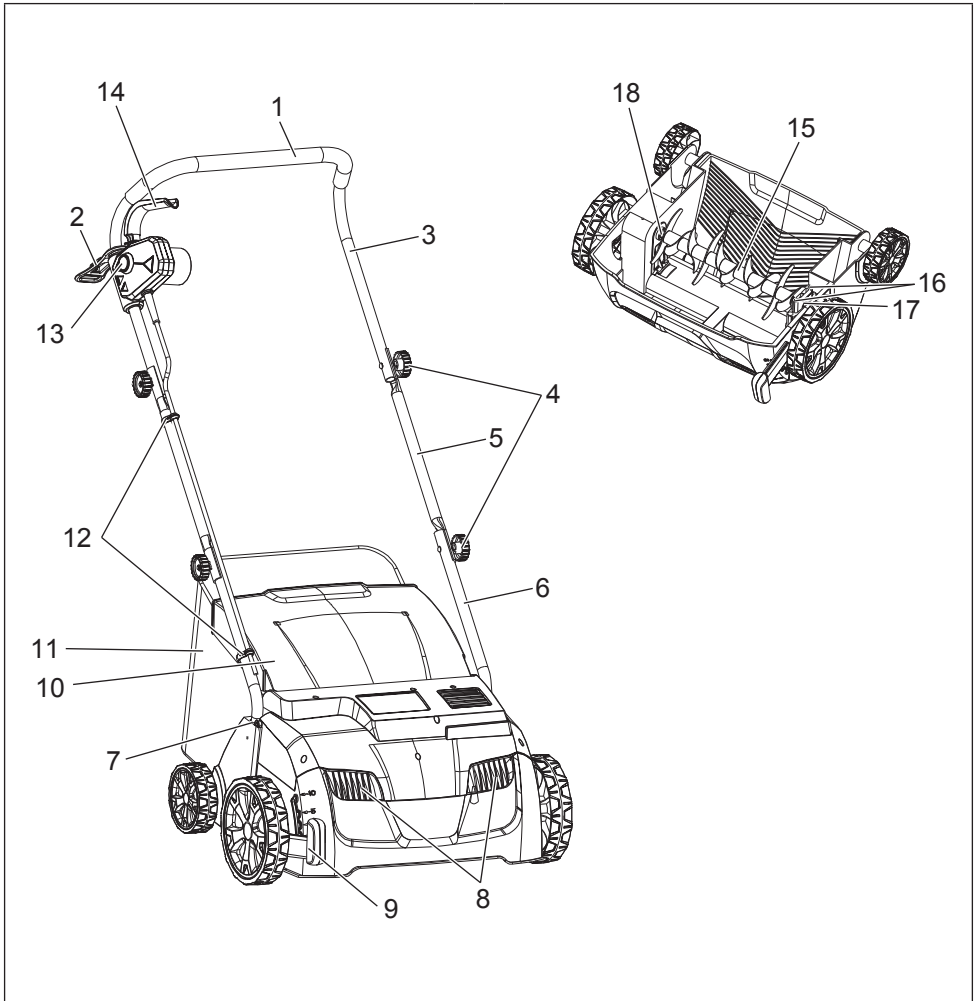
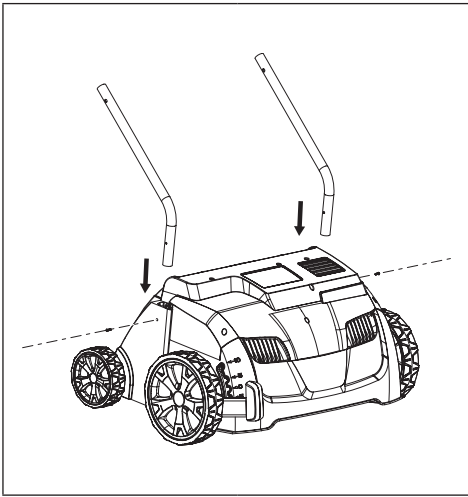


GB	Electric Scarifier	Original Instruction Manual
F	Scarificateur Electrique	Manuel d'instructions original
D	Elektro-Vertikutierer	Original-Bedienungsanleitung
I	Scarificatore elettrico	Manuale di istruzioni originale
NL	Elektrische cultivator	Oorspronkelijke instructiehand- leiding
E	Escarificadora Eléctrica	Manual de instrucciones original
P	Arejador de Solo Eléctrico	Manual de Instruções Originais
DK	Elektrisk opriver	Original brugsanvisning
GR	Ηλεκτρικός εκχερσωτής	Πρωτότυπο εγχειρίδιο οδηγιών
TR	Elektrikli Çim Havalandırma	Orijinal Kullanım Kılavuzu
S	Elektrisk vertikalskärare	Originalbruksanvisning
N	Elektrisk harve	Original instruksjonshåndbok
FIN	Sähkökarhi	Alkuperäinen käyttöohje
LV	Elektriskais skarifikators	Tulkojums no rokasgrāmatas oriģinālvalodā
LT	Elektrinis aeratorius	Originali naudojimo instrukcija
EE	Elektriline kobestaja	Tõlgitud kasutusjuhend
PL	Wertykulator Elektryczny	Oryginalna instrukcja obsługi
HU	Elektromos gyepszellőztető	Eredeti kezelői kézikönyv
SK	Elektrický skarifikátor	Pôvodný návod na obsluhu
CZ	Elektrický kultivátor	Původní návod k použití
RO	Scarificator electric	Manual de instrucțiuni original
RUS	Электрический Скарифikator	Оригинальная инструкция по эксплуатации
UA	Електричний скарифiкатор	Оригінальний посібник з експлуатації





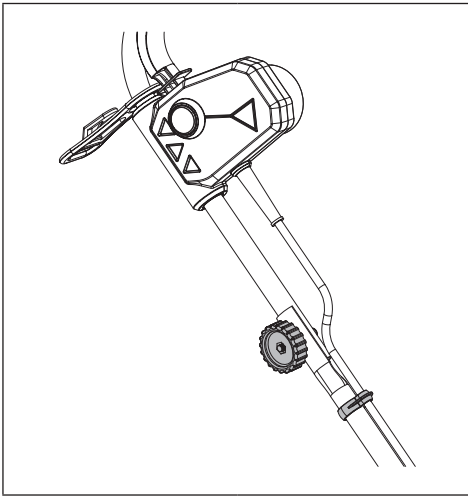
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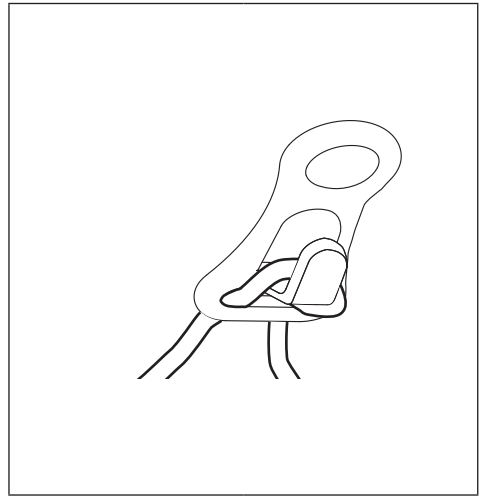
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4



5

DESIGNATION OF PARTS (Fig. 1)

- | | | |
|-----------------------|----------------------------|----------------------------|
| 1. Handle | 7. Support | 13. Lock-off button |
| 2. Cord strain relief | 8. Air vents | 14. Start/stop lever |
| 3. Upper handle bar | 9. Height adjustment lever | 15. Cutting tool |
| 4. Knob | 10. Deflector guard | 16. Bolt and spring washer |
| 5. Middle handle bar | 11. Grass catcher | 17. Bearing |
| 6. Lower handle bar | 12. Clip (x2) | 18. Drive shaft |

TECHNICAL DATA

Model name	UV3200
Voltage	230-240V
Frequency	50Hz
Rated input power	1300W
Net weight	12 kg
No load speed	3000min ⁻¹
Maximum cutting width	320 mm
Work height range	5 steps (-10/-5/0/5/10 mm)
Grass catcher volume	30L
Protection class	IPX4
Sound pressure level	77.97dB(A), K=2.50dB(A)
Sound pressure level at operator's ear	88.5dB(A), K=2.50dB(A)
Measured sound power level	97.25dB(A), K=1.84dB(A)
Guaranteed sound power level	99dB(A)
Vibration	4.513m/s ² , K=1.5m/s ²

SYMBOLS

The following show the symbols used for the machine. Be sure that you understand their meaning before use.



- Read instruction manual.



- Take particular care and attention.



- Double insulation.



- Wear protective gloves.



- Wear sturdy boots with non-slip soles.



- Wear eye and ear protection.



- Wait until all the machine parts stop completely.



- Pay attention to sharp cutting tools.



- Switch off the motor and unplug before cleaning or maintenance, or if power cable is damaged.



- Objects may be thrown out at high speed.



- Keep safe distance between bystanders or pets and working area.



- Do not expose to rain or moisture.



- Remove plug from the mains immediately if power cable is damaged or cut.



- Risk of electrical shock.



- Keep the cord away from the cutting tools or wheels.



- Only for EU countries
Do not dispose of electric equipment together with household waste material! In observance of the European Directive, on Waste Electric and Electronic Equipment and its implementation in accordance with national law, electric equipment that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.

SAFETY WARNINGS

READ CAREFULLY BEFORE USE KEEP INSTRUCTION MANUAL FOR FUTURE REFERENCE



Do not start to operate the machine until you have read these operating instructions. Observe all the instructions given, and install the machine as described.

Intended use of the machine

- This machine is intended for scarifying or raking in gardens.
- The scarifier is intended for private use only, and not for commercial use. Do not use it in public places either.

General Instructions

- Read this instruction manual to become familiar with handling of the machine. Handling the machine by the users insufficiently informed increases the risk of fire, electric shock, or personal injury to themselves as well as the others.
- Do not lend the machine to people who have unproven to be experienced.
- When lending the machine, always attach this instruction manual.
- The machine is not intended for use by persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge. Young children should be supervised to ensure that they do not play with the machine.
- Operate only if you are in good physical condition. Perform all work calmly and carefully. The user is responsible for all safety of persons and damages around the operating area.
- Never use this machine after consumption of alcohol or drugs, or if feeling tired or ill.
- Take a rest to prevent loss of control caused by fatigue. We recommend taking a 10 to 20-minute rest every hour.
- Use the machine in accordance with these instructions, considering the working conditions and the application. Unintended use of the machine could result in a hazardous situation.
- National or local regulation can restrict the handling of the machine.
- Stay alert. Watch what you are doing. Use common sense. Do not operate machine when you are tired.

Personal protective equipment

- Dress Properly. The clothing worn should be functional and appropriate, i.e. it should be tight-fitting but not cause hindrance. Do not wear either jewelry or clothing which could become entangled in to machine. Wear protecting hair covering to contain long hair.
- Always wear ear protections to avoid hearing loss.
- Wear protective glasses or goggles to protect eyes from flying objects and debris.
- Wear protective gloves to prevent injury to fingers.
- Wear dust mask to reduce the risk of injury.
- When using the machine, always wear sturdy shoes with a non-slip sole. This protects against injuries and ensures a good footing.
- While operating the machine, always wear substantial footwear and long trousers. Do not operate the machine when barefoot or wearing open sandals.

Work area safety

- Keep children and bystanders, including animals, away while operating the machine.
- Check the work area whether there are no stones, wires, glass, or other foreign objects. Foreign object may be caught up or flung by the machine, result in damage or injury.
- Operate the machine under good visibility and daylight conditions only. Do not operate the machine in darkness or fog.
- Do not operate machine in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. The machine creates sparks which may ignite the dust or fumes.
- Do not expose the machine to rain or wet conditions. Water entering the machine may increase the risk of electric shock.

Starting up the machine

- Before connect the plug or switch on the machine:
 - Check the plug and cord and confirm that they are good condition.
 - Check all the screws, nuts and other fasteners are properly secured.
 - Check cutting tools are in place and good working condition.
 - Check guards and safe devices, such as deflectors or grass catcher, function well.
 - Check the air vents are not covered by dust or other foreign materials. Clean them with a soft brush or cloth if they are blocked.
 - Replace damaged or unreadable labels.
 - Check all the parts of the machine carefully to determine if it operates properly and performs its intended function. Especially, never use the machine if the switch does not work normally.
 - Make sure the switch is off side to prevent unintentional start.
 - Check all tools for maintenance, such as adjusting wrench or spanner are removed.
- If the supply cord is damaged, ask Makita authorized service center to replace it, always use genuine replacement parts.
- Never use the machine if safety device, such as deflector guard or grass catcher, is damaged or missing.

- When turning on the motor:
 - Keep your feet away from the cutting tools.
 - Do not tilt the machine.
 - Do not stand in front of the discharge opening.
 - Never let your hands or other part of the body or clothing place near moving parts.

Electrical safety

- Check the connector plug on the machine fits into the socket before use.
- Never modify the connector plug.
- Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the machine. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
- Check the extension cable regularly for damage to the insulation. Replace it if damaged.
- If the connecting cable is damaged, withdraw the mains plug immediately. A damaged cable may cause contact with live parts and electric shock.
- Never use damaged cord.
- Keep the cord and extension cable away from cutting tools and wheels. Cutting tools may damage the cable and cause electric shock.
- When using the machine outdoors, always use a residual current-operated circuit-breaker (RCD) with an operating current of 30 mA or less.
- Use only extension cable for outdoor use with splash-proofed connector. Its cross-section must be at least 1.5mm² for cable lengths up to 25m, and 2.5 mm² for cable lengths over 25m.
- The machine should be connected only to a power supply of the same voltage as indicated on the nameplate, and can only be operated on single-phase AC supply. They are double-insulated in accordance with European Standard and can, therefore, also be used from sockets without earth wire.
- Avoid body contact with earthed or grounded surfaces (e.g. pipes, radiators, ranges, refrigerators).

Operation

- Avoid operating on wet grass. Take particular attention when working on wet grass to prevent slipping.
- Hold the handle firmly with both hands during operation. Keep the handle dry and clean to prevent accidents.
- Do not run. Only walk during operation.
- Pay particular attention to your footings when working on a slope.
- Do not work straight up or down on a slope. Always work along horizontal line.
- Be especially careful when turning the machine on a slope.
- Never work on a steep slope.
- Pay extreme attention when reversing or pulling the machine towards you.
- Do not overreach. Keep proper footing and balance at all times. This enables better control of the machine in unexpected situations.
- Always remember:
 - Keep your feet away from the cutting tools.
 - Do not tilt the machine.
 - Do not stand in front of the discharge opening.
 - Never let your hands or other part of the body or clothing place near moving parts.
- Do not force the machine. It does the job better and safer at the rate for which it was designed. Frequent overload may cause motor damage or fire.

- Switch off the motor and unplug:
 - Whenever leaving the machine unattended
 - Before clearing a blockage or any fault
 - Before checking, cleaning or working on the machine
 - Before making any adjustments, changing accessories or storing
 - When the machine hits a foreign object. Wait until the machine cools down. Inspect the machine and replace the parts if needed before continuing operation
 - Whenever the machine starts vibrating or making noise unusually
 - When attaching or removing grass catcher
 - When someone enters your working area
 - When crossing surface other than grass
 - When transporting.
- Stop the cutting tool:
 - If you have to tilt the machine
 - When crossing surfaces other than grass
 - Transporting the machine to and from surfaces to be worked.
- Pay attention to the cutting tools. They do not stop immediately after switch off.

Maintenance instructions

- Have your machine serviced by our authorized service center, always using only genuine replacement parts. Incorrect repair and poor maintenance can shorten the life of the machine and increase the risk of accidents.
- Inspect the machine on regular base.
- Before servicing, inspection, adjustment, storage, or to change an accessory, take following steps:
 - Shut off the power source
 - Disconnect the machine from power supply
 - Make sure that all moving parts have come to a complete stop
 - Allow the machine to cool.
- Inspect on the machine for possible damage:
 - Whether safety devices works properly for its intended function
 - Whether all the moving parts work smoothly and adequately
 - Whether all parts are not damaged and properly installed
 - Check the cutting tool for any damage, worn or unbalance
 - Check the grass catcher regularly for any damage or worn
 - Check all the nuts, bolts and screws are tight
 - Replace or repair by our authorized service center if there are any damaged or worn parts.
- Do not carry out maintenance or repair work other than that described in this instruction manual. Any other work must be carried out by Makita authorized service center.
- Only use original Makita replacement parts and accessories intended for your machine. Otherwise it may result in personal injury or damage on the machine.
- Store the machine in a dry room. Keep it out of reach of children. Never store the machine outdoors.

Vibration

- People with poor circulation who are exposed to excessive vibration may experience injury to blood vessels or the nervous system. Vibration may cause the following symptoms to occur in the fingers, hands or wrists: "Falling asleep" (numbness), tingling, pain, stabbing sensation, alteration of skin color or of the skin. If any of these symptoms occur, see a physician.
- To reduce the risk of "white finger disease", keep your hands warm during operation and well maintain the equipment and accessories.

WARNING:

- This machine produces an electromagnetic field during operation. It is recommended that persons with medical implants should consult their doctors and implant manufacturers before using this machine. Otherwise the electromagnetic field may affect medical implants and it may result in serious injury.

ASSEMBLY

CAUTION:

- Always be sure that the machine is switched off and unplugged before carrying out any work on the tool.

Assembling the handle bar (Fig. 2, 3, 4)

- 1) Insert the lower handle bar (6) into the support (7). Align the screw holes on them, and then fasten them by a screw. Perform this step on both sides.
- 2) Place the middle handle bar (5) onto the lower handle bar (6). Align the screw holes of those handles, and then fasten them with the knob (4), spacer, and the bolt. Perform this step on both sides.
- 3) Place the upper handle bar (3) onto the middle handle bar (5). Fasten each side of the upper bar with the knob (4), spacer, and the bolt.
- 4) Fasten the cord with the clips (12) onto the handle bar.

Assembling the grass catcher

CAUTION:

- Do not operate the machine without grass catcher. Otherwise ejected object may cause injury.
- For rear discharge appliances with exposed rear rollers, when used without a catcher, full eye protection shall be worn.

NOTE:

- The performance of the machine reduces when the grass catcher is full. Empty the grass catcher on regular basis before it becomes completely full.

Installing the grass catcher

Pull up the deflector guard (10) and hold it. Insert hooks on the grass catcher into the grooves on the machine.

Removing the grass catcher

Pull up the deflector guard (10) and hold it. Remove the grass catcher by releasing the hooks from the grooves on the machine.

Cord strain relief (Fig. 5)

The cord strain relief (2) helps to prevent the cord from entangling into the blade or wheel.

Make a small loop at the end of the mains cord, and pass it through the opening of the cord strain relief, and then hang it on the hook.

Always take the position of the cord into consideration during operation. Start your operation from the nearest point to the power supply to prevent the cord from accidentally cut. It is recommended keeping the cord over your shoulder during the operation.

Removing or installing cutting tool

CAUTION:

- Wear protective gloves.
- Pay particular attention when handling cutting tool. It is very sharp and may become hot during operation.
- Always use appropriate cutting tool in accordance with your operation.
- Before operation, make sure two bolts, which hold the cutting tool onto the machine, are firmly tightened. Do not use the machine if it is loose or missing. If it is damaged, replace it immediately.

Removing cutting tool

- 1) Remove the grass catcher (11).
- 2) Remove the handle from the machine.
- 3) Place the machine upside down on a flat surface.
- 4) Loosen the two bolts (16). Remove them and spring washers.
- 5) Lift the bearing part of the cutting tool (17), and then pull the cutting tool (15) out from the drive shaft (18).

Installing the cutting tool

- 1) Insert the cutting tool by sliding its hex nut part into the socket of driving shaft.
- 2) Fasten the bearing part to the machine by the bolts and spring washers.

FUNCTIONAL DESCRIPTION

WARNING:

- Before plugging the machine, always make sure that the machine is switched off. Plugging the machine with the switch on may cause an unexpected start resulting in serious personal injury.
- Never use the machine if power cable is damaged. Otherwise it may cause electric shock.
- Do not use the machine if the switch does not turn it on and off. Have defective switches replaced by Makita authorized service center.

Start/stop lever

To start the machine, press and hold the lock-off button (13), and then fully pull the start/stop lever (14) and hold it. Once pulling the start/stop lever, you do not need to hold the lock-off button.

To stop the machine, simply release the start/stop lever.

Height adjustment

Depending on the condition of the grass, adjust the height of the cutting tool.

Refer to the table below as rough indication for depth settings.

Height	Usage	
	Scarifying	Raking (Optional accessory)
+10mm	For transportation and storage.	For transportation and storage. Raking sensitive lawn. Dethatching thin layers.
+5mm	Scarifying sensitive lawn. Dethatching thin layers. The second scarifying operation in autumn.	Raking normal lawn.
0mm	Scarifying normal lawn. Dethatching normal layer.	Raking rough thick lawn.
-5mm	Scarifying normal lawn. Dethatching thick layer.	Do NOT use for raking operation.
-10mm	Scarifying rough thick lawn. Dethatching thick layer.	Do NOT use for raking operation.

Changing the height

Push in the height adjustment lever (9) towards wheel axis side, and move it upwards or downwards.

Overload protection

This machine is equipped with overload protection, and it functions under the following situations:

- The cutting tool becomes clogged because scarified materials are built up around it.
- The machine is trying to scarify more than the motor can handle.
- Something hinders the rotation of the cutting tool.

When this protection works, the machine is switched off automatically.

If it happens, unplug the machine, wait until it cools down, and remove the cause of the overload before restarting the machine.

OPERATION

Operation Tips:

- Cut your grass before operation and fertilize after the operation.
- Adjust the depth of the cutting tool in accordance with the height of the grass and weather.
- Avoid operating on wet grass. It tends to stick on the discharge port and other parts of the machine. It may also cause slip and fall.
- Do not move too fast. Push the machine slowly. Otherwise discharge port may become clogged and the motor may overload.
- Operate along a line as straight as possible.
- Make slightly overlapping scarified lines. It will maintain even and smooth surface.
- When a flower bed is included in the operating area, make a circle or two around the flower bed.
- Be especially careful when turning the machine.
- Do not stay in one position. It damages the grass.

Tips for scarifying:

- Always take the weather into account. Warm, sunny and wet weather is good for scarifying because the lawn can recover healthily. On the other hand, avoid cold, heat, dry weather.

- During spring season scarify the lawn.
- If summer is wet, scarify the lawn in early autumn.
- Refrain from scarifying during period of extremely hot weather.
- If summer is very dry, do not scarify in autumn.

Tips for raking:

- Plenty amount of air is needed for the area around the roots of the lawn in order to maintain healthy growth in spring season.
- It is recommended performing aeration operation on the lawn every 4 – 6 weeks in accordance with the state of the lawn.

MAINTENANCE

⚠ CAUTION:

- Always be sure that the machine is switched off and unplugged before performing inspection or maintenance.
- Wear protective gloves before performing inspection or maintenance.
- The cutter does not stop immediately after switch off. Wait until all the parts stop before performing any maintenance work.
- Make sure that all the tools are removed after maintenance work.
- Never use gasoline, benzene, thinner, alcohol or the like for cleaning. Discoloration, deformation or cracks may result. To clean the machine, use only moist cloth and soft brush.
- Do not hose or clean the machine with high pressured water.

When transporting the machine, pay attention to the following points:

- Switch off the motor, unplug and wait until the cutting tool stops.
- Adjust the depth of the cutting tool to transportation height.
- Always transport the machine by its handle.
- Avoid heavy impact or strong vibration.
- Secure the machine firmly in case it is embarked on vehicles.

Perform the following steps after each operation:

- Switch off the motor, unplug and wait until the cutting tool stops.
- Clean the grass catcher. Store it in a dry room.
- Check, clean and store the machine in a dry room.

Perform the following work at regular basis:

- Check all the clamps, such as screws, nuts etc. are tightly fasten.
- Check for defects such as loose, worn, or damaged parts. Replace them if necessary.
- Check that the covers and guards are not damaged or deformed.
- If the machine starts vibrating abnormally during operation, that may be caused by unbalanced or deformed cutting tool due to the impacts by foreign objects. Have the cutting tool repaired or replaced by authorized service center if it happens.
- The cutting tool is worn out during the course of time. Check the condition of the cutting tool and its stability on regular basis. Replace it if it is worn or become blunt.
- Clean and lubricate all screw parts before storage.

TROUBLESHOOTING

WARNING: Before solving troubles, switch off the machine, pull out the mains plug, and wait until the machine stops completely.

Trouble	Possible cause	Remedy
The machine does not start.	Power supply is not plugged in.	Connect the power supply.
	Defect of power cord.	Unplug immediately. Ask your local Makita authorized service center to repair it.
	Defect of electrical circuit.	Ask your local Makita authorized service center to repair it.
	Lock-off button is not pressed.	Press the lock-off button and pull the start/stop lever.
There are cracking sounds from the machine.	Foreign matter is entangled in the cutting tool.	Switch off the motor, unplug, and wait until the cutter tool stops. And then remove the foreign matter.
There are strange noise from the machine.	Defect of drive belt	Ask your local Makita authorized service center to repair it.
The machine does not reach its maximum power.	Power source has low voltage than it required.	Try another power source. Check whether appropriate power source is deployed.
	Air vents are clogged.	Clean the air vents.
Poor result.	Grass is too high.	Mow the grass before scarifying.
	Cutting tool is worn out or damaged.	Replace it.
	Scarified surface exceeds the machine capacity.	Only scarify a surface which is in accordance with machine capacity.
	Scarified depth is not correct.	Adjust the depth of the cutting tool.

OPTIONAL ACCESSORY

CAUTION:

- These accessories or attachments are recommended for use with your Makita tool specified in this manual. The use of any other accessories or attachments might present a risk of injury to persons. Only use the accessories or attachments for their stated purposes.
- If you need any assistance for more details regarding these accessories, ask your local Makita Service Center.

There are several types of cutting tool:

- Scarifying blade - The sharp edge of a blade scarifies the ground and cuts roots.
- Raking blade (optional accessory) - Removing the lawn and leaves by fine needles.

NOTICE:

- Some items in the list may be included in the tool package as standard accessories. They may differ from country to country.

For European countries only

EC Declaration of Conformity

We Makita Corporation as the responsible manufacturer declare that the following Makita machine(s):

Designation of Machine:

Electric Scarifier

Model No./ Type: UV3200

Specifications: see "Technical data" table.

are of series production and

Conforms to the following European Directives:

2000/14/EC amended by 2005/88/EC, 2006/42/EC,
2004/108/EC

And are manufactured in accordance with the following standards or standardised documents:

EN60335-1, EN60335-2-92.

The technical documentation is kept by:

Makita International Europe Ltd.

Technical Department,

Michigan Drive, Tongwell,

Milton Keynes, Bucks MK15 8JD, England

The conformity assessment procedure required by Directive 2000/14/EC was in Accordance with annex V.

Measured Sound Power Level: 97.25 dB (A)

Guaranteed Sound Power Level: 99 dB (A)

10.1.2013



Tomoyasu Kato
Director

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