in position and perfectly efficient.
	<ul style="list-style-type: none"> - The working vehicle must be off, the mulcher/hammer flail of the same must not have residual pressure, the working vehicle safety lever must be in the locked position and the vehicle ignition key must be removed and kept in a safe place by the user.
	<ul style="list-style-type: none"> - The rotor and relative machine tools must be at a standstill.
	<ul style="list-style-type: none"> - Always inspect the machine, controlling tightness of all screws and nuts and the presence of damage which must be repaired before start-up, in order to take the machine back to its original state.
	<ul style="list-style-type: none"> - Supervise the work area, removing stones, pieces of metal, steel cables and all dangerous material, without any exception. Adopt all necessary protections for your own protection and that of others. Protect the cab or the driver's position from falling/projection of material at high speed using shatterproof/strengthened/laminated windows and fixed guards (e.g. metal grid) that can resist the impact in compliance with the state-of-the-art of current technology. Contact the manufacturer to request any clarifications on the subject.
	<ul style="list-style-type: none"> - Check that the position and the conditions of the ground in the work area do not jeopardise the stability of the working vehicle-machine unit in any way.
	<ul style="list-style-type: none"> - 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.
	<ul style="list-style-type: none"> - Make that all safety pictograms are legible. Clean them using a damp cloth.


START-UP PROCEDURE

	1. Switch the working vehicle on and lift the machine to 5 cm from the ground;
	2. With the working vehicle engine ticking over, activate the mulcher/hammer flail system
 PERICOLO	3. Power the machine for a few minutes so that it ticking over, so that the pipes are completely filled with oil. In this phase, make sure that the sharp parts of the machine do not touch the material to be handled;
	4. Gradually accelerate the working vehicle engine to working speed, which ensures the machine the hydraulic power necessary in relation to use. Maintain it for a few minutes;
	The machine is supplied with a valves block ("BERTI FLUID BOX"), which is calibrated by fixing the maximum pressures and flow rates of the machine hydraulic circuit. Calibration is performed in the manufacturer's establishment before delivery of the machine, lead sealing the valves block as a guarantee of the process. Any tampering without formal approval from the manufacturer makes the warranty immediately null and void and relieves the manufacturer from any liability for damage/injury caused to objects, persons and animals. Read the paragraph 4.2.4. for more information about the original values setting and calibration test of the Fluid Box performed in the manufacturer's establishment (BERTI factory).
	5. Work for a brief tract with the machine activated;
	6. Disconnect the mulcher/hammer flail and decelerate the working machine to a minimum;
	7. Put the working vehicle safety lever in the blocking position, switch the working vehicle off, remove the keys from the block and wait for 5 minutes until the machine cutting tools are at a complete standstill;
	8. Climb down from the working vehicle and check that there are no oil leaks at all hedge mower hydraulic hose joints;
 PERICOLO	Never use the hands to identify pressurised fluid leaks.
	9. Check the quality of the work carried out. If it is not satisfactory, repeat the steps from point 2 and, if necessary, review the machine adjustment operations stated in paragraph 3.5.1


3.5.1.MACHINE ADJUSTMENTS



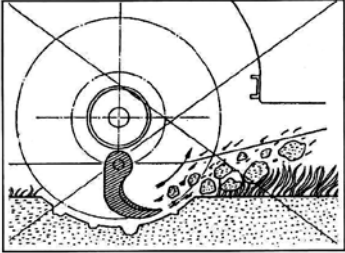
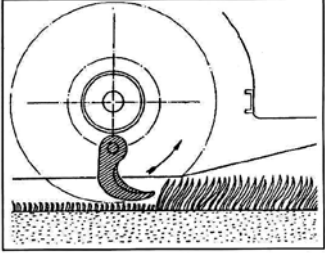
3.5.1.1. FORWARD SPEED

Adjust the working speed, based on the size (diameter) and volume of the material to be mulched, as well as the degree of grinding to be obtained. The machine must work exclusively in compliance with the declared use.


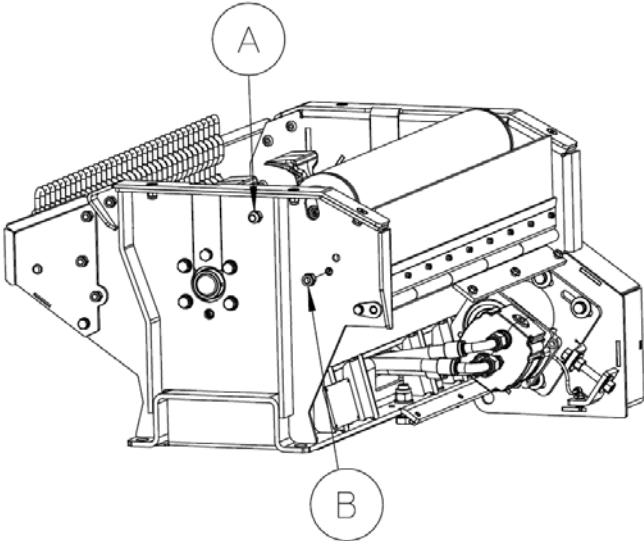
 PERICOLO	Excess speed puts excessive stress on mobile machine parts, thus wearing them out ahead of time. This will produce poor-quality shredded material, with possible projection of large pieces of material, thus creating dangerous situations for the operator.
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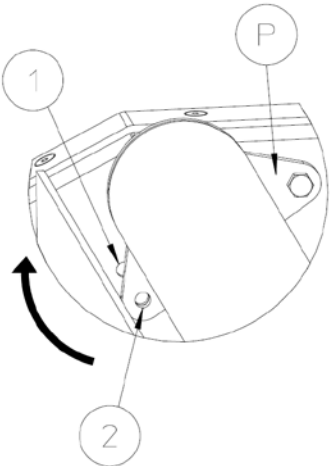

3.5.1.2. ADJUSTMENT OF CUTTING HEIGHT

	Before adjusting the machine cutting height, this instruction book must have been thoroughly read and understood.
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 PERICOLO	<p>All adjustments must be carried out by authorised workshops and specialised staff.</p>
 PERICOLO	<p>The work height must be adjusted in a way to prevent the cutting tools (hammer flails) coming into contact with the ground, thus generating consequent projections (figure 12-13).</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  Figure 12 NO </div> <div style="text-align: center;">  Figure 13 YES </div> </div>










To adjust the cutting and therefore work height, operate on the position of the machine rear roller as follows:





	<ol style="list-style-type: none"> 1. Remove the casing from the hydraulic engine; 2. Remove the standard or quick interface bracket completely; 3. Turn the machine over and rest it on suitable supports;
 PERICOLO	<p>In the workshop, use suitable equipment to handle and support the machine especially in terms of liftable and sustainable weight (see table 1.5.3 for data relative to the machine), in compliance with the Laws in force in the country of use.</p>
	<ol style="list-style-type: none"> 4. Loosen the nut A (figure 14); <div style="text-align: center;">  Figure 14 </div>
	<ol style="list-style-type: none"> 5. Unscrew the nut B and remove the respective screw (figure 14);

	<p>6. Turn the support plate into position 1 or 2, according to whether the cutting height must be increased or decreased (figure 15);</p>  <p style="text-align: center;">Figure 15</p>
	<p>7. Centre the holes in the support plate P with those in the side panel;</p>
	<p>8. Re-mount the screws and tighten the nut B;</p>
	<p>9. Tighten the nut A;</p>
	<p>10. Check for any damage/breakage and perform any repairs immediately, using original spare parts only.</p>
	<p>11. Once the operations have been completed, turn the machine over again and place it on the ground, re-mount the self-levelling support and the hydraulic engine guard;</p>
	<p>12. Repeat the actions stated in paragraphs 3.4 and 3.5 "Hitching and Starting the machine" and start to work in the ways described in paragraph 3.6.</p>
	<p>The operations must be performed on both ends of the roller.</p>


3.6. MACHINE IN WORK STAGE

 <p>PERICOLO</p>	<p>Before starting to work, make sure that everything described in chapter 2 "SAFETY STANDARDS AND ACCIDENT-PREVENTION" and in chapter 3 paragraphs 3.1, 3.2, 3.3, 3.4 and 3.5 are fully satisfied.</p>
 <p>PERICOLO</p>	<p>The work area must be inspected before using the machine, removing any stones, scrap iron, steel cables, manholes, stumps and all materials and obstacles without limits, which can constitute a source of danger, accident and serious injury/damage to the user, persons, animals and objects.</p>
 <p>PERICOLO</p>	<p>When working at the roadside, delimit the working range of the working vehicle using signs, safety staff and means in compliance with the Laws in force in the country of use.</p>
 <p>PERICOLO</p>	<p>The user must make sure that no person or animal stops within the machine work range during operation. The user must stop the machine immediately and move any unauthorised persons away. Never activate the machine near to persons within or transiting through the machine working range.</p>

 PERICOLO	<p>It is prohibited to use the machine a long way from the ground to fell trees or cut hedges as the risk of projection is high.</p> <p>It is prohibited to use the machine if the working vehicle, to which it is coupled, does not have a cab with laminated/shatterproof/strengthened windows and fixed guards (e.g. metal grid). The final user is responsible for supplying the working vehicle with suitable guards that resist the impact of material/objects projected at high speed by the machine according to the state-of-the-art of current technology and to contact the manufacturer to request all clarifications on the subject.</p>
 ATTENZIONE	<p>Because all mechanical parts and hydraulic connections settle down generally in the first phase of the machine's lifespan, it is indispensable that the machine is checked with maximum precision.</p>
 PERICOLO	<p>Make sure that all machine parts function regularly when operating. Remember that most problems and breakdowns that can occur during use of the machine are caused by loosening of the fixing elements.</p>
 PERICOLO	<p>It is prohibited to remove and/or modify the guards on the machine.</p>
 ATTENZIONE	<p>When changing direction, turning and reversing, lift the head from the ground slightly after disengaging the power supply to the machine, in order to prevent damage to the structure.</p>
 PERICOLO	<p>Pay attention to the risk of unintentional contact of the machine with high voltage overhead lines.</p>
 PERICOLO	<p>It is prohibited to use work configurations that prevent the user on the working vehicle from seeing the machine.</p>
 PERICOLO	<p>It is prohibited to use work configurations that put the working vehicle - machine unit stability at risk. The working vehicle must always be on flat land that can sustain its weight. The user is responsible for risk assessment every time, depending on the work area, assuming full responsibility for the damage caused as a consequence of incorrect evaluation.</p>
 ATTENZIONE	<p>It is prohibited to use the machine as a support point for the working vehicle. The pressure exerted by the working vehicle would cause the machine chassis to collapse with consequent breakage of the same.</p>

 ATTENZIONE	<p>Never rest or press the rotor on stumps or rocks for example because it could bend and turn then unbalanced. Operating the machine damaged in this way in a brief time will compromise structural integrity with sudden and uncontrolled breakage.</p>
 PERICOLO	<p>Never work on stones, especially in the presence of very dry grass or brush. The sparks caused by the contact of the tools with the stones could start a fire. In the event of a fire, call the competent authorities immediately, move the working vehicle-machine unit away to a safe place if possible, carry out the procedure stated in paragraph 3.7 and reach safety.</p>
 PERICOLO	<p>The machine must rest on the ground also at the end of the job. Before climbing down from the working machine, block the working vehicle safety lever, switch the working vehicle engine off, remove the ignition keys from the dashboard and keep them in a safe place and wait inside the cab for 5 minutes for the rotor and relative tools to come to a complete standstill.</p>
 ATTENZIONE	<p>If the machine should remain entangled in the dense vegetation or scrap iron e.g. scrub, shrubs, large quantities of bushes, steel cables and all those materials that can obstruct the machine, it is mandatory to put the working vehicle safety lever in the locked position, switch the engine off, remove the ignition key from the dashboard and keep it safely. It is also mandatory to wait inside the cab for 5 minutes in order to allow the rotor and relative tools to come to a complete standstill. It is then possible to climb down from the working vehicle. At this point, the operator must release the machine manually, following all Safety Standards regarding this case. Check for any damage/breakage and perform any repairs immediately, using original spare parts only. If this is not the case, climb back onto the working vehicle and continue with the job, following the methods described in paragraph 3.5 "Starting the machine" and in paragraph 3.6 "Machine in work stage".</p>

HEDGE MOWING PROCEDURE WITH MINI AND MIDI TRACKED AND WHEELED EXCAVATORS

 ATTENZIONE	<p>During the job, the working vehicle must be on flat land and have blade/outriggers lowered. Hedge mowing is performed using arm and turret movements of the working vehicle.</p>
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Prepare the working area and proceed as follows:

	1. With the working vehicle engine ticking over, activate the mulcher/hammer flail system of the same;
	2. Accelerate gradually until revs. are reached that ensure the machine the power necessary in relation to the job for which it is to be used.
	3. Start the job modulating the movement speed in a way that the machine can complete mulching the material and discharge the mulched material onto the ground at the same time.



ATTENZIONE

The material on the ground must be worked as indicated: with the arm slewing and the rotation of the turret, cut the surface that can be reached by the working vehicle arm (figure 16,17): On completion of this operation, go to a new area and start to work again as described previously.

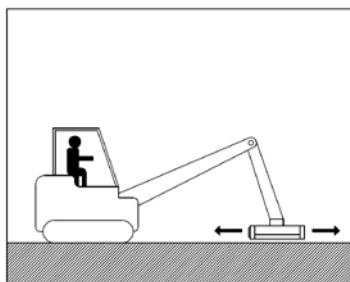


Figure 16

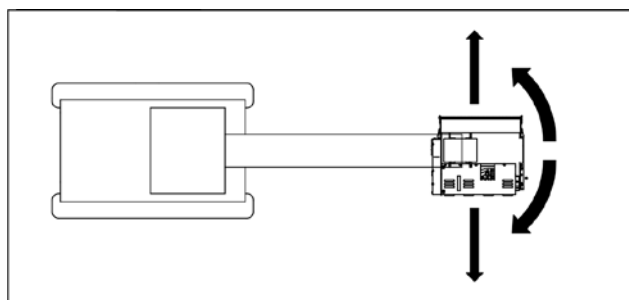


Figure 17



PERICOLO

It is prohibited to work at a distance from the ground. The machine must always be adherent and parallel to the ground. Danger of the projection of objects at high speed!



Figure 18


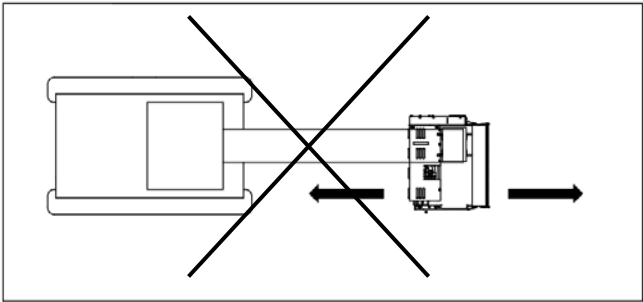
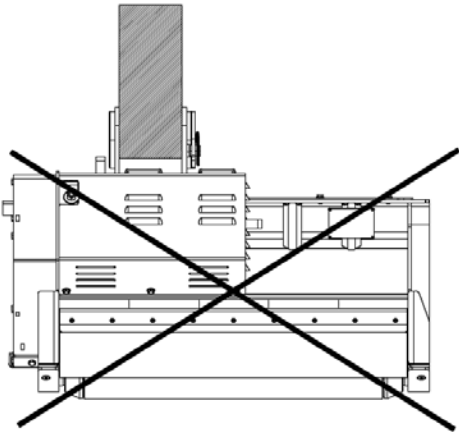
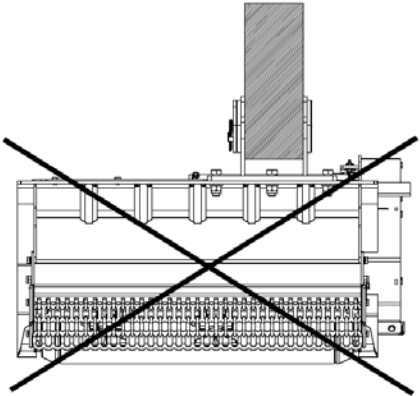

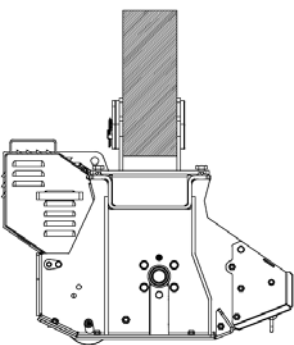
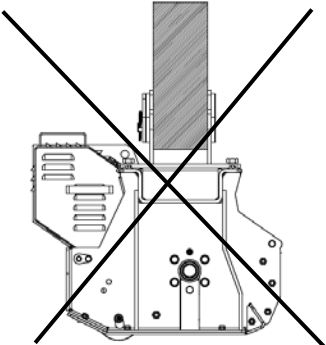
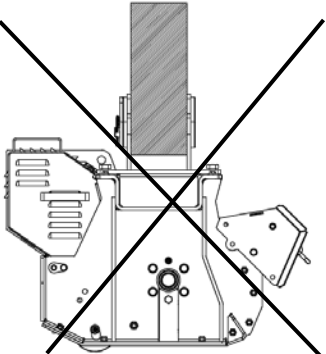



PERICOLO


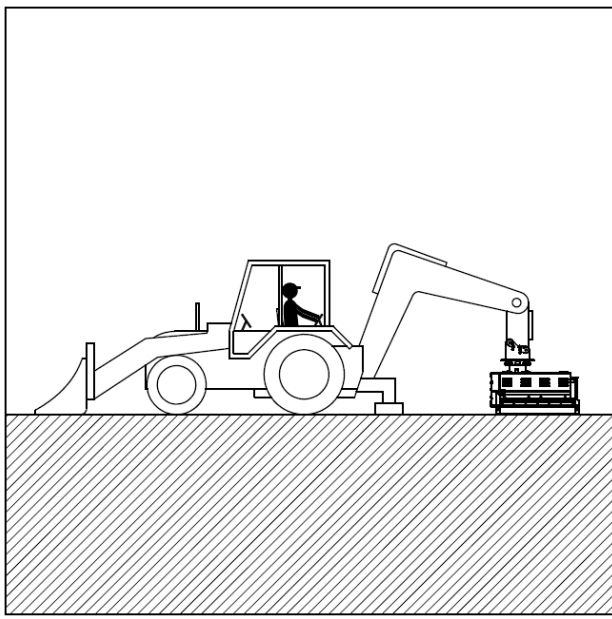

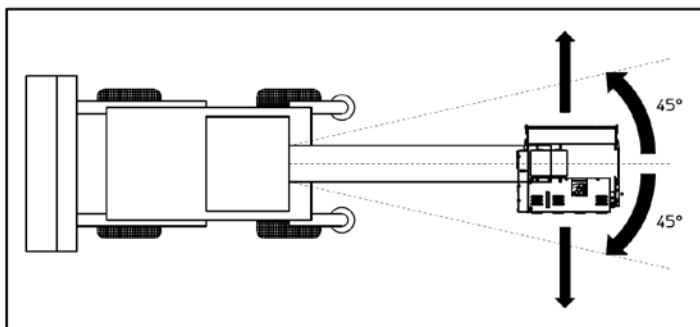

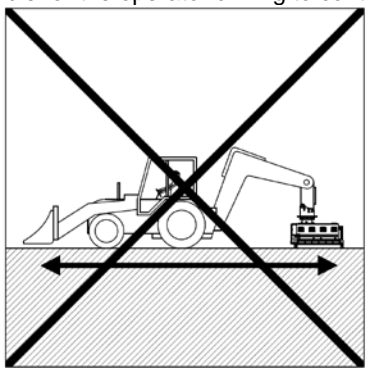
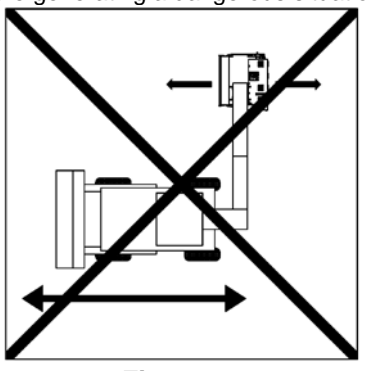
It is prohibited to work with sharp parts of the machine facing the operator cab. Danger of the projection of objects at high speed!




Figure 19

 <p>PERICOLO</p>	<p>It is prohibited to use the machine with the projection facing the working vehicle.</p>  <p>Figure 20</p>  <p>Figure 21</p>  <p>Figure 22</p>
 <p>PERICOLO</p>	<p>It is prohibited to use the machine with the front hood removed or in a different position with respect to that set by the manufacturer.</p>  <p>Figure 23 YES</p>  <p>Figure 24 NO</p>  <p>Figure 25 NO</p> <p>The risk of projection is high. Any tampering makes the user liable for damage/injury caused to persons, animals and objects.</p>
 <p>PERICOLO</p>	<p>It is prohibited to move the working vehicle to the next place of work until the rotor and machine tools are at a complete standstill.</p>


HEDGE MOWING PROCEDURE WITH RIGID AND ARTICULATED EXCAVATOR LOADERS

 <p>ATTENZIONE</p>	<p>During the job, the excavator loader must be at a standstill, be on flat land and have blade/outriggers/front lifting device on the ground. Hedge mowing is performed using arm movements of the working vehicle.</p>  <p>Figure 26</p>
 <p>ATTENZIONE</p>	<p>The material on the ground must be worked as indicated: with arm slewing and rotation, cut the surface that can be reached by the working vehicle arm (figure 27). On completion of this operation, go to a new area and start to work again as described previously.</p>  <p>Figure 27</p>
 <p>PERICOLO</p>	<p>It is prohibited to work with the working vehicle advancing or reversing (figures 28 and 29). It is impossible for the operator driving to control the rear arm, therefore generating a dangerous situation.</p>  <p>Figure 28</p>  <p>Figure 29</p>

 ATTENZIONE	<p>It is prohibited to use the machine as a support point for the working vehicle. The pressure exerted by the working vehicle would cause the machine chassis to collapse with consequent breakage of the same.</p>
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3.7. STOPPING THE MACHINE



To stop the machine, disconnect the working vehicle mulcher/hammer flail in a way to exclude the flow of oil to the machine.

 PERICOLO	<p>Always remain inside the cab during operations and make sure there are no persons, animals or objects within the work range of the machine. Any operation on the machine must be performed with the working vehicle off, putting the working vehicle safety lever in the locked position, switching the working vehicle engine off, removing the ignition keys from the dashboard and keeping them in a safe place and waiting inside the cab for 5 minutes for the rotor and relative tools to come to a complete standstill.</p>
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3.8. UNHITCHING THE MACHINE

When unhitching the machine:


	<ol style="list-style-type: none"> 1. Make sure that the tractor-machine unit is on flat, stable ground; 2. Disconnect the working vehicle mulcher/hammer flail system in a way to exclude the flow of oil to the machine and wait for the rotor and tools to come to a complete standstill;
 PERICOLO	<ol style="list-style-type: none"> 3. Put the machine on the ground without crushing it. The machine rotor and tools must be at a standstill;
	<ol style="list-style-type: none"> 4. Take the working vehicle engine to minimum revs. put the safety lever of the same in locking position, switch the engine off, discharge the pressure from the mulcher/hammer flail system and remove the ignition key;
 PERICOLO	<p>It is the user's responsibility to check that the mulcher/hammer flail is not pressurised. Avoid performing any interventions if the plant is pressurised causing difficulty in removing the pipes and expulsion of hot oil, which could cause serious injury.</p>
	<ol style="list-style-type: none"> 5. Climb down from the working vehicle and close the supply, return and draining cocks of the vehicle itself (if present);
	<ol style="list-style-type: none"> 6. Disconnect the machine oil supply pipe P with the working vehicle mulcher/hammer flail flow line;
	<ol style="list-style-type: none"> 7. Disconnect the machine oil return pipe T with the working vehicle mulcher/hammer flail return line;
	<ol style="list-style-type: none"> 8. Disconnect the machine hydraulic engine drain pipe D (not present if a hydraulic engine without draining is used) to the working vehicle draining line;
 ATTENZIONE	<p>When disconnecting the pipes, contain and collect any oil escaping. The oil and any containment material coming into contact with the same must be disposed of in compliance with the Laws in force in the country of use.</p>
	<ol style="list-style-type: none"> 9. Collect the hydraulic hoses with the use of straps and fix them to the hedge mower;
	<ol style="list-style-type: none"> 10. If the standard interface is present: slide the safety and shear pins S out (figure 4) and continue as described in point 12;
	<ol style="list-style-type: none"> 11. If the quick interface is present: release the quick interface and then continue from point 13;
	<ol style="list-style-type: none"> 12. Slide out P1 and pin P2 (figure 4) placing them on a safe and clean surface in a way to: <ol style="list-style-type: none"> a. prevent damage in case of falls; b. not obstruct the assembly operations; c. prevent them becoming dirty in case of falls;
	<ol style="list-style-type: none"> 13. Move the tractor away from the machine with care.

	Pins P1 and P2 and the safety pins S must be re-inserted into the relative holes once the working vehicle has been unhitched from the machine.
 ATTENZIONE	The land where the machine is parked must be flat and within a protected area, in a way to prevent unauthorised staff from approaching.


3.9. JAMMING

	This instruction manual must have been read and understood thoroughly before unjamming the machine.
 ATTENZIONE	It must be remembered that any variation in the conditions of the field such as type or volume of the material to be mulched, can cause the hedge mower to jam.
 ATTENZIONE	If the machine jams, follow that stated in paragraph 3.8 "UNHITCHING THE MACHINE" and take the machine to an authorised workshop .









In the workshop:





	<ol style="list-style-type: none"> 1. Remove the casing from the hydraulic engine; 2. Remove the self-levelling support completely; 3. Turn the machine over and rest it on suitable supports;
 PERICOLO	In the workshop, use suitable equipment to handle the machine especially in terms of liftable and sustainable weight (see table 1.5.3 for data relative to the machine).
	4. Unjam the machine manually;
	5. Check for any damage/breakage and perform any repairs immediately, using original spare parts only.
	6. Once the operations have been completed, turn the machine over again and place it on the ground, re-mount the self-levelling support and the hydraulic engine guard;
	7. Repeat the actions stated in paragraphs 3.4 and 3.5 "Hitching and Starting the machine" and start to work in the ways described in paragraph 3.6.

4. MAINTENANCE

 ATTENZIONE	<p>In the event of breakdown, the user must follow the machine stopping procedure, take the working vehicle engine to minimum, put the safety lever of the same in the locking position, switch the engine off, discharge the residual pressure from the mulcher/hammer flail system, remove the ignition key and wait inside the cab a few minutes for the rotor and the machine tools to come to a complete standstill. Climb down to check the size of the problem and contact the authorised workshop in order to solve the problem.</p>
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The following operations must be carried out before starting any maintenance operation:

	<p>This instruction manual must have been read and understood thoroughly before performing any maintenance on the machine.</p>
 PERICOLO	<p>Original spare parts must always be used.</p>
 PERICOLO	<p>The machine must be in an equipped and authorised workshop for all routine and extraordinary maintenance operations, with specialised staff. The machine must be at a standstill and unhitched from the working vehicle. It is prohibited to perform maintenance and repairs in the open and in places that are not suitably equipped.</p>
 ATTENZIONE	<p>The specialised staff must use the safety devices and personal protection devices (PPD) during use, maintenance, regulation, repairs and handling of the machine.</p> 
 ATTENZIONE	<p>Only perform any maintenance when the temperature of the oil and the hot parts of the machine has dropped below 60°C.</p>
 PERICOLO	<p>Do not carry out repairs of which you have no knowledge. Always follow instructions and contact the manufacturer if they are not available.</p>
 ATTENZIONE	<p>Do not use lifting points different to those prescribed.</p>

 ATTENZIONE	Make sure that the lifting equipment is suitable to carry out the operations in compliance with Safety Standards in the country of use.
 PERICOLO	Discharge the pressure from the machine hydraulic circuit before performing any interventions (if quick couplings are present):
 ATTENZIONE	Maintenance residues, e.g. cloths or material replaced containing inflammable substances must be kept away from sources of ignition and disposed of in compliance with the Laws in force in the country of use.
 ATTENZIONE	The oil collected must be disposed of in compliance with the Laws in force in the country of use.

4.1. MACHINE HOT POINTS

Before any maintenance intervention, make sure that the potentially hot parts have dropped to a temperature below 60°C. Pay extreme attention to:

- Transmission casing;
- Hydraulic engine protection casing;
- Hydraulic engine;
- "Berti Fluid Box" valves block;
- Pulleys and belts;
- Hydraulic hoses;
- Hydraulic engine belts-tensioner support.

4.2. MAINTENANCE INTERVENTIONS

The qualified staff must know about and precisely follow the indications and must have stopped and unhitched the machine in compliance with paragraphs 3.7 and 3.8.

The periodic checks and maintenance operations must be performed within the times and using the methods established and are the user'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....).

4.2.1. GREASING

Use a special universal greasing pump, supplied to all workshops, to grease the points indicated.

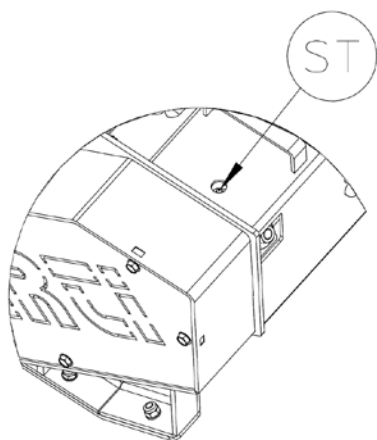


Figure 30

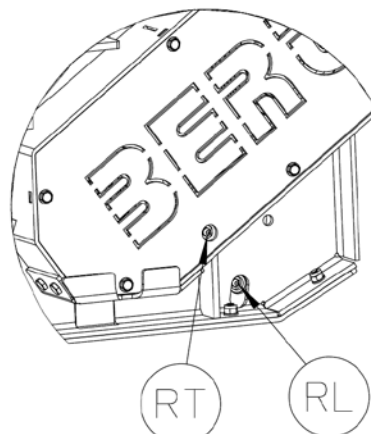


Figure 31

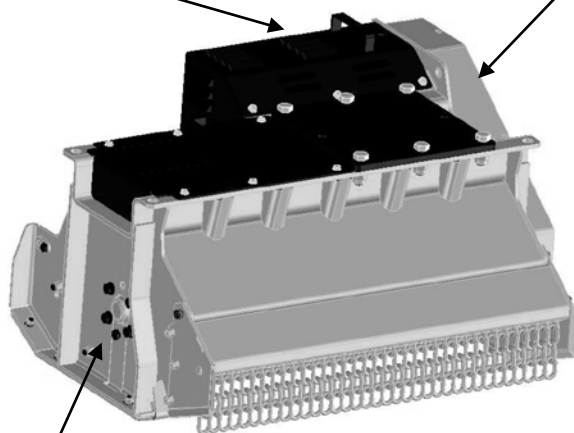


Figure 32

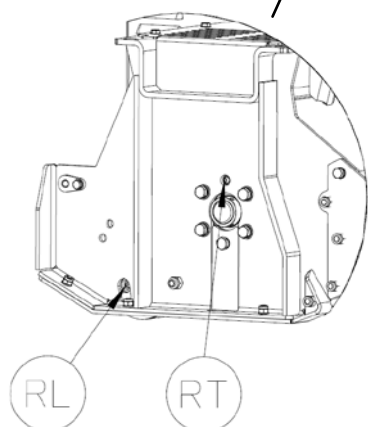


Figure 33

SELF-LEVELLING SUPPORT (OPTIONAL):

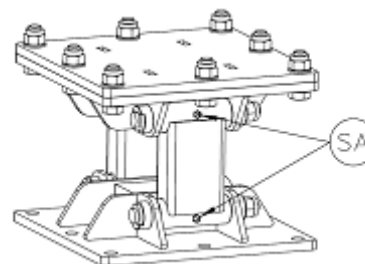


Figure 34

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

Recommended lubricant	EP2 grease
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Pos.	Name	Lubrication intervals	Notes
RT	Rotor	8 hours	Grease by activating the manual pump 1-2 times to prevent damage to the internal seals of the supports. The rotor is lubricated from the pulley side via a greaser that escapes from the engine casing.
ST	Belts-tensioner support	8 hours	Grease by activating the manual pump 1-2 times, to prevent damage to the seals inside the supports.
RL	Roller	8 hours	Grease by activating the manual pump 1-2 times, to prevent the grease escaping.

OPTIONAL:

SA	Mounting hitch	20 hours	Grease by activating the manual pump 1-2 times on the 4 arm greasers of the self-levelling support for the mounting hitch.
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Periodic and systematic greasing and lubrication of the machine maintain its performance and increase its useful life span.

4.2.2. ADJUSTMENT OF TRANSMISSION BELT TENSION

A dynamometer must be used to adjust belt pre-tensioning. This is an instrument that measures elastic deformation of a spring in proportion to the force applied on a graduated scale.

By pressing with a force of 50N on the individual belt, the flexure value must be between 8 - 10 mm (see figure 35).

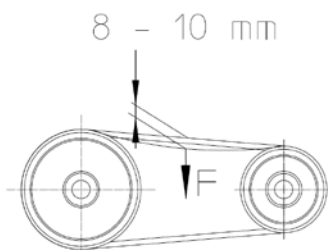


Figure 35

It is very important to check the tension of the belts in order to obtain excellent performance and to prolong useful life: perform the adjustments after the first 4 hours and successively every 50 hours until the sag is in compliance with that stated above.

ADJUSTMENT PROCEDURE

	1. Remove the guard from the hydraulic engine (figure 36);
	2. Remove the lateral transmission cover (figure 36);
	3. Loosen the screws F that fix the support to the chassis (figure 37);

Figure 36

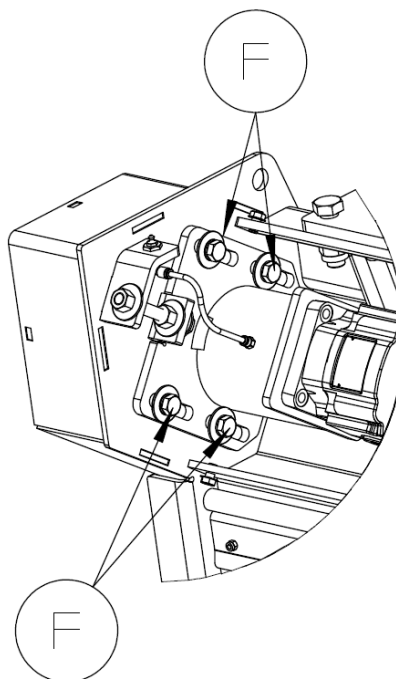


Figure 37

4. Tension the belts by operating on the tensioning screw T: to tension, first screw the nut D1 in anti-clockwise then screw nut D2 until the correct tensioning is reached (see the start of paragraph 4.2.2). Now, loosen in clockwise nut D1 until blocking is obtained. To loosen, screw in anti-clockwise nut D1 covering a run of about 10 mm and then loosen in clockwise nut D2 (figure 38);

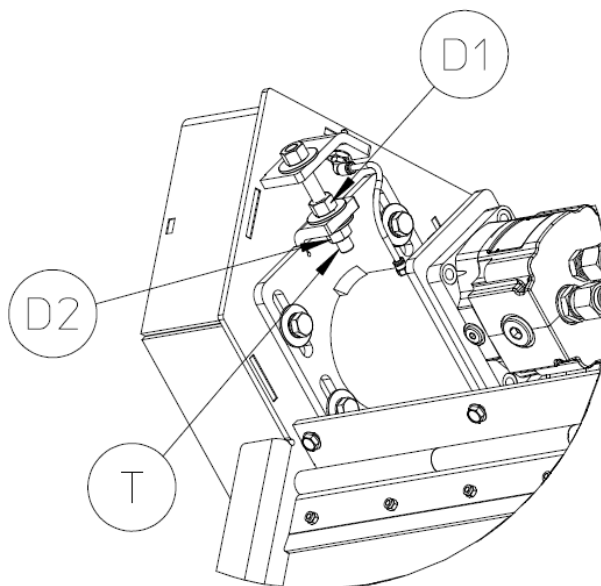


Figure 38

5. Tighten the screws F;
6. Re-mount the lateral transmission cover and the hydraulic engine casing.



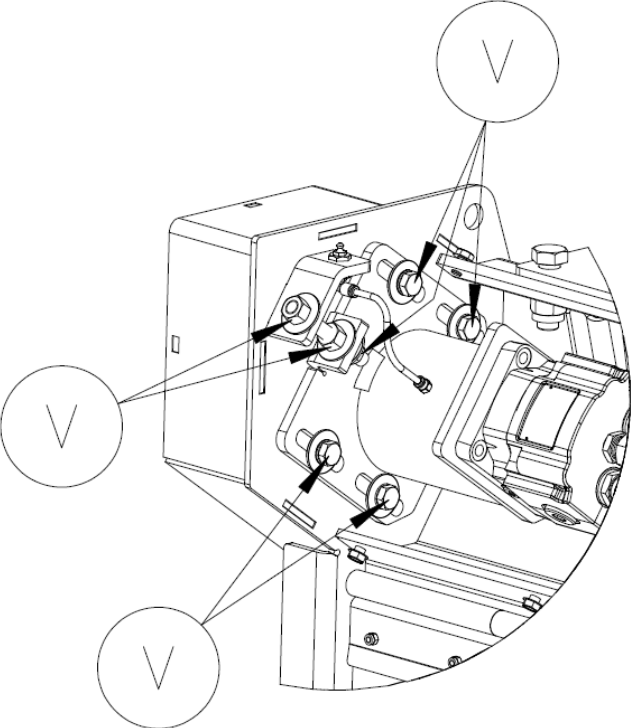
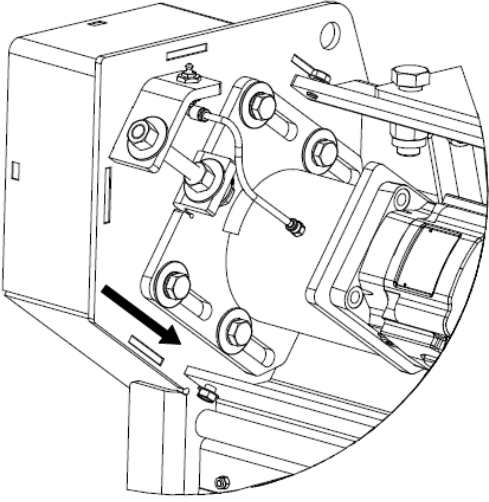
PERICOLO

It is prohibited to work without the belts protection cover and without the hydraulic engine casing.

4.2.3. REPLACING THE TRANSMISSION BELTS

When the machine transmission belts must be replaced, remove the lateral transmission cover and the hydraulic engine protection casing (figure 32).

REPLACEMENT PROCEDURE

	<p>1. Loosen the screws and the nuts V that keep the belt-tensioner support fixed and tensioned (figure 39);</p>  <p>Figure 39</p>
	<p>2. Turn the belt-tensioner support until it rests at the end run of the slot of the support itself (figure 40). At this point, the belts are much looser.</p>
	 <p>Figure 40</p> <p>3. As the belts are no longer tensioned, they can be replaced. It is important to check the state of wear of the pulleys by cleaning the grooves!</p>

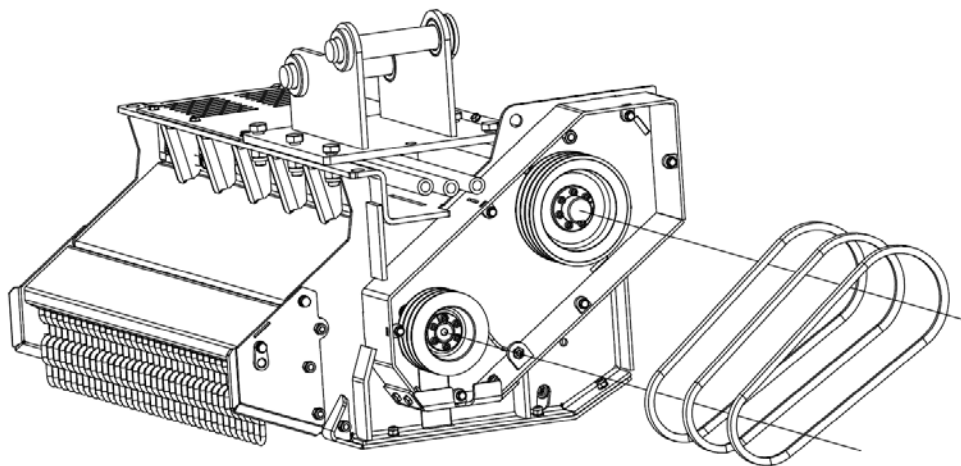


Figure 41



CAUTELA

The trapezoidal belts must be mounted without force. Using screwdrivers, jacks etc. causes damage to the external and internal parts of the belt. The belts mounted with force have duration of only a few days. Correct assembly allows to save time and money.
If the space for adjustment is reduced, insert the pulleys with grooves onto the shafts with the belts already inserted.

4. When replacement has been performed, turn the belt-tensioner support in order to obtain the desire tension (paragraph 4.2.2.) and block the position by fixing the screws and nuts V. Have the belts turn a few times and control pre-tensioning again;


5. Re-mount the lateral transmission cover and the hydraulic engine casing.



PERICOLO

It is prohibited to work without the belts protection cover and without the hydraulic engine casing.

4.2.4. HYDRAULIC PLANT

 ATTENZIONE	<p>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.</p>
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The machine hydraulic plant layout is given in figure 42 and is composed of:

1. Hydraulic gear engine (also available in the configuration without draining);
2. Berti Fluid Box valves block (contact the manufacturer regarding the adjustment procedure);
3. Hydraulic hoses.

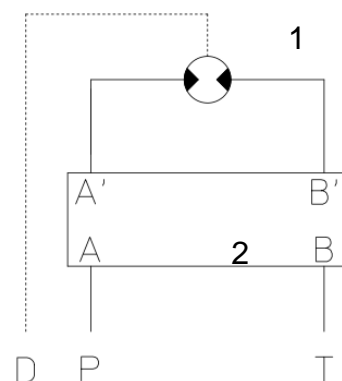



Figure 42




The working vehicle mulcher/hammer system must be adjusted in a way to guarantee the following oil pressures and flow rates:

Adjusting the working vehicle hydraulic plant	
RA/SB	95 – 115 - 125
Min. pressure bar	215
Max. pressure bar	225
Min. flow rate l/min	78
Max. flow rate l/min	82




Table 2

 ATTENZIONE	<p>It is however recommended to re-create the flow rate and pressure conditions stated in the Calibration Certificate delivered, attached to each machine.</p>
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 ATTENZIONE	<p>Contact the manufacturer for adjustments different to those indicated in the table above (tab. 2).</p>
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For hitching the machine to the working vehicle, refer to chapter 3 paragraph 3.4

PROCEDURE FOR REPLACING HYDRAULIC HOSE


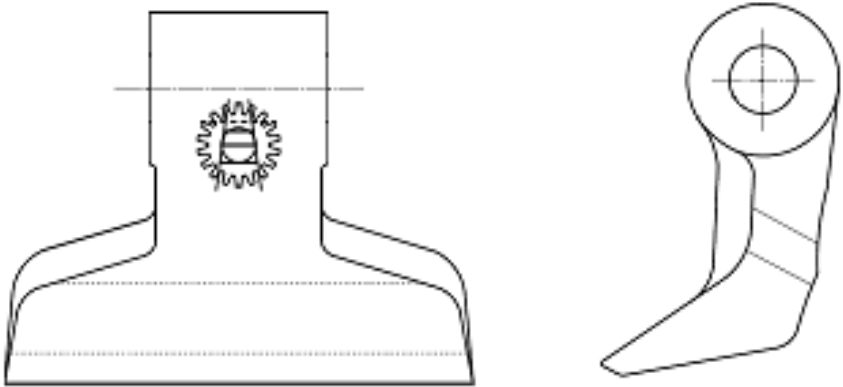

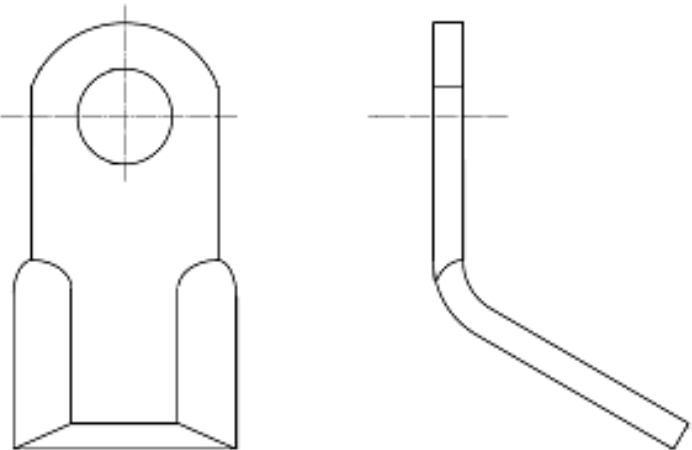
 ATTENZIONE	<p>1. Before removing a hydraulic hose, make sure that any residual pressure in the plant has been discharged;</p>
	<p>2. Identify the damaged hose precisely and use a relevant wrench to loosen the two relative connection points, paying attention to the possible escape of hydraulic fluid;</p>
 ATTENZIONE	<p>3. Replace the damaged piping only using original spare parts;</p>
	<p>4. Check the perfect condition of the hitch points (threads, gaskets, etc.), before installing the new hose;</p>
	<p>5. Use an appropriate wrench to tighten the hydraulic hose fittings, which have seepage, clockwise. Do not tighten excessively so as not to ruin the threading on the fittings.</p>
 ATTENZIONE	<p>Maintenance residues, e.g. cloths or materials replaced containing inflammable substances must be kept away from sources of ignition and disposed of in compliance with the Laws in force in the country of use.</p>
 ATTENZIONE	<p>The oil collected must be disposed of in compliance with the Laws in force in the country of use.</p>

4.2.5. CHECKING WEAR OF TOOLS

The wear of the mulching tools is performed visually. Replace when an imperfect size of material or increases in power absorption are noted. This is possible by a sensitive increase in the temperature of the working vehicle oil. Using the machine with blunt tools compromises the quality of the job.


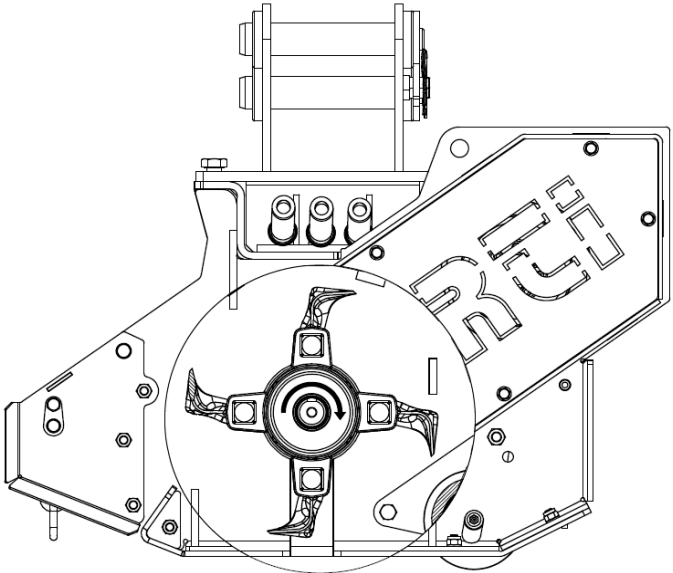


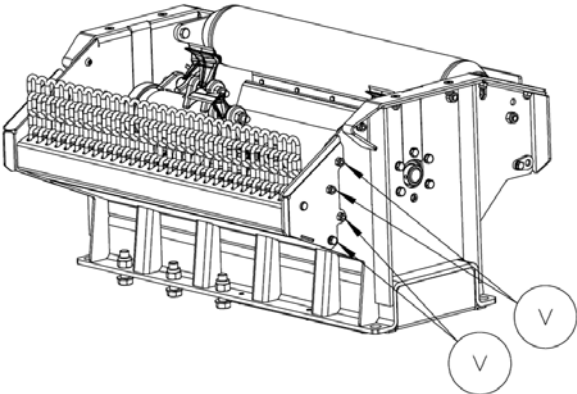
The dimensions and weights of the tools are strictly controlled: if they are replaced completely, the rotor may not have to be dynamically balanced (refer to "TOOLS REPLACEMENT PROCEDURE")

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.

 <p>ATTENZIONE</p>	<p>Replace the worn and/or damaged tools with original tools distinguished by the Berti mark.</p> <p>"A" type hammer flail::</p>  <p>Figure 43</p>
 <p>ATTENZIONE</p>	<p>"Y" blade</p>  <p>Figure 44</p>

Duration of the tools depends on the type of use and type of land worked. It is recommended to replace them completely every 200 operating hours on average.

4.2.5.1. TOOLS REPLACEMENT PROCEDURE

 <p>ATTENZIONE</p>	<p>If an individual tool must be replaced, it is recommended to replace the entire range. Not using original spare parts can cause the machine to vibrate anomalously. When mounting the tools, pay attention to the direction (figure 45).</p>  <p style="text-align: center;">Figure 45</p>
	<ol style="list-style-type: none"> 1. Remove the casing from the hydraulic engine; 2. Remove the standard or quick interface bracket completely; 3. Turn the machine over and rest it on suitable supports;
 <p>PERICOLO</p>	<p>In the workshop, use suitable equipment to handle and support the machine especially in terms of liftable and sustainable weight (see table 1 paragraph 1.5.3), in compliance with the Laws in force in the country of use.</p>
 <p>ATTENZIONE</p>	<ol style="list-style-type: none"> 4. Remove the front hood by taking the screws out V (figure 46). The component is heavy, handle it with care using the appropriate equipment;
	 <p style="text-align: center;">Figure 46</p>
<p>If the hedge mower rotor is the hammer type, operate as follows:</p>	



ATTENZIONE

- Loosen the nut D, hold the hammer flail M and slide the screw V out (Figure 47). When the hammer flail has been removed, check the state of wear of the supports, in particular the ovalisation of the holes, the square seat of the screw head and peripheral wear. If the phenomena described are present, contact the manufacturer for indications..

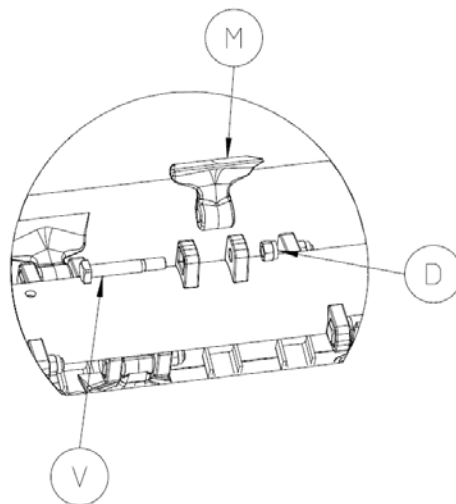


Figure 47

- Replace the new hammer flail, positioning it between the rotor supports. Insert the new screw, making sure to fit the screw head with the square recessed on the support;
- Mount the new nut and tighten it;

If the hedge mower rotor is the blades type, operate as follows:



ATTENZIONE

- Loosen the nut D, hold the blades C and slide the screw V out (Figure 48). Pay attention to the presence of the bush E and spacers F. When the blades have been removed, check the state of wear of the supports, in particular the ovalisation of the holes, the square seat of the screw head and peripheral wear. If the phenomena described are present, contact the manufacturer for indications.

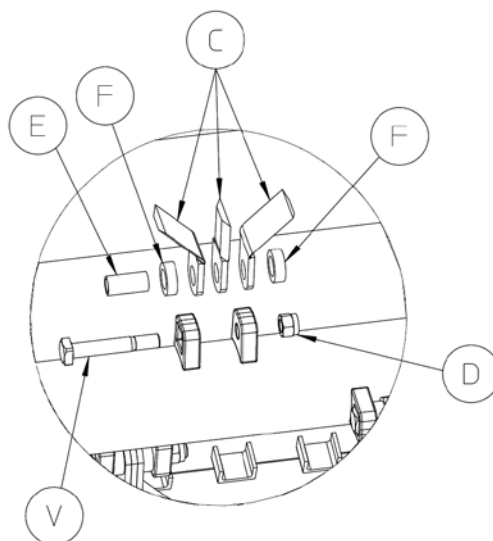






Figure 48


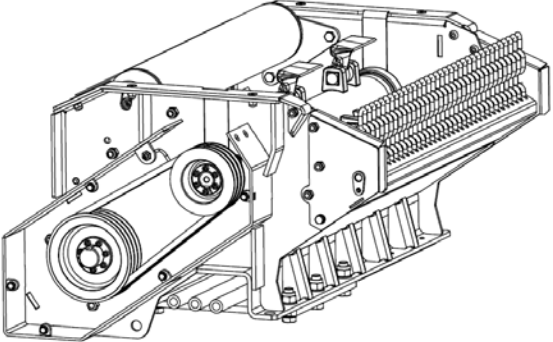
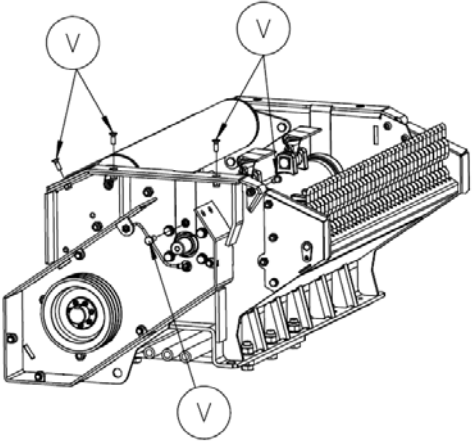
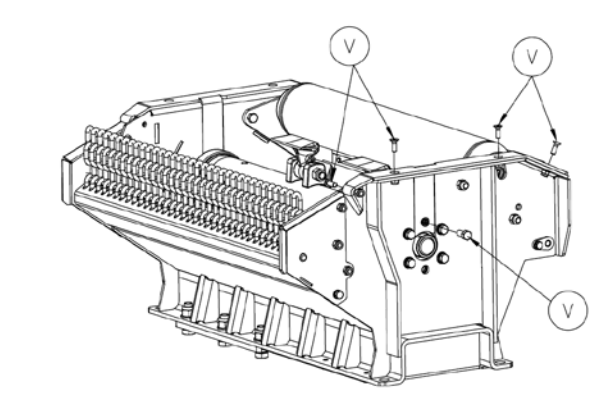
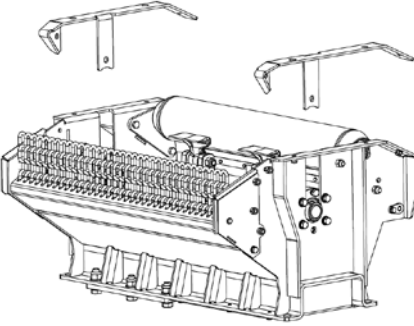
- Replace the new blades, positioning them between the rotor supports with the bush and spacers. Insert the new screw, making sure to fit the screw head with the square recessed on the support.
- Mount the new nut and tighten it.

5. Re-position the machine on the ground, mount the front hood, the hydraulic engine casing, the standard or quick interface bracket and repeat the hitching and starting procedure described from paragraph 3.4 to 3.6.

 ATTENZIONE	<p>When mounting the tools, pay attention to the direction. If they are mounted in the wrong direction they cannot cut.</p>
 PERICOLO	<p>If there are still vibrations when the tools have been replaced, the rotor must be dynamically balanced again in a specialised workshop.</p>
 ATTENZIONE	<p>Periodically check the tightness of the hammer flail screws and nuts. The loosening of the same may damage the rotor and give rise to dangerous projections.</p>
	<p>Our spare parts guarantee complete and correct use of your machine again.</p>

4.2.6. REPLACING THE ANTI-WEAR PADS

The machine has anti-wear pads that can be replaced at the end of the lifespan as follows:

	<ol style="list-style-type: none"> 1. Remove the casing from the hydraulic engine; 2. Remove the standard or quick interface bracket completely; 3. Capovolgere la macchina ed appoggiarla su opportuni sostegni;
 <p>PERICOLO</p>	<p>In the workshop, use suitable equipment to handle and support the machine especially in terms of liftable and sustainable weight (see table 1 paragraph 1.5.3), in compliance with the Laws in force in the country of use.</p>
	<ol style="list-style-type: none"> 4. Remove the lateral transmission cover and the sub-casing (figure 49);
	 <p style="text-align: center;">Figure 49</p>
	<ol style="list-style-type: none"> 5. Loosen the tension of the belts following the procedure described in chapter 4.2.2. Remove the pulley fitted to the shaft leaving the rotor, loosen the screws V and remove the skids as indicated in figures 50, 51, 52;
	<div style="display: flex; justify-content: space-around;"> <div data-bbox="352 1137 826 1579">  <p style="text-align: center;">Figure 50</p> </div> <div data-bbox="885 1137 1476 1534">  <p style="text-align: center;">Figure 51</p> </div> </div>
	 <p style="text-align: center;">Figure 52</p>
	<ol style="list-style-type: none"> 6. Replace the anti-wear pads (figure 53);

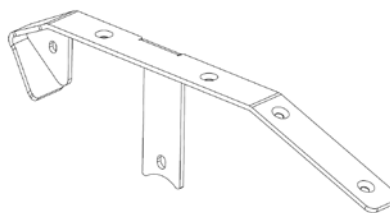


Figure 53

7. Tighten the screws V, mount the pulley fitted to the shaft leaving the rotor and tension the belts as described in paragraph 4.2.2. Mount the sub-casing and the lateral transmission cover;
8. Once all of the operations have been completed, turn the machine over again, place it on the ground, re-mount the the standard or quick interface bracket and the hydraulic engine casing and repeat the "hitching and starting" procedure described from paragraph 3.4 to 3.5.

4.2.7. REPLACING THE MACHINE FRONT GUARDS

The machine has front guards made up from chains fixed to the machine front hood.



PERICOLO

The chains must always be present and be in excellent working order. Working without chains means working without guards and is therefore considered improper. The manufacturer declines all liability in the event of serious damage/injury to the user, persons, objects and animals deriving from improper use.

1. Remove the casing from the hydraulic engine;
2. Remove the standard or quick interface bracket completely;
3. Turn the machine over and rest it on suitable supports;



PERICOLO

In the workshop, use suitable equipment to handle and support the machine especially in terms of liftable and sustainable weight (see table 1 paragraph 1.5.3), in compliance with the Laws in force in the country of use.

4. Loosen the screw V and slide the pin P out from the front hood as indicated in figure 54;

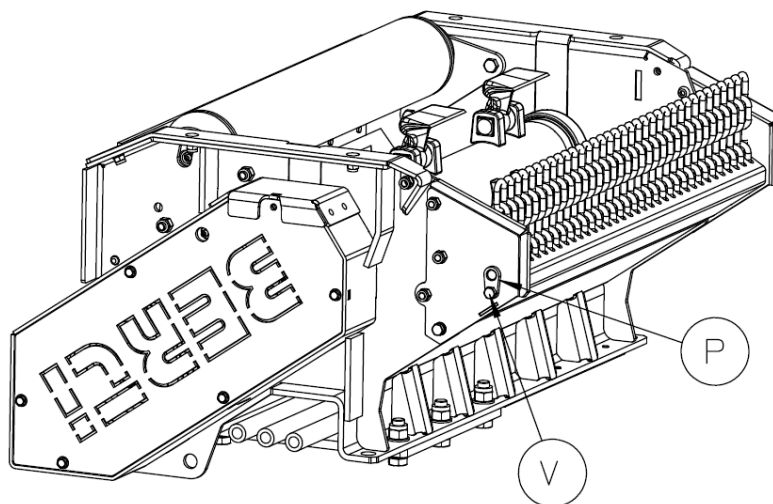


Figure 54

5. Remove the chains from the slots F as indicated in figure 55 and check the presence of any damage, which must be repaired immediately in a way to restore the initial state;

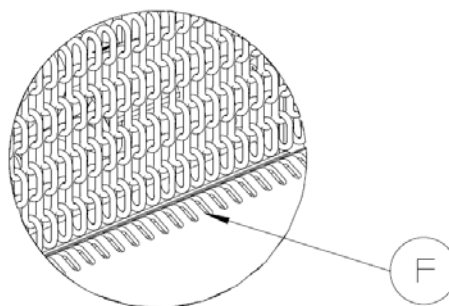


Figure 55

6. Insert the new chains into the slots, starting from left to right. During this operation, the pin P must be inserted gradually with the purpose of holding the chains in position (figure 56): At the end of the operation, each slot must have a chain mounted;

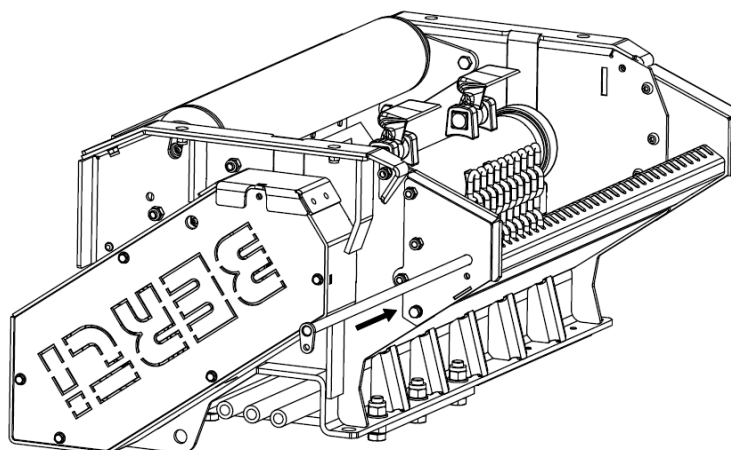


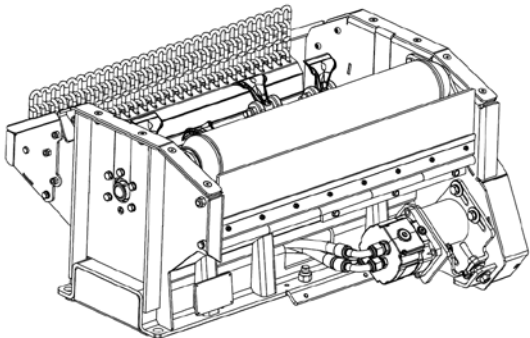
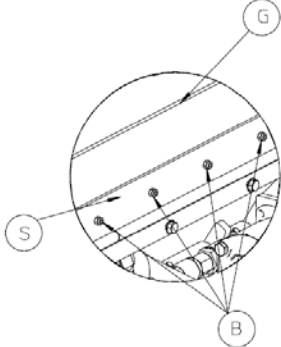
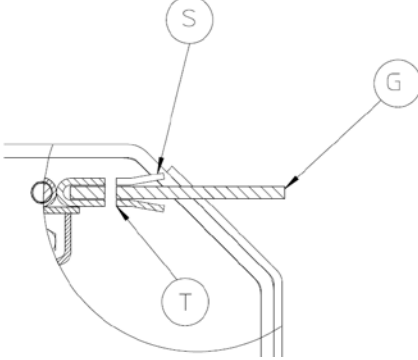


Figure 56

7. Once all of the operations have been completed, tighten the screw V, turn the machine over again, place it on the ground, re-mount the standard or quick interface bracket and the hydraulic engine casing and repeat the "hitching and starting" procedure described from paragraph 3.4 to 3.5.

4.2.8. REPLACING THE MACHINE REAR GUARDS

The machine has a rear protection made up from a sheet of rubberised fabric fixed onto a relevant support using bolts.

 PERICOLO	<p>The sheet of rubberised fabric must always be present and be in excellent state. Working without the rubberised sheet means working without protection and therefore is considered improper. The manufacturer declines all liability in the event of serious damage/injury to the user, persons, objects and animals deriving from improper use.</p>
	<ol style="list-style-type: none"> 1. Remove the casing from the hydraulic engine; 2. Remove the standard or quick interface bracket completely; 3. Turn the machine over and rest it on suitable supports;
 PERICOLO	<p>In the workshop, use suitable equipment to handle and support the machine especially in terms of liftable and sustainable weight (see table 1 paragraph 1.5.3), in compliance with the Laws in force in the country of use.</p>
	<ol style="list-style-type: none"> 4. Remove the bolts B with the relative wrenches and slide the worn rubberised sheet G out from the support S (figure 57-58);
 <p style="text-align: center;">Figure 57</p>	 <p style="text-align: center;">Figure 58</p>
	<ol style="list-style-type: none"> 5. Check for any damage to the support S, which must be repaired immediately in a way to restore the original state;
	<ol style="list-style-type: none"> 6. Insert the new rubberised sheet G into the support S, making sure it is positioned well in the housing S. Make holes in the rubber in correspondence with the holes T (figure 59);
 <p style="text-align: center;">Figure 59</p>	
	<ol style="list-style-type: none"> 7. Fix the rubberised sheet to the support using bolts B;
	<ol style="list-style-type: none"> 8. Once all of the operations have been completed, turn the machine over again, place it on the ground, re-mount the standard or quick interface bracket and the hydraulic engine casing and repeat the "hitching and starting" procedure described from paragraph 3.4 to 3.5.



4.2.9. CLEANING THE MACHINE

Clean the machine regularly using water and paying particular attention to residues of flammable materials. Ensure that the hot parts of the machine are free of straw, hay or residues of flammable materials.


4.3. STORAGE – RE-COMMISSIONING

If the machine is immobilised for long periods, store it in a place sheltered from the elements and protect it from damage. Before re-commissioning, it is advisable to operate as follows:

- release the rotor and the tools from any mulching residues;
- clean the machine thoroughly;
- plug the hydraulic hoses (if quick couplings are not present), making sure to collect the hydraulic oil it contains;
- carry out a general visual check of the machine in order to identify any structural damage, detect any deep scratches in the paintwork, check that original safety pictograms are present in their positions and that they are integral and legible;
- grease all mechanical parts and locking pins;
- if possible, store the machine in a covered place, on a level and smooth surface.

	Check that the storage temperature is between 0°C and 50°C.
 ATTENZIONE	For the disposal of oil and all materials used for collection, cleaning etc. follow the provisions in force in the country of use.

4.3. SCRAPPING

 ATTENZIONE	If the machine is scrapped, it must be disposed of in the appropriate waste sites in accordance with the Laws in force in the country of use. 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. Parts consisting only of plastic, aluminium or steel may be recycled if collected by the appropriate centres.
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4.4. SCHEDULED MAINTENANCE TABLE

Description	Controls
GENERAL MACHINE CHECKS	
Rotor greasing	Every 8 operating hours
Roller greasing	Every 8 operating hours
Greasing the belt-tensioner support	Every 8 operating hours
Greasing the mounting hitch	Every 20 operating hours
Check machine bolt tightness	After the first 4 hours and then every 50 hours
Check belts tensioning	After the first 4 hours and then every 50 hours
Check wear and fixing of tools	Before every job
Replace tools, screws and nuts	Every 200 operating hours or when damaged or no longer sharp
Replace transmission belts	Every 400 hours or when too worn
Replace pulleys	Every 400 hours or when too worn
Rotor balancing	Every partial or total replacement of the tools
Replace skids	Every 400 hours or when too worn
Check guards integrity	Every machine start-up. Restore the guards if worn and/or damaged.
Check pictograms	Every machine start-up. Restore if worn and/or damaged.
HYDRAULIC PLANT	
Check tightness of hydraulic hoses	At every start-up and every seepage of liquid
Check hydraulic hoses	Check at every start-up. Replace immediately in the event of damage, seepage
Hydraulic engine oil retainer	Check every 200

4.5. TROUBLESHOOTING TABLE

ANOMALY	CAUSE	SOLUTION
Mulching not uniform	<ul style="list-style-type: none"> • Tools worn or damaged • Machine not adjusted in agreement with the instructions • Machine clogged • The rotor does not turn at envisioned speeds • Broken roller support • Worn skids; • Excessively uneven land 	<ul style="list-style-type: none"> • Replace the tools • Make the adjustments • Decrease the advancement speed • Check belt tension, the oil flow rate and the machine feed pressure • Replace the roller support • Replace skids; • Perform the job a few times
Premature wear of the tools	<ul style="list-style-type: none"> • Stony/sandy land • Cutting height of tools too low • high rotor rotation speed 	<ul style="list-style-type: none"> • Scour the ground in advance • Adjust cutting height • Check oil flow rate
Machine noise	<ul style="list-style-type: none"> • Rotor unbalanced • Loss of counterweights • Tools damaged, worn or missing • Bearings worn 	<ul style="list-style-type: none"> • Balancing in specialised workshop • Replace the tools • Replace the bearings
Excessive heating of hydraulic engine	<ul style="list-style-type: none"> • Working vehicle oil level too low • Spent oil • Constrictions on the machine feed lines • Excessive amount of material to work; • Under-dimensioned working vehicle oil cooling system 	<ul style="list-style-type: none"> • Add oil to the working vehicle • Replace the oil • Eliminate the quick couplings • Use the mulcher/hammer flail system • Perform the job a few times and/or reduce the advancement speed. • Strengthen the cooling system
Frequent breakage of the hydraulic engine oil retainer	<ul style="list-style-type: none"> • Draining line (if present) obstructed; • Draining line (if present) pressurised; • Pressurised machine tank; • Sudden inversion of the oil flow; • Engine worn 	<ul style="list-style-type: none"> • Avoid constrictions on the draining line; • Do not connect the drain pipe to the hydraulic engine oil return line • Bleed the tank periodically and contact the working vehicle manufacturer • Use the mulcher/hammer flail system • Replace the hydraulic engine
Frequent breakage of bearings	<ul style="list-style-type: none"> • Machine chassis bent • No bearings lubrication • Rotor excessively stressed • Rotor unbalanced/bent 	<ul style="list-style-type: none"> • Replace the machine chassis • Grease the bearings in agreement with the Scheduled maintenance table • Use the machine in compliance with the allowed working limits • Balancing in specialised workshop or replace the rotor

Rotor does not turn	<ul style="list-style-type: none"> • Foreign body jammed • Bearing breakage; • Hydraulic engine breakage; • Transmission breakage; • Belts breakage; • Rotor shaft breakage • Hydraulic hoses disconnected or inverted; • Working vehicle hydraulic plant cocks closed; • Working vehicle feed plant failure 	<ul style="list-style-type: none"> • Refer to the “Machine jamming” procedure • Replace bearings and gaskets • Replace hydraulic engine • Replace transmission • Replace belts • Replace rotor • Connect hydraulic hoses correctly • Open the working vehicle hydraulic plant cocks • Contact the working vehicle mechanic.
Sealing rings broken/worn	<ul style="list-style-type: none"> • Excessive lubrication • High rotor rotation speed • Incorrect assembly of the gaskets 	<ul style="list-style-type: none"> • Change the sealing rings • Check machine adjustment • Request information from the manufacturer
Chassis broken/unwelded	<ul style="list-style-type: none"> • Sheet steel worn • Chassis stressed excessively and crushed to the ground • Rotor unbalanced 	<ul style="list-style-type: none"> • Change the chassis; • Change the chassis • Balance the rotor
Rear roller blocked	<ul style="list-style-type: none"> • Supports broken; • Self-lubricating bushes worn • No greasing • Support roller bent • Wet land • Material deposited in the supports 	<ul style="list-style-type: none"> • Replace the supports • Replace the bushes • Grease • Replace the support roller • Do not work with unfavourable environmental conditions • Clean the support and lubricate
The tools wear prematurely	<ul style="list-style-type: none"> • The rotor turns at a rotation speed that is too high or too low • the machine works on stony, rocky land and/or with stumps on the surface 	<ul style="list-style-type: none"> • Check machine adjustment • If possible, do not work on lands with these features and inspect the work area and eliminate the same
The rotor vibrates	<ul style="list-style-type: none"> • The rotor is unbalanced; • Tools worn/broken, • Rotor bent 	<ul style="list-style-type: none"> • Balancing in specialised workshop • Replace the worn and/or broken and/or missing tools. • Replace rotor

5. GENERAL CONDITIONS

5.1. SPARE PARTS

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

- type of vehicle;
 - serial number;
 - spare part code that can be obtained from the Spare Parts Catalogue.
- If it is a component that is part of a major unit (rotor, overgear unit, hydraulic engine, guards), you should also specify the model and serial number of the unit.

5.2. WARRANTY

On delivery, check that the machine has not been damaged during transport and that the accessories are complete.

WARRANTY CONDITIONS:

- The manufacturer guarantees its products for a period of 12 months from the date of delivery on the condition that the attached form is filled-in in full and sent to the manufacturer within 15 days of date of delivery (the delivery document acts as evidence).
- In accordance with the aforementioned terms, the manufacturer agrees to supply all components to be replaced under warranty according to its own evaluation or the opinion of its authorised representatives regarding parts that have material or manufacturing defects. Shipping and labour costs shall in any case be charged to the customer.
- The warranty does not include payment for damage caused by improper use of the machine by the operator and for parts normally subject to wear and tear and breakage such as: hammer flails, blades, belts, etc.
- The manufacturer is not liable for accidents involving the operator or third parties, deriving from improper use of the machine.
- This warranty is not valid in the case in which:
 - a) maintenance and repairs have been performed by unauthorised individuals or companies.
 - b) machine has been previously repaired or modified with non-original spare parts.
 - c) in the event of an incorrect manoeuvre;
 - d) due to insufficient maintenance and/or lubrication;
 - e) when permissible power limits have been exceeded;
 - f) whenever the instructions given in this manual are not followed;
 - g) whenever unauthorised modifications have been made.
- Machine breakdowns during or after the warranty period shall not give rise to any right to interrupt payments for the goods that have already been delivered. No breakage or malfunction can be used as a pretext for delaying payment.
- The manufacturer reserves the right, at all times, to make any modifications in order to improve its own product and is not obliged to add these modifications to previously manufactured machines, which have already been delivered or are undergoing manufacture.
- These general warranty terms replace and cancel all previous explicit or implicit terms.

CERTIFICATO DI GARANZIA
GUARANTEE CERTIFICATE
GARANTIESCHEIN
CERTIFICAT DE GARANTIE
CERTIFICADO DE GARANTÍA
GARANTIBEVIS
GARANTIECERTIFICAAT



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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 acquired 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 / Köparens underskrift / Handtekening van de koper

Data /Date/Datum/Fecha _____



Nome / Name / Nom / Nombre / Namn / Naam

Indirizzo / Address / Anschrift / Adresse / Dirección / Adress / Adres

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5.3. NOTES

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