

POWRTOUCH BASIC FAULT FINDING

ALWAYS ENSURE THAT YOUR BATTERY IS FULLY CHARGED AND IF YOU ARE IN DOUBT ABOUT BATTERY STATUS USING THE BATTERY GAUGE ON YOUR CARAVAN CHECK WITH THE VOLTAGE CHART SECTION 5 PARAGRAPH 5.4

PLEASE PAY SPECIAL ATTENTION TO TESTING THE BATTERY UNDER LOAD.

TO CARRY OUT THESE CHECKS THE CARAVAN MUST BE DISCONNECTED FROM ITS 240 VOLT SUPPLY.

Before you call Powrwheel Limited to report a fault you should have the serial number of your Powrtouch available, as you will be asked for this information. It allows a Powrtouch Engineer to locate the full manufacturing status of the mover and be able to advise you accordingly.

Also, before reporting a fault you are requested to check through the fault finding list below to see if any of them can solve the problem. Failure to comply to this may result in you be asked to carry out some of these tests, thus delaying action to repair if required.

CHECKING FM ELECTRONICS CONTROL BOX - LED STATUS

LED Status Array in Use	Red Light	Green Light	
Power Up Normal	OFF	ON	
Incoming Data Transmission	ON	OFF	
Awaiting Configuration	FLASH	FLASH	Alternating
LED Status Array - Fault Diagnosis			
PCB Over Heat	FLASH		
Low Caravan Battery Voltage		FLASH	
Over Current on MOSFET Drive	FLASH	FLASH	Together

CHECKING THE CHARGE STATUS OF A 12 VOLT BATTERY

APPROX CHARGE STATE	VOLTMETER READING (No Load)	HYDROMETER READING
100%	12.7 v or over	1.27
75%	12.5 v	1.23
50%	12.4 v	1.20
25%	12.2 v	1.17
Discharged	12.0 v	1.10

Please Note: Voltage readings should be taken at least 4 hours (and could be up to 12 hours depending upon charging rates) after recharging to obtain an accurate reading.

The above figures are for the battery when under no load, if a battery is on the point of failing or not fully charged then the only test that will determine this is to take the readings under load (drop test). This can be achieved by using the Powrtouch mover with the rollers engaged to the tyres and driving both rollers forwards or backwards, if the reading drops to 12 volts or less the safety cut out on the ECB will stop the Powrtouch to prevent damage to the battery. However, this is an indication of insufficient battery voltage to drive the Powrtouch caused by an under charged or failing battery.

PLEASE BEAR SAFETY IN MIND AND THAT BEING IN THE CARAVAN WATCHING THE METER YOU DO NOT DAMAGE THE CARAVAN BY RUNNING INTO AN OBSTRUCTION.

The above voltages are accurate at 25 degrees centigrade. In temperatures less than this the battery performance and output decreases by 1.25% per degree.

BASIC FAULT FINDING CHART

Symptom of Fault	Possible Fault and Method of Correction
Unit fails to operate	Reset the ECB by turning off the isolation switch and removing the key for at least 20 seconds and then turning on again. The green light on the ECB should be illuminated.
Unit fails to operate – seems completely dead – Red Light flashing on ECB	Over heating - remove isolation key and leave 20 minutes to see if the thermal fuse will reset itself, RED LIGHT WILL STOP FLASHING and the ECB should not feel hot.
Unit fails to operate – seems completely dead	Check that the green light is illuminated on the electronics if not check that the in line fuse is not broken and 12volts DC is getting to the ECB.
Unit fails to operate or operates intermittently	Check the battery voltage of the handset is correct at 9.5 volts. If the 6 red LED's flash twice when the handset is turned on then this is also an indication that the handset battery voltage is low. This also can be checked by use of the umbilical cable.

Unit fails to operate or moves intermittently	Radio interference, check by using emergency umbilical cable.
Unit fails to operate or moves intermittently	Badly connected or corroded battery terminals, check battery terminals are clean and connected as required.
Unit fails to operate or moves intermittently – Green light flashing on ECB	Caravan battery low - check voltage of battery (see battery voltages chart Section 5 Paragraph 5.4). Charge or renew caravan battery.
Caravan fails to move or moves intermittently	Caravan battery low - with the rollers engaged move the caravan and check the voltage drop on the caravan battery meter. If this drops below 12 volts, it is advisable to have the battery tested by an accredited supplier, then as necessary charge or renew caravan battery.
Rollers slip on wheels	Disengage rollers from the tyres and the gap should be 19mm approx. Also check the tyre treads are not badly worn and the tyre pressures are correct.
IF IN DOUBT CONSULT A POWRWHEEL ENGINEER TEL: 01283 587900	