



Bio-shredders

Libretto istruzioni
Operator's Manual
Gebrauchsanweisung
Livret des Instructions
Manual de Instruccion

“ R 500T “



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INTRODUCTION

This manual is to be considered part of the machine. Distributors of new and used machines are required to issue a document stating that the user's manual has been delivered along with the machine itself. Operators are strongly required to read the manual thoroughly and carefully before undertaking any kind of operation on the machine.

AIM OF THE MACHINE

The R500bio-shredder is a machine designed for professional uses. It is particularly suitable for the treatment of bulk material. It grinds up all sorts of vegetable waste (pruning and garden waste, hedges, fruit and vegetable waste, wooden boxes, wooden packages, pallets and so on). When working, it always considers the size, the quantity and the quality of the material to be shredded.

WARNINGS AND SAFETY DIRECTIONS

Operator's safety measures

People under the age of 16 are not allowed to use the shredders.

When attending the machine, the user is responsible for any damages, which might occur to third parties.

During the shredding sessions it is absolutely necessary to wear protective gloves and glasses. It has been proved that, following an uninterrupted use, the allowed noise level is exceeded. It is therefore advisable for the user to wear ear-protection devices, too.

During the shredding session the user always has to wear robust shoes and long trousers.

Hair must be gathered up.

Do not use the machine if you are tired, ill or if you have taken medicines, drugs as well as if you have been drinking alcoholics.

When the machine is working, please do not use ladders or stools to get to the driving roller located at the bottom of the hopper, unless the machine is off.

Do not approach the working area of the cardan shaft transmission when it is working.

Please use cardan shaft transmission gears provided with a free wheel device. The transmission-gears must be in compliance with the regulations envisaged by the machine guideline.

Safety measures concerning the machine

When starting the machine, please make sure that all its parts are assembled correctly.

Replace the broken or the damaged parts before using the machine.

The machine has to be placed on a flat and steady base.

Before leaving the shredder unattended, it is necessary to stop the tractor and to disconnect the transmission shaft.

It is compulsory to use the machine with all its safety devices correctly mounted to it. Roll the discharging conveyor belt completely open and turn it on before starting introducing the material.

Never modify the machine.

Do not use the machine for purposes, which are different than the ones it was designed for

Safety measures during the shredding session

When using the bio-shredder, the operator must wear the individual safety devices; he must stay close to the hopper into which he inserts the material he wishes to grind up. He has also to make sure that nobody is around within radius of 20 meters.

Please do not insert branches having bigger sizes than the foreseen ones (18 cm as stated in the picture graph on the hopper).

Please do not insert any stones, metals, glass, plastic, earth, and newspaper bundles and so on in the bio-shredder but only vegetable materials.

Do not remove any protection housing when the machine is working.

The operator shall keep off the discharging conveyor belt when the machine is working.

Do not get close with any parts of your body to the protection housings.

When the machine is working, do not let any parts of your body get close to the transmission-gear. The PTO of the tractor has to revolute at an approximate speed of 540 revolutions/minute. Please do not let it revolute faster than that.

Safety measures when maintaining

For the maintenance of the machine, please follow the procedures mentioned in *MAINTENANCE*.

Use original spare parts only.

When replacing the hammers and when carrying out the cleaning processes, please watch out not to cut yourself. "Cutting-heads are very dangerous!"

Start carrying out the maintenance only after you have worn protective gloves and stopped the tractor; wait until the rotor has come to a complete stop.

Safety during transport and storage

Please make sure that all parts of the shredder are well fastened to the trailer not to lose anything during transport.

The machine must be transported with great care and the engine must be off.

Please use the appropriate hooks to lift the machine.

Before transporting the machine hooked to the tractor, please disconnect the transmission shaft.

ASSEMBLY

The R500 bio-shredder is delivered to you fully assembled and, therefore, ready to use.

If you purchase an unassembled machine, please use the exploded diagram (picture 1), the basic components list and the corresponding instructions to carry out the assembly of the machine in the correct way.

It is of the utmost importance that trained and authorized staff only sees to the assembly of the machine.

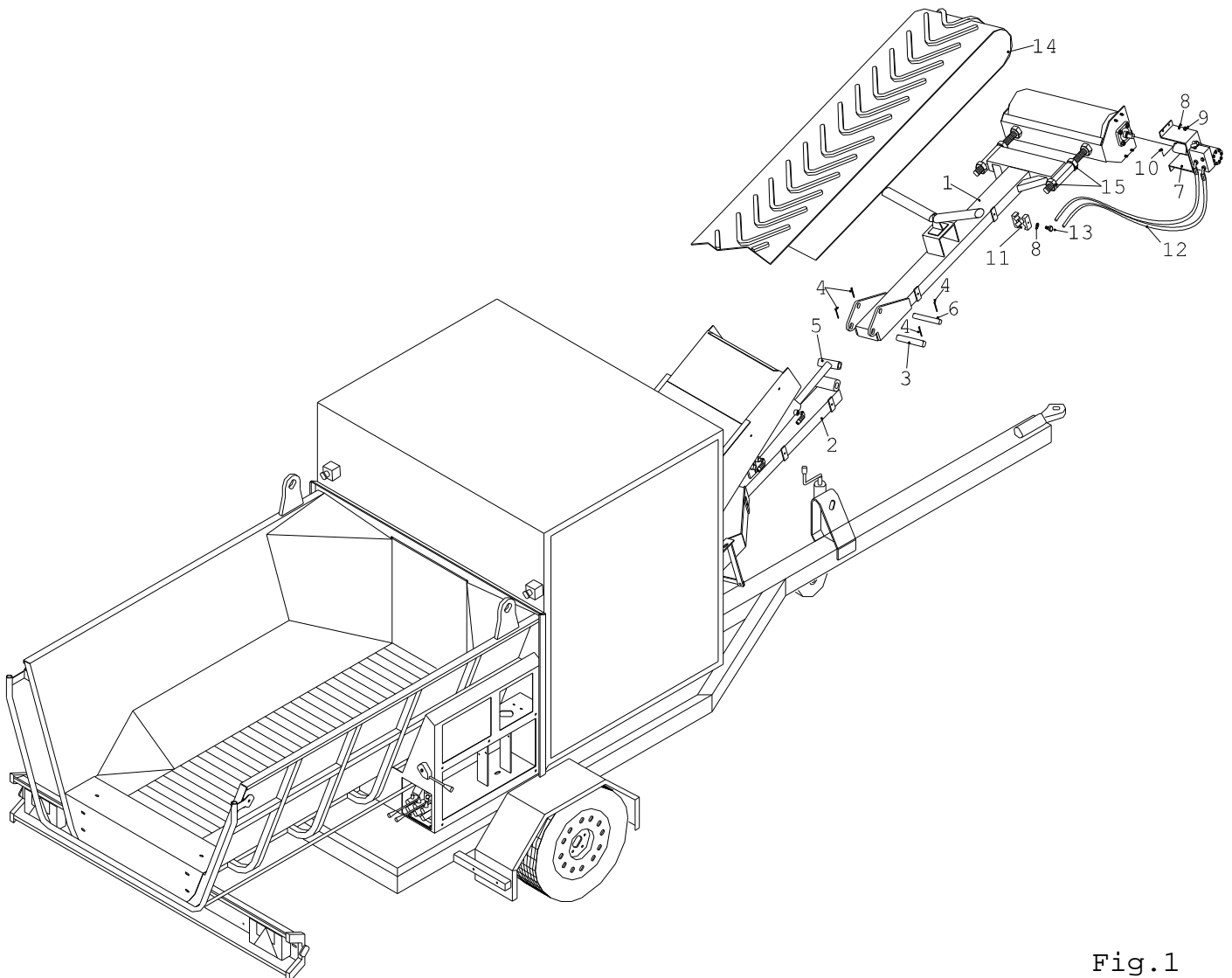


Fig.1

Basic list of components

1 Mobile conveyor belt frame	9 m8 aut nut
2 Fixed conveyor belt frame	10 M8x10 dowel
3 Gudgeon pin for conveyor belt frame	11 m8 collar
4 A4x50 split pin	12 hydraulic pipes
5 Cylinder	13 screw for the collar
6 Mobile pin for cylinder	14 rubber conveyor belt
7 Hydraulic engine frame	15 M27 nut
8 8 Flat washer	

Directions for assembly:

Please wear protective gloves first.

Fix the mobile conveyor belt frame (1) to the fixed one (2) by using the pin for the conveyor belt frame (3). Block the pin with the two split pins (4).

Let the bush of the cylinder (5) overlap with the holes of the mobile conveyor belt frame (1); insert the mobile pin for the cylinder (6) and block it with the two split pins (4).

Assemble the hydraulic engine frame (7) on the mobile conveyor belt frame (1) by using the four flat washers (8) and the four M8 nuts. Block the coupling made through the dowel (10). Put the hydraulic pipes (12) in place in the collars (11); bolt the screws (13) placing the washers (8) in between.

Place the rubber conveyor belt (14) on the roll of the mobile conveyor belt frame (1) and, using the four M27 nuts (15), stretch it until it touches the scraper of the mobile conveyor belt frame (2). The conveyor belt (14) must be centred as to roll freely.

TRANSPORT

Authorised trailers only can transport this Bio-Shredder. Before transporting the machine hooked to the tractor, please disconnect the transmission shaft.

During transport, fasten the machine to the trailer as well as you can, making sure that the Bio-Shredder does not exceed the allowed limits of the overall volume of the means of transport used.

INFORMATION ON USE

Working times

According to the regulations for noise reduction, Bio-Shredders can not be used at the following times: on working days from 1:00 p.m. to 3:00 p.m. and from 7:00 to 7:00 a.m. of the following day; on bank holidays from 1:00 p.m. to 3:00 and from 10:00 p.m. to 7:00 a.m. of the following day.

Activation

Please place the bio-shredder on a flat and dry surface. Let it hooked to the trailer. Make sure that all protection housings are closed. Make also sure that the levels of the hydraulic oil, of the oil in the multiplier unit and of the oil in the reducers (see paragraph “Maintenance”) are not under the allowed limit. Unblock the machine from its trailer by using the lever (picture 1). Turn the lever of 90° until it reaches its working position. Once the lever is in its working position, please block it. Pull out the two supporting feet from underneath the hopper and place them on the ground, placing thick wedges between the feet and the soil (picture 2).

Connect the cardan joint to the tractor in the correct way. Make sure that the “free wheel” device is in PTO of the bio-shredder and that the safety-locks are in their appropriate seatings. Next, fasten the safety chains to a fixed part of the bio-shredder and of the tractor so that the external protection housing does not rotate. Switch the tractor on and let it go at its minimum. Connect the PTO of the cardan shaft. Let the clutch go very slowly so that the shredder can start working slowly. Start accelerating and increase the pace more and more until you reach an engine revolution number of the tractor allowing to get 540 revolutions at PTO. No-stress display: 3000/3200 revolutions/minute

Adjustment of the no-stress device

The main aim of the No-stress device is to control the action of the driving roll/apron conveyor automatically, thus avoiding possible lodgements in the shredding unit.

The No-stress device is controlled or adjusted by the operators through a 4 button panel.

You can carry out this operation only if the display is on.

When using the machine, the screen displays the instantaneous revolution number of the rotor.

Through the button panel you can control the following functions:

- 1st Function: adjustment of the minimum revolution number
- 2nd Function: adjustment of the maximum revolution number
- 3rd Function: control of working hours



ADJUSTMENT OF THE MINIMUM NUMBER OF REVOLUTIONS

Keeping the screen on, press the button “Clr” three times and the button “Min” one time. A number between 0 and 3500 will be displayed. The very number equals the current minimum number of revolutions when the device sets in to block the feeding roll.

At this point, if you wish to increase or decrease this minimum number of revolutions, you simply have to press the buttons “max” or “min” according to your needs.

Once you have chosen the minimum number of revolutions, you have to save it by pressing “Ent” twice and then “Clr” to go back to the instantaneous number of revolutions.

ADJUSTMENT OF THE MAXIMUM NUMBER OF REVOLUTIONS

Keeping the screen on, press the button “Clr” three times and the button “Max” one time. A number between 0 and 3600 will be displayed. This number equals the current maximum number of revolutions when the device sets in to activate the feeding roll.

At this point, if you wish to increase or decrease this maximum number of revolutions, you simply have to press the buttons “max” or “min” according to your needs.

Once you have chosen the maximum number of revolutions, you have to save it by pressing “Ent” twice and then “Clr” to go back to the instantaneous number of revolutions.

The maximum number of revolutions for the machine to set in must equal or be lower than the instantaneous number displayed on the screen when the machine is empty.

WORKING HOURS CONTROL

Keeping the screen on, press the button “Clr” three times and the button “Ent” once. The screen will display the hour amount worked by the machine. In order for the screen to display the instantaneous number of revolutions again, press the button “Clr” once.

There is no ideal maximum or minimum number of revolutions at which the no-stress device should set in since the speed of the feeding roll is as variable as the material you can shred.

Anyway, we suggest you to choose a value between 3000 revolutions/minute and 3200 revolutions/minute as the maximum number of revolution. As far as the minimum number of revolution is concerned, we recommend a value between 2900 and 3100 revolutions/minute.



Foto3

It is not possible to calibrate the minimum number of revolutions so that it is equal or higher than the maximum number. The same goes the other way round.

Use

Unfold the conveyor belt open by using the outer lever of the distributor (picture 3, lever upwards to open it; lever downwards to close it).

Turn the conveyor belt on by using the central lever (picture 4. Lever in the middle means that the conveyor is still; lever downward means that the conveyor belt is moving). Start the apron conveyor by using the control shackle (picture 5) located on the front part of the hopper. This shackle allows you to control the direction of the apron conveyor (operator-introduction-inversion-stop-hopper).

It is possible to control the speed of the conveyor belt and of the apron conveyor through the appropriate regulators located under the corresponding levers (picture 6).

Once the operator has put his gloves, glasses and headphones on, he can start introducing leaves, twigs and branches, provided that the input material has a maximum diameter of 18 cm.

It is understood that when we say 18 cm, we mean the largest diameter, which can be shredded, considering a soft or medium hard wood variety. It goes without saying that if you use harder wood varieties, the maximum diameter you can shred decreases proportionally.

The material to be minced can also be introduced in the hopper using a bucket or a mechanical fork.

To get the best performances from the machine, we suggest you to insert the material at a pace, which can allow the tractor to work over its maximum torque.

If you need to grind up wet material or fibrous materials such as linden trees, pines or palms, please decrease the inserting speed to avoid any lodgements of the machine.

Accidental cases and what to do accordingly

(Please use the exploded diagram and the basic list of components at the end of the this booklet)



THE BIOSHREDDER DOES NOT IDLE

Please make sure that the cardan joint is connected directly to the tractor and to the shredder: the safety locks must be in their appropriate seatings. If the failure goes on, please call a technician.

STALLING OF THE CUTTING HEADS BECAUSE OF TOO MUCH MATERIAL INSERTED OR FOLLOWING THE ACCIDENTAL INSERTION OF STONES OR BIG METAL PIECES

(Use the exploded diagram and the list of components at the end of the manual)

Switch off the engine and wear safety gloves. Open the door on the left (73) and take out the two spring washers first (132) and then the two pins for the sieve (131). Remove the lid of the back protection housing (125) by unscrewing the 6 nuts (2). At this point you can extract the sieve (130)

Clean the cutting unit and remove all the residues of vegetable waste that are still inside

Please handle the hammers in the machine very carefully (they can cause serious injuries)

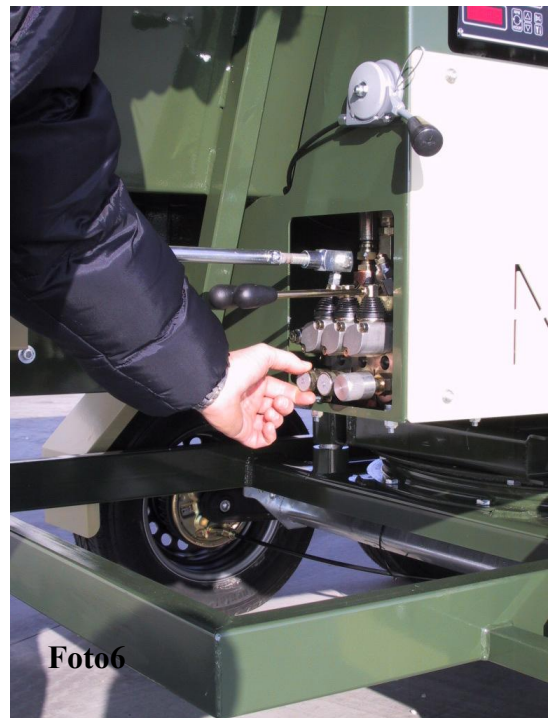
Assemble everything again and idle the Bio-Shredder. Every time, after a stalling of the cutting unit for the above mentioned reasons, check if the driving belts and the cutting group still work correctly and make sure that the blades, the hammers and the shafts, which are inserted in, are still integral (see paragraph “Maintenance”)

STALLING OF THE MACHINE BECAUSE OF STUCKED MATERIAL BETWEEN THE DRIVING ROLL AND THE ROTOR

Open the door on the right (72) and the one on the left (73). Unhook the springs (48) by unbolting the nuts (50). Lift the driving roll (54) and, by using the levers, remove the material lodged between the rotor (144) and the driving roll (54). Assemble everything again.

STALLING OF THE BIOSHREDDER DUE TO LACKING FUEL IN THE TRACTOR

Fill the fuel tank of the tractor. Please do not start the machine since the driving belts



could break because of overheating.

Before re-starting the bio-shredder, please remove any branches stuck under the driving roller (54). In order for you to do so, please unhook the springs (48) and then lift the driving roller (54) Clean the cutting unit as described in the previous paragraph.

STALLING OF THE INPUT HYDRAULIC SYSTEMS

If the roller (54) and the apron conveyor (145) are stalled, make sure that you did not push one of the emergency buttons by mistake (274) or that the rotor is not working at a too low pace, that is to say inferior to the maximum revolution number set on the no-stress device.

In the first case you simply have to unblock the switches by twisting them slightly. In the second circumstance you have to work on the accelerator lever of the tractor.

Make sure that the fluid regulator is open (picture 6). If the problem is still there even after the above-mentioned checking procedures, turn the tractor off and check that no objects are in the way thus preventing the roller (54) or the apron conveyor from working correctly. (145). If there are some, please remove them. Make sure that the machine has no leaks within the hydraulic system and that the level in the oil tank (149) is visible from the level indicator. Make sure that the flexible coupling (112) is in good condition and that it can transfer the motion to the pump (109). If the breakdown persists, please contact an authorized technician.

STALLING OF THE DISCHARGING HYDRAULIC SYSTEMS

If the discharging conveyor belt is not rolling (194), make sure that the fluid regulator is open (picture 6) and that no objects are in the way thus preventing it from working. If there are some, remove them. Next, check that the outer hedges of the conveyor belt do not rub against some fixed parts of the machine. If so, please centre the conveyor properly by using the four M27 nuts (198).

BAD FUNCTIONING OF THE NO-STRESS DEVICE

If the no stress screen does not lighten up when the machine is working, make sure that the sidelights of the tractor are on. Check the cable connecting part to the tractor and all the connections inside the no-stress box.

If the display is on but it reports a wrong number of the revolutions of the rotor, make sure that the sensor (236) is located at approximately 2 cm. from the circumference described in the references (113). Check the adjustment of the no-stress device as previously described. If it has been wrongly adjusted, please carry on the correct adjustment.

Make sure that the electro-valves (255-146) are not blocked or burnt.

Should any damages occur to the electronic card (231) of the no-stress device or of

the sensor (236), you could disable the no-stress device through its switch (289). This way you can work manually by using the control shackle (picture 5). Please contact an authorized technician anyway.

EXCESSIVE VIBRATIONS

The possible reasons for such a failure could be: unbalance of the cutting unit caused by the inclination of one or more shafts that support the hammers; breaking down of one or more hammers ; loosen driving elements. Find out the source of the problem and contact a technician for its repairing.

MAINTENANCE

(Use the exploded diagram and the list of components at the end of the manual)

Before each checking, maintenance or cleaning operation to be carried out at the end of every working session, please switch the tractor off.

We strongly advise you to wear working gloves.

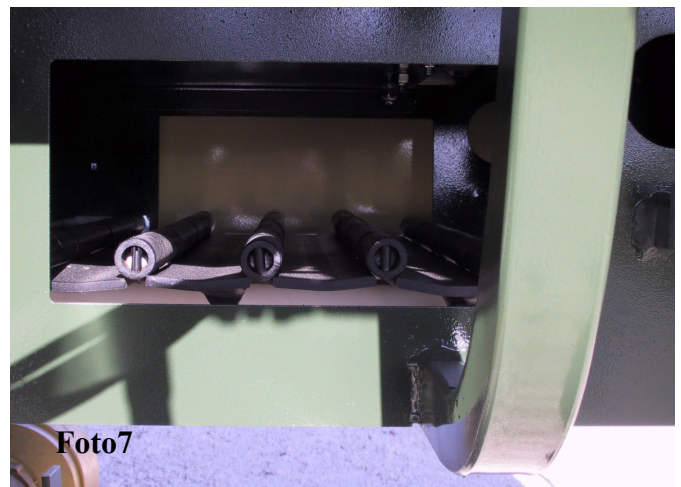
Cleaning of the shredding unit:

Clean the machine as described in the previous paragraph “*Accidental cases and what to do accordingly* ” and remove all possible residues left inside the bio-shredder. When doing so, please act very carefully since the cutting heads are very dangerous. Assemble everything back.

Cleaning, checking and replacing the apron conveyor:

After every working day, we advice you remove the protection housing on one side of the hopper (191) by unbolting the four nuts (118) so that you can clean the apron conveyor (145) and the driven roller (185) through the inspection overlay of the hopper (picture 7). Please make sure that the apron conveyor is not too stretched (there should be a 3/ 4 cm subsidence when pressing the upper part of the apron conveyor itself at around 15 cm from its beginning). If so, loosen it by using the threaded bars (187).

A too stretched apron conveyor leads to the breaking down of its joints. It can also cause a decrease in the performance level of the machine. Through the same inspection overlay, it is possible to evaluate the wear of the tubes of the apron conveyor. If the wear exceeds 3.5 mm, please replace the tubes. Loosen the apron conveyor by using the threaded bars (187) and replace a louver (171-172) or the entire apron conveyor (145). In order for you to do so, take down the hydraulic engine (92) by unbolting the two screws (24) and by pulling out the spring washers (173) from the upper part. You have to pull out four of them if you are replacing a



louver only (171-172) and two of them if you are replacing the entire apron conveyor (145). Roll the rolling shutter until the louver without spring washers reaches the inspection overlay; extract the pin for the apron conveyor (170) and replace the louver or the complete apron conveyor. Mount the missing pin again (170) by using the inspection overlay, move back the louver without spring washers to the upper part, insert the washers on both sides and stretch the apron conveyor according to the directions previously explained.

Checking and replacing the leads for the apron conveyors

By using the same inspection overlay as described in the previous paragraph, you can make sure that the height of the six polythene leads for the apron conveyor (260) is not less than 15mm. If they are shorter, please replace them.

Disassemble the apron conveyor as previously described, unbolt the screws blocking the leads (261 or 262), replace the worn ones (260) and bolt the screws again.

The lateral leads (263 and 264) are to be found on the sides of the apron conveyor and you have to replace them when their thickness decreases from 5 to 2 mm. To replace them, what you have to do is unbolting the screws (118) located on the outer side of the loading hopper, remove the worn leads and replace them with new ones. Fix them using the screws (118).

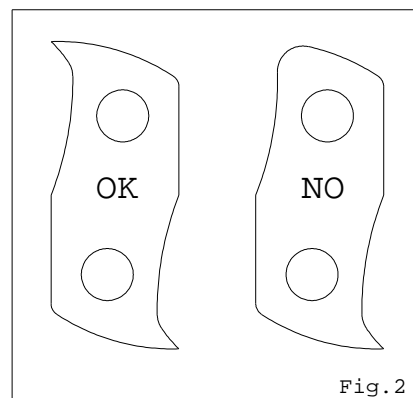
Checking the discharging conveyor belt

We suggest you to check the tension of the conveyor belt (194) once a month. If needed, please stretch it by using the four M27 nuts (198). The conveyor belt is stretched correctly if, when rolling, it touches slightly against the scraper of the fixed conveyor belt structure (217) without actually brushing any fixed part of the machine. A too high tension can lead to the breaking of the chain belt itself or to a decrease in the performance level of the machine.

Checking, rotation and replacement of the hammers:

Please check the wear of the hammer tips every 50 working hours (Picture 2). In order for you to carry out this checking procedure, open the doors (72 and 73), take down the two lids (175) by unscrewing the nuts (2), remove the two spring washers first (132) and then the two sieve pins (131). At this point, please remove the back protection housing (125) by unscrewing the six nuts (2) and take the sieve out (130). Please make sure that the tips of the hammers are in good condition (picture 2); if not, have them rotated or replace them.

Disassemble the leads of the conveyor (127) by unbolting the six nuts (2); disassemble the rubber strips (128) by unscrewing the four screws (63); eventually disassemble the back protection housing (126) by removing the 8 screws (41). To rotate or to replace the hammers, please block the pin (136) through a 30 spanner; unbolt the screw through a 6



Allen screw (143) (if necessary, you can heat the 143 screw with a hairdryer)
When taking the pin (136) out, you can recover all hammers and all spacers. Before you rotate or replace the hammers, please check the surface condition of the pins (136, picture 3) and, if necessary, replace them.

Do the same for the other three rows, too. Eventually you can assemble everything back together following the assembly chart of the rotor carefully (picture 4)

A wrong assembly of the hammers and of the spacers will cause harmful vibrations.

When replacing damaged parts, please use original spare parts only. They have to be marked with the name of the manufacturer. The operator will easily find these original spare parts at the constructing company NEGRI MARCO.

In case the blades have been subjected to heavy impacts or blows, a technician must test them.

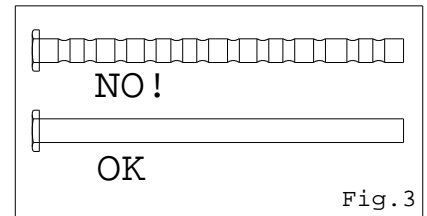


Fig. 3

Assembly chart of the rotor

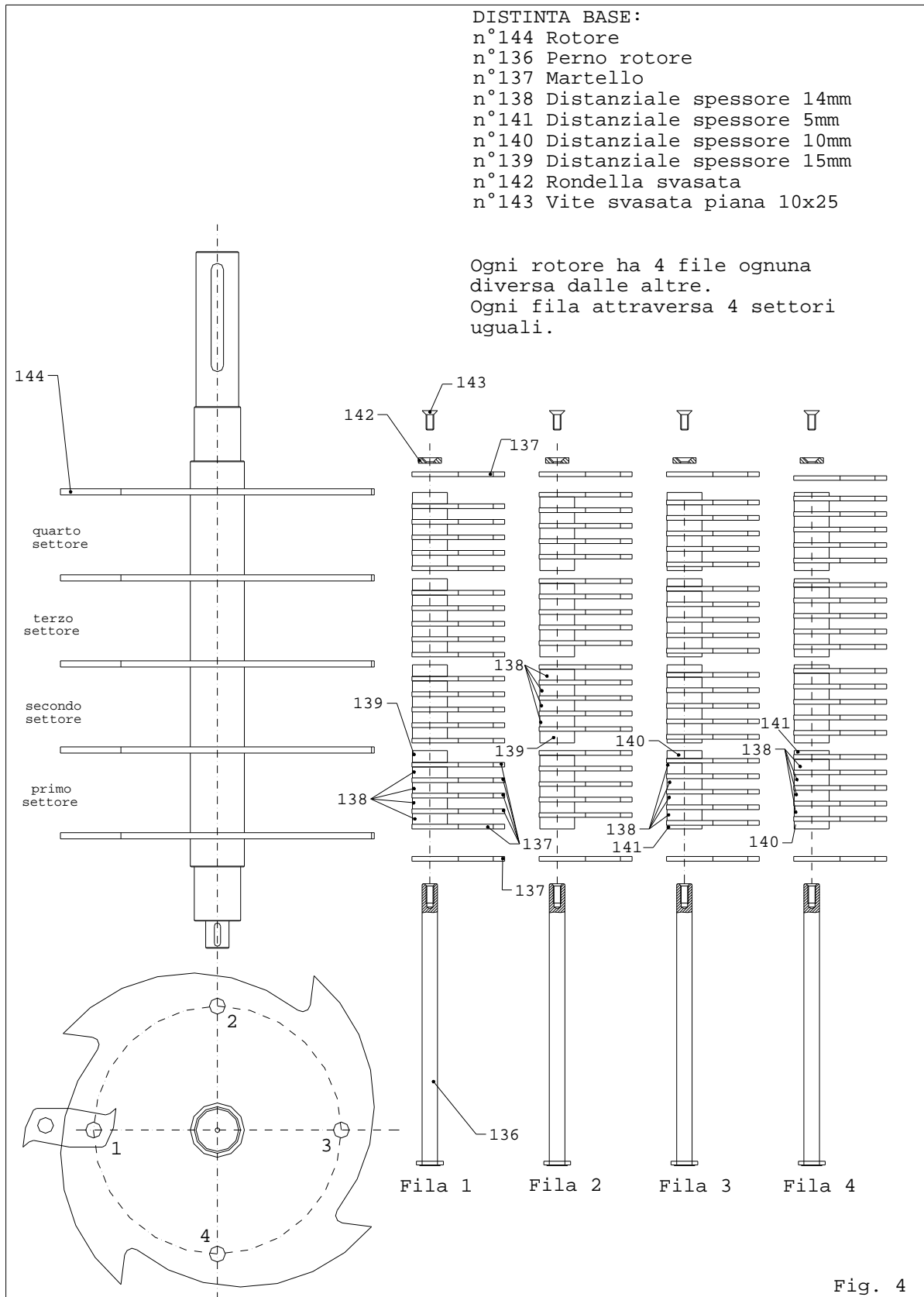


Fig. 4

Stretching the driving belts:

Open the door on the right (72) and stretch the driving belts by using the regulators (50) so that, if you press the belt with a finger, its lowering does not exceed its thickness. When you have to replace the driving belts, please loosen the regulators (50) so that the belts can come out from their seating. Replace the worn belts and stretch them as previously described. Assemble everything back together.

The driving belts on the R 500 tractor model are SPB 1800.

Checking the height of the driving roller

We suggest you to make sure, by looking inside the loading hopper, that between the driving roller (54) and the apron conveyor (145) there is at least 5mm backlash. Should you adjust their height, please use the rules (51) located on the sides of the machine when opening the doors.

Checking the flexible coupling

To verify the wear of the coupling (112), please open the left door (73) and make sure that there is no backlash between the two parts of the coupling. If so, you have to replace the coupling. To replace it, please loosen the two dowels (29); disassemble the pump supporting structure (111) by unbolting the four nuts (2). Without taking the pump out, take the coupling out. Replace it with a new one and assemble everything again following the inverse procedure.

Cleaning of the air / oil exchanger

To get the maximum results out of the hydraulic system, we suggest you to clean the splits with compressed air or water, always taking care of directing the jet parallel to the splits in order not to damage them. It is of the utmost importance that the electric engine is unplugged from the voltage during this operation and it is well protected against the jet.

Levels

Hydraulic oil: It is possible to check the level of the hydraulic oil through the level indicator located on the oil tank. If you need to top up, please use the SAE46 oil type. Oil for reducers and multiplier: Check the oil level in the reducers through the appropriate level caps (SAE 80w-90 kind).

Daily maintenance

Clean the machine outside.

Make sure that the screws and the nuts are tightened properly.

Make sure that all protection devices are sound and steady on the machine.

Clean the apron conveyor inside.

Clean the air/oil exchanger

Check the intactness of the driving belts.

Extraordinary Maintenance

Check the condition of the hammers every 50 hours (137)

Every time you replace the hammers, check the condition of the rotor pins (136)

Check the wear of the tubes of the apron conveyor (145) every 100 hours.

Check the wear of the leads of the apron conveyor (260) every 100 hours

Check the height of the driving roller (54) every six months

Grease the 12 bearings (133-36-195-186-97) every 100 hours.

Check the wear and the backlash of the flexible coupling (112) every 100 hours .

Change the hydraulic oil (SAE 46 kind) every 600 hours or 2 years.

Replace the hydraulic oil filter element when the red cylinder reaches the glass dome-shaped element located on the oil filter (please use 25 µm strengthened cellulose filters)

After the first 150, please change the oil in the reducers; later on you can change it every 2000 hours or at least once a year (SAE 80w-90 kind).

After the first 50 hours, please change the oil in the multiplier box; later on you can change it every 500 hours or, at least, once a year (SAE 80w-90)

STORAGE

Every time your working session with the machine is over, please turn the tractor off, clean the shredding unit and check the stretching of the driving belts (see paragraph *Maintenance*)

Make sure that the radiant mass of the air/oil exchanger is always clean to guarantee performances in time and, above all, to guarantee that the electric parts work, as they should. Clean the splits with compressed air or water taking care of directing the jet parallel to the splits in order not to damage them. It is of the utmost importance that the electric engine is unplugged from the voltage during this operation and it is well protected against water jets.

Store the shredder indoors. If you store it in a cold place and if you are not using it for a long time, we suggest you to loosen the driving belts and the discharging conveyor belt. Please roll the conveyor belt completely open before storing the bio-shredder (working position).

WARRANTY

The company NEGRI MARCO guarantees this machine against manufacturing failures and against other failures related to the materials for 2 years starting from the purchase date. The guarantee is valid for every person who acts for purposes, which are not part of his commercial or professional activity.

The terms stated in this guarantee are in compliance with the 1999/44/CE European Directive.

For people using the product for professional aims, the guarantee is valid only if it is provided with the till receipt or the guarantee certificate (attached to this booklet), filled in by the seller and sent within 10 days from the purchase date.

As far as the internal combustion engines and the electrical ones are concerned, the guarantee which runs for them, is the one given by the engine builders, that it is valid 1 year long.

The guarantee excludes every responsibility related to direct or indirect damages to people or things and its effect ends if the pieces returned were stripped down, tampered or repaired by unauthorised centres. The guarantee does not cover the damages caused by the non-respect of the use directions, either.

The parts that are largely used and for this reason get quickly worn, such as gaskets, chains, belts, valves, bearings, hydraulic pipes, blades, etc., are not covered by the guarantee.

The guarantee excludes also the transport costs, the costs for inspections, the assembling and dismantling carried out by one of our technicians following the customer's request to solve problems which then resulted not to be dependent from us.

In case of any damage, please contact an authorised centre and use original spare parts, specifying the model and the version. When no original spare parts are assembled, no guarantee right valid.

TECHNICAL SPECIFICATIONS

Noise emissions

The acoustic pressure to the operator's ear is in compliance with EN ISO 11201 and modified by the regulations relating to the machine: 117-dB (A).

Total length: 5415 mm

Total width: 2030 mm

Total height: 2800 mm

Inserting height: 960 mm

Discharging height: 2700 mm

Hopper width: 1450/960mm

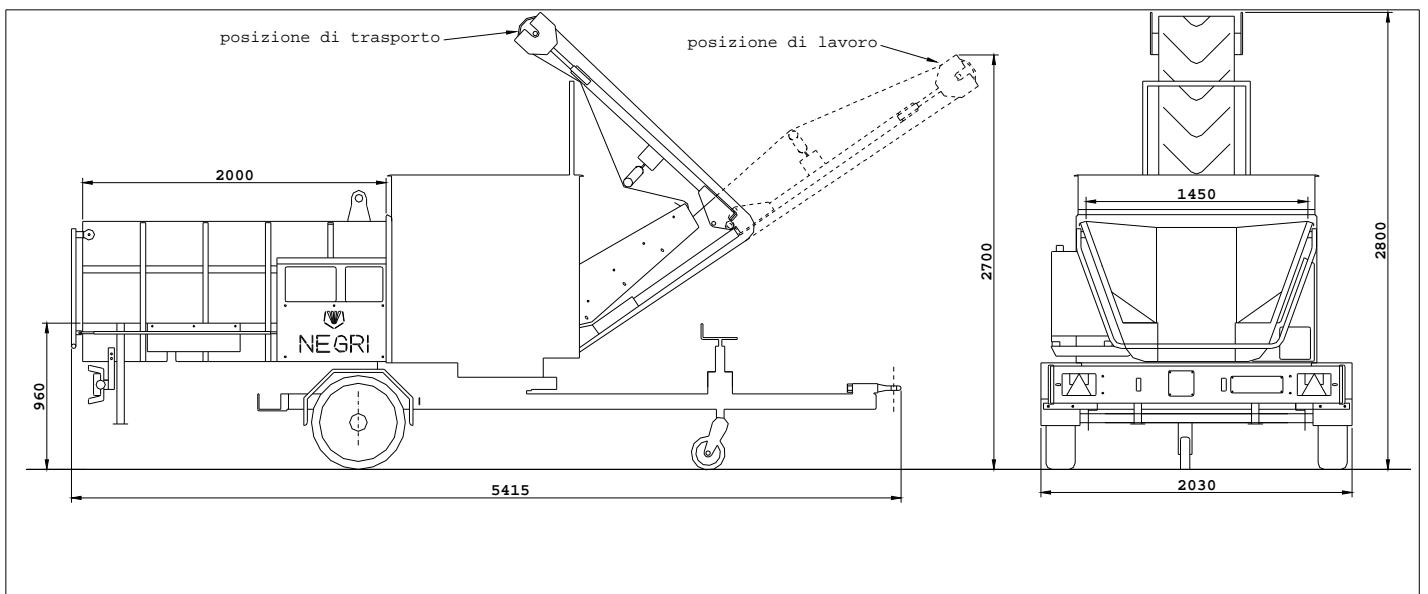
Hopper length: 2000mm

Weight: 2270 Kg.

Required tractor power: at least HP90

Number of revolutions at the PTO: 540 revolutions/minute

OVERALL DRAWINGS



WARNINGS AND SAFETY DIRECTIONS



Before using the bio-shredder and before each checking, maintenance or cleaning operation, please read the operator's manual carefully. It's very important that the operator sticks to the directions given as to avoid wrong manoeuvres that could lead to injure himself and third parties.



We strongly suggest you to use protection-goggles to prevent dust or any other dangerous material from getting into your eyes . Since during an uninterrupted use of the machine the allowed noise level is exceeded, please don't forget to wear an ear-protection device. The non-observance of this direction could damage your ability to hear irreparably. This sticker is to inform that this machine consists of cutting tools. For this reason, it is necessary for the operators to wear protection gloves during work and maintenance.



This sticker informs that the protections of the cutting heads and the hammers have been designed to prevent the operator, who stands in front of the machine, from touching them. However, especially from the front material discharge, he could get to the blades, if he leaned forward. Should it be necessary for the operator to lean forward, please make sure to take all the necessary precautions, like switching the machine off or wearing your protection gloves.



This sticker informs the operator that under the protection devices there are some driving-belts working. It is therefore absolutely forbidden to put your hands in the spaces the manufacturer left open for the machine to cool off. It is also forbidden to use the machine without the protection devices.



SUDDEN EJECTION OF SHREDDED MATERIALS

This signal explains to the operator and to other people being around the machine, that the machine might eject some shredded material. For this reason the operator must work in the suggested use-position only. All other people are kindly required to keep a distance of at least 20 meters from the machine



MIND YOUR HANDS: working rollers

This sticker is to inform that there is a working roller in the area. When performing every kind of operation beyond the ordinary use of the machine, we suggest you to use all the possible precautions such as stopping the engine and wearing protection-gloves.

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