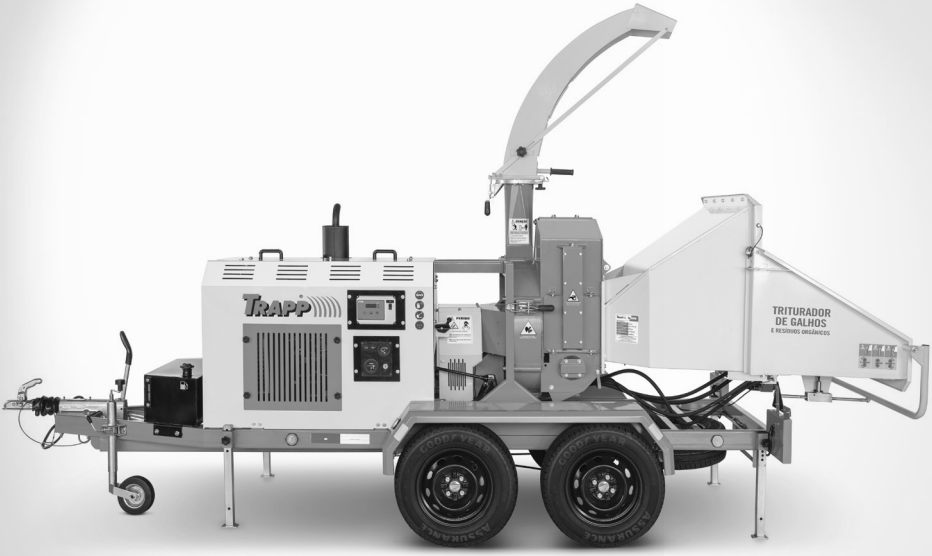
Instructions Manual

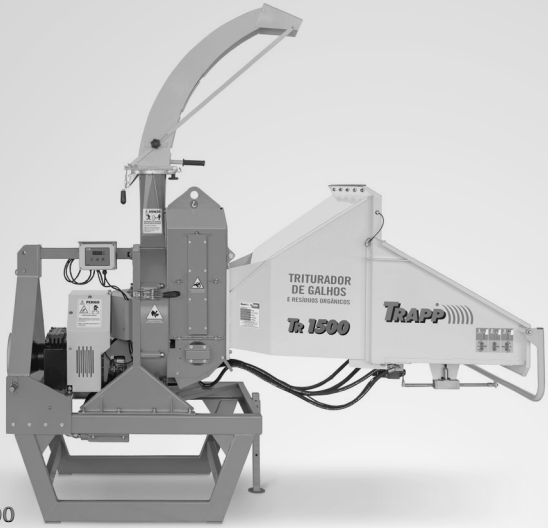
Organic Residue Shredder



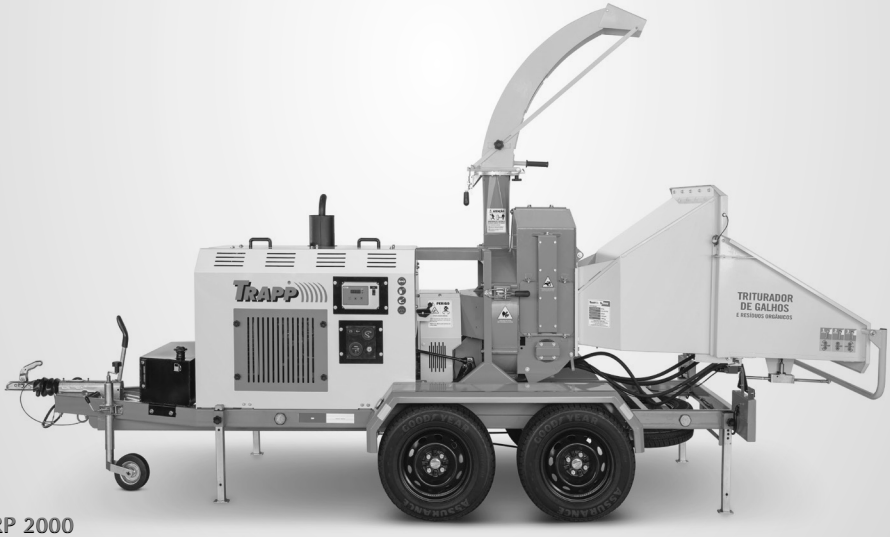
Models

TR 1500
TR 2000

TRAPP®



TRP 1500



TRP 2000

Congratulations!

You have just acquired a quality product developed with the highest TRAPP technology. This product will provide quickness and efficiency on the jobs, with savings and complete safety. For this, some precautions are necessary. The critical safety measures contained in this Instructions Manual do not cover all possible situations that may occur. The operator must understand that common sense, attention, and precautions are not factors that can be incorporated into the product; they must be supplied by the people that operate it and perform its due maintenance.

Important Recommendations

Caution!

Read all the instructions contained in this manual before operating the equipment, always observing the safety indications and following the instructions to prevent accidents and/ or injuries.

Read and keep these instructions.

1 - Work area

- ✔ **Do not operate the equipment near an explosive atmosphere, nor wherever there are flammable liquids, gases, and/or suspended dust.** The electrical installation of the equipment produces sparks that may ignite flammable liquids, gases, or suspended dust.
- ✔ **Keep children and spectators distant.** When the equipment is in use, all persons, especially children, must remain at a safe distance from the work area. The operator/user is responsible for possible accidents that may occur.

2 - Electrical safety

- ✔ **Do not expose the equipment to rain or moisture.** Install the equipment in a dry location and protected from inclement weather. Water inside the equipment may damage the engine's electrical circuits, besides increasing the risk of electric shock and cause the oxidation of the machine's structure.

3 - Personal safety

Caution!

Whenever you perform any cleaning or maintenance operation, first assure that the equipment is turned off and the blades are stationary, because the blades continue in motion for some instants after the equipment is shut down.

- ✔ Most accidents occur while the operator is using the machine or during its maintenance, and are caused by the lack of attention to the basic safety precautions. Therefore, it is necessary to be aware of the potential risks of an action, paying attention to your own actions and their effects.

- ✔ **Do not hold or lean yourself on the machine during its transport; keep away at a safe distance.**

- ✔ **Keep alert. Remain aware of what is happening and use common sense when you are operating.** Do not operate the equipment when you are tired, distracted, or under the influence of drugs, alcoholic beverages, or medication. A moment of inattention may result in serious injury risk.

- ✔ **Use safety gear such as gloves, goggles, respiratory mask, and hearing protector, according to the operation performed.** Observe the labels on the machine indicating the type for safety gear required to use the shredder and check, on page 6 of this manual, what each label represents.

- ✔ **Dress appropriately.** Do not wear loose clothing or jewelry, because it may get caught on moving parts of the equipment. If you have long hair, keep it tied up during the job.

- ✔ **Prevent accidental operation.**

- ✔ Assure that the equipment is disconnected from the power plug of the tractor or, if started by a diesel engine, turn off the key at the starting dashboard and remove the battery cable before performing any maintenance on the shredder.

- ✔ At no time insert any part of your body inside the machine's cutting system to avoid personal damages.

- ✔ **Remove any object before turning on the equipment.** A tool or any other object stuck on the moving parts of the equipment may result in injuries.

4 - Use and precautions

Caution!

Check often if all the bolts are well attached, especially those on the knives and counter-knife. Always keep the measure of the knife and counter-knife regulated to ensure proper performance of the shredder.

- ✔ Support the machine on the ground and lower the stabilization shoes of the machine before turning on the shredder.

- ✔ To perform the job safely, position the machine at a site that is flat and suitable, free from obstacles that may cause the operator to trip upon introducing the material in the shredder.

- ✔ **Do not force the equipment.** Use it correctly and for the applications described in this manual, thus obtaining better performance and safety in your job. Follow the indications of use and applications on page 6 of this manual to achieve better performance of the shredder.

- ✔ **Do not use the equipment if the "NO STRESS" system is not operating.** The equipment cannot be controlled if this is damaged. In this case, it must be repaired immediately.

- **Disconnect the battery cable, remove the fuses, or disconnect the power plug before performing any adjustments or changing cutting blades and accessories. Before accessing the cutting system, wait for the complete stop of the disk to open the machine body and have access to the shredder's cutting system.** Such preventive measures reduce the risk of accidental operation of the equipment.

- **Carefully observe the way of introducing the materials into the shredder; irregular materials may hit the operator when pulled by the feeder roll.** Insert the material in the input funnel and, when the feeding roll pulls it, step away from the shredder.

- **Do not allow unacquainted persons to use the equipment.** The equipment may become dangerous at the hands of users unacquainted with its operation.

- Check the site where you intend to release the shredded material and regulate the material outlet nozzle before turning on the shredder. It is recommended that the nozzle work in parallel to the disk so to avoid clogging on the exit of material.

- Do not use the shredder in sites that are moist and poorly illuminated.

- As soon as the disk reaches the ideal rotation, start the feeding rolls through the drive bar located in the feeding funnel and insert the material you wish to shred.

- Before introducing the material you wish to shred, check the information in this manual to see the indicated work rotation.

- Be acquainted with all the triggering commands of the shredder to know how to act in a possible emergency stop.

- **Conserve your equipment. Check often if the moving parts are fixed, if any component is damaged or any other condition that may affect its proper functioning.** If there is a problem, make the repair before using the equipment. Many accidents are caused by a lack of adequate maintenance.

- **Keep the cutting disk clean and with the cutting blades clean and sharp, with the knife and counter-knife measurement between 3 and 4 mm.**

- Keep the feeding rolls clean after using the shredder and remove the leftover material from the protection of the smooth roll. The accumulation of material on the feeding rolls hampers the operation of the hydraulic engines that trigger the feeding rolls. Keep the machine on for a few minutes after finishing the job; this helps in the cleaning of the shredder.

- **The cutting blade keeps moving after the equipment is shut off. Therefore, be aware of this when performing any maintenance or cleaning.**

- Never use a pressurized water jet to clean the machine, so to not damage the electrical components. Also do not use chemical cleaning products, avoiding the corrosion of the material; only use neutral detergent and moist cloth or compressed air.

- **Use the equipment and accessories according to the instructions contained in this manual, taking into account the work conditions and the service to be performed.** The use of the equipment for operations not included in this manual may result in hazardous situations.

- Turn the shredder off immediately if the nozzle is clogged, if the cutting disk is locked, or if you notice excessive vibration of the machine. With the machine turned off and the disk stopped, assess the situation and unblock the outlet nozzle or the disk and resume the work. If the problem persists, contact a TRAPP Assistant.

- ✔ Do not shred material that is not indicated for this shredder; this results in loss of equipment warranty. Besides these products, for any other type of material that is not specified in the manual, the factory must be consulted before shredding it.
- ✔ In TR 2000, watch out for the output of the exhaust during the machine's operation; it produces wind and toxic smoke, and may also cause burns due to the working temperature.
- ✔ Do not transit around the machine while it is operating, especially in the direction in which the outlet nozzle is releasing the material. The material released by the nozzle may cause serious physical damages to the operator.

- ✔ **Repairs to the equipment must only be performed by qualified professionals and with original TRAPP parts.** Always use the services of the Authorized TRAPP Technical Assistants. TRAPP does not take responsibility for possible accidents or damages that occurred due to the use of non-original parts.

Note: *Some materials contain resin, in which case the cleaning of the machine must be performed more often during the job to avoid the clogging of the shredder. The recommendation is not to shred this material when it is green since this reduces the amount of resin.*

Uses and Applications

TRAPP shredders were developed with an efficient cutting system. The electronically-monitored cutting disk model, cutting blades, feeding rolls, and feeding control allow a wide variety of materials to be shredded, with this being a differential among other shredder models. The list of materials that may be shredded is presented next:

- ✔ Wood trunks[1] from tree pruning with diameters up to 20 cm;
- ✔ Branches with leaves and bushes;
- ✔ Leaves[2] and trunks of palm trees and coconut trees;
- ✔ Bamboo[2];
- ✔ Food-derived organic material[2];
- ✔ Wooden pallets and construction wood without nails or cement residues.

Notes: 1) Wood that is very dry and of hard quality must be fed with greater caution not to lock or damage the cutting system.
2) These materials require some precautions upon feeding to avoid clogging the outlet nozzle and accumulating material in the cutting system. Moist material may cause clogging, while very dry material may accumulate in the cutting system, which needs to be cleaned more often.

- ✔ Materials such as glass, metal, plastic, paper, cardboard, styrofoam, and cement or clay artifacts cannot be shredded. For any unspecified materials of vegetable origin, TRAPP must be contacted to assess the application before shredding; damages caused by the use of non-recommended materials lead to loss of warranty.
- ✔ Through the various types of materials that may be shredded in TRAPP shredders, it is possible to achieve an excellent composting result for the enrichment of soil nutrients, cover material for soil, use in seedbeds of gardens and vegetable gardens, or as fuel for boilers.

Important: Certify that the result obtained from the shredded material is appropriate for use in composting, soil coverage, or boiler fuel.

Technical Characteristics

Model	TR 1500	TR 2000
Upper hydraulic engine	622 Nm	
Lower hydraulic engine	311 Nm	
Disk rotation	Rotation 1,600-1,150 (rpm) Maximum/Minimum	
Minimum power	65 HP (tractor)	54 cv/40 kW (engine)
Minimum power for power take-off	50 HP (with 540 rpm)	Not applicable
Hydraulic system pressure	160 bar of work and a maximum of 170 bar	
No Stress system	Powered by 12 V - with a 10 A fuse	
Activation	Manual/mechanical with 3 stages	
Disk diameter	Ø680 mm	
Number of knives	3 pieces	
Total length	2,800 mm	4,850 mm
Total width	1,350 mm	1,550 mm
Total height with the nozzle	2,900 mm	2,900 mm
Cutting capacity	Ø180 mm hard and dry wood, Ø200 mm green wood	
Productivity	2 to 18 m^3	
Transmission type	B-belt B39 (box/disk) A36 (disk/pump)	V-belt BSX 35 (box/disk) A36 (disk/pump)
Counter-knife adjustment	4 mm ±1 mm	
Shredder weight	940 kg	1,450 kg
Oil in the hydraulic tank	18 liters (ISO VG68)	
Oil in the gearbox	4 liters (W140)	
Oil in the diesel engine crankcase	5.5 liters with oil filter SAE 15W40	
Noise	89 db(A)	

Safety Stickers

Danger of hand injuries: Do not open or remove the safety protections while the machine is operating.

Lifting point of the machine.

Manometer: maximum pressure of 170 PSI.

Hot surface.

Cutting blades, do not insert hands.

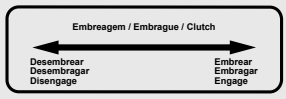
Caution: feeding rolls with knives, do not insert any body part.

Use proper protection goggles and hearing protector.

Use proper protection gloves.

Use proper protection mask.

Rotation direction.



Clutch.

Maximum shreddable diameter.

Caution: Carefully read all the instructions and safety norms before using the machine.

Keep away: To avoid severe or fatal injuries, only trigger the shredder if there are no people or animals close to the machine.

Only for TR 2000

Fuel.

Slow.

Fast.

Main Components - TR 1500

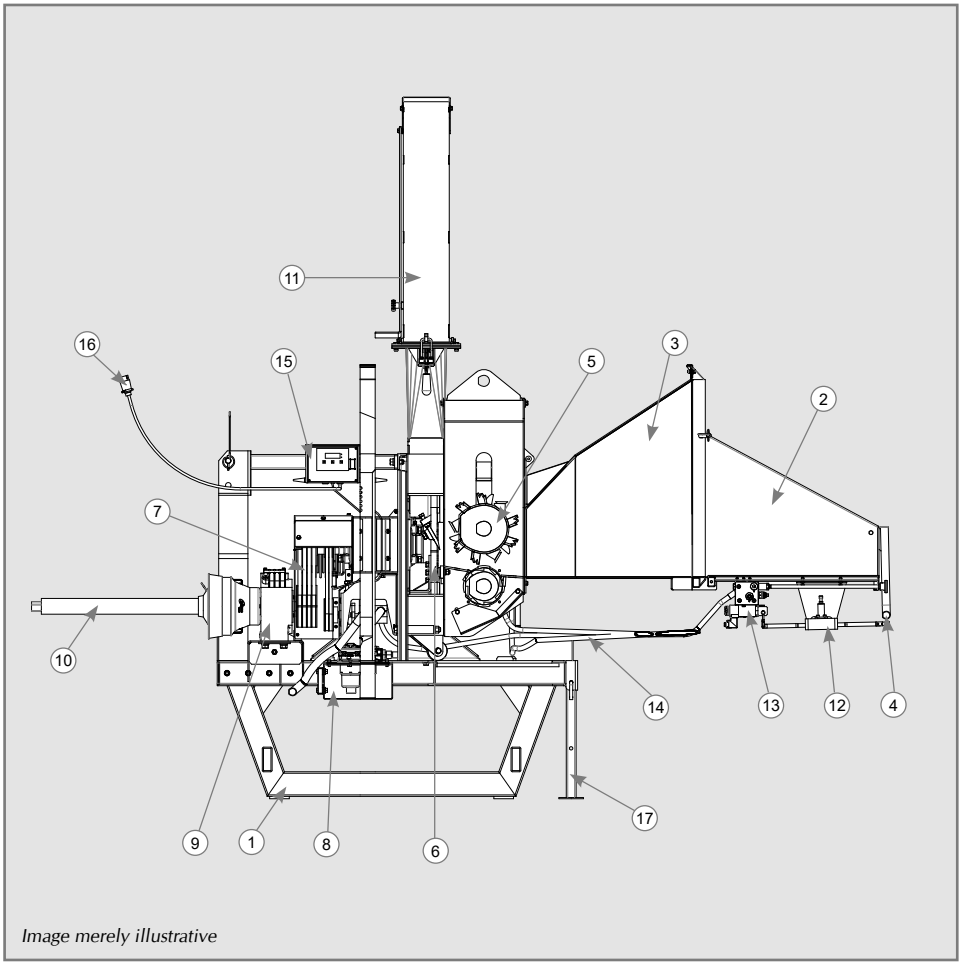
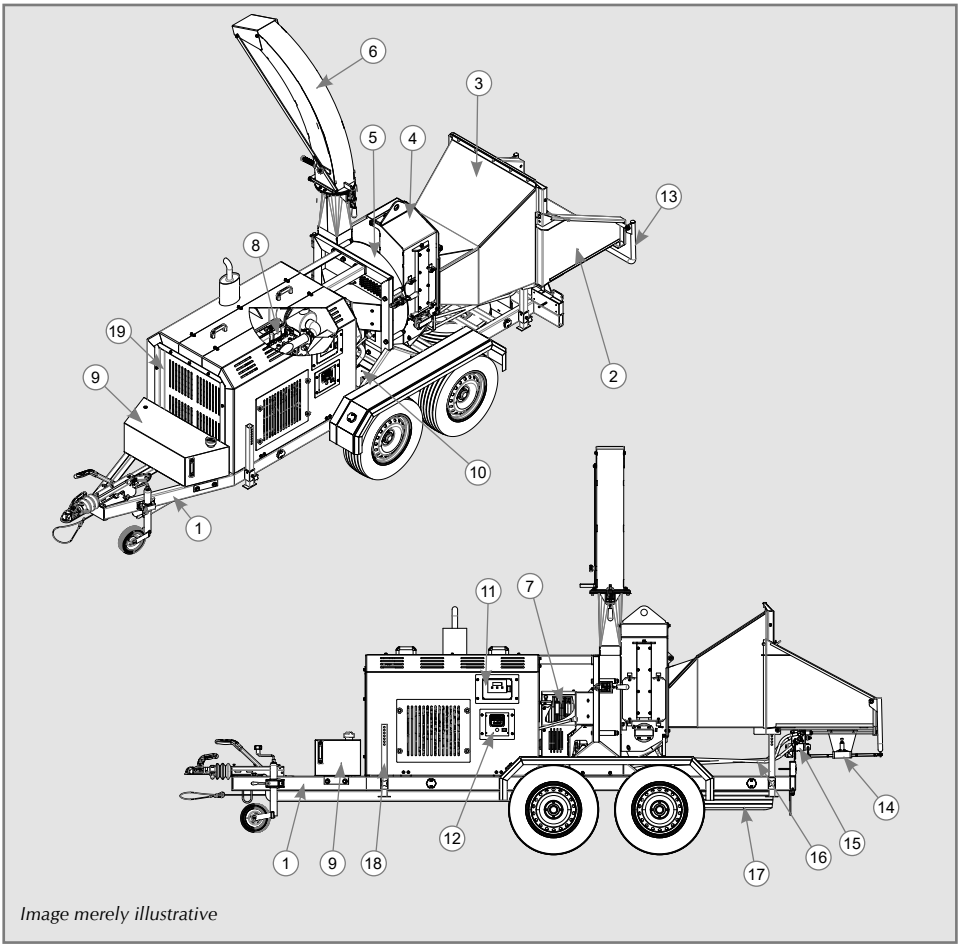


Image merely illustrative

1. Machine base.
2. Feeding funnel lid.
3. Feeding funnel.
4. Drive bar of the feeding rolls.
5. Feeding rolls.
6. Cutting disk.
7. Set of pulleys and belts for operation.
8. Hydraulic tank.
9. Gearbox.
10. Cardan shaft.
11. Outlet nozzle.
12. Drive block of the feeding rolls.
13. Hydraulic block.
14. Hydraulic system hoses.
15. Control panel of the "NO STRESS" system.
16. Electrical outlet: 12 V.
17. Stabilizing shoe.

Main Components – TR 2000



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1. Tow.
2. Feeding funnel lid.
3. Feeding funnel.
4. Machine body where the feeding rolls are located.
5. Machine body where the cutting disk is located.
6. Outlet nozzle.
7. Set of pulleys and belts.
8. 54 hp engine
9. Diesel fuel tank.
10. Hydraulic tank. Control panel of the "NO STRESS" system.
11. On/off panel and indicators of the diesel engine.
12. Drive bar of the feeding rolls.
13. Drive block of the feeding rolls.
14. Hydraulic block.
15. Hydraulic system hoses.
16. Spare tire.
17. Stabilizing shoe.
18. Battery (located inside the fairing).

Initial Assembly and Operation Instructions

- ✔ Carefully read the instructions and seek to familiarize yourself with the controls and proper use of the equipment.
- ✔ Remember that the operator or user is responsible for any accident or damage involving third parties or their properties.
- ✔ After removing the shredder from the packaging, perform the assembly of the unassembled parts to give start to the use of the equipment.

TR 1500

- ✔ For using the TR 1500, check the 12 V electrical outlet connection with the tractor battery, for the correct connection scheme, as per Figure 1.
- ✔ Check the oil in the gearbox and that in the hydraulic tank. Consult the table on page 7 of this manual. The TR 1500 shredder was designed to be attached to a tractor equipped with a 3-point hydraulic arm with universal coupling, as shown in Figure 2.

Note: The warranty does not cover the burning of electronic components, lamps, or fuses due to incorrect installation. In doubt, contact a professional qualified for the job.

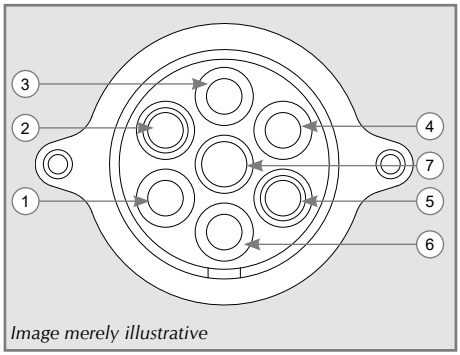

Figure 1

***Note:** This indication is the connection of the outlet of the tractor or automobile.*

TR 1500

1. Positive.
2. Negative.

TR 200D

1. Tail light.
2. Break.
3. Left blinker.
4. Reverse light.
5. Ground.
6. Right blinker.
7. Auxiliary.

- ✔ After concluding the connection of the electrical part, check if all the functions are correct and, then, complete the remaining procedures for using the shredder.

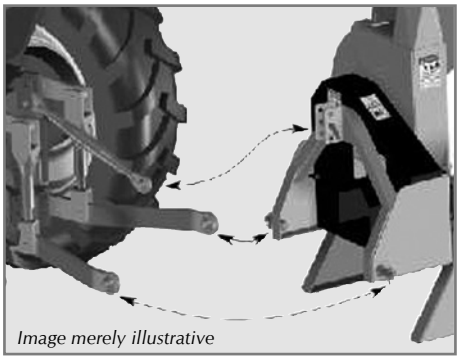

Figure 2

- ✔ Before connecting the equipment to the tractor, position both on flat terrain, keeping observers and children at a distance.
- ✔ Slowly approximate the shredder to the hydraulic arms; first, connect the lower arms, then hook it up to the upper point. The shredder is equipped with fixing pins for Category-II tractors.
- ✔ Certify the fixation of the pins with the corresponding safety lock; then, suspend the shredder and lock it, lifting the stabilizing shoe of the base of the shredder, indicated on page 9 of this manual.

- ✔ Position and lock the hydraulic arms of the tractor with the anti-vibration lock current or tensioners, after hitching the shredder at the three points of the tractor. The tractor needs to have the fixing locks to transport the machine safely; the warranty does not cover machine falling due to incorrect fixation.
- ✔ After attaching the shredder to the tractor, slowly lift the lifting arms with the tractor's hydraulic system and observe if the weight of the machine will suspend the front wheels of the tractor; if necessary, mount the ballasts on the front of the tractor to balance the weight.
- ✔ **Cardan shaft:** the Cardan shaft is a fundamental component in the transmission of force from the tractor to the shredder; it must meet the mounting specifications so not to damage the shredder during the operation and cause excessive vibration. For the TR 1500, a 6-ridge Cardan shaft is recommended.

Assembly of the Cardan Shaft

- ✔ Observe the indication of load capacity upon suspending the TR 1500 on the hydraulic system of the tractor; check the weight of the machine on page 7 and consult the tractor manufacturer.
- ✔ To obtain a proper assembly between the tractor's power take-off and the machine, the Cardan shaft must have a superposition of at least 1/3 of its length to meet the safety norms.
- ✔ The recommendation for the working inclination of the Cardan shaft is of at least 15°; adjust the inclination angle by regulating the tractor's hydraulic system. If the tractor model allows and the angle is compatible, keep the TR 1500 supported on the ground during the job to achieve better access to the feeding funnel. If the height of the machine gets uncomfortable to feed the funnel due to the inclination, position the tractor in terrain with elevations to facilitate the access to the feeding funnel and maintain the equipment supported on the ground.

Note: When suspending the TR 1500 with the tractor's hydraulic system, check the maximum inclination allowed of the Cardan shaft assembled on the machine and the power take-off of the tractor.
Exceeding the inclination may damage the equipment and produce excessive vibration on the operating shredder.
To perform maneuvers with TR 1500 assembled onto the tractor, disconnect the Cardan shaft from the machine. Upon positioning the machine on the ideal working site, mount the Cardan shaft again and check its inclination, adjusting if necessary.

To assemble the Cardan shaft, remove it from the package and separate the male from the female. To obtain the measure to cut the Cardan shaft, mount the machine at the 3 points of the tractor, align the axes of the power take-off of the tractor and of the machine, and check the distance between the ends of the axes.

- ✔ The measure found between the axes of the power take-off must be divided by 1.3. The value of this division will indicate measurement A; mark the Cardan shaft with measurement A and cut the surplus, as shown in Figure 3. At the marked position, cut the excess of the male and female Cardan with a saw bow with a 24-tooth steel-cutting blade or with a cutting disk, using protective gear. After concluding the complete cut, mark the plastic protection of the male and female Cardan and remove 3 centimeters of the plastic protection only, cutting with a saw, leaving the Cardan shaft with the tip exposed, as indicated in Figure 3.
- ✔ After performing the cutting procedure, remove the burr from the cut pieces, discard the cut material, and mount the Cardan shaft on the machine. If necessary, release the machine that is attached to the tractor so you will have room to assemble the Cardan shaft. Fit the male and female parts of the Cardan shaft and mount the female side on the axis of the power take-off of the TR 1500, then fit the male Cardan shaft on the axis of the power

take-off of the tractor until you hear a click, showing that it is in the correct fitting position on both sides.

- ✔ After the assembly and adjustment of the protection chains, move the inclination of the tractor's hydraulic system and check if there is slack between the male and female Cardan, positioning the machine at the recommended tilt of at most 15°.
- ✔ Fix the retention chains of the protection. The ideal functioning condition is obtained with the chain positioned radially relative to the transmission. Regulate the length of the chains to allow the articulation of the transmission in any condition of work, transport, and maneuver. Certify that the chains do not wrap around the transmission due to excessive size. Before starting the job, check the rotation of the power take-off; it must not exceed 540 rpm. Check also the inclination and if the machine is supported on the ground to avoid damages to the shredder and cause the warranty loss.
- ✔ Observe, as the machine moves, if the male and female Cardan shafts get close enough to the point of touching; if this occurs, turn off the power take-off immediately. Dismantle the male and female Cardan shafts and perform the cutting again so to leave slack of at least 1 to 2 centimeters between the ends of the Cardan shaft to initiate the functioning of the shredder following the operating instructions.

The measure of the cut.
Dividing the measurement found between axes by 1.3 will supply the measure to cut the Cardan shaft.

$$\frac{\text{The measure between Cardan shafts}}{1.3} = \text{Measure A}$$

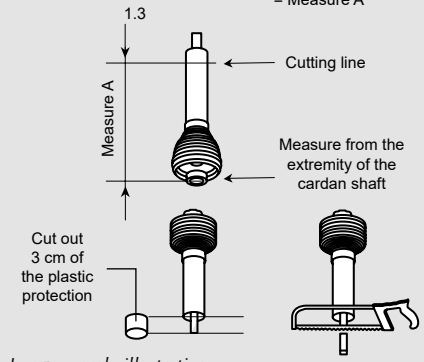

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Figure 3

Note: The cut pieces of the massive and tubular parts of the Cardan must have the same length.

- ✔ Do not stop the rotation of the power take-off of the tractor suddenly unless for safety purposes. The abrupt stop may damage the transmission system of the equipment.
- ✔ Do not use the chains to transport or support the Cardan transmission.
- ✔ It is not recommended to work with the male and female Cardan shafts without slack since this may damage the power take-off axes of the tractor and shredder. To perform maneuvers, remove one of the parts of the cardan shaft.

Caution!

- ✔ **These operations must only be performed on appropriate terrain and only after having stopped the tractor, turned off the power take-off, and pulled the parking brake.**

Caution!

- ✔ **If necessary, lift the machine from the ground. However, for the safety of all, put it over support, avoiding any accident that may be caused by a possible sudden fall.**
- ✔ **Before removing the shredder from the 3-point hitch of the tractor, position the stabilizer shoe of the base as indicated on page 9 of this manual.**

TR 2000

✔ The TR 2000 shredder was designed to be triggered by a diesel engine and with a utility trailer homologated by the Department of Transportation (Detran) to transport the equipment in urban roads, according to each city's legislation.

✔ Before hooking up the utility trailer with the TR 2000 to any automobile, check the indication of load capacity of the automobile's support and compare if it is compatible with the weight of the machine. Before connecting the trailer to an automobile, position both on flat terrain, keeping observers and children away. Before turning on the 12 V outlet of the carriage to an automobile, check the electrical outlet connection and the wiring scheme; consult Figure 1 on page 11 for the correct wiring scheme. Damages caused by incorrect connections are not covered by warranty.

✔ After hooking up the utility trailer to the automobile and securing the safety cables and chains, suspend the support wheel (1) by turning the upper gauntlet; to lift the entire set, release the side gauntlet and lift at most for transport, then secure it again. Then, suspend the stabilizer shoes (2) and retighten its screws; release the stationary brake (3) as indicated in Figure 4 and test the brake light and blinkers.

✔ Before transporting the equipment, close the material input funnel lid (4) using the lock (5) to secure it, and remove the material outlet nozzle (6) by loosening the screws (7), washers (8), and the lock (9) as indicated in Figure 4; check if the protections and accessories of the TR 2000 are well fixed.

✔ After transporting the TR 2000 at the worksite, place it on a flat position and, if you wish to work with the utility trailer disconnected from the automobile, adjust the support wheel and the stabilizer shoes leaving the machine aligned, then trigger the stationary brake and disengage the trailer from the automobile.

✔ Assemble the material outlet nozzle and direct it towards the desired position; check if, with the transport of the machine, all its parts are well fixed before operating the shredder.

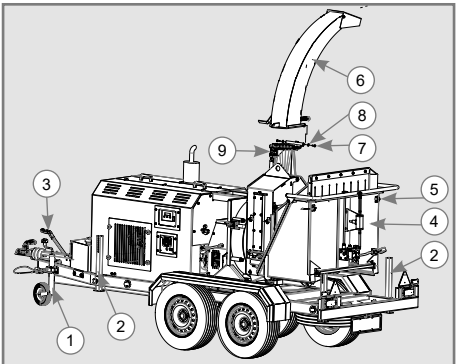

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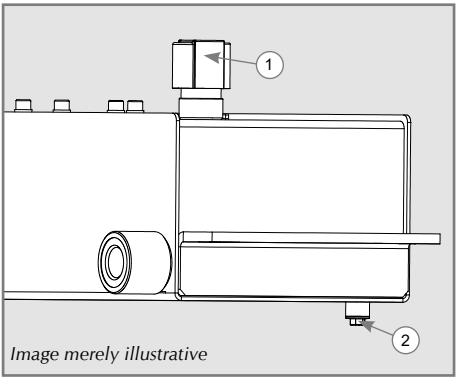
Figure 4

Hydraulic Reservoir Oil Change

✔ To change the hydraulic reservoir oil, remove the oil input lid (1), position a container with capacity to support the amount of oil in the reservoir below the drain plug with the drain screw (2), remove the drain screw (2) located on the lower part of the tank and wait for all the oil to drain. After all the oil has been drained, fix the drain screw again (2) and complete with 18 liters of VG68 oil; check the level and then close the oil input lid (1).



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Operation Instructions

Operator requisites:

✔ **Every operator that uses the equipment must be competent and necessarily meet the following characteristics:**

- **Physical:** Have good eyesight, coordination, and capacity to perform all the necessary functions for using the machine.
- **Mental:** Have the capacity of understanding and applying the safety norms and precautions established in this instruction manual. The user must be alert for their own safety and that of other persons, as well as to avoid damage to the equipment.
- **Training:** The user must have read, studied, and understood this manual, graphics, and schemes. They must be qualified and trained for use or maintenance of the equipment, signing the back of the manual after becoming acquainted with all the instructions of operation and safety of the machine.

Checklist

✔ Before putting the shredder into operation, one must check:

- The use of adequate apparel and footwear, as well as safety gear such as protective goggles, respiratory mask, hearing protector, and gloves.
- If there is nothing locking the cutting disk.
- If there are no tools or objects inside or on top of the equipment, especially inside the feeding funnel.
- If the rotation direction is correct.
- If there are no people or objects near the pulleys and belts or around the machine. Spectators must be at a radius of 30 m away from the machine.
- If the Cardan shaft is duly fitted both on the shredder as the tractor's power take-off (TR 1500).
- If the hydraulic hoses are all duly fixed and with no leakages.
- If the outlet nozzle is duly fixed and directed towards a safe location.
- If the hydraulic tank and gearbox are duly filled up with the indicated amount of oil (TR 1500).
- If the hydraulic tank, fuel tank, radiator, and diesel engine crankcase are filled up with the amounts of fluid indicated in the manual (TR 2000).
- Only shred woods and plants in the dimensions of the machine's capacity.
- Certify that there is enough fuel in the tractor and in the fuel tank of TR 2000 to avoid a forced stop. Only fuel TR 2000 with standard Diesel.
- Only use the shredder in safe conditions and ventilated and well-lit places.

Note: After checking the items above and with the equipment being duly prepared for the job, start the engine (connecting the tractor to TR 1500 or turning on the diesel engine for TR 2000). Wait until the maximum rotation is reached, then wait approximately 5 minutes for the hydraulic oil to reach the working temperature. Never start or leave running a diesel or gasoline combustion engine in closed or unventilated environments. The gas expelled by the exhaust contains carbon monoxide, an odorless and lethal gas.

- Avoid exposing the shredder to a location with much sun intensity to not heat the machine in some parts which already reach high temperatures. To protect your hands, use gloves, and protect other body parts to prevent burns.
- Avoid inadequate work postures or effort during the use of the shredder, following the use instructions of the shredder.

Shredder Utilization

Caution!

Read all the instructions contained in this manual before operating the equipment, always observing the safety indications and following the instructions to prevent accidents and/or injuries.

Check if all the fluids of the shredder, as per the model table on page 7, have been supplied and are in accordance with the following specifications:

✔ TR 1500
- The oil in the transmission box;
- The oil in the hydraulic tank.

✔ TR 2000
- The oil in the hydraulic tank;
- The oil in the engine crankcase;
- The water in the engine's radiator;
- The diesel in the fuel tank.

✔ For the instructions for filling the diesel engine fluids, open the upper protection (1) of the cowl (2) that gives access to the radiator lid (3) and the crankcase oil lid (4); add water to the radiator, if necessary, and oil to the crankcase, following the recommendations in the engine manual; then, close the upper protection again and certify that you have closed the radiator and oil input lids, see Figure 5.

✔ To insert oil in the hydraulic tank (1) in TR 2000 and TR 1500, proceed as follows:
- Remove the oil input lid (6) and, with the aid of a funnel, supply 18 liters of VG68 oil. Check the oil level through the viewfinder (5) and, after filling up, check if there are leaks at the hose outlet (4). If you need to clean, open the lid (2) by loosening the screws, noting that, after opening the lid, it must be glued with gasket glue to avoid leakages. On the return filter (3), there is a saturation indicator that turns red when it must be changed, as per figure 6; for changing, consult a TRAPP assistant.

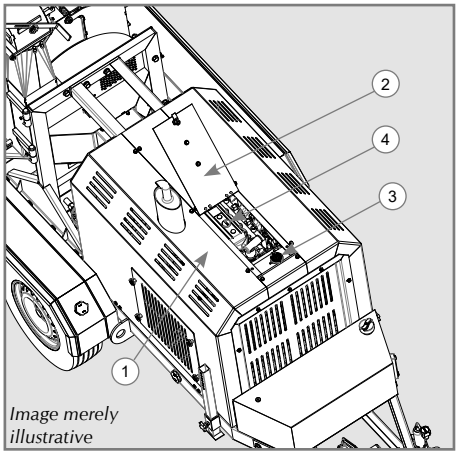

Figure 5

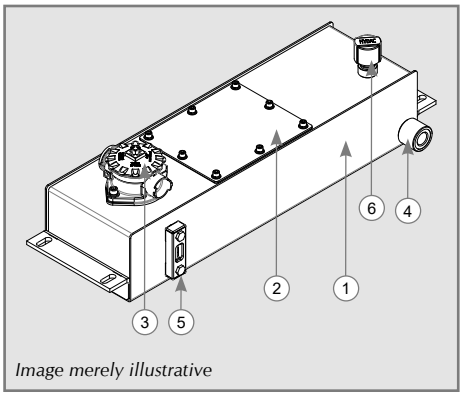

Figure 6

✔ In TR 1500, to insert oil in the gearbox, proceed as follows:

- Open the lid (4) and add 4 liters of W140 oil, checking the level through the viewfinder (1). If maintenance or cleaning is necessary, open the lid (4) and, if you need to remove the oil, open the drain plug (3). The screw (5) may be removed when necessary for maintenance; the gearbox has a pressure relief valve (2), as per Figure 7.

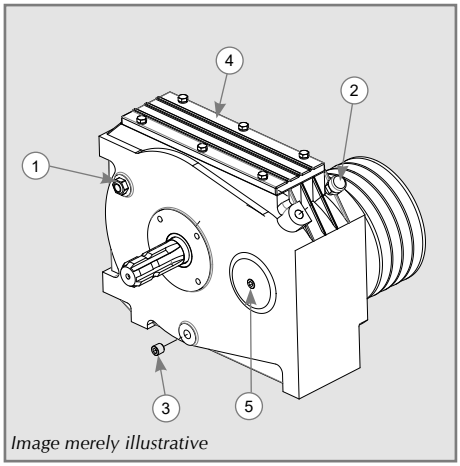

Figure 7

Note: *The radiator of the TR 2000 is supplied with water; just check the water level and complete, if necessary.*

✔ For TR 2000, to connect the battery (1), proceed as follows:

- Open the lid (2) for accessing the engine, loosening the fixing knobs (3) and connect the negative and positive cables at their respective places. After fixing the cables, certify that the battery is well set, assemble the lid (2) again using the knobs (3), which must be quite tight, as per Figure 8.

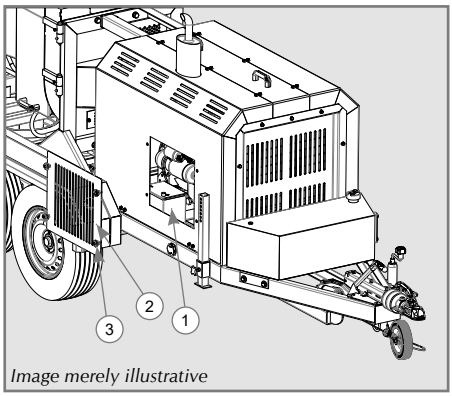

Figure 8

✔ For TR 2000, to supply the fuel tank, proceed as follows:

- Open the lid (1) using the key and check the amount through the viewfinder (2), as per Figure 9. Fuel only with standard diesel. After fueling, close the lid and check if there is no fuel leak or spillage before starting the engine. Capacity: 45 liters.

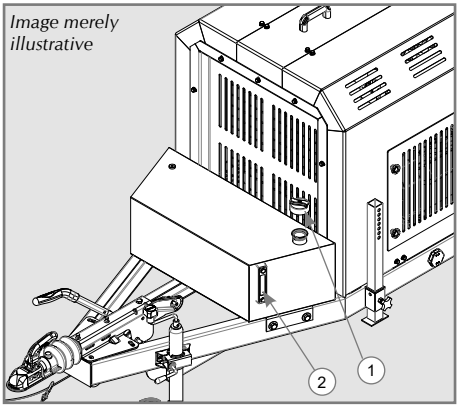

Figure 9

✔ For TR 1500, the electrical part of the machine is fed by the tractor's battery. In this case, after checking the connection between the cables, connect the plug of the "NO STRESS" panel to the power outlet of the tractor, 12 V tension.

✔ For TR 2000, the diesel engine has a manual pump to eject fuel and requires "bleeding the diesel" when turning on for the first time. For this, consult the engine's manual.

✔ In TR 2000, as soon as the engine runs, let it warm up for about 5 minutes, turn on the "NO STRESS" panel, then engage the clutch to tension the disk belt. As soon as it is tensioned, accelerate the engine until the panel indicates the rotation of 1,500 rpm.

✔ For TR 1500, as soon as the tractor is turned on, engage its power take-off at low rotation. As soon as the Cardan shaft begins rotating, turn on the "NO STRESS" panel and accelerate the tractor until reaching the rotation of 1,450 rpm on the machine's panel or 540 rpm on the tractor.

✔ When the equipment is in use, all persons, especially children, must remain at a safe distance from the work area. The operator/user is responsible for possible accidents that may occur.

✔ Never let anyone touch the machine while it is being used or transported.

✔ When using the equipment, only one person must give instructions and perform signals related to the movement of the load.

Tips for good operation

✔ The opening of the input funnel next to the feeding roll is of 20 cm; if the material to be shredded exceeds this measure, it may lock the material input. Woods with irregular measures must be selected and have their size adjusted before being inserted into the feeding funnel.

✔ Organic materials derived from food leftovers must be inserted into the machine accompanied by branches and leaves to facilitate the shredding and the entry into the feeding roll.

✔ Do not hold the introduced material after the feeding roll pulls it. When the material begins being pulled, back away from the feeding funnel since irregular woods or branches might produce unexpected movements striking the operator and causing severe accidents.

✔ Do not introduce material with over 2 m of length into the feeding funnel, since it may damage the shredder or cause physical damages to the operator. If necessary, cut the material into parts before inserting it into the feeding funnel.

✔ Material with length lower than 40 cm must be inserted into the feeding roll right after more lengthy material to ease the entry of the material into the feeding roll.

- ✔ Materials with diameters above 15 cm must be inserted in the feeding roll right after materials with smaller diameters that are already being shredded to facilitate the opening of the feeding roll. If necessary, the feeding roll's input opening may be adjusted to aid the entry of materials with varying measures.

- ✔ To achieve proper operation of the cutting system and not lock the cutting disk or clog the material outlet nozzle, regulate the speed of the feeding rolls by adjusting the knob (1) in the input funnel, monitoring the system pressure with the manometer (2) as per Figure 10, and proceed with the following recommendations:

  - Assess and separate the material to be shredded. Set aside materials with diameters over 16 cm, which require a differentiated adjustment to obtain better shredder performance and avoid constant stops due to clogging or locked disk. For this purpose, turn the knob to the negative sign (-) to reduce the feeding roll speed;

  - Materials with diameters smaller than 16 cm and with more leaves may be shredded with a higher feeding speed, thus achieving better productivity. For this purpose, turn the knob to the positive sign (+) to increase the feeding roll speed;

  - Fibrous materials such as palm and coconut tree leaves, as well as eucalypts bark, tend to accumulate easily on the disk, so mix them with drier woods, and this will help the self-cleaning of the cutting set;

  - Change the programming of the "NO STRESS" panel to shred wood with diameters over 16 cm; regulate the stopping rotation to 1,250 rpm, as per the programming instruction in this manual;

  - Woods with diameters smaller than 16 cm may be shredded with the regulation of the rotation on the panel at 1,150 rpm, as when it left the factory.

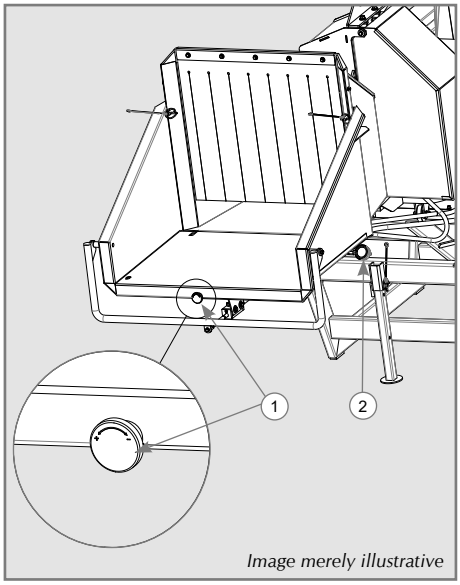

Figure 10

Figure 11

- ✔ The knob located at the entry of the feeding funnel has the function of altering the rotation of the feeding rolls.

- ✔ To obtain a reference and be able to regulate the rotation of the feeding rolls, observe the pressure indication on the manometer positioned on the outside of the funnel.

- ✔ When the pressure on the manometer indicates 170 psi, this means that the rotation of the feeding rolls is already at the smallest rotation possible; this adjustment applies to wood with diameters larger than 16 cm.

✔ When the pressure indicates 50 psi, the rotation of the feeding rolls is at the ideal rotation for wood or branches with leaves with diameters smaller than 16 cm and other materials.

The panel with the "NO STRESS" system monitors the worked hours and the rotation of the cutting disk, and releases or blocks the rotation of the feeding rolls; the feeding rolls do not run if the panel is not on.

✔ The panel has quite sensitive buttons for programming; the programming of the rotation may be changed to ensure the control on the feeding of the material to the disk, ensure the safety of the cutting set, and improve the efficiency of the shredder for various applications.

✔ Assess the type of material to be shredded; some materials need to be shredded separately, and others may be mixed for better performance;

✔ Wood with diameters below or above 16 cm must be shredded with differentiated programming. For this, proceed as follows:

1. Simultaneously press the 3 keys (F ▼ ▲), try multiple times until the panel shows the programmed rotations of 1,650 (maximum) and 1,150 (minimum);

2. When the light starts blinking, keep pressing the F key and release the two other keys (▼ ▲) the panel will show the programmed rotation; never alter the rotation without consulting the manual;

3. Adjust the first rotation (minimum) to 1,250 rpm by pressing the keys (▼ ▲) of the panel to increase or decrease the numbering; this programming is for wood with diameters above 16 cm. Do the same for wood with diameters below 16 cm, programming the rotation to 1,150 rpm. When finished, release the F key;

4. To change the information on the panel display and show the hours worked, press the F key. Observe Figure 11, which shows the panel and the programming buttons;

✔ The maximum rotation of 1,600 rpm must not be changed; in case you have difficulty performing the programming, contact a TRAPP Assistant.

✔ Remove foreign bodies such as pieces of metal, glass, or rocks before turning the machine on.

✔ Turn on the shredder and wait for it to reach the maximum rotation to insert materials to be shredded.

✔ Assess the pressure of the hydraulic system through the manometer located at the feeding funnel. The pressure indicated when the rolls are running must not exceed 170 psi; if the pressure exceeds this value and the roll is not turning, consult the closest TRAPP Technical Assistance.

✔ In case the shredder has been idle for a long time, some adjustments may be necessary to the hydraulic system or the diesel engine, such as the bleeding of the injector nozzles; if necessary, consult the closest TRAPP Technical Assistance.

✔ TRAPP does not take responsibility for occurrences and damages caused by the lack of compliance with the instructions contained in this manual.

✔ After defining the programming of the ideal work rotation, move the drive bar of the feeding rolls, located at the feeding funnel, to test the three stages: advance, still, and retreat, as per Figure 12.

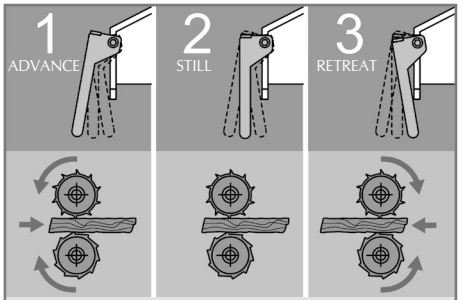

Image merely illustrative

Figure 12

✔ After testing the triggering of the feeding rolls, the funnel lid may be lowered, locked with the locking pins, and the material may be inserted into the feeding funnel, as per Figure 13.

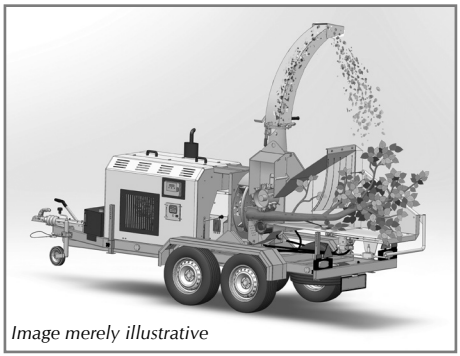
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Figure 13

✔ The size of the shredded material may vary according to the state of composition and type of material.

Important: When transporting TR 1500 on the tractor, the Cardan shaft must be decoupled, the stabilizer shoe, suspended, the feeding funnel lid, closed, and the material outlet nozzle, removed. Do not exceed the speed of 40 km/h.
When transporting TR 2000, the machine must be off, the stabilizer shoe, suspended, the feeding funnel lid, closed, and the material outlet nozzle, removed. Do not exceed the speed of 60 km/h and do not perform maneuvers with radii smaller than 5 meters so to not damage the tires.

Feeding rolls

✔ Depending on the size of the material to be shredded, the opening between the feeding rolls may be changed, as per Figure 14. To shred leaves and woods with up to 5 cm of diameter, it is best to leave the minimum height regulation between the rolls; for materials sizes larger than 5 cm, the upper roll may have a broader opening to facilitate the entry of the material onto the roll.

✔ This system for regulating the height of the feeding roll may be used when the machine gets some material locked on the disk due to excessive feeding. In this case, to adjust the distance between the rolls, proceed according to the following instructions:

- Open the protection lid of the engines (1) loosening the fixing knob (2). Then, loosen the counter nut (3) of the height regulation bar (4), and, using an appropriate wrench, turn the bar clockwise to suspend the upper roll or anti-clockwise to approximate it to the lower roll. The height of the jamb (6) must be adjusted according to the upper roll regulation. Next, secure the counter nut (5) of the jamb. After completing the adjustment, resume the regulation bar (4) to the original position and lock the counter nut (3), as per Figure 14.

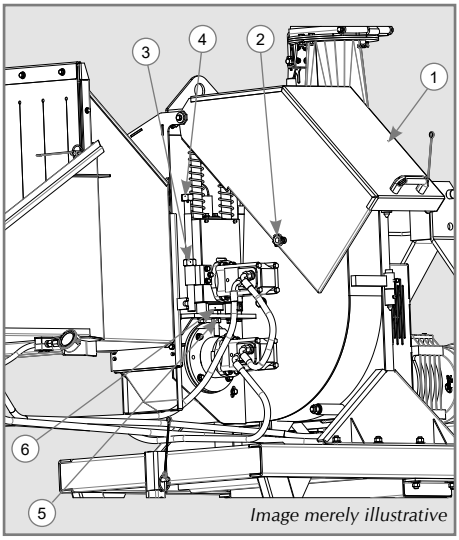

Figure 14

- ✔ After suspending the upper feeding roll, the material must be removed from inside the shredder to unlock the disk; then, the elevation bar of the top roll must be returned to the original position; do not use the elevation bar of the roll as a jamb so not to damage the regulation set.

- ✔ The feeding roll has a nylon jamb to absorb the impact during operation.

- ✔ The upper roll has knives to aid in feeding the material towards the cutting disk; one must check if such knives are fixed with the correct torque and if they are sharp. To replace or change the knives, consult Figure 15.

- ✔ To change or sharpen the knives of the upper roll, proceed as follows:

  - Position the feeding roll (1) so that you have access through the input funnel, and then turn the machine off. Release the 3 screws (2) that fix the knife (3) on the upper roll and perform the exchange or sharpening. Then, reassemble the knife and tighten well the screws, watching out for the knife's cutting line; after conclusion, proceed the same way with the remaining knives of the upper roll, as per Figure 15.

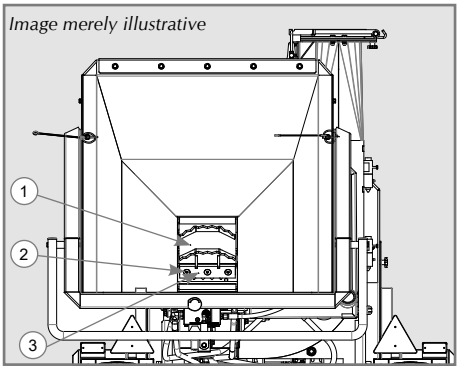

Figure 15

Sharpening or changing of knives and counter-knife of the cutting set

Inside the body of the shredder, you will find the counter-knife; it does not have regulation, but in case of wearing of the cutting line, it may be turned 180° so the other side may be used.

To sharpen or replace the counter-knife (1), proceed as follows:

- ✔ Loosen and remove the 5 screws (2) that make the closing of the body of the cutting set (3) and open the lock (4), open the cutting set body (3). Next, loosen the screws (5), sharpen the counter-knife or turn it to the sharpened position; if it cannot be reused, replace it with a new counter-knife; then, reassemble with the screws and nuts, tightening as necessary, as per Figure 16.

To sharpen the knives (6) of the cutting disk (7), proceed as follows:

- ✔ With the body of the cutting set open, loosen the screws (8) until you notice that the knives are loose; next, remove the knife (6). Do this with the remaining knives to be sharpened or replaced, then reassemble by tightening the screws (8) that hold the knife to the disk (7), observing the correct torque. For the regulation of the knife, we have a jamb (9) on

the cutting disk, in which we have a counter-nut (10) and a screw (11); this screw will serve as jamb and regulator of the disk knife. To adjust the disk knife, simply loosen the counter-nut (10), turn the screw (11) using a proper wrench until positioning it at the necessary measure to compensate the wear of the knife; then, retighten the counter-nut (10). Do this before reassembling the knife on the disk. Upon concluding the fixing of the knife on the disk, check the position of the knife to guarantee the distance between knife and counter-knife. This distance is of 4 mm, with a variation of 1 mm for more or less. To this end, the cutting line of the knife cannot exceed the extremity of the square bar (12) welded at the extremity of the disk (7). Upon completing the verification of the knife's position, perform the closing of the cutting set body, partially inserting the 5 screws (2) to guide the holes before triggering the lock (4) that secures the body of the cutting set; then, tighten the 5 screws (2) observing the correct torque, as per Figure 16.

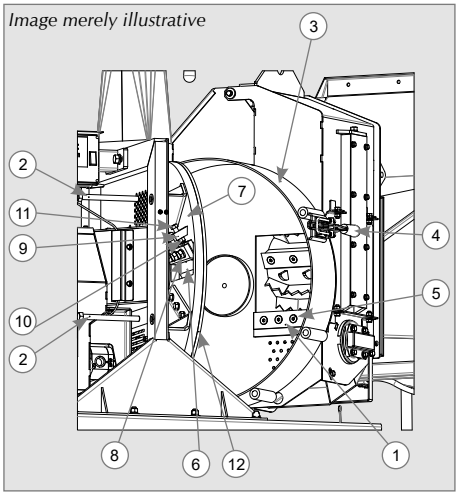

Figure 16

Note: *For the correct torque on the screws, observe the torque table on page 30 of this manual.*

Caution!

Never do any maintenance or sharpening service with the machine running; always wholly turn off the tractor, remove the power take-off, and make sure that the disk and rolls are not in motion.

Caution!

- ✔ **There is danger of cutting upon performing the maintenance of the knives and counter-knife. Whenever you perform any cleaning or maintenance operation, use the correct tools and protective gear.**
- ✔ **Any maintenance or cleaning must be performed with the equipment removed from the power take-off.**

- ✔ Perform the sharpening using a grinding machine or sander. Assess the wear of the knife and, if necessary, make the change. The wear limit for the sharpening is the course of the knife abutment screw: when the knife does not touch this screw after being sharpened, it must be replaced;
- ✔ Assess the sizes and weights of the knives after sharpening so not to produce unbalancing of the disk;
- ✔ If it is necessary to replace any knives, one must check the balance of the disk; it is recommended that the entire knife set be changed to avoid unbalancing the disk.

Caution!

✔ **After performing the sharpening, exchange, or distance regulation work on the knives, do an inspection on all the fixing screws of the knives, of the distance regulation of the knives, on the screws and nuts that give closure to the machine body, and of the safety lock; check if all are duly secure before beginning the jobs.**

Caution!

✔ **The assembly of the knives may cause personal and physical damages to the operator and damage the equipment if it is not correct; the warranty of the machine does not cover this situation.**

Assemble and direct - outlet nozzle

The material outlet nozzle is fundamental for the operation of the machine; it is supplied disassembled. To assemble, proceed as follows:

✔ Position the nozzle (1) over the outlet duct (2) and tighten the screws (3), securing the nozzle; then, fix the safety lock (4). Whenever you wish to direct the nozzle, loosen the knob (5), turn the nozzle to the desired position, and retighten the knob. To adjust the position of the jet break (6), release the knob (7), move the regulating rod (8), and retighten the knob (7) upon reaching the desired position, as per Figure 17.

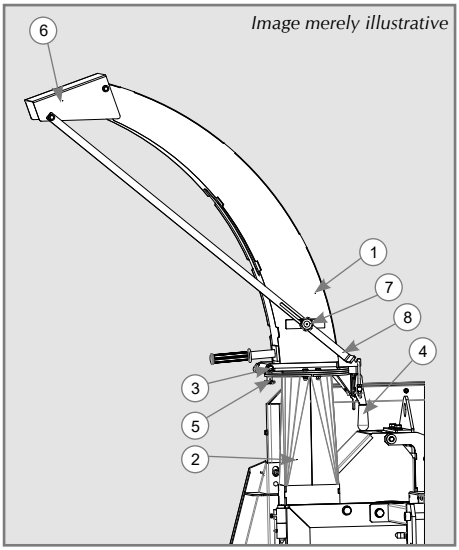

Figure 17

In case there occurs blockage of shredded material in the outlet duct due to improper rotation or even caused by an excess of material or too moist material, it may be removed through the duct itself by performing the partial removal of the outlet nozzle, as per Figure 18, following the recommendation:

1. Turn off the machine entirely and certify that the disk is completely still, that it is not turning;
2. Carefully and slowly release the safety lock (1) of the outlet nozzle until its limit; then, this lock may be removed entirely from the socket (2) at the outlet nozzle, always holding the outlet nozzle by the handle (3) to not suffer too abrupt a collision on the safety jamb (4) so not to be any damage;
3. Remove the material accumulated in the outlet duct (5);
4. After removing the accumulated material, close the nozzle with the outlet duct by securing it with the safety lock (1).

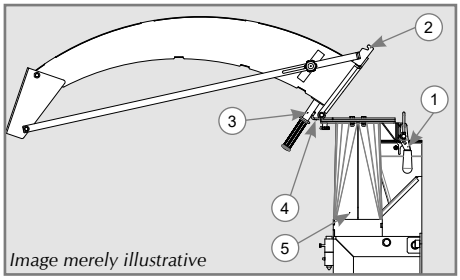

Figure 18

Lubrication point

In TR 1500 and TR 2000, there are common lubrication points, as indicated in Figure 19. The TR 2000 has other lubrication points, as shown in the utility trailer's manual.

Point 1 is located at the pillow block; it is a grease fitting that serves to lubricate the rolling bearings.

Point 2 is located fixed on a fin welded onto the part that is over the welded base of the set, just above the pillow block (1) where Lubrication Point 1 is. Point 2 constitutes of a grease fitting connected through a small tube that will take the grease up to pillow block 2, where the rolling bearings are. It is recommended to grease the pillow blocks every 25 worked hours. Use 10 grams of high-performance NGLI 2 grease. One may use Unimoly GLP 2 or Ronex MP grease.

Point 3 is located near the opening to access the knives, because of the pillow block that supports the lower engine.

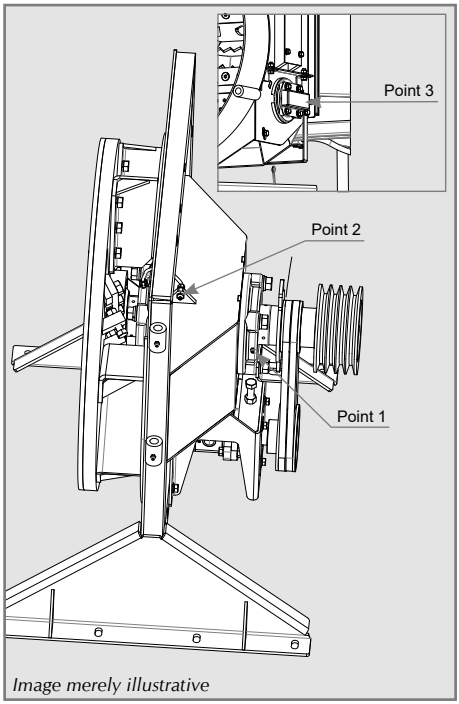

Figure 19

Important:

- ✔ **To keep your equipment efficient and prolong its performance and lifespan, lubricate it regularly. Inject grease through the lubricant grease fittings using a pump.**
- ✔ **Before injecting the lubricant grease through the grease fittings, clean them to avoid that dust and other foreign objects mix with the grease, lowering the lubrication effect.**
- ✔ **Always use special bearing grease.**
- ✔ **The lubrication must be carried out weekly in case the machine is used daily.**

Important:

✔ **Avoid the excess of grease as it may cause the early wear of the bearings.**

Regulation of the hydraulic pump belts

✔ Check the tension of the belt frequently. The belts should have a slack of around 10 mm, as per Figure 20.

✔ To have access to the disk belts, it is necessary to remove the belt protection (2), as per Figure 21.

✔ If there is a need, tension the belts or replace them with new ones.

✔ When the belt slack is well above 10 mm, this may compromise its life span.

✔ On the shredder, the pressure of the hydraulic pump belts is done through the regulation of the positioning of the pump itself; the rotation of the machine cannot be altered, neither can the pump model, so to not deconfigure the pressure of the hydraulic system. The pump model is of the gear type with 2.5 cm3 and clockwise rotation. To adjust the hydraulic pump belt's tension, proceed as follows:

1. Loosen the screws (1) that secure the belt protection (2);
2. Remove the belt protection (2);
3. Loosen the screws (3) of the hydraulic pump (4) just enough to move it and make the necessary adjustments or change the belts;
4. Use the hydraulic pump adjustment screw to help regulate the belt tension (Figure 20); loosening them, we will have the relief of the stress on the hydraulic pump belts; tightening the adjustment screw of the pump, we will reduce the slack of the belts;
5. After making the necessary adjustment to the belts, tighten the fixing screws (3) of the hydraulic pump (4);
6. Tighten the nut of the adjustment screw of the hydraulic pump (4);
7. Place the belt protection and secure the screws again.

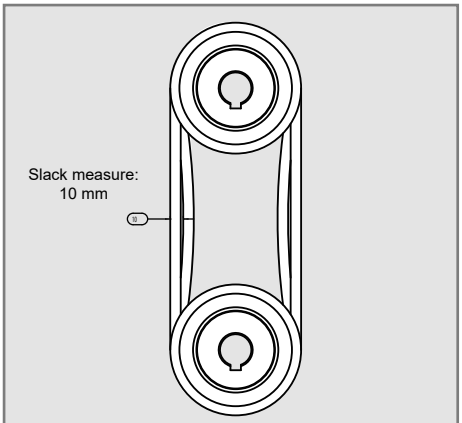

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Figure 20

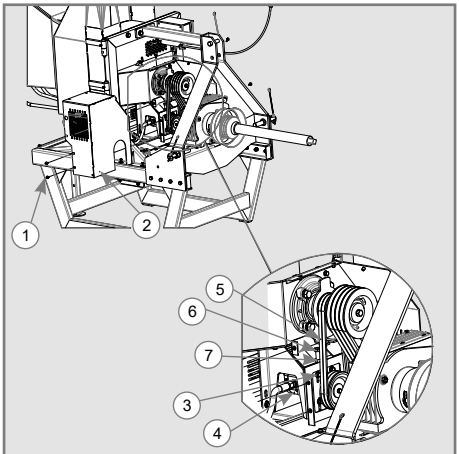

Image merely illustrative

Figure 21

Important:

✔ **Never operate the shredder without the belt protection, which must be duly fixed to the machine's structure.**

Regulation of the gearbox belts

The regulation of the gearbox belts is also essential and needs to be checked periodically, with them being found under the belt protection. To make the adjustment or change the belts, follow the steps as per Figure 22:

1. With the belt protection removed, adjust the belts by loosening the screws (2) that secure the gearbox (4), on the lower part of the support base (3) of the gearbox. Loosen the screws (2) only enough to be able to advance or retreat the box;
2. Adjust the belts (1) by moving the gearbox (4), regulating the tension adjustment screw of the belt (5), loosening the screw's counter-nut (6), retightening the screw (5);
3. After obtaining the desired belt tension, tighten the fixing screws (2) of the gearbox (4);
4. Check if the belt adjustment screw (5) of the gearbox (4) is duly tightened, tightening the counter-nut of the screw;
5. Place the belt protection again, securing it with the screws;
6. Certify that all screws are duly tightened.

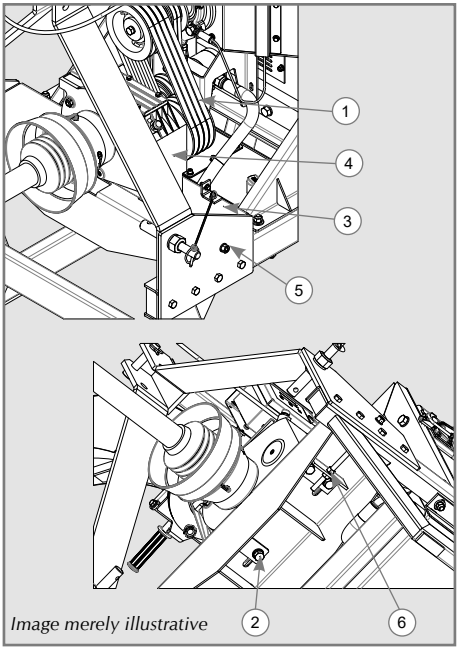

Figure 22

Rotation sensor

Installed in the pillow block set, the rotation sensor (1) is responsible for reading the rotation of the disk axis, as per Figure 23.
This reading is performed by the counting of the flange (2) attached to the pulley of the disk axis (3). If the "NO STRESS" panel is not on and the disk is stopped, the indicated rotation must mark zero rpm; if the disk is running, it must inform the numerical rotation on the panels display. If this function presents a problem, contact a TRAPP Technical Assistant.

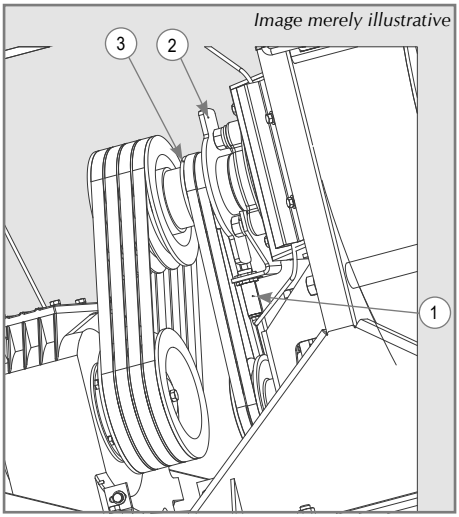

Figure 23

Points for lifting the machine

The shredders have 2 points for lifting the machine identified with the figure of a hook. These points are recommended for lifting the machines as per Figures 24-A and 24-B.

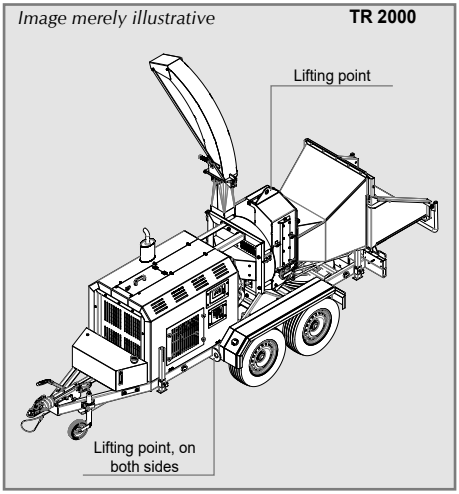

Figure 24-A

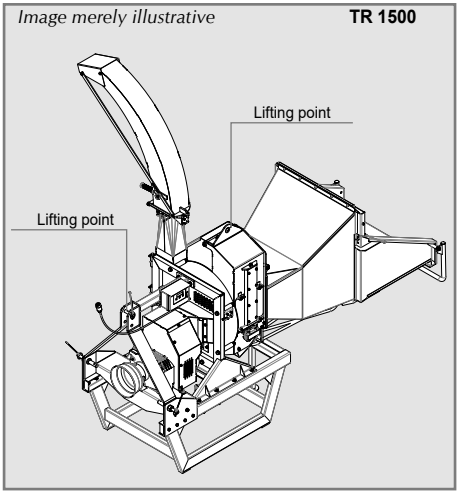

Figure 24-B

Note: *When lifting the machine, certify that the capacity of the belt and the lifting equipment is enough to lift the weight of the machine, as indicated on the table on page 7. Observe if the belt won't damage any point of the machine when it is suspended. Drops or damages to the machine due to carelessness when lifting it are not covered by warranty.*

Post-job instructions

After using the equipment, remove all the material inside the shredder and proceed with the following recommendations:

1. Clean it with a moist cloth and detergent. Dry it with a clean and dry cloth;
2. Do a general inspection of the whole equipment, and replace parts that are damaged or worn out;
3. Firmly tighten all the screws and nuts;
4. Lubricate it and cover it entirely with a tarp. Store it in a dry space, safe from inclement weather.

By following these instructions, your shredder will be in good conditions whenever you need to use it.

Caution!

Never use a water jet to clean your equipment. Only perform the cleaning if your machine is turned off and the cutting disk, still.

Noise emission

The noise emission measurement is done according to the technical noise norms applicable to the worksite, as per the following parameters:

- ✔ In neutral: 94 dB(A).
- ✔ With full load: 104 dB(A).

Electrical installation

- ✔ Electrical work must be performed by electricians!
- ✔ The electrical scheme works in 12 V.
- ✔ All machine parts that are connected to the electrical current must be isolated and repaired with appropriate tools.
- ✔ To obtain information on the electrical scheme of the utility trailer of TR 2000, consult the trailer's manual.

Torques for screws - inch series normal thread - UNC (N.m).		
Thread	Degree of resistance	
	Degree 5	Degree 8
1/4 - 20	12.1	17.0
5/16 - 18	23.9	33.8
3/8 - 16	41.5	58.4
7/16 - 14	65	92
1/2 - 13	101	141
9/16 - 12	143	201
5/8 - 11	199	280
3/4 - 10	350	494
7/8 - 9	562	793
1 - 8	841	1187
1.1/8 - 7	1040	1685
1.1/4 - 7	1455	2359
1.3/8 - 6	1916	3106
1.1/2 - 6	2527	4097

To achieve tightening force equal to 80% of the proof load.

Torques for screws - inch series fine thread - UNF (N.m).		
Thread	Degree of resistance	
	Degree 5	Degree 8
1/4 - 28	13.5	18.9
5/16 - 24	25.9	36.6
3/8 - 24	45.7	64.2
7/16 - 20	71.1	100
1/2 - 20	110	155
9/16 - 18	155	219
5/8 - 18	219	308
3/4 - 16	381	536
7/8 - 14	606	853
1 - 12	903	1271
1.1/8 - 12	1128	1835
1.1/4 - 12	1565	2545
1.3/8 - 12	2101	3417
1.1/2 - 12	2748	4468

The values are for guidance and based on average conditions of friction with steel. The use of anti-corrosion coating may substantially alter the results. For critical applications, the values must be measured with the use of a device1), for the determination of the axial effort at the screw stem.

Note: 1) Skidmore - Wilhelm or similar.

Useful Suggestions

During the use of the shredder, some situations or problems may occur to which we present some guidance next:

Problem	Probable cause	Solution
Jamming of the machine	Excess of feeding. The engine cannot keep the necessary rotation, and the product accumulates inside the machine (persisting the use, this may force the belts, possibly sliding over the pulleys or even damaging the belts).	Turn the equipment off and wait for the engine to stop. Clean the excess of residue inside the machine, start the engine, wait for it to reach maximum rotation and restart the job, controlling the machine feeding so to not demand more than the capacity that the engine can bear. Regulate the programming of the "NO STRESS" panel to compensate for the overload of the disk, and reduce the speed of the feeding rolls, see pages 20 and 21.
Low production	1. Insufficient feeding of the machine. 2. Machine rotation below the specified. 3. Moist product.	1. Control the feeding so it is continuous yet not excessive so to not cause jamming, programming the rotation in the "NO STRESS" panel as per the table on page 20. 2. Check the rotation of the disk and feeding rolls and adjust, if necessary. 3. One must avoid shredding too moist products or mix them with drier products.
Irregular cutting of the product	1. Lack of knife sharpening. 2. Worn counter-knife. 3. Irregular knife and counter-knife measure. 4. Material in a decomposition state or too moist.	1. Sharpen the knives as indicated on the Maintenance item (page 22). 2. Proceed as indicated on the Maintenance item (page 22). 3. Check the measure of the knife and counter-knife on page 22. 4. Let the material dry to shred it.

Problem	Probable cause	Solution
Difficulty starting the engine	1. Excess of product inside the machine.	1. Turn the equipment off and wait for the engine to stop. Clean the excess of product inside the machine, start the engine, wait for it to reach the maximum rotation, and restart the job.
	2. Improperly fitted Cardan shaft.	2. Check the fitting of the Cardan shaft (TR 1500).
	3. Too loose belts.	3. Check the tension of the belts.
	4. Lack of fuel.	4. Check the fuel level, refuel if necessary, and bleed the diesel.
	5. Dirty fuel.	5. Clean the filters, change the fuel, and bleed the injector nozzles by manually pumping the diesel.
	6. Engaged clutch.	6. Release the clutch to start the engine.
Drive bar does not trigger the feeding rolls	1. Low level of hydraulic oil.	1. Check the level of hydraulic oil and refuel if necessary.
	2. Low or high disk rotation.	2. Check the disk rotation and adjust if necessary.
	3. "NO STRESS" panel is off.	3. Check if the panel is on and turn it on if necessary.
	4. Damaged drive valve.	4. Check if the valve is working and replace it if necessary.
	5. Hydraulic hoses connected incorrectly.	5. Check if the hoses are connected correctly and correct if necessary.
	6. The disk reading sensor is not triggering.	6. Increase and decrease the disk rotation and observe if the panel changes; if necessary, replace the sensor.
Feeding rolls do not pull the material	1. Roll opening different from the material one wishes to shred.	1. Adjust the roll opening according to the shredded material.
	2. Material is too moist.	2. Mix the moist material with dry material.
	3. Material with a size outside the recommended.	3. Adjust the size of the material according to the capacity of the machine.

Warranty Term

Metalúrgica TRAPP Ltda ensures this product against manufacturing defects for **6 (six) months** starting from the issuance date of the Purchase Invoice.

The legal warranty is already included in the warranty term established in the previous paragraph, with the warranty divided as follows:

- ✔ **The 3 (three) first months - legal warranty;**
- ✔ **The 3 (three) following months - special warranty,** granted by Metalúrgica TRAPP Ltda.

The legal and/or special warranty covers:

- ✔ Manufacturing defects such as assembly error as well as material failure and the respective labor for the repair, after the due proof by the technicians of Metalúrgica TRAPP Ltda or licensed technical assistants.

Note:

- ✔ **All parts proven defective will be replaced, free of cost; there will be no device or equipment exchange.**
- ✔ **The buyer is responsible for the packaging and transportation expenses to the closest TRAPP Technical Assistance.**
- ✔ **This warranty will only be valid upon the presentation of the Purchase Invoice for this product.**
- ✔ **This product is subject to modifications of technical specifications without previous warning of the manufacturer.**

The legal/special warranty does not cover:

- ✔ Defects caused by improper use such as lack of lubrication (lack of oil), use of diesel outside the recommended, excess of oil in the crankcase, broken axis, overload, missing phases, tension outside the specified, capacitors, bearings, loss of parts, broken or kneaded parts or damages caused by carelessness in the transport, storage, coupling, or energization of the engine, regular preventive maintenance services such as engine regulation and triggering adjustments.
- ✔ Parts such as spark plugs, lubricants, joints in general, crooked or broken crankshaft, fuel filter, air filter, and retainers, are exempt of warranty.
- ✔ If the product suffers damages resulting from accidents, improper use, carelessness, ignorance or noncompliance of the instructions contained in the Instructions Manual, presents signs of having been adjusted, repaired or damaged by persons unauthorized by Metalúrgica TRAPP Ltda, or if the product is exposed to humidity, inclement weather, sea air, etc., as well as parts that present normal use wear.

Observations:

- ✔ **Always use original parts and contact the Authorized TRAPP Technical Assistance.**
- ✔ **For your tranquility, preserve and keep this Manual and the Purchase Invoice of the product always at hand.**

Attention!

Use Original TRAPP parts and the services of professionals of the TRAPP Authorized Technical Assistance.
TRAPP is not responsible for possible damage caused to the equipment or accidents which may occur from using parts which are not original.

Notes

Notes

Responsibility Term

Without the proper completion of this Registration, TRAPP does not provide the product warranty:

Invoice:

Date:

Client address:

Retailer name:

Serial number:

Checking list before turning the shredder on:

- ☐ Read the manual.
- ☐ Check the necessary safety gear.
- ☐ Check the necessary fluids in the shredder.
- ☐ Check if all parts of the machine are duly assembled and tightened.
- ☐ Check the instructions for transportation.
- ☐ Check the worksite and the material to be shredded.

I _____, Document _____, Occupation _____, Resident of the city of _____, District _____, Street _____, Number _____, contact number: _____, I declare that I received the product Branches and Organic Residue Shredder model _____, in perfect conditions and received specialized technical training to operate it ministered by professional _____, an employee of the manufacturer, Metalúrgica TRAPP.

City: _____
Date: _____ of _____ of _____

Responsibility term

I declare that I have read the safety and operating instructions of this manual and the machine is in a perfect state of appearance and operation.

_____
Owner Signature

ATTENTION!

USE

ORIGINAL PARTS.

TRAPP does not undertake responsibility for eventual damages caused to the equipment, neither for accidents that may occur due to the use of non-original parts.

METALÚRGICA TRAPP LTDA.
Av. Pref. Waldemar Grubba, 4545
CEP 89256-502 - Jaraguá do Sul - SC - Brasil
Tel.: +55 47 2107-8800
CNPJ: 83.238.832/0001-78
www.trapp.com.br | trapp@trapp.com.br
Made in Brazil | Hecho en Brasil

Customer Service
Fone: +55 47 3371-0088 - +55 47 2107-8800
Webmail: trapp@trapp.com.br
Website: www.trapp.com.br
(Contact TRAPP)

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