

EN ORIGINAL INSTRUCTIONS

IMPORTANT - These instructions are for your safety. Please read through them thoroughly prior to handling the product and retain them for future reference.



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**EN Scarifier and Raker
1800W 37cm**

MSRP1800-3

5063022106100

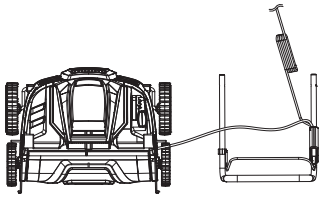
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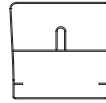
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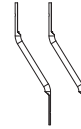
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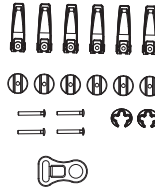
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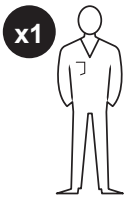


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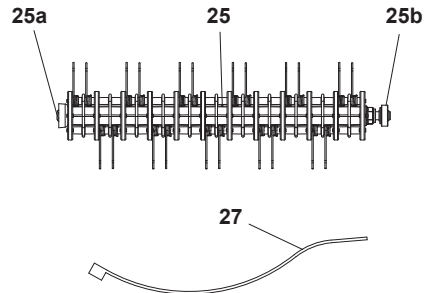
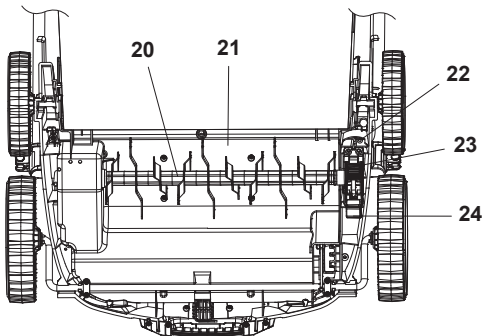
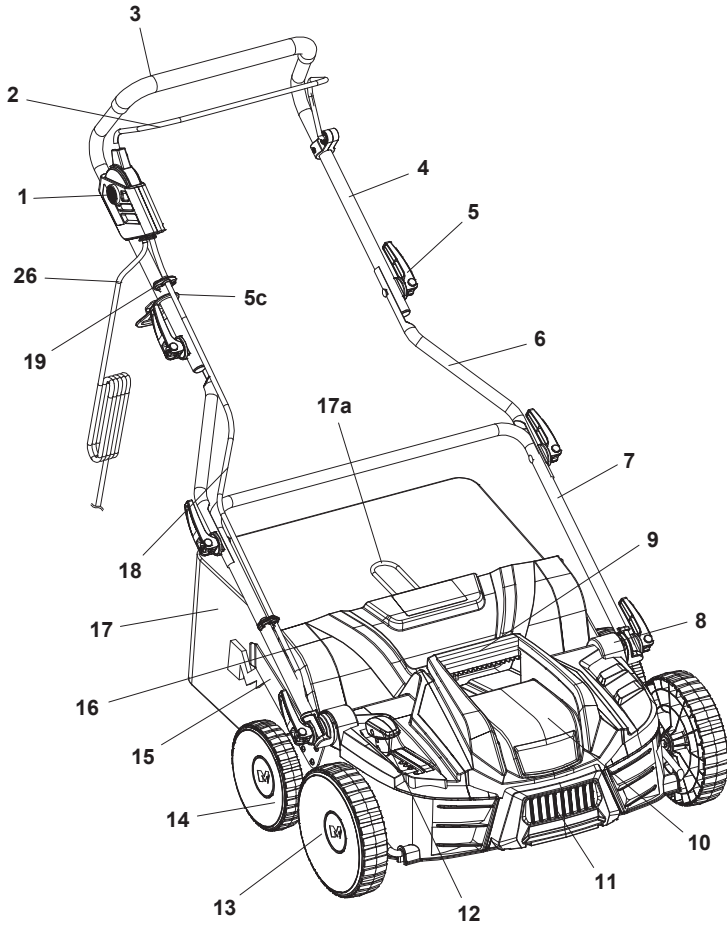
EN You will need



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EN Product description



- | | | |
|---------------------------|----------------------------|--------------------------------------|
| 1. Lock-off button | 9. Transport handle | 19. Wire clip (x2) |
| 2. Start lever | 10. Motor housing | 20. Scarifier drum |
| 3. Hand grip | a. Motor* | a. Hex shaft* |
| 4. Upper handle bar | 11. Front deck | b. Bearing* |
| 5. Clamp lever (x6) | 12. Depth adjustment lever | 21. Rear discharge chute a. Support* |
| a. Mounting bolt* (x4) | 13. Front wheel (x2) | 22. Cutting tool holder |
| b. Flange* (x6) | 14. Rear wheel (x2) | 23. Locking button |
| c. Cord retainer | 15. Stand bracket (x2) | 24. Locking lever |
| 6. Middle handle bar (x2) | 16. Deflector guard | 25. Raker drum |
| 7. Lower handle bar | 17. Grass catcher | a. Hex shaft* |
| a. Dial plate* (x2) | a. Carry handle | b. Bearing* |
| b. Indicator* | b. Steel frame* | 26. Power cord with plug |
| 8. Handle support (x2) | c. Rubber clip* (x6) | 27. Cable tie |
| a. Indicating line* (x2) | d. Hook* (x2) | |
| b. Mounting bolt* (x2) | 18. Interconnection cord | |



NOTE: Parts marked with * are not shown in this overview. Please refer to the respective part in the instruction manual.



EN Safety

General Machine Safety Warnings



WARNING! Read all safety warnings, instructions, illustrations and specifications provided with this machine. *Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.*

Save all warnings and instructions for future reference.

The term “machine” in the warnings refers to your mains-operated (corded) machine or battery-operated (cordless) machine.

Work area safety

- a) **Keep work area clean and well lit.** *Cluttered or dark areas invite accidents.*

- b) **Do not operate machine in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** *Machines create sparks which may ignite the dust or fumes.*
- c) **Keep children and bystanders away while operating a machine.** *Distractions can cause you to lose control.*

Electrical safety

- a) **Machine plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) machines.** *Unmodified plugs and matching outlets will reduce risk of electric shock.*
- b) **Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators.** *There is an increased risk of electric shock if your body is earthed or grounded.*
- c) **Do not operate the machine in rain or wet conditions.** *This may increase the risk of electric shock.*
- d) **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.*
- e) **When operating a machine outdoors, use an extension cord suitable for outdoor use.** *Use of a cord suitable for outdoor use reduces the risk of electric shock.*
- f) **If operating a machine in a damp location is unavoidable, use a residual current device (RCD) protected supply.** *Use of an RCD reduces the risk of electric shock.*

Personal safety

- a) **Stay alert, watch what you are doing and use common sense when operating a machine. Do not use a machine while you are tired or under the influence of drugs, alcohol or medication.** *A moment of inattention while operating machines may result in serious personal injury.*

- b) **Use personal protective equipment. Always wear eye protection.** *Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.*
- c) **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source, picking up or carrying the machine.** *Carrying machines with your finger on the switch or energising machines that have the switch on invites accidents.*
- d) **Remove any adjusting key or wrench before turning the machine on.** *A wrench or a key left attached to a rotating part of the machine may result in personal injury.*
- e) **Do not overreach. Keep proper footing and balance at all times.** *This enables better control of the machine in unexpected situations.*
- f) **Dress properly. Do not wear loose clothing or jewellery. Keep your hair and clothing away from moving parts.** *Loose clothes, jewellery or long hair can be caught in moving parts.*
- g) **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** *Use of dust collection can reduce dust-related hazards.*
- h) **Do not let familiarity gained from frequent use of machines allow you to become complacent and ignore machine safety principles.** *A careless action can cause severe injury within a fraction of a second.*

Machine use and care

- a) **Do not force the machine. Use the correct machine for your application.** *The correct machine will do the job better and safer at the rate for which it was designed.*
- b) **Do not use the machine if the switch does not turn it on and off.** *Any machine that cannot be controlled with the switch is dangerous and must be repaired.*

- c) **Disconnect the plug from the power source and/or remove the battery pack, if detachable, from the machine before making any adjustments, changing accessories, or storing machines.** *Such preventive safety measures reduce the risk of starting the machine accidentally.*
- d) **Store idle machines out of the reach of children and do not allow persons unfamiliar with the machine or these instructions to operate the machine.** *Machines are dangerous in the hands of untrained users.*
- e) **Maintain machines and accessories. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the machine's operation. If damaged, have the machine repaired before use.** *Many accidents are caused by poorly maintained machines.*
- f) **Keep cutting tools sharp and clean.** *Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.*
- g) **Use the machine, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** *Use of the machine for operations different from those intended could result in a hazardous situation.*
- h) **Keep handles and grasping surfaces dry, clean and free from oil and grease.** *Slippery handles and grasping surfaces do not allow for safe handling and control of the machine in unexpected situations.*

Service

- a) **Have your machines serviced by a qualified repair person using only identical replacement parts.** *This will ensure that safety of the machine is maintained.*

Lawn scarifier and lawn aerator safety warnings

- a) **Do not use the machine in bad weather conditions, especially when there is a risk of lightning.** *This decreases the risk of being struck by lightning.*

- b) **Thoroughly inspect the area for wildlife where the machine is to be used.** *Wildlife may be injured by the machine during operation.*
- c) **Thoroughly inspect the area where the machine is to be used and remove all stones, sticks, wires, bones, and other foreign objects.** *Thrown objects can cause personal injury.*
- d) **Before using the machine, always visually inspect to see that the tines and the tines assembly are not worn or damaged.** *Worn or damaged parts increase the risk of injury.*
- e) **Before use, check the supply cord and any extension cord for signs of damage or aging. Do not use the machine if the cord is damaged or worn. If the cord is damaged or worn during use, switch off the machine and do not touch the cord before disconnecting it from the supply.** *A damaged supply cord or extension cord may result in electric shock, fire and/or serious injury.*
- f) **Check the catcher frequently for wear or deterioration.** *A worn or damaged catcher may increase the risk of personal injury.*
- g) **Keep guards in place. Guards must be in working order and be properly mounted.** *A guard that is loose, damaged, or is not functioning correctly may result in personal injury.*
- h) **Keep all cooling air inlets clear of debris.** *Blocked air inlets and debris may result in overheating or risk of fire.*
- i) **While operating the machine, always wear non-slip and protective footwear. Do not operate the machine when barefoot or wearing open sandals.** *This reduces the chance of injury to the feet from contact with the moving tines.*
- j) **While operating the machine, always wear long trousers.** *Exposed skin increases the likelihood of injury from thrown objects.*
- k) **Do not operate the machine in wet grass. Walk, never run.** *This reduces the risk of slipping and falling which may result in personal injury.*
- l) **Do not operate the machine on excessively steep slopes.** *This reduces the risk of loss of control, slipping and falling which may result in personal injury.*

- m) **When working on slopes, always be sure of your footing, always work across the face of slopes, never up or down and exercise extreme caution when changing direction.** *This reduces the risk of loss of control, slipping and falling which may result in personal injury.*
- n) **Use extreme caution when reversing or pulling the machine towards you. Always be aware of your surroundings.** *This reduces the risk of tripping during operation.*
- o) **Keep the supply cord away from the tines.** *A damaged supply cord may result in electric shock, fire and/or serious injury.*
- p) **Switch off and remove plug from mains if the cord is entangled or damaged.** *Entangled or damaged cords can increase the risk of electric shock.*
- q) **Hold the machine by insulated gripping surfaces only, because the tines may contact hidden wiring or its own cord.** *Tines contacting a “live” wire may make exposed metal parts of the machine “live” and could give the operator an electric shock.*
- r) **Do not touch tines and other hazardous moving parts while they are still in motion.** *This reduces the risk of injury from moving parts.*
- s) **When clearing jammed material or cleaning the machine, make sure all power switches are off and the power cord is disconnected.** *Unexpected operation of the machine may result in serious personal injury.*

Additional safety warnings for lawn scarifier and lawn aerator

Training

- a) Read the instructions carefully. Be familiar with the controls and the proper use of the machine.
- b) Never allow children, persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge or people unfamiliar with these instructions to use the machine. Local regulations may restrict the age of the operator.

- c) Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people or their property.

Preparation

- a) Obtain ear protection and safety glasses. Wear them at all times while operating the machine.
- b) While operating the machine, always wear substantial footwear and long trousers. Do not operate the machine when barefoot or wearing open sandals. Avoid wearing clothing that is loose fitting or that has hanging cords or ties.
- c) To prevent dust irritation the wearing of a face mask is recommended.
- d) Do not wear loose clothing or jewellery that can be drawn into the air inlet. Keep long hair away from the air inlets.
- e) Operate the machine in a recommended position and only on a firm, level surface.
- f) Do not operate the machine on a paved or gravel surface where ejected material could cause injury.
- g) Before using, always visually inspect to see, that the tines, bolts and other fasteners are secure, the housing is undamaged and that guards and screens are in place. Replace damaged or unreadable labels.
- h) Before use check the supply and extension cord for signs of damage or aging. If the cord becomes damaged during use, disconnect the cord from the supply immediately. **DO NOT TOUCH THE CORD BEFORE DISCONNECTING THE SUPPLY.** Do not use the product if the cord is damaged or worn.
- i) Only use a weather proof extension cable fitted with a coupler according to EN 60320-2-3.
- j) Never operate the machine while people, especially children, or pets are nearby.



CAUTION! Do not touch a rotating cutting tool.

Operation

- a) Always direct the cable to the rear away from the product.
- b) Do not carry the product by the cable.
- c) Operate the machine only in daylight or in good artificial light.
- d) Keep proper balance and footing at all times.
- e) Always be sure of your footing on slopes.
- f) Walk, never run.
- g) Always work across the face of slopes, never up and down.
- h) Do not operate the machine on steep slopes.
- i) Maintain operating position and stability by properly grasping and supporting the handle.
- j) Use extreme caution when reversing or pulling the machine towards you.
- k) Stop the tines if the machine has to be tilted for transportation. Do not operate the tines when crossing surfaces other than grass, and when transporting the machine to and from the working area.
- l) Never operate the machine with defective guards, or without safety devices, for example deflectors and/or catchers, in place.
- m) Switch on the motor carefully according to instructions and with feet well away from the tine(s).
- n) Do not tilt the machine when switching on the motor, except if the machine has to be tilted for starting. In this case, do not tilt it more than absolutely necessary and lift only the part which is away from the operator.
- o) Do not switch on the motor when standing in front of the discharge opening.
- p) Do not put hands or feet near or under rotating parts. Keep clear of the discharge opening at all times.
- q) Never pick up or carry a machine while the motor is running.
- r) If the machine becomes clogged, shut-off the power source and disconnect the plug from the power supply before cleaning debris.
- s) Keep the air vents clean of debris and other accumulations to prevent damage to the power source or possible fire.

- t) If the cutting mechanism strikes any foreign objects or if the machine should start making any unusual noise or vibration, immediately shut off the power source and allow the machine to stop. Disconnect the plug from the power supply and take the following steps before restarting and operating the machine:
- Inspect for damage;
 - Replace or repair any damaged parts;
 - Check for and tighten any loose parts.
- u) Stop the machine and disconnect the plug from the power supply. Make sure that all moving parts have come to a complete stop
- after striking a foreign object, and to inspect the machine for damage and make repairs before restarting and operating the machine;
 - if the machine starts to vibrate abnormally, and then to immediately inspect for damage, replace or repair any damaged parts and to check for and tighten any loose parts.

Maintenance and storage

- a) Disconnect the plug from the power supply before checking, cleaning or working on the machine and when it is not in use.
- b) Disconnect the plug from the power supply before carrying out maintenance or cleaning work.
- c) Improper maintenance will lead to malfunction/failure of the machine.
- d) Inspect and maintain the machine regularly. Keep all nuts, bolts and screws tight to be sure the machine is in safe working condition.
- e) Check the catcher frequently for wear or deterioration.
- f) Be careful during adjustment of the machine to prevent entrapment of the fingers between moving tines and fixed parts of the machine.
- g) Always allow the machine to cool before storing.
- h) Check the catcher frequently for wear or deterioration.
- i) When servicing the tines be aware that, even though the power source is switched off, the blades can still be moved.

- j) Wear strong work gloves when removing and re-assembling the tines.
- k) When the machine is stopped for servicing, inspection, or storage, or to change an accessory, shut off the power source, disconnect the plug from the power supply and make sure that all moving parts are come to a complete stop. Allow the machine to cool before making any inspections, adjustments, etc. Maintain the machine with care and keep it clean.
- l) Replace worn or damaged components in sets to preserve balance. Use only genuine replacement parts and accessories.
- m) When not in use, store the machine in a dry place out of the reach of children.
- n) Replace worn or damaged components in sets to preserve balance.
- o) If the replacement of the supply cord is necessary, this has to be done by the manufacturer or his agent in order to avoid a safety hazard.

Additional safety warnings for lawn scarifier

- a) Beware of sharp tines. Tines continue to rotate after the motor is switched off.
- b) Keep any cords away from the tines. The tines can cause damage to the cords and lead to contact with live parts.
- c) If the machine starts to vibrate abnormally, check it immediately. Excessive vibration can cause injury.
- d) Always ensure the machine is fully assembled before using it. Never attempt to use an incomplete machine or one fitted with an unauthorised modification.
- e) Do not overload the machine.
- f) Follow the maintenance and repair instructions for this machine. Never carry out any modifications to the machine. Information about maintenance and repair is provided in this user manual.

Health surveillance

All employees should be part of an employer's health surveillance scheme to help identify any vibration related diseases at an early stage, prevent disease progression and help employees stay in work.

Vibration and noise reduction

To reduce the impact of noise and vibration emission, limit the time of operation, use low-vibration and low-noise operating modes as well as wear personal protective equipment.

Take the following points into account to minimise the vibration and noise exposure risks:

1. Only use the machine as intended by its design and these instructions.
2. Ensure that the machine is in good condition and well maintained.
3. Use correct attachments for the machine and ensure they are in good condition.
4. Keep tight grip on the handles/grip surface.
5. Maintain this product in accordance with these instructions and keep it well lubricated (where appropriate).
6. Plan your work schedule to spread any high vibration tool use across a longer period of time.
7. Prolonged use of the product exposes the user to vibrations that can cause a range of conditions collectively known as hand-arm vibration syndrome (HAVS) e.g. fingers going white; as well as specific diseases such as carpal tunnel syndrome. To reduce this risk when using the product, always wear protective gloves and keep your hands warm.

Emergency

Familiarise yourself with the use of this product by means of this instruction manual. Memorise the safety directions and follow them to the letter. This will help to prevent risks and hazards.

1. **Always be alert when using this machine, so that you can recognise and handle risks early.** *Fast intervention can prevent serious injury and damage to property.*
2. **Switch off and disconnect from the power supply if there are malfunctions.** *Have the machine checked by a qualified professional and repaired, if necessary, before you operate it again.*

Residual risks

Even if you are operating this machine in accordance with all the safety requirements, potential risks of injury and damage remain. The following dangers can arise in connection with the structure and design of this machine:

1. Health defects resulting from vibration emission if the product is being used over long periods of time or not adequately managed and properly maintained.
2. Injuries and damage to property due to broken attachments or the sudden impact of hidden objects during use.
3. Danger of injury and property damage caused by flying objects.



WARNING! This machine produces an electromagnetic field during operation! This field may under some circumstances interfere with active or passive medical implants! To reduce the risk of serious or fatal injury, we recommend persons with medical implants to consult their doctor and the medical implant manufacturer before operating this machine!

Symbols

On the product, the rating label and within these instructions you will find among others the following symbols and abbreviations. Familiarise yourself with them to reduce hazards like personal injuries and damage to property.

V~	Volt, (alternating voltage)	Hz	Hertz
W	Watt	°C	Degree Celsius
/min or min ⁻¹	Per minute	g	Gram

kg	Kilogram	mm	Millimetre
cm	Centimetre	m	Metre
dB(A)	Decibel (A-rated)	m/s ²	Metres per second squared



Lock / to tighten or secure.



Unlock / to loosen.



Read the instruction manual.



Note / Remark.



Caution / Warning.

IPX4

Protection against solid foreign bodies as well as against splashed water from all directions.

yyWxx

Manufacturing date code; year of manufacturing (20yy) and week of manufacturing (Wxx).



Always wear hearing protection.



Always wear eye protection.



Wear a dust mask.



Wear protective gloves.



Wear protective, slip-resistant footwear.



Wear tight-fitted protective clothes.



Switch the machine off and disconnect the plug from the power supply before assembly, cleaning, adjustments, maintenance, storage and transportation.



This product is of protection class II. That means it is equipped with enhanced or double insulation.



Do not expose the machine to rain or wet conditions (moisture).



Beware of thrown objects - Keep bystanders away!

Objects thrown by the product could hit the user or other bystanders. Always ensure that other people and pets remain at a safe distance from the machine when it is in operation. In general, children must not come near the area where the product is.



Inspect the area where the machine is to be used and remove all objects which can be thrown by the machine.

If objects are hidden while operating, switch the motor off and remove the object.



Danger of rotating parts. Keep hands and feet away from the tines! Danger of injuries.



Disconnect the mains plug if the cord becomes damaged or entangled. **DO NOT TOUCH THE CORD BEFORE DISCONNECTING THE SUPPLY.**



Tines continues to rotate after the machine is switched off. Wait until all machine components have completely stopped before touching the machine.



Pay special attention when working on the tines!



Switch off the motor: Release the start lever (2).



Switch on the motor: Press down the lock-off button (1) and hold it in position, then engage the start lever (2).



Guaranteed sound power level value in 103 dB.



WEEE symbol. Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or local store for recycling advice.



The machine complies with the applicable European directives and an evaluation method of conformity for these directives was done.



UK Conformity Assessed.

Rating label explanation

Electric Raker & Scarifier : MSRP1800-3

M = Brand name (MAC Allister)
SR = Scarifier & Raker
P1800-3 = Rated Input (1800W)


TTB1800SR

TTB = Brand Name (Titan)
1800 = Rated Input (1800W)
SR = Scarifier Raker

EN Technical specifications

General :

- > **Rated voltage, frequency** : 230-240 V~, 50 Hz
- > **Rated power input** : 1800 W
- > **Rated no load speed n_0** : 3300 min⁻¹
- > **Scarifier drum** : 10 dual blades, Ø128 mm
- > **Raker drum** : 22 spring tines, Ø128 mm
- > **Working width** : 370 mm
- > **Working depth** : 5 levels
+10/-3/-6/-9/-12 mm

- > **Protection class** : II / 
- > **Degree of protection** : IPX4
- > **Grass catcher volume** : 45 l
- > **Weight** : approx. 14.5 kg
- > **Dimensions** : approx. 1180 x 650 x 900 mm

Sound values :

- > **Sound pressure level L_{pA}** : 87.6 dB(A)
- > **Uncertainty K_{pA}** : 3 dB(A)
- > **Sound power level L_{WA}** : 100.92 dB(A)
- > **Uncertainty K_{WA}** : 0.98 dB(A)
- > **Guaranteed sound power level L_{WA}** : 103 dB(A)

Hand arm vibration values :

- > **Vibration a_h** : 2.54 m/s²
- > **Uncertainty K** : 1.5 m/s²

The sound value(s) have been determined according to noise test code given in EN 62841-1 and EN IEC 62841-4-7, using the basic standards EN ISO 11094 and EN ISO 3744.

The sound intensity level for the operator may exceed 80 dB(A) and ear protection measures are necessary.

The declared total vibration value(s) and the declared noise emission value(s) have been measured in accordance with a standard test method and may be used for comparing one machine with another;

The declared total vibration value(s) and the declared noise emission value(s) may also be used in a preliminary assessment of exposure.



WARNING! The vibration and noise emissions during actual use of the machine can differ from the declared total value depending on the ways in which the machine is used;

The need to identify safety measures to protect the operator that are based on an estimation of exposure in the actual conditions of use (taking account of all parts of the operating cycle such as the times when the machine is switched off and when it is running).

EN Before you start

Unpacking

1. Unpack all parts and lay them on a flat, stable surface.
2. Remove all packing materials and shipping devices if applicable.
3. Make sure the delivery contents are complete and free of any damage. If you find that parts are missing or show damage do not use the product but contact your dealer. Using an incomplete or damaged product represents a hazard to people and property.
4. Ensure that you have all the accessories and tools needed for assembly and operation. This also includes suitable personal protective equipment.



WARNING! The product and the packaging are not children's toys! Children must not play with plastic bags, sheets and small parts! There is a danger of choking and suffocation!

You will need

(items not supplied)

Suitable personal protective equipment

(items supplied)

Grass catcher (17)
 Scarifier drum (20)
 Raker drum (25)
 Cable tie (27)



NOTE: The accessories required depend on the intended application. Ask your dealer for advice.

Assembly



WARNING! The machine must be fully assembled before operation! Do not use a machine that is only partly assembled or assembled with damaged parts!



Follow the assembly instructions step-by-step and use the pictures provided as a visual guide to easily assemble the machine!



Before using the machine, familiarise yourself with the operating features read the entire instruction manual paying particular attention to the safety rules and operating procedures.



Do not connect the machine to power supply before it is completely assembled.

Handle assembly

1. Put the machine on the ground. Fit the dial plates (7a) to the ends of the lower handle support (8) with the toothed sides facing inwards.
2. Align and pass the dial plate (7a) through the mounting bolt (8b) of the handle support (8) on both sides of lower handle bar (7) (Fig. 1, step 1).
3. Check the orientation of flanges (5b) and align their slots onto the lower handle bar (7) firstly, then attach the clamp lever (5) onto the mounting bolts (8b) (Fig. 1, step 2).
4. Secure the handle assembly by folding up the clamp lever (5) towards the lower handle bar (7). If clamp lever (5) cannot be folded, loosen it and fold again. If it is too loose, tighten it by turning the clamp lever (5) clockwise (Fig. 1, step 3).



NOTE: For first assembly, secure the lower handle bar (7) with the clamp lever (5) in one of the positions of the tilt adjustment mechanism by aligning the indicator (7b) with the indication line (8a) of handle support (8). Ensure the lower handle bar (7) is assembled on the same height level on both sides.

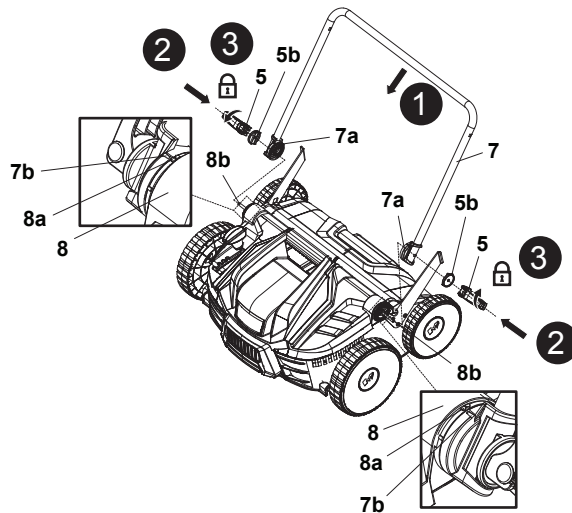


Fig. 1

5. Align the mounting holes of the middle handle bar (6) with the lower handle bar (7) and hold it in place, then pass the mounting bolt (5a) through the mounting holes (Fig. 2, step 1).
6. Check the orientation of flanges (5b) and align their slots onto one of the middle handle bars (6), then attach the clamp lever (5) onto the mounting bolt (5a) (Fig. 2, step 2).
7. Secure the handle assembly by folding up the clamp lever (5) towards the middle handle bars (6). If clamp lever (5) cannot be folded, loosen it and fold again. If it is too loose, tighten it by turning the clamp lever (5) clockwise (Fig. 2, step 3).
8. Repeat the same steps (5-7) to fix the other middle handle bar (6).
9. Slide the cord retainer (5c) on the upper handle bar (4) on the switch side (Fig. 2, step 4) and keep it in position, then align the mounting holes of the upper handle bar (4) with the two middle handle bars (6) and hold it in place, then pass the mounting bolt (5a) through the mounting holes (Fig. 2, step 5).
10. Make sure that the interconnection cord (18) runs on the upper side of the handle bars (4, 6, 7).
11. Check the orientation of flanges (5b) and align their slots onto the upper handle bar (4) firstly, then attach the clamp lever (5) onto the mounting bolt (5a) (Fig. 2, step 6).

- Secure the handle assembly by folding up the clamp lever (5) towards the upper handle bar (4). If clamp lever (5) cannot be folded, loosen it and fold again. If it is too loose, tighten it by turning the clamp lever (5) clockwise (Fig. 2, step 7).

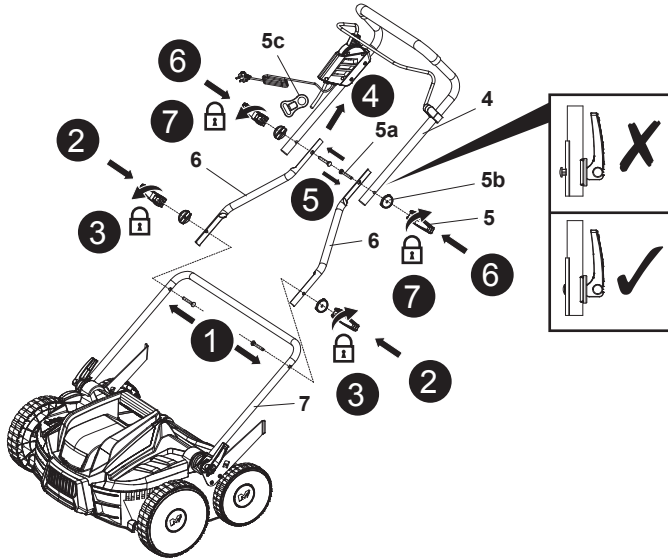


Fig. 2

WARNING! Make sure the clamp levers (5) are properly tightened before using the machine.

- Secure the interconnection cord (18) with two wire clips (19) (Fig. 3).

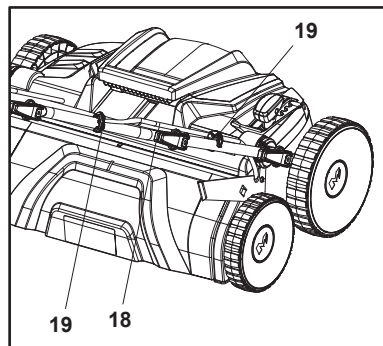


Fig. 3

Grass catcher

- Align and insert the steel frame (17b) into the Grass catcher (17) (Fig. 4).
- Clip the six rubber clips (17c) to the steel frame (17b) (Fig. 5).
- The Grass catcher (17) is ready for use.

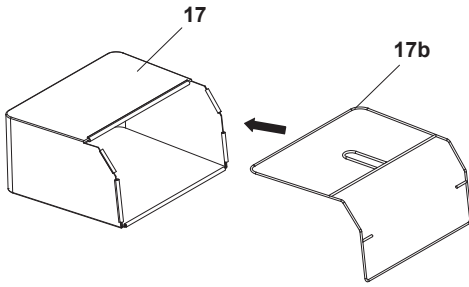


Fig. 4

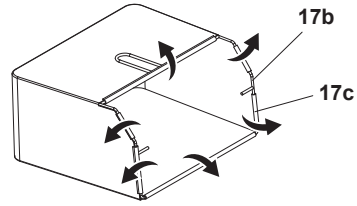


Fig. 5



WARNING! Do not attempt to use the machine without the Grass catcher attached - danger of flying objects!

4. Open the deflector guard (16) and hold it in position (Fig. 6, step 1).
5. Hold the Grass catcher (17) by its carry handle (17a).
6. Align the two hooks (17d) with the supports (21a) and hang the Grass catcher (17) onto it (Fig. 6, step 2).
7. Carefully release the deflector guard (16) afterwards.

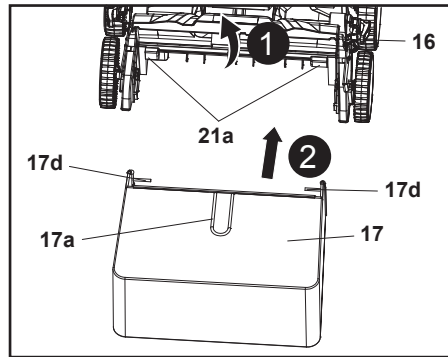


Fig. 6



NOTE: Always carry the Grass catcher (17) by its carry handle (17a).

Change / replace drums



WARNING! Wear safety gloves when working on the cutting tool and close to it! Use proper tools to remove debris, e. g. a wooden stick! Never use your bare hands!



Always use original spare parts for replacement. The attachment must be replaced by an approved spare from dealer or authorised repair agent. Do not attach any other type of attachment!

1. Turn the machine upside down to expose the cutting tool.
2. Disengage the locking lever (24) by pulling it upwards, then press down the locking button (23) and rotate the cutting tool holder (22) to release the cutting tool (Fig. 7, steps 1, 2, 3).
3. Pull the scarifier drum (pre-assembled) (20) out of the hub (Fig. 8), then remove it by pulling sideways.

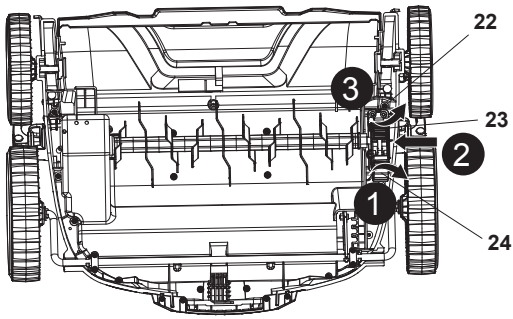


Fig. 7

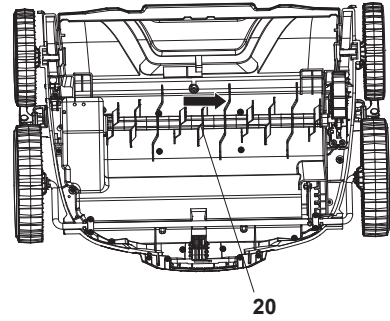


Fig. 8

4. Insert a new drum (20 / 25) (Fig. 9) by inserting its hex shaft (20a / 25a) into the hub.

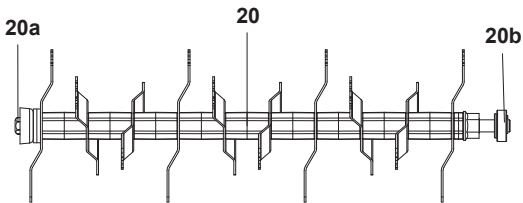


Fig. 9A: Scarifier drum (19)

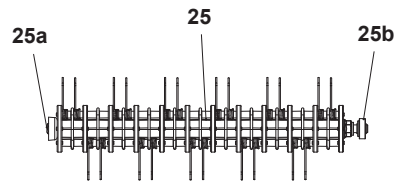


Fig. 9B: Raker drum (32)

5. Push the bearing (20b / 25b) of the drum into the slot of the cutting tool holder (22) and make sure it fits in place.
6. Press down the locking lever (24) to engage it with an audible click.
7. Make sure the drum (20 / 25) is correctly fixed and test if it can rotate freely by turning the drum by hand.

Connection to power supply

Only applicable for power cable length: Pigtail (EU), otherwise delete the below paragraph.

For safety reasons the product is equipped with a short power cord (26). Do not connect the product directly to the power supply using this power cord. A proper extension cord is required for operation. Observe the technical requirements for this product when purchasing an extension cord.



Note: For your safety, it is required that the plug attached to this product is always connected to an extension cord! The extension cord must be suitable for outdoor use with sockets protected against water splashing! Ensure the extension cord is of the proper size and type for your product ($\geq 1.0 \text{ mm}^2$)!

Always use a residual current supply (RCD, $\leq 30\text{mA}$) protected supply.

1. Double the extension cord back, about 40 cm from the end and lead the loop through the hole of the cord retainer (5c) (Fig. 10, step 1) and hang the loop over the hook.
2. Pull the extension cord over the cord retainer (5c) and gently tug on the cord to ensure that it is firmly secured (Fig. 10, step 2).
3. Connect the power cord (26) to the socket of the extension cord (Fig. 10, step 3).

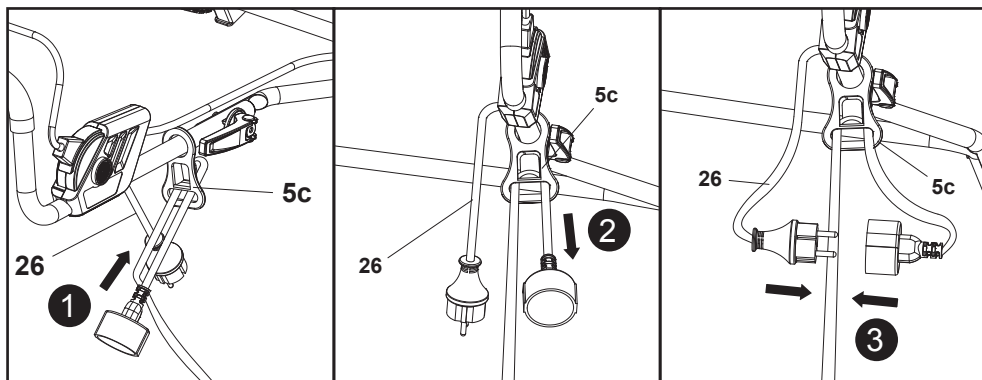


Fig. 10

4. Connect the plug of extension cord into a suitable socket.



WARNING! Check the voltage! The voltage must comply with the information on the rating label!

If using an extension cord it must be suitable for outdoor use with sockets protected against water splashing.

Ensure the extension cord is of the proper size and type for your product:

- 1.5 mm² for up to 60 m in length.
- 2.5 mm² for up to 100 m in length.

5. Your machine is now ready to be used.

EN Functions & Settings

Intended use

This 2 in 1 Raker & Scarifier is designated with a rated input of 1800 Watts.

Depending on the fitted attachment this machine is either intended for scarifying and removing thatch from lawns or for raking in domestic and hobby gardens.

When used as a scarifier with scarifier drum installed, this machine works by scratching through and between the grass with specially adapted prongs that collect and remove any unwanted parts from the lawn whilst leaving the grass stalk intact. At the same time the machine scarifies the ground resulting in a better airing.

When used as a raker with raker drum installed, the fine needles will scratch the surface of the lawn while simultaneously picking light debris for better oxygen absorption, airing and draining.

This machine is not to be used in wet weather conditions and may not be used to mow grass or for shredding leaves.

For safety reasons it is essential to read the entire instruction manual before first operation and to observe all the instructions therein.

This machine is intended for private domestic use only, not for any commercial trade use. It must not be used for any purposes other than those described.



NOTE: Thatch is a build-up of organic materials which can include dead grass or leaves, stems, rhizomes and overcrowded grass roots as well as lateral weed growth. It stifles the growth and health of the lawn. Removing thatch encourages the lawn to thicken up and makes it stronger and less susceptible to disease. Reducing the thatch level increases the levels of water, air and nutrients that can get through to the root zone of the grass plants.

Handle height adjustment



WARNING! Switch the machine off and wait that the cutting tool has come to a complete stop before adjusting the handle height !



Disconnect the plug from the power supply before adjusting the handle height!



To ensure safe operation the height adjustment of the handle bar is limited to the indicated positions! Do not attempt to adjust any other height!

Adjust the handle assembly to a suitable height according to your needs. There are two handle heights to choose.

1. Unfold and loosen the clamp levers (5) anticlockwise on both sides of the lower handle bar (7), but do not remove them (Fig. 11, step 1).
2. Hold and swing the handle assembly gently to the desired position by aligning the indicator (7b) with the indication line (8a) of handle support (8) (Fig. 11, step 2). Ensure the handle assembly is assembled at the same height level on both sides.
3. Secure the handle assembly by folding up the clamp lever (5) towards the lower handle bar (7). If clamp lever (5) cannot be folded, loosen it and fold again. If it is too loose, tighten it by turning the clamp lever (5) clockwise (Fig. 11, step 3).

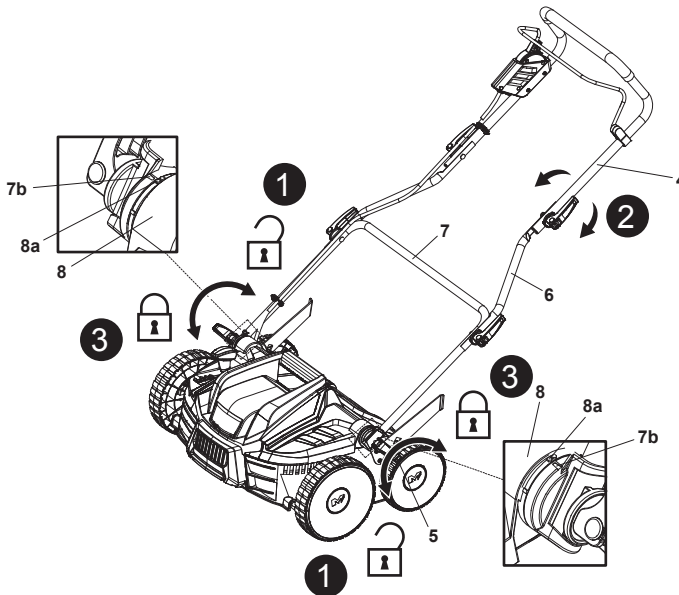


Fig. 11

Grass catcher



WARNING! Do not attempt to use the machine without the Grass catcher (17) attached - danger of flying objects!

1. Always attach the Grass catcher (17) when using the machine as described in the “Assembly -> Grass catcher” section.
2. Always carry the Grass catcher (17) by its carry handle (17a).

Emptying



WARNING: Switch the motor off and wait until the cutting tool has come to a complete stop before removing the Grass catcher (17)!



Disconnect the plug from the power supply before emptying the Grass catcher

Empty the Grass catcher (17) frequently during use. Do not wait until it is completely full. We recommend emptying when it is half full.



NOTE: A full Grass catcher (17) will reduce the performance of this machine.

1. Lift the rear deflector guard (16) and hold it in place.
2. Lift the Grass catcher hooks (17d) off the supports (21 a) and remove the Grass catcher (17).
3. Remove the grass clippings from the rear discharge opening into the Grass catcher (17). Use a proper tool such as a brush.



WARNING! Never use your hands or feet to remove grass clippings!

4. Remove the Grass catcher (17) by its carry handle (17a).
5. Empty the grass clippings onto a compost heap (17a).
6. Re-fit the Grass catcher (17) onto the machine and ensure the Grass catcher hooks (17d) to stay correctly onto the supports as described in the “Assembly - Grass catcher” section.

Working depth adjustment



WARNING! Switch the motor off and wait that the cutting tool has come to a complete stop before adjusting the working depth!



Disconnect the plug from the power supply before adjusting the cutting depth!

Adjust the working depth according to the needs of your lawn. The suitable depth depends on the kind of lawn and the actual height of the grass.

1. Push the depth adjustment lever (12) away from the front wheel (13) (Fig. 12, step 1), then move it forward or backward to the desired working depth (Fig. 12, step 2).
2. Release the depth adjustment lever (12) and ensure it engages into place properly. Never adjust to any other intermediate position (Fig. 12, step 3)!

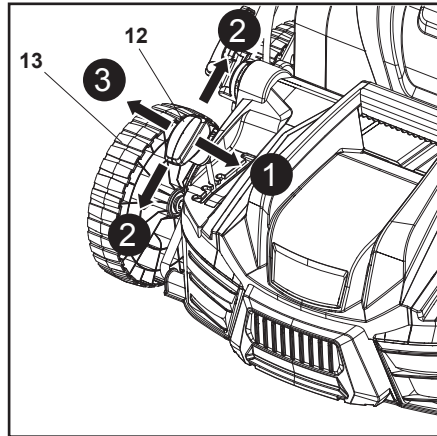


Fig. 12

Stage	Application
-12 mm	scarifying unkempt lawn, removing thick thatch layers
-9 mm	scarifying unkempt lawn, removing thick thatch layers
-6 mm	scarifying healthy lawn, removing thatch
-3 mm	scarifying young or sensitive lawn, removing thin thatch layers, also use this setting when scarifying a second time in autumn
+10 mm	for transportation and storage



WARNING! Ensure that the depth adjustment lever (12) engages in the slot after each adjustment.

EN Operation

General operation

1. Check the machine, its power cord and plug as well as accessories for damage before each use. Do not use the machine if it is damaged or shows wear. Take care of any problem you find or have the machine checked by qualified specialist.
2. Double check that the accessories and tool attachments are properly fixed.
3. Always push the machine using the hand grip (3). Keep the handles dry to ensure safe operation.
4. Ensure that the air vents are always unobstructed and clear. Clean them if necessary with a soft brush. Blocked air vents may lead to overheating and damage the machine.
5. Switch the machine off immediately if you are disturbed while working by other people entering the working area. Always let the machine come to complete stop before putting it down.
6. Do not overwork yourself. Take regular breaks to ensure you can concentrate on the work and have full control over the machine.
7. Before switching the machine on, check whether it has been assembled correctly and all the moving parts are running smoothly! Always test the correct function of the residual current device (RCD) before starting to operate your product.
8. While working, ensure that the product does not strike hard objects, as this can cause damage.

Starting/Stopping



Warning! Before starting, put the machine on a flat surface free of high grass!
Clean the underside of the deck!

Start the motor carefully according to instructions. Keep your feet well away from the cutting tool!

Do not tilt the machine when starting the motor.

Starting



NOTE: The machine can only be started by pressing the lock-off button (1) followed by pulling the start levers (2) towards the hand grip (3).

1. Set a suitable working depth as described in the "Function& Setting -> Working depth adjustment" section.
2. Connect the plug to power supply.
3. Stand behind the hand grip (3).
4. Press down the lock-off button (1) and hold it in position, then pull the start levers (2) towards the hand grip (3) (Fig. 13, steps 1, 2).
5. After the machine starts, release the lock-off button (1).
6. The machine starts moving forward and begins scarifying at the pre-set working depth.

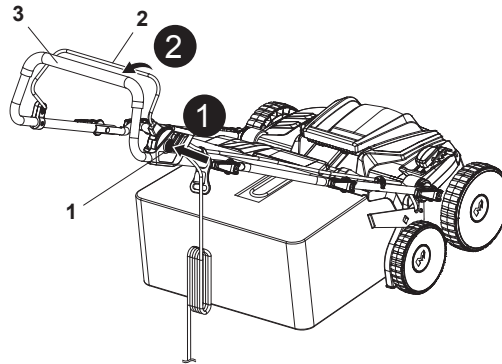


Fig. 13

Stopping

1. Release the start levers (2) to stop the machine (Fig. 14).
2. Disconnect the plug from the power supply.

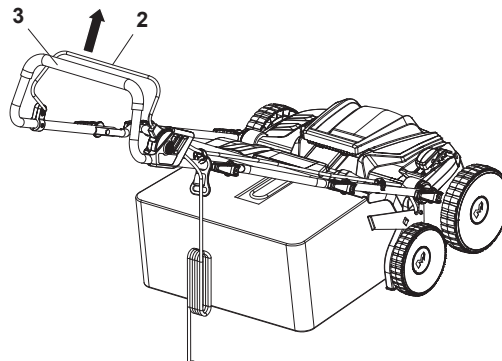


Fig. 14

Scarifying

1. Ensure that the scarifier drum (20) and Grass catcher (17) are correctly assembled.
2. Consider the weather when scarifying. Scarify the lawn with an increased depth setting during spring time between April and May, as the lawn is better able to recover during this season. During a wet summer scarify again in late summer with a decreased depth setting. Do not scarify during periods of hot weather condition. During a dry rainless summer do not scarify a second time in autumn.
3. Mow the lawn before scarifying and fertilise afterwards.
4. Make sure that the lawn is clear of stones, sticks, wire or other objects that could damage the product or its motor.
5. Do not scarify a wet lawn because it tends to stick to the underbody of the product, preventing the proper discharge of collected material, and it could also cause you to slip and fall.
6. Slowly push the product forward.
7. Scarify in slight overlapping rows. The most effective pattern for scarifying lawns is straight lines along one of the sides. This will keep the rows even and ensures that all the lawn is scarified without missing any spots (Fig. 15).

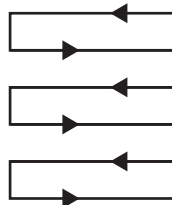


Fig. 15

8. Circle around flower beds. When reaching a flower bed in the middle of the lawn, make a row or two around the circumference of the bed.
9. Pay special attention when changing direction.
10. Empty the Grass catcher (17) regularly.



WARNING! If the machine strikes a foreign object stop immediately! Let the machine cool down and thoroughly inspect the machine for damage! Have any damage repaired before restarting!



Extensive vibration of the machine during operation is an indication of damage! Switch off the motor immediately. The machine should be promptly inspected and repaired!



Raking

In order that a healthy lawn can develop in the spring, it is necessary for greater amounts of air to penetrate the area around the roots of the grass. We recommend rake the lawn every 4 - 6 weeks depending on the state of your lawn.

Follow the same procedure for raking as described in "Operation->Scarifying" but the product is assembled with the raker drum (25).

After use

1. Switch the machine off, disconnect the plug from the power supply and let it cool down.
2. Check, clean and store the machine as described below.

The golden rules for care



WARNING! Always switch the machine off, disconnect the plug from the power supply and let the machine cool down before performing inspection, maintenance and cleaning work!

1. Keep the machine clean. Remove debris from it after each use and before storage.
2. Regular and proper cleaning will help ensure safe use and prolong the life of the machine.
3. Inspect the machine before each use for worn and damaged parts. Do not operate it if you find broken and worn parts.



WARNING! Only perform repairs and maintenance work according to these instructions! All further works must be performed by a qualified specialist!

General cleaning

1. Clean the machine with a damp cloth and pH-neutral soap. Use a brush for areas that are hard to reach.
2. In particular clean the air vents after every use with a cloth and brush.
3. Remove stubborn dust with high pressure air (max. 3 bar).



NOTE: Do not use chemical, alkaline, abrasive or other aggressive detergents or disinfectants to clean this product as they might be harmful to its surfaces.

4. Check for any damage and wear. Repair damages in accordance with this instruction manual or take it to an authorised service centre before using the machine again.

Maintenance

Before and after each use, check the product and accessories (or attachments) for wear and damage. If required, exchange them for new ones as described in this instruction manual. Observe the technical requirements.

Underbody and cutting tool



WARNING! Wear protective gloves when working on the cutting tool and close to it! Use proper tools to remove debris, e. g. a wooden stick! Never use your bare hands!

1. Keep the underbody and cutting tool clean and free of debris. Remove clippings from the rear discharge opening.
2. Check all nuts and bolts periodically for tightness before operation. After prolonged use, especially in sandy soil conditions, the cutting tool will become worn and lose some of the original shape. The cutting efficiency will be reduced and the cutting tool should be replaced.
3. Keep the cutting tool sharp to ensure a good cutting performance. Replace a worn or damaged cutting tool with a new one of the same type or have it sharpened by a qualified specialist.
4. Follow the same procedure for replacing the cutting tool as described in the "Assembly-> Change / replace drums" section.



NOTE: Replace this cutting tool after 50 hours working or 2 years whichever is sooner regardless of condition. If the cutting tool is cracked or damaged, you must immediately replace it with a new one.

5. Lubricate the cutting tool after each use to prolong the life span of cutting tool and machine. Apply light machine oil along the edge of the cutting tool.

Grass catcher

1. Inspect the Grass catcher (17) before each use. Do not use it if you find any damage.
2. Brush the inside and outside of the grass catcher (17) after each use and let it air dry before storage.

Interconnection cord

Check the performance of the interconnection cord (18) before each use. Ask a qualified specialist to adjust it if necessary.



WARNING! Do not use the machine with defective or loose wires!

Power cord

If the power cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a safety hazard.

UK plug (for UK only)

If you need to replace the fitted plug, then follow the instructions below.

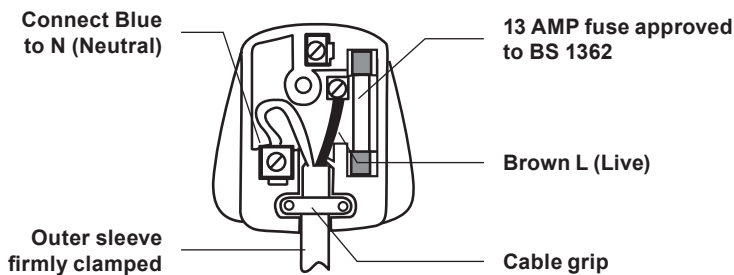


IMPORTANT: The wires in the mains lead are coloured in accordance with the following code:

Blue - Neutral

Brown - Live

As the colours of the wire in the mains lead of this product may not correspond with the coloured marking identifying the terminals in your plug, proceed as follows. The wire, which is coloured blue, must be connected to the terminal, which is marked with N or coloured black. The wire, which is coloured brown, must be connected to the terminal, which is marked L or coloured red.



WARNING! Never connect live or neutral wires to the earth terminal of the plug, which is marked with E.

Only fit an approved 13 Amp BS 1363 or BS 1363/A plug and correctly rated 13 Amp BS 1362 fuse. If in doubt, consult a qualified electrician.



NOTE: If a moulded plug is fitted and has to be removed take great care in disposing of the plug and severed cable, it must be destroyed to prevent engaging into a socket.

Spare parts/Replacement parts

The following parts of this product may be replaced by the consumer. Spare parts are available at an authorised dealer or through our customer service.

Description	Model or Specification Number
37cm Scarifier Drum	N/A
37cm Aerator Drum	N/A

Repair

This machine does not contain any parts that can be repaired by the consumer. Contact an authorised service centre or a similarly qualified person to have it checked and repaired.

Storage

1. Switch the machine off, disconnect the plug from the power supply.
2. Clean the machine as described above. Move the depth adjustment handle to the transport (+10mm) position.
3. Fold the handle assembly, locking the lower handle bar in the 3rd (storage) position and then fold the middle and top handle bars. Invert the machine and place it on the ground on the two stand brackets (15) to save storage space. Secure the handles with the supplied cable tie (27) to avoid opening of the handle assembly (Fig. 16).

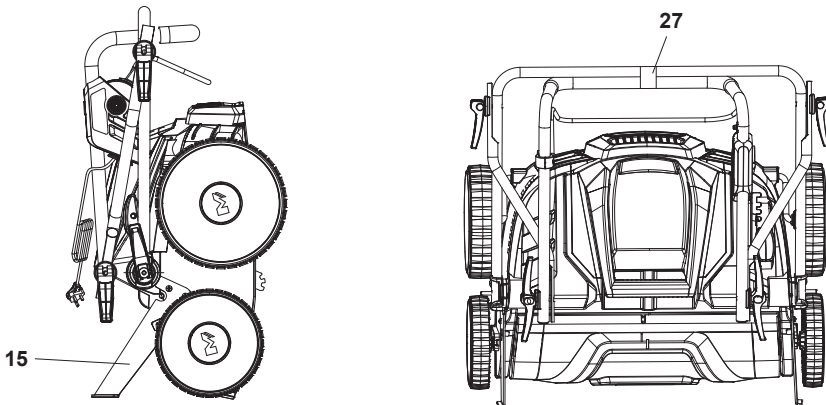


Fig. 16

4. Store the machine and its accessories in a dark, dry, frost-free, well-ventilated place.
5. Always store the machine in a place that is inaccessible to children. The ideal storage temperature is between 10 °C and 30 °C.
6. We recommend using the original package for storage or covering the machine with a suitable cloth or enclosure to protect it against dust.

Transportation

1. Switch the machine off, disconnect the plug from the power supply.
2. Move the depth adjustment lever (12) to the transport position (+10mm) as described in the “Functions & Settings -> Working depth adjustment” section.
3. Attach transportation guards, if applicable.
4. Always carry the machine by its transport handle (9).
5. Protect the machine from any heavy impact or strong vibrations which may occur during transportation in vehicles.
6. Secure the machine to prevent it from slipping or falling over.

Troubleshooting

Suspected malfunctions are often due to causes that the users can fix themselves. Therefore check the product using this section. In most cases the problem can be solved quickly.



WARNING! Only perform the steps described within these instructions! All further inspection, maintenance and repair work must be performed by an authorised service centre or a similarly qualified specialist if you cannot solve the problem yourself!

Problem	Possible cause	Solution
1. Product does not start	1.1. Not connected to power supply	1.1. Connect to power supply
	1.2. Power cord or plug is defective	1.2. Check by a specialist electrician
	1.3. The motor is not switched on	1.3. Switch on the motor
	1.4. Other electrical defect to the product	1.4. Check by a specialist electrician
2. Product does not reach full power	2.1. Extension cord not suitable for operation with this product	2.1. Use a suitable extension cord
	2.2. Power source (e. g. generator) has too low voltage	2.2. Connect to another power source
	2.3. Air vents are blocked	2.3. Clean the air vents
	2.4. Grass catcher is full	2.4. Empty Grass catcher
3. Unsatisfactory result	3.1. Cutting tool is dull / damaged	3.1. Replace with a new one
	3.2. Cutting material exceeds capacity	3.2. Only cut materials according to the capacity.
4. Product suddenly stops	4.1. Cutting tool is blocked	4.1. Remove the blockage
	4.2. Cutting depth is incorrect	4.2. Adjust the cutting depth
5. Excessive vibration or noise	5.1. Cutting tool is dull / damaged	5.1. Replace with a new one
	5.2. Cutting material exceeds capacity	5.2. Only cut materials according to the capacity.
	5.3. Cutting depth is incorrect	5.3. Adjust the cutting depth
	5.4. Bolts / nuts are loose	5.4. Tighten bolts / nuts

Recycling and disposal



Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or local store for recycling advice.

For further information visit www.recycle-more.co.uk.

The product comes in a package that protects it against damage during shipping. Keep the package until you are sure that all parts have been delivered and the product is working properly. Recycle the package afterwards.

EN Guarantee

We take special care to select high quality materials and use manufacturing techniques that allow us to create products incorporating design and durability. This product has a manufacturer's guarantee of 2 years against manufacturing defects, from the date of purchase (if bought in store) or date of delivery (if bought online), at no additional cost for normal (non-professional or commercial) household use.

To make a claim under this guarantee, you must present your proof of purchase (such as a sales receipt, purchase invoice or other evidence admissible under applicable law), please keep your proof of purchase in a safe place. For this guarantee to apply, the product you purchased must be new, it will not apply to second hand or display products. Unless stated otherwise by applicable law, any replacement product issued under this guarantee will only be guaranteed until expiry of the original period guarantee period.

This guarantee covers product failures and malfunctions provided the product was used for the purpose for which it is intended and subject to installation, cleaning, care and maintenance in accordance with the information contained in these terms and conditions, in the user manual and standard practice, provided that standard practice does not conflict with the user manual.

This guarantee does not cover defects and damage caused by normal wear and tear or damage that could be the result of improper use, faulty installation or assembly, neglect, accident, misuse, or modification of the product. Unless stated otherwise by applicable law, this guarantee will not cover, in any case, ancillary costs (shipping, movement, costs of uninstalling and reinstalling, labour etc), or direct and indirect damage.

This guarantee does not cover defects and damage caused by or resulting from:

- Normal wear and tear
- Overload, misuse or neglect
- Repairs attempted by anyone other than an authorised agent
- Cosmetic damage
- Damage caused by foreign objects, substances or accidents
- Accidental damage or modification
- Failure to follow manufacturer's guidelines
- Loss of use of the goods

If the product is defective, we will, within a reasonable time, repair, replace or provide spare parts.

Rights under this guarantee are enforceable in the country in which you purchased this product. Guarantee related queries should be addressed to the store you purchased this product from.

The guarantee is in addition to and does not affect your statutory rights.





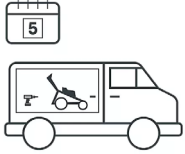
**IMPORTANT - RETAIN THIS INFORMATION
FOR FUTURE REFERENCE:
READ CAREFULLY**

Customer care and technical helpline

A better way to repair your tools

Kingfisher takes special care in creating high-quality garden power tools that are designed to last. But if a fault develops with your garden power tool and you need to claim under the guarantee, the Customer Care and Technical Helpline can support with technical assistance or if required, arrange a free courier collection from your home, assess your garden power tool for fault, repair it, and return it.

Deciding to repair your product rather than buying a replacement and adding to the mountain of waste is a more sustainable choice and you will be doing your bit for the environment.

How does it work?				
				
Step 1	Step 2	Step 3	Step 4	Step 5
Find your proof of purchase and get in touch with the Customer Care and Technical Helpline.	Chat to them about the problem with your tool.	They will provide technical and user advice or alternatively arrange a courier collection from your home.*	The team will assess and test and if necessary, repair your product back to full working order.	Your repaired tool will be returned to you via courier within 5 working days*.

Get in touch

If you need help or more information, please contact the Customer Care and Technical Helpline:

UK: 0800 0789647

Eire: 1800 932226

Opening hours are Monday – Friday, 8am-5pm

Availability of spare parts

Contact the customer service helpline for assistance or visit www.kingfisherspares.com

For assistance contact the customer services helpline:

UK 0800 0789647 uk@Kingfisherservice.com

EIRE 1800 932226 eire@kingfisherservice.com

Further information about this product can also be found at:

www.kingfisher.com/products

Manufacturer:

UK Manufacturer:

Kingfisher International Products Limited,
1 Paddington Square, London, W2 1GG,
United Kingdom

EU Manufacturer:

Kingfisher International Products B.V.
Rapenburgerstraat 175E
1011 VM Amsterdam
The Netherlands

EN www.diy.com
www.screwfix.com
www.screwfix.ie

**To view instruction manuals online,
visit www.kingfisher.com/products**