

Operator's manual
HUSQVARNA AUTOMOWER®
435X AWD



EN, English

Read the operator's manual carefully and make sure that you understand the instructions before you use the product.

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1 Introduction

Serial number:

PIN code:

The serial number is on the product rating plate and on the product carton.

- Use the serial number to register your product on www.husqvarna.com.

1.1 Support

For support about the Husqvarna product, speak to your servicing dealer.

1.2 Product description

Note: Husqvarna regularly updates the appearance and function of the products. Refer to *Support on page 3*.

The product is a robotic lawn mower. The product has a battery power source and cuts the grass automatically. Collection of grass is not necessary.

The operator selects the operation settings with the jog wheel. The display shows the selected and possible operation settings, and the operation mode of the product.

The boundary wire and the guide wire controls the movement of the product within the work area.

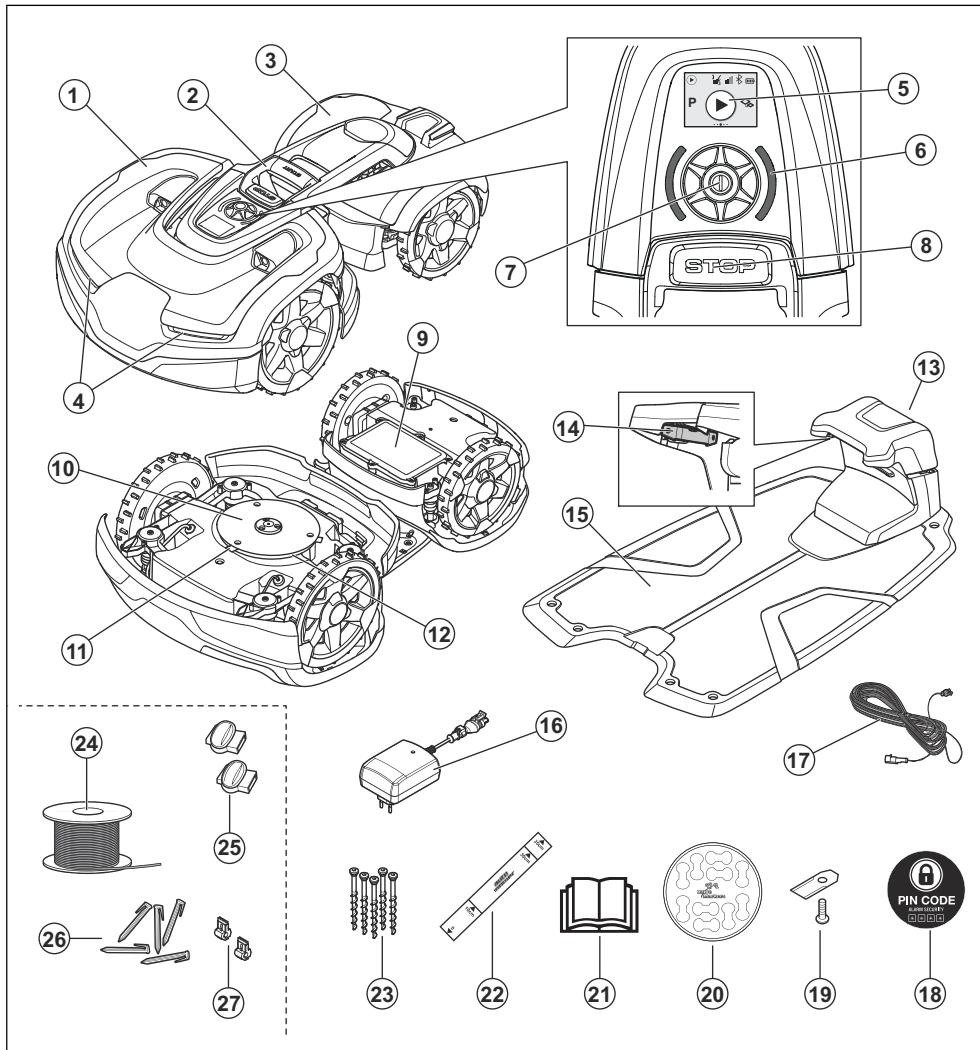
1.2.1 Automower® Access

The user interface of the product is called Automower® Access. It consists of the display, the jog wheel, the LED status indicator, the **START** button and the **STOP** button. Refer to *Automower® Access on page 6*.

1.2.2 Automower® Connect

Automower® Connect is a mobile application that makes it possible to select the operation settings remotely. Refer to *Automower® Connect on page 23*.

1.3 Product overview



- | | |
|-------------------------|---|
| 1. Front top cover | 9. START button |
| 2. Lifting handle | 10. Battery cover |
| 3. Rear top cover | 11. Skid plate |
| 4. Headlights | 12. Blades |
| 5. Display | 13. Blade disc |
| 6. LED status indicator | 14. LED for operation check of the charging station and boundary wire |
| 7. Jog wheel | 15. Contact strips |
| 8. STOP button | |

16. Charging station
17. Power supply (the appearance of the power supply may differ depending on market)
18. Low voltage cable
19. Alarm decal
20. Extra blades
21. Cable markers
22. Operator's Manual and Quick Guide
23. Measurement gauge for help when installing the boundary wire (the measurement gauge is broken loose from the box)
24. Screws for securing the charging station
25. Loop wire for boundary loop and guide wire¹
26. Couplers for loop wire²
27. Stakes³
28. Connector for the loop wire⁴

1.4 Symbols on the product

These symbols can be found on the product. Study them carefully.



WARNING: Read the user instructions before operating the product.



WARNING: Operate the disabling device before working on or lifting the machine.

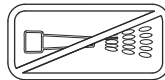
The product can only start when the correct PIN code has been entered. Switch off the product before carrying out any inspections and/or maintenance.



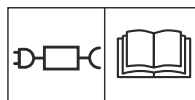
WARNING: Keep a safe distance from the machine when operating. Keep your hands and feet away from the rotating blades.



WARNING: Do not ride on the machine. Never put your hands or feet close to or under the machine.



Never use a high-pressure washer or even running water to clean the product.



Use a detachable power supply as defined on the rating label next to the symbol.

CE This product conforms to the applicable EC Directives.



Noise emission to surroundings. The product's emissions are set out in *Technical data on page 52* and on the rating plate.

¹ Is a part of the Installation kit which is purchased separately.

² Refer to note 1

³ Refer to note 1

⁴ Refer to note 1



It is not permitted to dispose this product as normal household waste. Ensure that the product is recycled in accordance with local legal requirements.



The chassis contains components which are sensitive to electrostatic discharge (ESD). The chassis must also be resealed in a professional manner. For these reasons the chassis shall only be opened by authorized service technicians. A broken seal can result in the entire or parts of the guarantee no longer being valid.



The low voltage cable must not be shortened, extended or spliced. Do not use a trimmer nearby the low voltage cable. Be careful when trimming edges where the cables are placed.

1.5 Symbols on the battery



Read the user instructions.

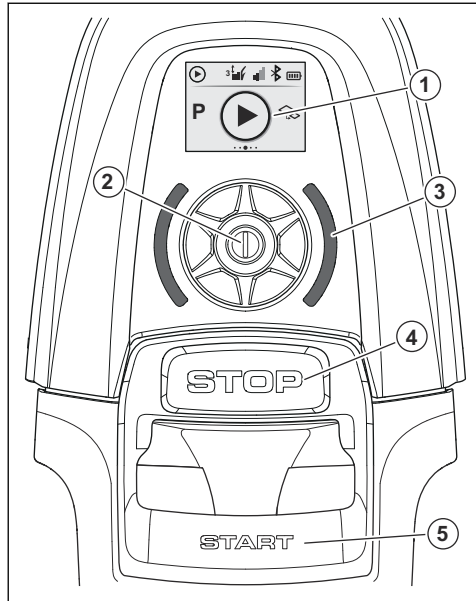


Do not discard the battery into fire and do not expose the battery to a heat source.



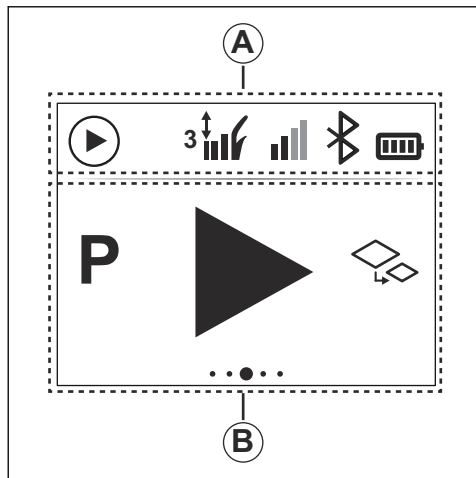
Do not immerse the battery into water.

1.6 Automower® Access








1. Display
2. Jog wheel
3. LED status indicator
4. **STOP** button
5. **START** button






1.6.1 Display



The display shows the status bar and the main menu icons. If an error occurs, the display shows

error icons. Refer to *Error icons in the Automower® Access display on page 38.*

A. Status bar		
Product activity		The current product activity status is shown as either mowing or parked.
Cutting height		The icon shows the current cutting height.
Mobile network		The icon shows the current cellular signal strength.
Bluetooth® status		When the Bluetooth® connection is active, the left Bluetooth® icon is visible in the status bar.
Battery level		The icon shows the current battery status.

B. Main menu icons		
On/Off		When the <i>On/Off</i> icon is confirmed in the main menu, the product is switched off. For how to switch on the product, refer to <i>To switch on the product on page 30.</i>
Park		In the <i>Park</i> menu it is possible to let the product park in the charging station. For different options, refer to <i>Menu structure overview on page 8.</i>
Main area		The <i>Main area</i> is the standard operating mode where the product mows and charges automatically. For different options, refer to <i>Menu structure overview on page 8.</i>
Secondary area		If you select the <i>Secondary area</i> mode, the product must be manually moved to and from an adjacent work area, refer to <i>To make a secondary area on page 18.</i> For different options, refer to <i>Menu structure overview on page 8.</i>
Settings		In the <i>Settings</i> menu it is possible to adjust the cutting height, and to activate Bluetooth® pairing.

1.6.2 To operate Automower® Access

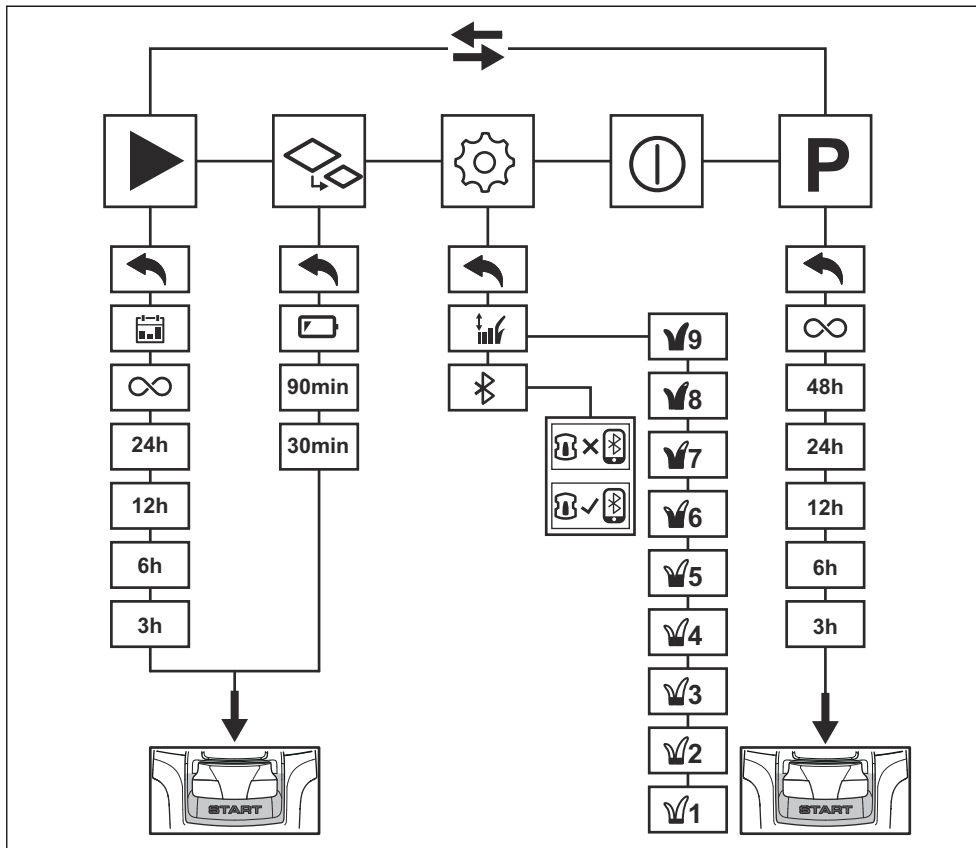
For information on what is what, refer to *Automower® Access on page 6*.








If it is the first time you start the product, refer to *To start the product for the first time on page 25*.

1. Push the jog wheel to start the display. If the product is turned off, refer to *To switch on the product on page 30*.

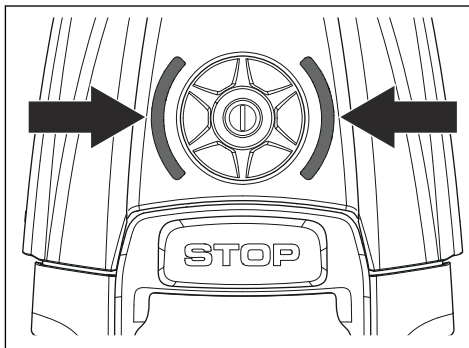
2. Turn the jog wheel clockwise to move to the right or down in the menus. Turn the jog wheel counterclockwise to move to the left or up in the menus.
3. Push the jog wheel to select a menu option.

1.6.3 Menu structure overview



Icon description			
	Use the current timer settings in the Automower® Connect app.		Activate the Bluetooth® pairing mode.
	Operate in the selected mode until a new option is chosen.		Pairing between the product and mobile device is not successful.
	Operate in the selected mode until the battery is empty.		Pairing between the product and mobile device is successful.
	Change the cutting height.		

1.6.4 LED status indicator



LED indication	Status
Green	In operation
Blue	Parked
Red	Error
Yellow	Paused/stopped
Flashing (yellow)	PIN code needed
Pulsating (green/blue)	Charging in progress
Flashing (green/blue)	Push the jog wheel to confirm start of operation.
Flashing (green, low-frequency)	In an idle status (inactive).

2 Safety

2.1 Safety definitions

Warnings, cautions and notes are used to point out specially important parts of the manual.



WARNING: Used if there is a risk of injury or death for the operator or bystanders if the instructions in the manual are not obeyed.



CAUTION: Used if there is a risk of damage to the product, other materials or the adjacent area if the instructions in the manual are not obeyed.

Note: Used to give more information that is necessary in a given situation.

2.2 General safety instructions

The following system is used in the Operator's Manual to make it easier to use:

- Text written in *italics* is a text that is shown on the display of the product or is a reference to another section in the Operator's Manual.
- Text written in **bold** is one of the buttons on the product.
- Text written in *UPPERCASE* and *italics* refer to the different operating modes available in the product.

2.2.1 IMPORTANT. READ CAREFULLY BEFORE USE. KEEP FOR FUTURE REFERENCE

The operator is responsible for accidents or hazards occurring to other people or property.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities (that could affect a safe handling of the product), or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Local regulations may restrict the age of the operator. Cleaning and maintenance shall not be made by children without supervision.

Never connect the power supply to an outlet if the plug or cord is damaged. Worn or damaged cord increase the risk of electric shock.

Only charge the battery in the included charging station. Incorrect use may result in electric shock, overheating or leaking of corrosive liquid from the battery. In the event of leakage of electrolyte, flush with water/neutralizing agent. Seek medical help if it comes in contact with the eyes.

Use only original batteries recommended by the manufacturer. Product safety cannot be guaranteed with other than original batteries. Do not use non-rechargeable batteries.

The appliance must be disconnected from the supply mains when removing the battery.



WARNING: The product can be dangerous if used incorrectly.



WARNING: Do not use the product when persons, especially children, or animals, are in the work area.

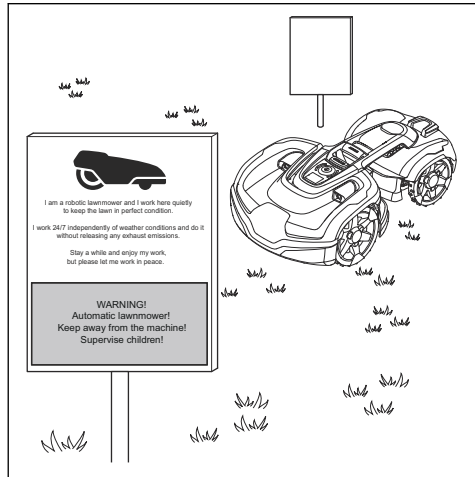


WARNING: Keep your hands and feet away from the rotating blades. Never put your hands or feet close to or under the product when the motor is running.

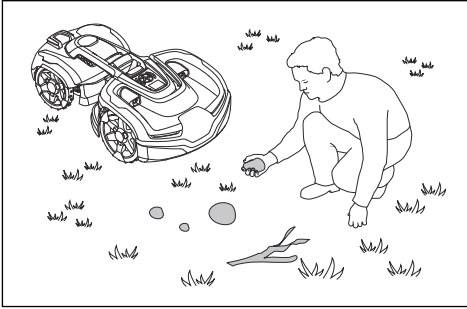
2.3 Safety instructions for operation

2.3.1 Use

- The product may only be used with the equipment recommended by the manufacturer. All other types of use are incorrect. The manufacturer's instructions with regard to operation/maintenance must be followed precisely.
- Warning signs shall be placed around the work area of the product if it is used in public areas. The signs shall have the following text: **Warning! Automatic lawnmower! Keep away from the machine! Supervise children!**



- Use the park function or switch off the product when persons, especially children or pets, are in the work area. It is recommended to program the product for use during hours when the area is free from activity, e.g. at night. Consider that certain species, e.g. hedgehogs, are active at night. They can potentially be harmed by the product. Refer to *Timer on page 26*.
- The product may only be operated, maintained and repaired by persons that are fully conversant with its special characteristics and safety regulations. Please read the Operator's Manual carefully and make sure you understand the instructions before using the product.
- It is not permitted to modify the original design of the product. All modifications are made at your own risk.
- Check that there are no stones, branches, tools, toys or other objects on the lawn that can damage the blades. Objects on the lawn can also lead to the product getting stuck. Help may be required to remove the object before the product can continue mowing. Always switch off the product before clearing a blockage.



- Switch on the product according to the instructions. When the product is switched on; make sure to keep your hands and feet away from the rotating blades. Never put your hands and feet under the product.
- Never touch moving hazardous parts, such as the blade disc, before it has come to a complete stop.
- Never lift up the product or carry it around when it is switched on.
- The product must never be allowed to collide with persons or other living creatures. If a person or other living creature comes in the way of the product, it shall be stopped immediately. Refer to *To stop the product on page 31*.
- Do not put anything on top of the product or its charging station.
- Do not allow the product to be used with a defective guard, blade disc or body. Neither should it be used with defective blades, screws, nuts or cables. Never connect a damaged cable, or touch a damaged cable before it is disconnected from the supply.
- Do not use the product if the **STOP** button does not work.
- Always switch off the product when it is not in use. The product can only start when the correct PIN code has been entered.
- The product must never be used at the same time as a sprinkler. Use the timer function so the product and sprinkler never run simultaneously. Refer to *Timer on page 26*.
- Husqvarna does not guarantee full compatibility between the product and other types of wireless systems such as remote controls, radio transmitters, hearing loops, underground electric animal fencing or similar.

- The built-in alarm is very loud. Be careful, especially if the product is handled indoors.
- Metal objects in the ground (for example reinforced concrete or anti-mole nets) can result in a stoppage. The metal objects can cause interference with the loop signal which then can lead to a stoppage.
- Operation and storage temperature is 0-50 °C / 32-122 °F. Temperature range for charging is 0-45 °C / 32-113 °F. Too high temperatures might cause damage to the product.

2.3.2 Battery safety



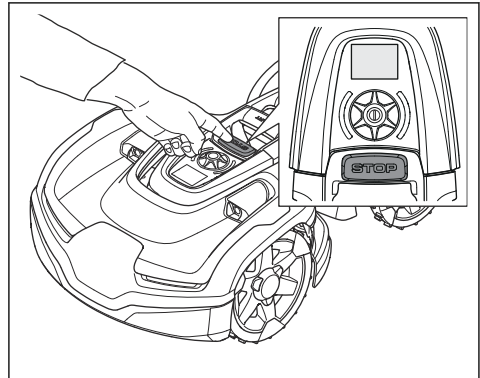
WARNING: Lithium-ion batteries can explode or cause fire if disassembled, short-circuited, exposed to water, fire, or high temperatures. Handle carefully, do not dismantle, open the battery or use any type of electrical/mechanical abuse. Avoid storage in direct sunlight.

For more information about the battery, refer to *Battery on page 36*

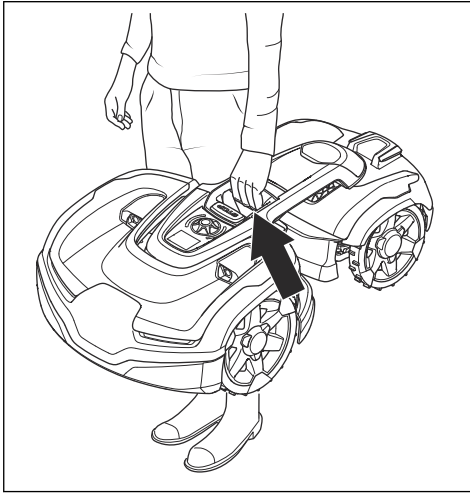
2.3.3 How to lift and move the product

To safely move from or within the work area:

1. Push the **STOP** button to stop the product.



2. Push the jog wheel for 3 seconds to switch off the product.
3. Make sure that the LED status indicator is not lit.
4. Carry the product by the lifting handle as the illustration shows.



CAUTION: Do not lift the product when it is parked in the charging station. It can damage the charging station and/or the product. Push the **STOP** button and pull the product out of the charging station before lifting it.

2.3.4 Maintenance



WARNING: The product must be switched off before it is turned upside down.

The product must be switched off before all work on the chassis of the product, such as cleaning or replacing the blades.



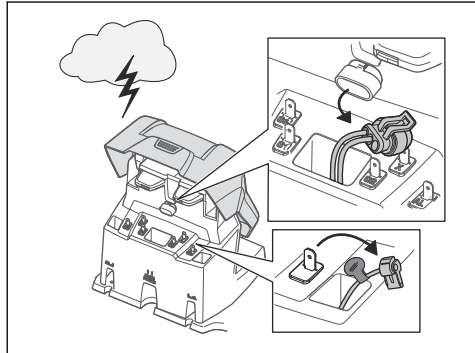
CAUTION: Never use a high-pressure washer or even running water to clean the product. Never use solvents for cleaning.



CAUTION: Use the plug to disconnect the charging station before any cleaning or maintenance of the charging station or the loop wire.

Inspect the product each week and replace any damaged or worn parts. Refer to *Introduction - maintenance on page 32*.

2.3.5 In the event of a thunderstorm



To reduce the risk of damage to electrical components in the product and the charging station, we recommend that all connections to the charging station are disconnected (power supply, boundary wire and guide wire) if there is a risk of a thunderstorm.

1. Mark the wires to simplify reconnecting. The charging station's connections are marked AR, AL and G1. Some models have additional guide wires (G2, G3).
2. Disconnect all connected wires and the power supply.
3. Connect all the wires and the power supply if there is no longer a risk of thunder. It is important that each wire is connected to the right place.

3 Installation

3.1 Introduction - Installation



WARNING: Read and understand the safety chapter before you install the product.



CAUTION: Only use original spare parts and installation material.

Note: Refer to www.husqvarna.com for more information about installation.

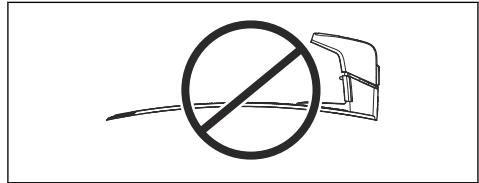
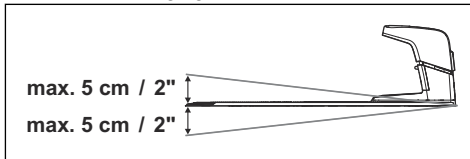
3.2 Before the installation of the product

- Make a blueprint of the work area and include all obstacles.
- Make a mark on the blueprint where to put the charging station, the boundary wire and the guide wire.
- Make a mark on the blueprint where the guide wire connects to the boundary wire. Refer to *To install the guide wire on page 21*.
- Fill in holes in the lawn.

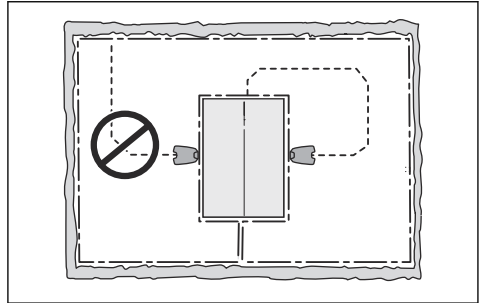
Note: Holes with water in the lawn can cause damage to the product.

3.2.1 To examine where to put the charging station

- Keep a minimum 3 m / 10 ft. of free space in front of the charging station.
- Keep a minimum of 1.5 m / 5 ft. of free space to the right and to the left of the charging station.
- Put the charging station near an outdoor power outlet.
- Put the charging station on a level surface.



- Put the charging station in the largest open section of the work area.
- Put the charging station in an area without an irrigation system.
- Put the charging station in an area with protection from the sun.
- If the charging station is installed on an island, make sure to connect the guide wire to the island. Refer to *To make an island on page 17*.



3.2.2 To examine where to put the power supply

- Put the power supply in an area with a roof and protection from the sun and rain.
- Put the power supply in an area with good airflow.
- Use a residual-current device (RCD) when you connect the power supply to the power outlet.



WARNING: Do not change the power supply. Do not cut or extend the low-voltage cable. There is a risk of electrical shock.

Low-voltage cables of different lengths are available as accessories.



CAUTION: Make sure that the blades on the product do not cut the low-voltage cable.



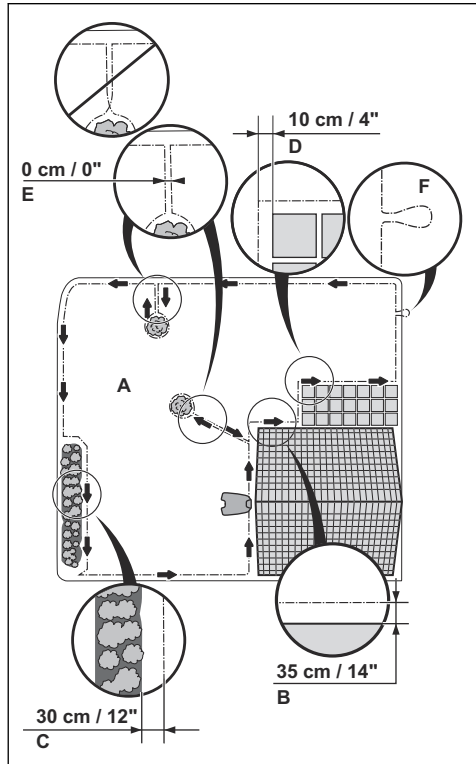
CAUTION: Do not put the low-voltage cable in a coil or below the charging station plate. The coil causes interference with the signal from the charging station.



3.2.3 To examine where to put the boundary wire



CAUTION: If the work area is adjacent to water bodies, precipices or a public road, the boundary wire must have a protective wall. The wall must be minimum 15 cm / 6 in. in height.



- Put the boundary wire around all of the work area (A). Adapt the distance between the boundary wire and obstacles.
- Put the boundary wire 35 cm / 14 in. (B) from an obstacle that is more than 5 cm / 2 in. high.
- Put the boundary wire 30 cm / 12 in. (C) from an obstacle that is 1-5 cm / 0.4-2 in. high.
- Put the boundary wire 10 cm / 4 in. (D) from an obstacle that is less than 1 cm / 0.4 in.
- If you have a paving stone path that is in level with the lawn, put the boundary wire below the paving stone.

Note: If the paving stone is minimum 30 cm / 12 in. wide, use the factory setting for the *Drive Past Wire* function to cut all the grass adjacent to the paving stone.



CAUTION: Do not let the product operate on gravel.

- If you make an island, put the boundary wire that runs to and from the island near together (E). Put the wires in the same stake.
- Make an eyelet (F) where the guide wire is to be connected to the boundary wire.



CAUTION: Do not make sharp bends when you install the boundary wire.

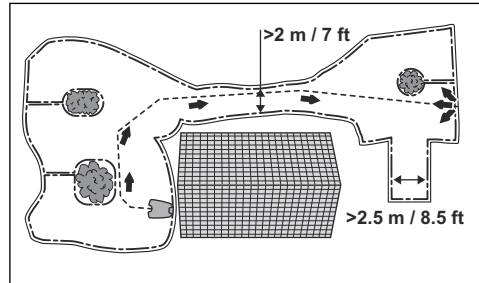


CAUTION: For careful operation without noise, isolate all obstacles such as trees, roots and stones.

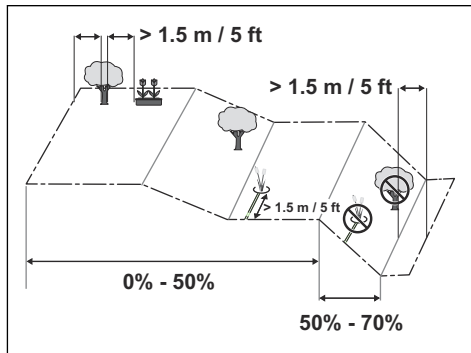
passage must be a minimum of 60 cm / 24 in. wide.

Note: If a passage is less than 2 m / 6.5 ft. wide, install a guide wire through the passage.

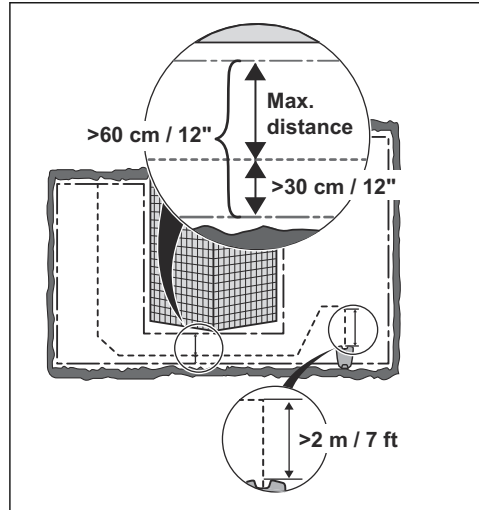
A dead end must be a minimum of 2.5 m / 8.5 ft. wide.



3.2.3.1 To put the boundary wire in a slope



- For slopes up to 50% steep inside the work area, the product will operate normally. Keep a distance of 1.5 m / 5 ft between the boundary wire and obstacles, or between obstacles.
- For slopes between 50-70% steep, make sure that there are no obstacles in the slope. There must be a distance of 1.5 m / 5 ft from the bottom of the slope to the boundary wire.
- For slopes adjacent to a public road, put a fence or a protective wall along the outer edge of the slope.



Note: Make sure that the guide wire has as much free area as possible to the left of the guide wire when facing the charging station. Minimum distance between the guide wire and boundary wire is 30 cm / 12 in.

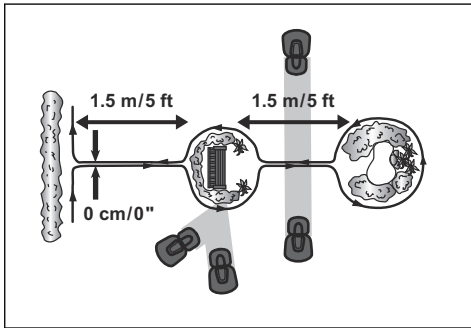
3.2.3.2 Passages

A passage is a section that has boundary wire on each side and that connects 2 work areas. The

3.2.3.3 To make an island

- Put the boundary wire to and around the obstacle to make an island.
- Put the 2 sections of boundary wire that run to and from the obstacle together.

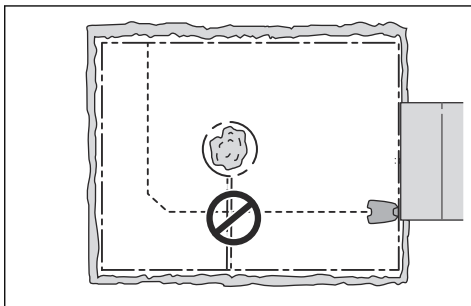
- Put the 2 sections of boundary wire in the same stake.
- Make sure that there is a minimum of 1.5 m / 5 ft of empty space before an obstacle.



CAUTION: Do not put a section of boundary wire across the other. The sections of boundary wire must be parallel.



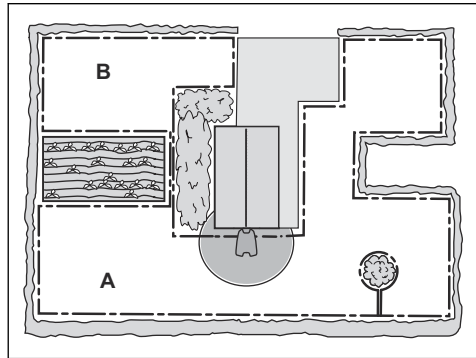
CAUTION: Do not put the guide wire across the boundary wire, for example a boundary wire that goes to an island.



3.2.3.4 To make a secondary area

Make a secondary area if the work area has 2 areas that are not connected with a passage.

- Put the boundary wire around the secondary area (B) to make an island. The work area with the charging station is the main area (A). Refer to *Main area* on page 30.

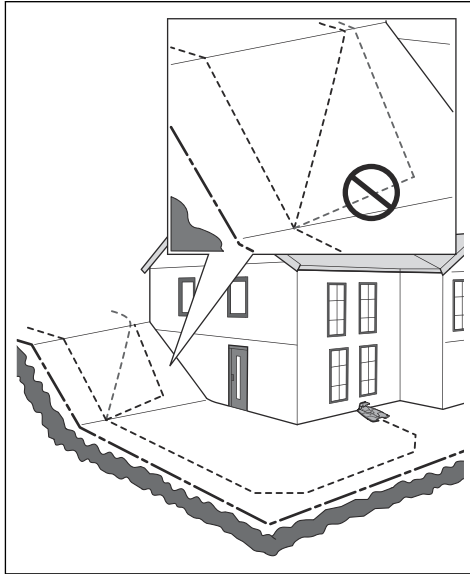


Note: When the product cuts grass in the secondary area, the *Secondary area* mode must be selected. Refer to *Secondary area* on page 30.

3.2.4 To examine where to put the guide wire

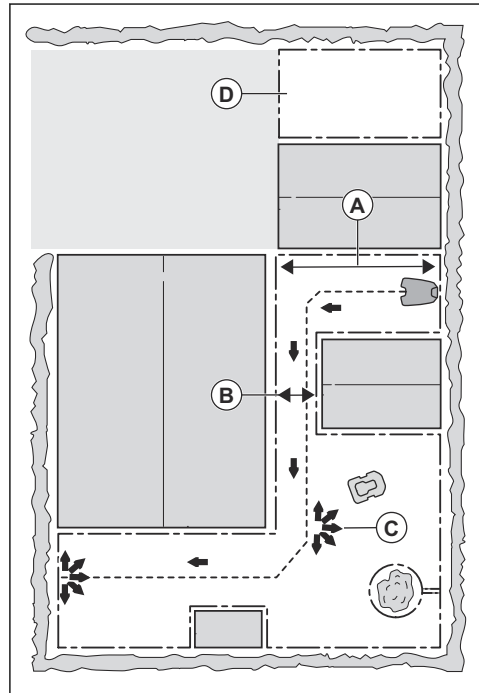
Depending on product model, the product can have up to 3 guide wires. Use the same approach for all guide wires.

- Put the guide wire in a line at a minimum of 2 m / 7 ft. in front of the charging station.
- Make sure that the guide wire has as much free area as possible to the left of the guide wire when facing the charging station.
- Put the guide wire minimum 30 cm / 12 in. from the boundary wire.
- Do not make sharp bends when you install the guide wire.
- If the work area has a slope, put the guide wire in a straight line from the bottom of the slope to the top of the slope. If it is not possible to make a straight line, put the guide wire diagonally across the slope.



CAUTION: Do not put the guide wire in parallel with the slope, as the illustration shows. This can increase the wear on the grass.

3.2.5 Work area examples



- If the charging station is put in a small area (A), make sure that the distance to the boundary wire is at a minimum 3 m / 10 ft.
- If the work area has a passage (B), make sure that the distance to the boundary wire is at a minimum 2 m / 6.5 ft. If the passage is smaller than 2 m / 6.5 ft., install a guide wire through the passage. Minimum passage between the boundary wire is 60 cm / 24 in.
- If the work area has areas which are connected by small passages (C), you can change the settings of Lawn Coverage. Refer to *Lawn coverage on page 27*.
- If the work area includes a secondary area (D), refer to *To make a secondary area on page 18*. Put the product in the secondary area and select *Secondary area mode*, refer to *Secondary area on page 30*.

3.3 Before the installation of the wires

You can select to attach the wires with stakes or bury them. You can use the 2 procedures for the same work area.

- Bury the boundary wire or the guide wire if you are going to use a dethatcher on the work area. If not, attach the boundary wire or guide wire with stakes.
- Cut the grass before you install the product. Make sure that the grass is maximum 10 cm / 4 in.

Note: The first weeks after installation the perceived sound level when cutting the grass may be higher than expected. When the product has cut the grass for some time, the perceived sound level is much lower.

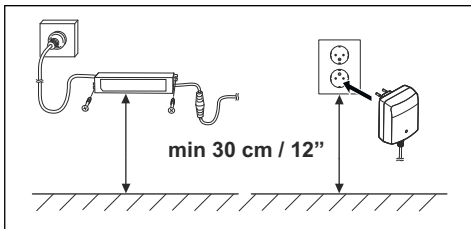
3.4 Installation of the product

3.4.1 To install the charging station



WARNING: Obey national regulations about electrical safety.

1. Read and understand the instructions about the charging station. Refer to *To examine where to put the charging station on page 15*.
2. Put the charging station in the selected area.
3. Connect the low-voltage cable to the charging station.
4. Put the power supply at a minimum height of 30 cm / 12 in.



WARNING: Do not put the power supply at a height where there is a risk it can be put in water. Do not put the power supply on the ground.



WARNING: Do not encapsulate the power supply. Condensed water can harm the power supply

and increase the risk of electrical shock.

5. Connect the power supply cable to a 100-240V outdoor power outlet.



WARNING: Applicable to USA/ Canada. If power supply is installed outdoors: Risk of Electric Shock. Install only to a covered Class A GFCI receptacle (RCD) that has an enclosure that is weatherproof with the attachment plug cap inserted or removed.

6. Put the low-voltage cable in the ground with stakes or bury the cable. Refer to *To put the wire into position with stakes on page 21* or *To bury the boundary wire or the guide wire on page 22*.
7. Connect the wires to the charging station. Refer to *To install the boundary wire on page 20* and *To install the guide wire on page 21*.
8. Attach the charging station to the ground with the supplied screws.



CAUTION: Do not make new holes in the charging station plate.



CAUTION: Do not put your feet on the charging station.

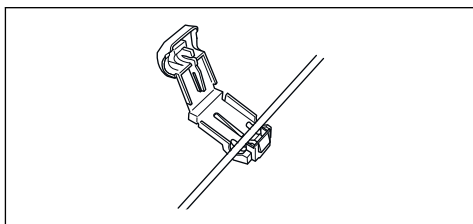
3.4.2 To install the boundary wire

1. Put the boundary wire around all of the work area. Start and complete the installation behind the charging station.



CAUTION: Do not put unwanted wire in a coil. The coil causes interference with the product.

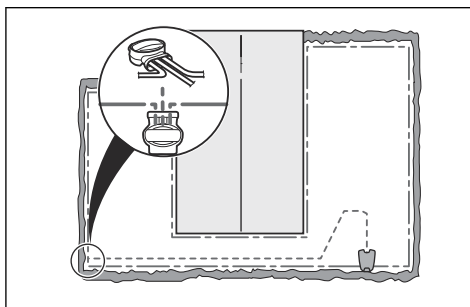
2. Open the connector and put the boundary wire in the connector.



3. Close the connector with a pair of pliers.
4. Cut the boundary wire 1-2 cm / 0.4-0.8 in. above each connector.
5. Put the right end of boundary wire into the channel with the mark "AR".
6. Put the left end of boundary wire into the channel with the mark "AL".
7. Push the right connector onto the metal pin with the mark "AR".
8. Push the left connector onto the metal pin with the mark "AL".
9. Put the cable mark on the left and right boundary wire.

3.4.3 To install the guide wire

1. Open the connector and put the wires in the connector.
2. Close the connector with a pair of pliers.
3. Cut the guide wires 1-2 cm / 0.4-0.8 in. above each connector.
4. Put the guide wires centrally below the charging station plate, and push them through the slot in the charging station tower.
5. Push the connector onto the metal pin with the mark "G1" (if applicable, also for G2 and G3).
6. Put the cable mark on the guide wires.
7. Put the end of the guide wires at the eyelet on the boundary wire.
8. Cut the boundary wire with a pair of wire cutters.
9. Connect the guide wires to the boundary wire with a coupler.



- a) Put the 2 ends of the boundary wire and the end of the guide wires into the coupler.

Note: Make sure that you can see the end of the guide wires through the transparent area of the coupler.

- b) Push the button on the coupler with an adjustable pliers.



CAUTION: Twinned cables, or a screw terminal block that is insulated with insulation tape are not satisfactory splices. Soil moisture will cause the wire to oxidize and after a time result in a broken circuit.

10. Attach the guide wires to the ground with stakes or bury the guide wires in the ground. Refer to *To put the wire into position with stakes on page 21* or *To bury the boundary wire or the guide wire on page 22*.

3.5 To put the wire into position with stakes

- Put the boundary wire and the guide wire on the ground.
- Put the stakes at a maximum of 75 cm / 30 in. distance from each other.
- Attach the stakes to the ground with a hammer or a plastic mallet.



CAUTION: Make sure that the stakes hold the boundary wire and the guide wire against the ground.

Note: The wire is overgrown with grass and not visible after a few weeks.

3.6 To bury the boundary wire or the guide wire

- Cut a groove in the ground with an edge cutter or a straight shovel.
- Put the boundary wire or the guide wire 1-20 cm / 0.4-8 in. into the ground.

3.7 To change the position of the boundary wire or the guide wire

1. If the boundary wire or the guide wire is put into position with stakes, remove the stakes from the ground.
2. Carefully remove the boundary wire or the guide wire from the ground.
3. Adjust the boundary wire or the guide wire into a new position.
4. Put the boundary wire or the guide wire into position. Refer to *To put the wire into position with stakes on page 21* or *To bury the boundary wire or the guide wire on page 22*.

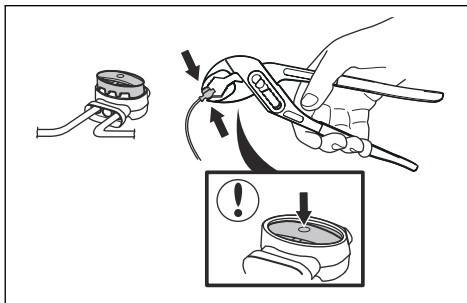
3.8 To extend the boundary wire or the guide wire

Note: Extend the boundary wire or the guide wire if it is too short for the work area. Use original spare parts, for example couplers.

1. Cut the boundary wire or the guide wire with a pair of wire cutters where it is necessary to install the extension.
2. Add wire where it is necessary to install the extension.
3. Put the boundary wire or the guide wire into position.
4. Put the wire ends into a coupler.

Note: Make sure that you can see the ends of the boundary wire or the guide wire through the transparent area of the coupler.

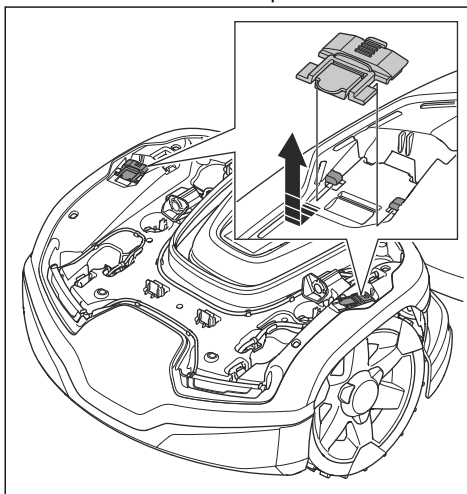
5. Push the button on the coupler with an adjustable pliers.



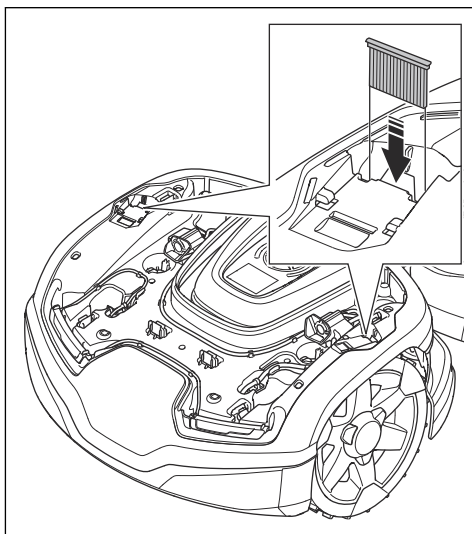
3.9 To install the wheel brushes

The wheel brushes are an accessory for Automower® 435X AWD. Contact your local Husqvarna representative.

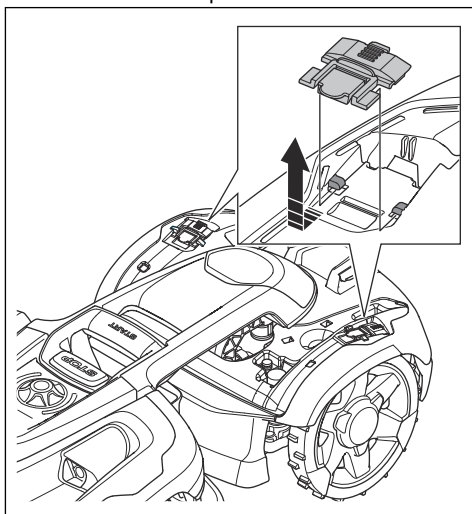
1. Remove the front top cover. Refer to *To remove the front top cover on page 34*.
2. Remove the rear top cover. Refer to *To remove the rear top cover on page 35*.
3. Remove the wheel brush covers in the front end of the product. Lift the front-end of the wheel brush cover and push forward.



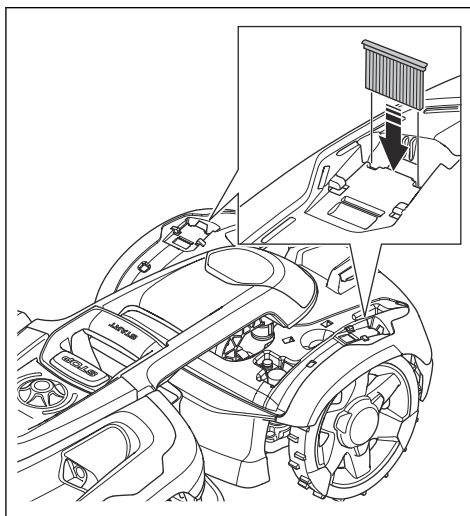
4. Install the front wheel brushes.



5. Remove the wheel brush covers in the rear of the product. Lift the front-end of the wheel brush cover and push forward.



6. Install the rear wheel brushes.



7. Attach the wheel brush covers.
8. Install the front top cover. Refer to *To install the front top cover on page 34*.
9. Install the rear top cover. Refer to *To install the rear top cover on page 36*.

3.10 After the installation of the product

3.10.1 To do a visual check of the charging station

1. Make sure that the LED status indicator on the charging station has a green light.
2. If the LED status indicator does not have a green light, do a check of the installation. Refer to *Indicator lamp in the charging station on page 45* and *To install the charging station on page 20*.

3.11 Automower® Connect

The product has Automower® Connect included from factory.

The app gives 2 modes of connectivity: Long-range cellular connectivity and Short-range Bluetooth® connectivity.

The product can connect to mobile devices that have the Automower® Connect app installed. Automower® Connect is a free app for your mobile device. The Automower® Connect app gives extended functions to your Husqvarna product. You can:

- See the status of your product.
- Change settings to your product.
- Get extended product information.
- Get an alarm if the product moves out of the work area.

Note: All countries do not support Automower® Connect because of regional specified cellular systems.

3.11.1 To install Automower® Connect

1. Download the Automower® Connect app on your mobile device.

2. Register in the Automower® Connect app.
3. Log in to your Husqvarna account in the Automower® Connect app.

3.11.2 To pair Automower® Connect and the product

1. Do step 1-6 in *To start the product for the first time on page 25.*
2. Obey the instructions in the Automower® Connect app.

3.12 Overview of settings in Automower® Access and Automower® Connect

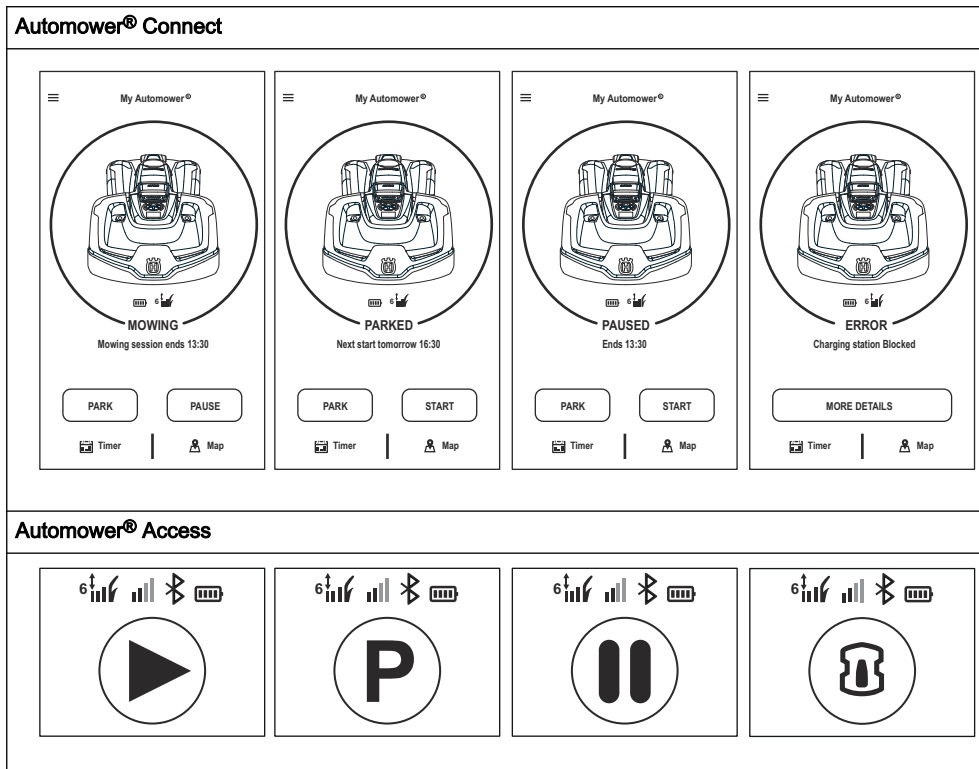
This table shows which functions are available in the Automower® Access and the Automower® Connect.

Note: N/A in this table means that the function is not available for the interface.

Function	Automower® Access	Automower® Connect
Control		
Operating mode	Set and view	Set and view
Status view		
Mower activity	View	View
Battery status	View	View
Automower® Connect status	View	View
Messages		
Warning messages	N/A	Detailed view
Error messages	Error icons	Detailed view
Settings		
Timer	N/A	Set and view
Cutting height	Set and view	Set and view
Installation	N/A	Set and view
Operation	N/A	Set and view
Accessories	N/A	Set and view
Security	N/A	Set and view
Time and Date	N/A	Set and view

3.12.1 User interface overview

The user interface overview below shows examples of Automower® Connect and the corresponding display in Automower® Access.



3.13 To start the product for the first time

When the product is switched on for the first time, there are some basic settings to do before the product can start to operate.

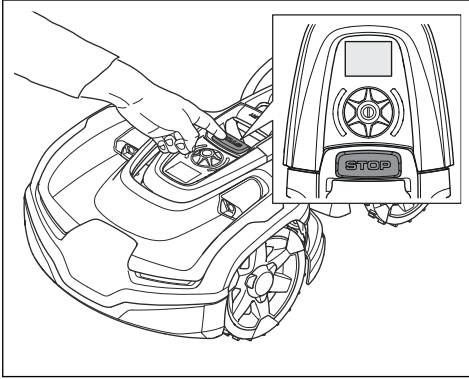
1. Push the jog wheel for 3 seconds to switch on the product.
2. Enter the factory PIN code.
3. Pair your product with Automower® Connect.
 - a) If you want to pair your product with Automower® Connect, obey step 4-9.
 - b) If you do not want to pair your product with Automower® Connect, push the arrow icon to continue to the menu.
4. Log in to your Husqvarna account in the Automower® Connect app.
5. Start Bluetooth® on your mobile device.
6. Select *My mowers* in the Automower® Connect app, and then select the plus sign (+).
7. Select model. The Automower® Connect app searches for available products within short-range (Bluetooth®).
8. Select product.
9. Obey the instructions in the Automower® Connect app.

Note: We recommend you to pair your product with Automower® Connect to get access to all functions in the product.

3.14 Settings in Automower® Access

3.14.1 To adjust the cutting height with Automower® Access

1. Push the **STOP** button to stop the product.



2. Use the jog wheel to go to *Settings*.
3. Use the jog wheel to go to the cutting height icon.
4. Turn the jog wheel to change the cutting height.
5. Push the jog wheel to select the cutting height.

3.15 Settings in Automower® Connect



The product has factory settings but the settings can be adapted to each work area.

3.15.1 Timer



In *Timer* you can change the timer settings for the product. To change the settings, obey the instructions in the Automower® Connect app.

The timer function controls which work hours the product should operate and not operate. When the product is not operating it is parked in the charging station. The operating hours and days can be seen in an overview in the Automower® Connect app.

The default timer setting allows the product to operate around the clock 7 days a week. This is normally a suitable setting for a work area corresponding to the maximum capacity. If the

work area is less than the maximum capacity the timer should be used to minimize wear on the grass and to the product.

To calculate the timer setting, refer to *To calculate the timer setting on page 26*.

3.15.1.1 To calculate the timer setting

1. Calculate the dimension of your lawn in m^2 / yd^2 .
2. Divide the m^2 / yd^2 of the lawn with the approximate operation capacity. Refer to table below.
3. The result is equal to the number of hours that the product must operate each day.

Note: The operation capacity is approximate and is calculated for flat and open work area. If the work area has a lot of slopes or obstacles, you need to increase the timer settings.

Model	Approximate operation capacity, m^2 / yd^2 / h
Automower® 435X AWD	146 / 175

Example: A lawn of $500 m^2$ / $600 yd^2$, cut with an Automower® 435X AWD.

$$500 m^2 / 146 \approx 3.5 h.$$

$$600 yd^2 / 175 \approx 3.5 h.$$

Days / week	h / day	Timer settings
7	3.5	10:00 - 13:30 / 10 am - 1.30 pm

3.15.2 Cutting height



In *Cutting height* you can change the cutting height settings for the product. To change the settings, obey the instructions in the Automower® Connect app.

There are 2 ways to adjust the cutting height:

- With the jog wheel on the product. Refer to *To adjust the cutting height with Automower® Access on page 26*.

- With the Automower® Connect app. Open the Automower® Connect app on your mobile device. Go to *Settings > Cutting height* and obey the instructions in the app.

The cutting height can be varied from MIN (3 cm / 1.2 in.) to MAX (7 cm / 2.8 in.).



CAUTION: During the first weeks after a new installation, the cutting height must be set to MAX to avoid damaging the loop wire. After this, the cutting height can be lowered step by step every week until the desired cutting height has been reached.

3.15.3 Operation



In *Operation* you can change the operation settings of the product. To change the settings, obey the instructions in the Automower® Connect app.

3.15.3.1 ECO mode

ECO mode stops the signal in the boundary loop, the guide wire and the charging station, when the product is parked or is charging.

Note: Use *ECO mode* to save energy and avoid interference with other equipment, for example hearing loops or garage doors.

Note: Push the **STOP** button before you remove the product from the charging station. If not, the product can not be started in the work area.

3.15.4 Installation



In *Installation* you can change the installation settings of the product. To change the settings, obey the instructions in the Automower® Connect app.

3.15.4.1 Find charging station

The product has 2 search methods to find the charging station:

- Charging station signal - The product moves in the work area until it finds the signal of the charging station.

- Guide wire - The product moves in the work area until it finds the guide wire. The product moves along the guide wire to the charging station.

The factory setting is set to mix the 2 search methods. When the battery is low the product starts to search for the charging station signal. The strength of the charging station signal can be changed in the Automower® Connect app. After a specified time delay the product changes search method to the guide wire method. The time delay can be changed in the Automower® Connect app.

3.15.4.2 Lawn coverage

The *Lawn coverage* function is used to move the product to remote parts of the work area. You can divide your lawn into 5 areas. For each area you can set:

- which guide wire the product should follow.
- the distance from the charging station to the remote area.
- how frequently the product should operate in the remote area.

3.15.4.3 Drive Past Wire

The front of the product always moves past the boundary wire by a specified distance before the product moves back into the work area. The factory setting for the *Drive Past Wire function* is 31 cm. You can select a distance of 20-50 cm.

3.15.4.4 Starting point

The *Starting point* function allows you to control how far the product drives forward from the charging station before it starts to operate. Use this function if the charging station is placed in an area with limited space, for example under a veranda.

3.15.5 Accessories



In *Accessories* you can change the settings of the product accessories. To change the settings, obey the instructions in the Automower® Connect app.

3.15.5.1 Headlights

Headlight settings

There are 4 different headlight settings that control when the headlights are on:

- Always ON
- Evening only
- Evening and night
- Always OFF

The default setting is Always ON.

Flashes when fault

The headlights flashes if the product stops to operate because of a fault if the function *Flashes when fault* is enabled. The default setting is that *Flashes when fault* is enabled.

3.15.6 General (Bluetooth® only)



This function is used to set time and date, or to reset to default settings. To change the settings, obey the instructions in the Automower® Connect app.

3.15.6.1 Time & date

The time and date can be changed manually, or by using the time and date from the mobile device.

3.15.6.2 Reset to factory settings

The user settings can be reset to factory settings.

3.15.7 Security (Bluetooth® only)



The security settings controls the PIN code, the GeoFence and other security functions. To change the settings, obey the instructions in the Automower® Connect app.

3.15.7.1 New loop signal

The loop signal is randomly selected to create a unique link between the product and the charging station. In rare cases, there may be a need to generate a new signal, for instance if 2 adjacent installations have a very similar signal.

3.15.7.2 Change PIN code

The correct PIN-code must be entered to get access to the *Security* menu in the Automower® Connect app. To change the PIN code, obey the instructions in the app.

3.15.7.3 Theft protection

In the *Theft protection* menu it is possible to set the alarm duration and also what events should trigger the alarm.

Time lock

A time lock can be set to decide how many days will pass before the PIN code must be entered. This means that the product cannot be operated/controlled without first entering the correct PIN code. When the time limit has passed the product continues to mow as normal, but the PIN code must be entered before any new commands or settings can be done. When the PIN code is entered, the product is ready to continue operating. A setting between 1 to 100 days is possible, and the default setting is 30 days.

Require PIN code

This function means that the product cannot be operated or controlled after the **STOP** button has been pushed without first entering the correct PIN code. If the incorrect PIN code is entered 5 times, the product is locked for a time. The lock is extended for each new incorrect try.

Alarm duration

There is a possibility to set how long the alarm signal should last. A setting between 1 and 10 minutes is possible.

STOP button pressed

If the alarm *"STOP button pressed"* is enabled, the alarm goes off if someone presses the **STOP** button and the PIN code is not entered within 30 seconds.

Carried away

If the alarm *Carried away* is enabled, the product senses unexpected motions, and the alarm goes off.

3.15.7.4 GeoFence

GeoFence is a GPS-based theft protection that makes a virtual fence for the product. You will get a message if the product is moved on the other side of the GeoFence.

3.15.8 Automower® Connect, app settings (Bluetooth® only)



In *Automower® Connect* you can enable/disable the Automower® Connect module. You can also see the signal strength, connectivity status, initiate new pairing or remove the product from the paired accounts.

3.15.9 Messages

In this menu the previous fault and information messages can be found. For some of the messages, there are tips and advice to help to rectify the fault.

If the product is disrupted in any way, for example it is trapped or the battery is low, a message is saved relating to the disruption and the time it happened.

If the same message is repeated several times, this may indicate that an adjustment to the installation or the product is required. Refer to *Installation on page 15*.

3.15.10 My mowers

When you choose *My mowers* you can manage all the products paired to your account, as well as add new ones. If there are several paired products it is possible to select one of them as Current mower.

To pair a new product to the Automower® Connect app:

1. Select the plus sign (+).
2. Select model.
3. Obey the instructions in the Automower® Connect app to finish the pairing.

3.15.11 Automower® Direct

Automower® Direct uses short-range Bluetooth® communication, and is included in Automower® 435X AWD.

Husqvarna cannot guarantee the time period or coverage of the long-range cellular connectivity. It is possible to communicate with the product through Bluetooth® if you are in short-range of the product. You can use Automower® Direct without a Husqvarna account as long as you have the product PIN code.

3.15.11.1 To start to use Automower® Direct

1. Download the Automower® Connect app on your mobile device.
2. Select Automower® Direct on the start screen of the Automower® Connect app.
3. Start Bluetooth® on your mobile device and on the product, refer to *To start the product for the first time on page 25*.
4. Go to the *Settings* icon in the display and activate Bluetooth®.

5. Select the product to pair with in the Automower® Connect app.
6. Enter the PIN code for the product.

Note: You have access to the menus and functions as long as you are in Bluetooth® short-range.

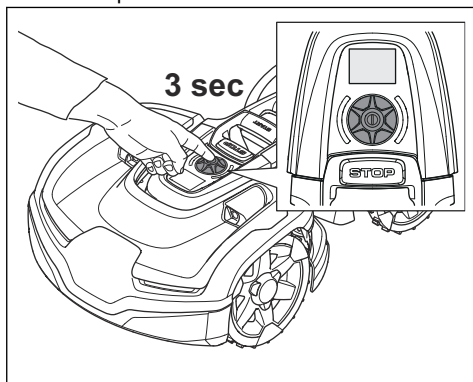
4 Operation

4.1 To switch on the product



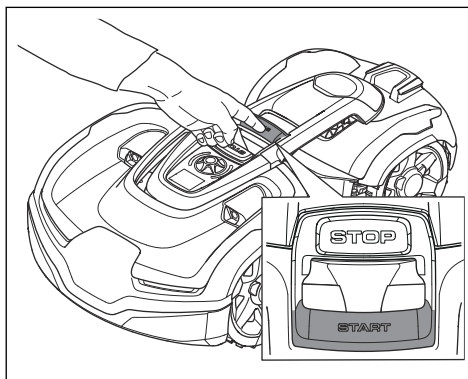
WARNING: Read and understand the safety chapter before you switch on the product.

1. Push the jog wheel for 3 seconds to switch on the product.



Note: Make sure that the **STOP** button is pushed down. If the **STOP** button is not pushed down a **STOP** symbol will appear on the display.

2. Use the jog wheel to enter the PIN code. The correct PIN code must be entered to get access to the menu. If the incorrect PIN code is entered 5 times, the product is locked for a time. The lock is extended for each new incorrect try.
3. Select the desired operating mode and push the jog wheel. Refer to *Operating modes on page 30*.
4. Push the **START** button to start the product.



If the product is parked in the charging station, it will only leave the charging station when the battery is fully charged and if the timer is set to allow the product to operate.

4.2 Operating modes

In the Automower® Access menu the following operation modes can be selected:

- Main area
- Secondary area
- Park

4.2.1 Main area

Main area is the standard operating mode where the product mows and charges automatically. Refer to *Menu structure overview on page 8*.

4.2.2 Secondary area

In the *Secondary area* mode, the product operates for a chosen period of time or until the battery is empty. Refer to *Menu structure overview on page 8*.

Note: It is recommended to change the operation selection to *Main area* before placing the product in the charging station.

4.2.3 Park

When the *Park* mode is selected the following operation selections can be chosen:

- Park until further notice
- Park for a specific number of hours

Refer to *Menu structure overview on page 8*.

4.2.3.1 Park until further notice

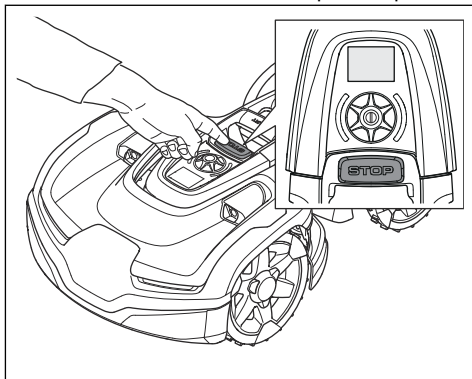
The product stays in the charging station until another operating mode is selected.

4.2.3.2 Park for a specific number of hours

The product stays in the charging station for a chosen number of hours and then automatically returns to normal operation according to the timer. This operation selection is suitable when there is a need to pause operation, e.g. for temporary irrigation or for games on the lawn.

4.3 To stop the product

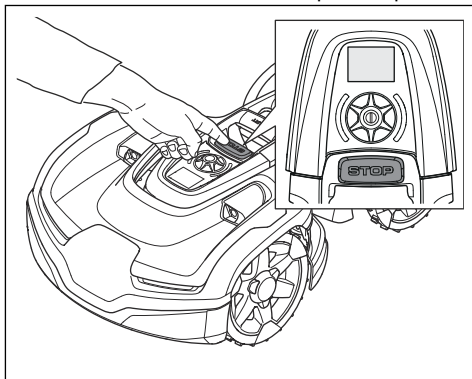
1. Push the **STOP** button on top of the product.



The product stops and the blade motor stops.

4.4 To switch off the product

1. Push the **STOP** button on top of the product.



2. Use the jog wheel to select the On/Off-symbol in the main menu of the Automower® Access display.

3. Make sure that the LED status indicator goes out.

Note: If the LED status indicator is lit or is flashing in any color the product is not switched off. Refer to *LED status indicator on page 9*.



WARNING: Always switch off the product if it requires maintenance, or if the product must be moved from the work area.

4.5 To charge the battery

When the product is new or has been stored for a long period, the battery can be dead and needs to be charged before starting. In the Main area mode, the product automatically alternates between mowing and charging.



WARNING: Only charge the product using a charging station and a power supply which is intended for it. Incorrect use may result in electric shock, overheating or leakage of corrosive liquid from the battery.

In the event of leakage of electrolyte flush with water and seek medical help if it comes in contact with the eyes etc.

1. Place the product in the charging station.
2. Slide the product in as far as possible to ensure proper contact between the product and the charging station.
3. The battery status can be monitored on the status bar of the display.

Note: If the battery is empty the product needs to charge for a certain time period before the product is possible to start.

5 Maintenance

5.1 Introduction - maintenance

For better operating reliability and longer service life: check and clean the product regularly and replace worn parts if necessary. All maintenance and servicing must be done according to Husqvarna's instructions. Refer to *Guarantee terms on page 55*.

It is important that the blade disc rotates easily. The edges of the blades should not be damaged. The lifetime of the blades varies immensely and depends for instance on:

- Operating time and size of the work area.
- Type of grass and seasonal growth.
- Soil, sand and use of fertilizers.
- The presence of objects such as, toys, tools, stones, roots and the like.

The normal life is 3 to 6 weeks when used under favorable conditions. Refer to *Replace the blades on page 33* on how to replace the blades.



WARNING: Wear protective gloves.

Note: Working with blunt blades gives a poorer mowing result. The grass is not cut cleanly and more energy is needed, resulting in the product not being able to maintain such a large area.

5.2 Clean the product

It is important to keep the product clean. A product with large amounts of grass stuck to it will not cope as well with slopes. It is recommended to clean using a brush.

Husqvarna offers a special cleaning and maintenance kit as an accessory. Contact your Husqvarna central service.

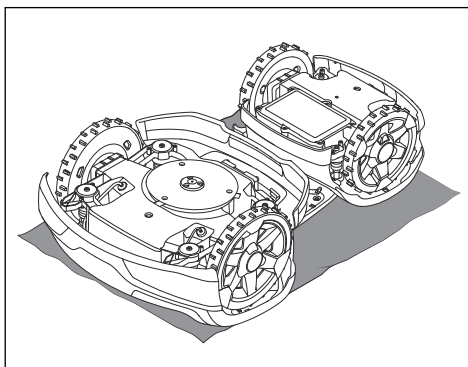


CAUTION: Never use a high-pressure washer to clean the product. Never use solvents for cleaning.

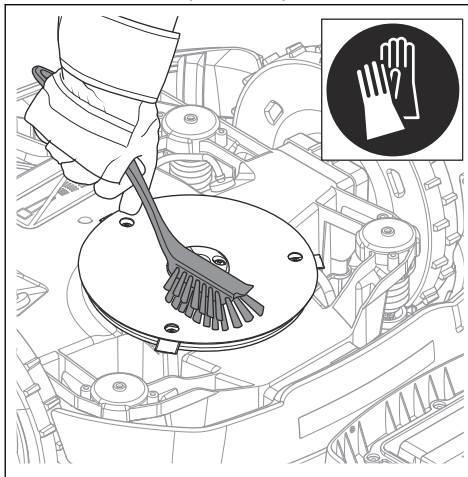
5.2.1 To clean the blade disc

Inspect the blade disc and blades once a week.

1. Switch off the product. Refer to *To switch off the product on page 31*.
2. Turn the product upside down. Place the product on a soft and clean surface to avoid scratching the body. It's also possible to clean the disc and blades with the mower on its side.



3. Clean the blade disc with for example a dish brush. At the same time, check that the blade disc rotates freely in relation to the foot guard. Also, check that the blades are intact and can pivot freely.



5.2.2 Chassis

Clean the underside of the chassis. Brush or wipe with a damp cloth.

5.2.3 Wheels

Clean around the front wheels and rear wheels. Grass on the wheels can impact on how the product performs in slopes.

5.2.4 Cover

Use a damp, soft sponge or cloth to clean the cover. If the cover is very dirty it may be necessary to use a soap solution or washing-up liquid.

5.2.5 Charging station

Clean the charging station regularly from grass, leaves, twigs and other objects that may impede docking.



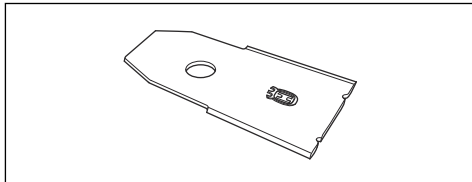
WARNING: Use the plug to disconnect the charging station before any maintenance, or cleaning of charging station or power supply.

5.3 Replace the blades



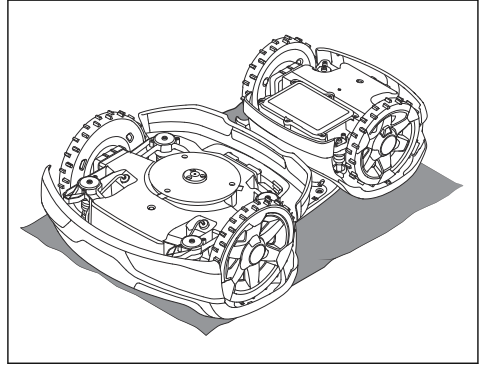
WARNING: Use blades and screws of the right type. Husqvarna can only guarantee safety when using original blades. Only replacing the blades and reusing the screw can result in a screw wearing during mowing. The blades can then be propelled from under the body and cause serious injury.

Replace worn or damaged parts for safety reasons. Even if the blades are intact, they should be replaced on a regular basis for the best mowing result and low energy usage. All 3 blades and screws must be replaced at the same time to obtain a balanced cutting system. Use Husqvarna original blades embossed with the crowned H-mark logotype, refer to *Guarantee terms on page 55*.

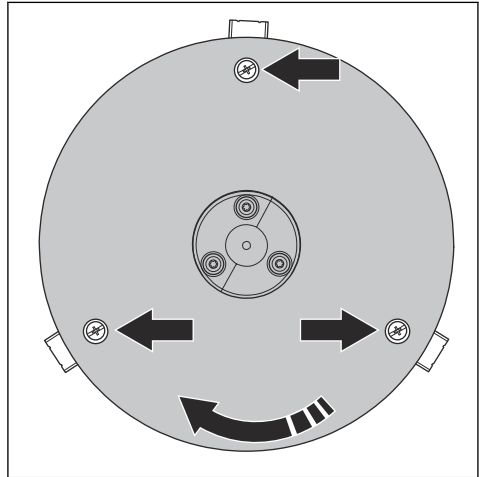


5.3.1 To replace the blades

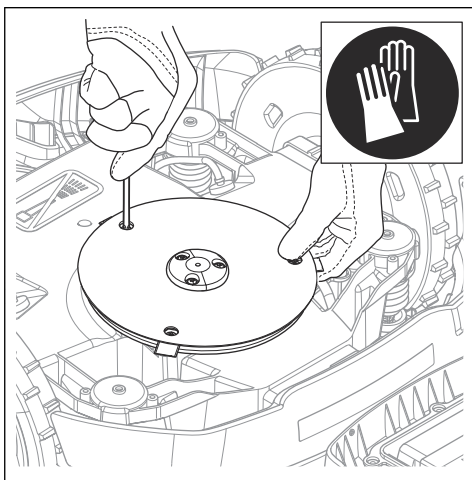
1. Switch off the product. Refer to *To switch off the product on page 31*.
2. Put on protective gloves.
3. Turn the product upside down. Place the product on a soft and clean surface to avoid scratching the body.



4. Rotate the skid plate so that its holes align with the screws for the blade.



5. Remove the 3 screws. Use a manual straight slot or cross-tip screwdriver.



6. Remove each blade and screw.
7. Fasten new blades and screws.
8. Check that the blades can pivot freely.

5.4 To replace the top covers

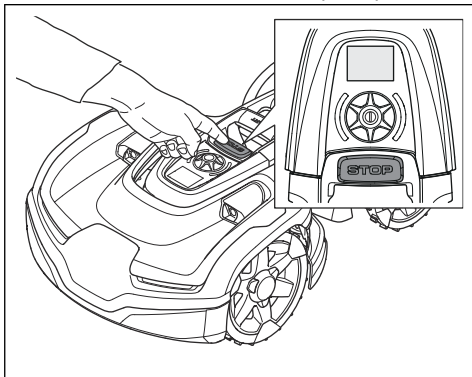
If the top covers are damaged, you must replace them.



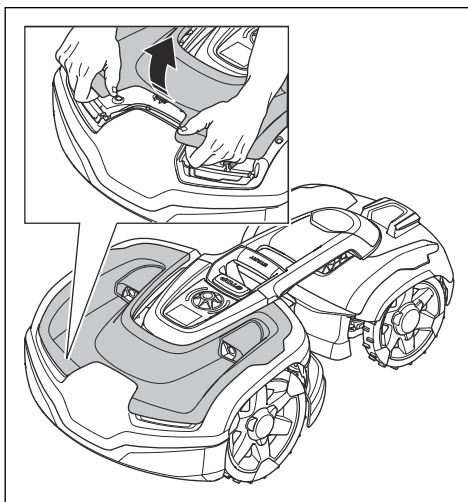
CAUTION: Clean grass and dirt from the product before you remove the covers.

5.4.1 To remove the front top cover

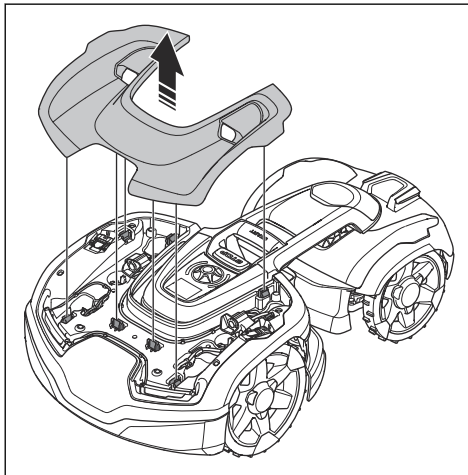
1. Push the **STOP** button to stop the product.



2. Remove the front top cover from the snap-on clips on the product.

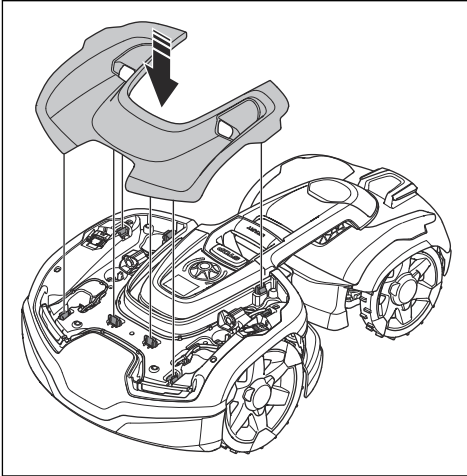


3. Lift the front top cover.

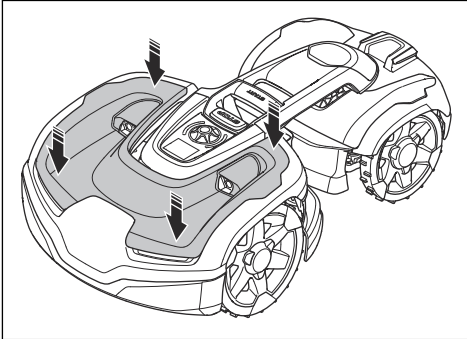


5.4.2 To install the front top cover

1. Put the front top cover on the snap-on clips.

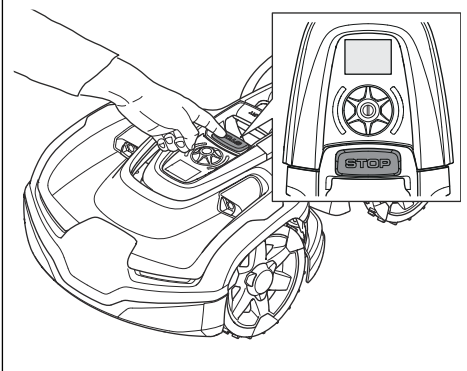


2. Push the front top cover into position.

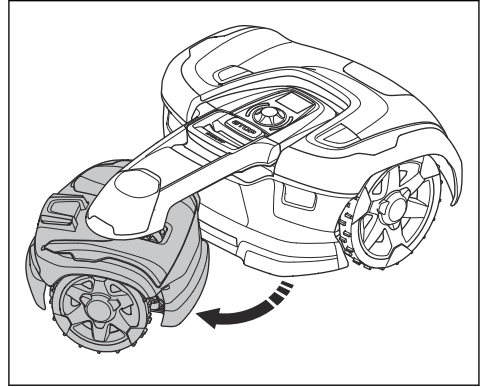


5.4.3 To remove the rear top cover

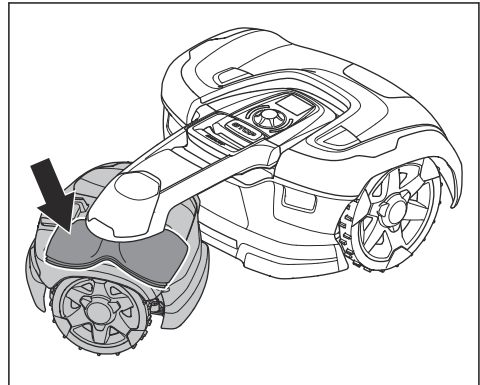
1. Push the **STOP** button to stop the product.



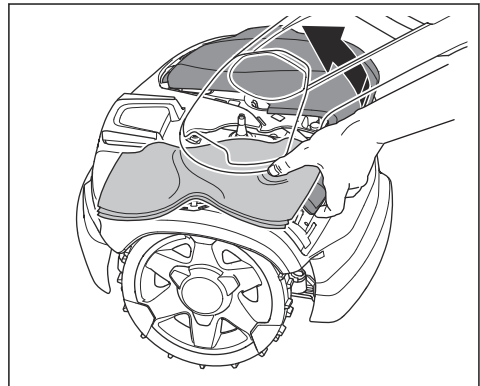
2. Turn the rear body to the left or right side.



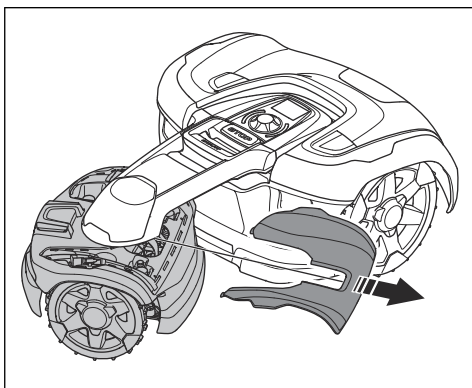
3. Put a protection between the rear top cover and the link arm. This is to prevent damage to the rear top cover.



4. Pull the rear top cover.

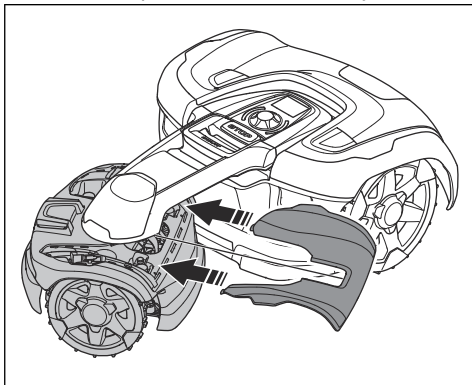


5. Remove the rear top cover.

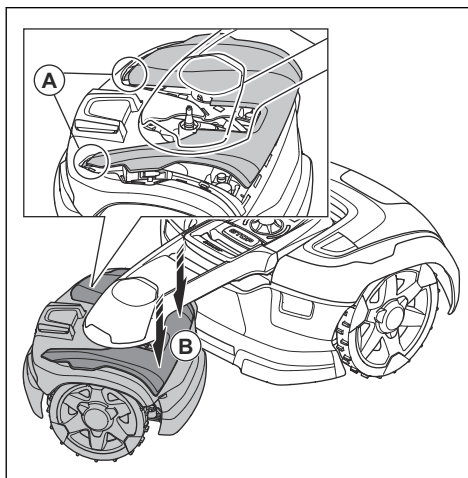


5.4.4 To install the rear top cover

1. Put the top cover on the rear body.



2. Put the top cover in position (A) and push the 2 magnets to assemble the top cover (B).



5.5 Battery



WARNING: Only charge the product using a charging station and power supply which is intended for it. Incorrect use may result in electric shock, overheating or leakage of corrosive liquid from the battery. In the event of leakage of electrolyte flush with water and seek medical help if it comes in contact with the eyes etc.



WARNING: Use only original batteries recommended by the manufacturer. Product safety cannot be guaranteed with other batteries. Do not use non-rechargeable batteries.



CAUTION: The battery must be charged fully before winter storage. If the battery is not fully charged it can be damaged and in certain cases be rendered useless.

Below indicates that the battery is getting old and eventually needs replacing:

- The operating time for the product is shorter than normal between charges. This leads to more charging cycles than normal, which increases the risk of tracks forming near the charging station.

- The product is found standing out on the lawn with *Empty battery* message. This indicates that the product does not have battery capacity enough to find the charging station.

The battery is fine as long as the product maintains a well-cut lawn.

Note: Battery life is dependent on the length of the season and how many hours a day the product is operating. A long season or many hours of use a day means that the battery must be replaced more regularly.

Contact your local Husqvarna representative to replace the battery.

5.6 Winter service

Take your product to your local Husqvarna representative for service prior to winter storage. Regular winter service will maintain the product in good condition and create the best conditions for a new season without any disruptions.

Service usually includes the following:

- Thorough cleaning of the body, the chassis, the blade disc and all other moving parts.
- Testing of the products's function and components.
- Checking and, if required, replacing wear items such as blades and bearings.
- Testing the products's battery capacity as well as a recommendation to replace battery if necessary.
- If new software is available, the product is updated.


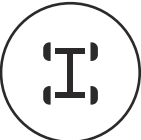

6 Troubleshooting






6.1 Introduction - troubleshooting

In this chapter, a number of messages are listed which may be shown in Automower® Connect and Automower® Access if there is a malfunction. There is a proposal as to the cause and steps to take for each message. This chapter also presents some symptoms that can guide you if the product does not work as expected. More suggestions for steps to take in the event of malfunction or symptoms can be found on www.husqvarna.com.

6.2 Error icons in the Automower® Access display

If an error icon is shown in the Automower® Access display, press the **STOP** button to confirm the error and return to the main menu.

Error icon	Description	Action
	The product has stopped because of an unexpected situation.	Examine if the cause of the problem is obvious. For example, if the product is not in the work area area or if the product is in top of an object (stone, branch, etc). Restart the operation of the product.
	The product has stopped because of an unexpected behavior from the wheel motors.	Examine the drive wheels and remove grass or other objects. Restart the operation of the product. Contact your local Husqvarna representative if the problem is frequent.
	The product has stopped because the loop signal is missing.	Refer to the error message "No loop signal" in <i>Fault messages on page 40</i> .

Error icon	Description	Action
	<p>The product has stopped because of low battery.</p>	<p>Refer to the error message "Empty Battery" in <i>Fault messages on page 40</i>.</p>
	<p>The product has stopped because of a blockage to the cutting system.</p>	<p>Examine the blade disc and its adjacent area. Remove grass or other objects that can cause blockage to the cutting system.</p>
	<p>The product has stopped because of a temporary electronic or software problem.</p>	<p>Switch off/on the product. If the problem continues, contact your local Husqvarna representative.</p>
	<p>The product has stopped because of an activated alarm.</p>	<p>Restart the product. The settings for the alarm are in the security menu in Automower® Connect app.</p>
	<p>The product has stopped because of the wrong PIN code.</p>	<p>Enter the correct PIN code. Contact your local Husqvarna representative if you have forgotten the PIN code.</p>

6.3 Fault messages

The table below shows a number of fault messages that may be shown in Automower® Connect. Contact your local Husqvarna representative if the same message appears often. For more information, refer to *Messages on page 29*.

Message	Cause	Action
<i>Wheel motor blocked</i>	Grass or other object has wrapped around the drive wheel.	Check the drive wheel and remove the grass or other object.
<i>Cutting system blocked</i>	Grass or other object has wrapped around the blade disc.	Check the drive wheel and remove the grass or other object.
	The blade disc lies in a pool of water.	Move the product and prevent the collection of water in the work area.
<i>No loop signal</i>	The power supply is not connected.	Check the wall socket connection and whether an earth-fault breaker has tripped or not. Check that the low voltage cable is connected to the charging station.
	The low voltage cable is damaged or not connected.	Check that the low voltage cable is not damaged. Check that it is also properly connected to the charging station and to the power supply.
	The boundary wire is not connected to the charging station.	Check that the boundary wire connectors are fitted properly to the charging station. Replace connectors if damaged. Refer to <i>To install the boundary wire on page 20</i> .
	Boundary wire broken.	Find out where the break is. Replace the damaged section of the loop with a new loop wire and splice using an original coupler. Refer to <i>Find breaks in the loop wire on page 47</i> .
	<i>ECO mode</i> is activated and the product has attempted to start outside the charging station.	Place the product in the charging station, press the START button.

Message	Cause	Action
<i>No loop signal</i>	The boundary wire is crossed on its way to and from an island.	Check that the boundary wire is laid according to instructions, e.g. in the right direction around the island. Refer to <i>To install the boundary wire on page 20</i> .
	The connection between the product and the charging station has been broken.	Place the product in the charging station and generate a new loop signal.
	Disturbances from metal objects (fences, reinforcement steel) or buried cables close by.	Try moving the boundary wire.
<i>Trapped</i>	The product is caught in something.	Free the product and rectify the reason for it becoming trapped.
	The product is stuck behind a number of obstacles.	Check if there are any obstacles which make it hard for the product to move away from this location.
<i>Empty battery</i>	The product cannot find the charging station.	Check that the charging station and the guide wire are installed in accordance with the instructions. Refer to <i>To install the guide wire on page 21</i> .
	The guide wire is broken or not connected.	Find out where the break is and rectify it.
	The battery is spent.	Replace the battery. Refer to <i>Battery on page 36</i> .
	The charging station's antenna is defective.	Check if the indicator lamp in the charging station flashes red. Refer to <i>Indicator lamp in the charging station on page 45</i> .
<i>Wrong PIN code</i>	Wrong PIN code has been entered. Five attempts are permitted, and the keypad is then blocked for five minutes.	Enter the correct PIN code. Contact your local Husqvarna representative if you forget the PIN code.
<i>No drive</i>	The product is caught in something.	Free the product and rectify the reason for the lack of drive. If it is due to wet grass, wait until the lawn has dried before using the product.
	The work area includes a steep slope.	Maximum guaranteed slope is 70%. Steeper slopes should be isolated. Refer to <i>To put the boundary wire in a slope on page 17</i> .
	The guide wire is not laid according to the recommendations.	Put the guide wire according to the recommendations. Refer to <i>To install the guide wire on page 21</i> .

Message	Cause	Action
<i>Wheel motor overloaded</i>	The product is caught in something.	Free the product and rectify the reason for the lack of drive. If it is due to wet grass, wait until the lawn has dried before using the product.
<i>Charging station blocked</i>	The contact between the charging strips and contact strips may be poor and the product has made a number of attempts to charge.	Put the product in the charging station and check that the charging strips and contact strips make good contact.
	An object is obstructing the product.	Remove the object.
	The charging station is tilted or bent.	Confirm that the charging station is placed on a fully flat and horizontal ground. The charging station must not be tilted or bent.
<i>Stuck in charging station</i>	There is an object in the way of the product preventing it from leaving the charging station.	Remove the object.
<i>Upside down</i>	The product is leaning too much or has turned over.	Turn the product the right way up.
<i>Needs manual charging</i>	The product is set to the <i>Secondary area</i> operating mode.	Place the product in the charging station. This behavior is normal and no action is required.
<i>Next start hh:mm</i>	The timer setting prevents the product from operating.	Change the timer settings. Refer to <i>Timer on page 26</i> .
	The time on the product is not correct.	Set the time. Refer to <i>Time & date on page 28</i> .
<i>Lifted</i>	The lift sensor has been activated as the product has become trapped.	Free the product
<i>Collision sensor problem</i>	The product body can not move freely around its chassis.	Check that the product body can move freely around its chassis. If the problem remains, the message requires action by authorized service technician.
<i>Wheel drive problem</i>	Grass or other object is wrapped around the drive wheel.	Clean the wheels and around the wheels.
<i>Alarm! Mower switched off</i>	The alarm was activated because the product was switched OFF.	Adjust the security level in the <i>Security</i> menu, refer to <i>Security (Bluetooth® only) on page 28</i> .
<i>Alarm! Mower stopped</i>	The alarm was activated because the product was stopped.	
<i>Alarm! Mower carried away</i>	The alarm was activated because the product was lifted.	

Message	Cause	Action
<i>Electronic problem</i>	Temporary electronic or software related issue.	Switch off/on the product. If the problem remains, the message requires action by authorized service technician.
<i>Loop sensor problem</i>		
<i>Charging system problem</i>		
<i>Tilt sensor problem</i>		
<i>Temporary problem</i>		
<i>Temporary battery problem</i>	Temporary battery or software related issue.	Switch off/on the product. If the problem remains, the message requires action by authorized service technician.
<i>Battery problem</i>		
<i>Charging current too high</i>	Wrong or faulty power supply unit.	Switch off/on the product. If the problem remains, the message requires action by authorized service technician.
<i>Connectivity problem</i>	Potential problem on the connectivity circuit board in the product.	Switch off/on the product. If the problem remains, the message requires action by authorized service technician.
<i>Outside work area</i>	The boundary wire connections to the charging station are crossed.	Check that the boundary wire is connected correctly. Check that the boundary wire has been laid according to the instructions. Refer to <i>To install the boundary wire on page 20</i> .
	The boundary wire is too close to the edge of the work area.	
	The work area slopes too much by the boundary loop.	
	The boundary wire is laid in the wrong direction around an island.	
	Disturbances from metal objects (fences, reinforcement steel) or buried cables close by.	Try moving the boundary wire.
	The product finds it hard to distinguish the signal from another product installation close by.	Place the product in the charging station and generate a new loop signal.

6.4 Information messages

The table below shows a number of information messages that may be shown in Automower® Connect. Contact your local Husqvarna representative if the same message appears often. For more information, refer to *Messages on page 29*.

Message	Cause	Action
<i>Low battery</i>	The product cannot find the charging station.	Check that the charging station and the guide wire are installed in accordance with the instructions. Refer to <i>To install the guide wire on page 21</i> .
	The guide wire is broken or not connected.	Find out where the break is and rectify it.
	The battery is spent.	Replace the battery. Refer to <i>Battery on page 36</i> .
	The charging station's antenna is defective.	Check if the indicator lamp in the charging station flashes red. Refer to <i>Indicator lamp in the charging station on page 45</i> .
<i>Settings restored</i>	Confirmation that a <i>Reset all user settings</i> has been carried out.	This is normal. No action required.
<i>Guide not found</i>	The guide wire is not connected to the charging station.	Check that the guide wire's connector is tightly connected to the charging station. Refer to <i>To install the guide wire on page 21</i> .
	Break in the guide wire.	Find out where the break is. Replace the damaged section of the guide wire with a new loop wire and splice using an original coupler.
	The guide wire is not connected to the boundary loop.	Check that the guide wire is connected correctly to the boundary loop. Refer to <i>To install the guide wire on page 21</i> .

6.5 Indicator lamp in the charging station

For a fully functional installation, the indicator lamp in the charging station must emit a solid or flashing green light. If something else appears, follow the troubleshooting guide below.

There is more help on www.husqvarna.com. If you still need help, please contact your local Husqvarna representative.

Light	Cause	Action
<i>Solid green light</i>	Good signals	No action required
<i>Green flashing light</i>	The signals are good and <i>ECO mode</i> is activated.	No action required.
<i>Blue flashing light</i>	The boundary loop is not connected to the charging station.	Check that the boundary wire connectors are fitted properly to the charging station.
	Break in the boundary loop.	Find out where the break is. Replace the damaged section of the loop with a new loop wire, and splice using an original coupler.
<i>Red flashing light</i>	Interruption in the charging station's antenna.	Contact your local Husqvarna representative.
<i>Solid red light</i>	Fault in the circuit board or incorrect power supply in the charging station. The fault should be rectified by an authorized service technician.	Contact your local Husqvarna representative.

6.6 Symptoms

If your product does not work as expected, follow the symptoms guide below.

There is a FAQ (Frequently Asked Questions) on www.husqvarna.com which provides more detailed answers to a number of standard questions. Contact your local Husqvarna representative if you still cannot find the reason for the fault.

Symptoms	Cause	Action
The product has difficulty docking.	The boundary wire is not laid in a long straight line that is far enough out from the charging station.	Check that the charging station has been installed according to the instructions. Refer to <i>To install the charging station on page 20</i>
	The charging station is on a slope.	Place the charging station on a surface that is entirely level. Refer to <i>To install the charging station on page 20</i> .
The product runs at the wrong time	The clock needs to be set.	Set the clock. Refer to <i>Time & date on page 28</i> .
	The start and stop times for mowing are incorrect.	Reset the start time and stop time settings for mowing. Refer to <i>Timer on page 26</i> .
The product vibrates.	Damaged blades lead to imbalance in the cutting system.	Inspect the blades and screws and replace them if necessary. Refer to <i>Replace the blades on page 33</i> .
	Too many blades in the same position lead to imbalance in the cutting system.	Check that only one blade is fitted at each screw.
	Different versions (thickness) of Husqvarna blades are used.	Check if the blades are of different versions.
The product runs, but the blade disc does not rotate.	The product searches for the charging station.	No action. The blade disc does not rotate when the product is searching for the charging station.
The product mows for shorter periods than usual between charges.	Grass or other foreign object blocks the blade disc.	Remove and clean the blade disc. Refer to <i>Replace the blades on page 33</i> .
	The battery is spent.	Replace the battery. Refer to <i>Battery on page 36</i> .
Both the mowing and charging times are shorter than usual.	The battery is spent.	Replace the battery. Refer to <i>Battery on page 36</i> .

Symptoms	Cause	Action
Uneven mowing results.	The product works too few hours per day.	Increase the mowing time. Refer to <i>Timer on page 26</i> .
	The <i>How often?</i> setting is incorrect in relation to the layout of the work area.	Check that the correct <i>How often?</i> value is selected.
	The shape of the work area requires the use of <i>Area 1-5</i> for the product to find its way to all remote areas.	Use <i>Area 1-5</i> to steer the product to a remote area. Refer to <i>Lawn coverage on page 27</i> .
	The work area is too large.	Try to limit the work area or extend the work time. Refer to <i>Timer on page 26</i> .
	Blunt blades.	Replace all the blades. Refer to <i>Replace the blades on page 33</i> .
	Long grass in relation to the set cutting height.	Increase the cutting height and then successively lower it.
	Accumulation of grass by the blade disc or around the motor shaft.	Check that the blade disc rotates freely and easily. If not, screw off the blade disc and remove grass and foreign objects. Refer to <i>Clean the product on page 32</i> .

6.7 Find breaks in the loop wire

Breaks in the loop wire are usually the result of unintentional physical damage to the wire such as when gardening with a shovel. In countries with ground frost, also sharp stones that move in the ground can damage the wire. Breaks can also occur due to the wire being stretched excessively during installation.

Mowing the grass too low right after the installation can damage wire insulation. Damage to the insulation may not cause disruptions until several weeks or months later. To avoid this, always select the maximum cutting height the first weeks after installation and then lower the height one step at a time every second week until the desired cutting height has been reached.

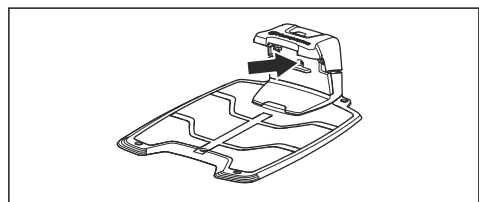
A defective splicing of the loop wire can also lead to disruptions several weeks after the splice was done. A faulty splice can, for example, be the result of the original coupler not being pressed together hard enough with a pair of pliers, or that a coupler of lower quality than the original coupler has been used. Please first check all known splices before further troubleshooting is done.

A wire break can be located by gradually halving the distance of the loop where the break may

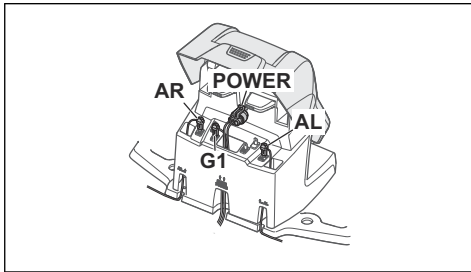
have occurred until there is only a very short section of the wire left.

The following method does not work if *ECO mode* is activated. Make sure first that *ECO mode* is turned off. Refer to *ECO mode on page 27*.

1. Check that the indicator lamp in the charging station flashes blue, which indicates a break in the boundary loop. Refer to *Indicator lamp in the charging station on page 45*.



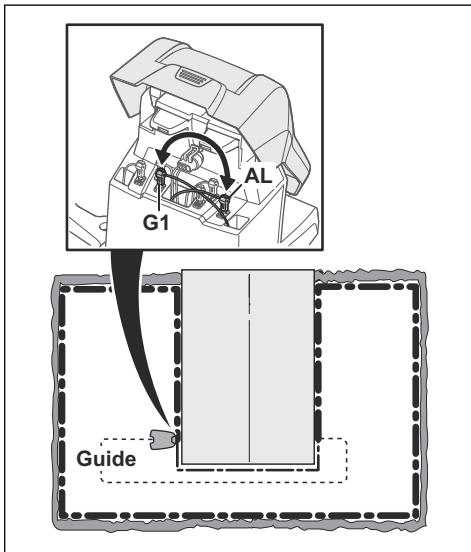
2. Check that the boundary wire connections to the charging station are properly connected and not damaged. Check that the indicator lamp in the charging station is still flashing blue.



3. Switch the connections between the guide wire and the boundary wire in the charging station.

Start by switching connection AL and G1.

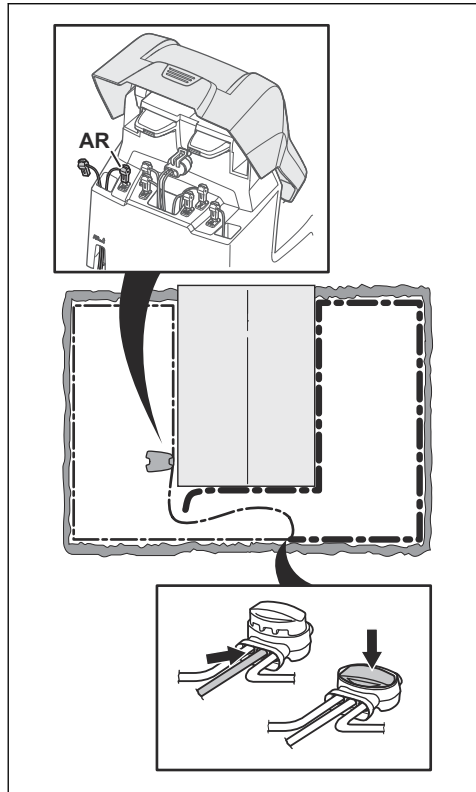
If the indicator lamp is lit with a solid green light, then the break is somewhere on the boundary wire between AL and the point where the guide wire is connected to the boundary wire (thick black line in the illustration).



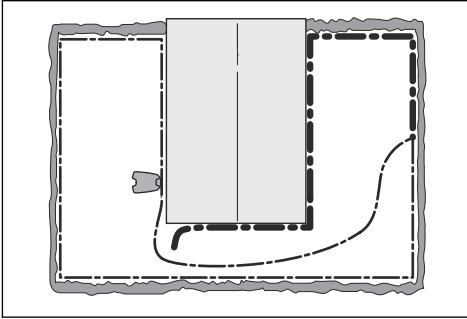
To rectify the fault you will need boundary wire, connector(s) and coupler(s):

- a) If the suspected boundary wire is short then it is easiest to exchange all of the boundary wire between AL and the point where the guide wire is connected to the boundary wire (thick black line).

- b) If the suspected boundary wire is long (thick black line) then do as follows: Put AL and G1 back to their original positions. Then disconnect AR. Connect a new loop wire to AR. Connect the other end of this new loop wire at the middle of the suspected wire section.

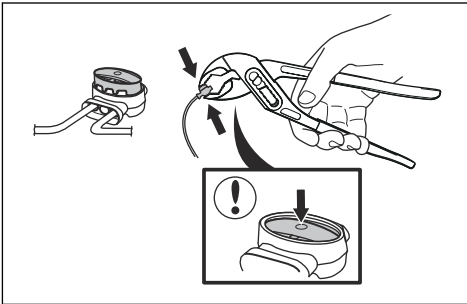


- If the indicator lamp now is green, then the break is somewhere in the wire between the disconnected end to the point where the new wire is connected (thick black line below). In that case, move the connection for the new wire closer to the disconnected end (roughly at the middle of the suspected wire section) and check again if the indicator lamp is green.



Continue until only a very short section of the wire remains which is the difference between a solid green light and a flashing blue light. Then follow instruction in step 5 below.

4. If indicator lamp still flashes blue in step 3 above: Put AL and G1 back in their original positions. Then switch AR and G1. If indicator lamp now is lit with a solid green light then disconnect AL and connect a new boundary wire to AL. Connect the other end of this new wire at the middle of the suspected wire section. Follow the same approach as in 3a) and 3b) above.
5. When the break is found, the damaged section must be replaced with a new wire. Always use original couplers.



7 Transportation, storage and disposal

7.1 Transportation

The supplied Li-ion batteries obey the Dangerous Goods Legislation requirements.

- Obey all applicable national regulations.
- Obey the special requirement on package and labels for commercial transportations, including by third parties and forwarding agents.

7.2 Storage

- Fully charge the product. Refer to *To charge the battery on page 31*.
- Switch off the product. Refer to *To switch off the product on page 31*.
- Clean the product. Refer to *Clean the product on page 32*.
- Keep the product in a dry, frost free space.
- Keep the product with all wheels on level ground during storage, or use a Husqvarna wall hanger if available.
- If you keep the charging station indoors, disconnect and remove the power supply and all the connectors from the charging station. Put the end of each connector wire in a container with grease.

Note: If you keep the charging station outdoors, do not disconnect the power supply and the connectors.

7.3 Disposal

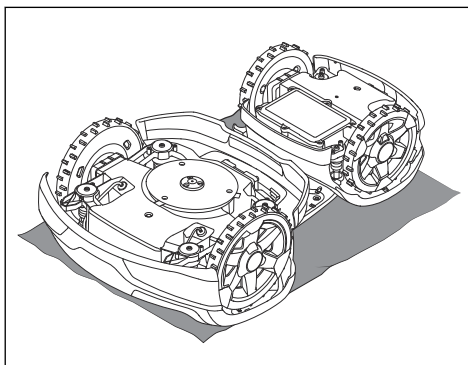
- Obey the local recycling requirements and applicable regulations.
- For questions about how to remove the battery, refer to *To remove the battery on page 50*.

7.3.1 To remove the battery

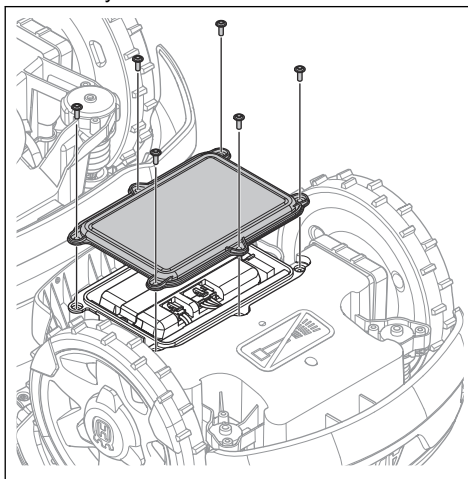


CAUTION: Only remove the battery when you dispose the product.

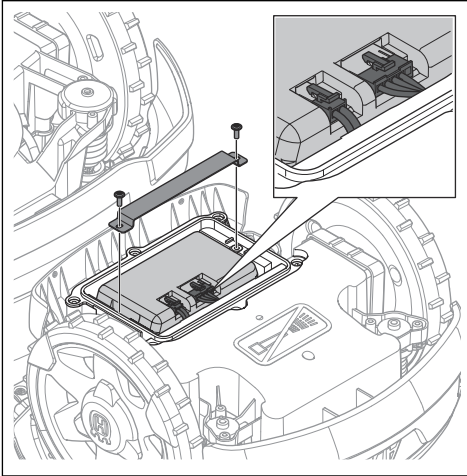
1. Switch off the product. Refer to *To switch off the product on page 31*.
2. Turn the product upside down.



3. Remove the 6 screws and remove the battery cover.



4. Remove the two screws and remove the bar.



5. Disconnect the two cables from the battery and remove the battery.

8 Technical data

8.1 Technical data

Dimensions	Automower® 435X AWD
Length, cm / in.	93 / 36.6
Width, cm / in.	55 / 21.6
Height, cm / in.	29 / 11.4
Weight, kg / lbs	17.3 / 38.1

Electrical system	Automower® 435X AWD
Battery, Lithium-Ion 18 V/5.0 Ah Art. No.	590 81 01-01
Battery, Lithium-Ion 18 V/4.9 Ah Art. No.	590 81 01-02
Power supply, V/28 V DC	100-240
Low voltage cable length, m / ft	10 / 33
Mean energy consumption at maximum use	24 kWh/month in a 3500 m ²
Charge current, A DC	7
Typical mowing time, min	100
Typical charging time, min	30

Boundary wire antenna	Automower® 435X AWD
Operating Frequency Band, Hz	300-80000
Maximum Radio-frequency power, mW @60m ⁵	<25

Noise emissions measured in the environment as sound power ⁶	Automower® 435X AWD
Measured sound power noise level, dB (A)	60
Noise emissions uncertainties K _{WA} , dB (A)	2
Guaranteed sound power noise level, dB (A)	62
Sound pressure noise level at the operator's ear, dB (A) ⁷	49

The noise emission declarations conforms to EN 50636-2-107:2015

⁵ Maximum active output power to antennas in the frequency band in which the radio equipment operates.

⁶ **Noise emissions in the environment measured as sound power (L_{WA}) in conformity with EC directive 2000/14/EC. The guaranteed sound power level includes variation in production as well as variation from the test code with 1-3 dB(A).**

⁷ Sound pressure noise uncertainties K_{pA}, 2-4 dB (A)

Mowing	Automower® 435X AWD
Cutting system	3 pivoted cutting blades
Maximum blade motor speed, rpm	2475
Power consumption during cutting, W +/- 20 %	40
Cutting height, cm / in.	3-7 / 1.2-2.8
Cutting width, cm / in.	22 / 8.7
Narrowest possible passage, cm / in.	60 / 24
Maximum angle for work area, %	70
Maximum angle for boundary wire, %	50
Maximum length boundary wire, m / ft	800 / 2600
Maximum length guide loop, m / ft	400 / 1300
Working capacity, m ² / yd ² , +/- 20%	3500

IP-classification	Automower® 435X AWD
Robotic lawnmower	IPX4
Charging station	IPX1
Power supply	IPX4

Frequency Band Support	
Bluetooth® Frequency range	2400.0-2483.5 MHz
Automower® Connect 3G	Band 19 (800 MHz)
	Band 5 (850 MHz)
	Band 8 (900 MHz)
	Band 2 (1900 MHz)
	Band 1 (2100 MHz)
Automower® Connect 2G	GSM 850 MHz
	E-GSM 900 MHz
	DCS 1800 MHz
	PCS 1900 MHz

Power Class		
Bluetooth® Output power	8 dBm	
Automower® Connect 3G	Power Class 3	24 dBm
Automower® Connect 2G	Power Class 4 (for GSM/E-GSM)	33 dBm
	Power Class 1 (for DCS/PCS)	30 dBm

Husqvarna AB does not guarantee full compatibility between the product and other types of wireless systems such as remote controls, radio transmitters, hearing loops, underground electric animal fencing or similar.

The products are made in England or the Czech Republic. See information on the rating plate. Refer to *Introduction on page 3*.

9 Warranty

9.1 Guarantee terms

Husqvarna guarantees this product's functionality for a period of two years (from date of purchase). The guarantee covers serious faults relating to materials or manufacturing faults. Within the guarantee period, we will replace the product or repair it at no charge if the following terms are met:

- The product and the charging station may only be used in compliance with the instructions in this Operator's Manual. This manufacturer's warranty does not affect warranty entitlements against the dealer/retailer.
- End-users or non-authorized third parties must not attempt to repair the product.

Examples of faults which are not included in the guarantee:

- Damage caused by water seepage from using a high-pressure washer, or from being submerged under water, for example when heavy rain forms pools of water.
- Damage caused by lightning.
- Damage caused by improper battery storage or battery handling.
- Damage caused by using a battery that is not a Husqvarna original battery.
- Damage caused by not using Husqvarna original spare parts and accessories, such as blades and installation material.
- Damage to the loop wire.
- Damage caused by non-authorized changing or tampering with the product or its power supply.

The blades and wheels are seen as disposable and are not covered by the guarantee.

If an error occurs with your Husqvarna product, please contact Husqvarna customer service for further instructions. Please have the receipt and the product's serial number at hand when contacting Husqvarna customer service.

10 EC Declaration of Conformity

10.1 EC Declaration of Conformity

Husqvarna AB, SE-561 82 Huskvarna, Sweden, tel: +46-36-146500, declares that the **Husqvarna Automower® 435X AWD** with serial numbers dating 2019 week 1 and onwards (the year and week is clearly stated on the rating plate, followed by the serial number), comply with the requirements of the COUNCIL'S DIRECTIVE:

- Directive "relating to machinery" **2006/42/EC**.
 - Particular requirements for robotic battery powered electrical lawnmowers **EN 50636-2-107: 2015**.
 - Electromagnetic fields **EN 62233: 2008**.
- Directive on "restriction of use of certain hazardous substances" **2011/65/EU**.
 - The following standard is applied: **EN 50581:2012**
- Directive "relating to noise emissions from outdoor equipment" **2000/14/EC**. Refer to *Technical data on page 52* for information regarding noise emissions and the cutting width.

For **Husqvarna Automower® 435X AWD**:
The notified body 0404, SMP Svensk Maskinprovning AB, Box 7035, SE-750 07 Uppsala, Sweden, has issued a report regarding the assessment of conformity according to annex VI to the Council's Directive of May 8, 2000 "relating to noise emissions into the environment" 2000/14/EC.

- Directive "relating to radio equipment" **2014/53/EU**. The following standards have been applied:
 - **ETSI EN 303 447 V1.1.1**

Electromagnetic compatibility:

- **ETSI EN 301 489-1 V2.2.0**

For **Husqvarna Automower® 435X AWD**, equipped with the **Automower® Connect** module also:

- **ETSI EN 301 489-19 V2.1.0**
- **ETSI EN 301 489-52 V3.1.1**
- **ETSI EN 301 908-2 V11.1.1**

For **Husqvarna Automower® 435X AWD** equipped with **Bluetooth®** also:

- **ETSI EN 300 328 V2.1.1**
- **ETSI EN 301 489-17 V3.1.1**



Huskvarna 2019-01-01

Lars Roos

Global R&D Director, Robotic category

(Authorized representative for Husqvarna AB and responsible for technical documentation.)



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Original instructions

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