

MODELS: POWERSTART200 POWERSTART350 POWERSTART500.V2 POWERSTART900

Thank you for purchasing this Sealey product. Manufactured to a high standard this product will, if used according to these instructions and properly maintained, give you years of trouble free performance.



IMPORTANT: BEFORE USING THIS PRODUCT, PLEASE READ THE INSTRUCTIONS CAREFULLY. MAKE CAREFUL NOTE OF SAFETY INSTRUCTIONS, WARNINGS AND CAUTIONS. THIS PRODUCT SHOULD ONLY BE USED FOR ITS INTENDED PURPOSE. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. RETAIN THESE INSTRUCTIONS FOR FUTURE USE.

1. FEATURES

GENERAL FEATURES

- ✓ Initial peak current: Powerstart200 1600 Amps
Powerstart350 3200 Amps (12V)
Powerstart500 4400 Amps (12V)
Powerstart900 5000 Amps (12V)
- ✓ Test switch and status meter.
- ✓ Automatic mains powered charger unit.
- ✓ Latest battery technology.

SAFETY FEATURES

- ✓ Polarity-indicating LEDs prevent cross-connection.
- ✓ The Powerstarts contain sealed lead-acid batteries. This means that the Powerstart 200, 350 500 and 900 may be stored in any position without fear of leakage.



Powerstart200 Powerstart350 Powerstart500.V2 Powerstart900

IMPORTANT: READ THE SAFETY INSTRUCTIONS BEFORE ATTEMPTING TO USE THE POWERSTART.

- WARNING! BEFORE CHARGING THIS UNIT, DISCONNECT THE OUTPUT LEADS FROM THE UNIT AS THEY WILL REMAIN "LIVE" WHILE CHARGING.**
- WARNING! NEVER CLAMP THE OUTPUT LEADS TO THE CARRY HANDLE AS THIS COULD RESULT IN SHORT CIRCUIT.**

2. SPECIFICATIONS

	Powerstart200	Powerstart350	Powerstart500.V2	Powerstart900
Battery Type	Genesis	Hawker	Hawker	Hawker
Start Power	200hp	350hp	500hp	900hp
DC Output	12V	12/24V	12/24V	12/24V
Peak Current	1600A	3200A / 1600A	4400A / 2200A	5000A / 2500A
Cranking Current (20°C 5 secs)	680A	1360A / 680A	1700A / 850A	1900A / 950A
Cold Cranking Current (-18°C 30 secs)	280A	560A / 280A	700A / 350A	760A / 380A
Breakers (Charging Circuit Protection)	10A (Internal)	10A (External Reset)	10A (External Reset)	10A (External Reset)
Charger Fuse	630mA Antisurge	630mA Antisurge	630mA Antisurge	630mA Antisurge
Weight	15.2kg	24.4kg	22kg	31.6kg

Note: 'Start Power' indicates the maximum size of engine that each Powerstart is capable of cranking.

3. SAFETY INSTRUCTIONS

- DANGER! RISK OF EXPLOSIVE GASES.**



WORKING IN VICINITY OF A LEAD-ACID BATTERY IS DANGEROUS. BATTERIES GENERATE EXPLOSIVE GASES DURING NORMAL OPERATION. FOR THIS REASON, IT IS VERY IMPORTANT TO READ AND FOLLOW THESE INSTRUCTIONS EXACTLY EACH TIME YOU USE THE POWERSTART.

IMPORTANT: To reduce risk of battery explosion, follow these instructions and those published by the battery manufacturer and the manufacturer of any equipment you intend to use in vicinity of the battery. Remember to review warning marks on all products and on engines.

3.1. PERSONAL PRECAUTIONS

- ✓ Ensure that there is another person within hearing distance and close enough to come to your aid should a problem arise when working near a lead-acid battery.
- ✓ Have fresh water and soap nearby in case battery acid contacts skin, clothing or eyes.
- ✓ Wear safety eye protection and protective clothing. Avoid touching eyes while working near battery.
- ✓ Wash immediately with soap and water if battery acid contacts skin or clothing. If acid enters eye, flush eye immediately with cool, clean running water for at least 15 minutes and seek immediate medical attention.
- ✓ Remove personal metallic items such as rings, bracelets, necklaces and watches. A lead-acid battery can produce a short-circuit current high enough to melt or weld a ring, which would cause severe burns.

3.2. OTHER IMPORTANT SAFETY INSTRUCTIONS

- ✓ Familiarise yourself with the application, limitations and potential hazards of the unit.
- ✓ Keep the unit in good working condition. Take immediate action to repair or replace damaged parts.
- ✓ Only use recommended attachments and parts. To use unapproved items may be dangerous and will invalidate your warranty.
- ✓ The Powerstart must only be opened and checked by qualified service personnel. **DO NOT** disassemble for any reason.
- ✓ Keep children and unauthorised persons away from the work area.
- ✓ Keep work area clean and tidy and free from unrelated materials and ensure that there is adequate lighting.
- ✓ If the unit receives a sharp knock or blow, it must be checked by a qualified service agent before being used.
- x **DO NOT** smoke or allow a spark or flame in the vicinity of the battery, engine or Powerstart.
- x **DO NOT** drop any metal tool onto the battery as it may produce a spark or short circuit, which could cause an explosion.

- x **DO NOT** use the unit to recharge dry cell batteries (commonly used in home appliances). These batteries may burst and cause injury to persons and/or damage to property.
- x **DO NOT** charge or boost a frozen battery.
- x **DO NOT** allow the power lead clamps to touch each other, or to contact the same piece of metal, as this will result in a damaging short circuit.
- x **DO NOT** pull or carry the unit by its cables or wires and do not pull the negative and positive clamps from the battery terminals.
- x **DO NOT** operate in vicinity of flammable liquids or gases.
- x **DO NOT** recharge the unit with plugs, cables or attachments that are damaged. Replace such items immediately.
- x **DO NOT** use this product to perform a task for which it is not designed.
- x **DO NOT** store the unit in damp or wet locations or where temperature may exceed 50°C.
- x **DO NOT** submerge the unit in water.
- x **DO NOT** use whilst under the influence of drugs, alcohol or intoxicating medication.
- x **DO NOT** leave the unit in a totally discharged state for an extended period of time as this will result in permanent damage.
- x **DO NOT** cross-connect the power leads from the Powerstart to the battery. Ensure that positive is to positive and negative is to negative.
- ✓ The Powerstarts may be used under any weather conditions - rain, snow, hot or cold.

3.3. ELECTRICAL SAFETY IN RELATION TO BATTERY CHARGERS

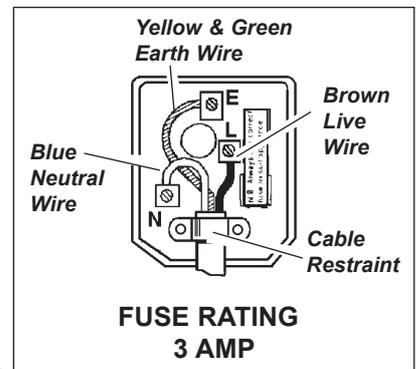
 **WARNING!** It is the responsibility of the owner and the operator to read, understand and comply with the following:
 You must check all electrical products, before use, to ensure that they are safe. You must inspect power cables, plugs, sockets and any other connectors for wear or damage. You must ensure that the risk of electric shock is minimised by the installation of appropriate safety devices. A Residual Current Circuit Breaker (RCCB) should be incorporated in the main distribution board. We also recommend that a Residual Current Device (RCD) is used. It is particularly important to use an RCD with portable products that are plugged into a supply which is not protected by an RCCB. If in any doubt consult a qualified electrician. You may obtain a Residual Current Device by contacting your Sealey dealer.

You must also read and understand the following instructions concerning electrical safety.

- 3.3.1. The **Electricity at Work Act 1989** requires all portable electrical appliances, if used on business premises, to be tested by a qualified electrician, using a Portable Appliance Tester (PAT), at least once a year.
- 3.3.2. The **Health & Safety at Work Act 1974** makes owners of electrical appliances responsible for the safe condition of those appliances and the safety of the appliance operators. **If in any doubt about electrical safety, contact a qualified electrician.**
- 3.3.3. Ensure that the insulation on all cables and on the appliance is safe before connecting it to the power supply. See 1.1.1. and 1.1.2. and use a Portable Appliance Tester.
- 3.3.4. Ensure that cables are always protected against short circuit and overload.
- 3.3.5. Regularly inspect power supply cables and plugs for wear or damage and check all connections to ensure that none are loose.
- 3.3.6. **Important:** Ensure that the voltage marked on the appliance matches the power supply to be used and that the plug is fitted with the correct fuse - see fuse rating at right.
- 3.3.7. **DO NOT** pull or carry the appliance by the power cable.
- 3.3.8. **DO NOT** pull the plug from the socket by the cable.
- 3.3.9. **DO NOT** use worn or damaged cables, plugs or connectors. Immediately have any faulty item repaired or replaced by a qualified electrician. When an ASTA/BS approved UK 3 pin plug is damaged, cut the cable just above the plug and **dispose of the plug safely.** Fit a new plug according to the following instructions (UK only).

- a) Connect the **GREEN/YELLOW** earth wire to the earth terminal 'E'.
- b) Connect the **BROWN** live wire to the live terminal 'L'.
- c) Connect the **BLUE** neutral wire to the neutral terminal 'N'.
- d) **After wiring, check that there are no bare wires, that all wires have been correctly connected, that the cable outer insulation extends beyond the cable restraint and that the restraint is tight.**

Double insulated products, which are always marked with this symbol , are fitted with live (brown) and neutral (blue) wires only. To rewire, connect these two wires as indicated above - **DO NOT** connect either wire to the earth terminal.



4. CHARGING INSTRUCTIONS

WARNING! YOU MUST FOLLOW THE SAFETY INSTRUCTIONS



IMPORTANT! Only recharge Powerstarts with the AC charger provided. The charger is automatic and does not require the user to monitor the progress of the charge. Furthermore, whenever the Powerstart is not in use it should be connected to the charger, failure to do this will invalidate the warranty.

4.1. Reading the power level indicators

The charge level of the Powerstart200 and 350 can be seen at any time by pressing the test button (fig. 1.A) and noting the meter (fig.1.E) reading. When the needle is in the green sector the unit is fully charged and is ready to be used. The red sector indicates that immediate charging is required and the yellow sector indicates that recharging is advisable.

- 4.1.1. For the Powerstart500 and 900 models press and hold the test button, the LED's (fig.2.E) from left to right, four orange (low power) and six green will light up one by one and stop at the level of charge, the further to the right the higher the charge.

4.2. Recharging

When new the unit should be charged before use until the charger display indicates "Full".

- WARNING!** Use the supplied charger, cable and connector. Unauthorised parts may damage the unit and will invalidate the warranty.

Ensure that you strictly apply the safety instructions as stated in Section 3.

- 4.2.1. Ensure that the Powerstart control switch (fig.1.D) is in the 'Off' position.
- 4.2.2. Plug the charger mains cable into a 230 volt supply. The green 'On' LED will illuminate.
- 4.2.3. Plug the charger cable into the charge input socket (fig.1.B) of the unit. The unit will now charge automatically and the charger LED's will indicate the level of charge. When the green 'Full' LED comes on, charging is complete but the charger should not be disconnected or switched off. Leave it connected to the Powerstart to ensure that the unit is fully charged when next required.
- 4.2.4. To disconnect the charger from the Powerstart, first switch off the charger, then press and hold the latch immediately above the socket and pull out the plug.

Important! If the 'Fault' LED on the charger illuminates, switch off the charger, disconnect it from the Powerstart and contact your Sealey dealer.

Note: The Powerstart charging circuits are protected against short circuit by thermal breakers. The breaker in the Powerstart200 has automatic reset whilst those in the Powerstart350, Powerstart500 and Powerstart900 (two in each - one per battery) have manual reset buttons on the front panel.

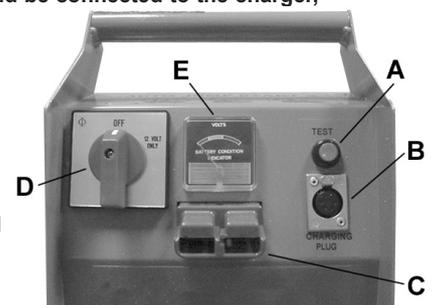


fig.1 Powerstart200

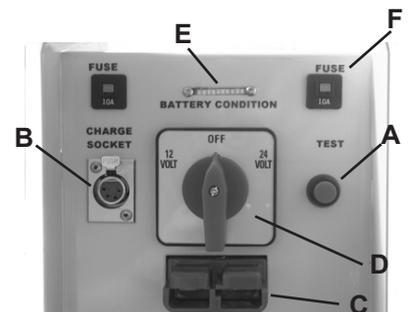


fig.2 Powerstart900

5. OPERATING INSTRUCTIONS

WARNING! YOU MUST FOLLOW SAFETY INSTRUCTIONS AND ENSURE THAT THE POWERSTART AND VEHICLE VOLTAGES ARE THE SAME.



- 5.1. Before use, press the test button to confirm that the Powerstart is charged (see 4.1.).
- 5.2. Apply the vehicle hand brake and select neutral gear (or 'Park' if automatic transmission). Turn ignition and electrical accessories off.
- 5.3. Use in a well ventilated area and wear protective eye shields and clothing.
- WARNING! Do not allow the red and black clamps to touch each other once the leads are connected to the Powerstart. Ensure that the correct clamps are placed on the correct battery terminals.**
- 5.4. With the leads **disconnected** from the Powerstart attach the positive RED (+) clamp to the positive terminal on the vehicle battery. Ensure that the terminal is clean.
- Note: On vehicles with multiple batteries connect positive clamp to positive battery terminal which is connected to vehicle electrical system.**
- 5.5. Attach the negative BLACK (-) clamp to the (ground) engine block or frame of the vehicle. Ensure that the cables are not in the path of moving engine parts, such as the fan and are away from the carburettor/injection system, fuel lines etc.
- 5.6. Confirm that the green LED at the lead connector (fig.3.1) is illuminated.
If the red LED is illuminated then the clamps are cross-connected and must be reversed.
- 5.7. With the Powerstart control switch (fig.1.D & fig.2.D) set to 'Off' plug the leads into the socket (fig.1.C or fig.2.C).
- Note: The connector will only fit the socket one way round, to prevent cross-connection.**
- Note: On Powerstart500.V2 and 900 models the negative BLACK clamp is fitted with a 500A fuse.**
- 5.8. **On models Powerstart350 Powerstart500 and Powerstart900 turn the control switch (fig.2.D) to select 12 or 24V to match the vehicle voltage.** On the Powerstart350 to select 24V the switch knob must be pulled out and then turned.
On model Powerstart 200 turn the switch (fig. 1.D) to select 12V.
- 5.9. Make sure that no one is standing near the battery. When all is OK, start the engine.
- 5.10. Once the vehicle has started, turn the control switch to 'Off' and then disconnect the leads from the Powerstart.
- 5.11. To remove the lead clamps firstly disconnect the **BLACK (-)** negative clamp followed by the **RED (+)** clamp.
- IMPORTANT: If the vehicle does not start within six seconds, DO NOT continue cranking. Let the Powerstart's internal battery(ies) cool for three minutes before attempting to start the vehicle again. Failure to do so may damage the unit.**
- 5.12. After use, immediately recharge the Powerstart as described in 4.2.



- WARNING! BEFORE CHARGING THIS UNIT, DISCONNECT THE OUTPUT LEADS FROM THE UNIT AS THEY WILL REMAIN "LIVE" WHILE CHARGING.**
- WARNING! NEVER CLAMP THE OUTPUT LEADS TO THE CARRY HANDLE AS THIS COULD RESULT IN SHORT CIRCUIT.**
- WARNING! The warnings, cautions and instructions discussed in this manual cannot cover all possible conditions and situations that may occur. It must be understood that common sense and caution are factors which cannot be built into this product, but must be applied by the operator.**

6. QUESTIONS & ANSWERS

QUESTION:	ANSWER:
Can the Powerstart be recycled?	Yes, in accordance with local authority regulations.
What is the ideal in-use storage temperature of the Powerstart?	Room temperature. The Powerstart will also operate at temperatures below zero, however power will be lessened. Intense heat will activate self-discharge.
I have a regular battery charger, can I use it to recharge the Powerstart?	No, only the supplied charger can be used.
Is the Powerstart fool proof?	No. All jump starting instructions must be followed carefully.
Can the Powerstart battery(ies) be replaced?	Yes, through your Sealey dealer, but note: Batteries are not covered by warranty as they are consumable items.

7. DECLARATION OF CONFORMITY

Declaration of Conformity We, the sole importer into the UK, declare that the product listed below is in conformity with the following standards and directives.	
POWERSTART Models: 200/350/500.V2/900 2006/95/EC Low Voltage Directive 2004/108/EC EMC Directive 93/68/EEC CE Marking Directive 2002/95/EC RoHS Directive 2002/96/EC WEEE Directive	 <p>The construction file for this product is held by the Manufacturer and may be inspected, by a national authority, upon request to Jack Sealey Ltd.</p> <p>Signed by Mark Sweetman  15th May 2008</p> <p><i>For Jack Sealey Ltd. Sole importer into the UK of Sealey Power Products.</i></p>

NOTE: It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.

IMPORTANT: No liability is accepted for incorrect use of this equipment.

WARRANTY: Guarantee is 12 months from purchase date, proof of which will be required for any claim.

INFORMATION: For a copy of our latest catalogue and promotions call us on 01284 757525 and leave your full name and address, including postcode.

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