

Solar Mower

Workshop Manual

101 88 90-26

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WARNING!
This tool can be dangerous if used incorrectly.
Warnings and safety instructions in this Workshop Manual must be followed carefully for the tool to be used safely and efficiently.



WARNING!
Keep hands and feet away from the rotating blades.
Never place your hands or feet close to, or under the cutting deck's cover before you have checked that the power switch is off and that the motor has stopped.



WARNING!
Do not permit anyone who does not know how the lawn mower works or behaves to carry out repairs on the lawn mower.



WARNING!
Under no circumstances may the lawn mower's original design be modified without the permission of the manufacturer. Always use genuine spare parts. Non authorised modifications and/or components can result in serious disruptions and the risk of personal injury.



IMPORTANT!
Read through the Workshop Manual carefully and understand the contents before starting to carry out any repairs. Follow all directions.

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SAFETY INSTRUCTIONS

User safety

- Read carefully through this Workshop Manual to understand all the repair directions.
- Check that there are no stones, twigs, tools or other objects, which can damage the blades, on the lawn to be used as a test surface.
- Those not familiar with how the lawn mower works or behaves should not be allowed to repair the tool. They should not be allowed to be within the vicinity of, or in the lawn mowers working area when the mower is activated.
- Never permitted anyone to touch the lawn mower when in use.
- Never use the lawn mower with damaged panels, covers or cables.
- Never use the lawn mower if the power switch does not work.



Tool safety



WARNING! Always switch off the lawn mower using the power switch before inspecting, cleaning or carrying out repairs. The batteries should always be disconnected when carrying out maintenance or repairs to the lawn mower's internal components. The only exception is when current or voltage needs to be measured. Extra care should then be exercised.

- Replace damaged parts. Check especially that the blades and cutting disc are not damaged. Change all the blades at the same time so that rotating parts are balanced.
- The lawn mower contains environmentally hazardous batteries. In accordance with applicable laws regarding spent batteries: **These must not be thrown in household waste or mixed with industrial waste.** Those who professionally sell batteries or such equipment where such batteries are included, are obliged to accept spent batteries and thereafter leave them to an approved authority for disposal.



Working safety



WARNING! Always switch off the lawn mower using the power switch before inspecting, cleaning or carrying out repairs.

- Never move the lawn mower with the rear panels folded down. Switch off the lawn mower using the power switch when moving outside of the cutting area or if maintenance shall be carried out.
- Always wait until the blades have stopped. Carry it by using the handle and with the rear panels folded up.
- When moving over short distances the lawn mower can be switched off by folding up the rear solar panel and waiting until the blades have stopped. Carry it by using the handle and with the rear panel folded up.
- Never use the lawn mower with defective covers, screws, nuts or cables.
- Start the lawn mower according to the instructions. Keep hands and feet away from the rotating blades. Never place your hands or feet under the solar panels.
- Do not stand in front of the lawn mower when you start it, also ensure that no one else is standing in front of the lawn mower.
- Never lift up the lawn mower or carry it around when it is running.
- Always switch off the lawn mower using the power switch before inspecting or cleaning the underside or carrying out repairs.

Care and storage safety

- Store the lawn mower in an area that is dry but not too warm, otherwise damage can be caused to the solar panels and batteries.
- During the winter the lawn mower should be stored in a dry place, preferably in the original packaging or parked on all four wheels, with the power switch off and the batteries disconnected.

Transport safety

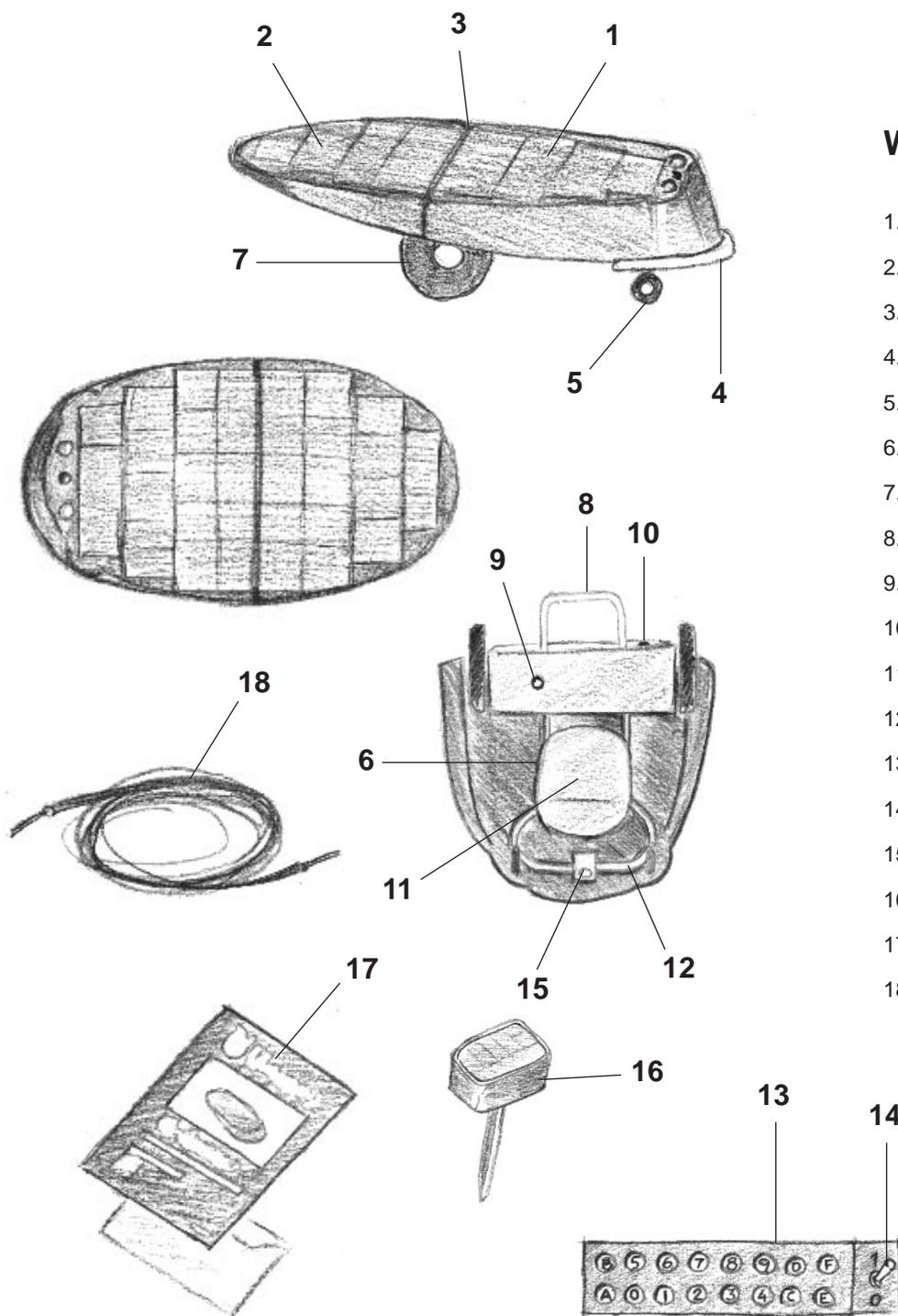
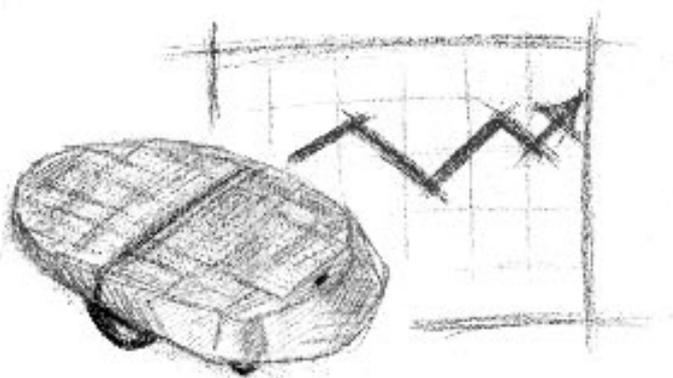
- Fold up the rear section of the solar panel and switch off the power switch when transporting the lawn mower. Use the original packaging when transporting the lawn mower over longer distances.



TECHNICAL DATA

Technical data

Batteries	NiCd
Cutting system	Cutting disc with three flexible blades
Wheels	Front wheels with stainless steel bearings
Height control	Variable, 30 - 60 mm
Weight	6.5 kg
Length/Width/Height	105cm/63cm/22cm
Working capacity	1200 m ² +- 20%



What is what?

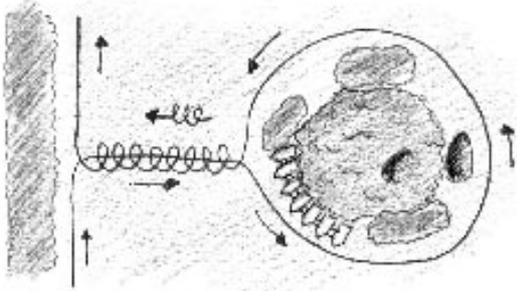
1. Front solar panel
2. Rear solar panel
3. Hinge
4. Bumper
5. Front wheels
6. Cutting disc
7. Drive wheel
8. Handle and rear panel support
9. Moisture sensor
10. Electronic controller with microprocessor
11. Protective plate
12. Frame
13. Keyboard
14. Power switch
15. Sensor
16. Generator
17. Operator's Manual with code
18. Loop cable

TROUBLE SHOOTING

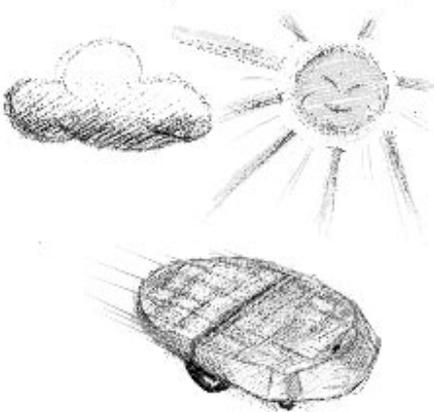
General trouble shooting tips

The dealer should have a test lawn of a least 5 x 5 m, surrounded by a loop cable and generator. This test lawn can be used in those cases where the customer has a problem with the lawn mower not detecting signals from the loop cable. Thereby making it possible to determine whether the operating disruptions are due to metal objects or electrical power lines in the customer's garden.

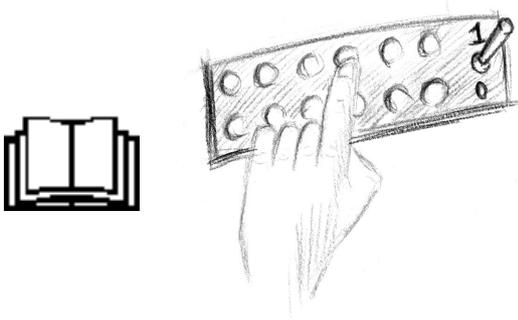
So called "islands" (see the diagram below), which are formed with a loop around flowerbeds, fountains, etc. should be routed in the loop cable's direction and have a diameter of at least 2 m (see the Operator's Manual) to ensure its function. If the commands F1-9 are changed to increase sensitivity then smaller "islands" can also be made, carry out tests before burying.



All trouble shooting should be preceded by at least 1 hour of charging (with the switch in the off position) outdoors in the middle of the day, to eliminate the fault being badly charged batteries.



Read through the entire Workshop Manual and the Operator's Manual to determine whether the fault is easily rectified via the keyboard or with the main power switch.



Solar panels

A number of solar panels connected together transform daylight into electrical energy. This electrical energy drives the lawn mower and charges the batteries.

When the lawn mower is in the sun its rays are sufficient to drive the lawn mower and charge the batteries.

The microprocessor is also used to measure the voltage levels from the solar panels, and thereby determine whether the lawn mower has gone into the shade or whether dusk is approaching.

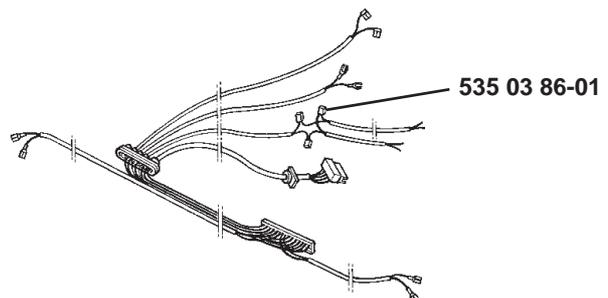
In the evening, when the light intensity is too low, the lawn mower stops and signals with 1 beep every 10 seconds. This indicates the night mode.



If the lawn mower avoids the shade during the day, it is because the batteries at the present time do not have sufficient capacity and to also ensure a long operating time. Large amounts of sun (sunny weather) allow the mower to charge fully before it starts to move, while small amounts of sun (cloudy) means that it charges a little and then moves hoping to find a sunnier part of the lawn.

If the lawn mower frequently stops to charge in the shadow, this is a sign that the batteries are deficient.

To check the operation of the solar panels the jointing sleeves 535 03 86-01 should be dismantled and the current from the front and rear solar panels should be measured.



The panel's connection cables should be connected as follows: The red cable from the box to the red cable from the front of the body (suitable length 85 mm).

The black cable from the box to the black cable from the rear of the body (suitable length 55 mm).

The black cable from the front of the body to the red cable from the rear of the body (suitable length 70 mm).

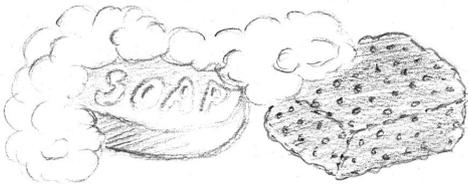
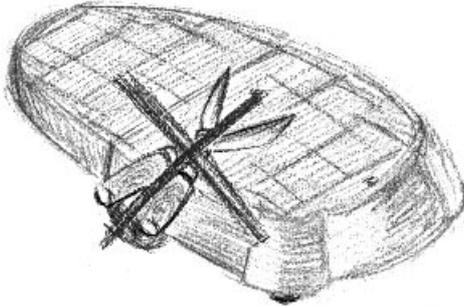
When the panels are connected together (in series) the cable runs to the box and is connected to the connector X1 at terminals 6 (black) and 7 (red). See the circuit diagram on the last page.

As the light intensity can vary a great deal it is difficult to specify an exact current, however, if a different current is measured from the front and rear solar panels at the same time, you may presume that the panel that generates the lowest current is faulty.

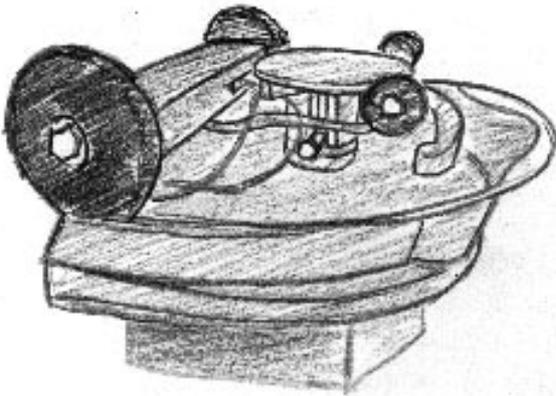
TROUBLE SHOOTING

The panel can still work despite one of the segments being damaged, but then gives a lower capacity. This can mean that the machine frequently stands still and charges, even on very sunny days. Or the lawn mower can stand still and beep once every 10 seconds, which is the night mode signal, despite it being the middle of the day.

No objects should be placed on top the panels for these to give maximum electrical energy. Panels should be cleaned using a damp sponge and a soap solution/hand washing up detergent when surfaces are dusty or dirty and during the pollen season or with similar daily soiling.



Great care should be exercised when handling the panels due to their low weight and fragility. This is especially important when the lawn mower is turned upside down, e.g. when the cutting height needs to be adjusted (see the diagram below).



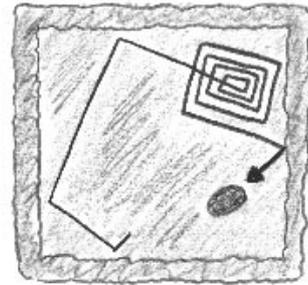
WARNING!
The blades are extremely sharp. Always wear protective gloves when working with the blades or cutting disc.

Motor and cutting disc

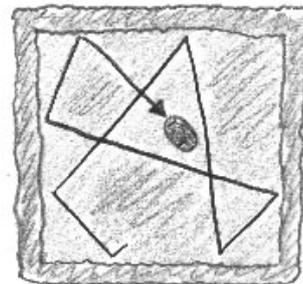
A 12V AC motor with controlled speed (max 2500 r/min) is used as the cutting motor. The cables from the motor are connected to connector X1 on the terminals 1-5 on the circuitboard in the box. Registration of the motor speed is made by using a tachometer which sends signals to the microprocessor on the circuitboard in the box.

The speed measurement is made to "measure" the length of the grass (mowing resistance).

If the mowing resistance momentarily exceeds the mean value for the last few minutes the lawn mower can move in a spiral pattern, to mow areas that have longer grass than average.



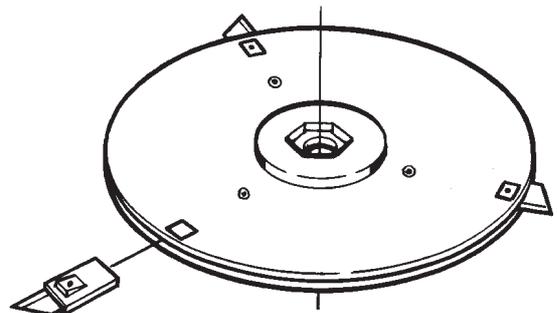
When the lower mower senses a drastic reduction in the mowing resistance, or if an obstacle comes in its way, it returns to its normal movement pattern.



The cutting height can be adjusted variably between 30-60 mm. Adjust the height by loosening the orange coloured knob and move the entire cutting unit upwards or downwards in its mountings.

The cutting disc is bolted to the cutting motor's shaft and holds 3 blades thrown out by centrifugal force.

These blades are mounted in blade holders (coloured red) to allow them to be easily attached to or dismantled from the cutting disc. The design of the blade holders ensures that the blades are well secured if a collision with small objects, e.g. twigs on the lawn, should occur.



TROUBLE SHOOTING

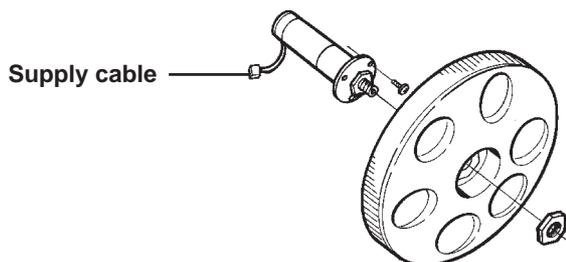
Drive motors

Two, 12 V DC motors with reversible direction of rotation are used to drive the lawn mower forwards. The two drive motors can rotate in different directions at the same time to give the lawn mower a tight turning circle and increase manoeuvrability.

A gearbox is engaged after the drive motors to give the lawn mower increased traction. The speed is registered by a tachometer which is connected to the motors. The speed of the motors is then governed by the microprocessor.

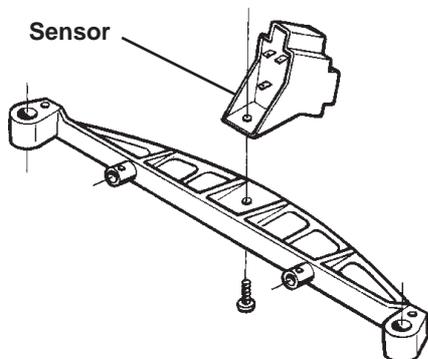
The cables from the drive motors are connected to the connector X9 (left) and X8 (right) on the circuitboard in the box. The voltage to the drive motors should be 12 V.

Red cable (+) and black cable (-) are the supply cables. These can be fed with 12 V for test driving. The other three cables are used to control the motor.



Sensors

A sensor (coil) is mounted on top of the front bracket between the front wheels, see the diagram below, so that the lawn mower can sense the electromagnetic field emitted by the loop cable.

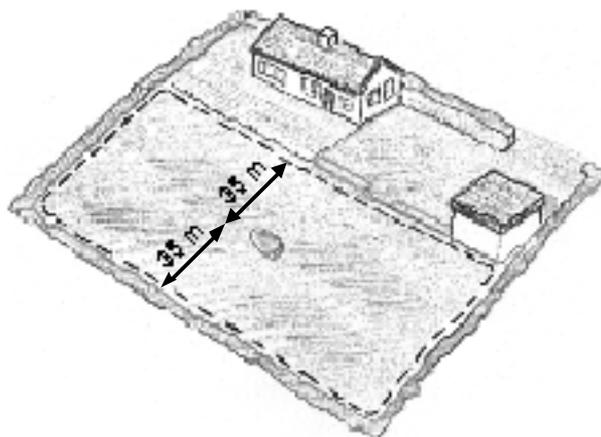


The lawn mower uses two different systems to sense the electromagnetic field:

1. The lawn mower should, with a loop length of 300 m – at a distance of max. 35 meters from the loop cable (see diagram) sense that the loop cable is generating an electromagnetic field, see diagram, (with a 500m loop length - max 25 m). If it does not sense the electromagnetic field an error signal, 3 beeps/sec. is sounded.

NOTE! The maximum cutting area to achieve a good cutting result is approx. 1200m².

2. The lawn mower should sense the increase in the electromagnetic field as it approaches the loop cable and because of this turns just in front of the loop cable.

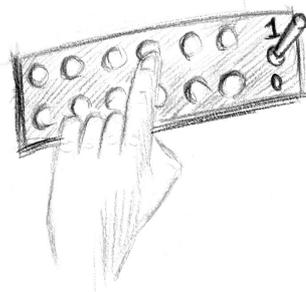


The sensor is sensitive to moisture and dirt. If, for example, grass sticks between the sensor's pins this will cause signal leakage and the lawn mower will possibly signal that it cannot sense a signal from the loop cable (3 beeps/second). The unused (smaller) pin can be cut off and insulated using silicon if the problem frequently recurs.

The part of the cable harness that runs from the sensor is connected to terminals 15 and 16 on the connector X1 on the circuitboard. (Arbitrary pole reversal.)

Moisture sensor

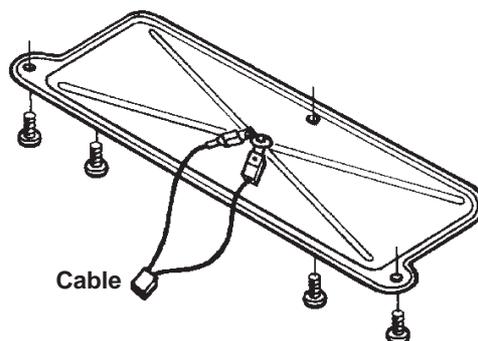
Using the keyboard (press C0) you can activate the moisture sensor which is located under the box so that the lawn mower can determine whether the grass is too moist to give an acceptable mowing result.



A copper rivet and a zinc plate form a galvanic element that when wet generates a voltage of 0.7V, which can be measured on the cables on the inside.

The moisture sensor only measures moisture in long grass, that is, it will not react to short, moist grass.

The cables connected to the rivet are connected to connector X5 on the circuitboard.

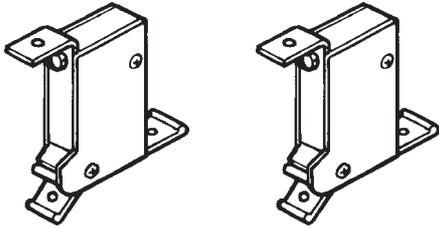


TROUBLE SHOOTING

Microswitches (Collision detectors)

The front panel's rear edge is suspended in two, spring-loaded aluminium levers.

These levers in turn activate two microswitches which are integrated in the " housings " (see the diagram below) that connect the front panel with the box.

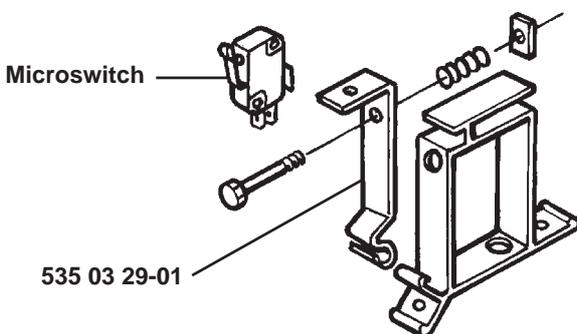


The microswitches are activated when the bumper on the front of the lawn mower hits an obstacle. These give a signal to the microprocessor that tells the lawn mower to back away. The lawn mower determines whether to reverse straight back and then turn to the left or right depending on whether the right-hand, left-hand or both microswitches are activated.

If you wish to check whether the microswitches are functioning proceed as follows:

1. Check that the microswitches "click" when the levers are pressed back.
2. Dismantle the black cover plates on the sides of the microswitches.
3. Check that the levers (535 03 29-01) are not bent and that they run parallel to the side of the microswitch housing.
4. Check that the microswitch's arm can move freely in the hole against lever.
5. Measure the voltage (the main power switch in position "1") between the earth (the box) and one of the cables on the microswitch. The voltage should be 5.0-5.1 V on one pin and 0 V on the other.

Press the lever backwards, the voltage should be between 5.0 - 5.1 V between the earth and the connected cables. If a voltage value lower than 5 V is obtained then the microswitch is defective and should be replaced (presupposes charged batteries).



6. Also check that the cables from the microswitch are correctly made in terminals 8-11 on connector X1 on the circuitboard. Right 8 (+) 9 (-) and left 10 (+) 11(-).

Cables

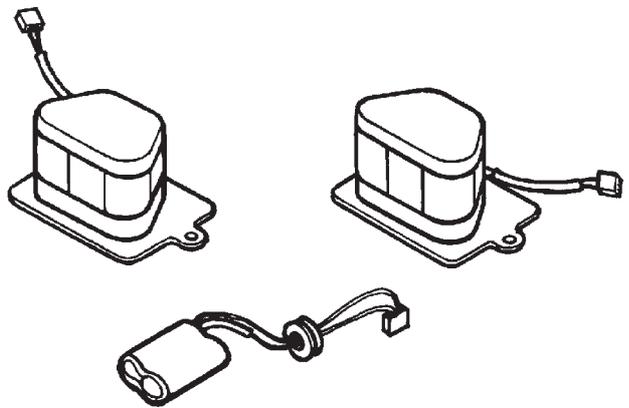
The cables are used to connect all the electrical components on the lawn mower that concern, propulsion, charging, communication and mowing.

When checking whether a cable break has occurred all connections must be removed before each individual cable is resistance measured using a multimeter.

For operations to be good, bearing in mind the short cable lengths in question, the resistance in the cables should be 0 ohm.

Batteries

Two, series connected 6V Nickel-Cadmium batteries are used in the lawn mower. One, 2.4V Nickel-Cadmium battery is used in the generator.



The batteries are used in the lawn mower to power the "computer", i.e. the circuitboard with microprocessor, even at night to ensure that the theft alarm works. The batteries also act as a buffer when the lawn mower is mowing in the shade or during a cloudy or a partially sunny day. This is why the lawn mower can still mow for short periods on cloudy days.

In the generator, the battery ensures that the loop is generating an electromagnetic field even when the sun is not shining sufficiently to power the generator. It is important that the generator is placed where it is well lit.

If the lawn mower requires long charging times on very sunny days and, despite this, only has a short operating time, it's reasonable to suspect that the batteries need to be replaced. The batteries in the lawn mower should be changed in pairs to guarantee operations, as a new battery with a relatively old battery will reduce capacity and in some cases completely destroy the new battery. If changing the batteries does not help, check whether the solar panels are functioning correctly.

Another sign that the batteries are discharged is when the lawn mower frequently stops in the shade to charge.

If the lawn mower has difficulties in sensing the electromagnetic field from the loop cable when it's cloudy, at daybreak or dusk, the battery in the generator may need to be replaced, see page 2. Thereafter check that the cables outside and inside the generator are in working order, and that there are no loose connections.

The lawn mower stands in the charging mode (2 beeps/10 seconds) for a maximum of 40 minutes, irrespective of whether the batteries are fully charged or not.

TROUBLE SHOOTING

Keyboard

The keyboard is used to deactivate the theft alarm and to enter the security code and to change limit values for a number of the lawn mower's parameters.

If the keyboard ceases to beep when the keys are pressed this can be due to, in addition to a discharged battery and/or insufficient light, bad contact between the cables and the connectors on the circuitboard.

The keyboard is attached to the box using self-adhesive tape, which is why care should be exercised when the keyboard is replaced and must be removed. All remaining adhesive should be removed using acetone or a similar solvent but not white spirit, to ensure the new keyboard is correctly attached.



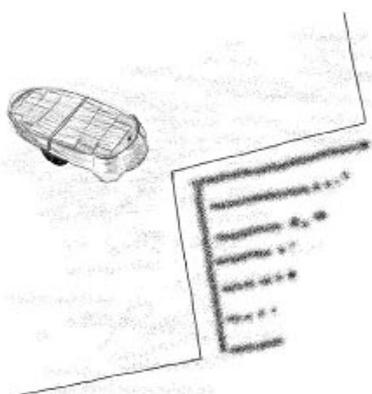
WARNING! The box must not be washed while electronic equipment is fitted.

Generator and loop cable

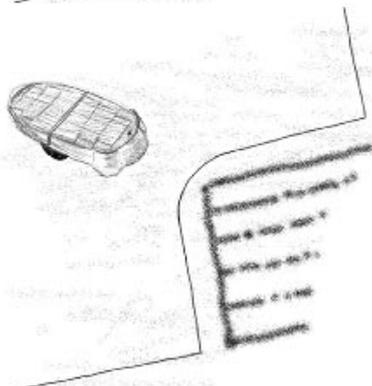
The generator is used together with the loop cable to form an electromagnetic enclosure that the lawn mower senses and keeps within.

The lawn mower gives a signal of 3 beeps/sec. if it does not sense the electromagnetic field emitted by the loop cable. The problem can be due to the sensor under the front of the lawn mower being faulty, or the generator and/or loop cable also being faulty. If the cable has been routed in the wrong direction around "islands" then this will extinguish the electromagnetic field.

Metal objects and electrical cables on the lawn can weaken the loop cable's electromagnetic field. If the lawn mower only signals 3 beeps/second in certain areas of the garden this can mean that it's experiencing a disturbance in just this area. Try moving the loop cable. Sharp bends (90 degrees) in the loop cable bring about a weakened electromagnetic field and this can result in the lawn mower escaping (see diagram).



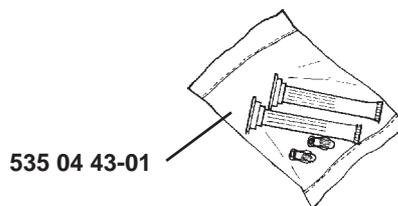
Sharp cable bends = risk of escaping.



Gentle bends give a stronger electromagnetic field.

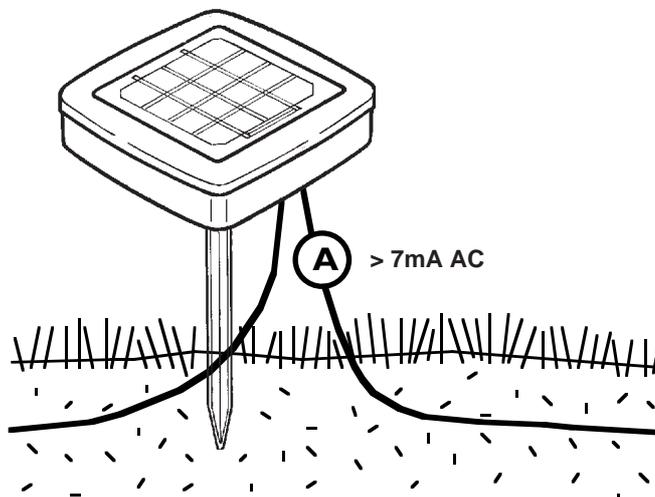
If the loop cable is correctly connected a signal should be given when the momentary switch on the generator makes. If the generator does not give a signal, start by bridging the generator using a piece of cable and make the generator's switch again. If a signal is now heard then the loop cable is not correctly connected or there is a break in the loop cable. Start by checking the cable's connection to the generator. If the cable is corroded, cut and strip it so that a good contact is obtained. Measurement of the loop cable's resistance is carried out with the cable disconnected from the generator. The resistance should be max. 2 ohm/100m per loop cable (max. loop cable length is 500 m).

If a cable break is established, ($R=\infty$), start by checking the joints and the transition between ground and air. (For damp and oxide-proof joints use jointing sleeves 535 04 43-01.) Use only original loop cables from Husqvarna.



The easiest way to check the operation of the generator is to measure the current flow in series with a functioning loop cable. There is a risk, with a measurement value under 7mA AC, that the electromagnetic field will be too weak.

Check that the cables and connections inside of the generator are correct. Another quick check is to test using a new battery (allow to charge in daylight).



TROUBLE SHOOTING

Circuitboard with CPU

The circuitboard together with the CPU (microprocessor) are the lawn mower's "brain" and handle all functions, commands and path selections the lawn mower decides on, based on the input data provided by the keyboard, sensors, solar panels, microswitches (collision detectors) and the batteries charge status.

To check whether an operating disruption is due to an error in the microprocessor start by resetting it 3 times (preceded by charging in daylight for at least 1 hour). That is, remove and reconnect one of the batteries connectors 3 times, allowing 5 seconds to elapse in between.

Also check that the fuses on the circuitboard have not blown and that they make good contact in the fuse holders. Replace fuses carefully.

The voltage between the fuses and the earth can also be measured and should be the same as the actual battery voltage. (The main power switch in position "1".)

If this does not solve the problem you can try replacing the microprocessor with a microprocessor that you know functions correctly. The processor must be lifted out using the processor tool, otherwise there is a large risk of damaging the processor pins.

NOTE! All work on or in connection with the circuitboard must take place with the batteries disconnected to avoid short circuiting. Static electricity can also damage the microprocessor.

When trouble shooting, a microprocessor with the article number 535 04 90-01 can be used, all have the code "A 00000 B". This microprocessor shall only be used for trouble shooting and repair work.

All other trouble shooting (in addition to replacing the circuitboard) consists of checking that connectors and cables are connected correctly on the circuitboard, even dampness and dust can result in faults, which is why cleaning with a dry brush and drying indoors can solve basic problems with short circuiting. Ocular inspection can also reveal the reason for a fault.

Buzzer

The lawn mower has a buzzer on the outside of the box that generates a beep, which the machine uses to interact with the user. The buzzer's volume can be adjusted using B0 - B9, where B9 gives a louder signal and B0 mutes the buzzer. If these setting have no effect on the volume, try replacing the buzzer. Connect 12 V DC to the buzzer to check whether it functions; it should sound.

There is also a buzzer on the circuit board, which has a fixed volume. If you wish the machine to be completely silent this must be blocked. This is done by pressing silicon into the hole on the top of the buzzer. Note this will also mute the beep heard when pressing the keys.

Main power switch

The main power switch ensures that the lawn mower does not start when it is switched off. The code must be entered in the lawn mower every time the main power switch has been switched off, even some commands are reset (see the Operator's Manual). Note that the switch does not cut the voltage from the batteries and solar cells. Accordingly, the batteries' connection cables should be disconnected when working inside the box and during the winter storage period.

The main power switch can be checked by measuring its resistance. The resistance should be 0 ohm respective infinite resistance depending on the position of the switch.

Magnetic switch

The magnetic switch is located by the hinge between the front and rear solar panel halves and ensures that the lawn mower does not start until the rear solar panel has been lowered.

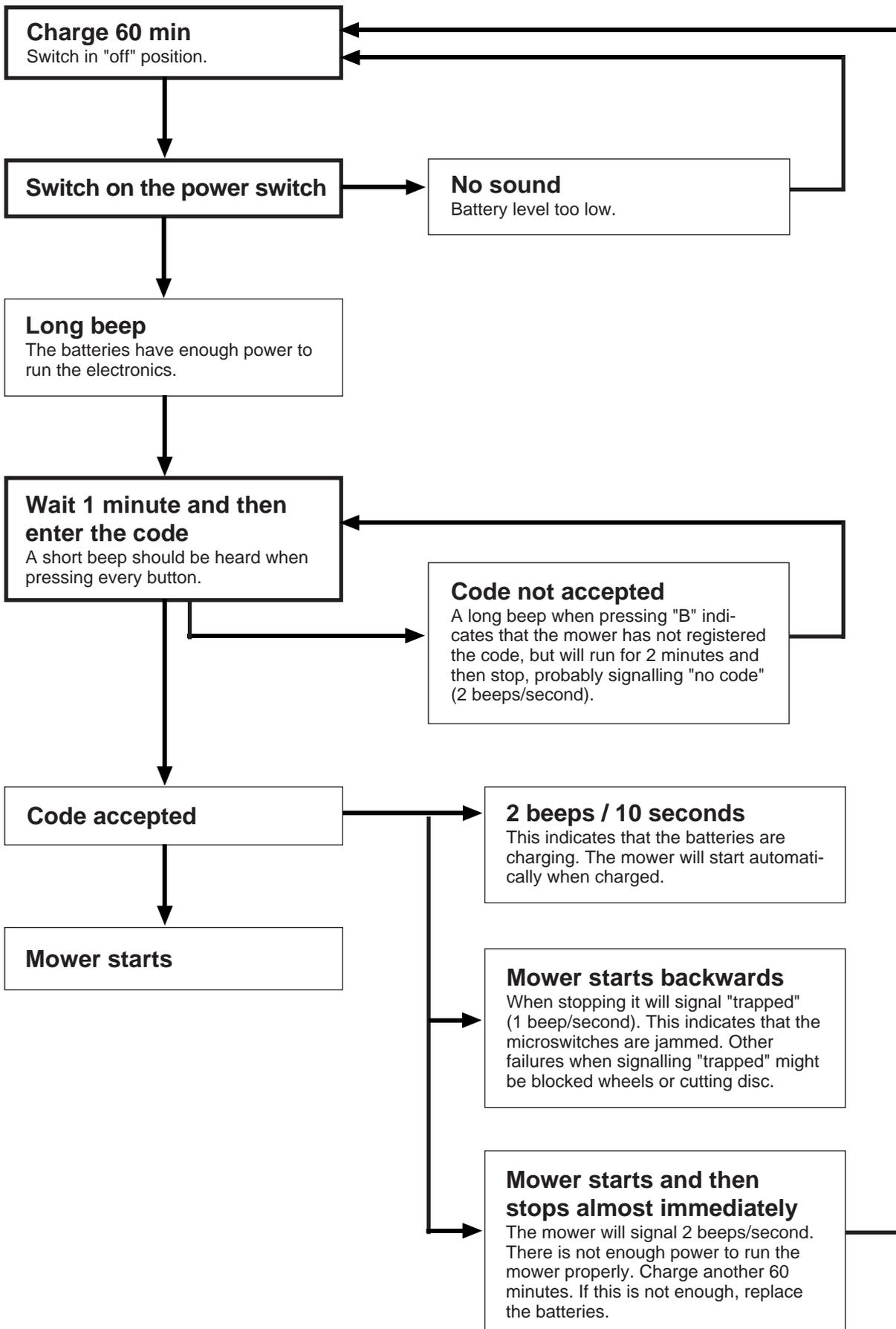
The magnetic switch can be checked by putting the power switch in the "on" position and then lowering the rear solar panel. When this is done a click should be heard from the relay on the circuit board and the machine indicates "start-up" (1 beep/second) for 10 seconds. If you hear this the magnetic switch functions correctly.

If the "start-up" does not start, temporarily strap the connection screws on the magnetic switch. If the "start-up" now starts the magnetic switch is defective.

For information on how to replace the magnetic switch refer to service notice tab 5, 96.016.

TROUBLE SHOOTING

Start-up sequence



TROUBLE SHOOTING

Trouble shooting chart

Observation	Possible cause	Action
3 beep/second	The lawn mower does not sense the signal from the loop.	<p>Check that the cable is not broken (by using the operating test on the generator).</p> <p>Check the sensor, wipe off any grass or moisture on the cable connections. Ensure the cover is fitted. If the problem frequently recurs cut off the unused pin and insulate using silicon (see service notice tab 5, 96.018).</p> <p>Measure the current in the loop cable. There is a risk that the electromagnetic field is too weak with values under 7 mA AC.</p>
	If this occurs in isolated areas it can be caused by disturbances from metal objects (fencing, reinforcement) or by underground cables in the vicinity.	Try moving the loop cable.
	If it occurs in the vicinity of an "island", it can be due to the loop cable be routed in the wrong direction around the "island" and thereby extinguishing the signal.	Check that the loop cable has been laid according to the instructions in the Installation guide.
	If it only occurs in the morning it can be caused by the battery in the generator being discharged.	Replace the generator battery.
The lawn mower jerks forwards and backwards and swings quickly.	The electronics were started at too low voltage.	Reset the processor by disconnecting and reconnecting one of the batteries 3 times.
	The microswitches switch too easily, e.g. at corners or over bumps.	Check that the microswitches do not switch before a tractive force of approx. 10N is applied.
	Play on the drive motors' contact connections.	Check the drive motors' circuit board connection.
	Faulty gearbox on a drive motor or faulty tachometer (hall element) on a drive motor.	Try by replacing one drive motor at a time.
	Electronic fault.	Replace the circuit board.
The lawn mower stops frequently to charge when in the shade.	The batteries have discharged.	Replace the batteries.

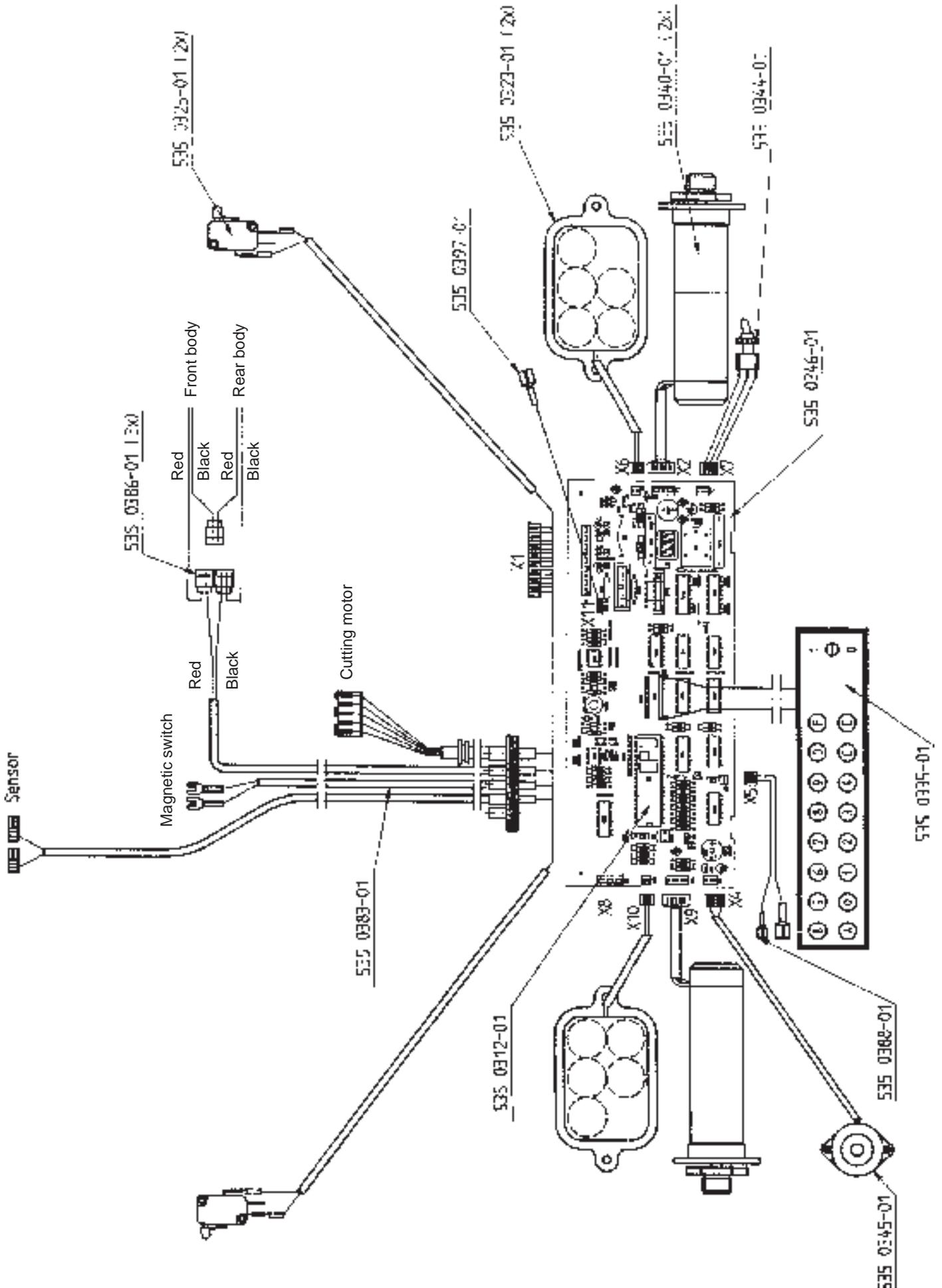
TROUBLE SHOOTING

The lawn mower escapes.	The signal from the loop is not strong enough.	Check the sensor, wipe off any grass or moisture on the cable connections. Ensure the cover is fitted. If the problem frequently recurs cut off the unused lug and insulate using silicon (see service notice tab 5, 96.018). Measure the current in the loop cable. There is a risk that the electromagnetic field is too weak with values under 7 mA AC.
	If this occurs in isolated areas it can be caused by disturbances from metal objects (fencing, reinforcement) or by underground cables in the vicinity.	Try moving the loop cable.
	The loop cable is bent sharply (90 degrees).	Lay the loop cable so that the bend is gradual.
	Loop cable is too deep.	Move the loop cable.

The code must be enter frequently.	The electronics have temporarily lost its voltage, and interprets this as if the lawn mower has been switched off.	Check the battery connection the circuit board.
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1 beep/second	The cutting disc is blocked.	Check that the disc can rotate freely.
	The drive wheel is blocked.	Check whether something is blocking the drive wheel.
	The lawn mower starts to reverse when it is switched on.	A microswitch has jammed. Check and rectify.

CIRCUIT DIAGRAM



We hope you find the links below useful. For further gardening information visit
www.GardenResources.co.uk

Blower Vacs	Brush cutters	Brushcutters	Chainsaws	Chain saws
Cultivators	Cylinder lawn mowers	Cylinder mowers	Echo chainsaws	Echo Strimmers
Electric chainsaws	Fertiliser spreaders	Garden blowers	Garden rollers	Garden shredders
Garden tractors	Garden vacuums	Hayter lawn mowers	Hedge cutters	Hedgecutters
Hover mowers	Husqvarna chainsaws	Kawasaki brush cutters	Kawasaki trimmers	Lawn mowers
Lawn scarifiers	Lawn tractors	Leaf blowers	Leaf vacuums	Petrol chainsaws
Petrol hedge cutters	Ride on lawn mowers	Ride on mowers	Rotary mowers	Rotavators
Ryobi trimmers	Scarifiers	Strimmers	Westwood lawn tractors	Westwood ride on mowers
Westwood tractors	Brush Cutters	Brushcutters	Blower Vacs	Chain Saws
Chainsaws	Cultivators	Cylinder Lawn Mowers	Echo Chainsaws	Echo Strimmers
Electric Chainsaws	Fertiliser Spreaders	Garden Blowers	Garden Rollers	Lawn Rollers
Garden Shredders	Garden Tractors	Garden Vacuums	Hayter Lawn Mowers	Hedge Cutters
Hedgecutters	Hover Mowers	Husqvarna Chainsaws	Kawasaki Brush Cutters	Kawasaki Strimmers
Lawn Mowers	Scarifiers	Lawn Tractors	Leaf Blowers	Leaf Vacuums
Petrol Chainsaws	Petrol Hedge Cutters	Ride on Lawn Mowers	Ride on Mowers	Rotary Mowers
Rotovators	Ryobi Strimmers	Garden Patio Heaters	Outdoor Patio Heaters	Gas Patio Heaters
Patio Heaters	Patio Heater Covers	Garden Heaters	Greenhouse Heaters	Green House Heaters
Gas Greenhouse Heaters	Stainless Steel Patio Heaters	Table Top Patio Heaters	Patio Heaters UK	Patio Heaters with Covers
Christmas Gardening Gifts	Garden Tractors	Ride on Lawn Mowers	Ride on Mowers	

Also See

[Gardening Tools Direct](#), for lawn mowers, brush cutters, chainsaws
[Gardening Supply](#) for patio heaters, lawn mowers, chainsaws
[Garden Tractor](#), for lawn tractors and ride on mowers