MICHIGAN U.S.A

RAVENGER®

Petrol Powered Chipper/Shredder

User Manual

RETAIN THIS MANUAL FOR FUTURE REFERENCE

PLEASE READ THIS MANUAL CAREFULLY BEFORE USE

Click to Watch:

Starting a 4-Stroke

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INTRODUCTION

This shredder is designed solely for shredding/chipping all kinds of newly-cut tree branches with a diameter of up to ***8.5cm***.

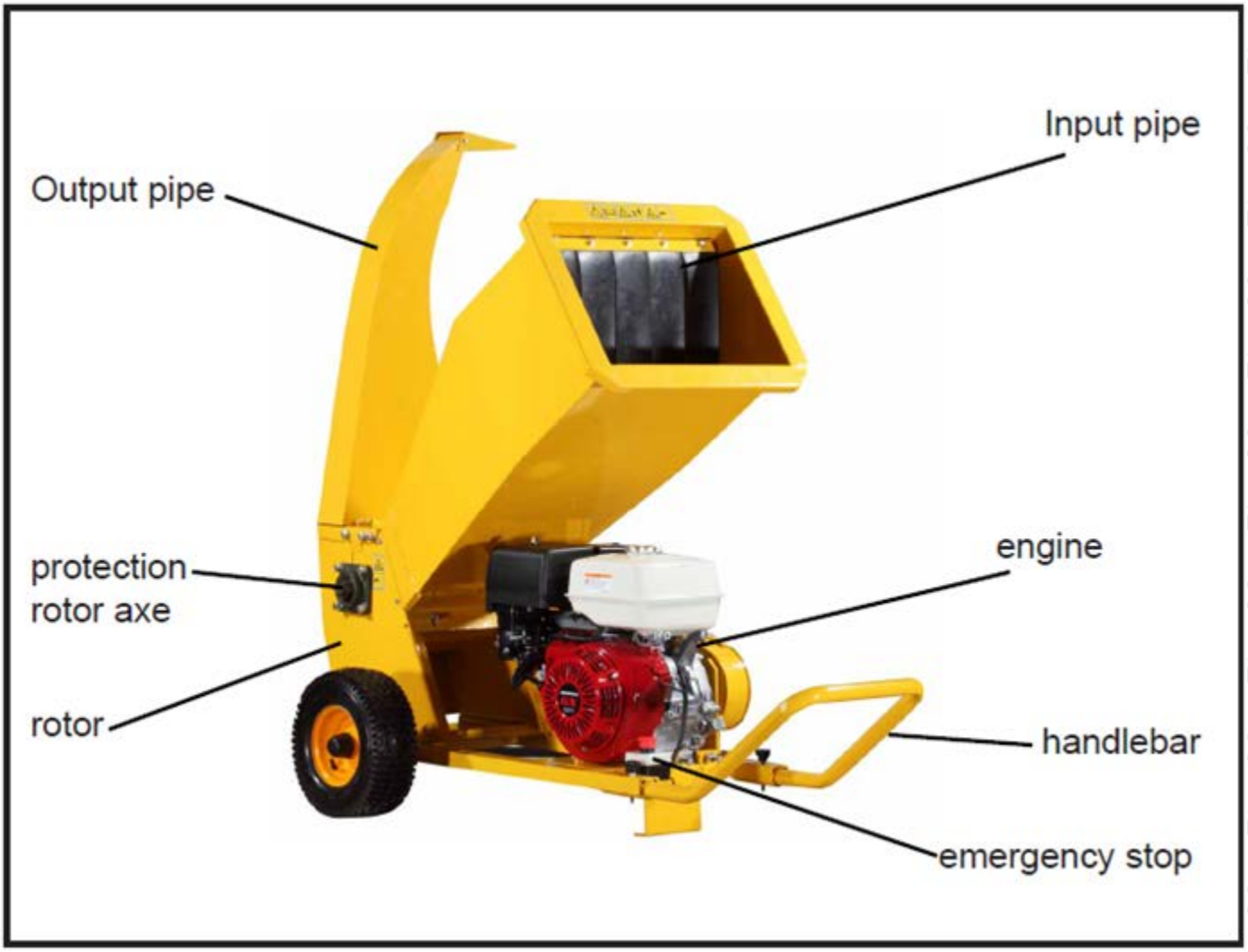
You should not use the shredder for shredding/chipping metals, stones and plastics. If you are going to shred tree roots, check if the diameter is less than 10 cm and remove all earth, sand and stones.

Before using the machine for the first time, check the maximum engine speed by screwing in/out the screw which controls the position of the throttle lever so that it is positioned as shown in the image below.

After the first hour's use check that the bolts of the blades are firmly fixed and that the gap between blades is 0.5mm (half a millimetre). Adjust the slots if necessary and fix the bolts.

The shredder is a machine for shredding/chipping newly cut wood. The rotor has 2 blades each with a 30 cm width and is powered by a gasoline engine. Transmission is through two parallel drive belts. The shredded wood or chips are discharged through the output tube by the centrifugal force of the rotor. Because of the angle of the blades, branches are pulled inside the machine automatically and no feeder belt is required.

PARTS DIAGRAM



SAFETY

- **Before use, make sure that the manual has been carefully read. Become familiar with the controls so as to use the machine correctly. Obey all safety instructions!**
- The user should be 18 years old or more.
- The machine should be positioned on a horizontal, firm surface.
- Users must wear safety gloves, ear-protection and safety goggles.
- When working in a confined space, always make sure there is sufficient ventilation and lighting, in order to reduce the risk of suffocation and injury.
- Only one person at a time should operate the machine.
- Pieces jamming the input tube can only be removed safely when the engine is stopped, the spark plug cap removed and the rotor is stopped and blocked. If necessary, unbolt and tip the input and output tubes to facilitate access to the rotor. Use a wooden pole to remove pieces stuck in the rotor. Never use your hands.

- Never leave the machine running unattended.
- Changing the blades of the rotor and checking blade bolts should only be done when the engine and rotor are stopped, the spark plug cap is removed and the rotor is blocked.
- After one hour of use always, check that all bolts and nuts are still tightened properly. If not, tighten them again or bring the machine back to your dealer/service-point.
- Use only original parts for maintaining your shredder, otherwise the warranty will be void.
- The shredder can only be repaired by a skilled dealer/service-point.
- The shredder exceeds 90 dBA during operation. Therefore all users and onlookers must wear ear-protection.
- Before use, make secure that the bolts on the fixed blade are firmly fixed. Check after one hour that the bolts still are firmly fixed (just the first time).

OPERATION

BEFORE OPERATING THE MACHINE

- Make sure the machine stands firmly on the ground and does not tilt in any way. The danger zone on the output of the machine must be respected, in order to avoid serious injury by chips thrown out of the output tube. Chips can be thrown a distance of 12 meters, so onlookers must remain behind the direction of throw or at least 12 meters away from the output tube.
- Before using the machine for the first time, check the maximum engine speed by screwing in/out the screw which controls the position of the throttle lever so that it is positioned as in the diagram.
- After the first hour's use check that the bolts of the blades are firmly fixed and that the gap between blades is 0.5mm (half a millimetre). Adjust in the slots if necessary and fix the bolts.

STARTING AND OPERATING THE MACHINE

- Start the engine at half throttle and let it warm up for about 3 minutes. (For proper use of the engine one should also read the attached manual). Then put the engine on full throttle.
- Put the branches in the input tube and when you feel they are pulled in by the rotating blades, let the branch go.
- Do not hang on to the branch, the branch will be pulled in by the machine by itself.
- Side branches with a diameter exceeding 3 cm should be sawn or cut off and shredded separately.

WARNING!

- In case of emergency or any doubt, immediately activate the safety switch (red knob) to be found by the engine.

- Before starting the engine check that the bolts holding the input and output tubes are fully tightened.

MAINTENANCE

- All technical check-ups and maintenance should be done with the engine shut off and the spark plug cap removed from the spark plug.
- While cleaning the shredder, never spray the bearings with a high pressure washer! It could cause water to enter the bearings which will cause damage to the machine; (this is not covered by warranty).
- The two grease nipples on the rotor require lubricating once a year or every 500 hours.
- Before putting the shredder into storage, grease or oil the bearings, blades and rotor to protect against corrosion.
- For engine maintenance refer to the Engine Manufacturers Engine Manual.
- Note that the first engine oil change is after 5 hours use.

TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
The shredder isn't performing properly: wood is not pulled in by the machine itself. The chips do not have the same size.	▪ Blades are worn down too much. ▪ Diameter of the branches inserted into the machine is too large. ▪ There is too big a gap between fixed blades. Correct gap should be 0.5mm (half a millimetre).	▪ Change or sharpen the blades. Note that the blades are sharpened on both edges so they can be reversed. ▪ Shut the engine off and remove the branch that is too thick. ▪ Adjust the gap between the blades by moving them into the slots.
The engine doesn't start / the engine shuts off by itself.	▪ Electrical problem with the engine. ▪ No fuel. ▪ No or not enough oil in the engine (the oil should be level with the threads of the filler hole).	Check that: ▪ The input tube is correctly fitted and that the bolts are tight. ▪ Put the start switch of the engine to "ON". ▪ Deactivate the emergency switch (turn the knob). ▪ Check the oil and fuel levels. ▪ Contact your dealer. **IMPORTANT**: Screw back the blade bolts afterwards.
The rotor jams / the engine will not start or turn because the rotor is jammed.	▪ Diameter of the branch is too big. ▪ There are unacceptable materials such as stones or metal in the input tube. ▪ A length of branch remains in the rotor after the engine was stopped.	▪ Shut-off the engine, remove the spark plug cap and turn the rotor counter-clockwise. Use a wooden stick to turn the rotor and to remove the material from the rotor and input tube. ▪ If necessary, remove the cap of the bearing housing and rotate the rotor axle with a spanner. ▪ If necessary, remove the input or output tube to facilitate access to the rotor. ▪ Check the sharpness of the blades and replace them if necessary. **IMPORTANT**: Screw back the blade bolts afterwards.

SPECIFICATIONS

MANUFACTURER	Michigan Power Equipment
ENGINE	4-Stroke OHV Manual Petrol Engine
DISPLACEMENT	420cc
MAX. OUTPUT	18HP / 3600 rpm
STARTING SYSTEM	Recoil Pull Start
FUEL TANK CAPACITY	6.5L
FUEL TYPE	Regular Unleaded 95 +RON
OIL CAPACITY	1.1 L
V-BELT SIZE / TYPE	Twin v-belt
WHEEL DIAMETER	12 Inch
MAX BRANCH DIAMETER	8.5cm

Please note, this model is not designed for tough fibrous material, such as flax, vines or palm fronds

Some experts believe that the incorrect or prolonged use of almost any product may cause serious injury or death. To help reduce your risk of serious injury or death, refer to the information below. For more information, see www.datastreamserver.com/safety

- Consult all documentation, packaging and product labelling before use. Note that some products feature documentation available online. It is recommended to print and retain the documentation.
- Before each use, check the product for loose/broken/damaged/missing parts, wear or leaks (if applicable). Never use a product with loose/broken/damaged/missing parts, wear or leaks.
- Products must be inspected and serviced (if applicable) by a qualified technician every 6 months. This is based on average residential use by persons of average size and strength, and on a property of average metropolitan size. Use beyond these recommendations may require more frequent inspections/servicing.
- Ensure that all users of the product have completed a suitable industry recognised training course before being allowed access to the product.
- If this product has been purchased in error when considering the information presented here, contact the retailer directly for details of their returns policy, if required.
- The product has been supplied by a general merchandise retailer that may not be familiar with your specific application or description of application. Be sure to attain third-party approval from a qualified specialist for your application before use, regardless of any assurances from the retailer or its representatives.
- This product is not intended for use where fail-safe operation is required. As with any product (for example, automobile, computer, toaster), there is the possibility of technical issues that may require the repair or replacement of parts, or the product itself. If the possibility of such failure and the associated time it may take to rectify could in any way inconvenience the user, business or employee, or financially affect the user, business or employee, then the product is not suitable for your requirements. This product is not intended for use where incorrect operation or a failure of any kind, including but not limited to, a condition requiring product return, replacement, parts replacement or service by a technician may cause financial loss, loss of employee time or an inconvenience requiring compensation.

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