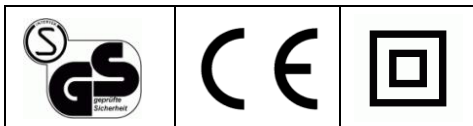


# COBRA

MODEL: SA32E (LS-S3201)

## COBRA SCARIFIER AERATOR OWNER'S MANUAL



**Cobra Garden Machinery**

Henton and Chattell Ltd., London Road, Nottingham NG2 3HW UK

[www.cobragarden.co.uk](http://www.cobragarden.co.uk)

# 1. Where to use your Electric Scarifier

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## Intended use

The SA32E is designed for aerating lawns and grass in private domestic gardens. It is not designed for use in public facilities, parks, sporting grounds, on roadsides, in agriculture or forestry.



### Please note

Attention! To prevent injury, the SA32E must not be used for trimming bushes, hedges and shrubs. In addition, the electric scarifier must not be used for levelling irregularities in the soil.

# 2. For Your Safety

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Please observe the notes on safety on the Electric Lawn Rake.



Warning!  
Read instruction  
handbook!



Sharp prongs can cause  
injury!  
Unplug from the mains  
before maintenance or  
if the mains lead is  
damaged.



Danger! Risk of injury!  
Keep bystanders  
Away!



Keep mains connection  
lead away from the scarifier.



## SAFETY INSTRUCTIONS



**Warning! Read these instructions carefully before operating this machine.**

Make sure that you are familiar with the controls and properly operate the machine. By following these instructions, you can reduce the risk of fire, electric shock and personal injury.

## GENERAL SAFETY INSTRUCTIONS

Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury! Save all warnings and instructions for future reference. The term "garden power tool" in the warnings refers to your mains-operated (corded) garden power tool or battery-operated (cordless) garden power tool!

- 1.This garden power tool is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or a lack of experience and knowledge. New users should be given supervision or instruction concerning the use of the garden power tool or given these instructions.
- 2.Children should not play with the garden power tool.
- 3.The garden power tool must be kept out of reach of children.
- 4.Store the instruction manual in a location accessible to all users of the garden power tool and always include the instruction manual when passing it on to other users.

5. Instruct inexperienced persons on the safe use of this garden power tool using this instruction manual.

## **IMPORTANT READ CAREFULLY BEFORE USE AND KEEP FOR FUTURE REFERENCE**

### **Training**

Read the instructions carefully. Be familiar with the controls and the proper use of the machine.

### **Preparation**

1. Never allow people unfamiliar with these instructions or children to use the product. Local regulations can restrict the age of the operator.
2. Never operate the product while people, especially children, or pets are nearby.
3. Keep in mind that the operator or user is responsible for accidents or hazards involving the powered garden tool that occur to other people or their property.
4. Wear ear protection and safety glasses at all times while operating this product.
5. Always wear substantial footwear and long trousers while operating the product. Do not operate the product when barefoot or wearing open sandals.

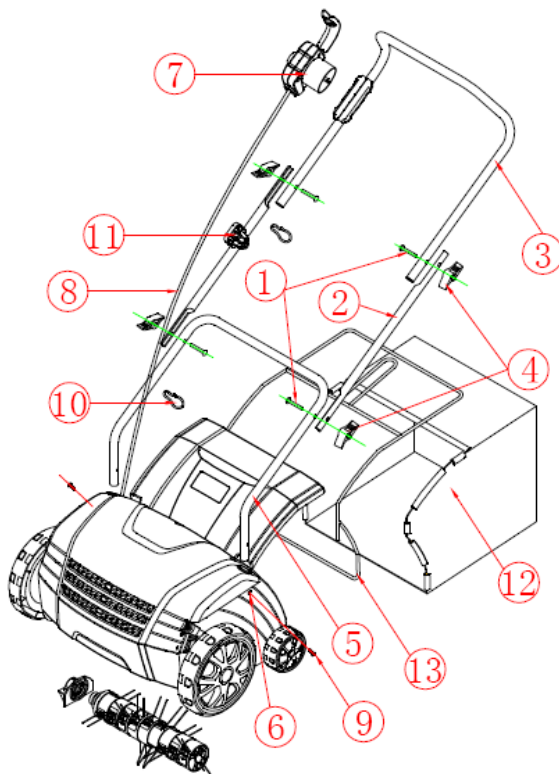
### **Checks before each use:**

1. Before using, always visually inspect to see that the tines, screws or bolts are not worn, loose or damaged. Replace worn or damaged tines and bolts in sets to preserve balance.
2. Thoroughly inspect the area where the product is to be used and remove all stones, sticks, wires, bones and other foreign objects.
3. Do not use the tool if the safety devices are inoperative or damaged, e.g. starter lever, safety interlock, rear flap or housing.
4. Keep hands and feet away from the aerator cylinder and the scarifier tines at all times.
5. Only operate the electric garden tool when visibility is good.
6. Whilst the motor is powered do not open the rear discharge flap or tip the machine to expose the blades or tines.
7. Take extra care when operating on slopes and even ground. When changing direction on slopes take additional care to avoid slips or falls.
8. Take extra care when walking backwards to avoid stumbling, slipping or falling.
9. Do not operate the scarifier when it is raining or in wet conditions.
10. Avoid using near the edge of pools and garden ponds.
11. Operate the powered garden tool at a walking pace only. Always ensure that you have secure foothold when working.
12. When leaving the machine unattended for any time, disconnect the mains power supply plug. Similarly, whilst transporting the powered tool from one work area to another disconnect the power and put the wear compensation lever in the transport position. See section 5.
13. If the scarifier comes into contact with stones, twigs, branches or other hard surfaces stop operation immediately. Disconnect the mains power, remove any obstructions and inspect the machine for damage. Do not operate the powered tool if it is damaged. Repair the machine before operating again.

**Electrical safety:**

1. Keep the scarifier and any extension cables away from the aerator cylinder and the scarifier tines to avoid damage to the cable.
2. Do not allow the machine or its connectors to become wet. Do not use whilst it is raining.
3. Be considerate to your neighbours when you operate the garden scarifier and abide by the local regulations regarding designated quiet times.
4. Regularly ensure that cables and connectors are not damaged and check for signs of wear and tear. Replace as required.
5. Disconnect the mains plug immediately if the cables, switches or connectors are damaged.
6. Only use suitable waterproof type connectors for external extension cables. Extension cables should meet the requirements of DIN VDE 0620 and have appropriate cable cross-sections for the application. Your local dealer will be able to recommend suitable outdoor extension cables.
7. Use a residual-current device with a rating of 30mA or less. Ask your local dealer for details.

### 3.Assembly



**Warning** fit the upper section of the upright with starting handle ③ in such a way that the plug ⑦ with the power cable ⑧ is on the right side (in the direction of movement) (see fig.)



1. Insert the two lower sections of the upright ⑤ (with the end with the round hole) in the mountings in the motor casing ⑥ and secure with the crosshead screws ⑨.

2. Insert the two locking bolts ① from outside the through the holes in the two central sections ② of the upright and secure to the lower sections of the upright ⑤ with two wing nuts ④.

3. Screw the upper part of the upright with starting handle ③ to the central sections of the upright ② with two more locking bolts ① and the wing nuts ④. This completes the assembly of the handle.

4. Attach connection cable ⑧ to the handle with the two cable clips ⑩.

5. Fit the fully assembled grass box to the scarifier.

a. Lift the rear deflector safety guard.

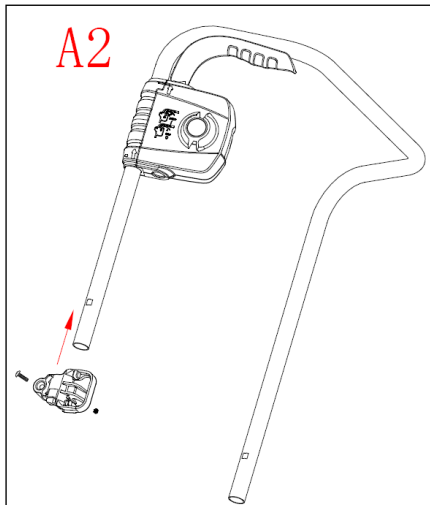
b. Make sure the discharge chute is clean free from debris

c. Locate fully assembled grass box ⑫, ⑬ onto location points at the rear of the deck as illustrated

d. Locate the safety flap onto the top of the grass box. Ensure the grass box is firmly located.

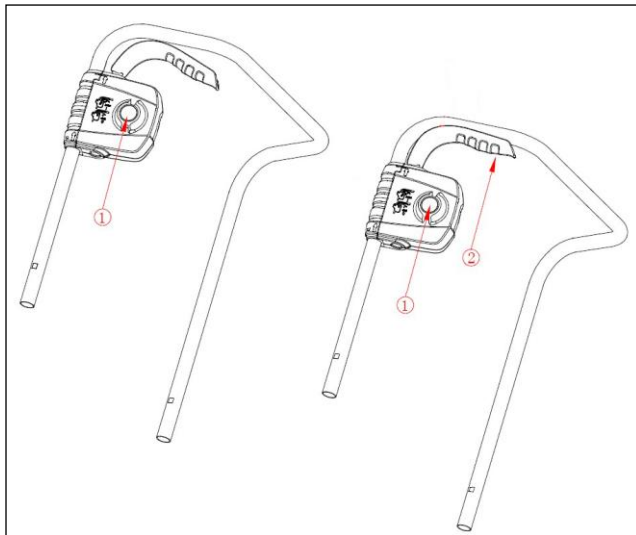
**Note:** The scarifier may be operated without the collector, ensure that the rear safety deflector guard is in the down position.

## 4.Operation



### Connect extension cable:

1. Attach the cable hook to the upper handle (A2)



### Starting and Stopping:

**Make sure the blade completely stops rotating before switching “on” again.  
Do not rapidly switch on and off.**

#### Starting:

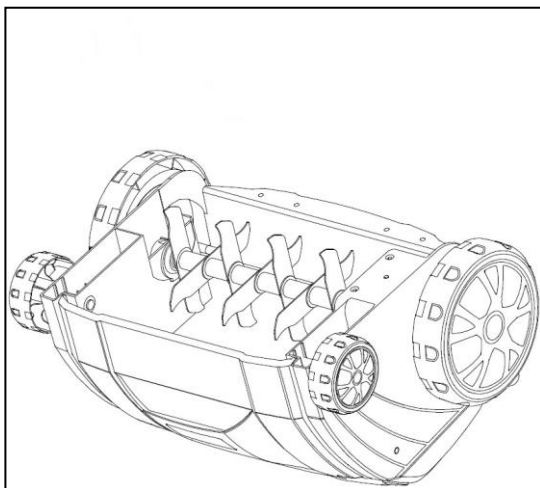
1. Press and hold the safety button ①
2. Squeeze the switch lever ② towards the main handle
3. Release the safety button ①

#### To Stop:

1. Stopping: Release the switch lever ②

## 5.Maintenance

### Cleaning the Aerator:



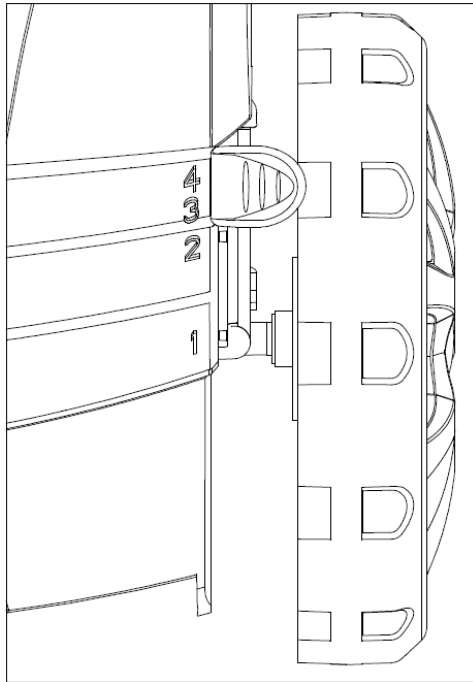
### Danger!

The aerator cylinder can cause injuries! Prior to maintenance unplug from the mains and wait until the Aerator drum has stopped. Wear working gloves for performing maintenance.

The Aerator should be cleaned after each time it is used. Remove grass and deposits from wheels, aerator cylinder and hosing.

### Risk of injury and physical damage!

**Do not clean Aerator under running water (particularly under high pressure ).  
Do not use hard or pointed objects for cleaning the Aerator.**



Note: Wear adjustment is not used for height adjustment. Adjustment of the aerator cylinder without visible wear can cause damage to the aerator cylinder or overload the motor.

### **Adjusting for wear:**

The Aerator is subject to wear in use due to the way in which it works. The more intensively the Aerator is used, the greater the wear on the knives.

Hard or very dry ground accelerates wear as does excessive use of the Aerator.

If the results of your work with the Aerator become increasingly worse due to knife wear, the aerator cylinder can be adjusted by selecting different positions on the lever.

### **The aerator cylinder has 4 adjustment positions:**

• **Transport position 1**

• **Aerating position 2**

• **Aerating position 3**

First adjustment position after knife wear (aerator cylinder lowered by 3 mm)

• **Aerating position 4 :**

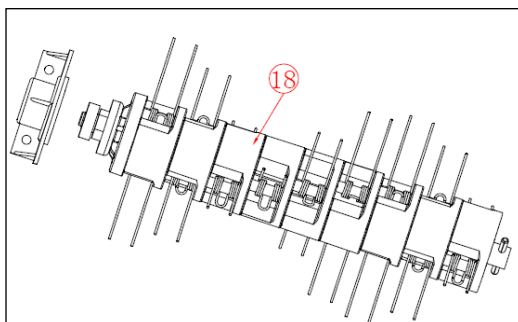
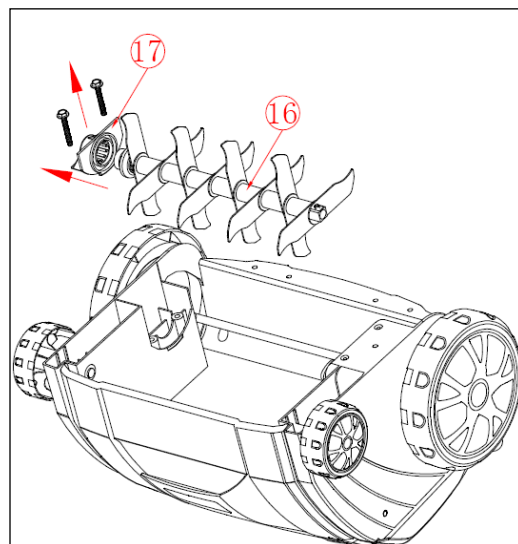
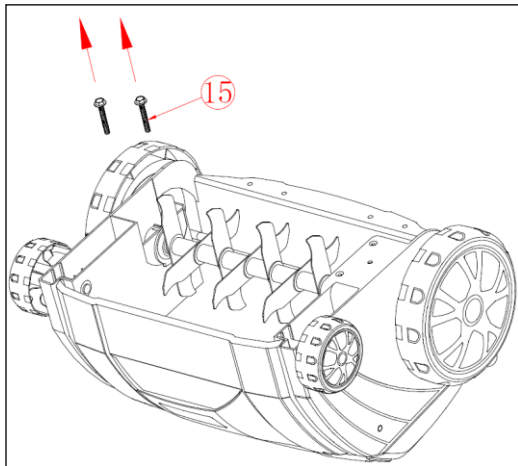
Second adjustment position after knife Wear


(aerator cylinder lowered by a further 3mm)

Push wear compensation lever gently away from the housing and move to the position required.

## 6. Trouble-shooting

### Replacing aerator cylinder:

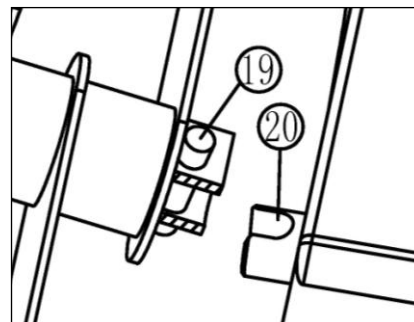


Danger! 

The aerator cylinder can cause injuries! Prior to rectifying faults, unplug from the mains and wait until the aerator cylinder has stopped. Wear working gloves when rectifying faults.

If the aerator cylinder is in wear adjustment position 3 and is worn, the aerator cylinder must be replaced.

1. Unscrew two screws ⑮ on the underside of the housing.
2. Lift the Scarifier blades cylinder ⑯ at an angle and pull away the drive shaft.
3. Remove the bearing shell ⑰ from the Scarifier blades cylinder ⑯
4. Push the bearing shell ⑰ on to the new Scarifier blades cylinder ⑯
5. Push the new aerator cylinder ⑰ on to the drive shaft in such a way that the pin ⑲ is inserted in the gap in the drive shaft ⑳
6. Screw the bearing shell ⑰ to the underside of the housing without tightening too much.
7. Replace the aerator cylinder with the scarifier cylinder ⑱ in the same way as above.



## 7 Using the SA32E

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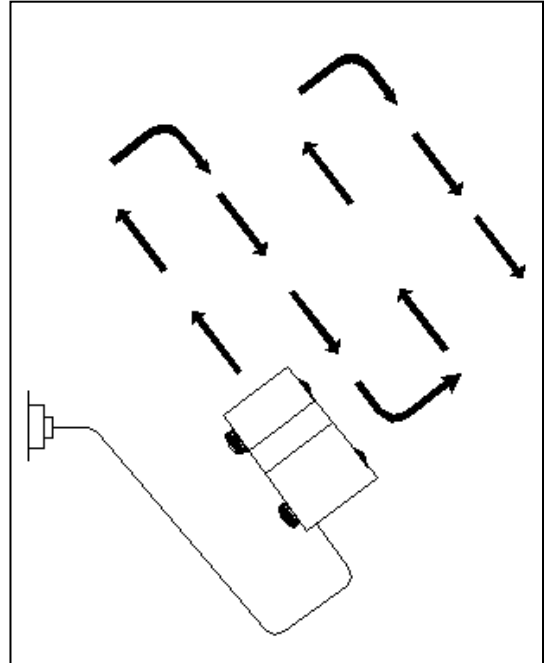
For operating convenience, it may be best to start scarifying at a point close to the power supply and to work away from the supply. Use the tool at a right angle from the power supply and place the power cable to side which has already been scarified.



**Warning:** When scarifying or aerating do not allow the motor to labour particularly in heavy conditions. When the motor labours the speed of the motor drops and you will hear a change in the motor sound, when this occurs stop operating, release the switch lever and raise the height of cut. Failure to do so could damage the machine.

NOTE: the motor is protected by a safety cut out which is activated when the blade becomes jammed or if the motor is overloaded. When this occurs, stop the machine and remove the plug from the power supply.

The safety cut out will only reset when the switch lever 10 is released. Clear any obstruction and wait for a few minutes for the safety cut out to reset before continuing to working. At this time do not operate the switch lever 10 as this will prolong the reset time of the safety cut out. If the mower cuts out again, increase the operating height to reduce the load on the motor.



## 8. Technical Data

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Electric Scarifier / Aerator	SA32E (LS-S3201)
Rated power	1400W
Operating width	32cm
Operating heights	+3/-3/-6/-9mm
Collector capacity	40L
Weight	10kg
Protection class	□ /IPX4
Working speed of the aerator cylinder	3900 ±5 %r/min
Sound power level	94dB(A)
Vibration	3.2m/s <sup>2</sup>

## 9. Warranty

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This product is warranted in accordance with legal regulations for a 24 month period effective from the date of purchase by the first user.

This product will not be covered if used in a commercial application.

This warranty covers all material or production failures, it does not include: defects from normal wear and tear, parts such as, bearings, brushes, cables, air cleaning elements, brake pad, clutch disc, tyre, wheel, recoil starter rope, belts, cutter blades, tines, plugs, lubricant oils and grease or accessories. Damage or defects resulting from abuse, accidents or alterations, natural fading of painted or plated surfaces, sheet peeling and other natural deterioration.

Any damage that occurs from the use of non-genuine Cobra parts will not be covered.

We reserve the right to reject any claim where the purchase cannot be verified or when it is clear that the product was not maintained properly. (Clean ventilation slots, carbon brushes and serviced regularly)

Expenses incidental to the warranty claim that are not covered;

-Compensation for loss of time, commercial loss or rental costs of substitute product.

-Costs incurred for transportation to and from the dealership.

Any damage that occurs from the following will not be covered; exposure of the product to smoke and soot, chemical agents, bird droppings or other animal waste, seawater, sea breeze, salt or other environmental phenomena.

Any damage resulting from operating methods other than those indicated in the owner's manual will not be covered.

Your purchase receipt must be kept as proof for date of purchase. Your un-dismantled product must be returned to your dealer in an acceptably clean state, accompanied by your proof of purchase.

### **Please Register Your Cobra**

If your dealer did not collect registration information from you, please take a few minutes and register your purchase with Cobra.

You can register by completing and mailing the registration card that should be in the box or by going online to:


[www.cobragarden.co.uk](http://www.cobragarden.co.uk) and clicking on Product Registration.

### **ENVIRONMENT**

Should your machine need replacement after an extended use, do not put it in the domestic waste but dispose of it in an environmentally safe way.

## 10. EC-Declaration of Conformity

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EC Declaration of Conformity	
We herewith declare,	Cobra Garden Machinery Henton & Chattell Ltd, London Road, Nottingham NG2 3HW UK
That the following machine complies with the appropriate basic safety and health requirements of the EC Directive based on its design and type, as brought into circulation by us.	
In case of alteration of the machine, not agreed upon by us, this declaration will lose its validity	
Machine Description:	Electric Powered Scarifier / Aerator
Machine Type:	SA32E (LS-S3201)
Power Rating	1400W
Operating Width:	320mm
Measured sound power level:	82dB(A)
Guaranteed sound power level:	94dB(A) Notified Body for EC Directive 2000/14/EC:0036 Intertek Testing Services Shanghai, Building No 86, 1198 Quinzhou Road(North), Shanghai 200233 China
Applicable EC Directives:	2006/42/EC      2004/108/EC 2000/14/EC      98/37/EC
Applicable Harmonized Standards:	EN 60335
Authorized Signature/Date/ Place:	 Peter J. Chaloner 01-10-2016
Title of Signatory:	Managing Director
Name and address of the person authorised to compile the technical file	Cobra Garden Machinery Henton & Chattell Ltd, London Road, Nottingham NG2 3HW UK