



S500 PRO

EN **User manual** *(Translation of the original manual)*

AERATOR-SCARIFIER



Read the instructions in the user manual.
Become familiar with the operation and controls of the machine.

DE **Benutzerhandbuch** *(Übersetzung der Originalbetriebsanleitung)*

BELÜFTER-VERTIKUTIERER



Die Anweisungen im Benutzerhandbuch durchlesen.
Sich mit den Funktionen und Bedienelementen der Maschine vertraut machen.

FR **Manuel d'utilisation** *(Notice originale)*

AÉRATEUR - SCARIFICATEUR



Lire les instructions du manuel utilisateur.
Se familiariser avec le fonctionnement et les commandes de la machine.

ES **Manual de uso** *(Traducción del manual original)*

AIREADOR - ESCARIFICADOR



Leer las instrucciones del manual del usuario.
Familiarizarse con el funcionamiento y los mandos de la máquina.

IT **Manuale di istruzioni** *(Traduzione delle istruzioni originali)*

AERATORE-SCARIFICATORE



Leggere le istruzioni contenute nel manuale per l'utente.
Informarsi sul funzionamento e sui comandi della macchina.

NL **Gebruikshandleiding** *(Vertaling van de originele handleiding)*

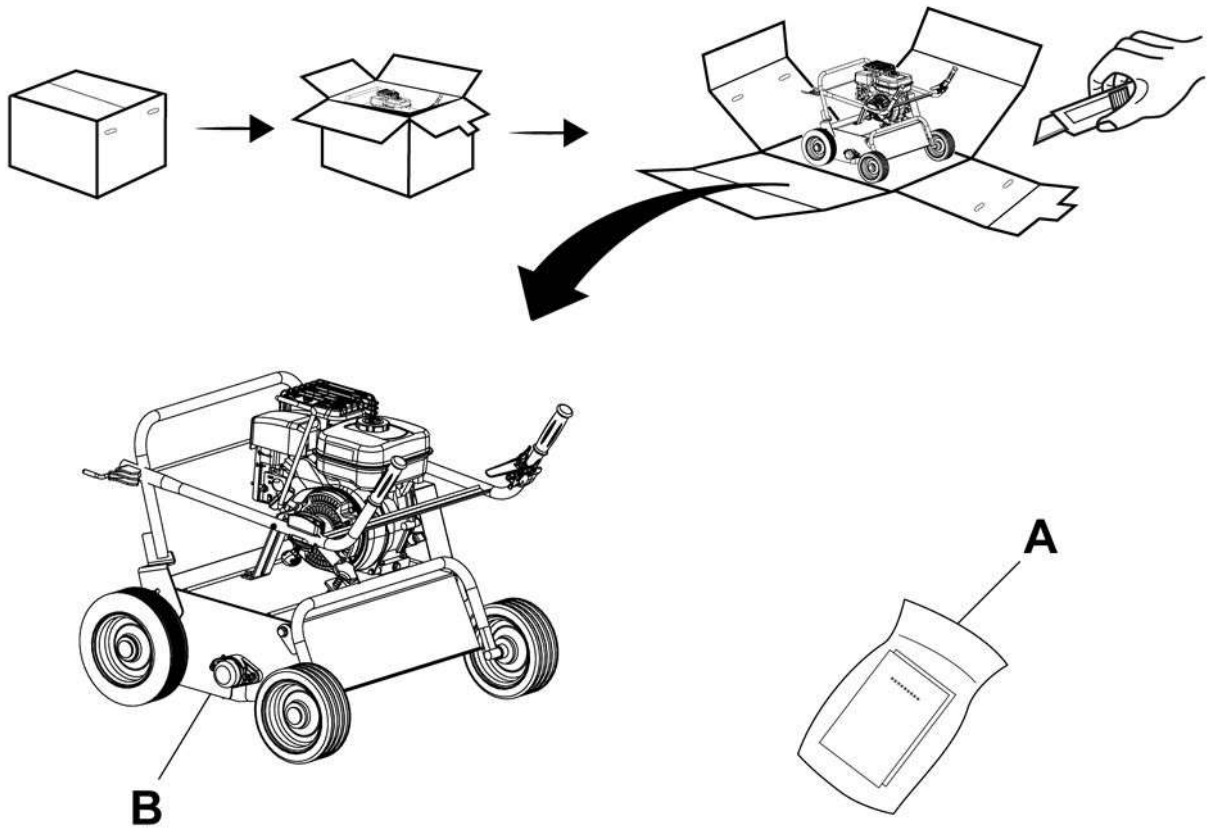
BELUCHTER-VERTICUTEERMACHINE



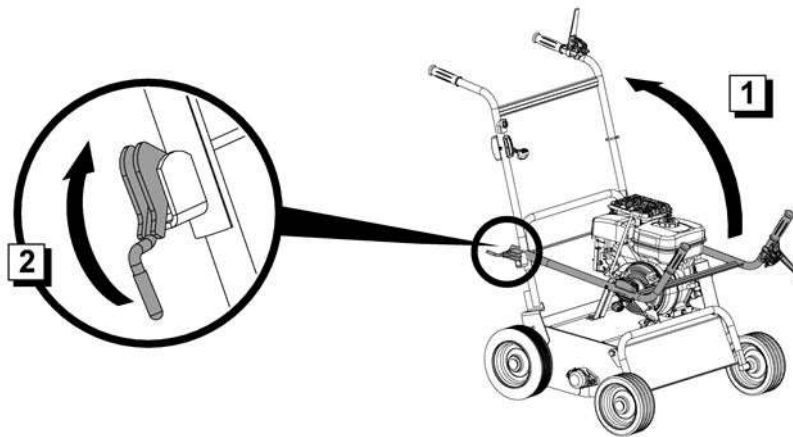
Lees de instructies van de gebruikershandleiding.
Maak u vertrouwd met de werking en de bedieningselementen van de machine.



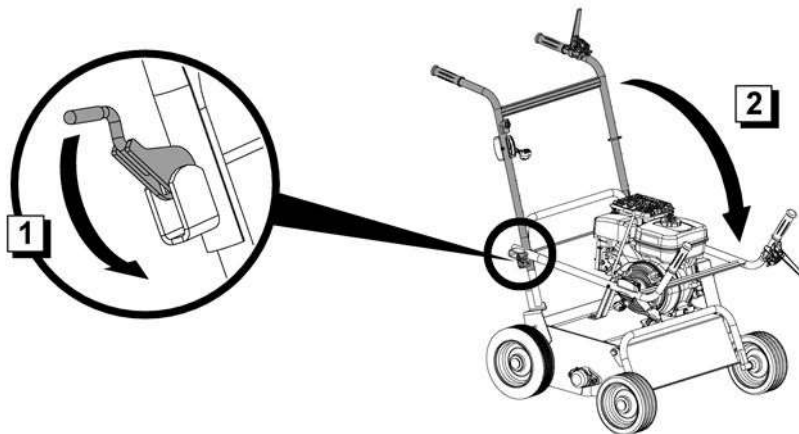
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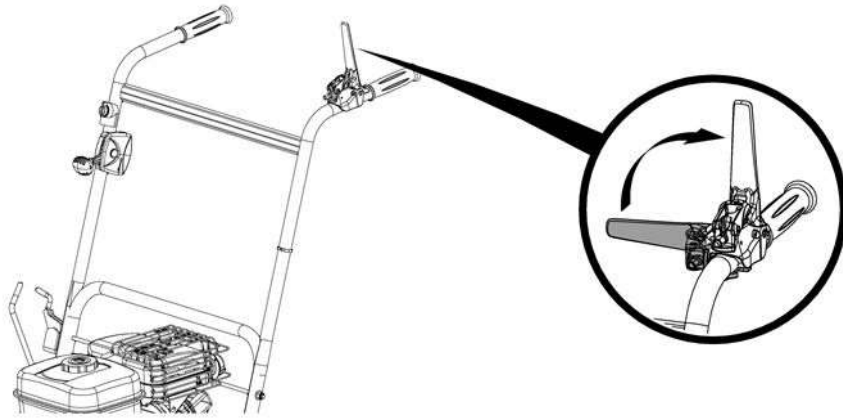


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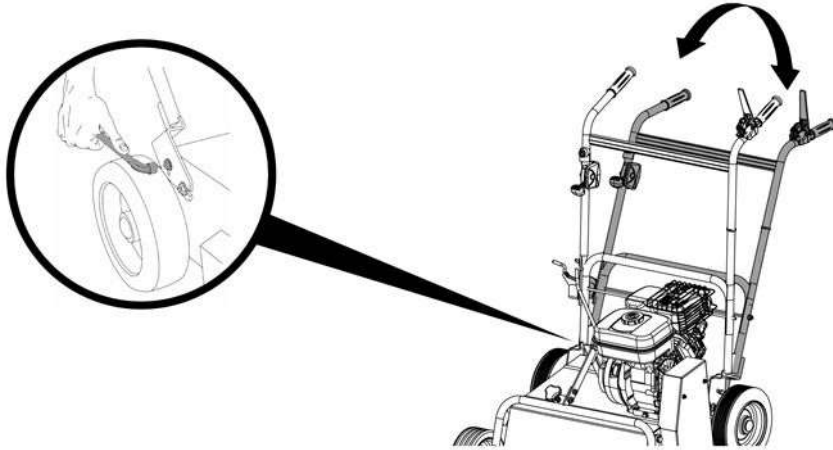




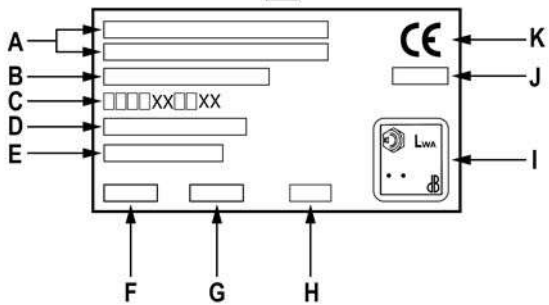
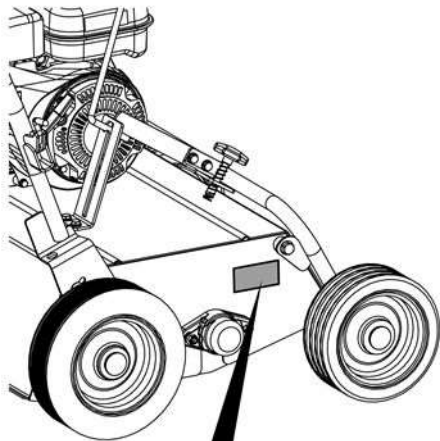
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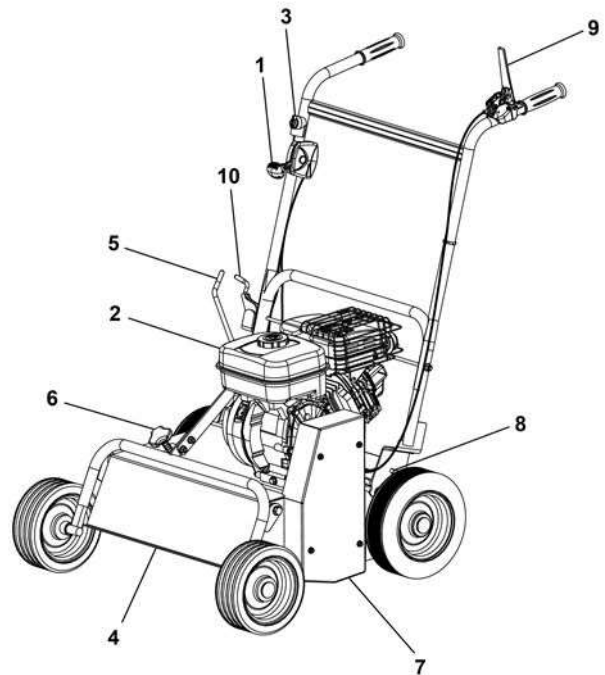
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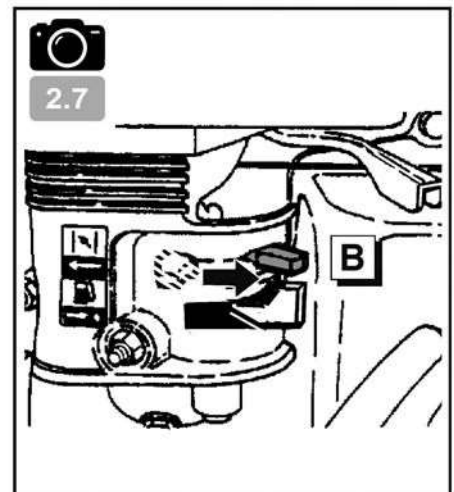
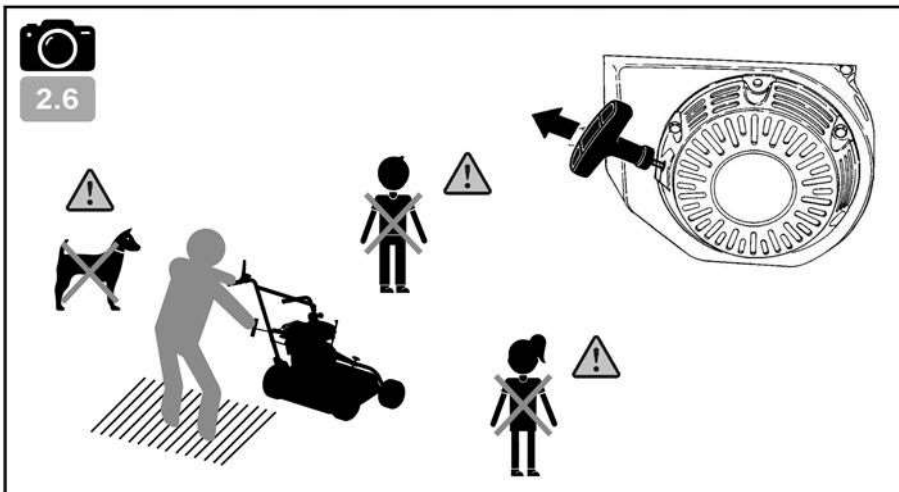
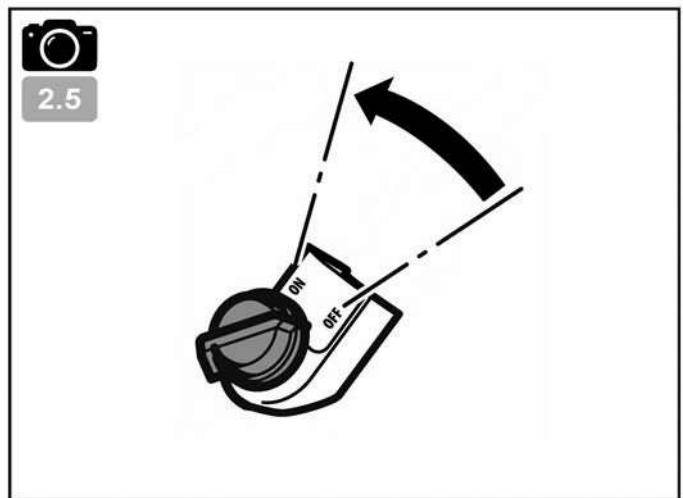
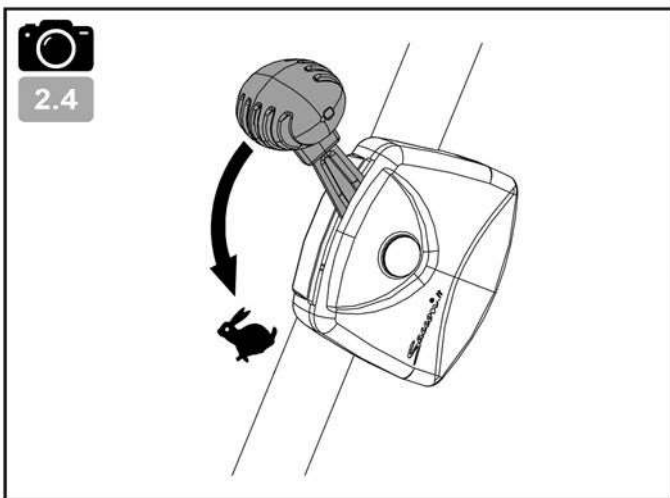
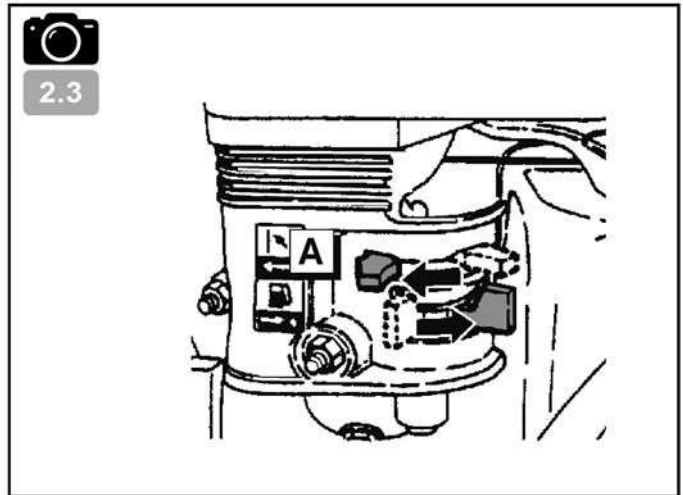
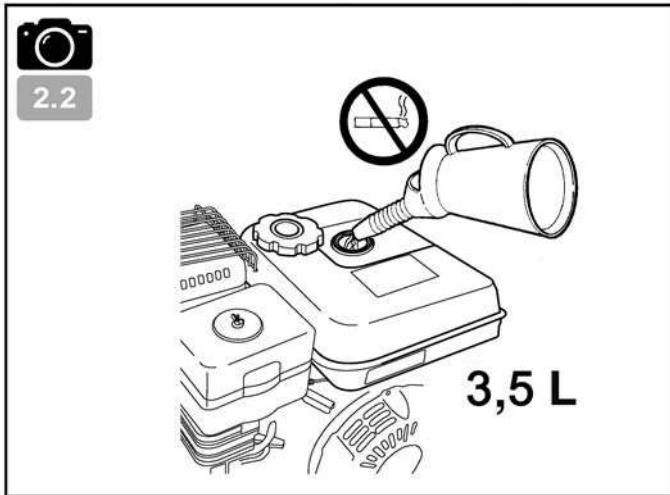
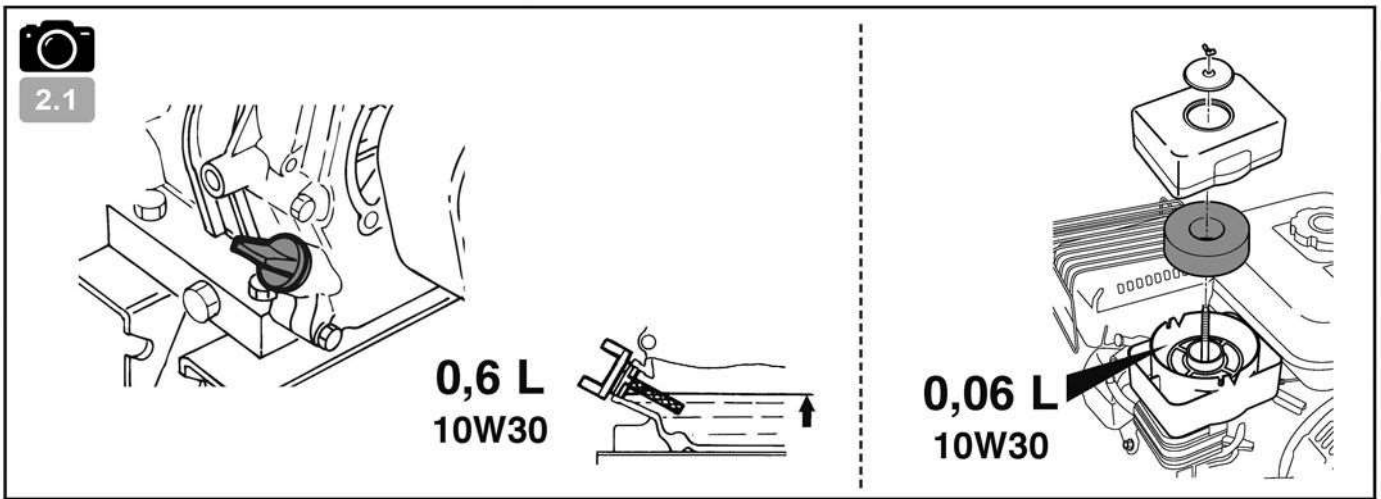


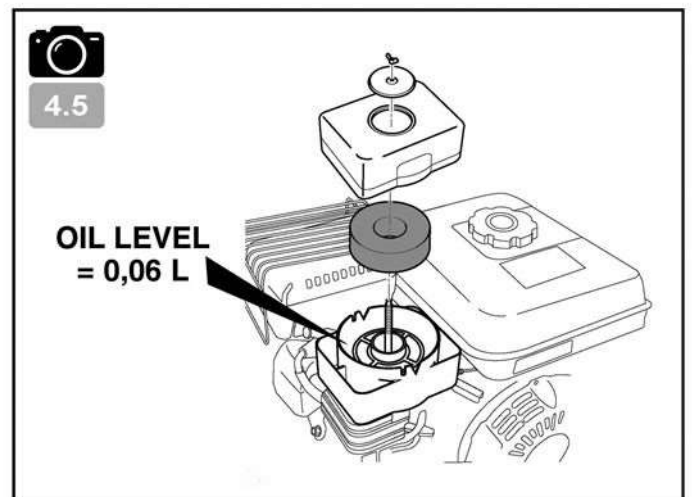
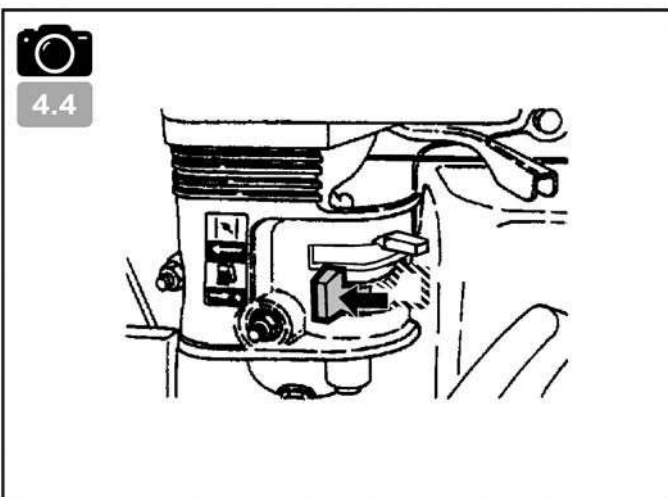
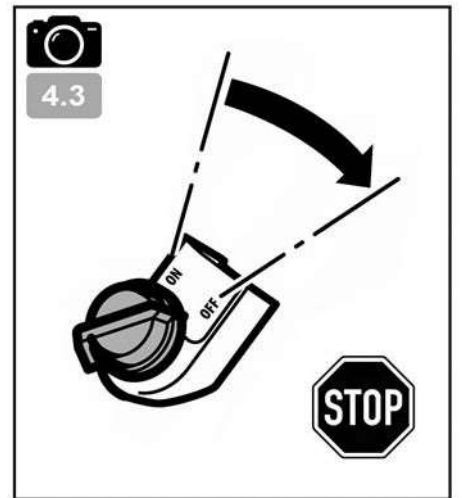
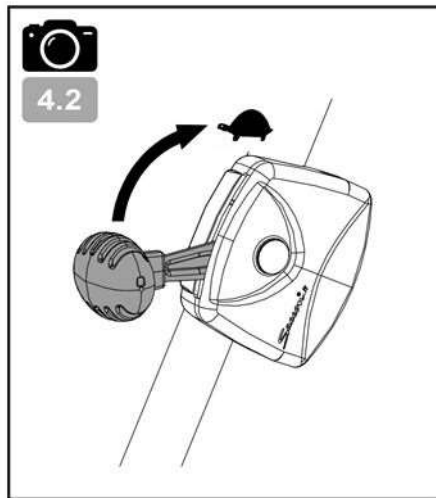
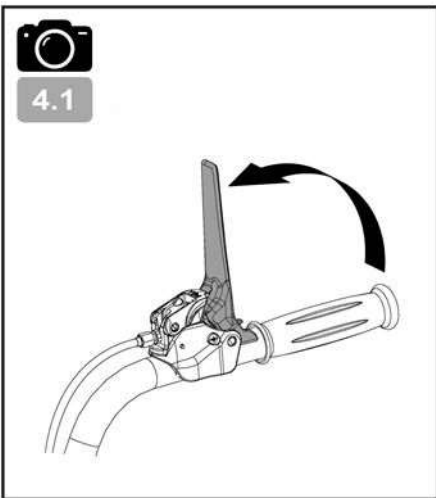
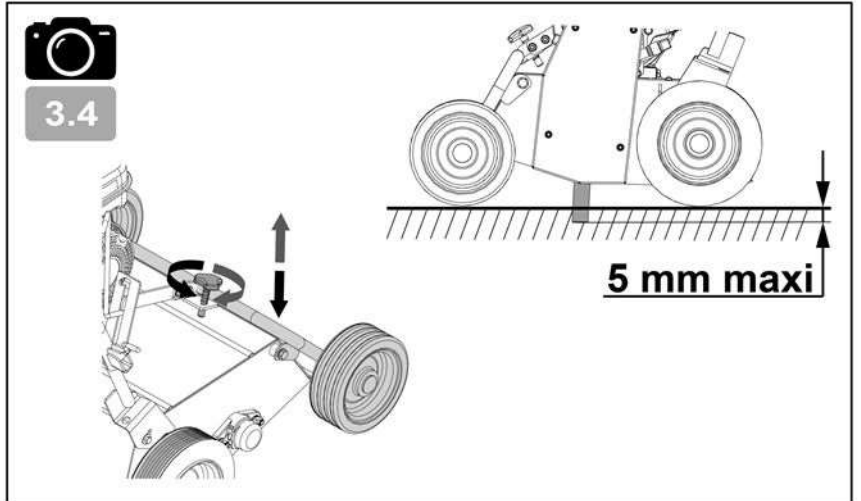
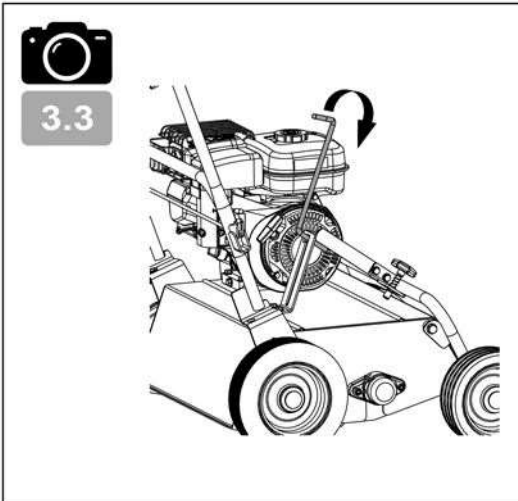
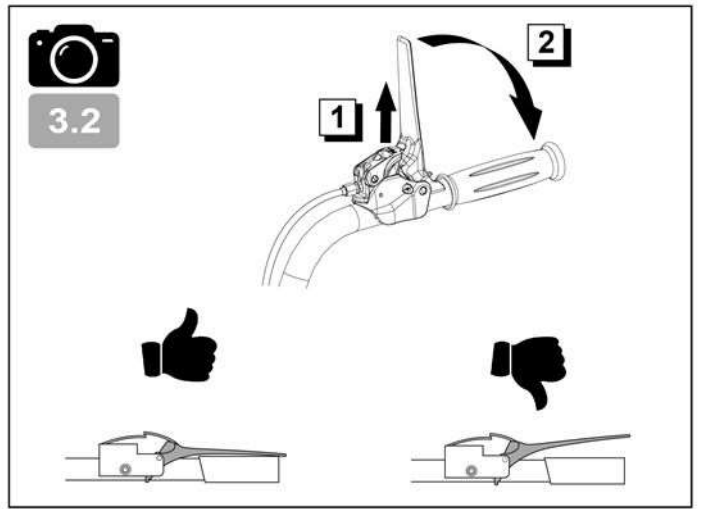
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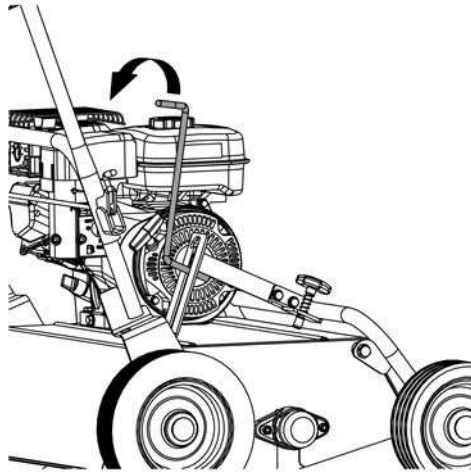




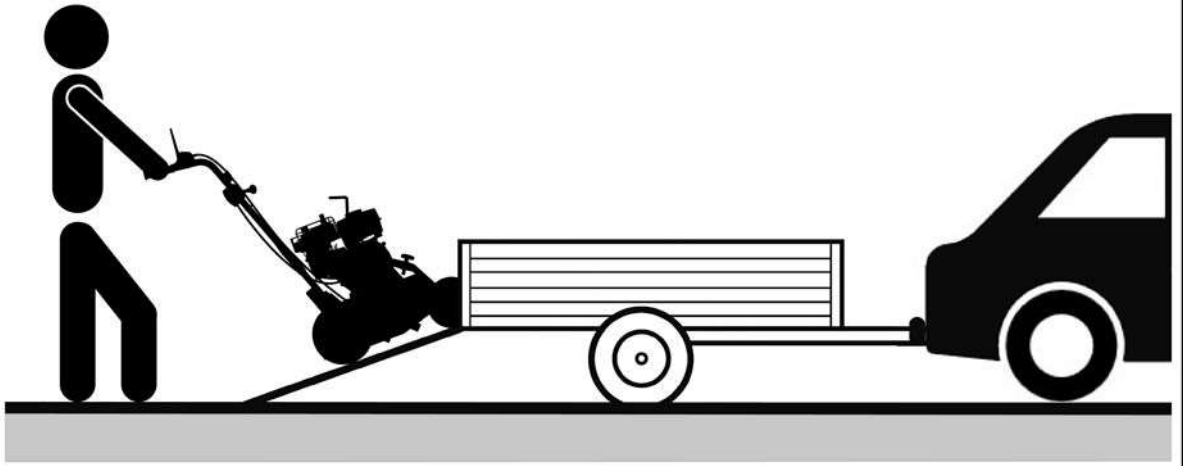




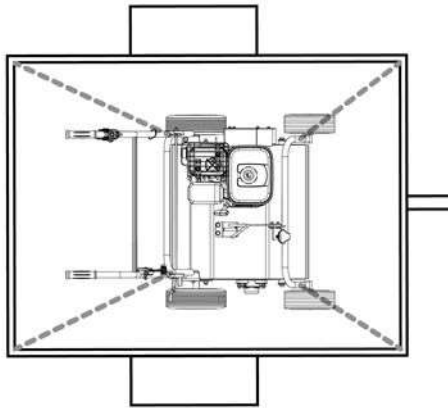
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5.2



5.3



Pay close attention to indications preceded by the following statements:

**CAUTION:**

Indicates a high probability of serious physical injury or danger of death if the instructions are not followed

PRECAUTION: Indicates a possibility of physical injury or damage to the equipment if the instructions are not followed

NOTE: Provides useful information



This symbol warns you to be careful during certain operations

**CAUTION:**

The machine is designed to provide safe and reliable service when used according to the Instructions. Please read and memorise the content of this manual before you use your machine. If you do not, you will risk injury and the equipment may be damaged

If a problem occurs, or if you have any questions about the scarifier, please contact an approved dealer

Training / Information:

- Familiarise yourself with the correct use and commands before you use the machine. Be sure that you know how to stop the engine quickly.
- The machine must always be used according to the recommendations indicated in the instruction manual.
- Remember that the user is responsible for any accidents or dangerous reactions occurring to other people or their belongings. It is their responsibility to assess the potential risks in the land to be worked and to take all the necessary precautions to guarantee their safety, in particular on slopes or on rough, slippery or loose ground.
- Never let children or people who are unfamiliar with these instructions use the machine. A minimum user age may be set by local regulations.
- Do not use the machine after taking any medicines or substances considered as potentially harmful to your reflexes and vigilance.
- When using the machine, wear the appropriate protective gear, in particular safety boots, long trousers, goggles and ear protectors. Do not use the machine if you are barefoot or wearing sandals.
- This machine is designed for re-generating lawns by cutting vertically into the lawn face using tines which rotate about a horizontal axis.

Preparation:

- Carefully inspect the area where the machine is to be used and remove all objects which may be projected by the machine (stones, wires, glass, metal objects, etc.).
- Before each use, always perform a visual inspection of the machine to make sure that the blades and/or flails and their attachments and deflectors are not worn or damaged. Have worn or damaged parts replaced by an authorised repair technician before using the machine again.
- If the machine has an engine stop button, keep the engine stop electrical cables in good condition to ensure that the engine will stop. Check that there are no fluid leaks (petrol, oil, etc.).
- Do not use the machine without mudguard or protective covers and make sure that all the attachment mechanisms are fully tightened.
- Never work if there is anyone, in particular children or animals, within a 20-metre radius around the machine; the user must stay at the commands on the handlebars.
- Do not leave the scarifier unattended when the engine is running or when it is plugged in.

Caution-danger: petrol is highly flammable:

- Store the fuel in containers specially provided for the purpose. Fill up with fuel outdoors only and do not smoke during the operation.
- Never remove the cap from the petrol tank or add petrol when the engine is running or when it is hot.
- If petrol is spilled on the ground, do not try to start the engine but move the machine away from this area and avoid causing any fires until the petrol fumes have dissipated.
- Store the machine in a dry place. Never store the machine in premises where the petrol fumes may reach a flame, a spark or a high source of heat.
- Replace the caps of the fuel tank and the petrol can correctly.

- Limit the quantity of petrol in the tank to minimise splashing.
- Do not run the engine in a confined space where carbon monoxide fumes may build up.
- Carbon monoxide may be fatal. Make sure that the premises are well ventilated.

Use:

- Disengage all tooth-drive and traction mechanisms before starting the engine.
- Start the engine (internal combustion) or switch it on (electric motor) carefully, following the manufacturer's instructions and keeping your feet away from the tool(s).
- The electric scarifier is designed for use only on alternating current (mains) and connection, only on a power outlet. It has double insulation which avoids the need to connect it to earth (additional insulation between electrical and mechanical parts which isolates the external metal parts from the current).
- Always keep the electric cable away from the blade and always pay attention to where it is.
- Attach the extension cable to the hook on the upper part of the handlebar to protect it while working.
- Shut down the engine when the machine is unsupervised.
- Walk, never run with the machine.
- Pull the machine towards you or reverse the movement direction (if possible) with a great deal of care.
- Keep the safe distance in relation to the rotating tools, given by the handlebar length.
- Never put your hands or feet near or under rotating elements.
- In the event of:
 - abnormal vibration,
 - blocking,
 - clutching problem,
 - a collision with a foreign object,
 - damage to the engine shutdown cable (depending on the model),

Shut down the engine immediately (if the engine cable is cut, activate the starter command as described in § "starting the engine" to shut down the engine). Let the machine cool down. Disconnect the spark plug wire. For battery-powered machines, remove the ignition key and for electric machines, unplug from the power outlet. Inspect the machine and have the necessary repairs carried out by an authorised repair technician before using the machine again.

- Shut down the engine when the scarifier needs to be tilted to be moved, when crossing ground which is not a lawn and when you are transporting the machine to and from the working zone.
- Before removing a blockage or releasing the grass exit opening, shut down the engine and disconnect the spark plug wire. For battery-powered machines, remove the ignition key.
- Shut down the engine and wait until the blades are fully stopped before removing the bag or unblocking the chute.
- Only work in daylight or in good quality artificial light.
- Do not use the machine on slopes over 10° (17%).
- Work cross-wise on slopes, never ascending or descending.
- Never pull the machine towards you when scarifying.
- When working on a slope, do not stop or start abruptly. Slow down on slopes and tight turns to avoid losing your balance or loss of control. Be particularly careful when changing direction on slopes.
- Do not use the scarifier when it is raining and it must not get wet. Where possible avoid using the scarifier on wet grass.
- Do not tilt the scarifier when starting it up or when switching on the engine, except if the machine needs to be tilted to start. In this case, do not tilt it more than is absolutely necessary and only raise the section which is the furthest away from the operator.
- Under no circumstances should you tilt your machine to the side when the blades are turning, or try to stop the blades which must always stop on their own.
- Reduce the gas during the engine shutdown phase and if it has a fuel shut-off valve, cut off the fuel supply when you have finished aerating and scarifying.

Inspection / maintenance / storage:

- Before any inspection, cleaning, tool change (cutting blade), adjustment or maintenance operations on the machine, stop the internal combustion engine and disconnect the spark plug. For battery-powered machines, remove the ignition key.
- Shut down the engine, disconnect the spark plug and wear thick gloves when changing the tool(s).
- Always unplug the machine from any electrical distribution before cleaning, inspecting or adjusting any part, or when the power cable is damaged or tangled. If an object strikes the blade, release the switch lever immediately, unplug your machine from the mains and when the blade is stationary, you can start a check-up to look for any damage.

- Keep all nuts and screws tight to guarantee safe usage conditions.
- Check regularly that the bag is not worn or damaged.
- To reduce fire risk, keep the engine, the silencer and the fuel storage area free of plants, waste oil, or any other inflammable material.
- If the exhaust silencer is defective, have it replaced by an approved repairer.
- Do not repair the parts. Have the parts replaced with original parts. Have parts replaced by an authorised repair technician before using the machine again.
- Replace the cutting blades in complete sets to keep them balanced.
- For your safety, do not modify your machine's characteristics. Do not modify the engine speed regulation settings and do not use the engine in overspeed. Regular maintenance is essential to guarantee safety and maintain performance.
- Let the engine cool down before you store the machine inside premises.
- If the tank needs to be drained, it is recommended to do this outdoors. The drained fuel should be collected in a special container or disposed of with the greatest care.
- Do not use a damaged extension cord. Install a new complete cable. Do not make any repairs, either permanent or temporary.

Movement / Handling / Transport:

- For the electric scarifier, always disconnect your machine from the power supply before lifting or transporting it. Do not lift it by the cable.
- The machine must only be moved in accordance with the instructions in the "Movement" section
- Handling: do not lift the machine on your own. The machine's weight is indicated on the manufacturer's plate and in this manual. The machine must be handled in accordance with the instructions in the "Handling" section.
- Stow the machine correctly for safe transport.
- The machine must be transported with the engine shut down and the spark plug disconnected using a trailer. Do not use any other method of transport.
- The machine must be loaded into and unloaded from a trailer using an adapted loading ramp.

PICTOGRAM DEFINITION

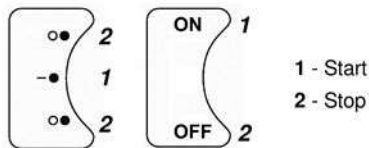


Rotating tools:
risk of limbs being cut



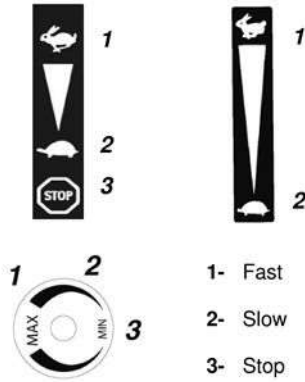
- 1- DANGER
- 2- Read the user manual.
- 3- Rotating blade: pay attention to ejected elements
- 4- Respect the safe distances
- 5- Rotating tools: do not approach the discharge opening
- 6- Rotating tools: risk of limbs being cut
- 7- Disconnect the spark plug connector before maintenance
- 8- Do not start the engine without topping up the oil level
- 9- Disconnect the electrical plug before maintenance
- 10- Keep the flexible power cable away from the teeth

**Circuit breaker
(according to motor)**



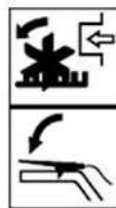
1 - Start
2 - Stop

**Gas command
(according to motor)**

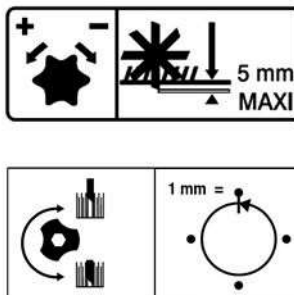


1- Fast
2- Slow
3- Stop

Clutching



Working depth adjustment



Do not touch hot surfaces



The exhaust gases are dangerous
Do not use in a poorly-ventilated area



Switch the engine off before filling up



Do not smoke
or use any flames



Wear ear protectors



Pictograms that may or may not be present depending on the machine model

TECHNICAL INFORMATION

Machine model	S500 PRO		
Weight	66 kg	Engine model	R210BH
Net power *	4.2 KW for an engine rate		3600 rpm
Nominal power	4 KW for a nominal engine rate		3300 rpm
Guaranteed acoustic power level	<i>2000/14/CE: mai 2000</i>		99 dB(A)
Acoustic pressure level at driving position			87.7 dB(A)
<i>NF EN13684 : 2018</i>	Measurement uncertainty	1 dB(A)	
Measured acoustic power level			97.9 dB(A)
<i>2000/14/CE: mai 2000</i>	Measurement uncertainty	1 dB(A)	
Level of vibrations on the operator's hands			4.7 m/s ²
<i>NF EN13684 : 2018</i>	Measurement uncertainty	2 m/s ²	

* The engine power indicated in this document is a net power obtained by the test on a series engine according to standard SAE J 1349 at a given rotation speed. The power of another production engine may be different from this indicated value. The actual power of an engine installed on a machine will depend on different factors, such as the rotation speed, the temperature, humidity, atmospheric pressure, maintenance and other conditions.

EU Stage V emission compliance	
	WARNING: Any change to the engine voids the EU type-approval of this product
Approval no.:	E9 2016 1628 2017 656SYA1 P 1035 01
CO ₂ (g/Kw-hr):	932.85


In accordance with the provisions of Article 43 2016/1628, the manufacturer provides you with the measured CO₂ value which was determined during the EU type-approval process: this CO₂ measurement results from testing over a fixed test cycle under laboratory conditions a(n) (parent) engine representative of the engine type (engine family) and shall not imply or express any guarantee of the performance of a particular engine.

NOTE: with permanent improvement in mind, the manufacturer specifies that all of this manual is not contractually-binding and reserves the right to modify the specifications of their machines without notice.

 ← Unpacking

1.1

 **CAUTION:** Incorrect assembly of this scarifier may cause serious injury. Make sure that you follow all the instructions carefully

 **CAUTION:** Make sure that you do not cut the cables or scratch the machine's paintwork when cutting sharp edges from the body

Item	Case content
A	Scarifier
B	Manuals


* Depending on version

 ← Handlebar position when in use

1.2

 ← Handlebar position for storage

1.3

 ← Fitting the clutch lever

1.4

 ← Adjusting the handlebar

1.5

 Machine identification plate

1.6

- A – Manufacturer's name and address
- B – Type of machine
- C – Machine model
- D – Commercial name
- E – Serial number
- F – Nominal power
- G – Rated engine speed
- H – Weight in kilograms
- I – Guaranteed acoustic power level
- J – Year of manufacture
- K – CE identification

 ← Description of the elements

1.7

- 1- Accelerator control
- 2- Engine
- 3- On / off switch
- 4- Rotating blades
- 5- Blade lifting lever
- 6- Blade height adjustment knob
- 7- Belt cover
- 8- Handlebar adjuster
- 9- Blade clutch lever
- 10- Handlebar locking lever

* Depending on version



← Oil full and level

2.1



← Petrol full

2.2

Super or unleaded or SP95 E 10




← Open the fuel tap and set the starter to position A

2.3



← Accelerator


2.4

Set the lever to : 



← Circuit breaker


2.5

Set the circuit breaker to: **ON** /  **OFF**
(Depending on engine type)



← Pull the launcher handle

2.6

 Always remain inside the safety zone when the machine is starting up



← Set the starter to position B

2.7

USE

This machine is designed for re-generating lawns by cutting vertically into the lawn face using tines which rotate about a horizontal axis.

Before airing, cut the grass to a height of around 40 mm

Only use the scarifier when the lawn is dry, and at least once a year

The best period for airing is during any growth period.



← Forward movement

3.1



← Engaging the tool

3.2



← Position when in use

3.3



← Working depth adjustment



3.4

NOTE: Have the blades enter the soil over a depth of approximately 3 mm


STOPPING

EN

 ← **Tool shutdown**
4.1 Release the clutch handle


 ← **Reduce the gas**
4.2 Set the accelerator command to: 


 ← **Engine shutdown**
4.3 Set the circuit breaker to: **OFF** / ○ ●
(Depending on engine type)


 ← **Close the petrol tap**
4.4

DAILY CHECKS

Check the following points before you start the engine: - No loose or broken nuts and bolts
- No fuel or engine oil leaks
- Safety of the environment

 ← **Clean engine oil level**
2.1

 ← **Fuel level ok**
2.2

 ← **Air filter element cleanliness and oil level**
4.5 (Depending on engine type)



Do not use any flammable solvents to clean the air filter's foam element

MAINTENANCE PROGRAMME (to be carried out by an authorised workshop)

First month or 20 hours

- Change the engine oil
- Clean the air filter (1)

Every 3 months or 50 hours

- Change the engine oil

Every 6 months or 100 hours

- Clean the decanting bowl
- Clean the spark guard
- Clean the spark plug

Every year or 300 hours

- Change the spark plug
- Clean the fuel tank and the fuel filter
- Check – adjust the idling rate (2)
- Check – adjust the valve play (2)

After every 500 hours

- Clean the combustion chamber (2)

Every 2 years

- Check the fuel pipe (change if necessary) (2)

NOTE:

- (1) Maintain the air filter more frequently when it is used in dusty areas
- (2) These operations must be carried out by an authorised workshop, unless the user has the necessary tools and is mechanically qualified



5.1

← Position transporting



5.2

← Movement



Shut down the engine
Let the engine cool down
Disconnect the spark plug



5.3

← Stowing point