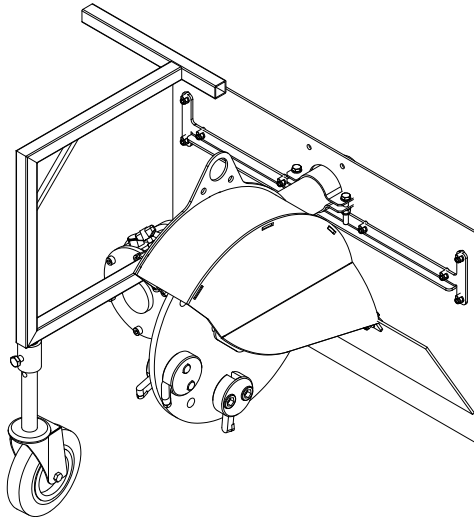


USE AND MAINTENANCE INSTRUCTION MANUAL

Stump Grinder MTC



TRANSLATION OF THE ORIGINAL INSTRUCTIONS

READ THE INSTRUCTION MANUAL BEFORE USING THE MACHINE.

EC DECLARATION OF CONFORMITY



The company:
CARAVAGGI Srl

REGISTERED OFFICE, FACTORY AND ADMINISTRATION:
Via Monte Adamello, 20 – 25037 Pontoglio (BS) - ITALY

declares under its own responsibility that the
Stump grinder

Model: stump grinder for two wheels tractors

Serial no. **see machine rating plate**

Year built: **see rating plate**

complies with all the provisions of the following European Directives: Machinery Directive 2006/42/CE amending Directive 95/16/CE and since the machine has been adapted to the following harmonized standards and specifications, where applicable:

UNI EN ISO 12100 "Safety of machinery – Basic concepts, general principles of design – Basic terminology, methodology, technical principles".

UNI EN ISO 4254-1: Agricultural machinery - Safety - Part 1: General requirements.

UNI EN 13683: Safety – Powered shredders/chippers.

ISO 11684: Tractors, machinery for agriculture and forestry, powered lawn and garden equipment – Safety signs and hazard pictorials – General principles.

Person authorized to draw up the declaration of conformity: **Valerio Gianpaolo Caravaggi**

The Legal Representative
(Valerio Gianpaolo Caravaggi)

CARAVAGGI s.r.l.
Via Monte Adamello, 20
25037 PONTOGGIO (Brescia)
Telefono 0377 700366
Partita IVA 01743270366

Pontoglio, 01 / 01 / 2018

1. HAZARD PICTORIALS



Warning!
Wear a hard hat, hearing protectors and safety goggles.



Warning!
Wear protective gloves.



Warning!
Wear safety shoes.



Warning!
Wear clothes that are suitable for work on machines with moving parts.



Warning!
Switch off the engine before carrying out any maintenance.



Hazard!
Projection of splinters. Keep to a safety distance from loading and unloading equipment.



Hazard!
Keep fingers well away from cutting elements.



Hazard!
Make sure the blades have stopped completely before approaching.



Warning!
Only one person must operate the machine.



Warning!
Do not use petrol engines in closed environments.
Risk of intoxication.



Warning!
Machine lifting point.



Hazard!
Keep well away from moving parts.

2. ABOUT THIS INSTRUCTION MANUAL

This instruction manual has been written for the user of the machine, the owner, the maintenance operator and the repair technician and must always be available for consultation.

It explains the purposes for which the machine was designed and the machine's technical characteristics. It also contains instructions for transport, cleaning, adjustments, use, maintenance and ordering spare parts. It also contains information for the operator, details of residual risks, and warnings with regard to operations that must be carried out with particular care.

The machine is intended for professional use and the instruction manual can never replace the experience acquired by the user.

This manual is to be considered an integral part of the machine and must be kept for future reference until it is dismantled at the end of its useful life.

The instruction manual must always be available for consultation and must be kept in a dry, protected place.

If the handbook gets lost or damaged, a replacement copy can be obtained from the manufacturer, quoting the serial number, type and year of construction shown on the plate fixed to the stump grinder (section 5).

The manufacturer reserves the right to update its products and the instruction manual without the obligation to update earlier versions.

The manufacturer disclaims all liability in the following cases:

- improper use of the stump grinder
- uses not in accordance with the instructions contained herein
- serious deficiencies in prescribed and recommended maintenance
- unauthorized modifications or interference
- use of spare parts that are not original or model-specific
- total or partial failure to follow the instructions
- force majeure.

3. IDENTIFICATION OF THE MAIN PARTS

1. Jockey wheel
2. Grinding disc
3. Transmission unit
4. Rubber guards
5. PTO
6. Jockey wheel towing bracket

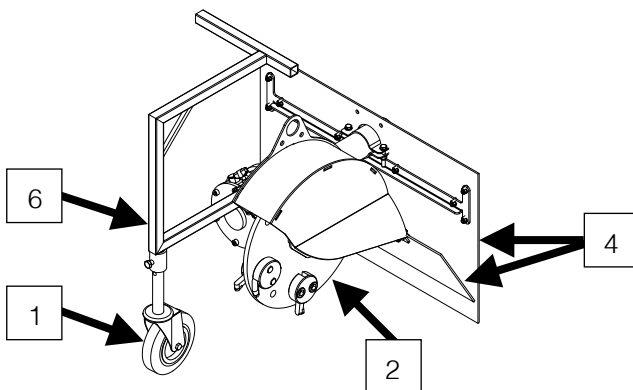


Fig. 1

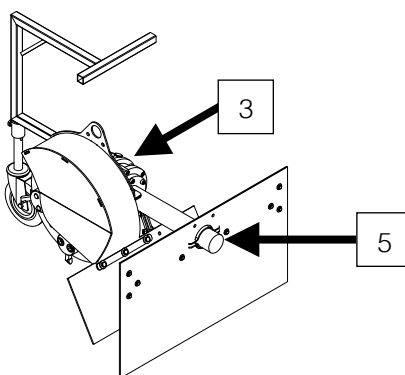


Fig. 2

4. CORRECT USE OF THE MACHINE

This machine must be run by an operator only.

In order to use the machine correctly, the operator must first read and understand the instructions in this handbook. Stop the machine immediately if anyone enters the danger area.

The Caravaggi stump grinder series MTC is designed and built to shred stumps and roots of felled trees in gardens, parks, channel banks and other places, helping to restore the landscape.

It is not suitable for uses other than those listed above.

The operator must be thoroughly acquainted with all the instructions provided in this instruction manual.

5. UNPACKING AND PREPARATION

The stump grinder series MTC can be arranged on pallets to facilitate handling and transport before installation.

To transport the machine in these conditions it is indispensable to use a transpallet or the like with an overall load capacity of around 100 kilos.

Do not:

- lift the stump grinder using ropes or other unsuitable means;
- drag the stump grinder
- subject the machine knocks or impact;
- expose the machine to rain, frost or other bad weather conditions.

On taking delivery, check that the contents correspond to the delivery note.

If you find any damage or deformity due to transport, report this to the carrier immediately and inform the authorized dealer or the manufacturer.

In particular, check the machine for:

- dents, bumps or deformation;
- damp areas or signs indicating that the pack has been exposed to foul weather;
- signs of tampering.

After checking that the transport has been carried out correctly, prepare the machine as follows:

- cut the packaging strips and free the machine from the pallet;
- remove the cardboard and move the stump grinder from the pallet, using hoists and taking care not to damage the grinding unit;

- fit the front rubber guard in position and connect the lower bracket assembly with the upper one on the sleeve, by screwing the retaining screws (Fig. 3).
- insert the towing bracket and the jockey wheel in their seats and tighten the wing nut and the retaining screws (Figs. 4 and 5);

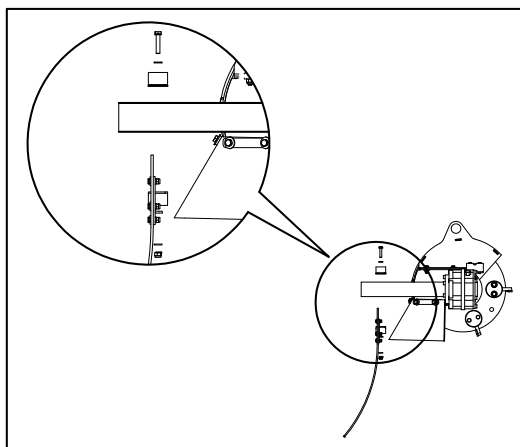


Fig. 3

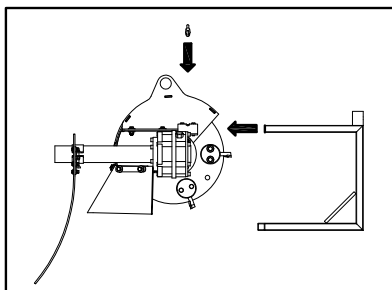


Fig. 4

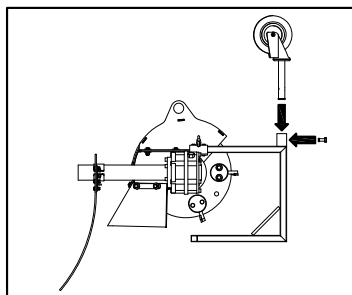
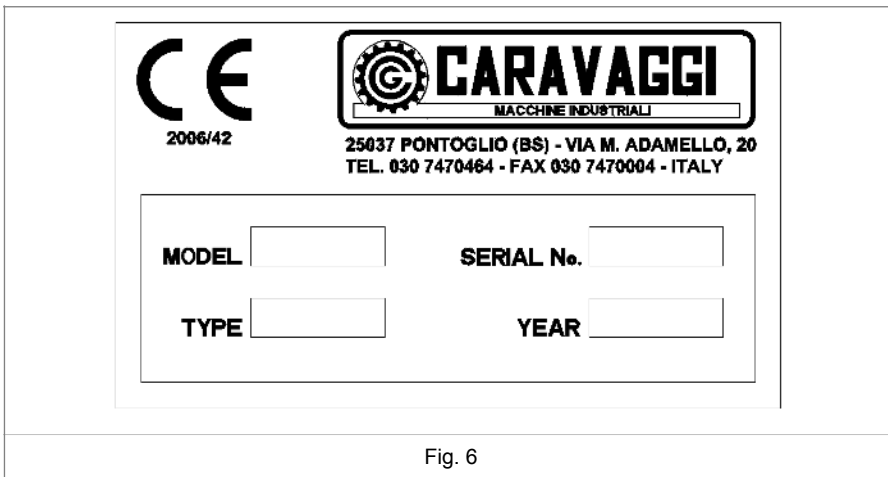


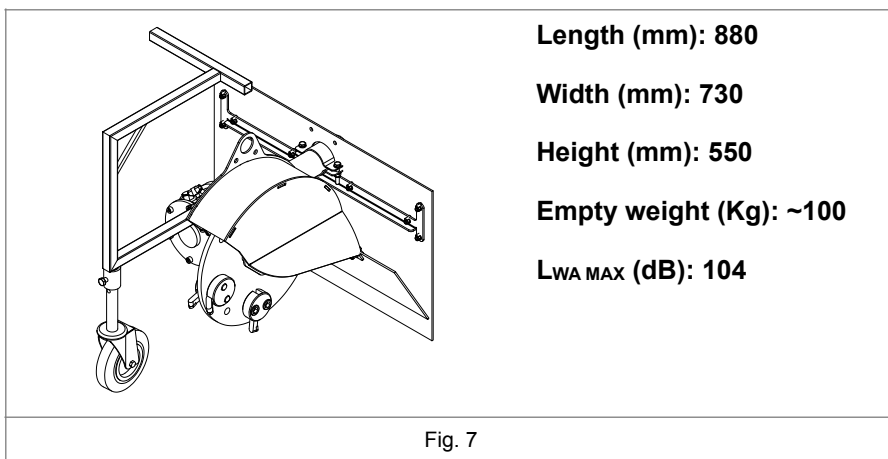
Fig. 5

6. TECHNICAL CHARACTERISTICS

The EC identification plate is clearly visible on the stump grinder (Fig. 6).
 In all communications with the manufacturer, state the serial number on the identification plate.



6.1 Overall dimensions



7. SAFETY RULES

This handbook contains rules on how to use the machine properly and details of the hazards that may be encountered. Besides following the rules, the operator should use the machine sensibly, based on his experience, and adopt all the necessary precautions to prevent accident or injury.

The manufacturer cannot be held liable for any alterations to the machine that are not authorized in advance in writing.

La stump grinder for walking tractors can be used solely for shredding the stumps and roots of felled trees.

It must never be used for any other purposes, such as shredding rocks or other materials.

The machine must only be operated by a fully qualified person who is authorized to do so and is thoroughly acquainted with the operating principles and the inherent hazards. Read through the handbook before setting to work. The stump grinder must not be operated by children.

7.1 GENERAL SAFETY AND ACCIDENT-PREVENTION RULES

- **Basic rule:** check the machine carefully each time before starting up.
- Besides following the recommendations contained in this handbook, it is important to follow the general safety and accident-prevention rules. Before using the machine, the operator must be fully acquainted with its features, devices, controls and functions.
- Before setting to work, make sure the grinding tools are properly secured. If they look damaged, they need to be replaced. Mount the tools as instructed and only use original spares supplied by the manufacturer (or an authorized dealer).
- Before and after each work session, check that the guards, covers and safety devices are correctly installed and integral, and are properly secured with nuts and bolts.
- The notices on the machine provide a series of important instructions. They are there to enable you to work in complete safety. Read all the safety stickers on the machine and follow the instructions on them. If they become damaged or unreadable, they need to be cleaned or replaced in the exact position, as described in the relevant section.
- The machine must only be used in an open space, on flat, firm ground that is free from obstacles. Make sure the machine is positioned stably before operating.
- Do not use the stump grinder in the rain.



- Anyone approaching the machine enters the danger area and hence becomes an EXPOSED PERSON. It is up to the operator to prevent other people from entering the danger area and he himself must act with extreme caution. Stop the machine immediately if anyone enters the danger area.
- Caution: the disc continues to turn for several seconds after the engine has been switched off.
- Keep this handbook readily available so that you can consult it for details of the operating cycle and maintenance instructions. If it gets lost or damaged, a replacement copy can be obtained from Caravaggi.
- The machine is designed for use by one operator only, who must always stand in front of the walking tractor.
- Do not wear items of clothing that are likely to get caught up in the mechanism, such as long wide sleeves, belts, and necklaces.
- Hearing protectors and safety goggles must always be worn when operating the machine.
- Do not leave the stump grinder unattended when it is connected to the walking tractor running.
- Do not place any tools or other objects on the machine as they could damage it or injure the operator.
- Use only original spares provided by Caravaggi.

Safety rules during operation

- Before starting operating the machine, check that the area is clear of any foreign materials.
- Keep the face and hands well away from the grinding disc.
- Stand firmly on the ground while operating the machine. Never stand in a position exposed to flying splinters of material.
- Switch off the machine if there is a malfunction, abnormal vibration or any strange noises. Disconnect the machine from the walking tractor PTO and determine the cause of the problem.
- Never attempt to move the machine while it is running.

7.2 SPECIFIC SAFETY AND ACCIDENT-PREVENTION RULES

7.2.1 Models for use with a walking tractor

- All maintenance, adjustment and cleaning operations (e.g. to remove foreign bodies from the hoppers) must be carried out with the machine standing on firm ground, the walking tractor engine off, the handbrake engaged, and the ignition switched off and the key removed.
- Never stand between the walking tractor and the machine with the power takeoff connected and the engine on.
- Make sure the transmission unit guards are integral and in good condition.
- Any damaged or broken guards must be replaced immediately.
- Never use the machine in enclosed or poorly ventilated areas (even if the doors and windows are open), as the exhaust fumes are toxic.
- Before detaching the machine from the tractor, make sure they are standing still on flat, firm ground.

8. STARTING UP

8.1 Coupling to the two-wheel tractor

- Connect the stump grinder to the walking tractor PTO, making sure the coupling is firm and aligned. (fig. 8).

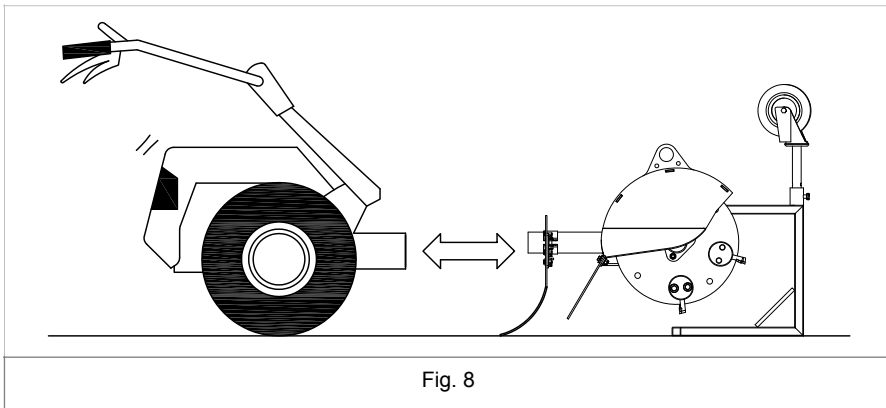
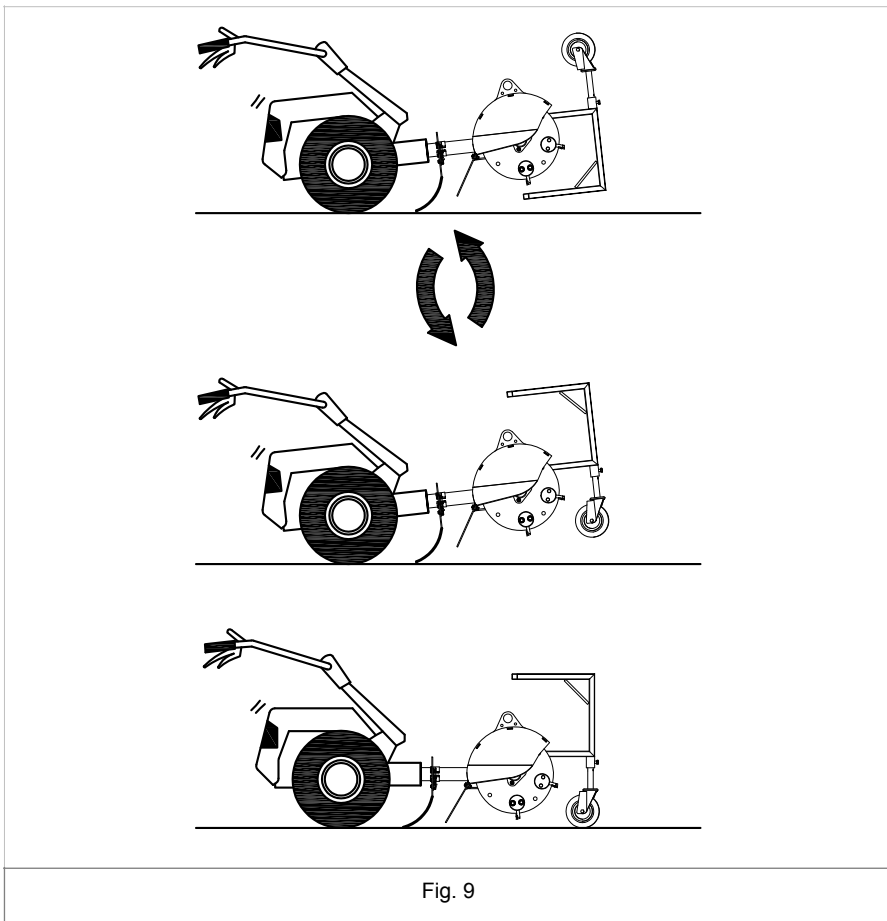


Fig. 8

- With the help of an operator placed at the controls of the two-wheel tractor, slightly unbalance the two-wheel tractor, so that a second operator can remove the wheel holder from the stump.
- Unscrew the clamping nut and remove the support, rotate it 180° and insert it into its housing; re-start and tighten the wing nut making sure that the support is firmly fixed to the sniffer.
- Unscrew the retaining screw to raise the jockey wheel and allow enough space around the grinding disc.



- With the help of an operator placed at the controls of the two-wheel tractor, slightly unbalance the two-wheel tractor, so that a second operator can remove the wheel holder from the stump.
- Start the walking tractor taking great care in keeping the grinding disc off the ground.



Warning! Before starting up the engine/motor check that the stump grinder is on a stable surface and there are no animals or unauthorized persons in the work area.

8.4 Operation

The stump grinder has been prepared correctly and is now ready to work.

Place the grinding disc directly in front of the stump.
Continue operation until the desired depth is reached (Fig. 10).

For grinding up to 25.4 cm above and below the ground level, tilt the walking tractor so as to reach the desired depth.

When grinding large stumps, the wood chips may accumulate under the walking tractor. Place the machine with the accumulated chips under the grinding disc.

Position the grinding disc over the chips and operate to clear the area where the machine operates.

When handling large stumps, **prevent the walking tractor wheels from getting into the drilled hole**: fill the hole with chips or change your working position.

Complete the grinding of the stump at ground level and continue grinding to the desired depth.

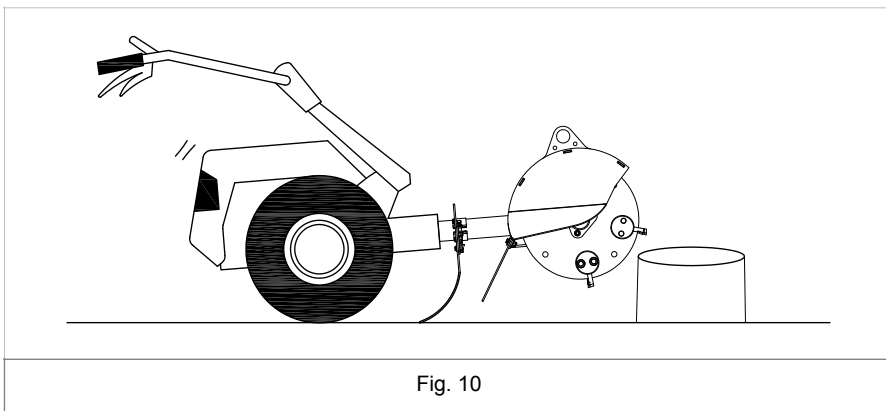


Fig. 10

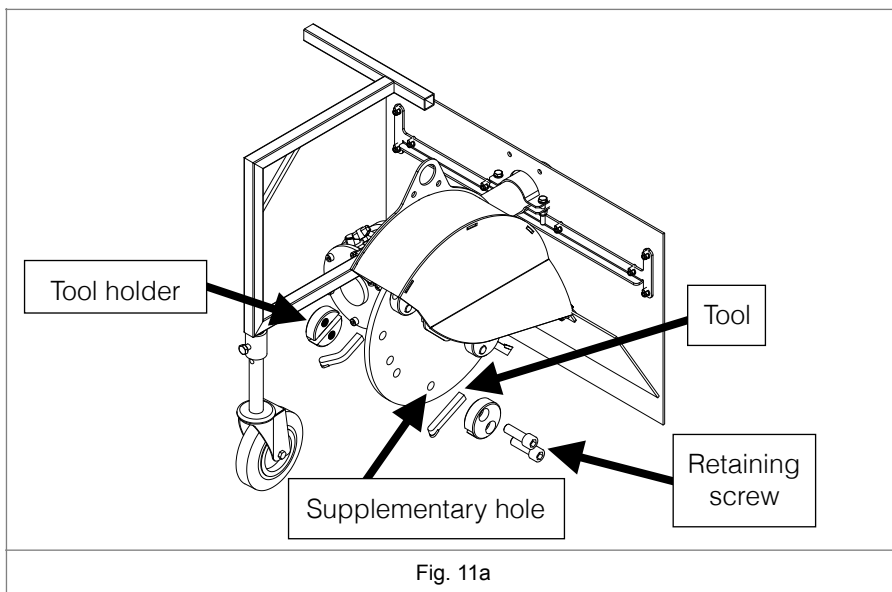
9. MAINTENANCE



Caution! Before proceeding with any maintenance operations, switch off the engine/motor and make sure the machine cannot be started up. Safety gloves must be worn during maintenance operations.

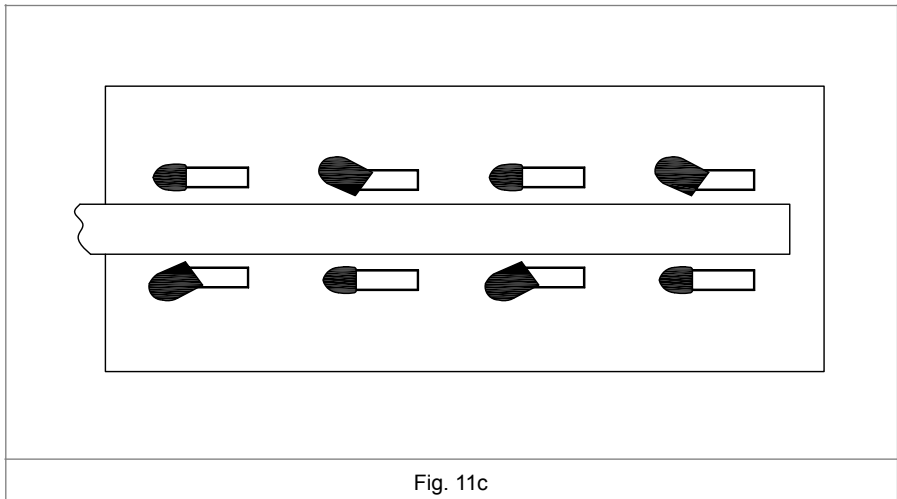
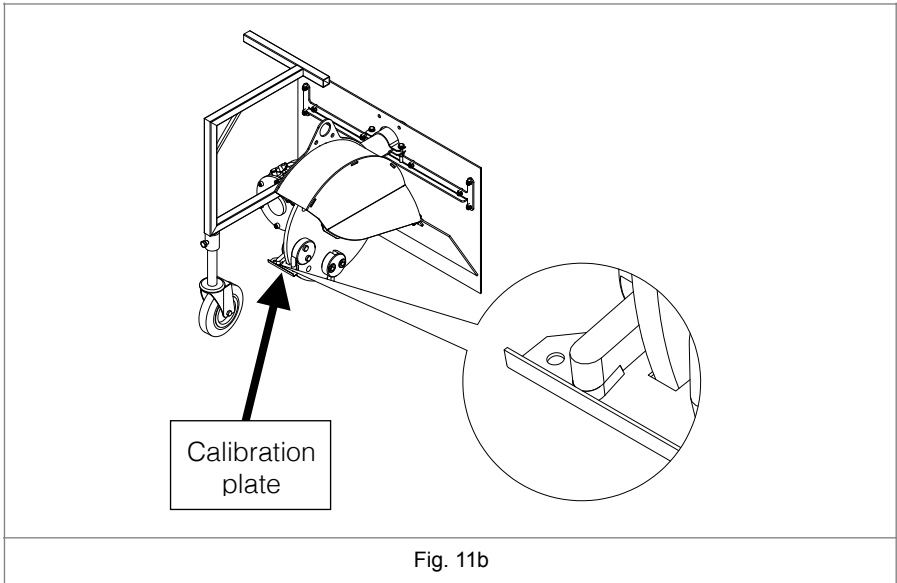
9.1.1 Replacing the grinding tools

- Unscrew the retaining screws of the tool holder.
- Remove any worn grinding tools and replace them with new ones, taking care of the correct direction (Fig. 11a).
- Adjust the position of the tools using a calibration plate (Fig. 11b).
- Tighten the retaining screw of the tool holders.



IMPORTANT

To prevent the grinding disc from rotating freely, it is advisable to insert a rod in the supplementary holes to stop the disc and operate more safely.



9.2 Routine maintenance

	Beginning of season	Before each job	End of season
Check screws, tightness, casing, etc.	◆	◆	
Check the grinding tools for wear	◆		◆
Check protection rubbers	◆	◆	◆
Clean machine			◆
Ingrassaggio dei punti di rotazione principali della macchina	◆	◆	◆
Check wear on bearings and transmission shafts	◆		◆
Check safety stickers and pictorials	◆		◆



10. TROUBLESHOOTING

Problem	Solution
The stump grinder will not start	<p>Check the transmission of the motion (power take-off of the two-wheels tractor, the gearbox).</p> <p>Check the state of the engine/motor of the two-wheels tractor (consult the instruction manual supplied).</p>
Difficult start-up or loss of power	<p>Check the transmission of the motion (power take-off of the two-wheels tractor, the gearbox).</p> <p>Check the grinding tools.</p> <p>Check the state of the engine/motor of the two-wheels tractor (consult the instruction manual supplied).</p>
The stump grinder loses revs and functions irregularly	<p>Check the transmission of the motion (power take-off of the two-wheels tractor, the gearbox).</p> <p>Check the grinding tools.</p> <p>Check the state of the engine/motor of the two-wheels tractor (consult the instruction manual supplied).</p>
Excessive vibration	Check the grinding tools.

11. WARRANTY

1. The Manufacturer hereby guarantees its stump grinder against breakage caused by faulty materials or workmanship.
2. This warranty is valid for the first owner only, for 12 months as from the date of purchase and/or delivery.
3. The Manufacturer is entitled to inspect the stump grinder and any components for which a claim has been made under the warranty, in order to determine the validity of the claim.
4. This warranty covers replacements free of charge only of components found to be defective due to faulty materials or workmanship. The warranty does not cover parts and accessories available from the trade.
5. This warranty does not cover reimbursement for labour, consumables or transport charges for repairs under the warranty.

WARRANTY EXCLUSIONS

1. The Manufacturer disclaims all liability for general damage or injury, loss due to halts in production, loss of earnings, leasing costs or any moral or commercial damage.
2. All claims concerning a motor or engine mounted on a stump grinder will be handled by the relevant manufacturer's after-sales service.
3. This warranty does not cover damage caused by misuse, abuse, insufficient maintenance, accidents or damage caused during transport.
4. Parts subject to wear, such as grinding tools and belts, are not covered by this warranty.
5. All expenses for setting the machine to work will be charged to the distributor or dealer.
6. This warranty is not valid if repairs, maintenance or modifications are performed by an unauthorized person or dealer.
7. The owner is responsible for routine maintenance and settings, which are thus excluded from this warranty.
8. The installation or use of non-original components and accessories will immediately invalidate this warranty.

PROCEDURE FOR MAKING CLAIMS UNDER THIS WARRANTY

If you find the stump grinder is defective due to faulty materials or workmanship, send the Manufacturer a written claim.

1. The machine must be returned to the Seller or the authorized CARAVAGGI dealer.
2. A duly compiled warranty or, in its absence, the original receipt must be presented.
3. The claim will be completed by the dealer, who will forward it to the Manufacturer.
4. The Manufacturer alone reserves the right to determine whether to accept the claim or otherwise.
5. The Court of Brescia, Italy, has sole jurisdiction in the event of disputes between the parties.

The warranty is effective as from the date of start-up of the machine, provided it does not exceed 30 days of despatch from the factory and is valid for 12 calendar months.



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