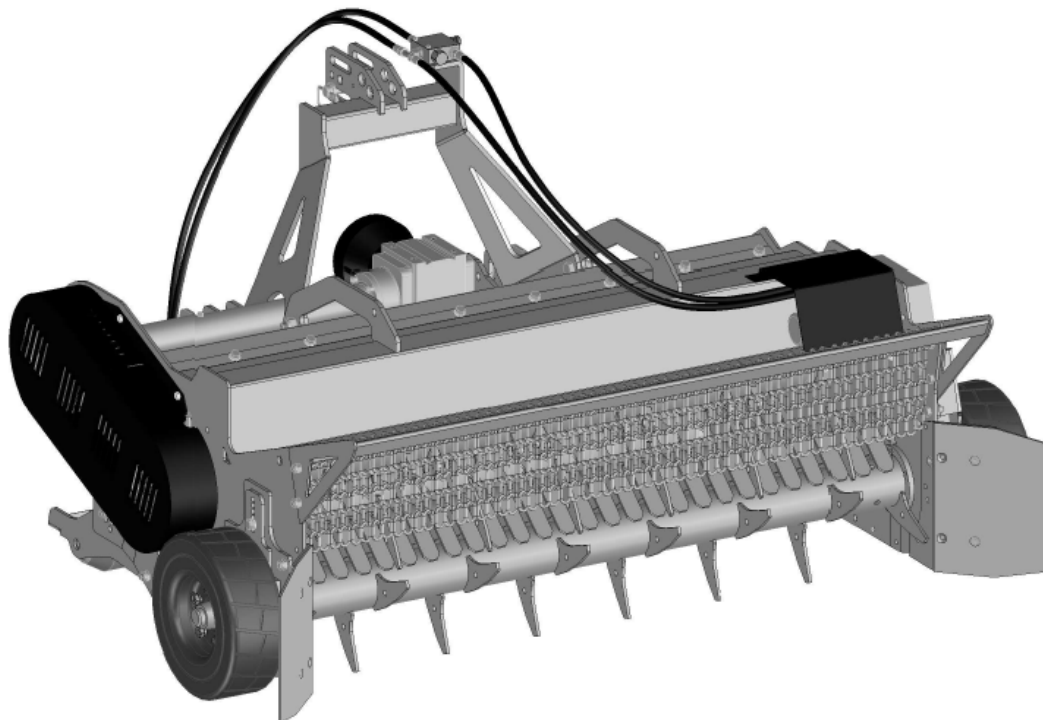




BERTI[®]
MACCHINE AGRICOLE



CE



Mod. **PICKER/F**, Operating and maintenance manual

PICKER /F Mulcher

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PICKER /F Mulcher

1.0 Guarantee

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

1.1 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:
 - a) assistance and repairs were done by unauthorized individuals or companies;
 - b) the machine has been previously repaired or modified using non-original spare parts;
 - c) whenever there has been a mistake when manoeuvring the machine;
 - d) there has been insufficient maintenance and/or lubrication;
 - e) when permissible power limits have been exceeded;
 - f) whenever the instructions in this manual are not duly complied with;
 - g) 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.

1.2 GUARANTEE CERTIFICATE

CERTIFICATO DI GARANZIA GUARANTEE CERTIFICATE GARANTIESCHEIN CERTIFICAT DE GARANTIE CERTIFICADO DE GARANTÍA GARANTIBEVIS GARANTIECERTIFICAAT			
Nome / Name / Nom / Nombre / Namn / Naam Indirizzo / Address / Anschrift / Adresse / Dirección / Adress / Adres <i>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.</i> <i>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.</i> <i>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.</i> <i>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.</i> <i>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.</i> <i>Undertecknad bekräftar mottagandet av användar- och underhållsmanualen och har informerats angående hantering av personuppgifter enligt lagdekret 196/03.</i> <i>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.</i> 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			

2.0 Introduction

2.1 INFORMATION ON THE MANUAL

This manual describes all instructions for operating and maintaining the machine in question as well as accident prevention standards.

We recommend reading it with care and attentively complying with all the procedures described in it before starting up, using or maintaining the machine because:



THE MANUFACTURER DECLINES ALL RESPONSIBILITY FOR DAMAGE CAUSED BY FAILURE TO COMPLY WITH THE STANDARDS AND GUIDELINES CONTAINED IN THIS MANUAL.



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.

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.

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.

2.2 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.

2.3 COPYRIGHT

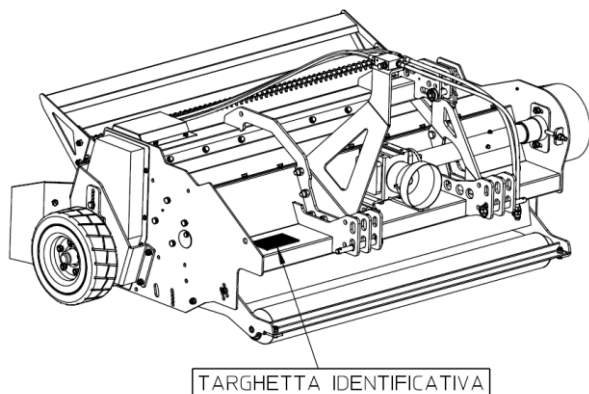
The copyright for the present manual belongs to BERTI MACCHINE AGRICOLE S.P.A.. The manual contains technical texts, drawings and illustrations which must not be divulged or transmitted to third parties in full or partially, without the written authorisation of BERTI MACCHINE AGRICOLE S.P.A.

PICKER /F Mulcher**2.4 MACHINE IDENTIFICATION PLATE AND EEC MARK**

The identification plate indicates:

- 1- Machine model;
- 2- Serial No.
- 3- Weight;
- 4- EEC mark.

Positioning of plate:



NOTE: To order spare parts or request technical information it is essential to refer to the model and serial number of the machine.

3.0 Information on the machine

3.1 AUTHORISED USE

The machine **Mod. PICKER** has been designed and manufactured for mulching and collecting pruning of vineyard and orchard, as well as of residue of hedges, etc. from the ground.

The machine is coupled to the tractor by a 3-point link and acts on the ground by virtue of its own weight and rotation of the rotor activated by the power take-off of the tractor via a cardan joint.

It is designed to work well even on stony and uneven terrains, as well as on smooth meadow tree cultures.

The machine is not designed to be used in sectors other than the agricultural sector.

The machine can be used:

- to mulch pruning and branches of vineyards and orchards, with a max. diameter of 8 cm;
- to mulch residue of under wood;
- to mulch other vegetable residue of plants nurseries and likes;
- to mulch on uneven terrains with stones of small/mid size (max Ø 10 cm).

It is prohibited to use the machine:

- if it is coupled with undersized tractors;
- on terrains with stones with bigger diameter than 10 cm;
- if terrains do not permit stable tractor operation, such as steep rising or descending slopes, the vicinity of ditches or cliffs, very uneven terrain, etc.;
- to mulch branches of more than 8 cm of diameter;
- in situations that require sharp turns;



IMPORTANT:

REMEMBER THAT YOUR OWN VISIBILITY AND THAT OF OTHER VEHICLES MAY BE IMPAIRED WHEN WORKING ON DUSTY TERRAIN.

PICKER /F Mulcher**3.2 USING THE MULCHER**

In order for the PICKER/F mulcher to operate, it must be pushed by the tractor in front as shown in Fig. 1, or by the tractor at the back in reverse gear as shown in Fig. 2.

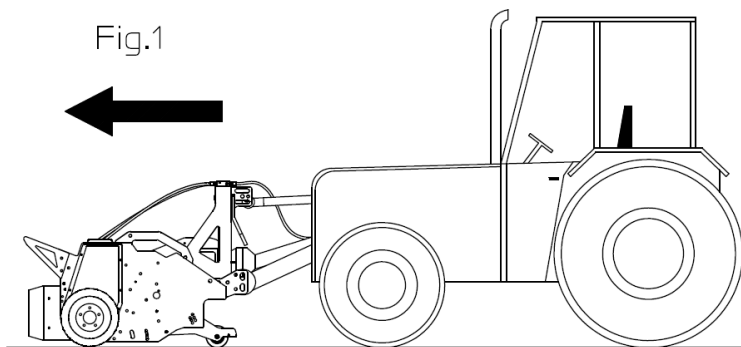
Methods of using the machine:

3.2.1 TRACTOR WITH FRONT ATTACHMENT

Can be used on tractors with front lifter. Check that the number of revolutions of the P.T.O. corresponds with the number of revolutions set on the machine. If these do not correspond, invert the position of the machine pulleys (see Point 7.8). The front P.T.O. of the tractor, seen from the front, must turn in an anti-clockwise direction.



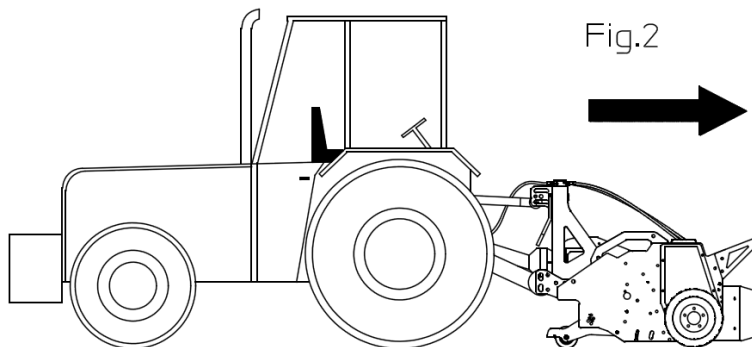
Fig.1

**3.2.2 TRACTORS WITH REVERSE DRIVE**

Can be used on tractors designed for reverse drive by using the reverse gear. Check that the number of revolutions of the P.T.O. corresponds with the number of revolutions set on the machine. If these do not correspond, invert the position of the machine pulleys (see Point 7.8). The rear P.T.O. of the tractor, seen from the front, must turn in a clockwise direction.

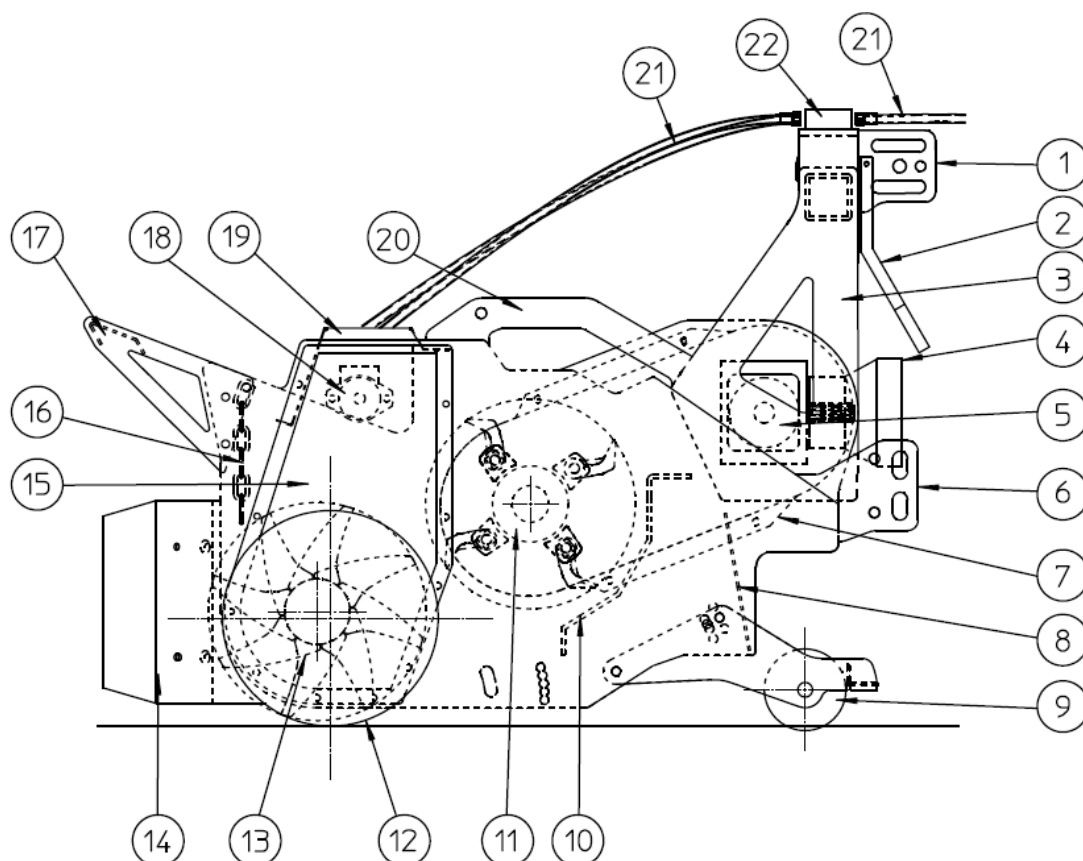


Fig.2



PICKER /F Mulcher

3.3 BASIC COMPONENTS OF THE MACHINE



NAME OF MARKED PARTS:

Pos.	Item
1	3-point link
2	Cardan support at rest
3	Linkage
4	PTO Cone
5	Gearbox
6	Attachment to parallel arms of tractor
7	Belts cover
8	Protection
9	Support roller with scraper
10	Grid for rear discharge
11	Mulching rotor
12	Adjustable front stabilising wheels
13	PICK-UP rotor
14	Conveying guards
15	Chain housing
16	Front protection chains
17	Front protective device
18	Hydraulic motor
19	Hydraulic motor housing
20	Main Frame
21	Hydraulic system tubes
22	PICK-UP rotor speed adjustment valve

PICKER /F Mulcher

3.4 TECHNICAL DATA

MODEL	PICKER/F 140	PICKER/F 160	PICKER/F 180
Total width cm	190	210	230
Working width cm	140	160	180
Length cm	160	160	160
Height cm	115	115	115
Weight Kg	1190	1270	1350
Number of tools No.	Hammers Type "A" No. 18 Double cutting hammers No. 24	Hammers Type "A" No. 22 Double cutting hammers No. 28	Hammers Type "A" No. 24 Double cutting hammers No. 32
Tractor power HP min / HP max	80 / 140	80 / 140	80 / 140
Number belts No.	4	4	4
PTO speed rev / min	1000 / 540	1000 / 540	1000 / 540
Hydraulic system pressure bar	200	200	200

3.5 STANDARD 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 require to be newly dynamically balanced in case of partial or total tool replacement.

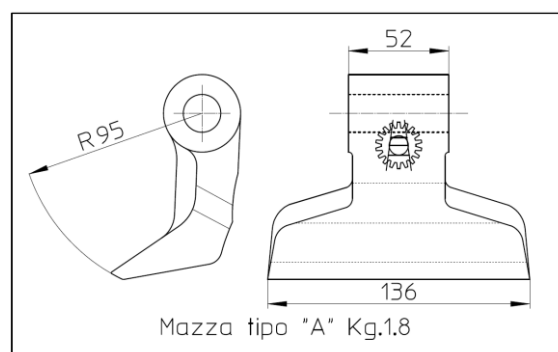
Tools that are broken or excessively worn can cause the machine to vibrate. In this case you must immediately stop working and start working again only after replacing the tools.

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.

TYPE OF TOOLS

WARNING:
INSTALL ONLY ORIGINAL TOOLS ON THE ROTOR
BEARING THE BERTI TRADEMARK



PICKER /F Mulcher**3.6 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:

- 1- Remove any mulch residues from the rotor and tools.
- 2- Thoroughly clean the machine.
- 3- 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.
- 4- Grease all mechanical units and locking pins.
- 5- 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.

3.7 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 :

- 1- Check that the machine is not damaged.
- 2- Check that the mechanical units are in satisfactory condition and not rusted.
- 3- Check the wear of the tools.
- 4- Check (where applicable) on the correct functioning of the lights bar and electrical system.
- 5- Grease all supports.
- 6- Check lubrication.
- 7- Check that there are no oil leakages from connections or tubing.
- 8- Check the condition of the transmission.
- 9- Check that all protective devices are correctly positioned, undamaged and complete.
- 10- Before reinstalling the cardan shaft, check that it is the one supplied.

After the first 4 hours of operation and subsequently every 50 hours of operation:

- 1- Check that all bolts are tight.
- 2- Check on the tension of the transmission belts.
- 3- Remove the chain housing t check on the chain tension which is automatically set.
- 4- Check lubrication.

3.8 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.

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

PICKER /F Mulcher**3.9 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.

3.9.1 GENERAL PRECAUTIONS

- Check that the machine has not been damaged during transport and if this is the case, immediately notify the manufacturer or dealer.
- 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.
- 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.
- 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.
- Removing or tampering with safety devices is strictly forbidden.
- Any modifications to the machine may compromise safety. In the case of modifications, the user will be solely responsible for any accidents.
- Do not use the controls or flexible tubing as grips. These components are mobile and do not provide stable support.
- Check the wear of the hydraulic tubes. If these are worn, replace them.
- Avoid operating the machine on muddy, sandy or soft ground.
- Take care to avoid accidental contact of the mulcher with high voltage overhead lines.
- The machine must not be left unmanned when the tractor is in motion.
- 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 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.
- Before use, check that all bolts are tight.
- Do not use the machine without the protective devices.
- Keep the machine clean, eliminating foreign bodies which may damage its functioning or harm the operator.
- Before acting upon moving parts of the machine, stop the tractor and turn off the engine.
- Disconnect the machine from the tractor on level ground, ensuring that it rests stably on the ground.
- Install the machine so as to avoid jolts which may affect its stability.
- Allow the machine to be used only by authorised personnel, with an appropriately licence for driving tractors.
- Ensure that no persons or animals are present within the manoeuvring and operating range.
- Prohibit anyone from remaining within the range of the machine during operations and maintain a safe distance as indicated in the present operating and maintenance manual.
- Do not transport persons, animals or objects on the machine.
- Use exclusively original spare parts.
- NOTE: Do not wear clothing which can become entangled in moving parts.
- BERTI MACCHINE AGRICOLE S.P.A. is not responsible for damage or injury which may be incurred by operators, third parties or property due to any arbitrary modification to this machine.
- BERTI MACCHINE AGRICOLE S.P.A. cannot anticipate all improper uses which can reasonably be foreseen as constituting a potential hazard.
- 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.
- Consult the manufacturer or authorised dealers for all clarifications regarding the operation and maintenance of the machine.

PICKER /F Mulcher**3.9.2 SAFE OPERATION AND MAINTENANCE OF THE MACHINE**

All due precautionary measures have been taken during design and manufacture of this machine to eliminate all risks for the machine operator. Residual risks, hazards and dangers may remain however regarding operation, use and maintenance and/or repair.

The following section gives all the instructions and information that is necessary or must be adopted to prevent the main risks connected with use of the machine in accordance with current safety regulations. These regard, in particular:

- connection between tractor and operating machine;
- protection of moving drive parts;
- projection of materials;
- noise;
- personal protection devices (DPI);
- stability.

3.9.3 CONNECTION BETWEEN TRACTOR AND OPERATING MACHINE

A common cause of injury regards procedures for hooking-up and releasing the machine from the tractor. Injuries are mainly caused by crushing or torn or injured muscles caused by exerting excess forces.

It is necessary for:

- all adjustments to be done with the machine on the level, the PTO disengaged and with the tractor braked and off;
- always make sure the machine is securely blocked and positioned in place when it is disconnected: this will prevent accidental movements or tipping over which can have serious consequences for persons or property in the vicinity of the machine;
- the tractor operator and the ground-level operator must coordinate their connection and release procedures;
- it is best to employ quick-connection systems or use a specific connection jack.



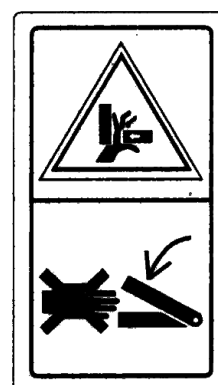
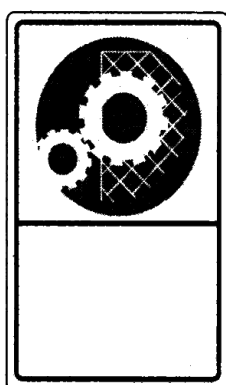
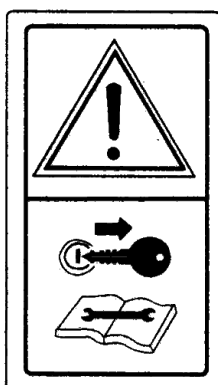
DO NOT STAND
BETWEEN MACHINE
AND TRACTOR !!

3.9.4 PROTECTION OF MOVING DRIVE PARTS

Injuries caused by being caught and pulled by moving drive parts are often very severe. They are caused both by inefficient protection due to broken or worn safety devices and by wearing unsuitable garments.

It is necessary for the P.T.O., cardan shaft, and all moving parts:

- to check the presence and condition of all safety guards and devices;
- to replace worn and/or broken safety devices;
- to avoid working in the vicinity of moving parts;
- to turn the tractor engine off before working on the transmission and the machine;
- to always prevent children or extraneous persons from approaching the machine when it is at work;
- to wear suitable close-fitting garments;



BEFORE DOING ANY WORK ON THE MACHINE ALWAYS READ THE OPERATING AND MAINTENANCE MANUAL WITH CARE, STOP THE TRACTOR'S ENGINE AND PULL THE KEYS OUT FROM ITS DASHBOARD	MAKE SURE SAFETY GUARDS AND DEVICES ARE IN EFFICIENT OPERATING ORDER.	DANGER OF BEING CAUGHT AND PULLED IN. WARNING! DO NOT APPROACH MOVING PARTS	DANGER OF CRUSHING. WARNING! DO NOT APPROACH REMOVABLE MACHINE PARTS
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PICKER /F Mulcher

3.9.5 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.

3.9.6 NOISE



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

3.9.7 PERSONAL PROTECTION DEVICES



Personal protection devices that comply with current standards in your country must be used in function of the type of job being performed.

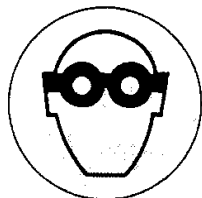
A Personal Protection Device is any equipment destined to be worn or held by the operator in order to protect him against one or more risks. Keep in mind, when selecting personal protection devices, that:

- Personal Protection Devices must be suited for the work conditions;
- they must not generate risks that are greater than the risk they should prevent;
- they must take the worker's ergonomic and physiological needs into account;
- they must adapt to the needs of each single user;
- if multiple Personal Protection Devices must be used at the same time because of the presence of multiple risks then they must be used in such a way that they are compatible with each other.

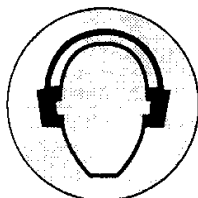
It is always good practice, when using operating machines, to wear suitable work garments. Avoid any garments that are loose or flappy,

Use the following Personal Protection Devices when performing routine or extraordinary maintenance and/or repairs:

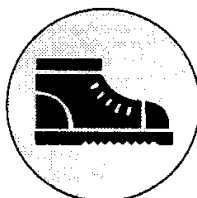
- glasses or visors protecting against projection of splinters or objects;
- leather safety gloves protecting against punctures, cuts, burns, etc.;
- reinforced leather aprons or the like;
- safety shoes;



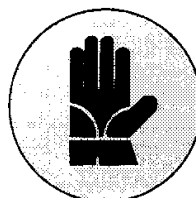
MANDATORY EYE
PROTECTION



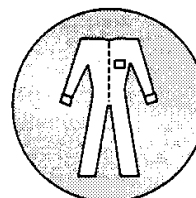
MANDATORY
HEARING
PROTECTION



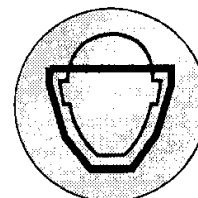
MANDATORY
SAFETY SHOES



MANDATORY
SAFETY GLOVES



MANDATORY
BODY
PROTECTION



MANDATORY FACE
PROTECTION

PICKER /F Mulcher**3.9.8 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.
- 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.

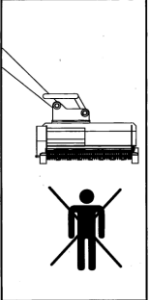
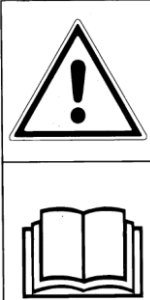
3.10 SAFETY SIGNS

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.

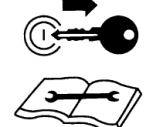
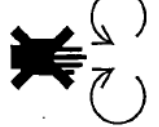
Ensure that all safety symbols are legible. Clean them using a cloth, water and soap.

PICKER /F Mulcher

3.10.1 DESCRIPTION OF THE PICTOGRAMS

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

PICKER /F Mulcher

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

4.0 Moving and transport

4.1 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.

4.2 TRANSPORT ON ROAD



WARNING:

ON-ROAD TRANSPORT MUST BE DONE WITH MAXIMUM CARE AND ATTENTION TO AVOID DANGER TO PERSONS AND VEHICLES IN TRANSIT.

IN THE EVENT THAT A PUBLIC ROAD IS USED, STRICTLY OBSERVE THE ROAD RULES.

Before performing on-road travel make sure that all the machine's parts are whole and in good conditions; also install optional light bars where necessary. The vehicle must be fitted with a yellow or orange flashing light.

Then proceed as follows:

- 1- Disengage the P. T. O. and wait until the rotor is stopped
- 2- Lift up the machine with the arms of tractor;
- 3- Always follow the local regulations of transport on road.

The weight of the machine changes the stability of the tractor-mulcher combination, affecting the steering and braking capacity, therefore, proceed at moderate speed.



WARNING:

DURING ON-ROAD TRANSPORT, THE P.T.O. AND THE HYDRAULIC SYSTEM MUST NOT BE ACTIVATED FOR ANY REASON WHATSOEVER.

4.3 STABILITY



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 manoeuvres.

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)

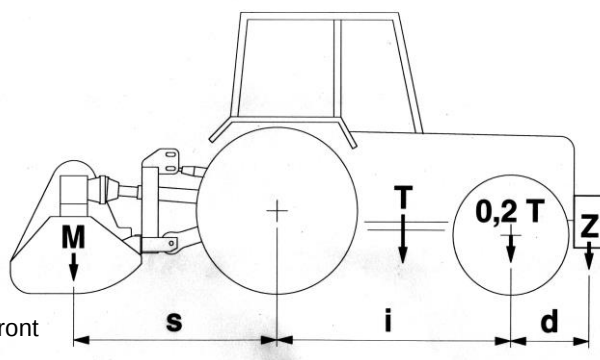
s = equipment overhang from the rear axle (m)

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.



5.0 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.

5.1 COMMAND AND CONTROL INSTRUMENTS

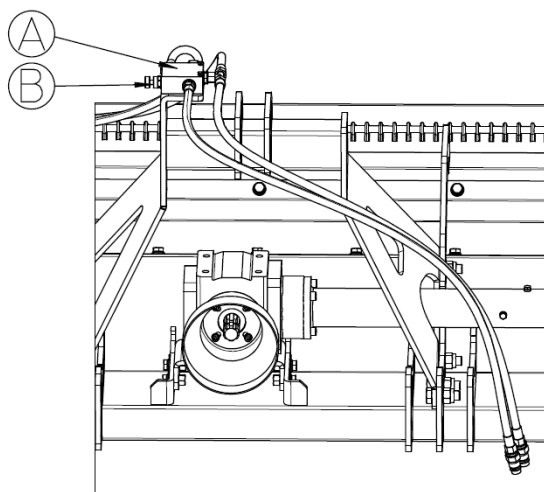
The PICKER/F mulcher is fitted with an adjustment valve which allows the operator to select the rotation speed of the PICK-UP rotor depending on the requirements of the work performed.

Valve components:

A : PICK-UP rotor rotation speed adjustment valve;

B : Valve adjustment knob.

See paragraph "7.5 VALVE ADJUSTMENT" for information on adjusting the valve.



6.0 Using the machine

6.1 CONNECTION TO THE THREE-POINT HITCH



WARNING:
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.
DURING INSTALLATION THE P.T.O. AND HYDRAULIC SYSTEM MUST BE DEACTIVATED.

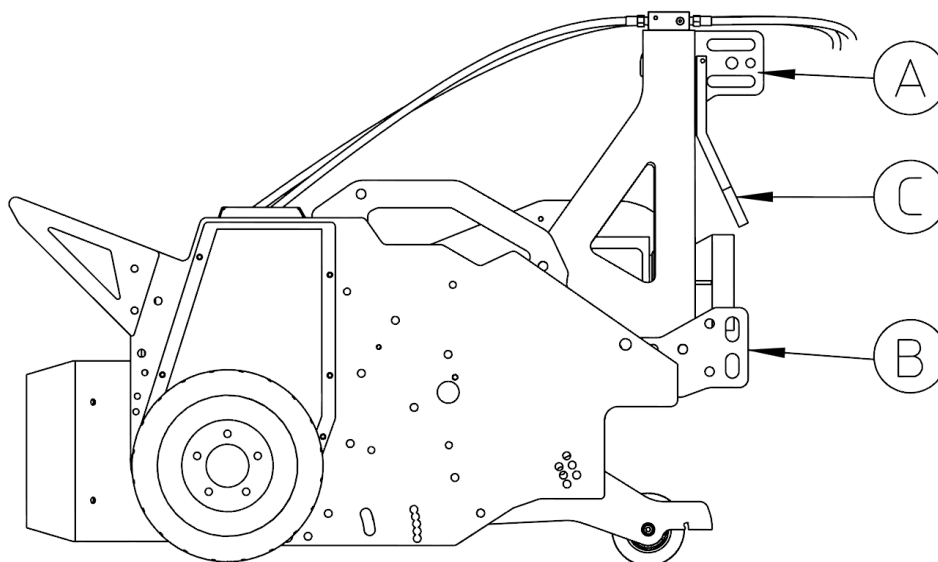


WARNING:
DURING USE, ADJUSTMENT, MAINTENANCE, REPAIR OR MOVING OF THE MACHINE THE OPERATOR MUST WEAR ADEQUATE PERSONAL PROTECTION DEVICES (see Par. 3.8.7).

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 are suitable for carrying the machine.

The three point linkage is equipped with pins of 1st and/or 2nd CAT, so that it is necessary to verify the compatibility with the corresponding linkage of the tractor.



After making these checks, proceed as follows:

- 1- Remove the safety pins of the 3rd point **A** and of the inferior links **B**;
- 2- Carefully bring the tractor near until you centre the inferior holes with those of the linkage;
- 3- Brake the tractor and turn it off;
- 4- Insert the pins on the links **B** and install the safety pins;
- 5- Adjust the arm tie-rods in order to prevent the machine from swinging to the right and left;
- 6- Turn back the hook **C**;
- 7- Install the cardan shaft making sure that the push-buttons are properly inserted in their slots (see paragraph 5.3);
- 8- Install the 3rd point **A**, Insert the pin, the washer and the safety pin supplied with the machine;
- 9- Adjust the length of the 3rd point so that the pin stays approximately in the centre of the slot;
- 10- Clamp the 3rd point tie rod.



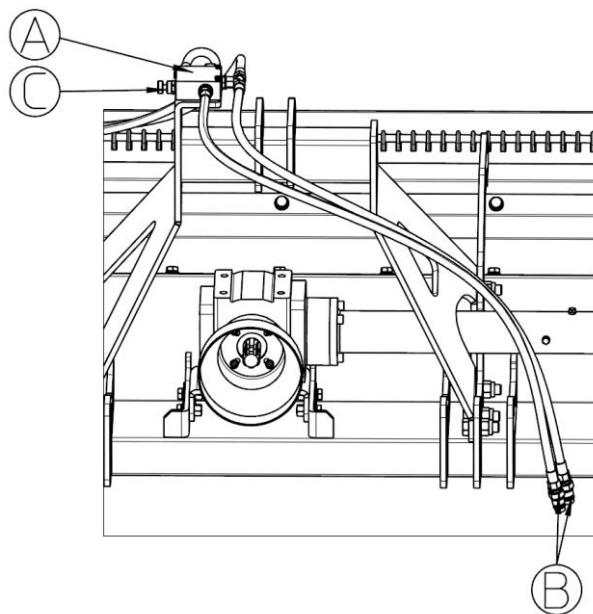
WARNING:
MAKE SURE THAT THE SAFETY PINS ARE PROPERLY INSERTED AND EFFICIENT.
MAKE SURE THAT THE QUICK CONNECTIONS ARE FIRMLY CONNECTED

PICKER /F Mulcher**6.2 CONNECTING THE HYDRAULIC SYSTEM**

The machine is equipped with a hydraulic system responsible for the movement of the PICK-UP rotor, which allows for the manual adjustment of the rotor rotation speed via valve A.

Connection procedure:

- 1- Connect quick couplings B of the machine to the double effect distributor of the tractor;
- 2- Check that no obstructions are present to the hydraulic tubes connected;
- 3- Check that the adjustment valve A is open to allow for oil circulation in the system;
- 4- Turn on the hydraulic system for a few minutes, supplying it with a little oil. This will enable the tubes to be completely filled with oil and will eliminate any air bubbles inside the tubes;
- 5- Adjust the PICK-UP rotor speed by means of the valve adjustment knob C;
- 6- Check for oil leakages from the hydraulic system;
- 7- Turn off the hydraulic system and decelerate the tractor;
- 8- The machine is now ready for use.



The tractor must be equipped with a double effect distributor with a minimum calibrated pressure of 130 bar.

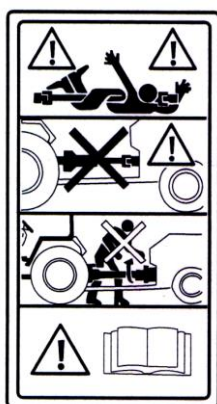
**WARNING:**

**CHECK THAT THE SAFETY PINS ARE PROPERLY INSERTED AND EFFICIENT.
ENSURE THAT THE GUDGEON PIN POSITIVE LOCKS HAVE BEEN FITTED.
CHECK THAT THE QUICK COUPLINGS ARE PROPERTY ENGAGED.**

PICKER /F Mulcher**6.3 CARDAN SHAFT SPECIFICATIONS (optional)**

The cardanic shaft is the transmission item that allows activating the shredder; its size depends on the power of the tractor.

Model	Power of tractor for choosing the cardanic shaft			
	KW		HP	
	Min.	Max.	Min.	Max.
PICKER/F 140	60	104	80	140
PICKER/F 160	60	104	80	140
PICKER/F 180	60	104	80	140

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);

6.4 INSTALLING THE CARDAN SHAFT

THE MANUFACTURING COMPANY GUARANTEES THAT THE CARDANIC SHAFT, SUPPLIED AS OPTIONAL WITH THE MACHINE IS OF A SUITABLE SIZE FOR SAFELY SUPPORTING THE POWER ABSORBED DURING WORK, IF THE USE CONDITIONS ARE COMPLIED WITH.

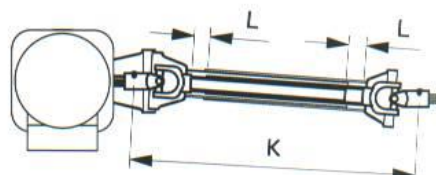
IN CASE OF REPLACING THE CARDANIC SHAFT, IT IS POSSIBLE TO INSTALL ANOTHER EC APPROVED, SUITABLE FOR THE POWER FIELD OF THE TRACTOR, INDICATED IN THE TABLE OF PARAGRAPH 6.3.

BEFORE CARRYING OUT THIS OPERATION CAREFULLY READ THE INSTRUCTIONS BOOK ATTACHED TO THE SAME CARDANIC SHAFT.



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 S 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.

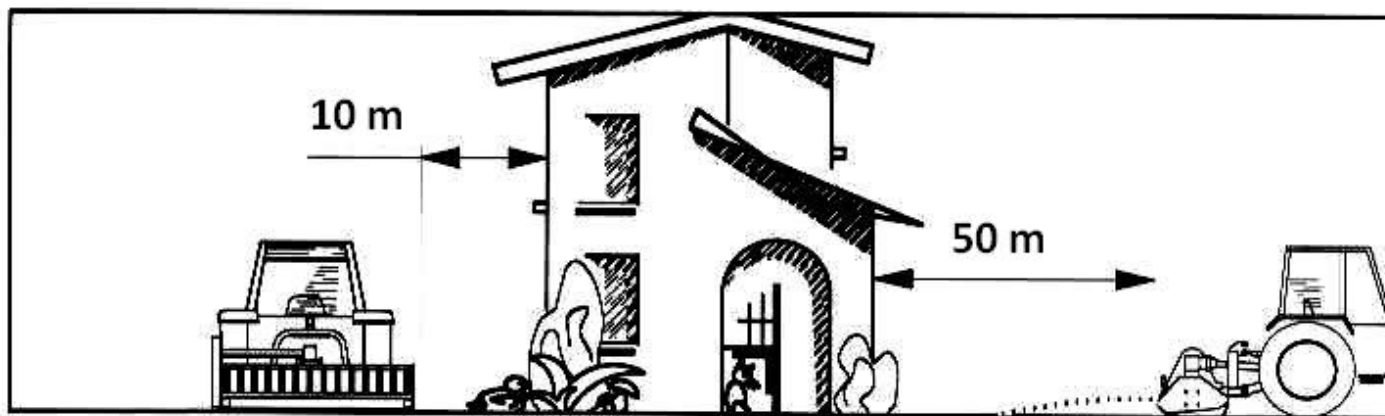
IMPORTANT: NEVER WORK WITH CARDAN SHAFTS WITHOUT THEIR SAFETY GUARDS
READ THE INSTRUCTION BOOKLET THAT COMES WITH THE CARDAN SHAFT WITH CARE.

NEVER CLIMB OVER THE CARDAN SHAFT REGARDLESS OF WHETHER IT IS IN MOTION OR STATIONARY.

PICKER /F Mulcher**6.5 INSTRUCTIONS FOR USE ON FIELD**

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

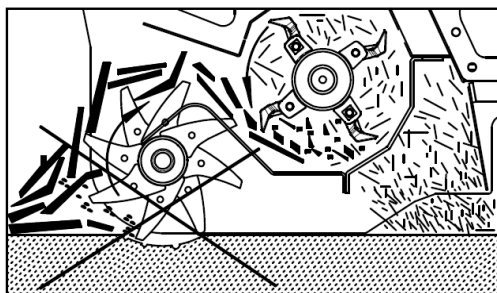
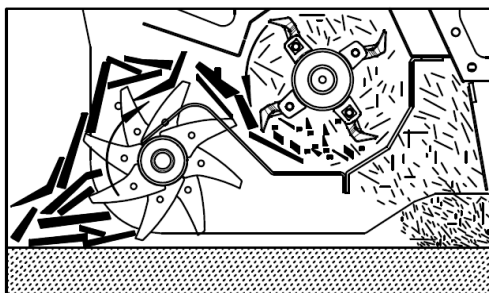
- carefully check that the machine operates properly before using it for the first time in the field: do this by rotating the rotor for a few minutes without any load. Perform this same check every time you start using the machine again;
- whenever turning around when working always disengage the tractor's 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;
- 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;
- respect safe distances when working near houses or roads:
 - 10 meters on the side
 - 50 meters to the rear;

**6.6 USE IN THE FIELD****IMPORTANT:**

BEFORE COMMENCING WORK ENSURE THAT NO PERSONS OR ANIMALS ARE PRESENT WITHIN THE OPERATION RANGE OF THE MACHINE.

Approach the work zone with the machine correctly hitched to the tractor and then proceed as follows:

- Using the lifting commands, lower the machine until the roller or the rear wheels rest on the ground and the teeth of the PICK-UP are able to skim the ground.
- Engage the P.T.O. and gradually accelerate the tractor until you reach the P.T.O.'s standard operating speed (540 or 1 000 RPM);
- Engage the hydraulic system to make the PICK-UP rotor turn and adjust the rotor rotation (see par. 5.1);
- Engage the gear and commence work;
- If necessary, adjust the working height by using the height adjuster and avoid that the PICK-UP teeth touch the ground.
- Adjust the speed with which the tractor advances where necessary on the basis of the product cutting

**NO****YES**

PICKER /F Mulcher**6.7 DISCONNECTING THE MACHINE****WARNING**

THE PROCEDURES DESCRIBED BELOW CAN CREATE DANGEROUS SITUATIONS: KEEP EXTRANEIOUS PERSONS AWAY FROM WHERE THE MACHINE WILL BE POSITIONED AND FROM ITS IMMEDIATE VICINITY.

**WARNING:**

DURING USE, ADJUSTMENT, MAINTENANCE, REPAIR OR MOVING OF THE MACHINE THE OPERATOR MUST WEAR ADEQUATE PERSONAL PROTECTION DEVICES (see par. 3.8.7).

Comply rigorously with the following instructions in order to unhook the machine from the tractor. For greater clarity you can also consult paragraph 6.1 "CONNECTION TO THE THREE-POINT HITCH".

For disconnecting, proceed as follows:

- 1- Disengage the P. T. O;
- 2- Rest the machine firmly on the roller and on the rear wheels;
- 3- Put the tractor's brake on;
- 4- Turn off the tractor;
- 5- Disconnect the hydraulic system;
- 6- Disconnect the 3rd point tie rod;
- 7- Turn ahead the hook for cardan shaft (C) (see par. 6.1);
- 8- Disconnect the cardan shaft and rest it on the hook (C);
- 9- Disconnect the parallel attachments;
- 10- Board the tractor once again and move away carefully.

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

6.8 JAMMING**WARNING:**

DURING USE, ADJUSTMENT, MAINTENANCE, REPAIR OR MOVING OF THE MACHINE THE OPERATOR MUST WEAR ADEQUATE PERSONAL PROTECTION DEVICES (see par. 3.8.7).

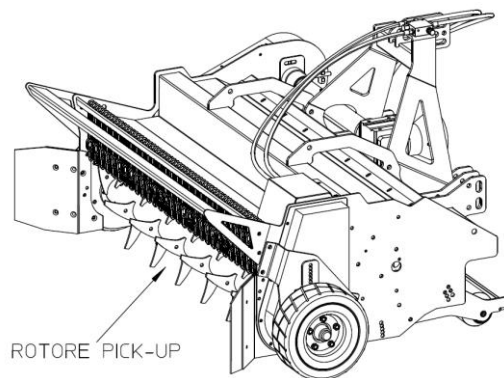
It must be remembered that any variation in the conditions of the field such as type or density of the material mulched, can cause jamming of the mulcher. To avoid jamming use an adequate forward speed (see par. 7.9).

6.8.1 PICK-UP ROTOR JAMMING

Procedure to remedy jamming:

- 1- Position the machine so that it is level;
- 2- Disengage the P.T.O., stop the tractor by braking;
- 3- Invert the direction of rotation of the PICK-UP rotor so that the jammed material can be expelled;
- 4- Once all the jammed material has been removed, turn on the tractor and disengage the brake;
- 5- Pull the machine backwards to avoid jamming the PICK-UP rotor once again;
- 6- Return the direction of rotation of the rotor to operating mode;
- 7- Engage the P.T.O. and continue mulching the material.

If the jamming persists, proceed as follows:

**WARNING:**

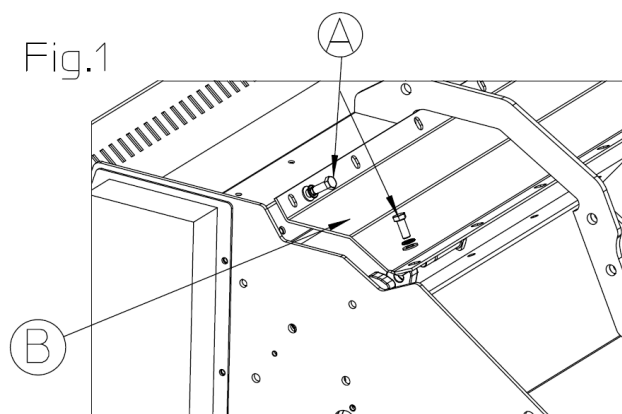
PERFORM THE OPERATIONS DESCRIBED BELOW WITH THE MAXIMUM CARE!

- 1- Position the machine so that it is level;
- 2- Disengage the P.T.O. and the hydraulic system;
- 3- Brake and turn off the tractor;
- 4- Remove the cause of jamming manually (EXCLUSIVELY WITH THE MACHINE STOPPED AND TRACTOR TURNED OFF!);
- 5- Free the PICK-UP rotor from the front;
- 6- Once the rotor is free, continue with mulching operations.

PICKER /F Mulcher**6.8.2 JAMMING OF MULCHING ROTOR**

Procedure to remedy jamming:

- 1- Position the machine so that it is level;
- 2- Disengage the P.T.O. and the hydraulic system;
- 3- Brake and turn off the tractor;
- 4- Unscrew and remove all bolts A from the upper hood B (Fig. 1);
- 5- Remove hood B;
- 6- Remove the jammed material thus freeing the rotor;
- 7- Reinstall hood and relative bolts;
- 8- Once the rotor is free, continue with mulching operations.



WARNING:
DURING USE, ADJUSTMENT, MAINTENANCE, REPAIR OR MOVING OF THE MACHINE THE OPERATOR MUST WEAR ADEQUATE PERSONAL PROTECTION DEVICES (see par. 3.8.7).

7.0 Adjustments



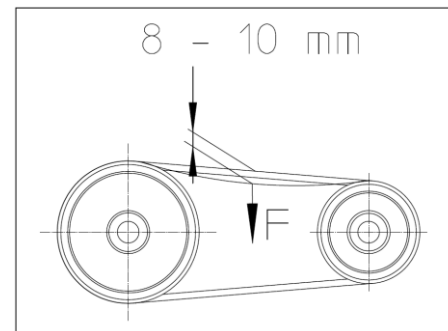
WARNING:
WHEN PERFORMING THE PROCEDURES DESCRIBED BELOW MAKE SURE THE P.T.O. AND THE HYDRAULIC SYSTEM ARE DISENGAGED.
THE TRACTOR MUST BE BRAKED AND OFF OR DISCONNECTED FROM THE MACHINE WHEN PERFORMING THESE PROCEDURES.

7.1 BELTS TENSION

The belts are considered appropriately tensioned when the measurable yield is approx. 8 – 10 mm if applying a force F of about 4 – 5 kg on each in the middle between the two pulleys.

It is essential to check the belt tension.
Adjust where necessary until the yield is as indicated above.

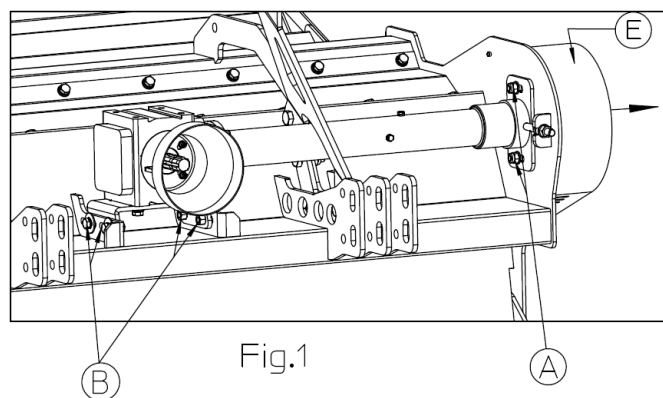
Check and adjustment must be done after the first 4 work hours and subsequently at 50 hour intervals



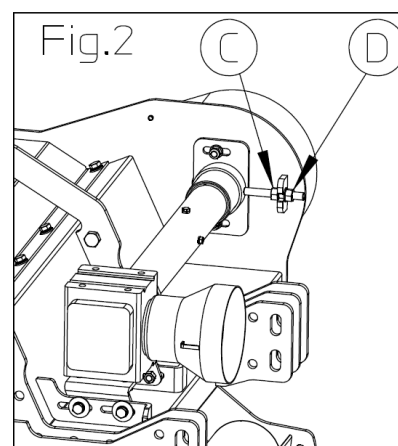
WARNING:
MAKE SURE THE P.T.O. AND THE HYDRAULIC SYSTEM ARE DISENGAGED.
THE TRACTOR MUST BE BRAKED AND OFF OR DISCONNECTED FROM THE MACHINE WHEN PERFORMING THESE PROCEDURES

For the adjustment proceed as follows:

- 1- Dismantle chain protection housing E (Fig. 1);
- 2- Loosen screws A of the belt tensioner;
- 3- Loosen screws B on the sides of the transmission unit supports;



- 4- Loosen internal nut C of the plate (Fig. 2);
- 5- Tighten external nut D until the belts have been tensioned;
- 6- Screw internal nut C to avoid loosening of the belt tension;
- 7- Act on the transmission unit so as to ensure that the extended unit is parallel to the frame; this will ensure that the pulleys are also aligned (Fig. 3);



PICKER /F Mulcher

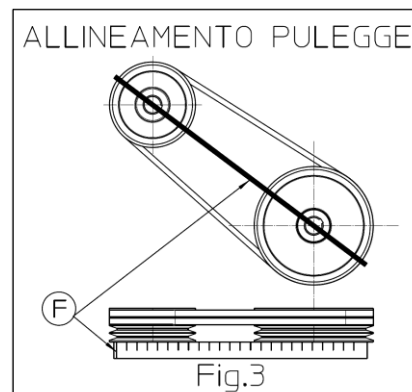
- 8- Check this with a ruler F; if this is not the case, adjust the alignment by acting on the transmission unit;
- 9- Tighten screws B on the sides of the transmission unit supports;
- 10- Tighten screws A of the belt tensioner;
- 11- Reassembly housing E securing it with the screws.



WARNING:
DURING USE, ADJUSTMENT, MAINTENANCE, REPAIR OR MOVING OF THE MACHINE THE OPERATOR MUST WEAR ADEQUATE PERSONAL PROTECTION DEVICES (see par. 3.8.7).

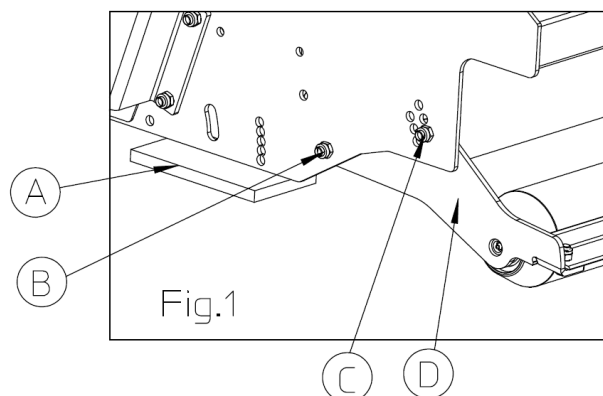


WARNING:
DO NOT WORK WITHOUT THE BELT COVER!!

**7.2 ADJUSTING THE REAR ROLLER (Fig.1)**

Proceed as follows:

- 1- Position the machine on the level with a shim below the sides;
- 2- Disconnect the machine (see par. 6.7);
- 3- Totally unscrew and remove nut C;
- 4- Loosen bolt B;
- 5- Turn the roller bracket D until you centre the a hole of it with the hole of the frame flank;
- 6- Reinstall bolts C and tighten;
- 7- Tighten bolt B.

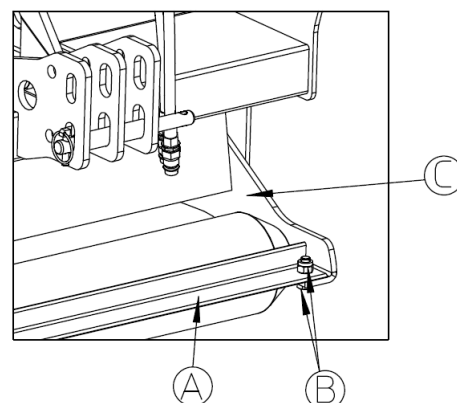


These procedures must be performed on both sides of the roller.

7.3 ADJUSTING THE ROLLER SCRAPER (fig.2)

Proceed as follows:

- 1- Position the machine on the level;
- 2- Disconnect the machine (see par. 6.7);
- 3- Loosen bolt B present on both extremities of the scraper;
- 4- Adjust the distance of scraper A (via the slots present on the plates of roller C), moving it nearer or further and taking care to position it parallel to the roller;
- 5- Tighten bolt B on both extremities.



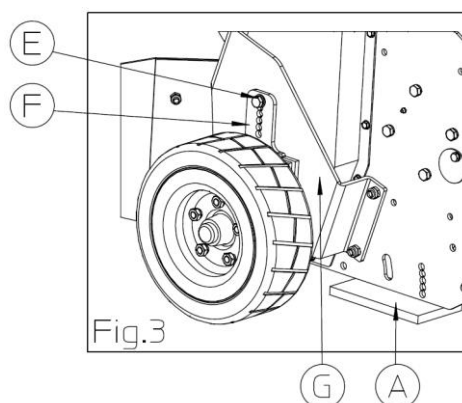
These procedures must be performed on both sides of the roller scraper.

7.4 ADJUSTMENT OF FRONT STABILISING WHEELS (Fig.3)

Proceed as follows:

- 1- Position the machine on the level with a shim below the sides;
- 2- Disconnect the machine (see par. 6.7);
- 3- Totally unscrew and remove nut E;
- 4- Adjust height of wheel support F;
- 5- Centre the hole of wheel support F with the welded nut of plate G;
- 6- Reinstall bolts E and tighten.

The operations must be performed on both parts of the front wheels.

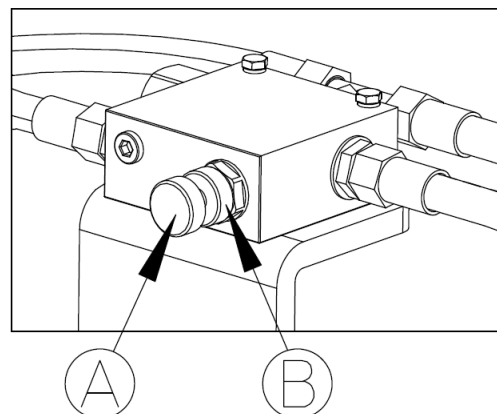


PICKER /F Mulcher**7.5 ADJUSTMENT OF PICK-UP ROTOR VALVE (fig.1)**

Proceed as follows:

- 1- Position the machine so that it is level;
- 2- Brake, disconnect the P.T.O. and activate the hydraulic system;
- 3- Loosen ring nut B;
- 4- The increase or decrease in rotation speed is adjusted by knob A;
- 5- Turn knob A in a clockwise or anti-clockwise direction to vary the PICK-UP rotor speed depending on the quantity of material which is required to enter into the mulching rotor chamber.

Fig.1

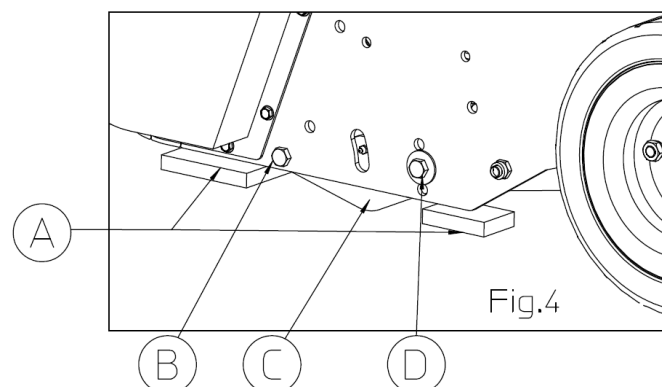
**WARNING:**

DURING MANUAL ADJUSTMENT OF THE VALVE, PAY GREAT ATTENTION TO THE ROTATION OF THE PICK-UP ROTOR.

7.6 ADJUSTMENT OF MIDDLE SUPPORT ROLLER (Fig.4) (optional)

Proceed as follows:

- 1- Position the machine so that it is level, with two shims A under the sides;
- 2- Disconnect the machine (see par. 6.7);
- 3- Fully unscrew bolt D;
- 4- Loosen bolt B;
- 5- Adjust the height of the middle support roller C;
- 6- Align the hole of roller C plate with the hole on the side of the machine;
- 7- Reinstall bolt D and tighten;
- 8- Tighten bolt B.

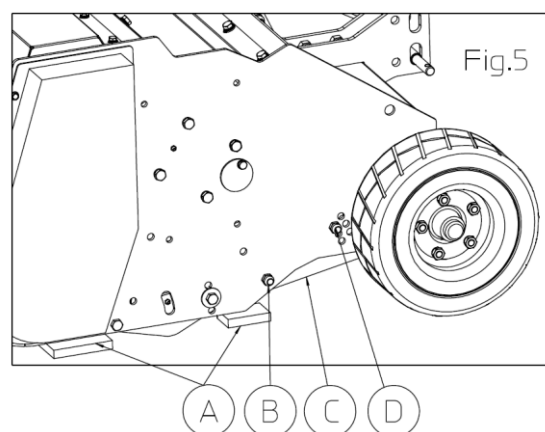


The operations must be performed on both parts of the middle support roller.

7.7 ADJUSTMENT OF REAR WHEELS (Fig.5) (optional)

Proceed as follows:

- 1- Position the machine so that it is level, with two shims A under the sides;
- 2- Disconnect the machine (see par. 6.7);
- 3- Fully unscrew bolt D;
- 4- Loosen bolt B;
- 5- Adjust the height of the rear wheel brackets C;
- 6- Align the hole of the plates with the hole on the faces of the machine;
- 7- Reinstall bolt D and tighten;
- 8- Tighten bolt B.



The operations must be performed on both parts of the rear wheels.

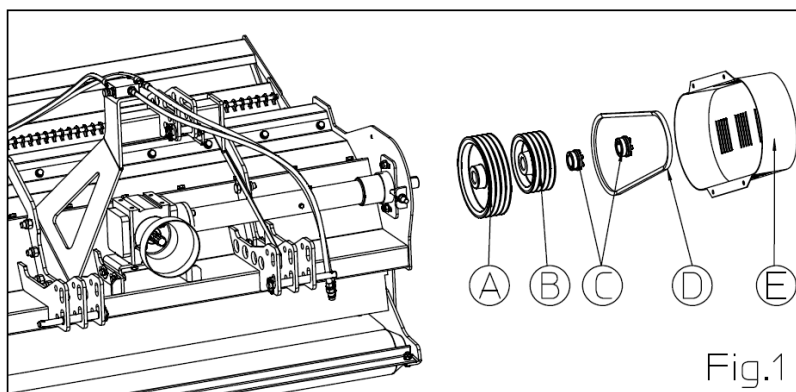
PICKER /F Mulcher**7.8 ADJUSTMENT OF P.T.O. SPEED 1000 / 540 rev/min**

Fig.1

The PICKER/F is designed to function with two P.T.O. speeds, namely, 1000 or 540 rev/min. This is achieved by changing the position of the pulleys.

Proceed as follows:

- 1- Position the machine so that it is level;
- 2- Disconnect the machine (see par. 6.7);
- 3- Dismantle the transmission housing E (Fig. 1);
- 4- Dismantle belt D (see par. 8.8 from Point 4 to 6);
- 5- Dismantle shrink discs C (loosen the shrink disc locking screws, completely remove two locking screws and screw them into the threaded extraction holes previously left open for this purpose, screw in until the shrink disc is released);
- 6- Dismantle pulleys A and B;
- 7- Reassemble pulleys inverting their positions;
- 8- Reassemble shrink discs C taking care to rest them properly against the relative pulleys;
- 9- Align the pulleys before locking the shrink discs (see Fig. Alignment of pulleys par. 7.1);
- 10- Align pulleys to one another, lock the shrink discs (remove the screws used to release the shrink disc and screw them once again into their original holes); In order to lock the shrink discs it is important that the screws are tightened cross-wise;
- 11- Reassemble the belts and tension the belts (see par. 7.1);
- 12- Reinstall the transmission housing E securing it with its screws.

Position of the pulleys:

- P.T.O at 1000 rev/min with pulley A (larger Ø) fitted on the mulching rotor shaft and pulley B (smaller Ø) fitted on the transmission unit shaft.
- P.T.O at 540 rev/min with pulley A (larger Ø) fitted on the transmission unit shaft and pulley B (smaller Ø) fitted on the mulching rotor shaft.

7.9 FORWARD SPEED

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
Pruning of vineyard															
Pruning of orchard (apple, pear)															
Pruning of olive, peach															
Under wood branches															

8.0 Machine maintenance

8.1 IMPORTANT WARNINGS AND OPERATING INSTRUCTIONS



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).



READ THIS MANUAL WITH CARE.

This manual must be read with care in order to prevent all risks when performing specific operations, whether when working with the machine or during maintenance and/or repair.

Turn to specialists to do everything that is not specifically indicated in this operating and maintenance manual.

WARNING:

IT IS VERY DANGEROUS TO WORK ON THE MACHINE WITHOUT SUFFICIENT INFORMATION ON WORK PROCEDURES.



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.

We give all the relative specifications in the "Working in Safe Conditions" chapter.

PICKER /F Mulcher**8.2 ROUTINE MAINTENANCE**

Moving parts must be protected according to current law to prevent the hazards of contact, catching, pulling and crushing of body parts.

Always check that:

- a) moving parts are protected and that their protective devices are sound and efficient;
- b) protective devices are always put back in position whenever they are removed in order to perform maintenance;
- c) you always wear suitable clothing according to specified Personal Protection Measures.

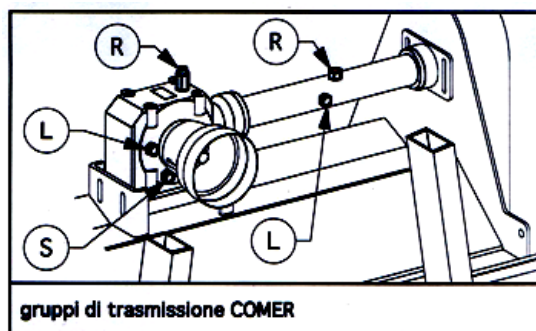
**WARNING:**

THE P.T.O. AND THE HYDRAULIC SYSTEM MUST BE DISENGAGED AND THE TRACTOR OFF AND PROPERLY BRAKED OR DISCONNECTED BEFORE BEGINNING ANY MAINTENANCE PROCEDURES

Here are several maintenance phases that must be periodically carried out in order for the machine to always be in good condition.

8.3 GREASING AND LUBRICATION

Systematic and periodic machine greasing and lubrication keep it performing well and prolong its working life

LUBRICATION OF TRANSMISSION UNIT:

R: oil refill hole

L: oil level hole

S: oil drain hole

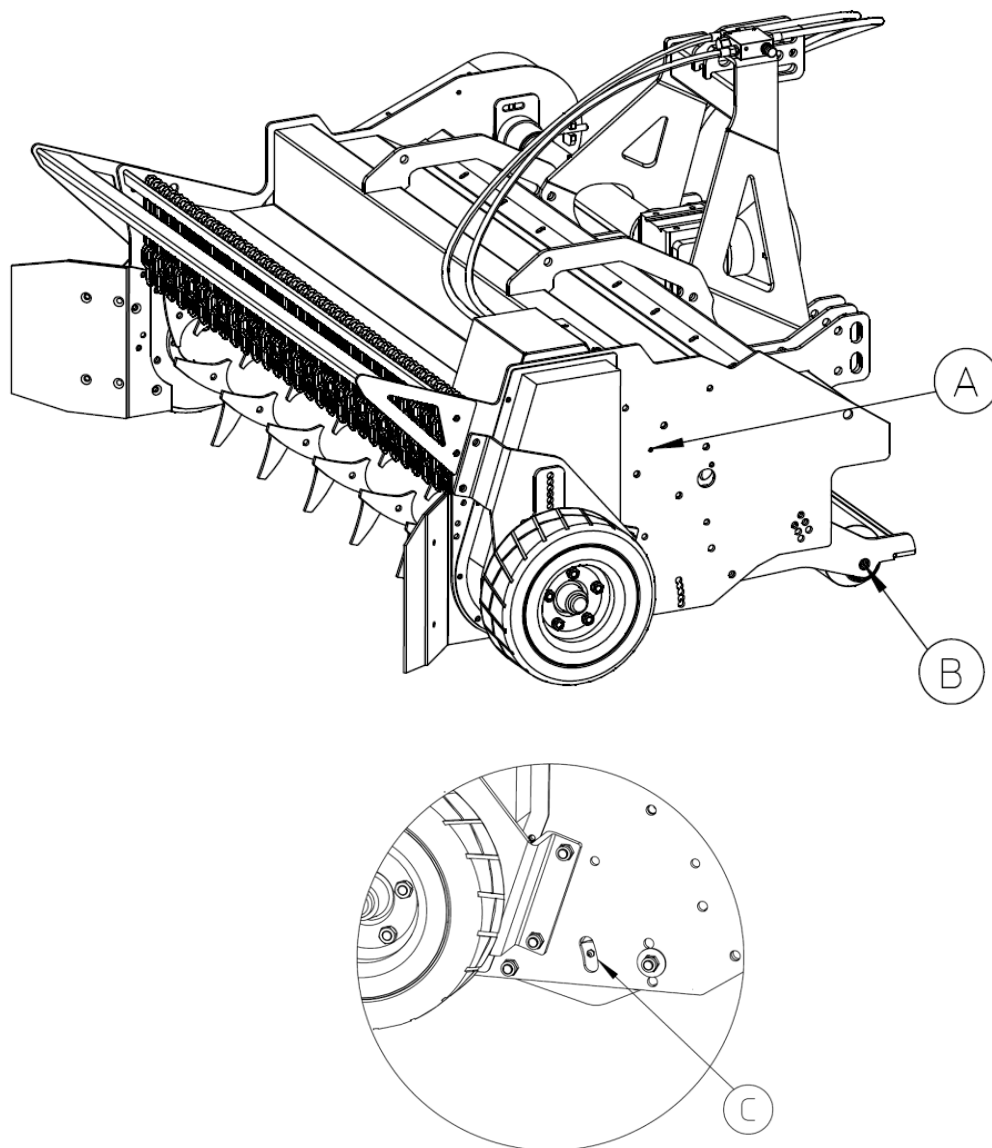
Carefully clean components around plugs before working on transmission systems: this prevents dirt from penetrating into these systems.

Transmission systems require the following checks:

- 1- Check the oil level in the gearbox during the first 20 working hours: oil must come up to the level hole. Add oil as required.
Perform the next oil level checks at 50 hours intervals.
- Totally replace the oil in the gearbox after the first 40 work hours. Then repeat this every 250 work hours.
 - There are various points for filling and checking oil levels depending on the type of transmission systems that are installed. Follow their instructions for performing an exact check.
 - The protective bowling must be removed in order to drain oil from COMER transmission systems.

PICKER /F Mulcher**8.3.1 GENERAL GREASING**

WARNING:
DURING USE, ADJUSTMENT, MAINTENANCE, REPAIR OR MOVING OF THE MACHINE THE OPERATOR MUST WEAR ADEQUATE PERSONAL PROTECTION DEVICES (see par. 3.8.7).



A – 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.

B – REAR ROLLER: grease every 20 working hours also on the opposite part.

C – MIDDLE SUPPORT ROLLER (OPTIONAL): every 20 working hours also on the opposite part.

LUBRICANTS TO BE USED	
Gearbox	Gear oil SAE 90–140
Rotor – levelling roller – other lubrication points	EP2 Grease
Hydraulic circuit	Hydraulic oil – OSO 46 ANTI-FOAM

PICKER /F Mulcher**8.4 HOT POINTS OF THE MACHINE**

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

Hot points:

- 1- Transmission and extension unit;
- 2- Belt protection housing;
- 3- Pulleys and belts;
- 4- Transmission chain protection housing;
- 5- Transmission chain;
- 6- Hydraulic motor;

8.5 CHECKING TOOL WEAR AND TEAR

A visual check of the wear of the mulching tools must be performed. Replace the knives or hammers if increased power absorption or imperfect material cutting is noted.

Use of the machine with blunt knives or hammers compromises the quality of the work.

8.6 REPLACING THE HAMMERS**WARNING:**

TO PERFORM THESE PROCEDURES MAKE SURE THE P.T.O. AND THE HYDRAULIC SYSTEM ARE DISENGAGED. THE TRACTOR MUST BE BRAKED AND OFF OR DISCONNECTED FROM THE MACHINE WHEN PERFORMING THESE PROCEDURES

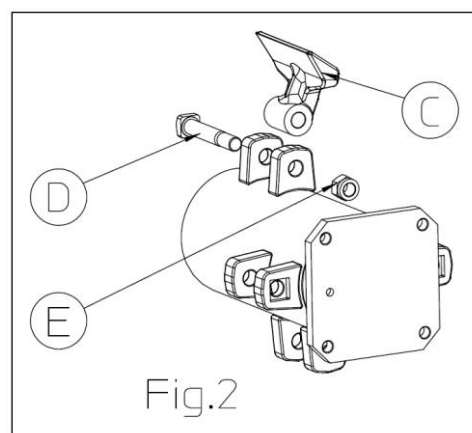
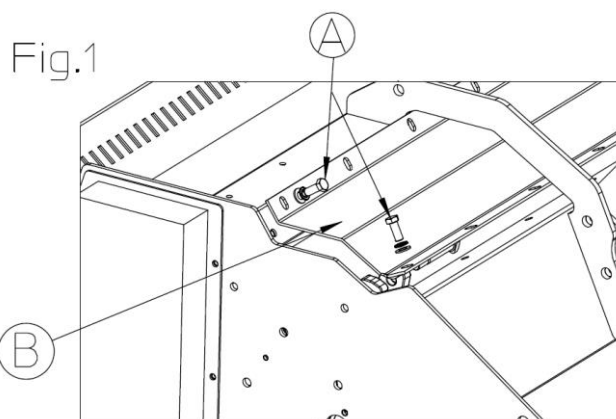
**WARNING:**

DURING USE, ADJUSTMENT, MAINTENANCE, REPAIR OR MOVING OF THE MACHINE THE OPERATOR MUST WEAR ADEQUATE PERSONAL PROTECTION DEVICES (see par. 3.8.7).

8.6.1 REPLACING HAMMERS TYPE "A"

Proceed as follows:

- 1- Set the machine on flat;
- 2- Disconnect the machine from the tractor (see Par. 6.7)
- 3- Unscrew and remove all screws A from the upper hood B (Fig. 1);
- 4- Remove the upper hood B for an easy reach to the rotor;
- 5- Unscrew and remove the bolt E (Fig. 2);
- 6- Remove screw D from the hammer holder supports;
- 7- Replace the hammer C making sure to mount it with the correct direction and fit a new bolt, making sure to fit the bolt's head into the hexagon of the lug and tighten strongly;
- 8- After all the hammers C, have been replaced, reinstall the hood B with bolts A.
- 9- In order to replace the hammers at the extremities of the rotor in which fixing screw D is inserted in inverse direction to the other screws, remove cover F (see Fig. 2 on next page) or the closing plate N (see Fig. 3 on next page). In order to remove the closing plate N, proceed as indicated in Points 6 to 8 of Par. 8.6.2; follow Points 19 to 22 for its reassembly.



 **IN THE EVENT OF REPLACEMENT OF A TOOL, IT IS ADVISABLE TO REPLACE THE ENTIRE SERIES. OUR ORIGINAL SPARE PARTS GUARANTEE COMPLETE AND CORRECT RESTORATION OF YOUR MACHINE.**

 **WARNING: ONLY ORIGINAL BERTI HAMMERS MUST BE MOUNTED ONTO THE ROTOR.**

PICKER /F Mulcher

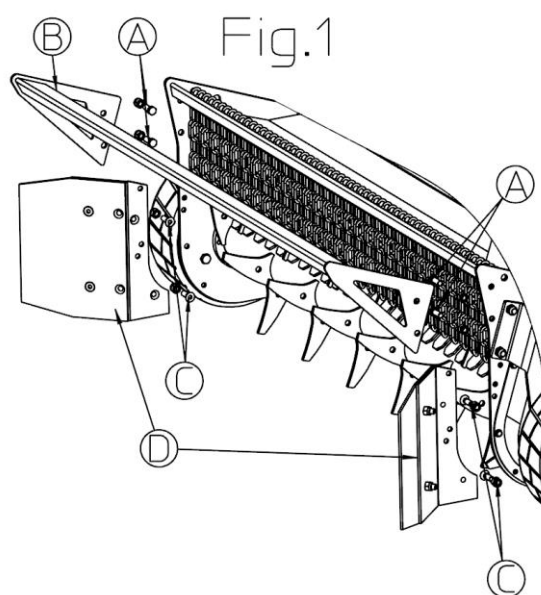
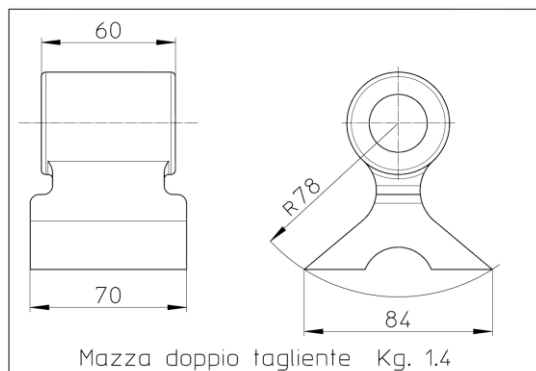
8.6.2 REPLACEMENT OF DOUBLE-CUT HAMMERS FOR FORESTRY ROTORS (OPTIONAL)

**WARNING:**

IN ORDER TO PERFORM THE OPERATIONS DESCRIBED, ENSURE THAT THE P.T.O. AND THE HYDRAULIC SYSTEM ARE DEACTIVATED. THE TRACTOR MUST BE BRAKED AND OFF OR DISCONNECTED FROM THE MACHINE WHEN PERFORMING THESE PROCEDURES

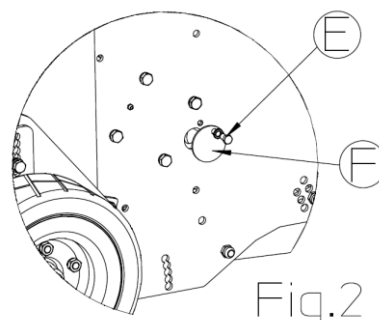
**WARNING:**

DURING USE, ADJUSTMENT, MAINTENANCE, REPAIR OR MOVING OF THE MACHINE THE OPERATOR MUST WEAR ADEQUATE PERSONAL PROTECTION DEVICES (see par. 3.8.7).

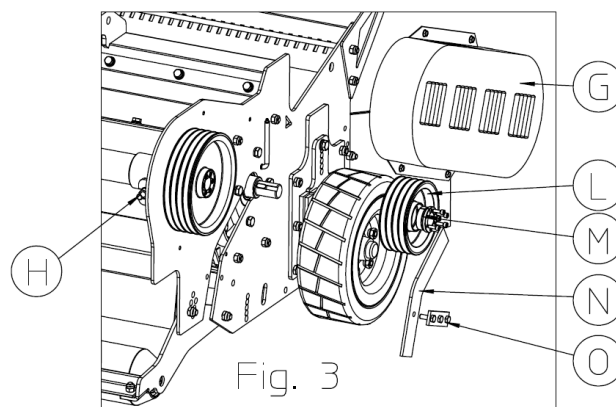


Proceed with the following operations:

- 1- Position the machine so that it is level;
- 2- Disconnect the machine from the tractor (see par. 6.7);
- 3- Unscrew and remove all screws A from the front guard (Fig. 1);
- 4- Remove screws C and remove the conveying guards D;
- 5- Remove screw E and remove the cover over hole F (Fig. 2) in order to then remove the pin holding hammer R (Fig. 4);
- 6- Dismantle the belt protection housing G and loosen the belt tensioner H (Fig. 3);
- 7- Dismantle the shrink disc M (see Par. 7.8 Point 5) using the threaded extraction holes located on the shrink disc itself, then remove the pulley L;
- 8- Remove the plate over slit O and the corresponding plate N;



IN THE EVENT OF REPLACEMENT OF A TOOL, IT IS ADVISABLE TO REPLACE THE ENTIRE SERIES. OUR ORIGINAL SPARE PARTS GUARANTEE COMPLETE AND CORRECT RESTORATION OF YOUR MACHINE.



WARNING: ONLY ORIGINAL BERTI HAMMERS MUST BE MOUNTED ONTO THE ROTOR.

PICKER /F Mulcher

**WARNING:**

IT IS VERY DANGEROUS TO REMAIN IN THE PROXIMITY OF THE MACHINE WHEN IT IS BEING LIFTED AND POSITIONED HORIZONTALLY.

**WARNING:**

BEFORE REPLACING THE TOOLS WITH THE MACHINE RESTING ON ITS FRONT, DO NOT RELAY PURELY ON THE LIFTING DEVICE USED; INSERT MECHANICAL JACKS OR SUPPORT STRUTS BETWEEN THE MACHINE AND THE GROUND SO AS TO AVOID ACCIDENTAL AND DANGEROUS TILTING OF THE MACHINE.

9- Apply utmost care in resting the machine on its front (Fig. 4), using the attachments on the parallel arms of the tractor P as anchoring points;

10- Remove screws I from the perforated grill T;

11- Remove the perforated grill T;

12- Remove the screws and the locking plate S of pin R;

13- With a pin Q with diameter 25-28 mm and a mallet, start to remove the hammer pin R using the hole to remove the pin (see Fig. 2);

14- While the pin is being extracted, remove the hammers one at a time;

15- Replace the hammers and refit pin R; as the pin is being inserted mount the hammers one at a time;

16- Once pin R is fully inserted, refit the plate and the locking screw S. Turn the rotor and repeat the operation from Point 12 until all hammer rows are replaced;

17- Once the hammers have been replaced, refit the perforated grill T and all the locking screws I of the grill;

18- Turn the machine in horizontal position with great care, refit cover F and screws E (see Fig. 2);

19- Refit plates N and O (Fig. 5);

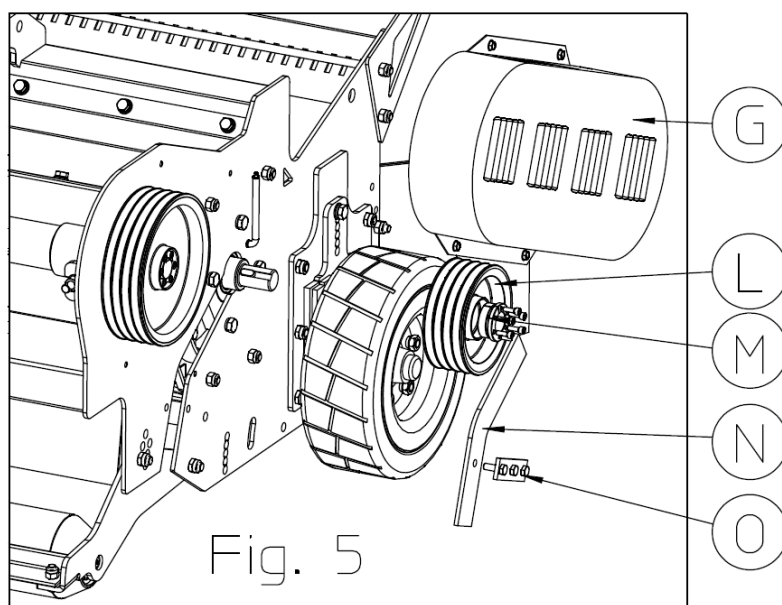
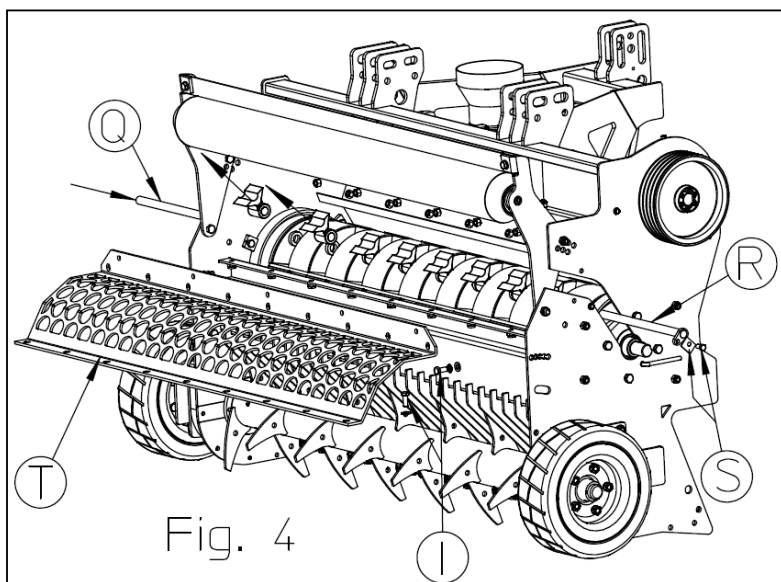
20- Remount the pulley L and the shrink disc M taking care to rest them properly against the relative pulleys, aligning the two pulleys (see Fig. pulley alignment) to lock the shrink discs; when the pulleys are aligned, tighten their screws cross-wise;

21- Install the belts and tension the belts (see par. 7.1);

22- Reinstall the belt protection housing G;

23- Reinstall the conveying guards D and front protective guard B (see Fig. 1);

24- Perform a function test (see Par. 8.10).



 IN THE EVENT OF REPLACEMENT OF A TOOL, IT IS ADVISABLE TO REPLACE THE ENTIRE SERIES. OUR ORIGINAL SPARE PARTS GUARANTEE COMPLETE AND CORRECT RESTORATION OF YOUR MACHINE.

PICKER /F Mulcher**8. HYDRAULIC SYSTEM**

Perform a visual check of the machine in order to verify that there are no loose connections, tubes with abrasions, cuts or other signs of wear. Tighten loosened connections and replace worn or damaged tubes.

8.7.1 REPLACEMENT OF HYDRAULIC TUBING**WARNING:**

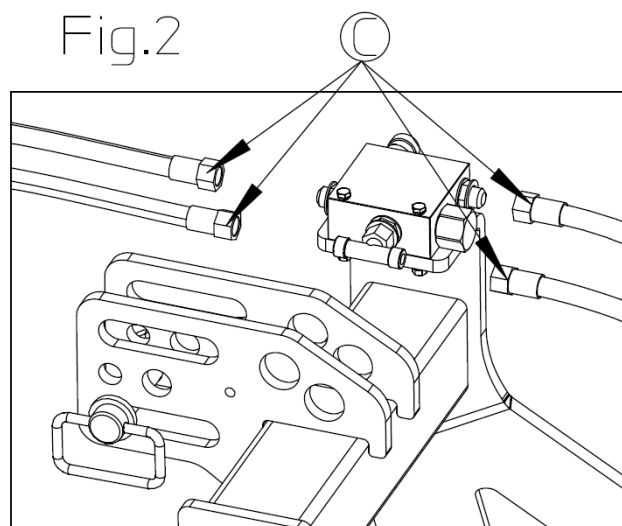
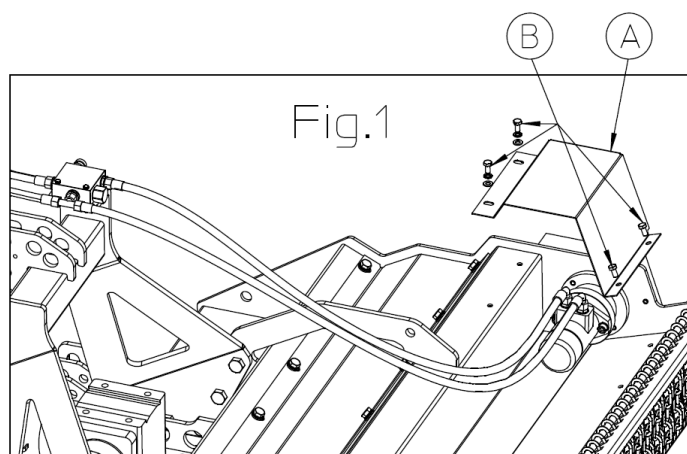
IN ORDER TO PERFORM THE OPERATIONS DESCRIBED, ENSURE THAT THE P.T.O. AND THE HYDRAULIC SYSTEM ARE DEACTIVATED. THE TRACTOR MUST BE BRAKED AND OFF OR DISCONNECTED FROM THE MACHINE WHEN PERFORMING THESE PROCEDURES

**WARNING:**

DURING USE, ADJUSTMENT, MAINTENANCE, REPAIR OR MOVING OF THE MACHINE THE OPERATOR MUST WEAR ADEQUATE PERSONAL PROTECTION DEVICES (see par. 3.8.7).

Proceed with the following operations:

- 1- Position the machine so that it is level;
- 2- Disconnect the machine from the tractor (see par. 6.7); close the hydraulic system valve;
- 3- Before removing the hydraulic tubing, ensure that any residual pressure in the system has been released;
- 4- Using an appropriate spanner, undo connections C (see Fig. 2 as example); to replace the tubes supplying the hydraulic motor proceed by removing screws B and the motor protection housing A (Fig. 1);
- 5- Before installing the new tube check on the perfect condition of the attachment points (threads, gaskets); if faults are present which may compromise the sealing of the system, replace these with original parts;
- 6- Replace the damaged tubing exclusively with original spare parts and reassemble housing A;
- 7- Once the tube replacement is complete, connect the machine to the tractor (see Par. 6.1 and 6.2);
- 8- Using appropriate spanners, tighten in a clockwise direction connections C of the hydraulic tubes which present leakages; do not tighten excessively so as to avoid damaging the thread of the connections. If the leakage persists check the condition of the gaskets and replace if necessary.



OUR ORIGINAL SPARE PARTS GUARANTEE COMPLETE AND CORRECT RESTORATION OF YOUR MACHINE.

PICKER /F Mulcher**8.8 REPLACEMENT OF TRANSMISSION BELT**

WARNING:
IN ORDER TO PERFORM THE OPERATIONS DESCRIBED, ENSURE THAT THE P.T.O. AND THE HYDRAULIC SYSTEM ARE DEACTIVATED. THE TRACTOR MUST BE BRAKED AND OFF OR DISCONNECTED FROM THE MACHINE WHEN PERFORMING THESE PROCEDURES



WARNING:
DURING USE, ADJUSTMENT, MAINTENANCE, REPAIR OR MOVING OF THE MACHINE THE OPERATOR MUST WEAR ADEQUATE PERSONAL PROTECTION DEVICES (see par. 3.8.7).

Proceed as follows:

- 1- Set the machine on flat;
- 2- Disconnect the machine from the tractor (see par.6.7);
- 3- Remove the chain protection housing E (Fig.1);
- 4- Loosen the screws B and A;
- 5- Loosen the screws C and D (Fig.2);
- 6- Loosen the tension of belts F and replace them with original spare parts (Fig. 3);
- 7- Replace all the belts and reassemble the belt protection housing E;
- 8- Tension the belts (see Par. 7.1).

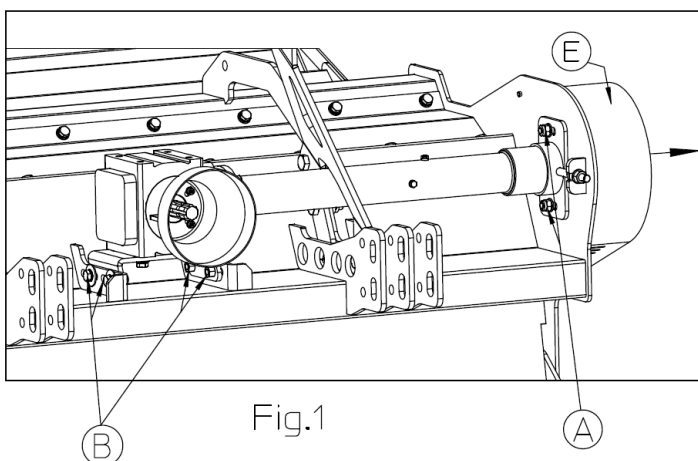


Fig.1

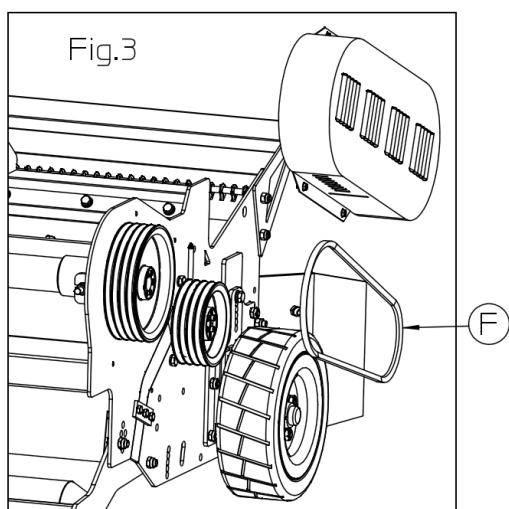


Fig.3

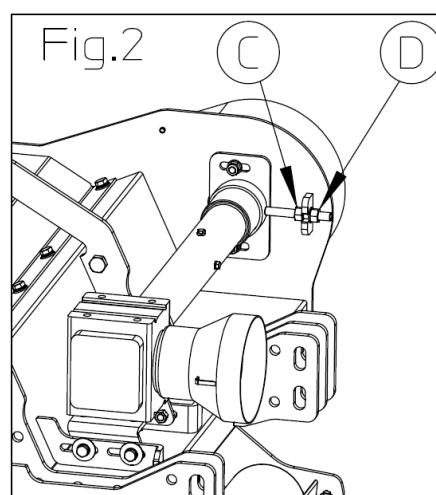


Fig.2



OUR ORIGINAL SPARE PARTS GUARANTEE COMPLETE AND CORRECT RESTORATION OF YOUR MACHINE.

PICKER /F Mulcher**8.9 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.

8.10 FUNCTION TEST AFTER MAINTENANCE OPERATIONS

After having performed maintenance and/or repair operations on the machine, it is advisable to test the effectiveness of these operations and the proper functioning of the machine.

Proceed as follows:

- 1- If necessary, connect the machine to the tractor (see Par. 6.1 and 6.2);
- 2- Lift the machine by using the wheel adjusting jack and/or the lifter so that the PICK-UP rotor does not touch the ground;
- 3- Avoid the presence of persons within the range of 50 m of the machine.
- 4- Engage the P.T.O. and gradually accelerate until the set speed is reached (1000/540 rev/min).

If the machine vibrates during the test, check the tools.

If, after having checked or replaced the tools, the vibrations continue, a dynamic balancing of the rotor is necessary.

In this case, consult your trusted dealer.

8.11 MAINTENANCE SHEET

DESCRIPTION	CHECKS
General machine checks	
Grease rotor	Every 8 hours of operation
Grease rear levelling roller	Every 10 hours of operation
Grease middle support roller	Every 10 hours of operation
Check bolt tightness	After the first 4 hours and then every 50 hours
Check belt tension	After the first 4 hours and then every 50 hours
Check chain tension	After the first 4 hours and then every 50 hours
Check wear of tools	Before each operation
Replace tools	When damaged or blunt
Replace transmission belt	When excessively worn
Hydraulic system	
Check hydraulic tube sealing	In the event of any fluid leakage
Check oil level in tank	Before each operation
Replace hydraulic tubes	When excessively damaged, in the presence of cuts or abrasions
Replace sealing gaskets	If damaged
Gearbox	
Check oil level	During the first 20 hours of operation and then every 50 hours
Check locking bolts	After the first 4 hours and then every 50 hours
Change oil	After the first 40 hours and then every 250 hours

8.12 TROUBLESHOOTING

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

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