

MODEL No's :

SUPERSTART520.V5

SUPERSTART620.V5

Thank you for purchasing a Sealey product. Manufactured to a high standard this product will give you years of trouble free performance if these instructions are carefully followed and the product is correctly maintained.



IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS AND CAUTIONS. USE THIS PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. PLEASE RETAIN THESE INSTRUCTIONS FOR FUTURE USE.

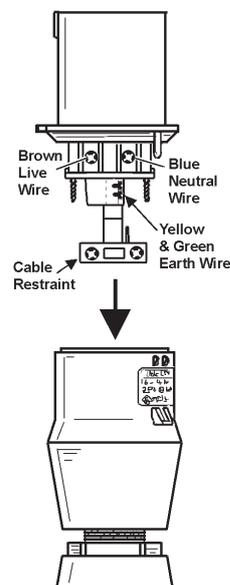
1. SAFETY INSTRUCTIONS

1.1. ELECTRICAL SAFETY

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.

- 1.1.1. The **Electricity at Work Act 1989** requires that all portable electrical appliances, if used on business premises, are tested by a qualified electrician, using a Portable Appliance Tester (PAT), at least once a year.
- 1.1.2. 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.
- 1.1.3. 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.
- 1.1.4. Ensure that cables are always protected against short circuit and overload.
- 1.1.5. Regularly inspect power supply leads and plugs for wear and damage and power connections to ensure that none is loose or damaged.
- 1.1.6. 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.
- 1.1.7. **DO NOT** pull or carry the appliance by the power cable.
- 1.1.8. **DO NOT** pull the plug from the socket by the cable.
- 1.1.9. **DO NOT** use worn or damaged cables, plugs or connectors. Immediately have any faulty item repaired or replaced by a qualified electrician.
- 1.1.10. This product requires an electrical supply in excess of 13 amps, and NO plug is fitted. You must therefore contact a qualified electrician to ensure that a 30 amp supply is available. We recommend that you discuss the installation of a industrial round pin plug and socket with your electrician. Ensure that the unit is correctly earthed via a three-pin plug, as shown.
 - a) **Connect the green/yellow earth wire to the earth terminal** .
 - b) **Connect the brown live wire to live terminal 'L'.**
 - c) **Connect the blue neutral wire to the neutral terminal, 'N' or unmarked.**
 - d) **After wiring, check that there are no bare wires, that all wires have been correctly connected, that the external insulation extends beyond the cable restraint and that the restraint is tight.**
- 1.1.11. If an extension reel is used it should be fully unwound before connection. A reel with an RCD fitted is preferred since any appliance plugged into it will be protected. The cable core section is important and should be at least 1.5mm², but to be absolutely sure that the capacity of the reel is suitable for this product and for others which may be used in the other output sockets, we recommend the use of 2.5mm² section cable.
- 1.1.12. **DO NOT** fit a 13 amp plug to either of these starter/chargers as these units will draw more than 13amps from the mains supply when being used to crank larger engines.



THE SUPPLY TO THE SUPERSTARTS 520 & 620 MUST BE FITTED WITH A 30 AMP FUSE OR BREAKER



DANGER! BE AWARE, LEAD-ACID BATTERIES GENERATE EXPLOSIVE GASES DURING NORMAL BATTERY OPERATION. FOR THIS REASON, IT IS VERY IMPORTANT TO READ AND FOLLOW THESE INSTRUCTIONS CAREFULLY, EACH TIME YOU USE THE CHARGING EQUIPMENT.

Follow these instructions and those published by the battery and vehicle manufacturers and the manufacturer of any equipment you intend to use in the vicinity of the battery. Remember to review warning marks on all products and on engines.

1.2. PERSONAL PRECAUTIONS

- ✓ Ensure there is another person within hearing range of your voice, or close enough to come to your aid, should a problem arise when working near a lead-acid battery.
- ✓ Wear safety eye protection and protective clothing. Avoid touching eyes while working near battery.
- ✓ Have fresh water and soap nearby in case battery acid contacts skin, clothing, or eyes.
- ✓ 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 weld a ring or the like to metal, which may cause severe burns.
- ✓ Ensure hands, clothing (especially belts) are clear of fan blades and other moving or hot parts of engine, remove ties and contain long hair.
- ✗ **DO NOT** smoke or allow a spark or flame in the vicinity of battery or engine.



1.3. GENERAL SAFETY INSTRUCTIONS

- ✓ Familiarise yourself with the application, limitations and potential hazards relating to starter/chargers. Also refer to the vehicle manufacturer's hand book. **IF IN ANY DOUBT CONSULT AN ELECTRICIAN.**
- ✓ Only use recommended attachments and parts. To use non-recommended items may be dangerous and will invalidate your warranty.
- ✓ Use the starter/charger in the upright position only and ensure it is placed on a stable surface which will adequately support the weight.
- ✓ Ensure the starter/charger is 'Off' and disconnected from the mains supply before handling the power clamps.
- ✓ Ensure the starter/charger is 'Off' and disconnected from the mains supply before attaching/detaching the power clamps to/from the battery.
- ✓ Keep tools and other items away from the engine and ensure you can see the battery and moving parts of the engine clearly.
- ✓ Ensure the voltage on the starter/charger is set to the same voltage as the battery.
- ✓ If battery has caps to access the battery fluid, remove the caps and check the fluid level before connecting the power clamps. If necessary top-up the battery with distilled water by referring to the battery manufacturer's instructions (apply the personal safety precautions described in para. 1.3).
- ✓ The cables may become hot with excessive use. If so, allow a few minutes for them to cool down before attempting to re-use.
- ✓ If the starter/charger receives a sharp knock or blow the unit must be checked by a qualified service agent before using.
- ✓ If the battery terminals are corroded or dirty clean them before attaching the power clamps.
- ✓ Keep children and unauthorised persons away from the work area.
- ✗ DO NOT dis-assemble the starter/charger for any reason. The starter/charger must only be checked by qualified service personnel.
- ✗ DO NOT try to charge a non-rechargeable battery.
- ✗ DO NOT try to start engine, or to charge battery, if battery is frozen.
- ✗ **WARNING!** To prevent the risk of sparking, short circuit and possible explosion DO NOT drop metal tools in the battery area, or allow them to touch the battery terminals.
- ✗ DO NOT allow power clamps to touch each other or to make contact with any metallic parts of the vehicle.
- ✗ DO NOT cross connect power leads from starter/charger to battery. Ensure positive (+) (RED) is to positive and negative (-) BLACK is to negative.
- ✗ If symbols cannot be distinguished, remember that the negative terminal is the one directly connected to the vehicle bodywork.
- ✗ DO NOT pull the cables or clamps from the battery terminals and DO NOT remove power clamps while the starter/charger is 'On'.
- ✗ DO NOT use the starter/charger outdoors, or in damp or wet locations and DO NOT operate within the vicinity of flammable liquids or gases.
- ✗ DO NOT use starter/charger inside vehicle or inside engine compartment. Ensure there is sufficient ventilation and do not cover or obstruct starter/charger ventilation louvres.
- ✗ DO NOT use this product to perform a task for which it is not designed.
- ✗ **WARNING!** Simultaneous charging of batteries is possible but must be done with great caution by a qualified person. Contact your Sealey dealer for information and accessories. DO NOT charge in series two batteries of differing type, capacity, or levels of discharge.
- ✗ **WARNING!** If a fuse blows, ensure it is replaced with an identical fuse type and rating.
- ✓ When not in use, store the starter/charger carefully in a safe, dry, childproof location.

2. SPECIFICATIONS

MODEL NO:	SUPERSTART520.V5	SUPERSTART620.V5
Input	230V	230V
Output	12V/24V	12V/24V
Output 12V Charge Peak (EN)	75A (50A)	90A (70A)
Output 24V Charge Peak (EN)	75A (50A)	90A (70A)
Output 12V Start Peak (EN)	450A (300A)	570A (360A)
Output 24V Start Peak (EN)	450A (300A)	570A (360A)
Input-Charge	6A/12A	9A/16A
Input-Start	30A	30A
Fuse Ref. (quantity)	120/121003 (2)	120/121003 (2)
Pack of 20 fuses	120/802029	120/802029

3. ASSEMBLY INSTRUCTIONS

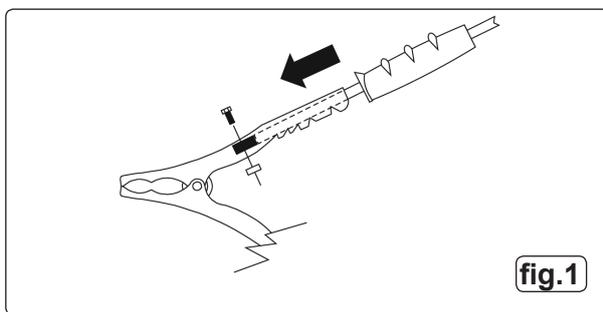


fig.1

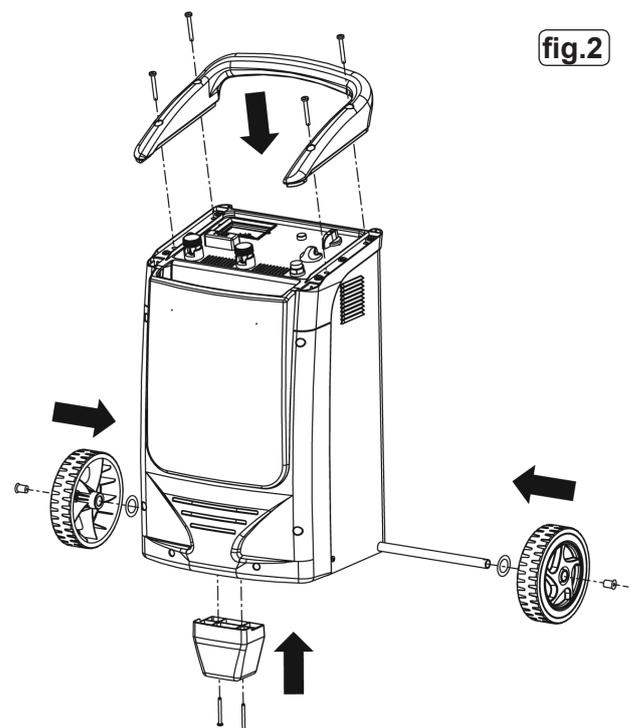


fig.2

- 3.1 GENERAL ASSEMBLY.** Assemble the handle and foot to the main casing using the fittings provided as indicated in fig.2.
- 3.1.1 Slide the axle through the casing at the bottom back corner.
- 3.1.2 Attach the wheels using the fittings provided as indicated in fig.2.
- 3.2 BATTERY CLAMPS.** (See fig.1)
- 3.2.1 Assemble the clamp with the red handle to the movable cable.
- 3.2.2 Assemble the clamp with the black handle to the fixed cable which comes directly out of the front of the battery charger.

4. OPERATING INSTRUCTIONS



WARNING! Ensure you have read and understood all safety instructions before using the charger.

- 4.1 PREPARATION** It is important to correctly prepare for charging - follow Section 1 safety requirements and, especially when charging battery in situ, any vehicle manufacturer's instructions. Check that capacity of battery is compatible with charger output.
- 4.1.1. Check battery to ensure the NEGATIVE & POSITIVE terminals are clearly identifiable before removing the battery from the vehicle.
 - 4.1.2. Disconnect and remove the battery from the vehicle and place in an appropriate safe area ready for charging.
 - 4.1.3. Remove the battery electrolyte cover or caps to allow the gases produced by charging to escape.
 - 4.1.4. Check the electrolyte fluid level in the battery is above the plates. If not, add distilled water to cover them by 5 - 10mm. DO NOT touch the battery fluid as it is corrosive.
 - 4.1.5. The correct charging status of the battery may be determined by use of a hydrometer which measures the specific density of the electrolyte. The following information indicates kg/l at 20°C: **1.28 = Fully charged** **1.21 = Half charged** **1.14 = Fully discharged battery.**

WARNING! Be cautious and vigilant as the electrolyte is highly corrosive sulphuric acid.

4.2. CONNECTING CHARGER TO BATTERY

- Ensure the battery charger is unplugged from the mains power supply before connecting power leads to the battery.
- 4.2.1. Set the charger voltage to match that of the battery: i.e. 12 or 24 volts by moving the cable to the appropriate terminal.
 - 4.2.2. Check the charger clamps and battery terminals to ensure they are clean and free from oxidation.
 - 4.2.3. Connect the charger POSITIVE (Red or +) lead to the POSITIVE (+) terminal of the battery and the NEGATIVE (Black or -) lead to the NEGATIVE (-) terminal of the battery.

4.3. CHARGING THE BATTERY

Connect the charger to the mains power supply and set the rate of charge according to your model type as follows:

- 4.3.1. **Superstart520.V5** (see fig.6) Set the mode switch (next to the on/off switch) to the 'charge' function indicated by the battery symbol.
 - Low charging rate: - select MIN & 1
 - Med charging rate: - select MIN & 2
 - High charging rate: - select MAX only (please note that when MAX is selected the switch marked 1 & 2 is over-riden.)
 The timer can be used in conjunction with the MAX setting and may be set for a charge time of up to 60 minutes. When the selected time has elapsed the current will be switched off. For unattended functioning leave the timer knob set on 'normal' charging.

4.3.2. Superstart620.V5 (see fig.7) Select charge level 1,2 or 3 using the rotary switch situated above the timer.

- 4.3.3. Once you have checked that the charger is correctly set up for the current situation, switch on the power.
- 4.3.4. Check the current delivery to the battery by reading the ammeter on the front of the battery charger (fig.4) ammeter face may vary by model). Initially, there will be a high rate of charge which will slowly decrease according to the capacity and condition of the battery.

4.3.5. When fully charged the ammeter reading should be close to "0" and the electrolyte in the battery should begin to gas. Stop charging to protect battery plates from oxidation and damage.

4.3.6. Switch charger off and unplug from mains power. Disconnect the power clamps, clean the charger and store in a safe, dry area.

4.3.7. Replace the battery electrolyte cover or caps. Wipe up any splashes or spillage (remember the electrolyte is a corrosive acid). Return the battery to the vehicle, secure according the manufacturer's instructions and re-connect the power leads. Check to ensure all tools are removed before closing the bonnet.

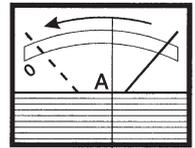


fig.4



fig.5

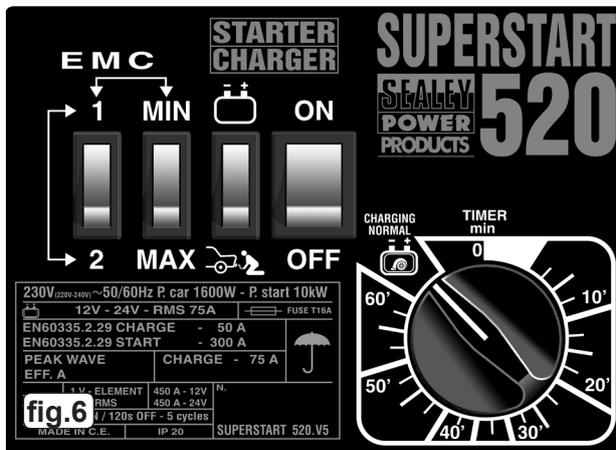


fig.6

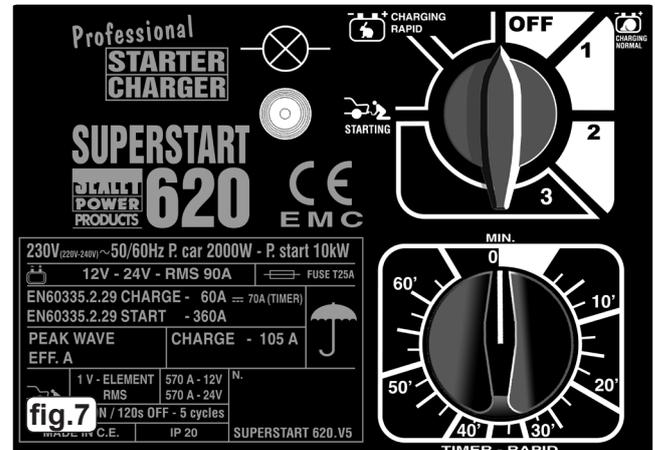


fig.7

NOTE: If charger is connected to a fully charged battery the ammeter will show a low charging output. NO charging is necessary. DO NOT continue to charge a fully charged battery, as this will damage the battery. DO NOT leave a battery on charge unattended.

4.4 SEALED BATTERIES

- 4.4.1. Charge a sealed battery very slowly, carefully monitoring the voltage across the battery terminals using a normal tester.
- 4.4.2. When the battery terminal voltage reaches 14.4V for 12V batteries or 28.8V for 24V batteries, stop charging.

4.5 MULTIPLE CHARGING

WARNING! DO NOT simultaneously charge different types of battery or batteries with different capacities or levels of discharge.

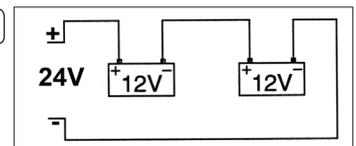
4.5.1. Simultaneous multiple charging should be carried out in series, since this enables monitoring of the current circulating in each battery. See fig.8. NOTE: If two batteries with rated voltages of 12V are connected in series, move the positive cable to the 24V terminal.

4.5.2. When fully charged, the ammeter reading should be close to "0" and the electrolyte in the batteries should begin to gas. Stop charging to protect the battery plates from oxidation and damage.

4.6 RAPID CHARGE

The Superstart620.V5 has a rapid charge function which is controlled by the 60 minute timer provided. Rapid charging takes place at a pre-set rate which is one step higher than the highest charge rate available during normal charging. To initiate rapid charging turn the timer to the required charging time in minutes and turn the rotary selector switch to the rapid charging position indicated by a 'hare' symbol (see fig.5). When the pre-set time has elapsed the current is automatically switched off. Turn the rotary selector switch to the 'off' position.

fig.8



4.7 STARTING

- WARNING! DO NOT** attempt to start engine with starter/charger if the battery is disconnected from the vehicle. The presence of the battery is essential for the elimination of possible overvoltage that may be generated due to energy accumulating in the connection cables at the starting stage.
- 4.7.1. Check the vehicle manufacturer's handbook and follow any special instructions. Check that the battery is in good condition.
- 4.7.2. Ensure the starter/charger is disconnected from the mains power supply and, for models with dual voltage output, set the output voltage to the same as the vehicle battery i.e. 12 or 24 volts.
- 4.7.3. Check that the charger clamps and battery terminals are clean and free from oxidation.
- 4.7.4. Without removing the cables that connect the battery to the vehicle, connect the charger POSITIVE (red) lead to the POSITIVE (+) terminal on the battery and the NEGATIVE (black) lead to NEGATIVE (-) terminal on the battery.
- 4.7.5. **Starting will be greatly eased if the battery is given a short charge before the ignition switch is turned. This must always be done with the selector switch set to the 'charge' position and NOT to 'starting'.** Plug starter/charger into mains power supply and perform a rapid charge for 5 to 10 seconds.
- 4.7.6. Move the starter/charger switch to the 'STARTING' position indicated by the symbol shown in fig.9. Turn the vehicle ignition on and crank the engine for a MAXIMUM of 3 seconds. If the vehicle does not start, wait 120 seconds and then try again to a maximum of 5 cycles.
- WARNING!** If the vehicle will not start, **DO NOT** continue as vehicle battery and electrical circuits may be damaged, and the fuse in the charger will blow. Disconnect the charger and investigate for vehicle faults.
- 4.7.7. When the vehicle is running successfully, switch the starter/charger off, unplug from the mains power and disconnect the power terminals from the battery.



5. FUSES

Your starter/charger is equipped with a safety fuse, or fuses, which will cut the power to the unit in the following circumstances:

- a) Overload - too high a current to the battery.
- b) Short circuit - clamps touch, or cross-connection to battery.
- c) Prolonged starting attempts.

Should the fuse blow take the following action:

- 5.1. Turn the unit off and disconnect from the mains power supply.
- 5.2. Allow the unit to cool down, establish the reason for failure and correct.
- 5.3. Replace the fuse. Use only Sealey replacement fuses. **DO NOT** use a fuse with copper bridges or similar as these will damage your equipment. Refer to Section 2 'Specifications' for fuse information and part numbers. We recommend you hold 2 or 3 spare fuses with the starter/charger. **Note: The use of an incorrect fuse will invalidate your warranty.**

Environmental Protection.



Recycle unwanted materials instead of disposing of them as waste.

All tools, accessories and packaging should be sorted, taken to a recycle centre and disposed of in a manner which is compatible with the environment.



When the product is no longer required, it must be disposed of in an environmentally protective way. Contact your local solid waste authority for recycling information.

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 product.

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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SUPERSTART STARTER/CHARGERS

SUPERSTART520.V5 SUPERSTART620.V5

Environmental Protection.



Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycle centre and disposed of in a manner which is compatible with the environment.



WEEE REGULATIONS. Dispose of this product at the end of its working life in compliance with the EU Directive on Waste Electrical and Electronic Equipment. When the product is no longer required, it must be disposed of in an environmentally protective way.

DECLARATION OF CONFORMITY

We, the sole importer into the UK, declare that the products listed below are in conformity with the following standards and directives.

BATTERY STARTER/CHARGERS Superstart520.V5, 620.V5

EMC Directive 2004/108/EC
RoHS Directive 2002/95/EC
WEEE Directive 2002/96/EC
CE Marking Directive 93/68/EEC
Low Voltage Directive 2006/95/EC

BS EN 60335 Pt.1 & Pt.2 - 29

The construction files for these products are held by the Manufacturer and may be inspected, by a national authority, upon request to Jack Sealey Ltd.



Signed by Mark Sweetman
4th January 2008

*For Jack Sealey Ltd. Sole importer
into the UK of Sealey Power Welders.*