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STURGO®

Electric Cleaners Trolley

15710355 | 15710355V4 | MK2/400W

Operation Manual

⚠ Read and observe all warnings on this unit before operation it.

⚠ DO NOT operate this equipment unless all factory installed guards and shields are properly secured.



Foreword

Thank you for purchasing the STURGO® Electric Cleaners Trolley!

This manual is about how to operate and maintain machines with model numbers 15710355, 15710355V4, MK2/400W.

It is imperative that any person intending to use this machine is fully conversant with the contents of this document. The machine is a powerful tool and can be dangerous if used inappropriately.

We have the right to improve the machine; the description in this manual may differ slightly for your product.

If you have any questions, please use the below details to contact us.



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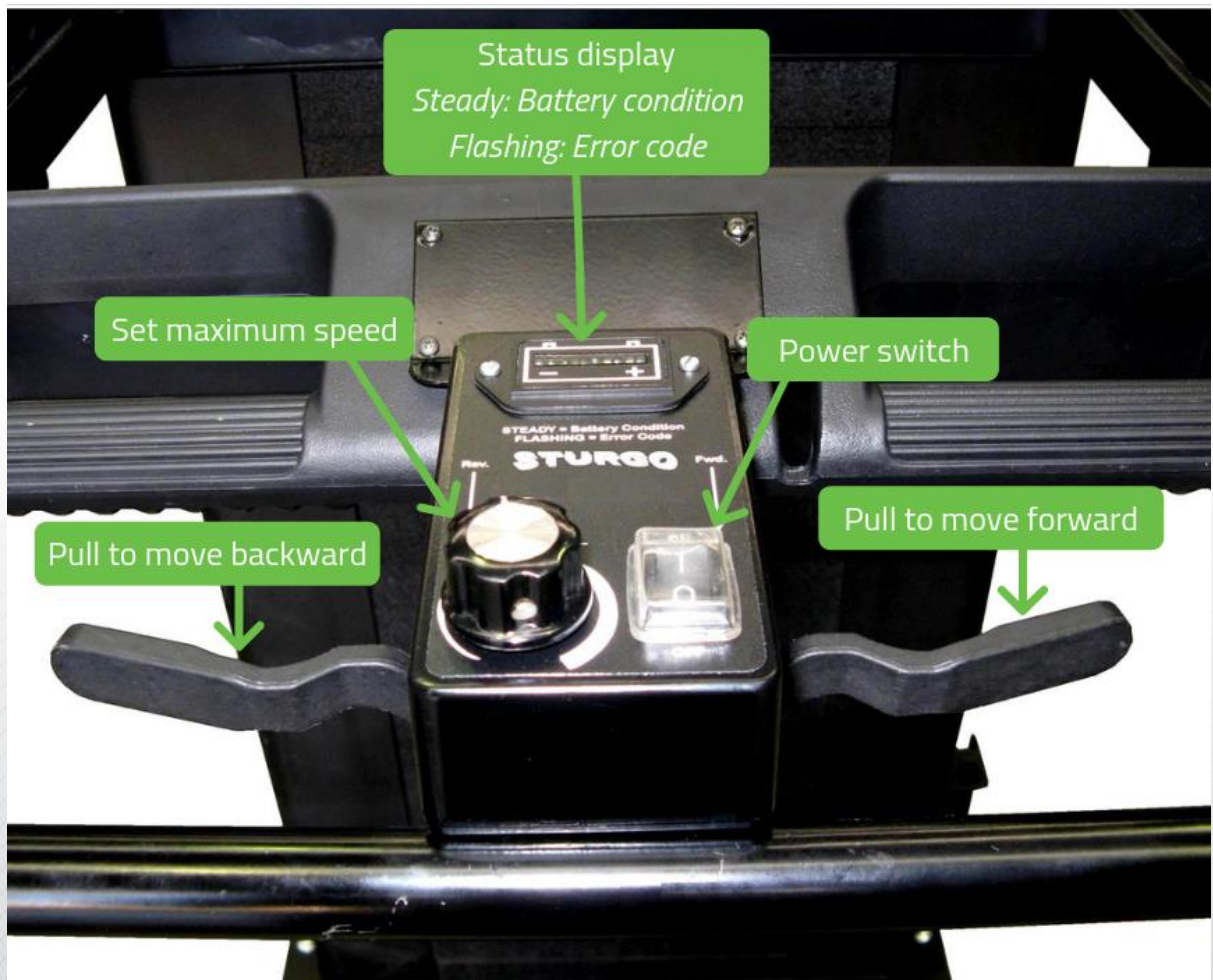


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Using the Machine

1. Turn ON the switch. The indicator panel will illuminate from 1 to 10 bars indicating the charge status of the battery. If the indicator is flashing or rippling up and down, refer to the SELF HELP GUIDE.

Image 1: Functions of the Hand Control Unit



2. Set the maximum speed with the control marked SPEED SET (anticlockwise for minimum speed, clockwise for maximum speed), and then pull back on the RHS throttle lever to go forward, and the LHS lever to go backwards. The further the lever is moved in either direction, the faster the machine will travel, up to its pre-set maximum speed.



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3. If driving upwards on a steep slope at low pre-set speed settings, the SPEED SET control may need to be increased to provide sufficient torque to climb the slope. Remember to reset the SPEED SET control when resuming flat ground or downhill use.
4. To stop, just release the lever. It is spring loaded to return to the rest position. The machine will slow to a stop and then the brake will lock to prevent further unwanted movement, particularly useful if operating on a slope. The machine will travel up to 2 metres before stopping, dependant on operating speed and slope angle. *Ensure this is considered when desiring to stop.*
5. If it is necessary to manually move the machine, the power switch must be in the OFF position and the brake lever in the Freewheel position. The brake lever is located under the front left-hand side of the machine.

Care must be taken if it is required to place the brake in the FREEWHEEL position when on a significant slope as the machine will no longer be controlled by the brake lock system.

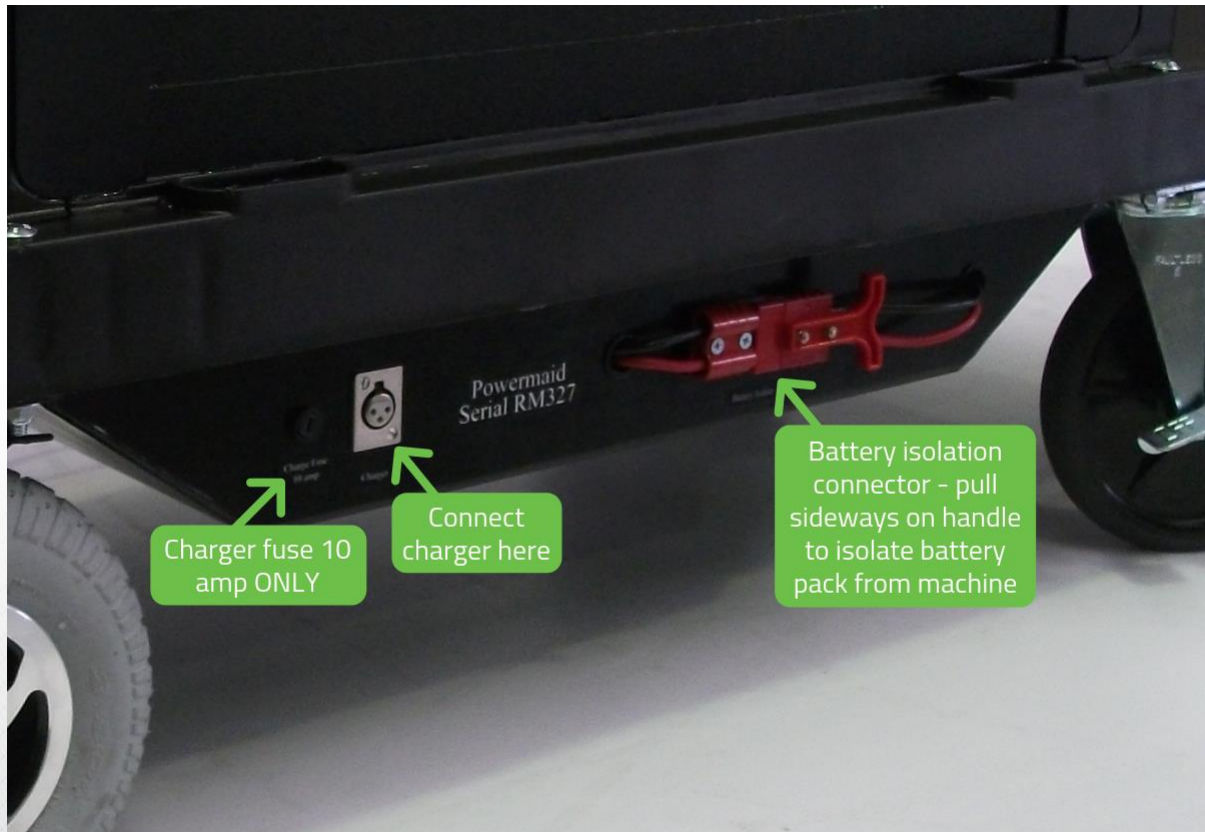
6. Do not allow the machine to pass through pools of water that exceed 50mm depth. Water damage will not be covered by warranty.



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7. Provision is made to disconnect the battery pack from the drive system in the event of an emergency or where it is necessary to carry out maintenance. A red connector with pull handle is located on the left side of the battery tray. Pull sharply on the handle disengage the connector.

Image 2: Battery tray connections



The machine is equipped with a state-of-the-art transaxle incorporating integral differential for superb manoeuvrability, as well as an automated braking system. The power available will allow the machine to operate on slopes of up to 30 degrees and the advanced electronic controller provides continuously variable speed, both in the forward and reverse direction. Internal monitoring functions of the controller provide a visual indication of battery condition and of any abnormal conditions that may be experienced (refer to the SELF HELP GUIDE).

A battery diagnostics connection list is provided for analysis of potential battery related problems.

Status Display

The status indicator panel will normally be in the steady condition, indicating battery status (10 lights = battery fully charged, down to 1 light = battery discharged). In the event that the lights on the indicator panel are flashing, an abnormal operating condition or fault is indicated (refer to the SELF HELP GUIDE).

NOTE: In all cases except the 'throttle not at rest' condition, the power must be switched OFF and then back ON again after an abnormal condition has been detected.

The most common causes of a flashing/rippling indicator are:

- (a) A rippling up and down of the indicator is because the throttle was not at rest when the power was switched on, or throttle was moved immediately the unit is switched on. In either case, release the throttle and the indicator should return to the steady state.
- (b) A rippling upwards only indicates the battery charger is still connected. Disconnect battery charger.
- (c) Nine bars flashing indicates the DRIVE/FREEWHEEL release lever is in the freewheel position. The lever is at the drive end of the trolley, left hand side. Place the lever in the 'DRIVE' position.
- (d) The status display provides a quasi-battery capacity indication. The reading is only valid after running the machine for about 10 seconds. Operation is along the line of a fuel gauge. Indications other than all bars illuminated at the start of operation means the batteries require some additional charging.
Experience gained in use of the machine will provide the operator with a good idea of how far the machine will continue to operate for a given charge state indication.

Fault Finding

If the status indicator lights are flashing, refer to the SELF HELP GUIDE. Where this does not assist in resolving the difficulty encountered, contact your supplier for assistance.

Battery Care

The batteries are fully sealed and do not require any maintenance.

The batteries must be charged after each period of use, regardless of the battery status indication.

Overnight charging (minimum of 8 hours) will provide 2-4 hours of motor running time on firm surfaces. Remember we are referring to actual motor run time. This represents a travel distance of 6-8 kilometres.

The charger is designed to be left on for extended periods. It is fully automatic in operation and no damage can be done by leaving it on for extended periods.



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Operator Maintenance

1. Follow charging recommendations to maximise battery life. This information is with the battery charger instructions.
(DAILY)
2. Manipulate the brake lever from DRIVE to FREEWHEEL position. If it does not move freely from one position to the other, refer to Technical Maintenance section.
(DAILY)
3. Tyre pressures should be maintained at between 20PSI (140KPa) and 25 PSI (175KPa)
(WEEKLY)
4. Check connections periodically, (visual check only). Do not manipulate or disturb. Pay particular attention to signs of insulation damage on wiring cables.
(WEEKLY)

Technical Maintenance

It is recommended that a suitably qualified site maintenance officer be responsible for:

1. Keeping the drive system clean. Regular removal of dust, dirt and cobwebs from the transaxle and battery housing areas is recommended. Access to the bottom of the machine is necessary and this task may need to be delegated to your electrical service personnel.
(MONTHLY)

USE ONLY COMPRESSED AIR. DO NOT USE LIQUID CLEANERS OR PRESSURE HOSES UNDER ANY CIRCUMSTANCES.

2. Lubricating of the brake lever when identified as being required by an operator.

In the event that a brake lever requires lubrication (never unless there is clear evidence that the lever is hard to manipulate between the DRIVE and FREEWHEEL positions, a single drop of oil at a time is to be applied to the spring-loaded pin shown below. If three drops have been applied and the brake will still not move freely, replace the complete brake assembly.



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Image 3: Brake maintenance

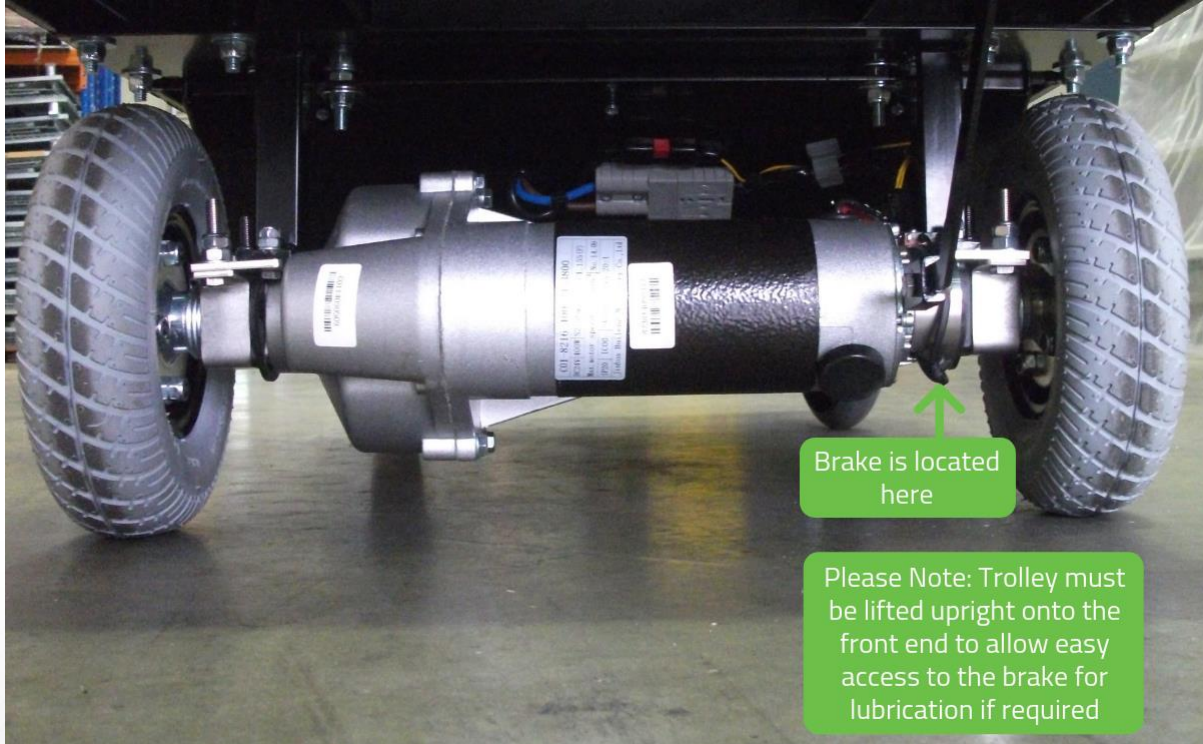
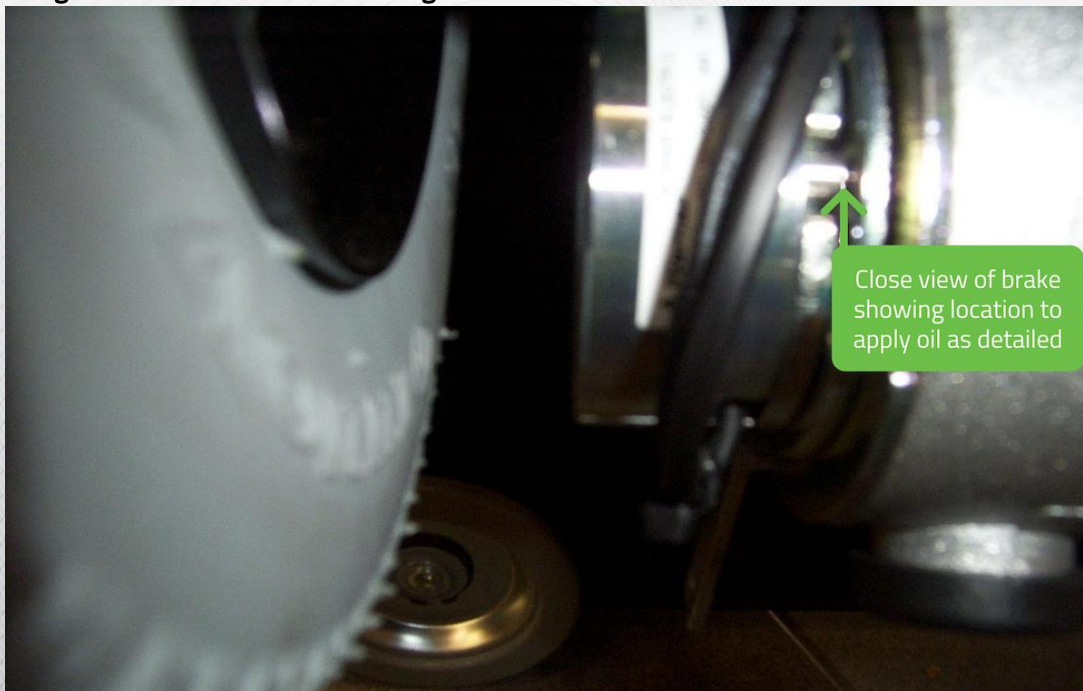


Image 4: Brake oil lubrication diagram



Warranty

Electric drive system

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Any failure occurring in normal use over a period of twelve months from the date of purchase will be rectified by repair or replacement of the relevant component, subject to delivery of the faulty machine (or component), to an authorised service centre. This is applicable to the drive system and battery charger.

Freight and/or consequential costs are to be met by the purchaser.

Batteries

Battery warranty is six months from date of purchase. Battery warranty claims are subject to the suspect battery or batteries being returned to the supplier for testing to verify a failure. Batteries determined to be damaged through incorrect charging procedures will not be replaced under this warranty.

Exclusions











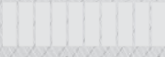

This warranty excludes repairs required as a result of:

- Application of external force
- Partial or complete immersion
- Normal wear and tear (e.g. tyres)
- Attempted repair by unauthorised persons

SELF HELP GUIDE

The status lights display the battery condition when lights are steady, and error codes when lights are flashing on and off. Count the bars lit and check against this list.

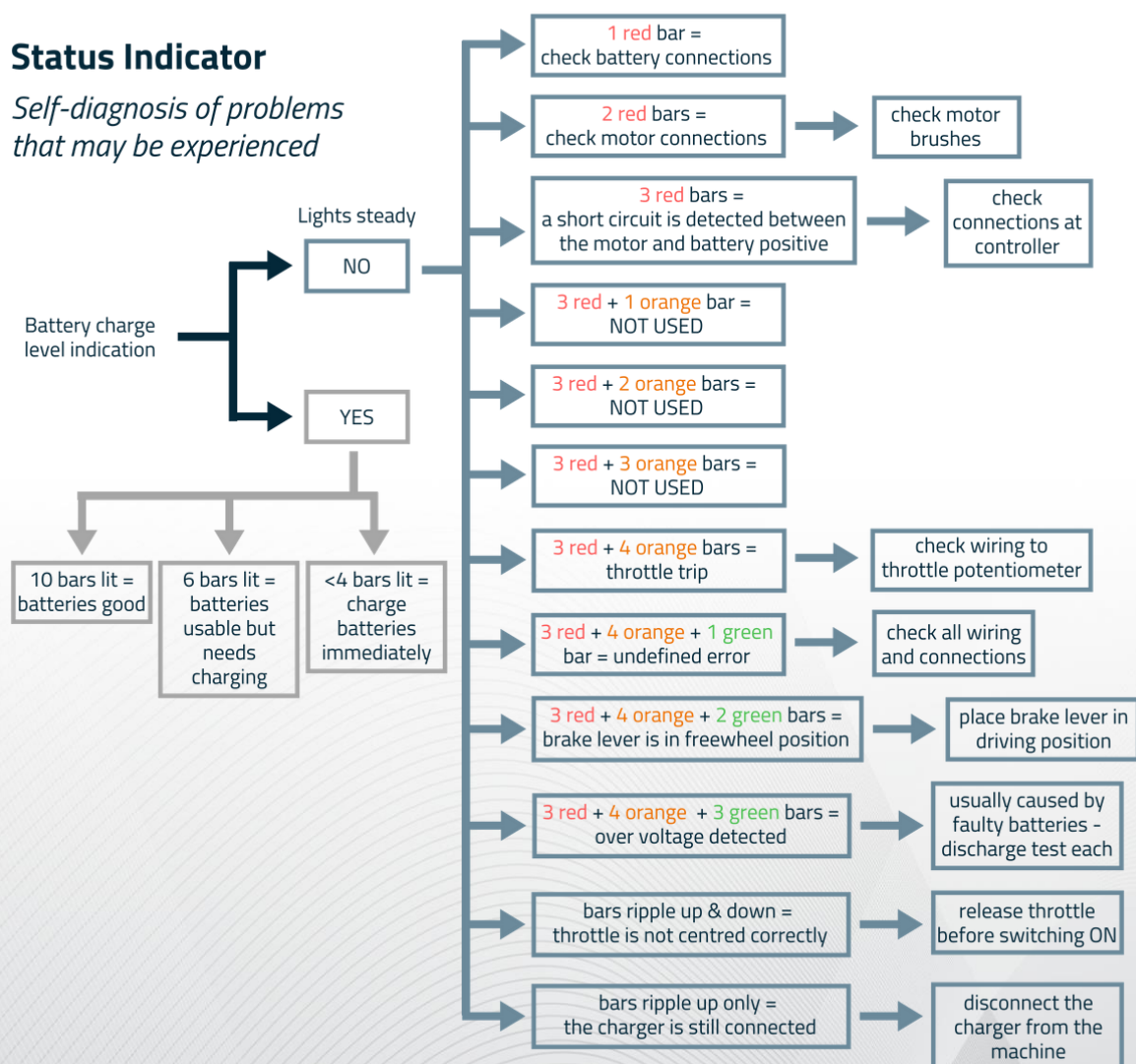
NOTE: Whenever the display is in flashing mode, the power must be turned off and on again to reset the controller.

 1 BAR	Low Battery Voltage	The battery needs charging or there is a bad connection to the battery. Check the connections to the battery. If the connections are good, try charging the battery.
 2 BARS	Motor Disconnected	The motor has a bad connection. Check all the connections and leads between the motor and the controller.
 3 BARS	Motor Wiring Trip	The motor has a short circuit to a battery. Check all the connections and leads between the motor and the battery.
 4 BARS	Possible Control System Trip	A brake system trip is indicated. Make sure that all brake connections are secure.
 5 BARS	Not Used	
 6 BARS	Not Used	
 7 BARS	Throttle Trip	A throttle wiring fault has been detected.
 8 BARS	Possible Control System Trip	A control system trip is indicated. Make sure that all connections are secure.
 9 BARS	Solenoid Brake Trip	The machine will not work if the drive/freewheel lever is in the freewheel position. If not in freewheel, check all brake connections.
 10 BARS	High Battery Voltage	An excessive voltage has been applied to the S-drive. This is usually caused by a poor battery connection. Check the battery connections.
 RIPPLE (UP&DOWN)	Throttle Displaced	The throttle has been not at rest when the machine is switched on or operated too soon after switching the power on. Place the throttle in the neutral position and it should operate normally.
 RIPPLE (UP ONLY)	Charger Charging	The machine will not operate because the battery charger is connected.

If the problems persist after you have made the checks described above, please contact your supplier.

Status Indicator

Self-diagnosis of problems that may be experienced



In the event that following the self-diagnosis chart has not solved your difficulty, please contact your supplier.