

SWARDMAN

EDWIN



USER MANUAL - Cylinder Lawn Mower



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Please read the User Manual from the first to the last page.

Warnings placed on the machine:



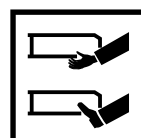
WARNING!



READ THE USER MANUAL!



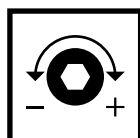
DANGER - FLYING OBJECTS!



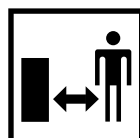
KEEP YOUR ARMS AND FEET AWAY FROM THE BLADES



DO NOT LIFT THE MACHINE USING THE HANDLE



LOCKING SCREW



KEEP BYSTANDERS AT A SAFE DISTANCE!



MAGNET



GUARANTEED NOISE LEVEL



- Read the User Manual before you start using the machine.
- Third parties must keep a sufficiently safe distance from the working area.
- For safety reasons, children and adolescents under 16 years of age and persons who have not read and understood this User Manual sufficiently are not allowed to work with this machine. To ensure that they do not play with the product, persons with limited physical or mental abilities are only allowed to use this product under the direct supervision of a competent person.

Read this User Manual carefully to understand thoroughly how to use and maintain your machine in a proper and safe manner. If you fail to do so, this may lead to personal injury or damage to the machine.

Always keep this User Manual available as an integral part of the machine, even if you sell the machine.

The left and right sides as referred to in this User Manual are meant from the perspective of the operator standing behind the machine in the direction of forward running.

Using the machine in any way contrary to this User Manual or failure to observe the operational and maintenance instructions may void the warranty.

The Swardman E 45S and E 55S model cylinder lawn mowers are exclusively designed for mowing lawns in private gardens and gardens around the house having the area less than 2,000 m² or for their being in operation for 100 running hours per year. The use for any other purpose is considered inconsistent with the intended purpose. The manufacturer does not assume any liability for injury or damage to the machine thereof, and these risks are unconditionally borne by the user. Strict observation of the conditions for operation, maintenance and repairs specified by the manufacturer is essential for the intended use of the machine.

This cylinder lawn mower should only be used, maintained and repaired by persons who are thoroughly familiar with its specific characteristics and all the relevant safety regulations.

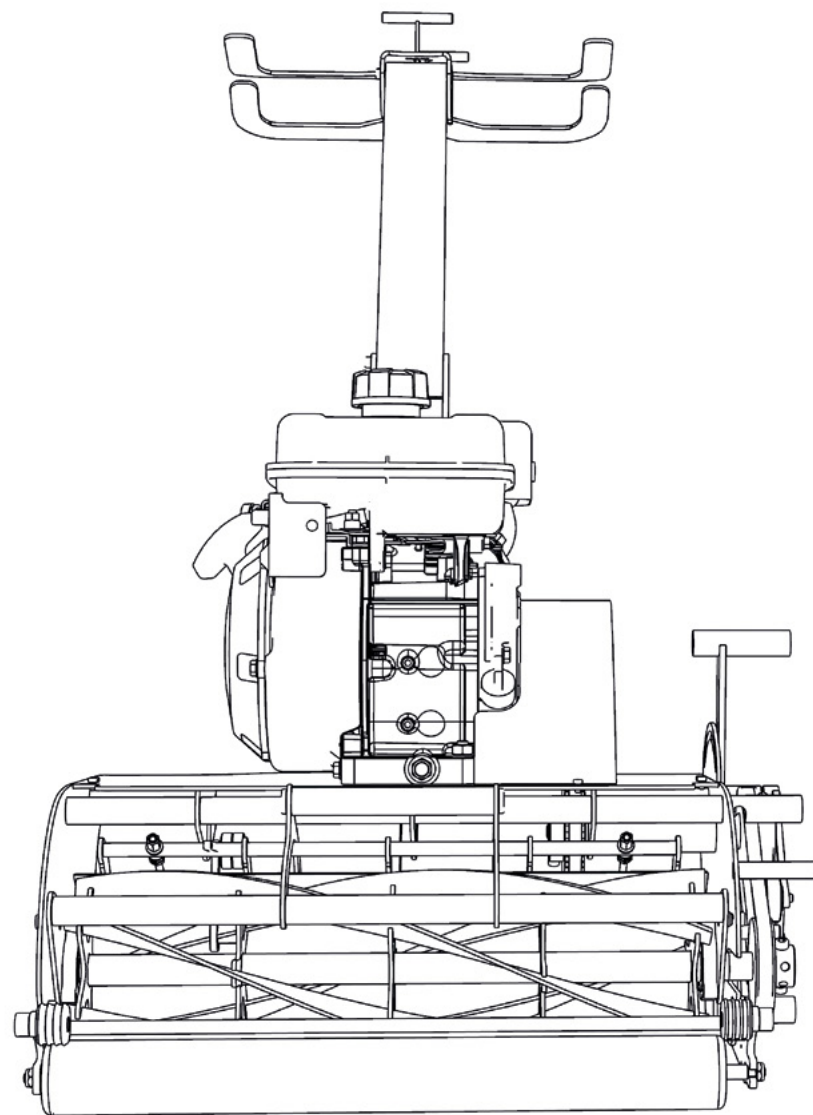


Safety information is marked with this symbol

In the interests of your safety, pay special attention to sections marked with this symbol!

Contents of Package


1. Lawn mower
2. Grass box
3. Tools
4. Oil (1 litre)
5. Oil aspirator
6. User Manual
7. Kawasaki engine user manual
8. Quick Start Instructions



General

- In the interests of your safety and the correct use of this machine, read this User Manual thoroughly and carefully.
- Please note that this machine user is responsible not only for ensuring other persons and their property are not in danger, but also for preventing any and all accidents that might occur due to the use of the machine.
- This User Manual is an integral part of the machine and must be handed over to each user.
- For safety reasons, children and adolescents under 16 years of age and persons who have not read and understood this User Manual sufficiently are not allowed to work with this machine. To ensure that they do not play with the product, persons with limited physical or mental abilities are only allowed to use this product under the direct supervision of a competent person.
- Please explain all the potential hazards and how to prevent them to anyone who is going to work with this machine.
- Please keep the machine in a secure place. Any machine that is not in use should be kept in a dry and locked place not accessible to children.
- When using the machine, wear hearing protection.
- When using the machine, always wear protective gloves, in the interests of your safety.
- In case of continuous work with the machine longer than two hours, take a safety break.
- The lawn mower is designed for mowing lawns in private gardens and gardens around houses having the area less than 2,000 m² or for its being in operation for 100 running hours per year.
- The machine must not be equipped with any additional accessories not authorised by Swardman. Failure to observe this instruction may void the warranty.
- This lawn mower must not be used for mowing areas that are not covered by grass or contain more than 20% plants that are not grasses.
- Never mow if there are other persons nearby, especially children or animals.
- Before as well as during each mowing, make sure there are no foreign or undesirable objects on the lawn that may cause damage to the machine or injury to the user. These above all include stones, sticks, tree bark, toys, wires, cords, hoses, etc.
- When mowing, always wear safe footwear and long trousers. Do not wear open shoes nor sandals.
- Before using the machine, always check its proper technical condition. Pay particular attention to the cylinder, counter-blades, screw connections, Bowden cables. If any parts are damaged or worn, have them repaired or replaced immediately. When carrying out repairs and maintenance, use only the original parts or parts authorised by Swardman.
- **⚠ Petrol is extremely flammable!**
- Store petrol only in containers designed and manufactured for this purpose.
- Refuel only outdoor and when the engine is cold. Smoking and being near open fires are prohibited during refuelling.
- Refuel only before you start the machine. Do not open the fuel tank when the engine is running or hot.
- If the tank overflows, do not start the engine. Immediately remove the mower from the area contaminated by petrol. Dry any petrol spilled from the engine. Do not start the engine until you are sure the excess petrol has evaporated from the fuel tank or the engine surface.
- Always carefully close the container and fuel tank.
- In case of any damage to the fuel tank, hoses of the fuel system, the exhaust or any other parts of the engine, immediately replace the damaged part.

Handling

- Do not use the mower in areas where the dangerous carbon monoxide could accumulate and create a poisoning hazard.
-  **The engine and the exhaust heat up very quickly.** Never touch them just after the engine has been started or stopped.
- Only use the fuel and oil recommended in the manual.
- Only mow lawns by daylight or sufficient artificial light.
- Only use your normal walking pace to drive the machine.
- **Primarily control the machine speed using a throttle lever 5, see Fig. 1. Higher throttle setting = higher number of engine revolutions = faster drive and higher number of cylinder revolutions. Lower throttle setting = lower number of engine revolutions = slower drive and lower number of cylinder revolutions. Number of cuts per meter and cut quality remain unchanged. Speed can additionally be controlled with a drive lever, e.g. upon a change of the drive direction.**
- When mowing on a slope, always pay attention to a safe posture.
- Take special care when changing the direction or turning on a slope.
- For safety reasons, do not mow a slope inclined more than 25°.
- Take special care when turning or reversing the machine.
- Always keep a natural posture when mowing and maintain a stable position all the time you are working.
- When mowing, keep the minimum safe distance ensured by the handlebars from the lawn mower.
- If you transport the machine to another location, load it into a vehicle or move it through places with no grass, always wait until the mowing blades stop.
- Never carry nor lift the mower while the engine is running.
- Never operate the mower when the grass box is not fitted correctly or other safety elements are missing or damaged.
- Start the mower only in its operating position, never start it while it is lying on its side.
- When starting the mower, always make sure your hands and feet are at a safe distance from the mowing blades.
- Never touch the mowing blades while the engine is running.
- Never adjust or clean the mowing blades while the engine is running.
- Stop the engine and remove the spark-plug connector every time you:
 - check, clean or adjust any part of the machine,
 - remove any undesirable items from the mowing blades.
- If the mower blades or drive gets blocked, immediately stop the mower, find the cause, remove it and before restarting, check the parts for any damage. If the machine shows increased vibrations after you restart it, stop it and contact the Swardman service department.
- The handle of interchangeable cartridges does not serve for handling of the machine but exclusively for removal and insertion of cartridges. Handling of the machine using the **cartridge handle** could result in an irreversible damage to cut settings or other functions of the cartridges.

Maintenance and Storage

- Please make sure all the screws are properly tightened.
- Before storing the machine, always make sure the motor has cooled down.
- Before storing the machine and for fire prevention reasons, always make sure there are no pieces of grass around the engine that could ignite.
- Before mowing, always check the mowing blades.
- For safety reasons, replace damaged parts with new parts.
- During maintenance or repair work on the machine, always wear protective gloves.
- Always perform maintenance and repair work with the engine stopped and the spark plug disconnected.
- Do not clean the mower with running water or a pressure washer.
- In case you need to drain the fuel tank, always do it outdoor and use a suitable container.
- For safety and reliability reasons, use only original Swardman parts.

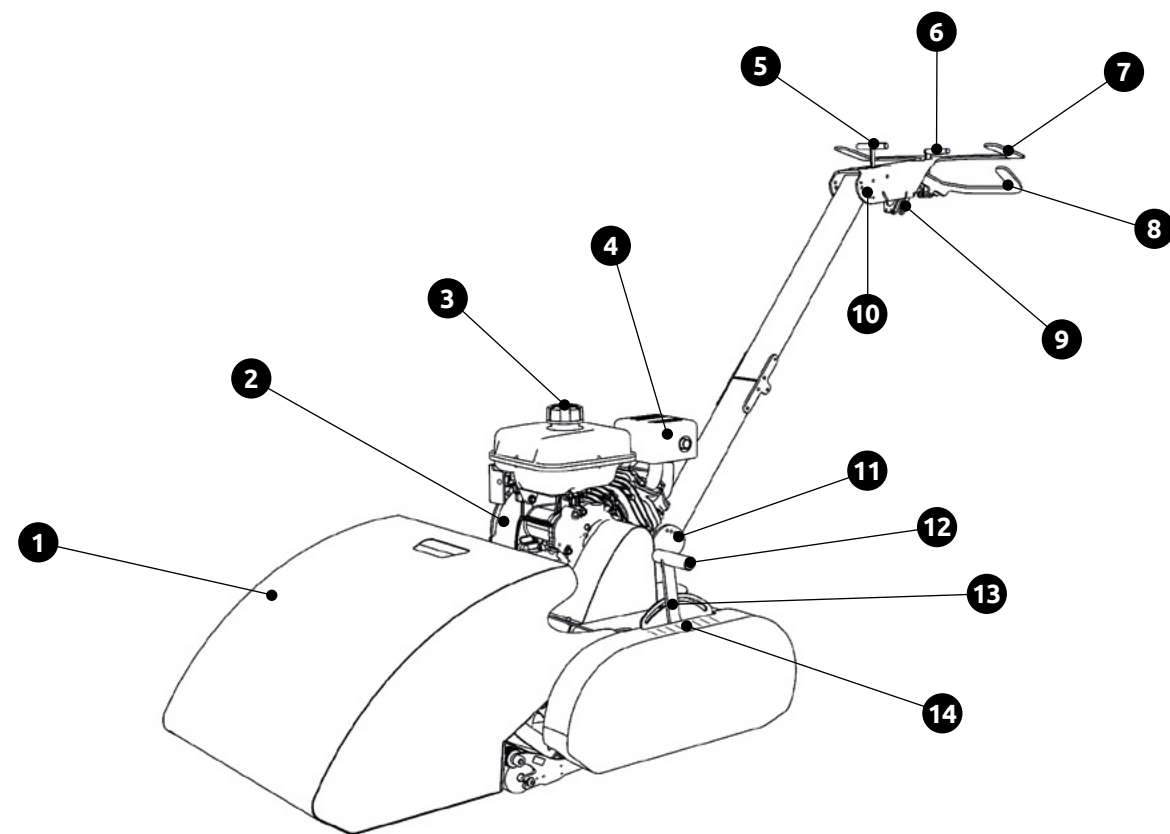
Cylinder lawn mower	Edwin 45	Edwin 55
Order number	E45S	E55S
Cylinder displacement (cm³)	99	99
Fuel tank capacity (l)	1.6	1.6
Fuel	Unleaded petrol w. octane rating 100 without bio components	
Oil tank capacity (l)	0.46	0.46
Oil type	SAE 30	SAE 30
Rated power	1.9 kW (2.6 HP)	1.9 kW (2.6 HP)
Maximum operating speed (kmph ⁻¹)	6	6
Maximum engine operating speed (rpm ⁻¹)	2800	2800
Spark plug	NGK BR6HS	NGK BR6HS
Cutting width (cm)	45 (18")	55 (22")
Mowing height (mm)	5 – 45	5 – 45
Number of cuts per meter (5-blade cylinder)	60	60
Grass box volume (l)	40	50
Weight (kg)	52	59
Maximum overall width (cm)	54	64
Declared sound pressure level A on the operator's side ¹ L _{pAd} (dB)	77 + 1	79 + 2
Guaranteed sound power level ² A L _{WA,G} (dB)	87	87
Declared aggregate value of acceleration of vibrations transferred to the operator's hand/arm ³ a _{hvd} (mps ⁻²)	3.1 + 1.6	2.9 + 1.5
Serial number	See specifications on the nameplate	

¹ measured in accordance with ČSN EN ISO 5395-1, Annex F and ČSN EN ISO 11201: April 2010

² measured in accordance with the Government Decree No. 9/2002 Coll., Directive 2000/14/ES

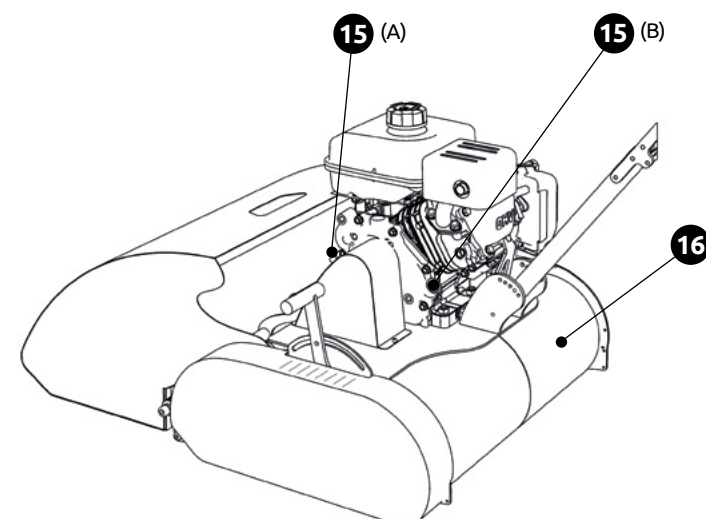
³ measured in accordance with ČSN EN ISO 5395-1, Annex G and ČSN EN ISO 20643

Figure 1



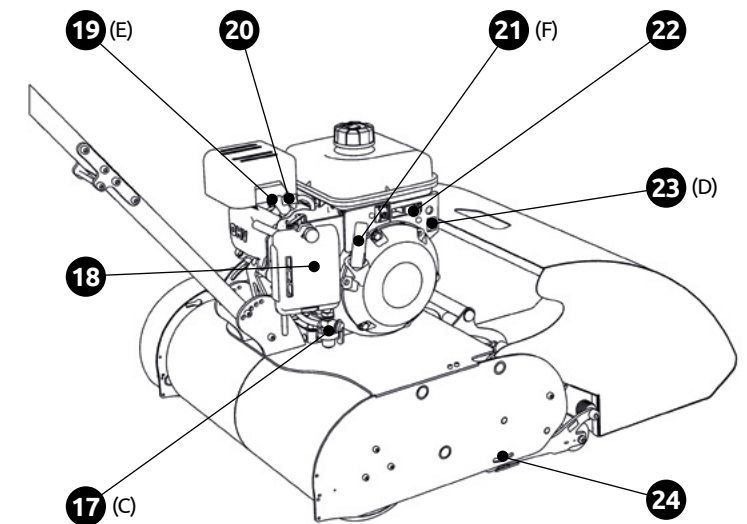
- | | | |
|---------------------|--------------------------------------|----------------------------|
| 1 Grass box | 6 Safety lock of cylinder | 11 Handlebar height |
| 2 Engine | 7 Handlebar body | 12 Setting control lever |
| 3 Fuel tank cap (B) | 8 Drive control lever | for mowing height |
| 4 Engine exhaust | 9 Control lever for mowing blades | 13 Quick-acting bolt |
| 5 Throttle lever | 10 Handlebar body position adjusting | 14 Mowing height indicator |

Figure 2



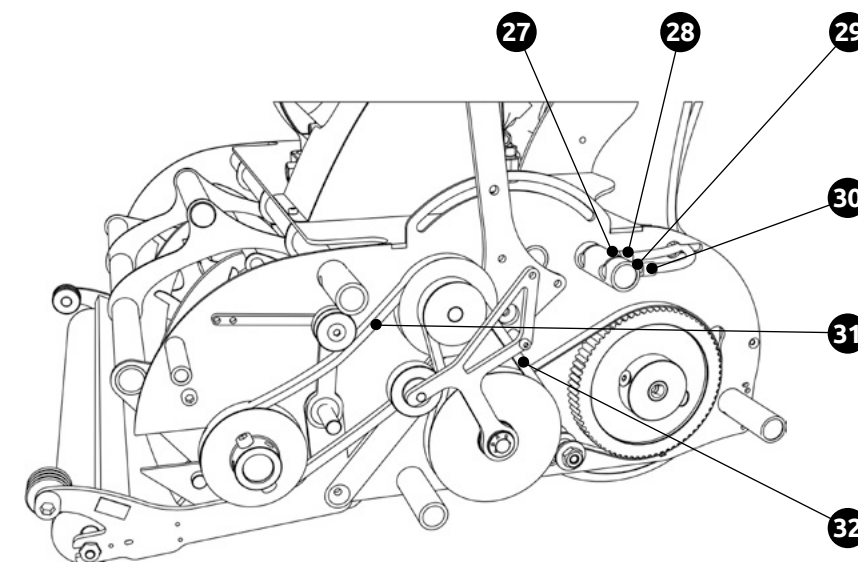
- 15 Oil tank cap (A+B)
16 Rear roller with differential

Figure 3



- 17 Fuel inlet closure (C)
18 Air filter
19 Choke control lever (E)
20 Spark-plug connector
21 Starter cord (F)
22 Throttle on engine
23 Engine start/stop button (D)
24 Mowing height locking screw

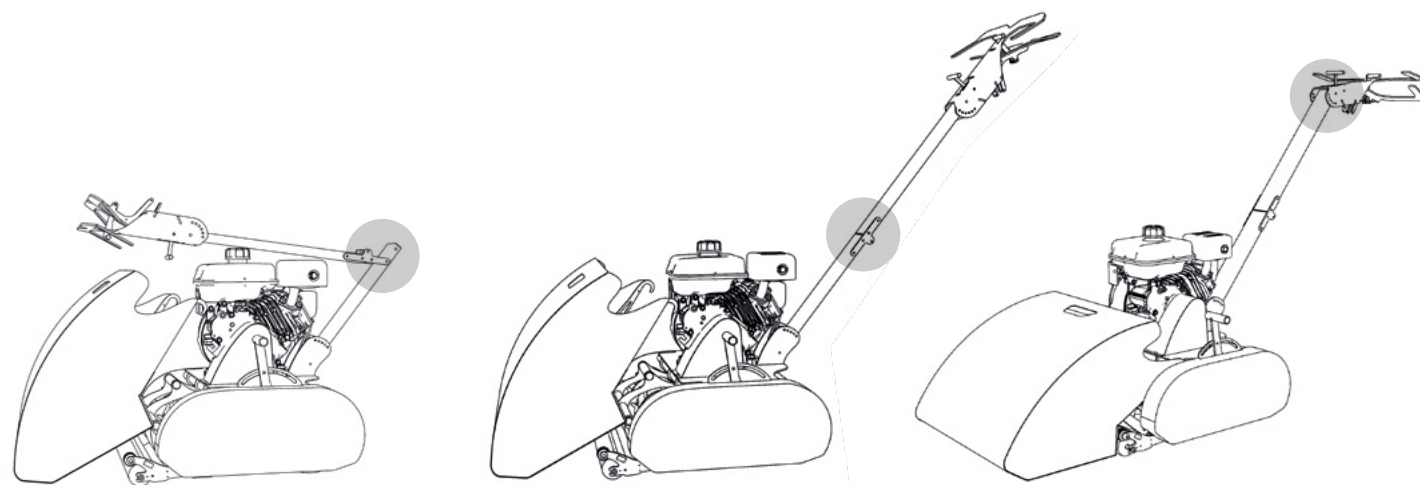
Figure 4



- 27 Cylinder cable screw counter nut
28 Cylinder cable screw
29 Drive cable screw counter nut
30 Drive cable screw
31 Cylinder belt
32 Drive belt

Assembling the Lawn Mower

Take the mower out of the box. The best way is to carefully cut the box from its front face and push the mower out. Do not ever use the handle on the mowing cartridge for lifting the mower or its transport.



1. Straighten the handlebars

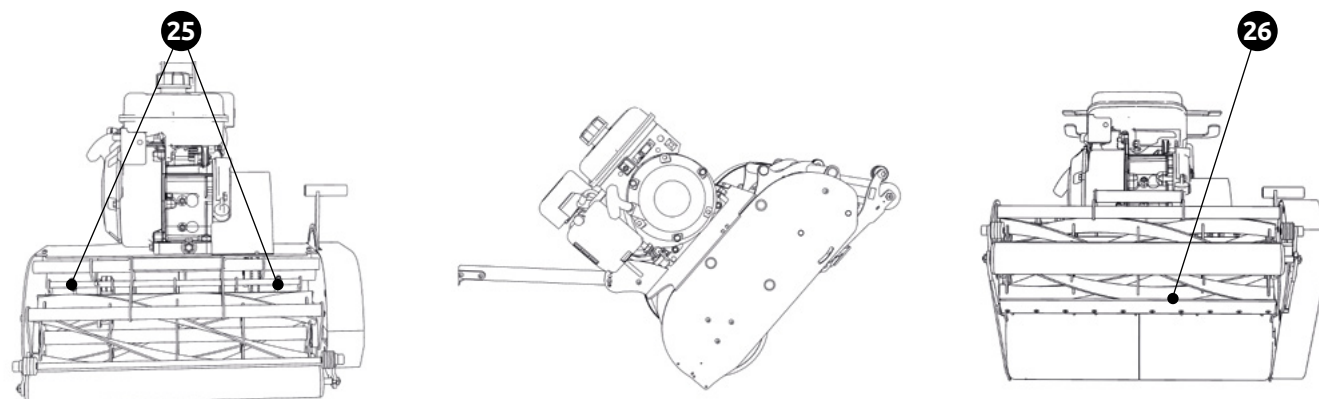
2. Secure with screws

3. Adjust position and angle of the handlebar body

Install the grass box as shown in Figure 3. The grass box is an integral part of the machine.

Checking the Cylinder Adjustment

Regularly check adjustment of the cylinder against the bed-knife before each mowing. **When adjusting, use the 8 mm wrench.** Mower with 45 cm (18in) cutting width has 2 adjusting screws on the cylinder and 55 cm (22in) cutting width has 3 adjusting screws.



1. If the cylinder does not provide smooth cut mowing, tighten up **the adjusting screws 25** clockwise. Proceed carefully by tightening them by approx. 10°. If required, repeat the procedure.
Note: There are 3 adjusting screws on the 55 cm model.

2. Close the petrol supply.
3. Tilt the machine onto the handlebars for only necessary time period. High possibility of oil spillage!

4. Insert a piece of paper in front of the bed-knife **26** and carefully turn the cylinder with your other hand.
5. If the paper has been cut by all the blades in whole width, the cylinder is adjusted. A light touch of cylinder blades with the bedknife is normal.



Adjust only with protective gloves on and the machine stopped.



An excessive pressure between the cylinder and the bed-knife will result in an excessive wear of blades as well as the driving belt. When properly adjusted, the cylinder should turn smoothly.

Starting the Engine (For more detail information follow engine manual)

1. Before starting the engine for the very first time, pour 0,4 l of oil, which is included in the package (oil SAE 30), into the yellow plug hole (front and rear holes are identical) **15** (A or B). Check the level using a closure gauge.
2. Pour unleaded gasoline with octane rating 98 or higher and with low-ethanol blends of 5% into the fuel tank through the filler **3** (B). The fuel tank has a capacity of 1.6 litres.
3. Open the fuel supply to the engine. Turn the lever **17** (C) downwards to the position „on“.
4. Start – turn the button **23** (D) on the engine to the „I“ position. Turn the choke lever **19** (E) to the forward position (see Fig. 3).
5. Set the throttle lever to the middle position between „Start“ and „Max“. Grasp the starter cord **21** (F) and yank it to start the engine.
6. If the engine fails to start after three attempts, check adjustments according to the above points.
7. If the engine starts, turn the choke lever **19** (E) to the intermediate position. After approx. 30 seconds, turn the choke lever **19** (E) towards you (see Fig. 3).
8. Stopping the engine – set the button **23** (D) to the „0“ position. The engine shall stop running.



The engine running-in process is completed after 8 hours of work. It is necessary to change the engine oil. Follow the instructions on page 14.

For the detailed engine maintenance description, see the Kawasaki engine manual, which is part of the package.

Mowing height adjusting

Mowing height can be adjusted with the control lever on the left side of the machine. To change the height adjustment, proceed as follows:

1. The mowing height is locked with the screw **24** in the right-hand side plate; the screw moves along a groove. Before changing the mowing height, slightly loosen the locking screw.
2. Loosen the quick-acting bolt **13**.
3. Adjust the mowing height by moving the lever **12** forwards to decrease and rearwards to increase the mowing height.
4. After the required height has been achieved, retighten the quick-acting bolt as well as the locking screw. This shall ensure the constant mowing height over the total machine width.

Next to the control lever for mowing height adjustment, there is an orientation scale with an indicator **14**. The scale shows the mowing height in millimeters.

Drive - Mower is Controlled by Three Levers

- The throttle lever **5** controls the engine revolutions and primarily serves for speed control. Use it to control the machine speed - both the drive speed and the mowing blades revolutions. **Higher throttle setting = higher number of engine revolutions = faster drive and higher number of cylinder revolutions. Lower throttle setting = lower number of engine revolutions = slower drive and lower number of cylinder revolutions. Number of cuts per meter and cut quality remain unchanged. However, it is not recommended to use the minimum engine revolutions that could cause an excessive engine load, in particular during verticulating or scarifying.**
- The left lever **8** controls the sensitive clutch of the machine drive and secondarily serves for speed control, e.g. during a change in travel direction. Push it to speed up the machine and vice versa. Slowly and softly push the left lever of drive (the right lever for the left-hand control) to activate the clutch and put the machine in motion.
- The right lever (the left lever for the left-hand control) **9** controls the clutch of the mowing blades.
- The safety lock **6** of the cylinder prevents the mowing blades from being started unintentionally. When locked, the right lever **9** cannot be operated.

Emptying the Grass Box

Continuously visually check that the box is not full. Never fill the box to allow grass to fall from the box onto the lawn. Never fill the box so as not to be able to pick it up and empty it by yourself.

Machine Work Termination

Use the throttle lever **5** to decrease the engine revolutions to minimum (START position) and turn the button **23** (D) on the engine to the „0“ position.

Cleaning

Clean the machine from dirt and cut grass after each operation. Thoroughly brush off the machine and wipe it with a cloth. Never use pressure washers, using them will void the warranty.

Adjusting

A quality lawn depends on properly adjusted mowing blades. Adjust every time you notice the machine is not mowing well. Perform a preventive check of adjustment before each mowing. (For better illustration, see the video manual at www.swardman.com.)

Adjust as follows (shown in the paragraph - Checking the Cylinder Adjustment (page 10)):

- 1. Stop the machine engine
- 2. Disconnect the spark plug
- 3. Let the engine cool down
- 4. Put on protective gloves
- 5. Take off the grass box
- 6. Close the fuel cock 17
- 7. Tilt the machine onto the handlebars
- 8. Take a strip of plain paper and the 8 mm wrench
- 9. Kneel down in front of the mower
- 10. Gripping the paper strip in one hand, simulate a blade of grass and bring it perpendicularly before the bed-knife
- 11. Turn the cylinder with your other hand so that the paper is cut - be very careful - the mowing blades can cause painful injuries even at a low speed
- 12. The paper should be cut off smoothly - repeat on both ends and in the middle. If the cut has been smooth at each point, the machine is adjusted correctly.
- 13. If the paper has not been cut or the cut has not been smooth, it is necessary to draw the bed-knife up towards the cylinder.
- 14. To do so, use the wrench on the blade adjustment nut 25 and slightly turn the nut clockwise.
- 15. Repeat the check using another piece of paper. Repeat this process until the cylinder cuts perfectly over the total width.
- 16. If the mowing system has been used for a prolonged period (depending on the mowing intensity and dimensions of the mown area), the blades might become dull and making adjustments will be more difficult. If the adjustment no longer helps to achieve a smooth cut, the mowing blades must be sharpened. How to have the mowing blades sharpened, visit the Swardman e-shop in the Service Section.
- 17. You can lubricate the cylinder blade with organic oil after each mowing to protect the blade against corrosion and reduce any noise and friction at the same time.

Filter Change

It is important to keep the air filter clean. The filter can become dirty quickly, especially during lawn verticutating, combing, brushing, and mowing dry lawns.

You can change the filter by unscrewing the air filter cover 18, opening it and removing the filter and pre-filter.

You can order the original filter and pre-filter in the Swardman e-shop in the Service Section.

Oil Change

The engine oil needs to be changed after the first 8 hours of operation - after the running-in period.

Then, it is sufficient to change oil after 50 hours of operation or after 12 months.

It is recommended to use the oil change kit that is part of each machine package.

For subsequent changes, it is recommended to visit the Swardman service department, where an overall check of the machine and adjustments necessary to ensure its faultless operation will take place.

For the detailed engine maintenance description, see the Kawasaki engine manual, which is part of the package.

Winter Storage / Storage longer than 30 days

The prescribed regular maintenance to be performed at the recommended service intervals, replacing worn or damaged parts if needed and having repairs and maintenance of the machine performed at the Swardman service department before winter storage will extend the mower lifetime and reliability.

Before storing the mower, observe the following:

- 1. Thoroughly clean the machine. Remove all stuck grass, especially from the area around the engine cooling fins (also see the Engine Operation Manual).
- 2. Check the mechanical mowing parts (see "Counter-Blade Adjustment") and slightly lubricate the blades with a biological oil.
- 3. Make sure all the bolts and nuts are tightened.
- 4. Drain all the petrol out of the fuel tank (see the Engine Operation Manual).
- 5. Clean the fuel shut-off valve (see the Engine Operation Manual) and close it.
- 6. Drain all the petrol from the carburettor, start the engine and let it run until all the fuel is consumed.

Acknowledgements

Thank you for choosing the Swardman cylinder lawn mower. We believe that with proper care it will serve you for a long time and your lawn will be your pride and joy.

Our team is always ready to advise you on how to correctly use this machine. If you have any questions, please do not hesitate to contact us.

We will be happy if you share with us your experiences in using the Swardman cylinder lawn mower.

The following table shows possible symptoms of problems and how to fix them if your machine is not working properly. If you cannot find or fix the problem while using this table, please contact your dealer.



Caution: Before checking for any defects, stop the machine and disconnect the spark-plug connector. For support in the form of video instructions, visit www.swardman.com and section „support“

Problem	Possible cause	Removal
The ground is untreated after mowing	The bed-knife is not adjusted correctly.	Adjust the bed-knife.
Engine does not start	1. Engine flooded 2. Spark-plug cable disconnected 3. Spark plug dirty	1. Allow engine to rest for 10-15 minutes 2. Reconnect cable 3. See Engine Operation Manual
Engine has stopped	1. Lack of petrol 2. Engine speed too low under given conditions 3. Cylinder blocked	1. Fill the fuel tank with petrol 2. Open the throttle 3. Stop engine and remove an obstacle
Engine cannot be stopped	Malfunction of the ignition switch	Disconnect the cable connector from the spark plug to stop the engine Contact your Swardman dealer.
Cylinder does not rotate	1. Incorrect adjustment of the cylinder 2. The cylinder cable is too loosened 3. Worn belt	1. Loosen adjusting screws of the cylinder 25 and readjust the cylinder 2. Tighten the cable by loosening the counternut 27 , screwing out the screw 28 and tightening the counternut 27 . 3. Replace the cylinder belt 31
Cylinder rotates even when the cylinder control lever is not pushed	Incorrect adjustment of the cylinder cable	Loosen the cable by loosening the counternut 27 , screwing in the screw 28 and tightening the counternut 27 .
Drive does not start	1. Incorrect adjustment of the drive clutch 2. Damaged drawbar or cable guide 3. Worn belt	1. Tighten the drive clutch cable by loosening the counternut 29 , screwing out the screw 30 and tightening the counternut 29 . 2. Replace the bowden and cable 3. Replace the drive belt 32
When the machine is pushed forward with the engine not running, the rear roller jams	Uneven tension of the transmission belt	In this case, try pulling the machine or when the machine is to be pushed forward for longer distances, start the engine.



If the above troubleshooting procedures fail to solve problems, contact Swardman at www.swardman.com in „contact“ section.

Swardman provides a warranty against manufacturing and material defects in the product. In case of a manufacturing or a material defect during the warranty period, we undertake to repair (or replace) the product.

The engine, which is part of the mower, is covered by its manufacturer's warranty conditions.

For this product intended for domestic use, the warranty period is 24 months from the date of purchase. In the event of industrial or professional use of the machine or any use of a similar load, the warranty period shall be 12 months.

A warranty repair will be made, if:

- you take the machine to your Swardman gardening equipment dealer,
- you prove the product purchase and the purchase date, e.g. through the product invoice.

The warranty cannot be applied, if:

- you fail to prove the product purchase with the purchase date,
- the machine is not provided with the serial number plate,
- the product is modified resulting in a change in the manufacturer's specifications or the use of non-original parts,
- any previous repair of the product is performed elsewhere than in the authorised Swardman service department,
- a defect is caused by an incorrect adjustment, misuse, improper use, professional use, negligence or by accidental damage,
- a defect is caused by insufficient lubrication or maintenance,
- any part, especially the drive or mowing mechanism, is damaged by its impacting against a solid object,
- a defect is caused by the product's misuse,
- a defect is caused by the product's normal wear and tear.

The following parts are considered to be consumables. Their lifetime depends on regular servicing, and the warranty does not normally apply to them: blades, driving belts, bearings, bowden cables.

The warranty does not cover the costs associated with routine maintenance of the product.

It is in your best interest to follow the User Manual of the lawn mower. Thorough care will ensure that the product will serve you well for many years. To ensure proper functioning, it is recommended to have the cylinder sharpened at the authorised Swardman service department at least once a year.

If necessary, always use the Swardman original spare parts. The warranty does not cover a damage resulting from using spare parts not manufactured or approved by Swardman.

This warranty does not affect your statutory rights in connection with defective products.

When the time comes to dispose of the product, please consider the environment and recycle the product. (For information on where to properly dispose of the product, please contact your local authorities).

Interchangeable Cartridges



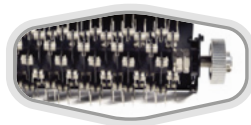
Cylinder (5, 6, 10 blades)



Verticutter cartridge



Scarifier cartridge



Astroturf cleaner cartridge



Grooming lawn brush cartridge

Handlebars



Leather handlebars



Beverage holder



Front profile roller



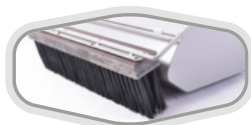
Front and rear roller wiper

Lights



LED spotlights

Other accessories



Broom for dirt and dew removal



Transport wheels

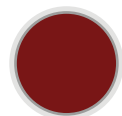


Wheels for taller grass

Colours and materials



ANTRACIT



RAL 3011



RAL 2009



RAL 3020



RAL 5015



RAL 6018



Optional RAL



Manufacturer Information

Swardman, s.r.o.
Šardice 792
696 13 Šardice
Czech Republic

www.swardman.com
E: info@swardman.com
Service T: +420 774 365 599



EC Declaration of Conformity, EU Declaration of Conformity

ES Prohlášení o Shodě, EU Prohlášení o Shodě

This declaration of conformity is issued under the sole responsibility of the manufacturer.
Toto prohlášení o shodě se vydává na výhradní odpovědnost výrobce.

Výrobce / Manufacturer:

Swardman, s.r.o.

Adresa / Address:

Šardice č.p. 792, 696 13 Šardice, Česká republika / Czech Republic

IČ / ID:

29 15 57 38

Jméno a adresa osoby pověřené sestavením technické dokumentace (podle 2006/42/ES, NV č. 176/2008 Sb.) a jméno a adresa osoby, která uchovává technickou dokumentaci (podle 2000/14/ES, NV č. 9/2002 Sb.) / Name and address of the person authorised to compile the technical file (according to 2006/42/EC) and name and address of the person, who keeps the technical documentation (according to 2000/14/EC):

Swardman, s.r.o.

Šardice č.p. 792, 696 13 Šardice, Česká republika / Czech Republic

Výrobek (stroj) – typ /

Product (Machine) – Type:

Vřetenová sekačka typ E55S, (E45S) /

Cylinder lawnmower type E55S, (E45S)

Výrobní číslo / Serial number:

Popis / Description:

Ručně vedený žací stroj se spalovacím motorem, s pojezdem. Pohon jednoválcovým, čtyřtaktním, vzduchem chlazeným, zážhový motorem KAWASAKI FJ100D o zdvihovém objemu 99 cm³, o výkonu 1,9 kW / 3 600 ot.min⁻¹ (dle údajů výrobce motoru). Číslo schválení typu motoru e13*97/68SN2G2*2006/105*0674*01.

Součástí motoru je vlevo uložený tlumič výfukového systému, výfuk vyústěn vodorovně doleva. Oba stroje jsou identické konstrukce, liší se pouze šířkou záběru. Vřetenové žací ústrojí s pěti břitzy je umístěno za válečkem určujícím výšku sečení. Za žacím ústrojím se nachází válec který slouží k pojezdu stroje. V přední části vřetena je umístěn sběrací koš. Shora a z boků je žací ústrojí zakryto kovovým krytem. Na levé straně pod krytem je pohon vřetena a pojezdu.

*Pedestrian-controlled cylinder lawnmower with combustion engine, self-propelled. Propelled by single-cylinder, four-stroke, air-cooled, gasoline engine: KAWASAKI FJ100D of 99 cm³ and power 1.9 kW at 3600 rpm (according to the manufacturer's engine). Approval number of the engine e13*97/68SN2G2*2006/105*0674*01.*

Part of the engine is mounted on the left muffler exhaust system, exhaust opens out horizontally to the left. Both machines are identical in construction, differing only cutting width. Cylinder lawnmower cutting cylinder with five blades is positioned behind the roller determining the cutting height. Behind the cutting mechanism is a cylinder which drives the machine. In front of the cutting cylinder is provided the collector. Top and the sides of the cutting mechanism is covered by metal cover. On the left side under the cover is placed drive of cutting and moving cylinders

Prohlašujeme, že strojní zařízení splňuje všechna příslušná ustanovení uvedených směrnic (NV) / We declare that the machinery fulfils all the relevant provisions of the mentioned Directives (Government Provisions):

Strojní zařízení – směrnice 2006/42/ES, NV č. 176/2008 Sb. / the Machinery Directive 2006/42/EC,

Elektromagnetická kompatibilita – směrnice 2014/30/ES, NV č. 117/2016Sb. / the Electromagnetic Compatibility (EMC) Directive 2014/30/EC,

Emise hluku – směrnice 2000/14/ES; NV č. 9/2002 Sb. / the Noise Emission Directive 2000/14/EC.

Harmonizované technické normy a technické normy použité k posouzení shody / The harmonized technical standards and the technical standards applied to the conformity assessment:

ČSN EN ISO 12100, ČSN EN ISO 5395-1, ČSN EN ISO 5395-2, ČSN EN ISO 14982:2009.

Osoby zúčastněné na posouzení shody / Bodies engaged in the conformity assessment:

Notifikovaná osoba č. 1017 / Notified Body No. 1017.
TUV SÚD Czech s.r.o.
Novodvorská 994, CZ-142 21 Praha 4, ČR /

Použitý postup posouzení shody / To the conformity assessment applied procedure:

Na základě směrnice 2000/14/ES, příloha V; NV č. 9/2002 Sb., příloha č. 5 / Pursuant to the Noise Emission Directive 2000/14/EC, Annex VI.

Naměřená hladina akustického výkonu /

L_{WA} = 85,6 dB

Measured sound power level:
Garantovaná hladina akustického výkonu /
Guaranteed sound power level: L_{WA} = 87 dB

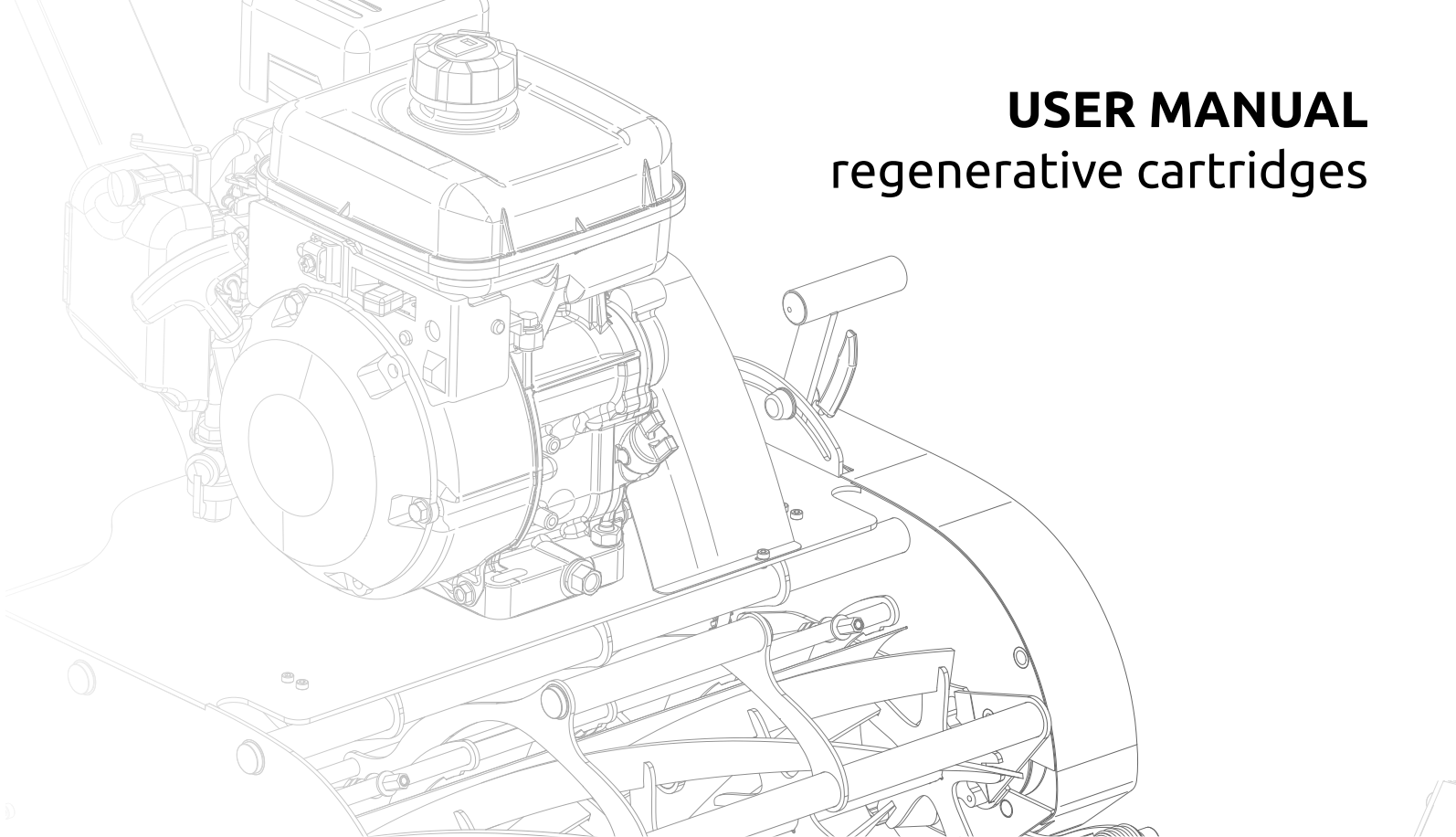
Poznámka: Veškeré předpisy byly použity ve znění jejich změn a doplňků platných v době vydání tohoto prohlášení bez jejich citování.
Note: All regulations were applied in wording of later amendments and modifications valid at the time of this declaration issue without any citation of them.

Místo a datum vydání /
Place and date of issue: Šardice 18. 2. 2020

Osoba zmocněná k podpisu za výrobce /
Signed by the person entitled to deal in the name of producer:

Jméno /
Name: Ing. Pavel Holesínský, jednatel/
Funkce /
Grade:

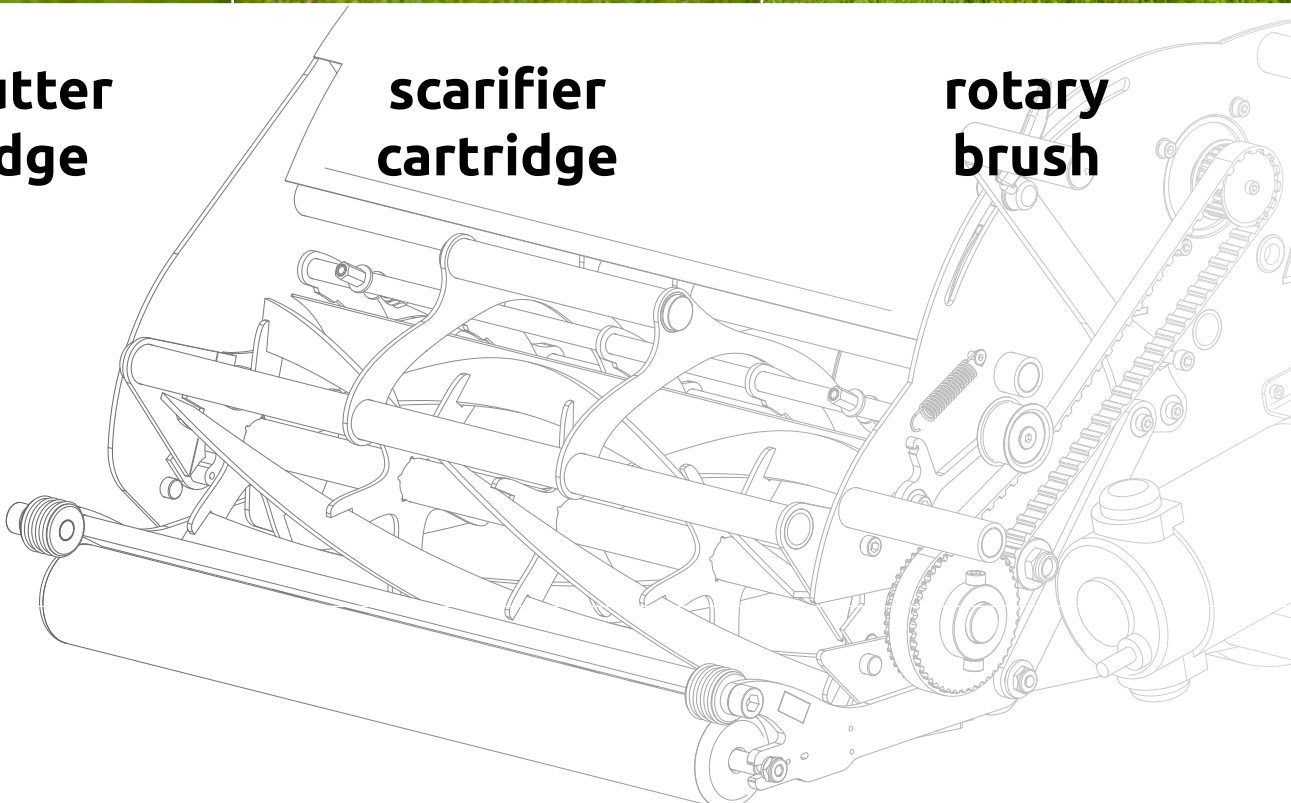
Podpis /
Signature: [Signature]



verticutter
cartridge

scarifier
cartridge

rotary
brush



Verticutter cartridge

Verticutter cartridge is used to cut lawns vertically. The cartridge is fitted with steel rotating blades. The denser a lawn is, the more it needs verticutting. We recommend to verticut the lawn 3 - 5x per year during the grass season, always before each fertilization to a depth of 3 - 5 mm.

Verticutting the lawn before fertilizing will remove the thatch and dead parts of the plants, prevent the fertilizer from being washed away by rain and ensure absorption into the soil and to the roots of the lawn. At the same time the grass sods are being broken, increased water absorption and supports the growth of grass sprouts and growth of the new plants. By breaking the surface of the soil, the circulation of the air in the soil will be restored. The surface will also have better access to sunlight. All of these positive procedures result in thicker and healthier lawn.

Verticutting must be performed at high speed in order for the blades to cut correctly. When using Edwin, you can increase the power using the throttle lever on the handlebar. When using the Electra, use the regeneration mode. See the mower's user's manual for more information.

If the lawn is very thick and full of thatch, we recommend double verticutting in two direction crossways.

Never carry out the verticutting if the lawn is soaked or too dry. The lawn does not need to be verticut all over its area. If there are thin areas, skip them. Never perform verticutting if the soil temperature is below 10 °C (50°F).

The steel blades of the verticutter are subject to normal wear and can be replaced with new ones when worn and not functioning. Spare parts are available in the e-shop at www.swardman.com



Scarifier cartridge / Astroturf cleaner cartridge

The scarifier cartridge is used to remove broken thatch and dead stalks after verticutting. It can also be used on lawns where verticutting was not performed.

Thanks to a large number of double springs and high revolutions (increase in high revs when using Edwin) or in regeneration mode (when using Electra), it is much more efficient and faster than manual raking.

The scarifier can remove undesired dirt from the lawn, such as leaves, moss, twigs, small cones and bark residues which can prevent safe mowing. The scarifier combs the grass nicely and highlights the stripes on the lawn.

The stainless steel springs of the scarifier are subject to normal wear and should be replaced with new ones when worn and not functioning. Spare parts are available in the e-shop at www.swardman.com.

Astroturf cleaner will clean your artificial grass from leaves, needles, little rocks and other small objects. It is used the same way as scarifier cartridge.



Rotary brush

The rotary brush is used for the application of sand and material, which usually follows the aeration. The sand can also be incorporated into a lawn that has not been aerated, although the resulting effect is poorer than on a previously aerated lawn.

The sand application is sufficient when the grass stalks are visible and the sand does not form accumulated hills. An uneven terrain can be levelled by repeating the sand application.

For best results, we recommend using dry and loose sand. Wet sand is not suitable for rotary brush application.



Technical Data

	Verticutter cartridge		Scarifier cartridge		Rotary brush	
Model	45 cm 18in	55 cm 22in	45 cm 18in	55 cm 22in	45 cm 18in	55 cm 22in
Range width	450 mm 18in	550 mm 22in	450 mm 18in	550 mm 22in	450 mm 18in	550 mm 22in
Number of blades / springs	10	12	36	44	-	-
Maximum designed depth	- 10 mm -0.4in	- 10 mm -0.4in	0 mm 0in	0 mm 0in	0 mm 0in	0 mm 0in
Maximum permissible working depth	- 5 mm -0.2in	- 5 mm -0.2in	0 mm 0in	0 mm 0in	0 mm 0in	0 mm 0in

Note: The working depth of the verticutting cartridge mentioned above is indicative. The actual working depth decreases with increasing the soil hardness and in case of solid particles such as stones which can also damage the verticutter blades.

Fig. No. 1 - Swardman Edwin

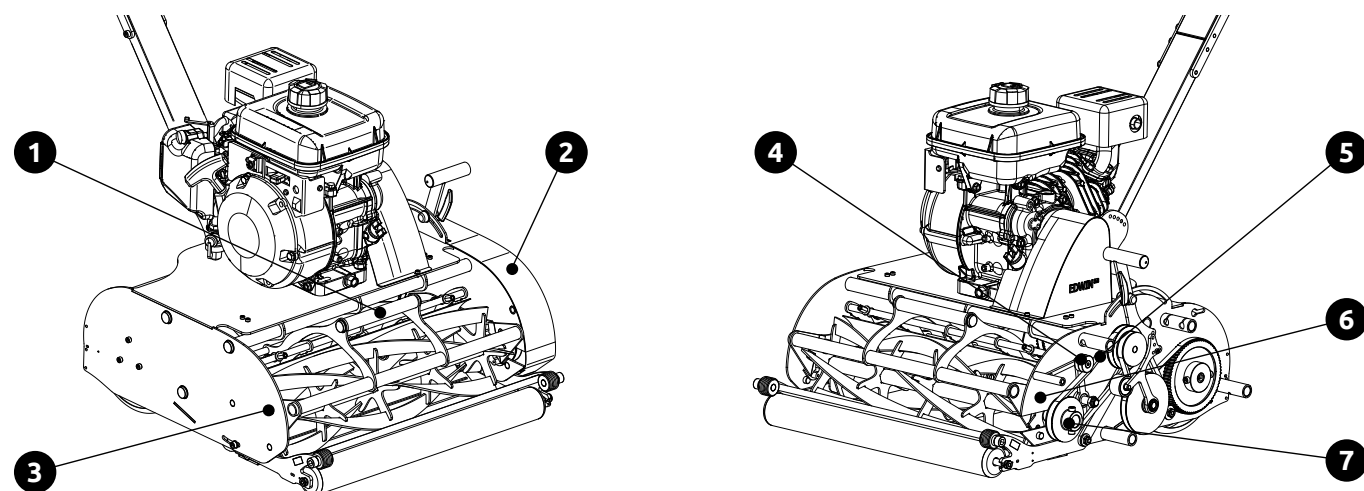
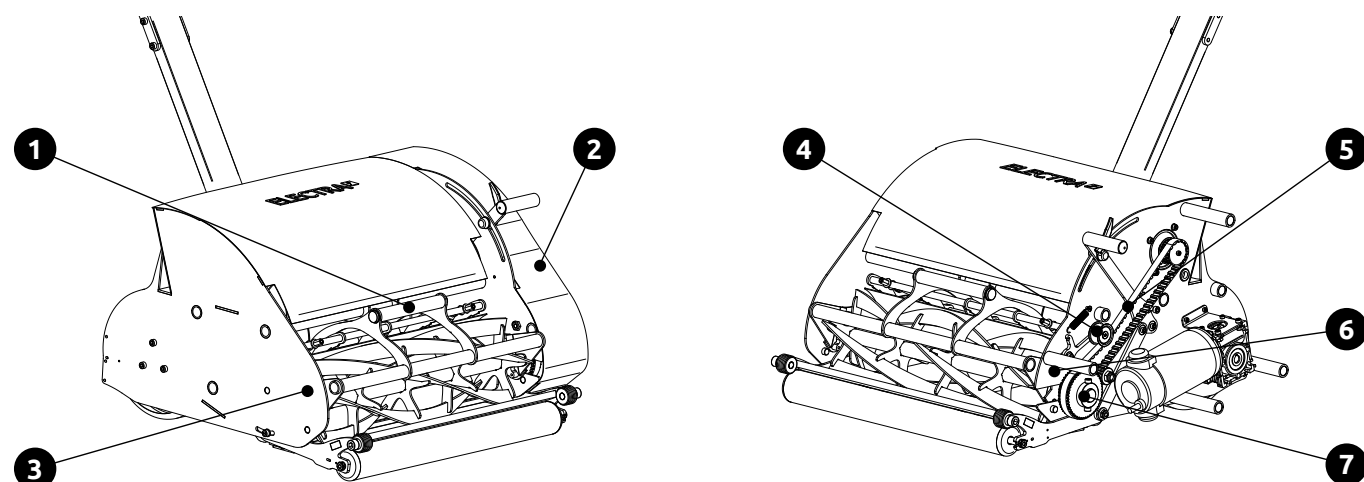


Fig. No. 2 - Swardman Electra



- 1 Cartridge handle
- 2 Side cover
- 3 Cartridge left securing screw
- 4 Cartridge clutch
- 5 Cylinder/reel drive V-belt (Edwin) / Cylinder/reel drive cog belt (Electra)
- 6 Cartridge right securing screw
- 7 Cartridge pulley

Installation of regenerative cartridges

1. Loosen the mowing height lock screw on the right side of the machine
2. Use the height setting lever to set the mowing height to maximum
3. Remove the side cover of the machine 2
4. Release manually the V-belt (Edwin) 5 or cog belt (Electra) 5 from the cartridge pulley 7.
5. Using the Allen key, loosen and remove the left 3 and the right securing screw 6 of the cartridge (the key is included)
6. Remove the cartridge from the machine using the cartridge handle 1
7. Using the handle 1 insert the desired verticutter / scarifier / rotary brush cartridge in the machine
8. Reinstall the securing screws - the left 3 as well as the right one 6 (make sure the screw can be screwed easily)
9. Install the V-belt (Edwin) 5 or the cog belt (Electra) 5 on the cartridge pulley 7
10. Guide the V-belt under the cartridge clutch 4 into its original position and at the Electra under the tensioner
11. Install the side cover 2
12. Set the correct working height of the machine.
 - a. for the **verticutter** set the height so that the front roller is maximum 5 mm (0.2in), preferably 3 mm (0.1in), lifted in the air, and always so that it moves freely above a hard surface. This corresponds to a working depth of -3 mm (-0.1in) and deeper.
 - b. for the **scarifier** set the height so that the springs slightly touch the hard surface or move over it. This corresponds to a working depth of 0 mm/in and deeper.
 - c. for the **rotary brush** lower the working height of the machine so that the bristles are in moderate contact with the surface / lawn. Replace the protective cover Fig. 3 and then cover the gap between the mower chassis and the protective with the magnetic shield Fig. 4



Fig. 3



Fig. 4

13. After installation of the verticutter or scarifier cartridge, place the grass box (for the verticutting cartridge, the collection into the box is less effective, but the bin serves as a protection against flying objects). After installing the rotary brush, the grass bin is not installed.
14. The machine is then ready for work. In the case of the installation of the rotary brush according to Fig. 5



obr. č. 5



When working with the machine and also with the verticutter / scarifier cartridge, grass box should always be installed as it also serves as a protective cover. When working with the rotary brush cartridge always use the metal cover and a magnetic shield.

Cleaning

After each work, clean the machine from dirt and grass residues. Wipe the appliance using a brush and wipe with a cloth, or use a leaf blower. Never use pressure washers, their use can void the warranty for the machine or the accessories.

Winter Storage / Storage longer than 30 days

The prescribed regular maintenance to be performed at the recommended service intervals, replacing of the worn or damaged parts if needed and having repairs and maintenance of the machine performed at the Swardman service department or at the service partner before winter storage will extend the machine lifetime and reliability.



- Before storing the machine, observe the following:**
- 1. Thoroughly clean the machine. Remove all stuck grass residues
 - 2. Check the mechanical parts
 - 3. Make sure all the bolts and nuts are tightened

Acknowledgements

Thank you for purchasing a Swardman product. We believe that with proper care it will serve you for a long time and your lawn will be your pride and joy. Our team is always ready to advise you on how to correctly use this machine. If you have any questions, please do not hesitate to contact us. We will be happy if you share with us your experiences in using the Swardman machine.

Troubleshooting

The following table shows possible symptoms of problems and how to fix them if your machine is not working properly. If you cannot find or fix the problem using this table, please contact your dealer. Caution: Before troubleshooting, turn the machine off and remove the end cap from the spark plug (Edwin) or pull the main switch to the off position (Electra).

Problem	Type	Possible cause	Remedy
The cartridge does not rotate	Edwin	1. The cartridge control cable is too loose 2. Worn belt	Follow the Edwin or Electra main user's guide in the „Troubleshooting“ section. Removal of the fault is the same as for the same symptoms of mower cylinder/reel malfunction.
	Electra	1. Low capacity of the accumulator 2. Fallen or damaged belt 3. Electronics failure	
The cartridge rotates even when the cylinder/reel control lever is not pushed	Edwin	Incorrect clutch adjustment, cartridge control cable too tight	
	Electra	Electronics failure	
The cartridge does not engage in the lawn	Edwin Electra	The working height is not adjusted properly / or the blades are worn	Use the height adjustment on the machine to lower the working height. / replace the blades.





SWARDMAN

passion for lawns



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