

**Translation of the original language.**

## **INFORMATION ON THE MANUAL**

### **INTRODUCTION**

This manual describes all instructions for operating and maintaining the machine in question as well as accident prevention standards. This manual, for ease of reference, is divided into identifiable chapters.

The information contained in this manual is intended for a professional user, who must have specific knowledge about how to use the machine and must be authorized, instructed and appropriately trained.

We recommend that original spare parts and accessories are used. Besides invalidating the guarantee, non-original parts may be hazardous, reducing the lifespan and performance of the machine.

In the event that the machine is transferred or sold, the present manual must always be delivered together with the machine. In the event that the manual is damaged or lost, a copy must be requested from the Manufacturer of the machine or previous owner. The manual is considered to be an integral part of the machine.

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## **1 Information on the manual**

This manual is an integral part of the machine and must accompany the same in case of resale and until its demolition.

In case of loss or damage of this manual, 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.

Relevant symbols are located on the machine and must be kept in perfectly visible condition by the operator and replaced when they are no longer legible.



**The presence of this symbol indicates that maximum care is to be taken in the operation at hand.**

It is possible that some devices described in this manual are not present on your machine, depending on the chosen set-up and on the market the machine is intended for.

The manual is made up of 37 pages.

### **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 commercial reasons. Such modifications do not oblige the Manufacturer to intervene on machines marketed at that time and do not invalidate the present documentation.

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

### **1.2 COPYRIGHT**

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

### 1.3 MACHINE IDENTIFICATION PLATE AND EEC MARK



Positioning of plate

## **1.4 INFORMATION ON THE MACHINE**

### **1.4.1 AUTHORISED USE**

TA/K mod.mulcher was designed to be used exclusively in agriculture, for cutting grass, stalks, plant residues, for pruning bushes, branches and shrubs up to a diameter of about 2 cm, depending on the type of tool used. Ideal for cleaning the sides of roads, ditches, embankments and sloping land in general.

Use is forbidden if: coupled with undersized tractors; on terrain with stones; on terrains with unstable balancing situations for the tractor, as for example deep downhill or uphill, deep slopes, near ditches or precipices, irregular terrains, etc...; to shred trunks with a diameter of over 2 cm; in situations where tight bends are required; and in backwards direction.

The machine is led by the tractor by means of a three point attachment and acts on the terrain in view of its own weight and rotation of the rotor, activating the tractor PTO by means of cardanic connection.

The machine is not intended for use in sectors different to agricultural.



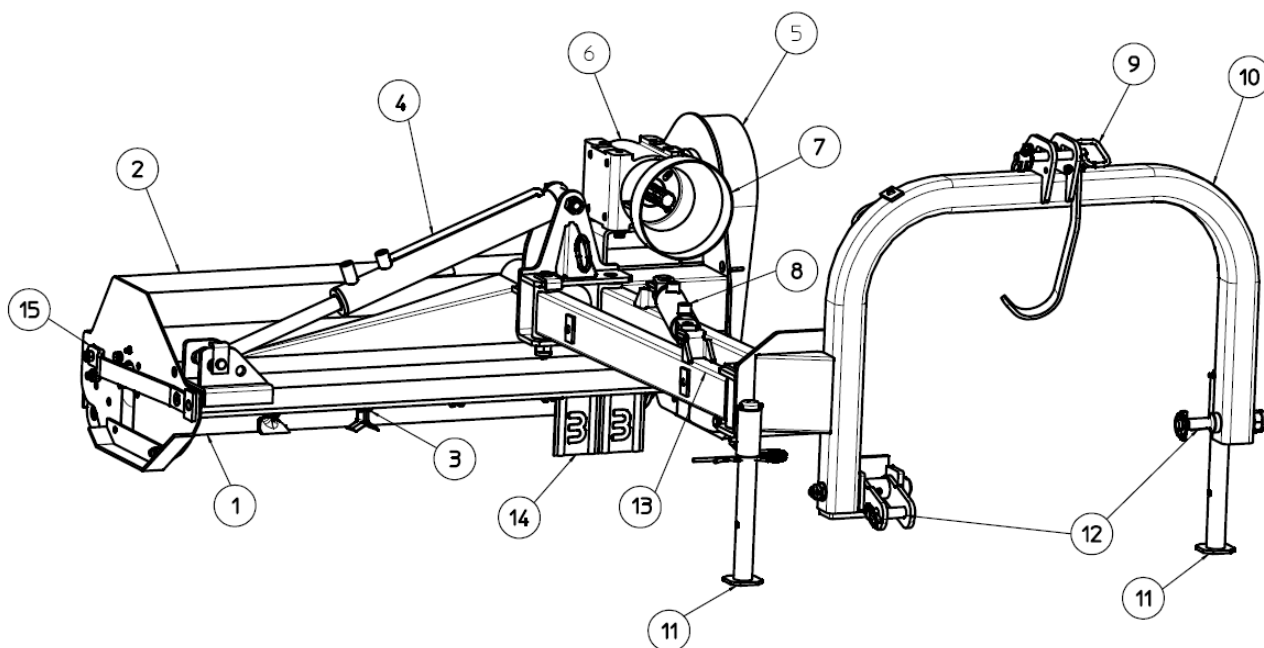
**Any use of the machine other than those listed above is considered unauthorised and dangerous.**

### **1.4.2 DESCRIPTION**

The machine has a machining body made up of a rotor with horizontal axis, on which the cutting tools are mounted, which rotates at high frequency.

The mulcher is essentially made up of:

- a chassis;
- a three point connection system to the tractor;
- a cardanic shaft coupling;
- a gearbox;
- a distributor unit;
- a rotor;
- a series of mulching tools;
- a support device in parked position;
- a roller.



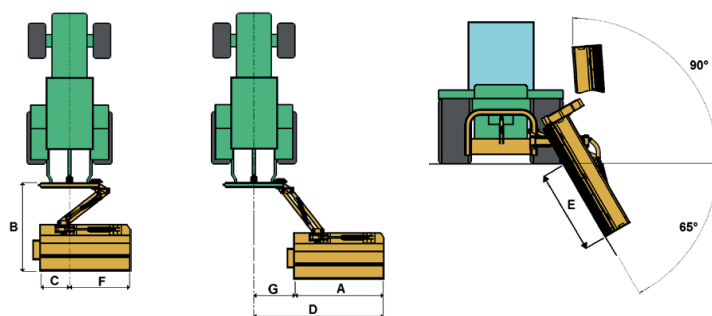
**NAME OF MARKED PARTS:**

| Pos. | Item                |
|------|---------------------|
| 1    | Roller              |
| 2    | Chassis             |
| 3    | Rotor               |
| 4    | Joint jack          |
| 5    | Carter              |
| 6    | Gearbox             |
| 7    | Counter-cowling     |
| 8    | Movement jack       |
| 9    | Third point pin     |
| 10   | Drawbar             |
| 11   | Foot                |
| 12   | Parallel hitch pins |
| 13   | Parallelogram       |
| 14   | Front guards        |
| 15   | Side guard          |

**1.4.3 TECHNICAL DATA**

The machine can work behind the tractor or on the side of the tractor, mowing the banks of ditches inclined upwards or downwards.

The following illustration and table indicate the machine's range of action



| Mod.            | A   | B   | C  | D   | E   | F  | G  |
|-----------------|-----|-----|----|-----|-----|----|----|
|                 | cm  | cm  | cm | cm  | cm  | cm | cm |
| <b>TA/K 115</b> | 115 | 120 | 51 | 157 | 73  | 65 | 42 |
| <b>TA/K 125</b> | 125 | 125 | 60 | 170 | 83  | 65 | 45 |
| <b>TA/K 145</b> | 145 | 125 | 60 | 190 | 103 | 85 | 45 |

| Mod.     |  |  |  |  |  |  |  |  |     |
|----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-----|
|          | cm                                                                                  | Min                                                                                 | Max                                                                                 | n°                                                                                  | n°                                                                                  | n°                                                                                  | PTO                                                                                   | min                                                                                   | max |
| TA/K 115 | 115                                                                                 | 25                                                                                  | 50                                                                                  | 32                                                                                  | 64                                                                                  | 2                                                                                   | 540                                                                                   | 300                                                                                   | 345 |
| TA/K 125 | 125                                                                                 | 25                                                                                  | 50                                                                                  | 34                                                                                  | 68                                                                                  | 2                                                                                   | 540                                                                                   | 310                                                                                   | 355 |
| TA/K 145 | 145                                                                                 | 25                                                                                  | 50                                                                                  | 40                                                                                  | 80                                                                                  | 2                                                                                   | 540                                                                                   | 330                                                                                   | 375 |

### 1.5 PROJECTION OF MATERIALS



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

- make sure machine tool guards are efficient;
- perform proper routine cleaning and maintenance on the machine;
- Make sure there are no persons, animals or property which could be damaged within the working range of the machine.

### 1.6 NOISE



Protect your hearing from the noise generated when working with the machine: wear earmuffs or earplugs.

### 1.7 STORAGE – RECOMMISSIONING

If the machine is immobilised for long periods, store it in a place sheltered from the elements and protect it from being damaged. Before recommissioning, it is advisable to thoroughly clean the entire machine and adequately lubricate all mechanical parts to prevent it from rusting.

Check that the storage temperatures are between 0°C and 50°C.

Before long periods of inactivity, ensure that the following is observed:

- Remove any mulch residues from the rotor and tools.
- Thoroughly clean the machine.
- Perform a visual check of the machine to identify any structural damage or deep scratches to the paint; check that the original safety symbols are present in their positions, that they are complete and legible.
- Grease all mechanical units and locking pins.
- If possible, store the machine in a covered place, on a level and smooth surface.



**The used oil must be suitably recovered and not discarded into the environment since, according to legal regulations in force, it is classified as hazardous waste and as such must be delivered to the appropriate collection centre.**

For the collection of exhausted oil it is compulsory to contact the “**Mandatory Used Oils Consortium**”.

### 1.8 INITIAL START-UP OR RECOMMISSIONING FOLLOWING A LONG PERIOD OF INACTIVITY

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

- Check that the machine is not damaged.
- Check that the mechanical units are in satisfactory condition and not rusted.
- Check the wear of the tools.
- Check (where applicable) on the correct functioning of the lights bar and electrical system.
- Accurately grease all mobile parts;
- Check that there are no oil leakages from connections or tubing;
- Check that all protective devices are correctly positioned.

### 1.9 SCRAPPING

In the event that the machine is scrapped, it must be discarded in the appropriate sites in accordance with the regulations in force. Before scrapping, separate the plastic and rubber parts, electrical and electronic parts. Recover any used oil and discard at the appropriate collection centres.



**The used oil must be suitably recovered and not discarded into the environment since, according to legal regulations in force, it is classified as hazardous waste and as such must be delivered to the appropriate collection centre.**

For the collection of exhausted oil it is compulsory to contact the **"Mandatory Used Oils Consortium"**.

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

### 1.10 SAFETY AND ACCIDENT PREVENTION REGULATIONS

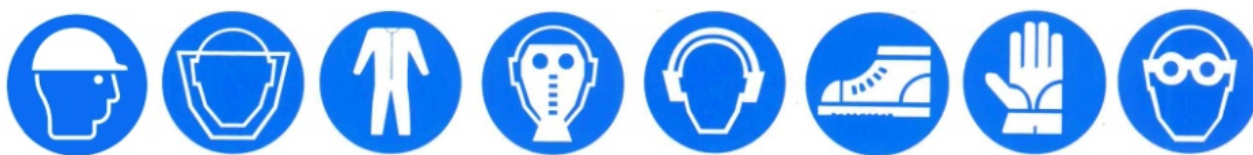


A correct use of the machine, strict observance of the regulations indicated herein and the application of all the precautions aimed at avoiding dangerous situations, contribute to preventing accidents or injuries, ensure a better and longer functioning of the machine and minimise repairs.

The company BERTI MACCHINE AGRICOLE S.P.A. does not accept any objective and subjective responsibility in cases where the regulations indicated in this manual have not been applied and observed.

- The machine is not designed to be used in sectors other than the agricultural sector
- The machine must be used by a single operator driving the tractor..
- Use of the machine other than that specified is considered inappropriate.
- The machine must be used exclusively by authorised, instructed and appropriately trained personnel. The operator in charge, as well as having read and acknowledged the instructions contained in this manual, must have sufficient preparation on how to use the machine properly and must have a driving license. The operator must contact the manufacturer if in doubt on how to use the machine and interpret this manual.
- The manual must always be readily available so as to be able to consult it when necessary. If the manual is lost or damaged, request a replacement copy from BERTI MACCHINE AGRICOLE S.P.A.
- The operator must make sure that during operation of the machine no person or animal is within range of the same. Never operate the machine near persons standing or transiting within range of the machine.
- Do not use the machine when ill, tired or under the influence of medication, drugs or alcohol.
- This machine is normally used during the day, if exceptionally its use is required at night or in reduced visibility conditions, you must use the lighting system of the tractor or eventually an auxiliary lighting system.
- Any arbitrary modification carried out on this machine lifts "BERTI macchine agricole S.p.A." from any responsibility for damages or injuries that may be caused to operators, third parties and things.

- Carefully check the machine each time before starting it.
- BERTI MACCHINE AGRICOLE S.P.A. cannot anticipate all improper uses which can reasonably be foreseen as constituting a potential hazard.
- The signs on the machine provide a series of important instructions: observe them for your own safety.
- Ensure that all safety symbols are legible. Clean the safety symbols and replace with new labels if necessary.
- Before using the machine ensure that all the protective devices are correctly positioned and in satisfactory condition. In the event that these are broken or damaged, replace them immediately.
- Before you get off the tractor and before any maintenance, operate the parking brake, switch off the engine, remove the keys from the dashboard and keep it safe.
- Personnel must use the safety devices and personal protection equipment during use and maintenance of the vehicle.
- It is recommended for the operator assigned to the machine not to wear clothing that can cause entanglement.



- During use the machine may emit dust in the case of dry products. It is advisable to periodically check the filters of the cab ventilation system or to use appropriate respiratory protective devices such as anti-dust face masks.
- During use the operator must have sufficient visibility of the working areas considered to be dangerous; it is, therefore, advisable to keep the mirrors of the tractor clean and in perfect condition.
- The machine must not be left unmanned when the tractor is in motion.
- Keep the machine clean, eliminating foreign bodies which may damage its functioning or harm the operator.
- Avoid operating the machine on muddy, sandy or soft ground.
- Check the wear of the hydraulic tubes. If these are worn, replace them
- Do not use the controls or flexible tubing as grips. These components are mobile and do not provide stable support.
- Any modifications to the machine may compromise safety. In the case of modifications, the user will be solely responsible for any accidents
- Removing or tampering with safety devices is strictly forbidden.
- Ensure the safety pictograms are in good conditions. If the pictograms are damaged, they must be replaced with original ones obtained from the manufacturer and placed in the position shown in the use and maintenance manual (paragraph 1.11.1).
- Pay attention to the risk of unintentional contact of the mulcher with high voltage overhead lines.
- Never use the machine to move people, animals or objects.
- Never use the machine to lift people, animals or objects.

#### **1.10.1 FIRE PREVENTION MEASURES**

- It is advisable that the personnel responsible for operating the vehicle is informed on the principal procedures in the event of fire.
- All fuels and most lubricants and hydraulic fluids are flammable.
- Do not smoke when topping up these fluids, do not re-fill near open flames, do not decant fuels.
- Switch off the tractor engine before refueling, do not refuel indoors.
- Before starting the tractor engine, check for lubricant leakages or residues which may cause small fires.
- Do not store flammable substances in inappropriate locations, do not pierce or burn pressurised containers or canisters, do not accumulate materials impregnated with flammable substances
- Take care of where cloths or replaced materials containing flammable residues are placed.
- In order to minimise the risk of combustion, periodically clean the machine with the appropriate equipment (water cleaners or compressed air).
- Use appropriate extinguishing equipment: Carbon dioxide, foam, chemical powder.
- Avoid using water jets. Only use water jets to cool surfaces exposed to fire.
- Never use petrol, solvents or other flammable or toxic fluids to clean mechanical parts. Rather use homologated commercial solvents which are non-flammable and non-toxic
- Do not perform welding operations in the proximity of tanks, pipes, cans, electrical cables or flammable materials in general
- When welding protect flammable parts with appropriate guards

### **1.11 SAFETY SIGNS**

Ensure that the safety symbols are in satisfactory 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. Ensure that all safety symbols are legible. Clean them using a cloth, water and soap.

#### **1.11.1 LOCATION OF PICTOGRAMS**



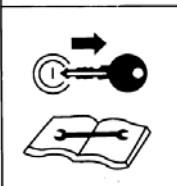
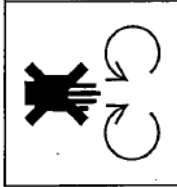
### 1.11.2 DESCRIPTION OF THE PICTOGRAMS



A series of pictograms are given in the manual to make it easier to read and to quickly attract the reader's attention to hazard situations and guidelines that cannot be avoided or sufficiently limited through use of technical protection systems or work organization measures and methods.

These pictograms, in other words, give information on objects and situations that may represent a specific danger.

|      |                                                                                                       |      |                                                                                                                                                                                          |
|------|-------------------------------------------------------------------------------------------------------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br> | <p><b>NOTE - DANGER</b> of cutting hands.</p>                                                         | <br> | <p><b>NOTE - DANGER</b> of contact with rotating tools. Keep a safe distance.</p>                                                                                                        |
| <br> | <p><b>NOTE - DANGER</b> of contact with moving parts. Wait for moving parts to stop.</p>              | <br> | <p><b>NOTE - DANGER</b> of scalding. Keep a safe distance.</p>                                                                                                                           |
| <br> | <p><b>WARNING</b> – Risk of folding machine parts falling.</p>                                        | <br> | <p><b>NOTE - DANGER</b> Material ejected from machine. Keep safe distance (as indicated in the operating manual).</p>                                                                    |
| <br> | <p><b>NOTE - DANGER</b> of contact with moving parts. Do not place hands near transmission belts.</p> | <br> | <p><b>WARNING-</b> Before performing any maintenance or repair operation on the machine, carefully read the instruction manual, stop the tractor engine and remove the ignition key.</p> |

|                                                                                                                                                                           |                                                                                                                   |                                                                                                |                                                                                                                                                                         |                                                                                                                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br>      | <b>NOTE - DANGER</b> of crushing. Do not position yourself between the tractor and the machine.                   |                                                                                                | <br>  | <b>NOTE - DANGER</b> Before performing any maintenance or repair operation on the machine, carefully read the instruction manual, stop the tractor engine and remove the ignition key. |
| <br>     | <b>WARNING</b> – Pressurised fluids. Before performing any operation on the machine, read the instruction manual. |                                                                                                | <br> | <b>NOTE – DANGER</b> of entanglement and dragging. Do not place hands near moving parts.                                                                                               |
|                                                                                         | <b>NOTE – OBLIGATORY</b> use of all personal protection devices.                                                  |                                                                                                |                                                                                      | Points of attachment for lifting the machine.                                                                                                                                          |
|                                                                                         | <b>GREASING POINTS</b>                                                                                            |                                                                                                |                                                                                      | <b>OIL TANK</b>                                                                                                                                                                        |
| <br> | <b>NOTE - DANGER</b> of contact with moving parts. Wait for moving parts to stop.                                 |                                                                                                | <b>50 m</b><br>DISTANZA DI SICUREZZA<br>SAFETY DISTANCE<br>DISTANCES DE SECURITE<br>SICHERHEITSABSTAND<br>VARNOSTNA RAZDALJA                                            | <b>MINIMUM SAFETY DISTANCE</b>                                                                                                                                                         |
|                                                                                         |                                                                                                                   | <b>Direction of rotation</b> and number of revolutions of the tractor power take-off (P.T.O.). |                                                                                                                                                                         |                                                                                                                                                                                        |

### 1.11.3 WARNINGS



The structure, design and efficiency of this machine may cause operators to underestimate risks that can arise during maintenance and/or repair procedures.

Scrupulously comply with the guidelines described in this manual for all maintenance and/or repair procedures in order to avoid any risks inherent to these tasks.

Here we list a few general precautions:

- read the operating and maintenance manual with care;
- perform all maintenance and/or repair in suitable work sites;
- prepare a suitable storage site for the machine;
- collect recovered oil in specific disposal containers;
- use suitable tools with the proper skill;
- employ personal protection devices (DPI).



#### PERFORM MAINTENANCE AND/OR REPAIR IN SUITABLE WORK SITES.

Suitable work sites include a flat, paved and well illuminated support surface that is sufficiently large and, if possible, located inside a building. It must always be possible, when working on the machine, to keep it in a stable position. It may, if necessary, be sustained by special support devices designed to guarantee stability even when the machine is subjected to stresses.



#### PREPARE A SUITABLE STORAGE SITE FOR THE MACHINE.

Store the machine in a covered area. Remember that:

- the machine must be safely positioned so that it will not fall over and so that hook-up and release procedures are simple and easy;
- entryways must permit easy passage;
- the tractor engine must only operate inside the storage site the amount of time necessary for entering and exiting and for manoeuvring: avoid build-up of exhaust gases;
- keep the storage site orderly to make machine movements as easy as possible.



#### COLLECT RECOVERED OIL IN SPECIFIC DISPOSAL CONTAINERS.

Used oil is harmful to the environment and to health. Use all necessary precautions when disposing of used oils. Comply with currently valid legislation in your own country regarding environmental protection and waste disposal legislation.

It is good practice, when changing oil, to wear protective gloves. Carefully wash body parts of the skin comes in contact with the used oil.



#### USE SUITABLE TOOLS WITH PROPER SKILL

Appropriate tools must be used even for the simplest tasks: improper use or incorrect tools can cause serious risks and hazards for persons. In this regard you should also use personal protection devices (DPI).

It is also good practice to keep tools in good shape and transport them with care



#### EMPLOY PERSONAL PROTECTION DEVICES (DPI).

Personal protection devices must be used in accordance with current standards in your own country and depending on the type of task being performed.



#### CODING:

This manual includes an identification code for each element of the machine.

The identification code must be used for:

- 1- The order of the same machine;
- 2- The order of spare parts;
- 3- Request for technical information.

## 2 Moving and transport

Pay maximum attention to safety during loading and unloading operations and ensure that these operations are performed by qualified personnel.

If the machine is lifted, it is obligatory to use the appropriate lifting points indicated in the pictograms.  
To transport the machine use a vehicle with adequate power and dimensions and appropriately fitted.

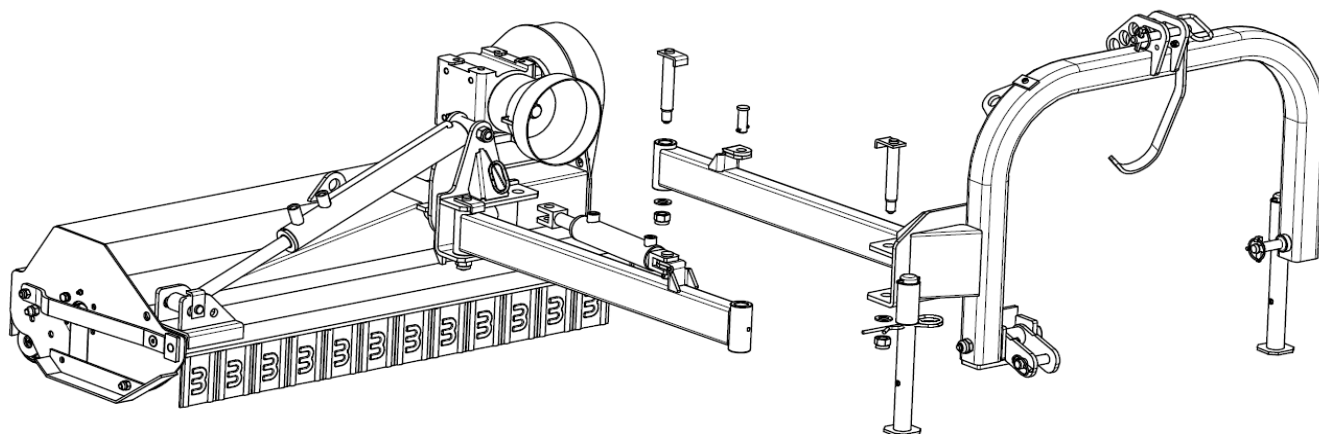
To transport the machine use a vehicle with adequate power and dimensions and appropriately fitted.  
Once loaded, the mulcher must be secured with anchoring ropes.

The machine is supplied with joint blocking material to prevent damage during transport and for increased safety: it is therefore necessary to remove them to make it operational.

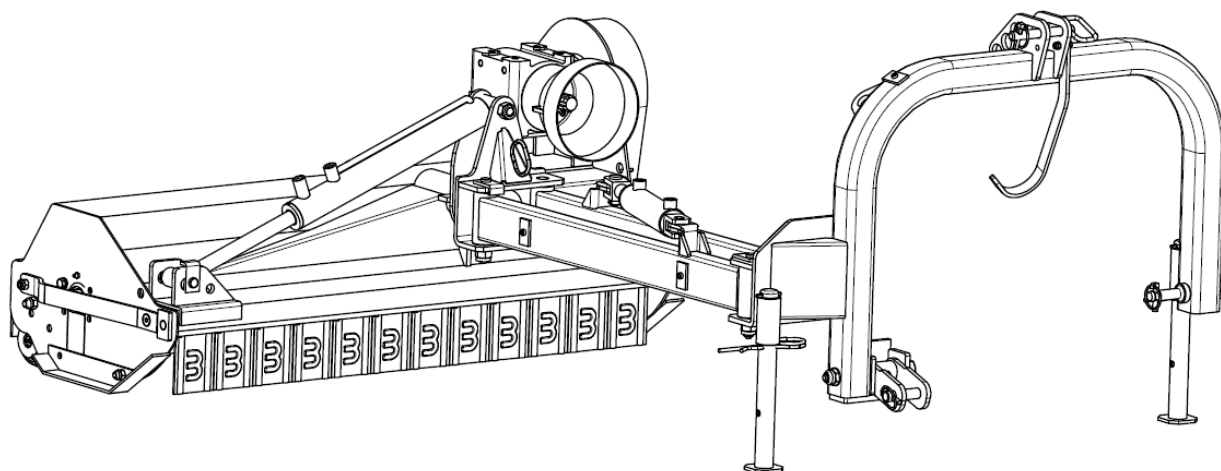


**The procedures described below may present dangerous situation;, also, due to the size and weight of the components, you need to use a hoist.**

Proceed as follows:



- Rest the machine in a stable manner on a flat surface;
- Remove the three-point drawbar from the packing and set it on the ground;
- Move the parallelogram arms with care and attention until they are centered on their connection holes;
- Move the jack and fasten it in place with its pin.



### 3 Transit on public road



In case you have to travel a public road, you are expected to strictly comply with the Highway Code, paying particular attention to speed.

Before entering the road, you need to install any optional light bars.  
It is mandatory to equip the vehicle with a flashing yellow or orange light.

Before re-entering a public road from an unpaved or dirty area, you must thoroughly clean the tyres of the tractor from residues of mud.  
When transiting on a public road, the mulcher must remain in transport position and the PTO of the tractor must be disconnected.



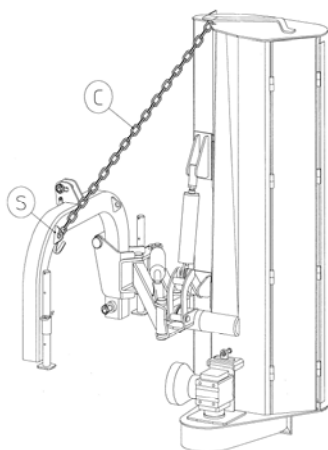
**On-road transport must be done with maximum care and attention to avoid danger to persons and vehicles in transit.**

Before performing on-road travel make sure that all the machine's parts are whole and in good conditions.

Then proceed as follows:

1. disengage the P.T.O. and wait until the mulching rotor is completely stopped
2. Secure the three point linkage with the locking pin
3. lift the machine off the ground enough so that it can be rotated vertical;
4. turn the machine vertical using the distributor that controls the joint jack;
5. fix the safety chain C in the hook S (see the picture);
6. if necessary lift the machine higher so that drive components do not touch the ground;

The illustration on the side indicates the position of the machine during transport.



The weight of the machine modifies the **stability** of the tractor-mulcher unit, affecting the ability to steer and brake, must go at moderate speed.



Machines for processing terrain are generally large and massive and have irregular shapes. They can, as a consequence, have stability problems both when they are alone and when they are connected to the tractor.

Stability problems can be avoided by carefully positioning them on flat surfaces and leaving sufficient room around them to perform all necessary maneuvers.

When the machine is coupled to a tractor and becomes an integral part of it from the road circulation point of view it can alter the stability of the tractor or cause driving and working problems.

Remember, to work safely, that the formula given in the highway code to check vehicle stability is also applicable to the tractor/machine combination when it is at work.

$$M \times s \leq 0,2 T \times i + Z (d+i)$$

$M \leq 0,3$  (prudential value)

$$Z \geq \frac{(M \times s) - (0,2 T \times i)}{(d+i)} \quad \text{(to calculate the ballast)}$$

where:

i = tractor wheel c/c distance (m)

d = distance of the front axle from the front ballasts (m)

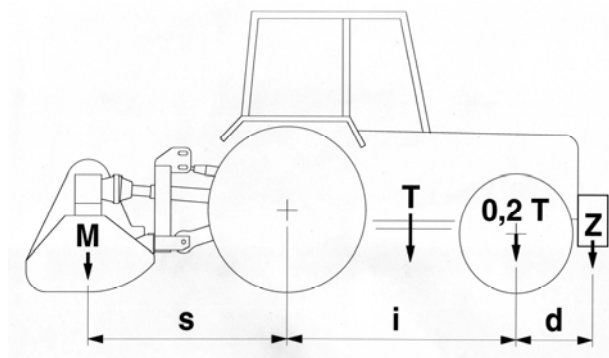
s = equipment overhang from the rear axle (m)

T = tractor mass (kg) (art. 275 D.P.R. 495/92)

Z = ballast mass (kg)

M = equipment mass (kg)

At least 20% of the total tractor operating machine mass must bear on the front axle of the tractor when it is in working order.



## 4 Functioning of the machine



Ensure that all the machine's units are functioning properly during operation. Remember that most of the defects and insufficiencies which may occur during use of the machine are caused by the loosening of fastening elements.

Since all mechanical units and hydraulic connections undergo adjustments during the first stage of the machine's lifespan, it is essential to check the machine with maximum accuracy.

Before using the machine ensure that no persons or animals are present within the range of operation of the machine.

Removing and/or modifying the protective devices of the machine is strictly forbidden.

Do not use the machine when ill, tired or under the influence of medication, drugs or alcohol.

Before using the machine you need to learn the layout of the controls and their operation.

It is good practice to inspect the area prior to mulching to ensure that there are no dangerous obstacles, such as rocks, manholes, miscellaneous items, especially in the vicinity of a roadway.

### 4.1 VISIBILITY

The control of work areas is possible with the tractor rear view mirrors and the operator's sight.



When reversing there may be shadow areas that are not visible in the rear view mirrors.

## 5 Using the mulcher



Before using the machine you need to familiarise with the controls and their operation.

Always stay with all body parts inside the cab of the tractor in all circumstances, to minimise the possibility of exposure to any external dangers.

Before you get off the tractor and before any maintenance and adjustment, operate the parking brake, switch off the engine, remove the key from the dashboard and wait for all mobile parts to stop.

The safety of the operator and bystanders depends on his good sense and prudence in using the machine. It is therefore required to know the position and function of all controls.

The machine must always be in perfect working condition and must be repaired only with original spare parts.

### 5.1 CONNECTION OF THE MACHINE TO THE TRACTOR

The machine must be connected to the tractor with PTO driven at 1000 rpm, with suitable weight and power, compliant with the law requirements in the country of use.



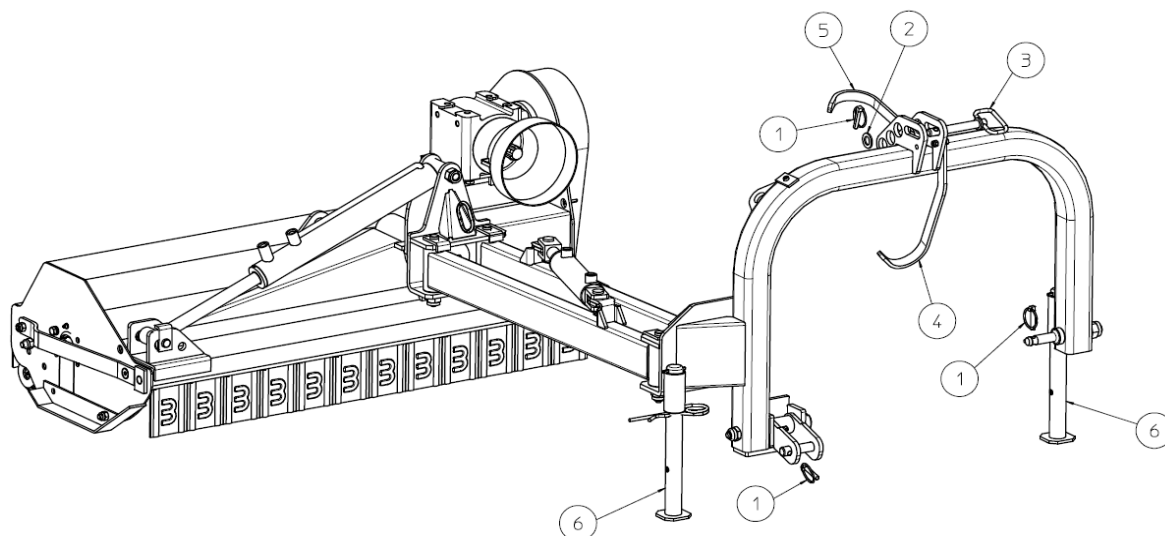
**During use, adjustment, maintenance, repair or handling, the operator must use adequate Personal Protection Equipment (PPE)**



These procedures are very hazardous.  
Avoid standing in front of the machine when it is approached by the tractor.  
Avoid the presence of extraneous persons.  
The P.T.O. must be disengaged during these installation procedures.

Before installing the machine make sure it is in perfect condition, resting on the ground and level and that lubricants are at proper levels and all components subject to wear and/or deterioration are perfectly efficient.  
Also check that the size and weight of the tractor is suitable for carrying the machine.

Make sure that the P.T.O. revolutions of the tractor are the same amount for which the mulcher has been prepared for.



Proceed as follows after making these checks:

- 1- remove the safety pins (1), pull out washer (2) and pin (3);
- 2- carefully bring the tractor near until you center the lower connection pins and thread the connection arms of the lift; reinsert the safety pins (1);
- 3- brake the tractor and turn it off;
- 4- adjust the arm tie-rods in order to prevent the machine from swinging to the right and left;
- 5- install the cardan shaft making sure that the push-buttons are properly inserted in their slots (see paragraph 5.4);
- 6- turn the bracket (4) backwards to position (5);
- 7- install the third point tie-rod, insert the pin supplied with the machine (3), the washer (2) and the related safety pin (1);
- 8- adjust the length of the third point so that the pin is approximately in the center of the slot;
- 9- clamp the third point tie-rod;
- 10- slightly lift the machine off the ground and lift the support feet (6);
- 11- connect the jack drive hoses;.

## 5.2 ANTI-IMPACT SAFETY SYSTEM

The safety system is designed and manufactured by BERTI to increase the safety of the machine and the operator during fieldwork.

During operations, connecting rod A is in the position indicated in figure 1.

If an obstacle is found by the mulching machine during operations (a tree trunk, roots, a stone, etc.), which prevents it from advancing, connecting rod A rotates on pin B, thereby providing a space (approx. 30-40 cm) for the operator to stop the tractor with no mechanical breakage (which might occur if the connection between the tractor and the mulcher is fixed)

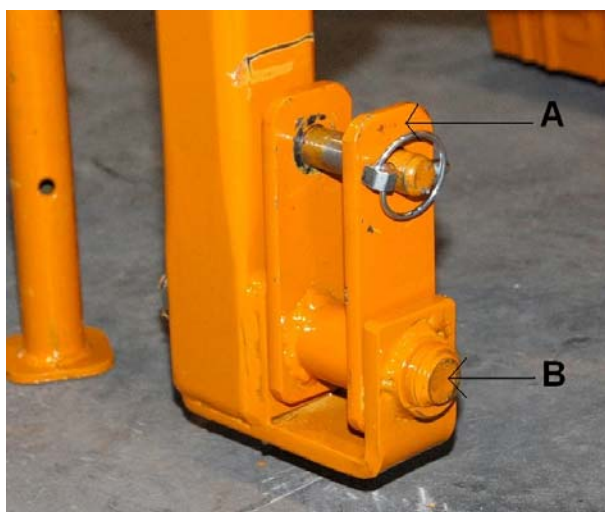


Figure 1

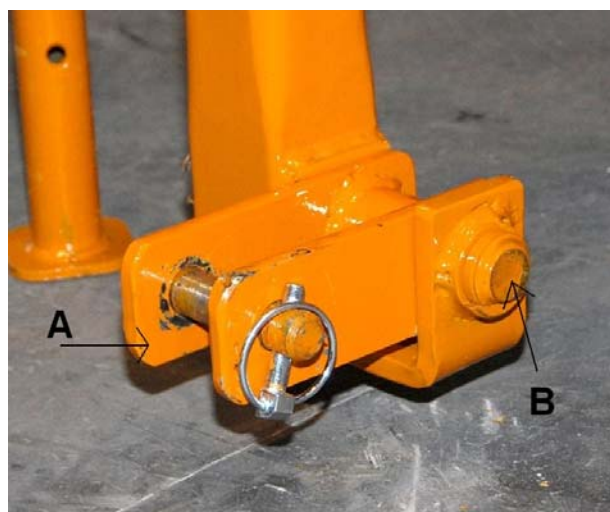


Figure 2

### 5.3 CARDAN SHAFT SPECIFICATIONS

Insert the cardanic shaft on the grooved shaft of the machine, holding the safety pin, release the safety pin and pushing back with the cardan joint until the plug engages with an audible "click " into place. If you do not hear the pin click, repeat the procedure.

Do not use a cardanic shaft without adequate protections compliant with law requirements.



**Avoid in any way to climb over the cardanic shaft, whether it is moving or stationary..**

If the machine is connected to the tractor for the first time, make sure that:

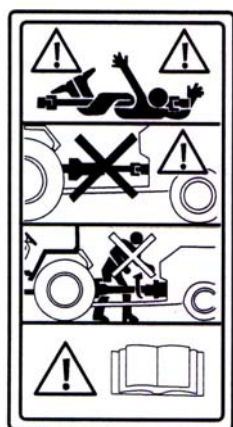
- in maximum steering conditions the cardanic shaft is not completely closed to prevent damage to the multiplier.  
 In the event the cardan joint is too long, you need to shorten it by cutting it adequately as needed.

The cardan shaft is the drive component that powers the shredder; it must be selected based on specific criteria that define its dimensions and length.

Model TA/K machines come standard with cardan shafts. The following table gives the size of the cardan shaft which is much larger than the power that is absorbed during mowing.

This design choice guarantees maximum cardan shaft strength during maximum extension

| DIMENSION OF THE CARDAN SHAFT |                     |         |                                                   |    |
|-------------------------------|---------------------|---------|---------------------------------------------------|----|
| Model                         | Max. power absorbed |         | Power that can be transmitted by the cardan shaft |    |
|                               | kw                  | HP      | kw                                                | HP |
| <b>TA/K 115</b>               | 15 - 26             | 20 - 35 | 30                                                | 40 |
| <b>TA/K 125</b>               | 18 - 30             | 25 - 40 | 30                                                | 40 |
| <b>TA/K 145</b>               | 22 - 33             | 30 - 45 | 30                                                | 40 |



#### **WARNING:**

The cardan shaft, when it operates, can create hazard and danger situations.

Machine operators must:

- read and preserve the operating and maintenance booklet attached with the cardan shaft;
- check that the cardan shaft is suitable for transmitting the required power;
- check that guards are properly installed, whole and effective;
- replace worn, broken or missing guards;
- turn the tractor motor off before working on the cardan shaft or on the machine itself;
- never let children or extraneous persons come near to the machine when it is at work and/or undergoing maintenance;
- set the cardan shaft on its specific support when it is not in use;
- wear suitable garments (that cannot be caught by the machine or pulled into it), especially close-fitting garments (such as work overalls with safety wrists and ankles);



The manufacturer guarantees that the cardan shaft, supplied with the machine, is suitable for safely supporting power absorption levels during work processes as long as all operating and use conditions are complied with.

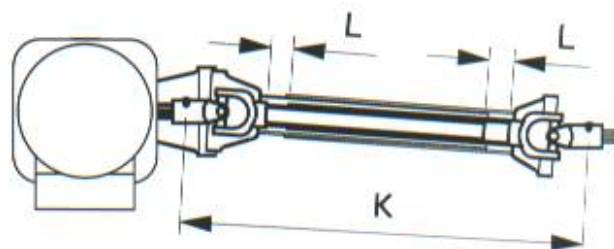
When the cardan shaft is replaced it can be replaced by another that meets EC standards and that is suitable for transmitting the power ratings indicated in the table.

Carefully read the instruction booklet that comes with the cardan shaft before performing these procedures.



**WHEN FIRST INSTALLING THE CARDAN SHAFT:**

Measure the distance K between the races of the P.T.O. push-buttons with the machine rested on the ground and level and with the overgear axially aligned with the tractor's P.T.O.: if the length of the cardan shaft that is supplied needs to be modified make sure that the telescoping tubes overlap for a length that permits between 40 and 50 mm of play L at their ends.



Important: this procedure must be done the first time the shaft is installed, every time it is replaced and every time the machine is installed on another tractor.

**WARNING:** after installing the cardan shaft fasten its guard from both sides with the specific chains.

When the machine is put away for storage always set the cardan shaft on its specific support bracket provided on the three-point drawbar to avoid build-up of dirt or deformation or breakage of the protective guard..



Important: grease the cardan shaft according to the recommendations given in the cardan shaft's manual.

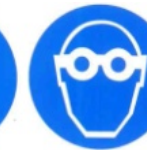
Important: never work with cardan shafts without their safety guards read the instruction booklet that comes with the cardan shaft with care.

After installing the cardan shaft perform several machine opening, closing and joint movements to make sure the shaft hoses are free to move without impediments

#### **5.4 STARTING THE MACHINE**



Before using the machine you need to familiarise with the controls and their operation.



**During use, adjustment, maintenance, repair or handling, the operator must use adequate Personal Protection Equipment (PPE)**



Before starting work, ensure that there are no people or animals within 10 meters to the side and 50 meters to the rear of the machine.



Also, before starting work, verify that ALL machine guards, particularly those of the mulching head, are intact and functioning perfectly.



This paragraph provides instructions for safely using the machine in its work area:

- carefully check that the machine operates properly before using it for the first time in the field: do this by rotating the rotor for a few minutes without any load, applying the instructions illustrated in paragraph 7. Perform this same check every time you start using the machine again;
- whenever turning around when working always disengage the tractor's P.T.O., wait until the rotor stops, lift the machine and then reverse your direction of operation;
- always make sure, when working, that nobody is present in the machine's residual risk zone;

- d. disengage the P.T.O. before lifting the machine, do not operate the machine while it is lifted and always stop the machine before descending from the tractor;

## 5.5 WORK STAGE



Before starting work, ensure that there are no people or animals within range of the machine.

The machine must be used by one operator only positioned inside the tractor driver cab.



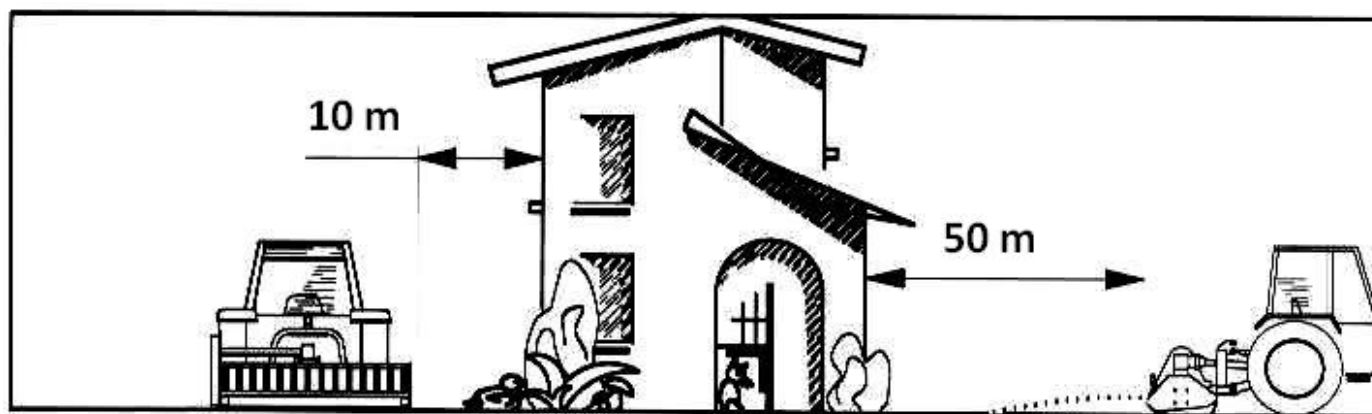
**When changing direction, turning and reversing, lift the head from the ground after disengaging the P.T.O. to prevent damage to the structure.**

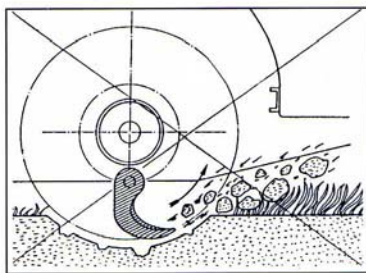
When the machine is properly attached to the tractor, approach the work area and proceed as follows:

- 1- use the distributor that controls the joint jack to turn the machine and bring it horizontal;;
  - 2- use the distributor that controls the movement jack to move the machine until it is in the work zone;
  - 3- remove the locking pin and hook it onto the cylindrical support;
  - 4- use the lift controls to lower the machine until its roller rests on the ground;
  - 5- engage the P.T.O. and gradually accelerate the tractor until you reach a 540 RPM rotation speed;
  - 6- engage 1<sup>st</sup> gear and start to work;
  - 7- If necessary use the lift to adjust working height, preventing cutting tools (hammers or blades) from coming in contact with the ground;
  - 8- If necessary adapt the tractor's forward speed to the job (paragraph 6.1 gives several recommended guideline speeds);
  - 9- Adjust the position of the roller to increase or decrease cutting height with respect to the ground (minimum cutting height 30 mm).
- See the instructions in paragraphs 6.2, in order to make these adjustments.

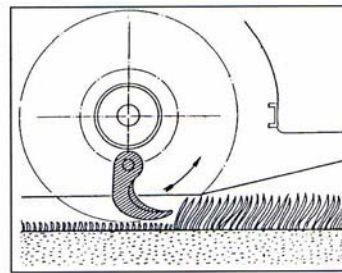


Always make sure, when you have finished working with the machine, that the rotor is stopped before closing the machine





**NO**



**YES**

## 5.6 STOPPING THE MACHINE

To stop the machine you must:

- 1- Operate the parking brake of the tractor;
- 2- Disengage the P.T.O.;
- 3- Switch off the tractor;
- 4- Wait for the rotor to be at complete stand-still before performing any operation on the the mulcher.

## 5.7 DISCONNECTING THE MACHINE



The procedures described below can create danger situations: keep extraneous persons away from where the machine will be positioned and from its immediate vicinity.

Comply rigorously with the following instructions in order to unhook the machine from the tractor.

For disconnecting, proceed as follows:

- 1- Disengage the P.T.O. and wait until the mulching rotor is completely stopped;
- 2- Secure the three point linkage with the locking pin;
- 3- Rest the machine on the levelling roller;
- 4- Put the tractor's brakes on;
- 5- Lower the support feet;
- 6- Completely rest the machine on the ground and turn the tractor off;
- 7- Disconnect the third point tie-rod;
- 8- Disconnect the cardan shaft from the tractor and rest it on the bracket;
- 9- Disconnect the parallel hitches;
- 10- Disconnect the jack supply hoses

Put the connection pins and safety clip pins back in their housings on the drawbar so you will be sure to find them when you use the machine again.



The land on which the machine is parked on must be flat and within a protected area, in order to prevent unauthorised personnel from approaching

## 5.8 JAMMINGS



It must be remembered that any variation in the conditions of the field such as type or density of the material mulched, can cause jamming of the mulcher.

6 Adjustments

6.1 FORWARD SPEED

Adjust the working speed, based on the size (diameter) of the material to be mulched, as well as the degree of grinding to be obtained.



Remember that the forward speed of the tractor must adapt to the type and quantity of material being shredded. EXCESS SPEEDS put excessive stresses on drive components, wearing them out ahead of time. This will produce poor-quality shredded material, the possible expulsion of large pieces of material which, because of their higher inertia may be projected beyond forecast safety limits..

The following table contains speeds we recommend to get maximum performance from the machine:

| RECOMMENDED FORWARD SPEED (km/ h)   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |   |
|-------------------------------------|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|---|
| TYPE OF MATERIAL                    | 0.5 | 1 | 1.5 | 2 | 2.5 | 3 | 3.5 | 4 | 4.5 | 5 | 5.5 | 6 | 6.5 | 7 | 8 |
| Non-woody grass and vegetal residue |     |   |     |   |     |   |     |   |     |   |     |   |     |   |   |

6.2 ADJUSTMENT OF CUTTING HEIGHT

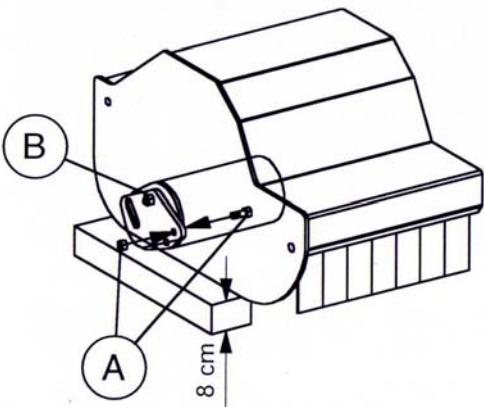
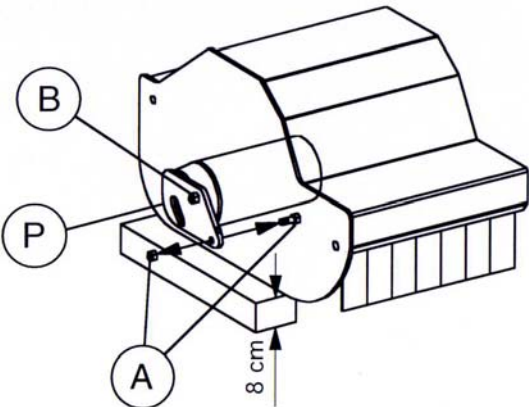
To adjust the cutting height of the tools, you must act on the position of the rear roller of the mulching head.



You need to place the tractor on a stretch of flat land, with the engine stopped, the parking brake on, the P.T.O. disengaged and the ignition key removed from the dashboard and kept safely.

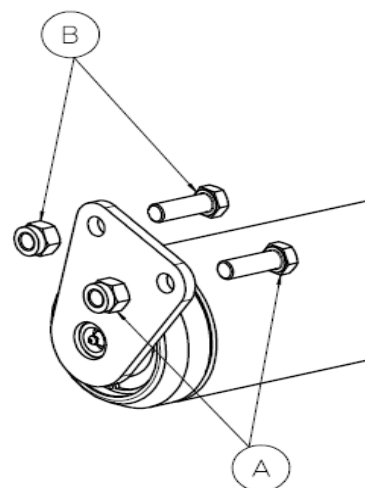
As a general rule, the tools should always be high enough to avoid contact with the ground.

To adjust the position of the roller, proceed as follows (see figures below):



- 1- Position the machine on the level with an 8 cm. shim below the sides;
- 2- Make sure the P.T.O. is disengaged; brake the tractor and turn it off;
- 3- Totally unscrew and remove nut A;
- 4- Loosen bolt B;
- 5- Turn the roller P, until the free hole of the side plates center the hole of the flank;
- 6- Reinstall bolts A and tighten;
- 7- Tighten bolt B.

These procedures must be performed on both sides of the roller.



### 6.3 ADJUSTMENT OF BELT TENSION



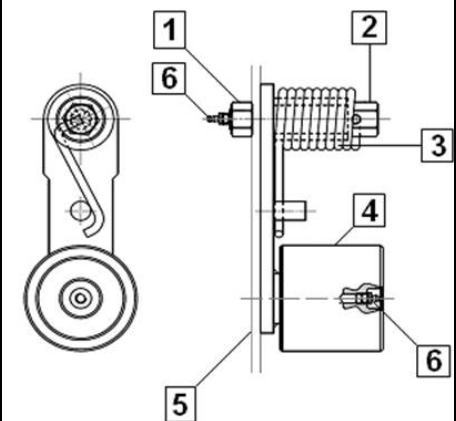
You need to place the tractor on a stretch of flat land, with the engine stopped, with the head resting on the ground, the parking brake on, the P.T.O. disengaged and the ignition key removed from the dashboard and kept safely.

If you were to intervene on the tension of the belts due to a mechanical failure of the automatic tensioner spring or in the case of loosening of the nuts, operate as follows:

- after removing the casing and replacing the spring or other components, take the tensioner unit (figure 1) and place it on the side of the mulcher, inserting the pin with a 30 mm hexagon spanner as in figure 1 and 2;
- rest the sliding roller on the belts making the tensioner rotate;
- with the roller supported, with a 30 mm spanner, rotate the pin by 90° (1/4 turn) and lock the M20 nut by tightening with another 30 mm spanner, then lock the M20 lock nut as well.
- At this point, once the belts are tensioned properly, check that the tensioner is free to rotate by applying pressure to the roller and moving it away from the straps by a few centimetres and release. It must slide freely. Re-assemble the casing with the relative screws.

With the automatic tensioner it is not necessary to intervene on the belt tension. It may be necessary to intervene on the tension of the belts in case of a mechanical failure of the automatic tensioner spring (see fig. 1) or in the case of loosening of the nuts, which fix the tensioner giving the proper PRE-TENSIONING of the spring resulting in the proper tensioning of the belts.

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




#### PRING PRE-TENSIONING

To set the load to the spring, when the roller is resting on the belts, rotate the spring holder pin by acting on the 30 mm hexagon spanner, then tighten the nut and M20 lock nut.

With 2 or 3 belts rotate the pin with a 30 mm hexagon spanner by about 90° (1/4 turn)

With 4 or 5 belts rotate the pin with a 30 mm hexagon spanner by about 180° (half turn)



Never work without the belt protection casing.

## 7 Machine maintenance



In case of failure, the operator must switch off the tractor, remove the ignition key, get off the tractor to assess the problem and intervene on the machine if needed.

Please note that all maintenance must be performed by qualified and trained personnel with the machine stopped. Maintenance and repair operation must not be carried out outside, but in a suitably equipped workshop.



**During use, adjustment, maintenance, repair or handling, the operator must use adequate Personal Protection Equipment (PPE)**

Used oil must be properly recovered and should not be released in the environment, since, according to the prevailing legislation, it is classified as hazardous waste and as such should be given to specialised collection sites. Therefore contact the nearest Used Oils Consortium.

Before starting any maintenance, the following operations must be carried out:

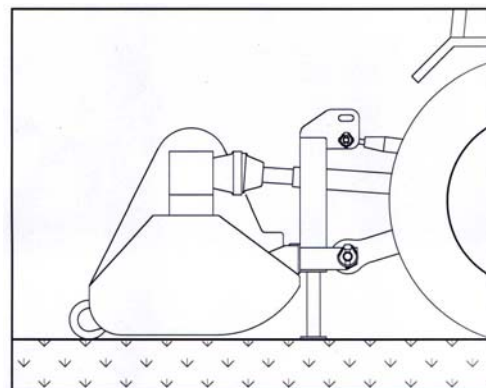
- during maintenance the machine must be placed on flat and compact ground;
- switch off the tractor engine, operate the parking brake and remove the key from the dashboard;
- always use appropriate Personal Protection Equipment (safety shoes, overalls and work gloves, etc....);
- provide all forms of accident prevention for the type of operation being conducted;
- if you use compressed air to clean the machine, you must protect yourself with special glasses;
- do not carry out repairs that you do not know. Always follow instructions and if without these contact the dealer or experienced staff;
- attention: replace worn or cracked tubes every time they are damaged;
- do not use lifting points other than those provided;
- make sure that the lifting equipment is suitable to carry out the operations in compliance with safety rules;
- do not keep the tractor engine running indoors and without a suitable ventilation system to dispose of harmful exhaust gases which are concentrated in the air;
- avoid prolonged or repeated skin contact with fuels/lubricants/fluids, as it may create skin disorders or other syndromes;
- do not ingest fuels/lubricants/fluids. In case of accidental contact with eyes, rinse the affected area thoroughly with clean water;
- operate with extreme caution because of the possible high-temperature of oil/fluid discharged;
- do not weld in closed or unsuitably ventilated environments;
- do not weld on or in proximity of painted surfaces, to prevent the development of toxic vapours. Remove paint with suitable products, then wash the surfaces and leave to dry.
- relieve pressure from the circuits before working;
- do not use your hands to detect leakage of fluids under pressure;
- leakage of fluid under pressure can penetrate the skin and eyes with very serious consequences.

After performing maintenance and/or repair on the machine, you should perform a test to verify the effectiveness of the intervention and the proper operation of the machine.

Proceed as follows:

- 1- if needed, connect the machine to the tractor (see section 5.1);
- 2- make sure that the machine is resting on the levelling roller, but sufficiently high so that the tools do not touch the ground;
- 3- avoid the presence of strangers within 10 m from the machine;
- 4- engage the P.T.O. and accelerate gradually until reaching 540 rpm.

If during the test the machine vibrates, check the tools (see section 7.6).  
If, after checking or replacing tools, there are still vibrations, you must carry out a new dynamic balancing of the rotor: in this case you must contact the dealer.



## 7.1 MAINTENANCE OPERATIONS THAT CAN BE PERFORMED BY THE OPERATOR

The work described in the following paragraphs does not require any specialisation.

The operator must know and follow the directions exactly and decommission the machine.

Periodic inspections and maintenance must be performed in the times and manner prescribed and are the operator's responsibility. Failure to comply with rules and maintenance schedules undermine the proper operation of the machine and its duration and thus voids the warranty.

Increasing the frequency of maintenance in harsh operating conditions (frequent stops and starts, prolonged winter season, etc ....).

To use and maintain the machine at best, follow the instructions (after the first 4 hours and then every 50 hours):

1. check the fixing of all bolts;
2. check the tensioning of the transmission belts;
3. check the lubricants.

## 7.2 GREASING

Using a special greasing pump, thoroughly grease the points indicated.

Only use a manual greasing pump, in order to prevent the breaking of bearing seals and grease passage pipes.

### LUBRICATING THE TRANSMISSION SYSTEM:

Carefully clean components around plugs before working on transmission systems: this prevents dirt from penetrating into these systems.

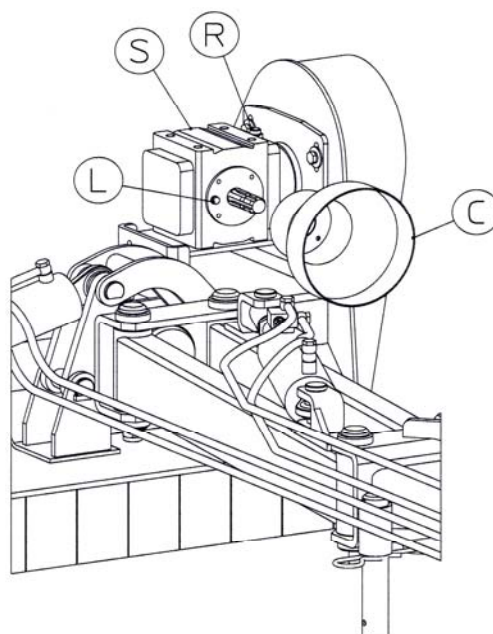
Transmission systems require the following checks::

- 1- check the oil level in the gearbox during the first 20 work hours: oil must come up to the level hole. Add oil as required. Perform the next oil level checks at 50 hour intervals;
- 2- totally replace the oil in the gearbox after the first 40 work hours. Then repeat this every 250 work hours.

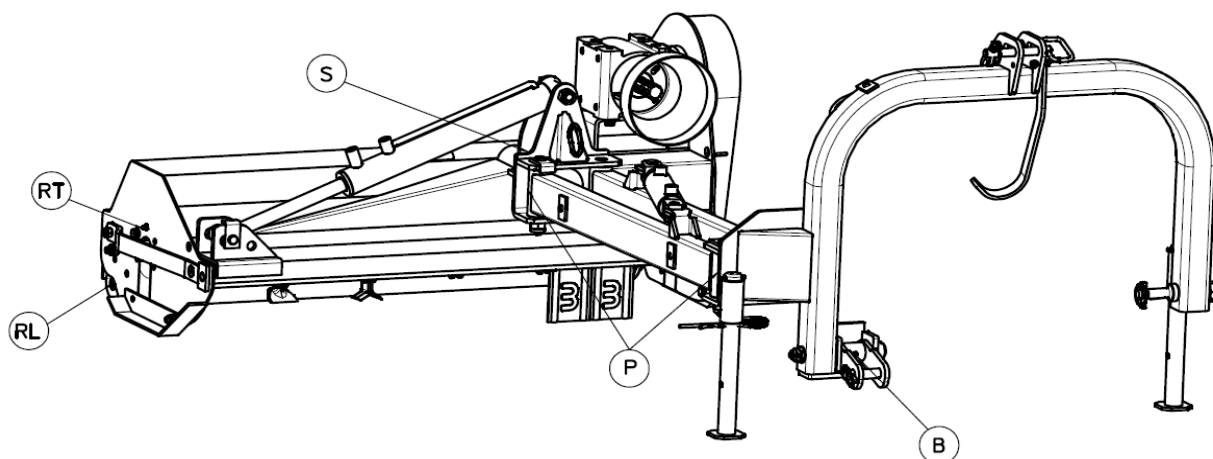
Oil is introduced into the gearbox through the hole closed by plug R

Levelling is possible when the hole is closed with cap L.

Guard C must be removed in order to access cap L..



**GENERAL GREASING:**



RL – levelling roller: grease every 8 work hours on both ends of the roller, pumping in grease until it comes out.

RT – rotor: grease every 8 work hours, pumping a maximum of 1-2 times to avoid harm to the internal bearing seals;  
 The rotor is lubricated from the pulley side using the grease nipple placed on the tube that exits from the transmission casing.

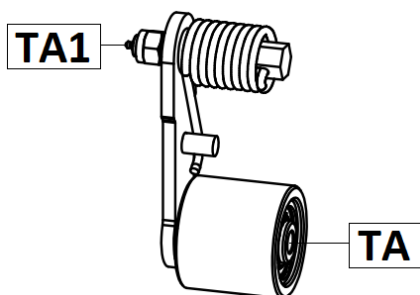
S – joint: grease every 20 hours of work.

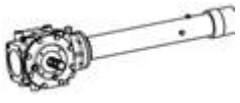
P – parallelogram: grease every 20 hours of work.

B – connecting rod safety system: grease every 20 hours of work.

TA – automatic belts adjuster: grease every 80 hours of work.

TA1 – automatic belts adjuster: grease every 8 hours of work.



|  <b>LUBRIFICANTI RACCOMANDATI - recommended lubricant</b><br><b>empfohlenen Schmiermittel - lubrifiant recommandé</b> |                          |                             |                        |                              |                        |                        |                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------|------------------------|------------------------------|------------------------|------------------------|----------------|
|                                                                                                                      | PETRONAS                 | TAMOIL                      | ENI                    | IP                           | ESSOMOBIL              | SHELL                  | TOTAL          |
|                                                                                                                                                                                                         | AMBRA<br>HYPOIDE<br>140  | TAMGEAR<br>MP<br>85W/140    | ROTRA<br>MP<br>85W-140 | PONTIAX<br>HD<br>85W/140     | MOBILUBE<br>HD 85W/140 | SPIRAX S2 A<br>85W/140 | EP 85W/140     |
|  <b>GREASE</b>                                                                                                       | AMBRA<br>GRS<br>PLUS EP2 | TAMLITH<br>EXTRA BLU<br>EP2 | GREASE<br>MU EP 2      | ATHESIA<br>EP<br>GREASE<br>2 | MOBILPLEX<br>EP 2      | GADUS S2<br>V220 2     | MULTIS<br>EP 2 |

### 7.3 HOT POINTS OF THE MACHINE

Before any maintenance operations ensure that potentially hot parts have cooled.

Pay utmost attention to:

- gearbox (if present to the extension as well);
- transmission casing;
- pulleys and belts.

### 7.4 HYDRAULIC SYSTEM

The machine is equipped with two jacks that drive the movement and the joint; power is supplied from the hydraulic unit of the tractor via the connection of pipes fitted with quick couplings.

The tractor must be provided with two double-acting distributors and one single-acting distributor, with minimum calibration pressure of 130 bar.

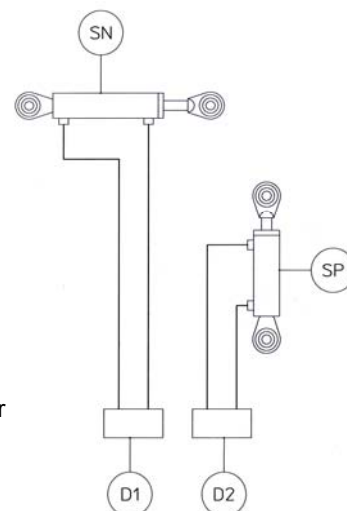
SN: jack joint

D1: double-acting distributor

SP: movement jack

D2: double-acting distributor

Perform several joint and movement maneuvers after connecting up the hoses to eliminate any air bubbles which may have formed inside the jacks.



**IMPORTANT:** connect the jack pipes in pair on the distributors.

Visually inspect the machine to verify that there are no loose fittings, pipes with abrasions, cuts or other signs of wear. Tighten loose fittings and replace worn or damaged pipes.

The displacement jack is equipped with a maximum pressure valve (the detail marked in **bold**) and allows the machine to partially return when an obstacle is found along the path.

Obstacle machine resistance can be adjusted by acting on the screw that adjusts the valve setting:

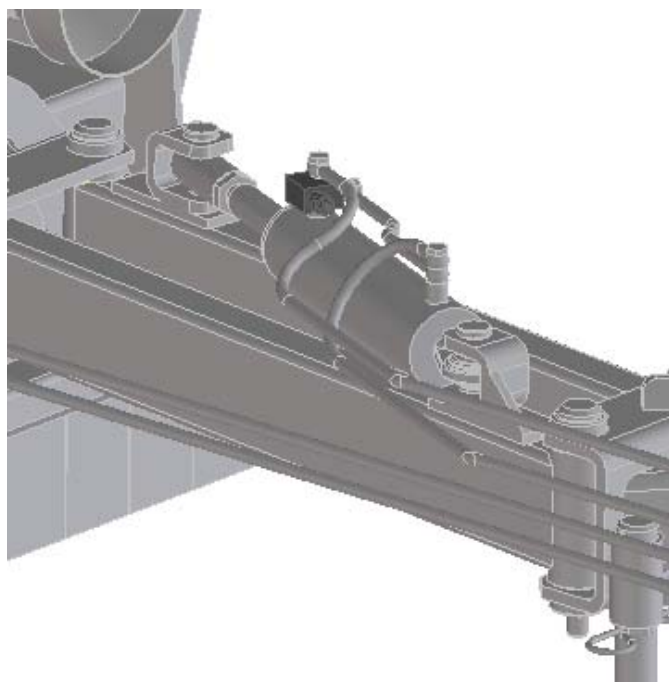
- tightening the screw will increase resistance on the obstacle
- loosening the screw will decrease resistance on the obstacle



**IMPORTANT:** tighten the lock nut after adjustment.



Check that the safety plugs are inserted properly and efficient.  
Make sure the blocking devices have been inserted in the connection pin.  
Check that the quick couplings are inserted properly.



#### 7.4.1 REPLACING A HYDRAULIC PIPE

Before attempting to replace a hydraulic pipe, be careful to take all safety measures for maintenance, stop the machine and close the hydraulic system valves.

Before removing a hydraulic pipe, be sure to release any residual pressure in the system.

Accurately identify the damaged pipe and loosen the two points of connection with a spanner, paying attention to potential leakage of hydraulic fluid.



**Replace the damaged pipe with original spare parts only.**

Ensure the perfect condition of connection points (threads, gaskets, etc....), before installing the new pipe.

With the appropriate tools, tighten the hydraulic fittings showing signs of leakage clockwise. Do not over tighten to avoid damaging the threads of the fittings.

#### 7.5 CHECK WEAR OF TOOLS

Original tools are the results of in-depth research and lengthy experience. They are made out of high quality steel and parts subject to thermal treatments are extremely tough and wear-resistant. Weights and dimensions are rigorously monitored and the rotor does not required to be newly dynamically balanced in case of partial or total tool replacement.

Tools that are broken or excessively worn can cause the machine to vibrate. In this case you must immediately stop working and start working again only after replacing the tools.

If the machine still vibrates after the tools are replaced then the rotor must be dynamically balanced.

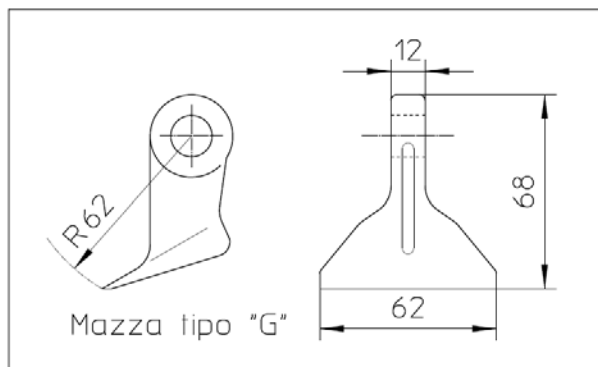
The high strength 10.9 (UNI 3740) fastening screw guarantees a sure connection and duration that corresponds to the duration of the tools.



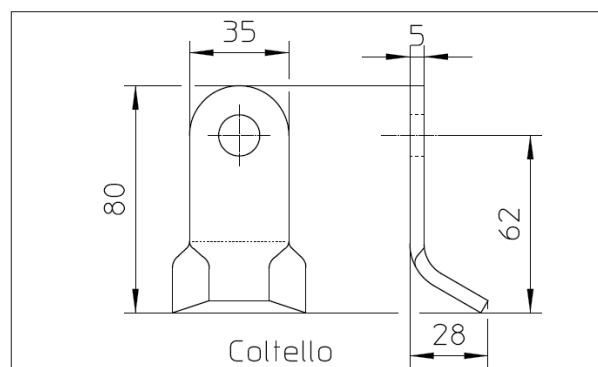
**WARNING: INSTALL ONLY ORIGINAL TOOLS ON THE ROTOR**

##### • TYPES OF TOOLS

Hammer type "G" :



Blade Y :



## 7.6 REPLACING TOOLS

### • REPLACING HAMMERS:



**In case of replacement of tools, you should consider replacing the entire series. Not mounting the original tools can cause excessive vibration of the machine.**

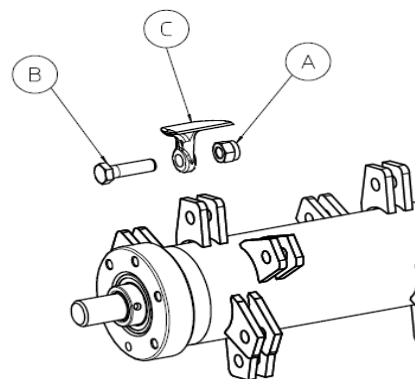
To carry out the operations described below, ascertain that the P.T.O. is disengaged. The tractor must be braked and switched off or disconnected.

Proceed as follows:

- 1- set the machine on the flat;
- 2- disconnect it from the tractor;
- 3- use a suitable hoist (see the weight indicated in paragraph 1.4.3) hooked to a suitably large beam. Hook up the machine and turn it over;
- 4- thoroughly unscrew bolt (A) and remove screw (B);
- 5- replace hammer C and install a new bolt and a new screw;
- 6- turn the machine back into its normal operating position..

Machine forward

Direction of hammer assembly



### • REPLACING BLADES:

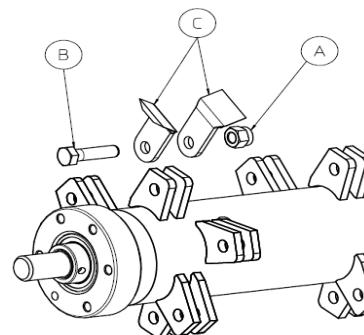


**In case of replacement of tools, you should consider replacing the entire series. Not mounting the original tools can cause excessive vibration of the machine.**

To carry out the operations described below, ascertain that the P.T.O. is disengaged. The tractor must be braked and switched off or disconnected.

Proceed as follows:

- 1- set the machine on the flat;
- 2- disconnect it from the tractor;
- 3- use a suitable hoist (see the weight indicated in paragraph 1.4.3) hooked to a suitably large beam. Hook up the machine and turn it over;
- 4- thoroughly unscrew bolt (A) and remove screw (B);
- 5- replace blades C and install a new bolt and a new screw;
- 6- turn the machine back into its normal operating position.



Our original spare parts guarantee complete and correct machine operation

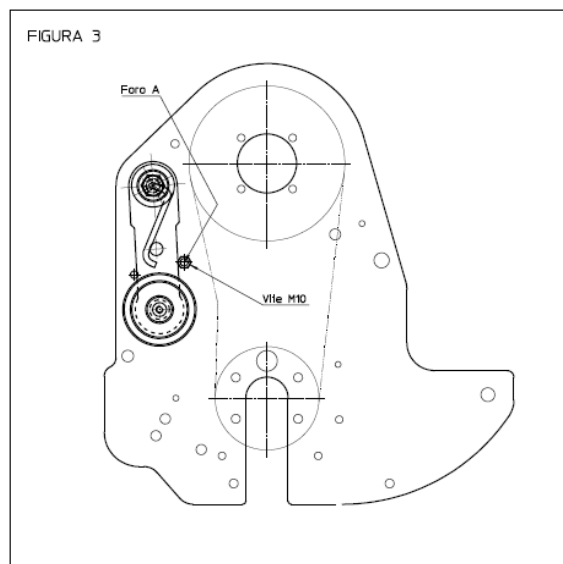
## 7.7 REPLACING THE TRANSMISSION BELTS



To carry out the operations described below, ensure that the mulching head is resting on the ground, with the tractor switched off, the P.T.O. disengaged, the parking brake on and the ignition key removed from the dashboard.

When you need to replace the belts, having given put the mulching machine in safety conditions, remove the casing by removing the screws that secure it. Then work as follows:

- 1- put pressure on the roller by pulling outwards until it you can insert an M10 x30÷40 screw in hole A, then slowly rest the tensioner plate on the screw inserted in hole A;
- 2- at this point there is more pressure on the belts and you can replace them;
- 3- after the replacement, apply pressure on the sliding roller until you remove the M10 screw from hole A, then slowly rest the belt tensioner roller on the belts. The roller has kept the initial pre-tensioning and there is no need for further action;
- 4- re-assemble the casing with the relative screws.



In the case you need to check the tensioning and re-tension the belt tensioner act as described in section 6.3.

## 7.8 CLEANING THE MACHINE

Regularly clean the machine using pressurised 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.

Check that the cables of the machine are in satisfactory condition. If a deterioration of the sheathing is noticed, replace the affected cable..

## 8 Programmed maintenance sheet

| Description                   | Post-Sales Service | Mandatory checks | Run-in operations | Maintenance intervals |  |             |
|-------------------------------|--------------------|------------------|-------------------|-----------------------|--|-------------|
|                               |                    | Hours .....      | Hours .....       | Hours .....           |  | Hours ..... |
|                               |                    |                  |                   |                       |  |             |
|                               |                    |                  |                   |                       |  |             |
|                               |                    |                  |                   |                       |  |             |
|                               |                    |                  |                   |                       |  |             |
|                               |                    |                  |                   |                       |  |             |
|                               |                    |                  |                   |                       |  |             |
| <b>General machine checks</b> |                    |                  |                   |                       |  |             |
| Grease                        |                    |                  |                   |                       |  |             |
|                               |                    |                  |                   |                       |  |             |
| Check bolt tightness          |                    |                  |                   |                       |  |             |
| Check wear of tools           |                    |                  |                   |                       |  |             |
| Replace tools                 |                    |                  |                   |                       |  |             |
| Replace transmission belt     |                    |                  |                   |                       |  |             |
| Etc...                        |                    |                  |                   |                       |  |             |
| <b>Hydraulic system</b>       |                    |                  |                   |                       |  |             |
| Check hydraulic tube sealing  |                    |                  |                   |                       |  |             |
| Check oil level in tank       |                    |                  |                   |                       |  |             |
| Replace hydraulic tubes       |                    |                  |                   |                       |  |             |
| Change hydraulic oil          |                    |                  |                   |                       |  |             |
| Etc...                        |                    |                  |                   |                       |  |             |
| <b>Gearboxes</b>              |                    |                  |                   |                       |  |             |
| Check oil level               |                    |                  |                   |                       |  |             |
| Check locking bolts           |                    |                  |                   |                       |  |             |
| Change oil                    |                    |                  |                   |                       |  |             |
| Etc...                        |                    |                  |                   |                       |  |             |

## 9 Troubleshooting

EXAMPLE:

| FAULT                                  | CAUSE                                                                    | REMEDY                                                                 |
|----------------------------------------|--------------------------------------------------------------------------|------------------------------------------------------------------------|
| Mulching not uniform                   | Worn or damaged tools<br>Machine not properly adjusted<br>Machine jammed | Replace tools<br>Adjust as necessary<br>Decrease forward speed         |
| Premature wear of tools                | Stony ground<br>Cutting height of tools too low                          | Scour the ground in advance<br>Adjust cutting height                   |
| Machine is noisy                       | Rotor unbalanced<br>Damaged, worn or missing tools<br>Worn bearings      | Balancing in specialised workshop<br>Replace tools<br>Replace bearings |
| Excessive heating of transmission unit | Low oil level<br>Oil spent                                               | Add oil<br>Change oil                                                  |
| Etc...                                 |                                                                          |                                                                        |
|                                        |                                                                          |                                                                        |
|                                        |                                                                          |                                                                        |

## 10 Spare parts

The machine must be repaired with original spare parts, which must be requested from the Dealer. Please note that the presence of spare parts should be properly accompanied by the following indications:

- type of vehicle;
- serial number;
- the spare part code can be detected on the Spare Parts Catalogue.

If it is a component that is part of a major unit (rotor, multiplier unit, guards), you should also specify the model and serial number of the unit.

## 11 Guarantee

Check, upon receipt of the machine, that it has not been damaged during shipment and that all accessories are present.

### GUARANTEE TERMS

- The manufacturer guarantees its products for a period of 12 months from the date of delivery on the condition that the herein attached form is fully compiled in all its parts and sent to the manufacturer within 15 days of date of delivery.
- The manufacturer, in accordance with the aforementioned terms, agrees to supply under guarantee coverage all components to be replaced according to its own decision or to the opinion of its own authorized representatives regarding parts that have material or manufacturing defects. Shipping and labour costs in this regard shall in any case be charged to the customer.
- Guarantee coverage does not include payment for damages caused by improper use of the machine by the machine operator and for parts normally subject to wear and tear and breakage such as hammers, blades, belts, etc.
- The manufacturer is not responsible for accidents to the operator or to third parties caused by improper use of the machine.
- This guarantee is not valid whenever:
  - b) assistance and repairs were done by unauthorized individuals or companies;
  - c) the machine has been previously repaired or modified using non-original spare parts;
  - d) whenever there has been a mistake when manoeuvring the machine;
  - e) there has been insufficient maintenance and/or lubrication;
  - f) when permissible power limits have been exceeded;
  - g) whenever the instructions in this manual are not duly complied with;
  - h) whenever unauthorized modifications have been brought to the machine.
- Machine breakdowns during or after the guarantee 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 payments.
- The manufacturer reserves the right, at all times, to bring all due changes with the object of improving its own product and is not obligated to add these changes to previously manufactured machines that have already been delivered or are undergoing manufacture.
- These general guarantee terms replace and cancel all previous explicit or implicit guarantee conditions.

### GUARANTEE CERTIFICATE

**CERTIFICATO DI GARANZIA**  
GUARANTEE CERTIFICATE  
GARANTIESCHEIN  
CERTIFICAT DE GARANTIE



**FAC-SIMILE**

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 article 13 of the Legislative Decree n. 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 n° 196/2003.

.....  
Firma dell'acquirente / Purchaser's signature / Unterschrift des Käufers / Signature de l'acheteur

Nome dell'acquirente / Purchaser's name / Name des Käufers / Nom de l'acheteur

Indirizzo / Address / Anschrift / Adresse

La casa costruttrice garantisce i suoi prodotti per un periodo di 12 mesi dalla data della consegna all'utilizzatore, se la cartolina viene compilata e spedita entro 15 gg. dalla data di consegna / The manufacturer guarantees its products for a period of 12 months from the date of delivery on the condition that the attached form is fully compiled in all its parts and sent to the manufacturer within 15 days of date of delivery / Der Hersteller garantiert die eigenen Produkte für einen Zeitraum von 12 Monaten ab dem Datum der Auslieferung unter der Voraussetzung, dass der beiliegende Garantieschein in allen Teile ausgefüllt innerhalb von 15 Tagen nach dem Datum der Auslieferung an den Hersteller gesandt wird / La firme constructrice garantit ses produits pendant un délai de 12 mois à compter de la date de livraison, à charge d'expédier le formulaire ci-dessous, entièrement rempli, à la firme constructrice dans les 15 jours de la date de livraison.

[illegible]

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