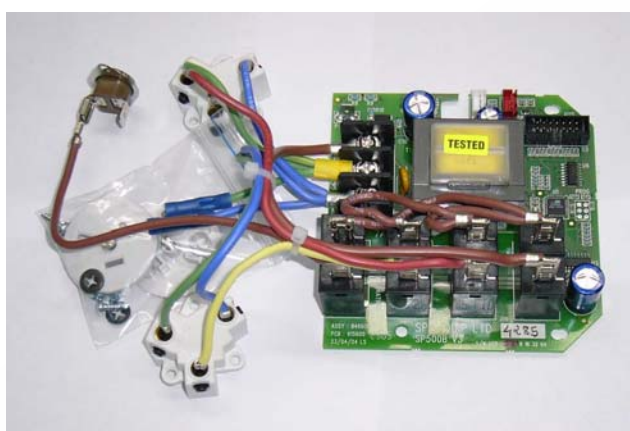


SERVICE NOTE

54500 To SP500AMkII Pcb Conversion Kit (p/n Q856497-2) Installation Guide



Summary

This service note provides instructions for the repair of the old 54500 controller using the PCB conversion kit p/n Q856497-2. This allows ongoing service repairs of the old controllers using the latest PCB design

Circulation:

Peter Ranyard	Les Hughson	Gary Dryden	Service personal as required.
Arjan Witberg	Ken Whines	Graeme Haley	
Jaeson Hoggan	Steve Bloxham	Sue Coulson	
Shane Shaw	Steve McDonald	Danny Rowland	
Alan Williams	Vassili Alexandrov	Jamie Galea	

Author

Approved For Circulation

Craig Ashdown
R&D Technician

Les Hughson B.Eng
R & D Manager

Parts Included in kit

- 1 x Q856497-2 (SP500AMKII) PCB and wiring assembly
- 2 x QHRW01 Star Lock retaining clip
- 4 x QHTC05 Screws
- 2 x Three pin socket faces

Disconnection of 54500 pcb

- 1/ Disconnect the controller from the power & remove the lid.
- 2/ Unscrew the nuts that secure the mains cable to pcb and disconnect wiring.
- 3/ Disconnect all wiring from pcb including sensors.
- 3/ Unscrew and remove the two 3 pin socket faces from plastic electrical carrier.
- 4/ Unscrew and remove the 3 pcb securing screws and lift pcb off plastic electrical carrier.
- 5/ Disconnect wiring and starlock retaining clips from klixon and remove klixon from element.

Connection of SP500AMKII pcb

- 1/ Fit the new klixon and the new starlock retaining clips, when fitting the klixon you will notice some white thermal paste on the bottom side of the old klixon, it is important that the white thermal paste be transferred to the bottom of the new klixon. Note: When the starlock retaining clips are fitted correctly the clips should sit flat on the klixon mounting tabs.
- 2/ Connect the Brown element wire to the unterminated side of klixon.
- 3/ Feed the two sensor wires through cut out in the pcb, fit the pcb to plastic electrical carrier and screw down with the four screws provided.
- 4/ Cut the terminals off the earth and neutral wires from the 54500 heater and strip.
- 5/ The earth and neutral wires in the SP500AmKII loom have a pre crimped straight connector. Crimp the earth and neutral wires that were previously stripped into the appropriate connectors and check that the wires are crimped tightly.
- 6/ Fit the 3 pin socket faces to the sockets and screw up tightly.
- 7/ Connect the RED wire to the terminal on the pcb which is marked POH.
- 8/ Connect the two sensor wires to the pcb. The two wires look much the same but one sensor wire is longer in length, the longer wire is the water sensor and needs to be connected to the white socket on pcb that is marked H20. The other wire connects to the RED connector on pcb which is marked TEMP.
- 9/ The touch pad connects into the 14 pin header socket as it did on the 54500 controller.
- 10/ Connect mains wires into terminal block. If unsure of phase colours match the colours of wires to terminal block wires.

Troubleshooting

Error code

- Err4
 - The water sensor plug maybe unplugged or damaged.
 - The water sensor and temp sensor plugs maybe crossed over.
 - The water sensor maybe faulty.
- H20
 - There maybe an air lock, keep turning the pump on until water is established.
 - Valves (if fitted) maybe closed stopping water reaching water sensor.
- Err8
 - The temp sensor plug maybe unplugged or damaged.
 - The water sensor and temp sensor plugs maybe crossed over.

Problem

- Pump not turning on
 - Pump plugged into Aux 3 pin socket
- Aux on straight away
 - Aux plugged into Pump 3 pin socket
- Touch pad not working
 - Touch pad become disconnected from pcb
- No power
 - Mains lead not connected or wires swapped