ECO-TRIMMER Manual Instructions (V.17)

Application.

This machine is designed to prune different types of fruits/plants.

Description.

The machine is composed of three parts: Frame, grids and engines.

List of contents of the package:

- Remove all components of the packaging.
- Remove the remaining packaging and the grafts of the carrier (if any) - Verify that the contents of the package is complete.
- Verify that the product has not received damage during transport.
- Electric Cable and all accessories.
- Care with the packaging materials are not toys children should not play with bags, there is a risk of suffocation.
- In the case of missing parts are damaged or put in touch with the seller.

Instructions on security matters.

General warnings in security matters.

INDICATES RISK OF
COPORAL INJURY
AND MATERIAL DAMAGE

INDICATES THE
MANDATORY USE
GLOVES

INDICATES THE RISK OF
CUTTING AND/OR TRAPPING
OF FINGERS IN BLADES
AND MIXING ACCESSORY.

INDICATES THE
COMPULSORY
USAGE OF
PROTECTIVE
EYEWEAR

INDICATES DANGER
OF ELECTRIC SHOCK.

Warning!: Read all instructions warnings in security matters.

The failure to comply with the instructions contained in the warnings and instructions can cause electrical shock and fire hazard and/or serious bodily injury. Keep all warnings and instructions to be able to see in the future.

Work Area.

Keep the work area clean and orderly.

The disordered and poorly lit areas conducive to accidents at work.

Do not use electrical machines in potentially explosive atmospheres, as well as, in the presence of liquids, flammable gases or dusts.

/Keep away from children or other persons while using the machine.

Electrical safety.

- The plug of the machine must fit into the power outlet.
- You should not alter in any way the plug.
- The use of plugs do not modified reduces the risk of electric shock. Avoid exposing the electrical machine to rain and moisture.
- The penetration of water on the electric motors increases the risk of electric shock.
- Do not damage the cable.
- Do not use the cable to carry, pull or disconnect the electrical machine.
- Keep cables away from sources of heat, oils, sharp edges or moving parts.
- A damaged wire or tangled up increases the risk of electric shock. Never use a machine switch is faulty.
- A machine that can be switched on and off, it is dangerous and must be repaired. Disconnect the plug from the power socket before making adjustments to any of these types: Clean, adjust.
- These preventive safety measures reduce the risk of accidental starting of the machine.
- After using the machine, keep it out of the reach of children.
- Do not allow a person who is not familiar with these instructions use this machine.
- The machines are dangerous in the hands of an untrained person.

Maintenance.

Check the alignment of the moving parts, the absence of parts or any other situation that is likely to affect the operation of the machine.

If the machine is damaged, repair before use. Many accidents are due to the lack of maintenance.

Keep cutting tools sharp and clean.

Some cutting tools sharp and clean, in good condition, work better and less stiff.

The machine includes a control panel and a few safety elements such as sensors arranged in the upper opening of the housing responsible for causing the stoppage of the machine in the event that the lid opens with the machine in operation and to prevent the starting of the machine with the lid open.

Use this electrical machine and cutting accessories etc. in accordance with these instructions, the electrical machines can lead to dangerous situations.

Security of the people.

- Listen, concentrate on the work you are doing and use the machine with wisdom.
- Do not use the appliance when you are tired or under the influence of narcotics, alcohol, or drugs.
- A moment of attention to while using the machine can cause serious personal injury.
- Always use safety equipment. Always wear safety glasses, gloves.
- A proper safety equipment such as: a dust mask, non-slip footwear and Headset of protection will reduce the risk of personal injury.
- Avoid the involuntary start, make sure that the switch is off before plugging the machine and mixing accessory.
- Appropriate clothing, do not wear loose clothing or jewelry or parts.
- Keep the hair and clothing away from the rotating blades.
- Loose clothing, jewelry and long hair can become entangled in the moving parts.

Warning! Forbidden to put any metal objects or of any material in the machine as it can cause serious bodily injury on the person and on the machine.

The machine is exclusively manufactured for the pruning of leaves. All other improper use may cause damage to the person and to the machine.

Do not open or change screens without previously having stopped and unplugged the machine and after 10 seconds minimum check that the blades are completely stops.

It is forbidden to put your hand on the mixing accessory while it is in operation, as it can cause very serious injury.

Do not handle the pickup, or any accessories, with the machine connected to the current.

Initial use.

This machine is comprised of a frame provided with an opening that has a grid with slots, below which is a rotating blade mounted on a lower frame support driven by a motor, to cut away the sheets fed through the grille and separate them from the fruits and the own branches of a plant that moves over the same.

Drag the leaves toward the interior by suction and the cut, falling leaves in a bag grille ().

Warranty.

This machine has a 2 year warranty from the date of purchase.

Cleaning and maintenance.

Attention! Before carrying out any work on the computer, disconnect the plug from the feeder.

1. Keep the vents in the machine to prevent overheating of the engine.
2. Clean the machine with a soft cloth, preferably after each use.
3. Keep the vents free of dust and dirt.
4. If I had dirt embedded use a damp cloth to remove fat.
5. Check the electrical cables that are not damaged before each use "Check knives that do not rub with the grid, in the event that there should be some kind of friction to adjust the height of the blades with the help of the necessary tool.
6. Clean the knives with delicacy which could cause misalignment.
7. In the case of not having used the machine for a long period of time, check that all materials are adjusted and in perfect condition.

These functional checks are performed on the following models:

Monthly.

- Revision of the blades, verify that there has been no type of deformation or deterioration in their structure, and that they are correctly aligned.
- Check for correct operation of the elements that make up the control panel, such as the stop switch and commissioning.
- Check the correct operation of the anchors of the tapas of separation of the dried fruit.

These anchorages must ensure that the cover is completely closed during its use.

Annual.

- **Check that the machine has all glyphs needed to ensure the safety of the user and which are described in the operating instructions manual.**

Environment.

If, after a long period of use due to change the machine, do not dispose of household waste.

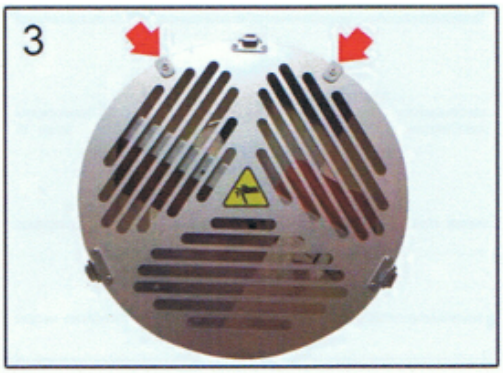
Get rid of the form that is compatible with the protection of the environment.

You cannot treat the waste produced by the electrical machine with household waste must be recycled where appropriate facilities exist (see with the local authority).

Mounting ECO-trimmer.

1. Package Contents: Machine Eco-trimmer + thumb with extendable legs + Bag Container.
2. Insert the repeating legs inside the base and adjust to the desired extent to work comfortably.

3. In the event of having to dismantle the grid for cleaning or maintenance tasks,remove screws in any case remove the machine without disconnecting the electrical current!.
4. Once connected the power switch to start the machine.



The Engine

Safety Notice

Only qualified and trained staff in the installation and operation of this equipment, you should install this engine. When not properly installed or used, rotating equipment could result in serious injury or fatal. The equipment should be installed in accordance with the National Electric Code (NEC), local codes and the Safety Standard NEMA MG2 for the construction and the Guide for the Selection, Installation and Use of Electric Motors and Generators and regulation OSHA standard 1910.147 entitled: The control of hazardous energy (closing / "tagout").

Use the correct material handling to avoid injury. Be careful when removing the engine from its packaging. There may be sharp corners on the motor shaft key engine, sheet metal and other surfaces.

1. Connect the power and ground to the engine in accordance with local codes and the NEC or IEC.
2. Provide a permanent guard to prevent accidental contact of parts of the body or clothing against the engine or engine components that move. Be careful with the burns if the engine is hot.
3. The key to the shaft should be secured before starting the engine.
4. mounting screws must be of high resistance steel. Be sure to use an appropriate block device on each screw (a washer to prevent the loosening of fixation by vibrations; or a compound to seal the threads and prevent loosening).
5. Do not apply power to the engine until the engine is securely mounted by the mounting holes.
6. This engine should only be connected to the appropriate voltage, frequency, and the size of the load.
7. Motors should not be used for the implementation of load or restriction unless the parking brake is installed in a suitable size. If an engine brake is installed, you must provide adequate safeguards in case of failure of the brakes.
8. Disconnect all services of electricity, turn the engine off and let it cool before servicing.
9. For motors, download the home and/or capacitors before giving service.
10. Do not ignore the safety devices inoperative.

Protection

After engine installation is complete, a guard with appropriate dimensions must be built and installed in the engine. This protection should prevent staff from coming into contact with moving parts of the engine or the transmission unit, but must allow sufficient cooling air to pass through the top of the engine. If you have installed a brake mounted engine, you must provide adequate safeguards for the staff in the event of a failure of the brakes.

Warning: The guards must be installed to form a secure perimeter and without compromises on moving parts, like the couplings, pulleys, external fans, and axle extensions are not used. All parties must be permanently protected to prevent accidental contact by the staff. Accidental contact with parts of the body or clothing can cause serious or fatal injuries. When this engine is installed according to these instructions, the engine complies with the machinery directive of the EEC. To meet the requirements of electromagnetic compatibility (EMC) when the input power is purely sinusoidal.

Dangerous places

Make sure that the installed engine is suitable for the location in which to operate Motors Division 2 should never be installed in places where require a motor of Division 1. Familiarize yourself with the qualifications and the specific details of the environment where you will work the engine.

- Class I: (Gases, Vapors) "Group A: Acetylene
- Group B: butadiene, hydrogen, ethylene oxide, propylene oxide
- Group C: acetaldehyde, cyclopropane, Diethel ether, ethylene, isoprene
- Group D: acrylonitrile, ammonia, acetone, benzene, ethylene oxide, ethylene dichloride, butane, gasoline, hexane, methane, methanol, gasoline, propane, propylene, stirene, toluene, ethyl vinyl acetate, vinyl chloride, xylem "Class II (Combustible Dusts)
- Group E: Aluminum, magnesium and other metallic powders with similar characteristics.

- Group F: The black coal, coke or coal dust "Group G: flour, starch or grain dust "Division 1: Where there are dangers such as flammable concentrations in normal operating conditions, and/or where the danger is caused by maintenance or repair work often or equipment failure frequently. Division 2: Where to manage hazards such as flammable concentrations, processed or used, but they are normally in closed containers or closed systems where they can only escape through a accidental rupture or breakdown of these containers.

Mount

mounted by feet: engines mounted by the legs must be mounted in a rigid base to prevent excessive vibration. Wedges or shims can be used if the location is not level. Incorrect alignment may void the warranty of the engine. Flange mounted motors mounted on the flange must be positioned and aligned correctly. Note: If the incorrect direction of rotation is detrimental to the load, check the rotation or the 'bump' of the engine before attaching the load to the motor shaft. V-belt drive: Pulley close to the motor body. Allow clearance for movement of the motor shaft end-to-end. Do not over tighten the belts as this can cause premature failure of the bearings or shaft breakage.

Coupled Direct: direct coupled engines must be carefully aligned and the shaft should rotate freely without binding or drag.

Note: engines of 254T up come with a bearing on the opposite side of the transmission. If you want assurances for the bearing from the front, please contact Techtop for assistance.

Earth

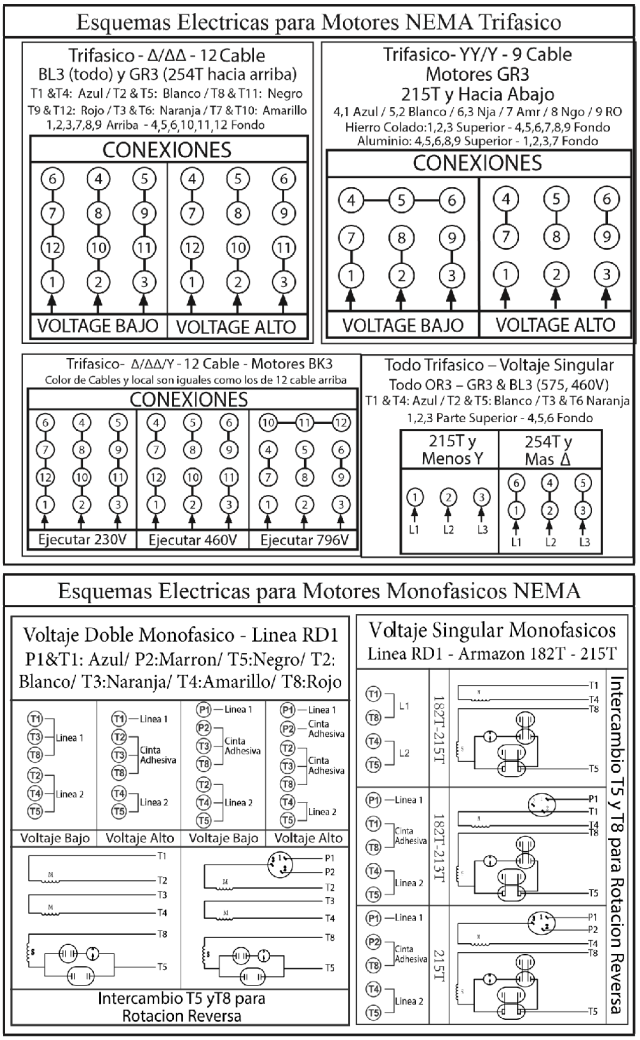
ground the motor in accordance with NEC and local codes. In the U.S., see the National Electrical Code, Article 430 for information about how to connect to earth motors and generators, and article 250 for general information on the earth. To make the connection to ground, the installer must ensure that there is a solid and permanent metal connection between the point of land, the engine or the terminal of the generator, and the engine or the frame of the generator. In locations outside the U.S., please consult the appropriate national code or the code that applied locally.

Connect your engine

Connect the engine as shown in the wiring diagram on the motor plate. Be sure to identify the appropriate electrical schematic for the engine that you are installing. If you have difficulty determining the appropriate electrical schematic for your engine, please contact Techtop for assistance. If this engine is installed as part of a system for the transmission of motor control, please connect and protect the engine according to the manufacturer's diagram of control. When using AC (alternating current) with variable frequency drives, make sure that the maximum engine speed is not exceeded. Cables, Fuses and earth must comply with the IEC or National Electrical Code and local codes. Note: If the incorrect direction of rotation is detrimental to the load, check the rotation or 'bump' of the engine before attaching the load to the motor shaft. When the engine is coupled to the load and start, should start quickly and operate without problems. If this is not the case, turn off the engine immediately and determine the cause. The possible causes are: low voltage on the engine, the motor connections are not correct or the load is too heavy. Check the motor current after a few minutes of operation and compare the measurement of the current with the value that is displayed on the board.

Three-Phase IEC electrical schematic- YY/Y - 9 132 GR3 Engine Harness down three-phase- 12 160

GR3 Engine Harness up under



processes of MAINTENANCE

WARNING: Do not touch the electrical connections unless they are first ensures that the electricity has aids off. Please refer to: OSHA standard 1910.147 entitled: "The Control of Hazardous Energy (lockout/tag-out)." Warning: surface temperatures of the engine enclosure can reach temperatures that can cause discomfort or damage to the staff who come into contact with hot surfaces. The protection should be provided by the User for the protection against accidental contact with hot surfaces. Failure to do so can cause injury.

Lubrication Procedure

Caution: Keep the clean lubrication. Mixture of different lubrication is not recommended and can result in premature failure of the bearing.

1. Re-lubrication is recommended when the engine is warm and the shaft is stationary.
2. Use a polyuria stabilized or lubrication, such as Mobil Polyrex EM TM 3.Remove all dirt and clean the outside of the lubrication fills and drains.
3. Clean the lubrication (or the area around the hole of lubrication, if equipped with lubrication grooves screws). If the engine has a removed, bleed plug. The motors can be lubricated again while you are off (no more than 80 °C) or when they are operating.

4. Where applicable, find the entry for the lubrication on the top of the mass of the bearing. If the engine is not equipped with a grease, clean the area and replace the pipe plug 1/8" with a grease nipple.
5. Remove the lubrication drain plug located in front of the entrance of fat.
6. Apply the grease gun to the attachment (or fat). Too much lubrication or fat injection too quickly can cause premature failure of the bearing. Slowly apply the recommended amount of fat, taking a few minutes to apply.
7. operates the engine for 20 minutes and re-install the bleed plug if it is been removed earlier.
8. Install the lubrication drain plug located in front of the entrance of fat.

Maximum lateral load

when the application calls for a significant side loading of the engine, the application may require roller bearings to avoid premature failure of the engine.

In order to properly evaluate the resulting side load before installing the engine. If your lateral load is higher than the value given in the table, please contact Techtop to explore options for the use of roller bearings.

Allowable lateral load for engines with ball bearings.

If the application calls for significant axial loads, please contact Techtop to determine if you have the right motor for your application

NOTES

1. radial loads are considered to include tension of the belt and the weight of the pulley.
2. The belt loads are considered that work in one direction vertically downwards.
3. To determine the load on the end of the shaft please subtract 15%.
4. Limits radial radial load are according to a life of bearing L-10 of 26.280 hours.
5. Limits of the radial load do not include the effects of any magnetic attraction unbalanced.

Condensation drains

Many engines come standard with bronze condensation drains of a track. These drains allow the engine ejects liquid from the enclosure without allowing liquid to enter the engine. The drains may require periodic maintenance to keep them clean of debris and flowing freely. From time to time, removes the drains of bronze to wash them.

Remove any accumulated debris that may prevent the operation.

For the engines that are equipped with rubber plugs in the holes of the drainage of condensation, make sure to remove the plug (for example, especially if the engine is installed in a place where it is likely the accumulation of condensation). In all cases, make sure that the drain is in the lower part of the engine. Some engines may require the rotation of end plates (for example, if the location of the assembly is not a typical horizontal mounting).

Info@orugaverde.com WWW.ORUGAVERDE.COM