

Technical Bulletin
Jacuzzi R790 Circuit Board
Part No. 22783

June 4, 2001

Products Affected: Jacuzzi R790 Circuit Board

Background: Circuit Board Will Not Power Up

It has come to our attention that there may be a small percentage of R790 circuit boards where the transformer pins have pulled away from the solder connection causing the board not to power up. Balboa has modified the method of attaching the transformer to the board and has designed a transformer bracket to add even greater stability. Figure a identifies the R790 board where a transformer pin has pulled away from the solder connection. Figure b is the new transformer bracket arrangement.

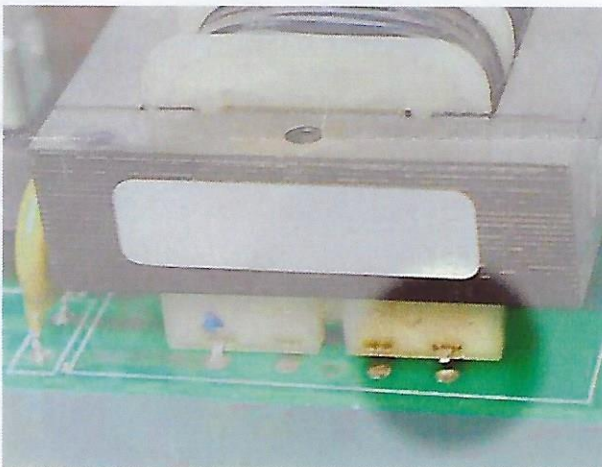


Figure A

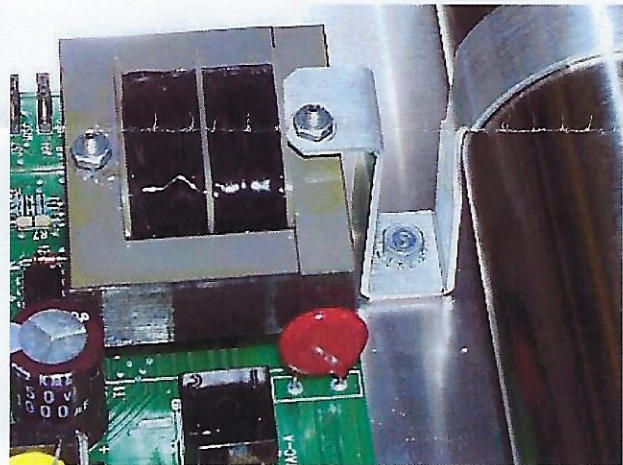


Figure B

Solution: Circuit Board Removal And Installation

1. Before working on any spa, make sure that the circuit breaker is in the off position and that there is no electrical power at the control system.
2. Remove the side panel of the spa skirt to access the control system.
3. Remove the six screws that hold the system box cover in place and remove the system box cover.
4. Label all wires connected to the circuit board (including sensor, pressure switch and panel cables) so that they can be returned to the proper location when the new board is installed.
5. Disconnect all of the labeled wires and cables from the circuit board. Make sure to disconnect the power input wires at TB1.
6. Remove the 2 circuit board mounting screws. One is located in the upper left-hand corner and the other in the lower right hand corner of the circuit board.

7. Remove the 2 bolts connecting the copper heater straps to the board and bend the straps down away from the board.
8. Remove the 2 heater clamp bolts on the left heater bracket and remove the heater bracket.
9. Remove the top bolt on the right heater bracket (located nearest the circuit board transformer).
10. Loosen the heater split-nuts enough so that the heater can be rotated, but keep the union tight enough not to leak.
11. Rotate the heater towards you to move the pressure switch away from the circuit board. This should give you enough clearance to remove the circuit board.
12. Depress the white board securing snap located in the upper right-hand corner of the circuit board while gently pulling the top of the board away from the system box.
13. Depress the white board securing snap located in the lower left-hand corner of the circuit board while gently pulling the bottom of the board away from the system box.
14. Remove the old circuit board and snap in the new circuit board on the two white board securing snaps.
15. Install the 2 circuit board mounting screws. One is located in the upper left-hand corner and the other in the lower right hand corner of the circuit board.
16. Rotate the heater back to its original position.
17. Locate the transformer bracket, star washer, and nut that were shipped with the replacement R790 board.
18. Install the transformer bracket on the bottom transformer bolt over the existing nut. Install the star washer and hand-tighten the nut over the transformer bracket. ***Do not loosen the nuts that secure the transformer to the board.***
19. Line up the transformer bracket and the top right heater bracket to the system box bolt thread and install the heater bracket bolt through both.
20. Install the left heater bracket and bolts and torque all 4 heater clamp bolts to 30 to 35 in. lbs.
21. Tighten the heater split-nuts to approximately 150 in. lbs.
22. Torque the transformer bracket nut from 15 to 18 in. lbs.
23. Bend the 2 copper heater straps back into position and install the 2 bolts connecting the copper heater straps to the circuit board. Both bolts must be torqued from 33 to 37 in. lbs.
24. Install the power input wires to TB1 and torque from 30 to 35 in. lbs.
25. While paying close attention to the wire labeling, install all wires and cables back on the circuit board. Remember the sensor, pressure switch, and panel cables. Refer to the wiring diagram located on the back of the system box cover or call Balboa Technical Support if you are not sure where to install a wire.
26. Install the system box cover and torque the 6 bolts from 8 to 10 in. lbs.
27. Install the side panel of the spa skirt.
28. Turn on the electrical power to the spa.
29. Test all spa functions to make sure that the control system is operable.

Balboa will be in charge of sending out replacement boards for your current inventory of R790 boards described above. Please contact our Balboa Technical Support department with the quantity you have in stock and we will pre-ship these boards to you on a RMA number. Circuit boards ordered on a pre-ship RMA must be received at Balboa within 90 days of shipment or an invoice will be sent to Jacuzzi for the order. An ARS (Automatic Return Service) tag will be included with the pre-shipped RMA order, which will simplify the return process. These tags are preaddressed and will automatically charge the freight to Balboa. By simply applying an ARS tag to the shipping box, and handing it to any UPS driver, your RMA will ship directly to Balboa Water Group. Please securely package these circuit boards in bubble wrap for protection during shipping.

If you have any questions about this technical bulletin or any related spa issue, please call our Technical Support staff at 714-384-0384.