

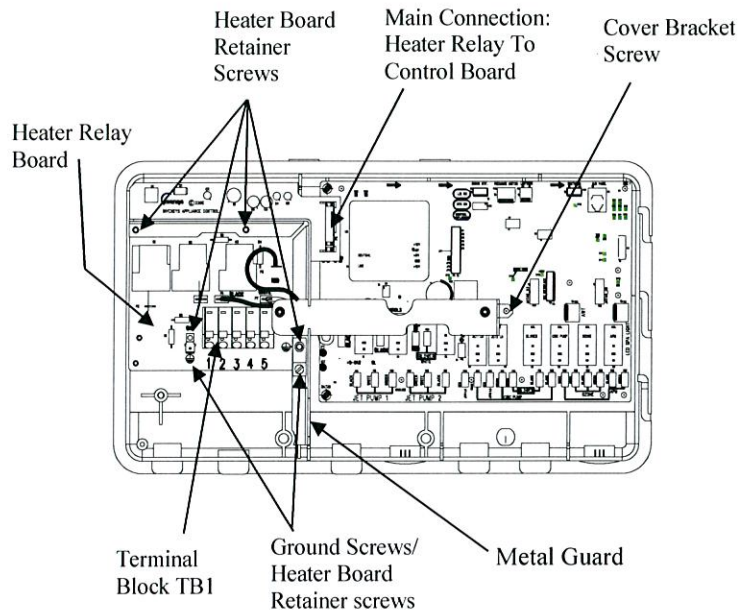
# Heater Relay Board Replacement Instructions

**WARNING!** Before applying power to the control box, complete the entire procedure contained in these instructions.

*(Refer to the illustration below to locate the various control box components referred to within this procedure.)*

**IMPORTANT:** Actual Heater Relay Board Components/Appearance may vary from what is shown in this document.

## Control Box



### Tools Required:

- Needle Nose Pliers
- Phillips Screwdriver

### Kit Contains:

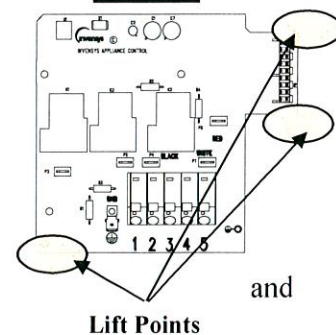
- Heater Relay Board
- Instructions
- (2) 3 Pin Power Jumpers
- (2) 3/8" Screws (replaces control box cover screws)

### **Removing the Heater Relay Board from the Control Box:**

1. Disconnect power to the spa and access the equipment compartment.
2. On the front of the control box, remove the screws and open the control box cover.
3. Label and number wires connected to the terminal block (TB1), then disconnect them from the terminal block.
4. Remove the screw holding the cover bracket then remove bracket from control box.
5. Carefully disconnect and remove the Red, Black and White wires from the heater relay board using needle-nose pliers (**do not pull on the wire use the plastic sleeve**). Leave the opposite ends connected to the main control board.
6. Disconnect remaining heater and ground wires from the heater relay board only.
7. Remove all four screws securing the heater board (2 retainer 2 grounding screws/retainer).
8. Remove the metal guard from the control box.
9. Using the lift points in figure 2, gently lift the heater relay board straight out of the control box.

**Caution:** Board will still be firmly connected to the main control board, lifting heater relay board straight out will disconnect it from the control board.

**Heater Relay Board**  
**Figure 2**



10. If you are returning the heater relay board with a warranty claim, be sure to package it in original factory packaging (you must use the packaging from the new board).

**Mounting the New Heater Relay Board into the Control Box:**

1. Line up the connector on the top right of the heater relay board with the connection on the top left of the control board.
2. Making sure all the screw holes are lined up, use the lift points in figure 2 and press down firmly to secure the relay board.  
**CAUTION:** Make sure connections are aligned perfectly!
3. Line up metal guard and screw into place.

**NOTE:** In older control boxes, you might encounter that a chip on the right side of the new heater relay board prevents the metal guard from seating properly.

FIGURE C

To correct this, cut a small section of the metal guard so it can be bent upwards away from the chip. **FIGURE D and E**  
**Tools required: Small hacksaw and hammer.**

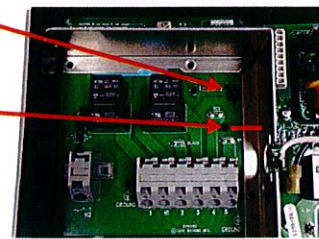
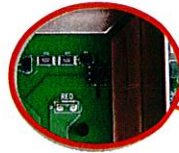
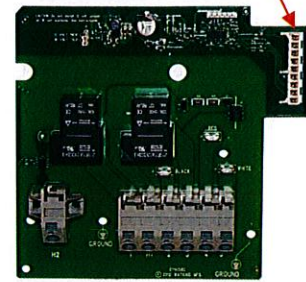


FIGURE C

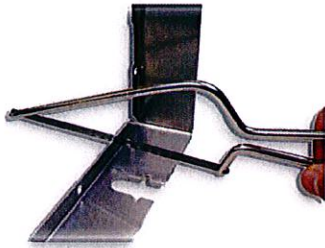


FIGURE D

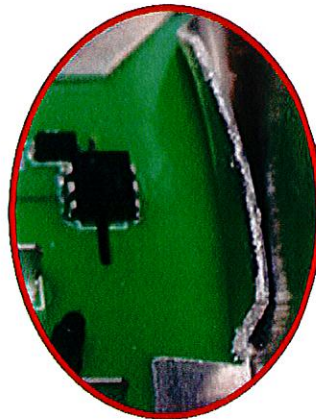


FIGURE E

4. Connect the new RED, WHITE, AND BLACK wires from the heater relay board, through the guard slot, to the labeled connections on the main control board.
5. Line up cover bracket and screw into place.  
**NOTE:** Make sure to slide cover bracket into slot in the metal guard.

**Connecting the Heater:**

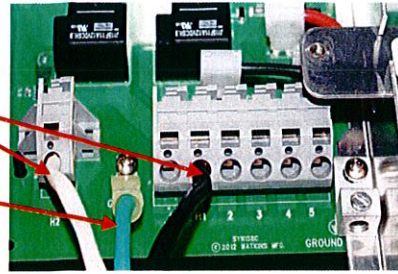
1. If current heater has flag terminals, cut terminals off black & white wires and strip insulation off as shown.  
**Caution: Be sure to strip properly to maintain wire integrity.**

New Relay Board





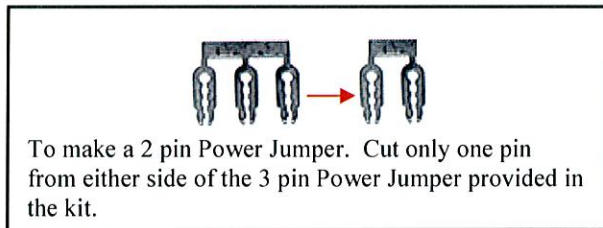
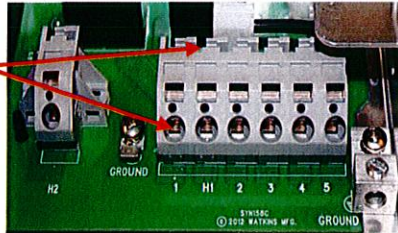
2. Connect the black heater wire to H1 and white heater wire to H2 of the heater relay board.
3. Connect the green heater ground wire to GND terminal as shown.



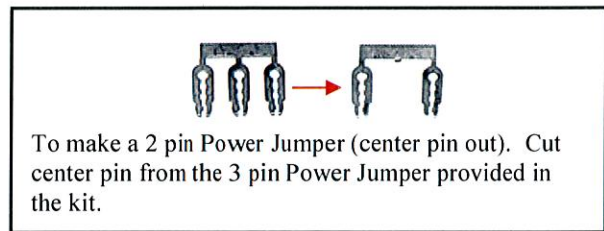
### Wiring the Line Voltage Conduit to Terminal Block

**CAUTION!** If the line voltage is wired incorrectly, damage to the control box may occur.

1. Locate the wiring diagrams provided with these instructions and select the one that corresponds to your spa model. **NOTE: For Domestic 60Hz models refer to figures 1.1 thru 2.1. For Export 50Hz models refer to figures 3.1 and 3.2.**



**FIGURE A**



**FIGURE B**

### Completing the Repair.

1. Orient the control box cover with the logo right-side-up.
2. Secure the cover using the 3/8" screws provided in the kit.
3. Close the equipment compartment and secure the door using the screws.
4. Reconnect power to spa and test spa functions.

# 115 VAC, 60 HZ

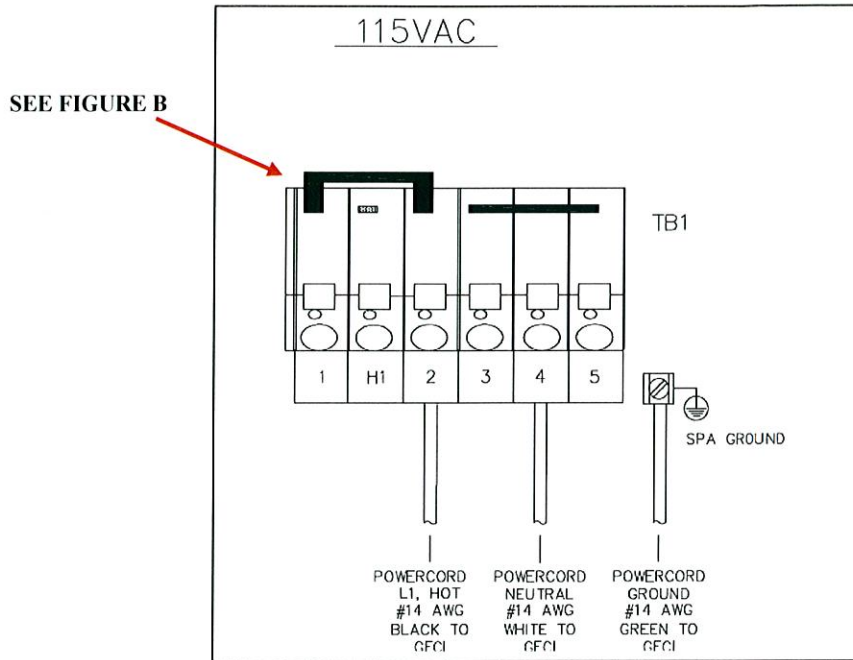


FIGURE 1.1

# CONVERTED SPAS (230 VAC, 60 HZ)

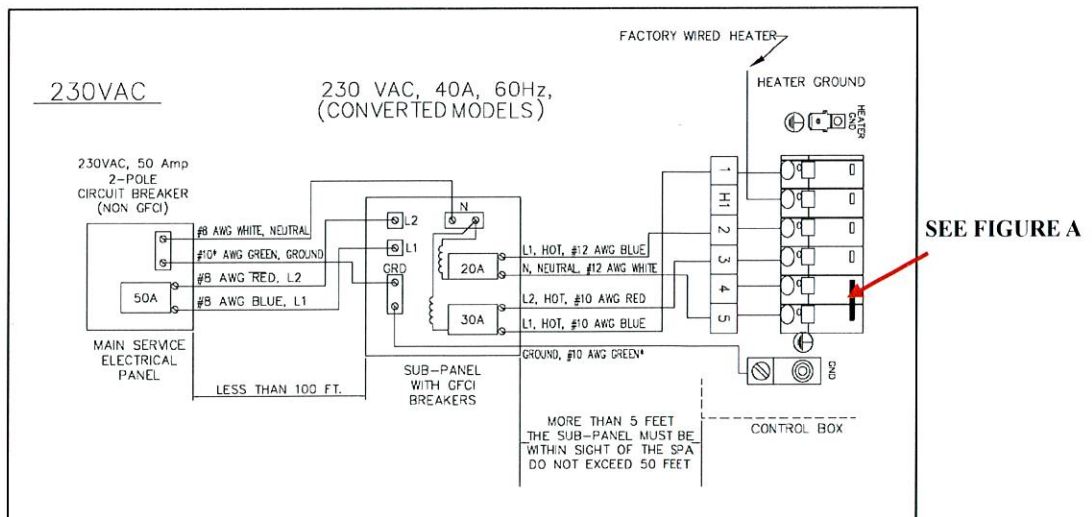


FIGURE 1.2

## HEATER ON THE 30A BREAKER (230 VAC, 60 HZ)

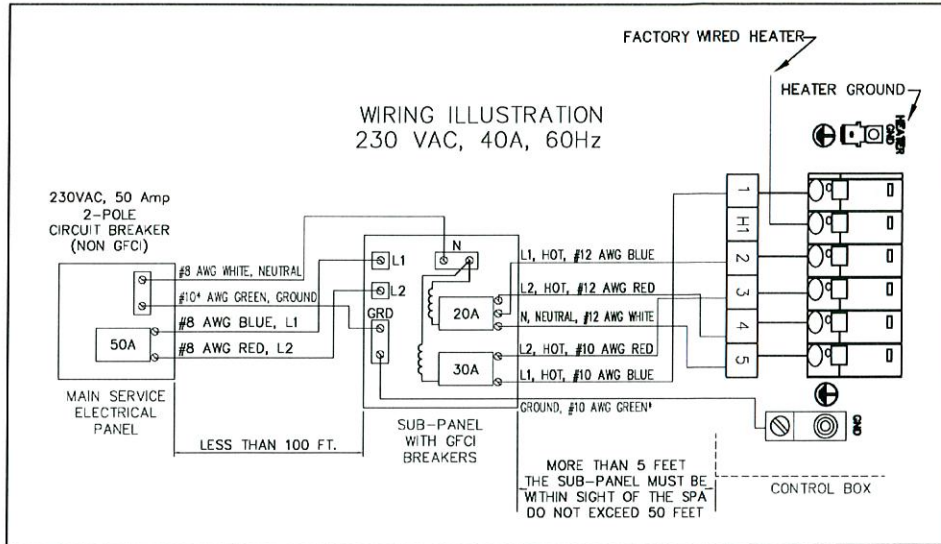


FIGURE 1.3

## HEATER ON THE 20A BREAKER (230 VAC, 60 HZ)

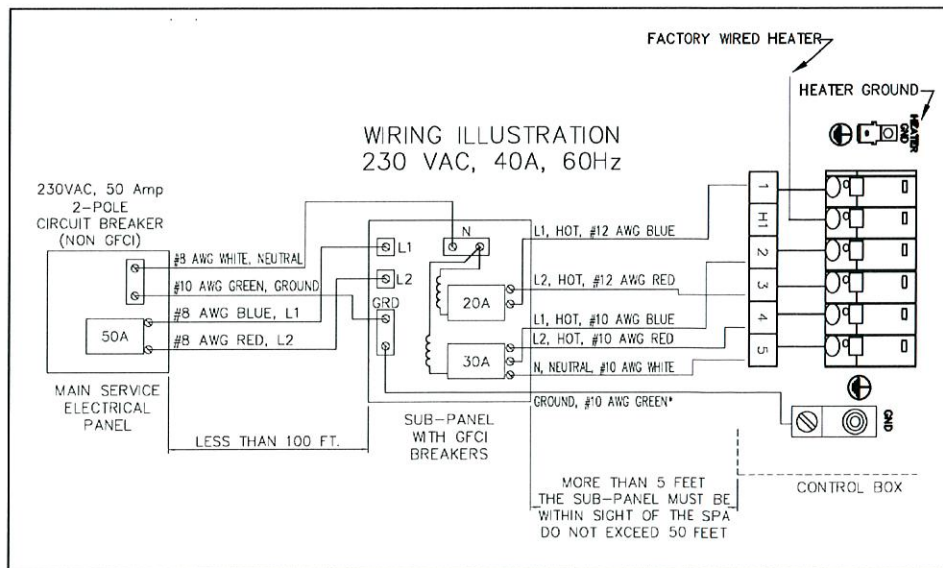
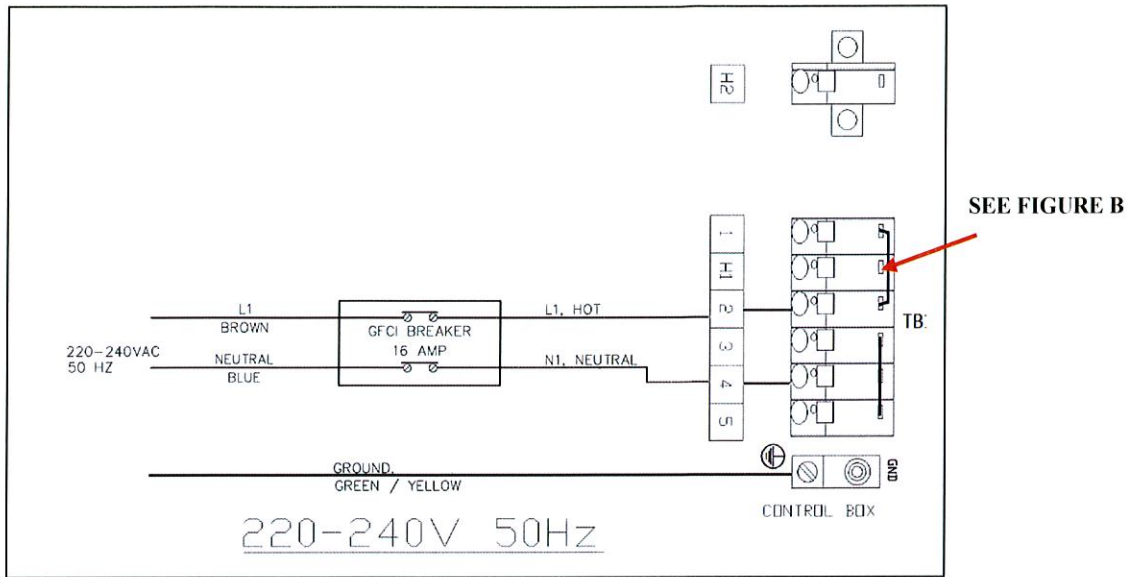
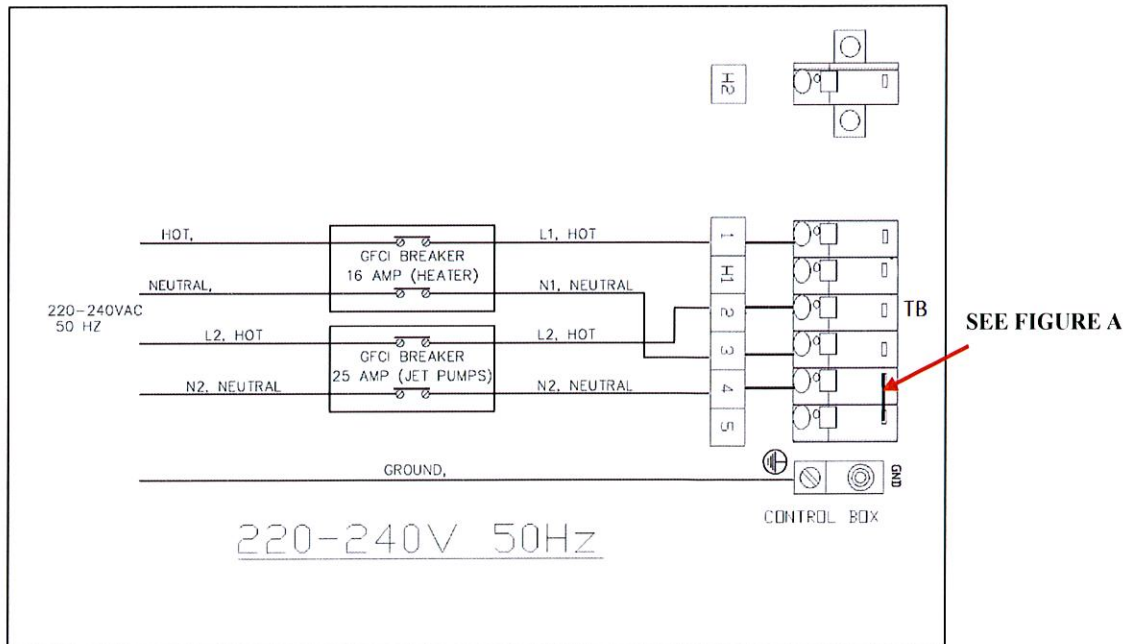


FIGURE 2.1

**(220 – 240 VAC, 50 HZ)**



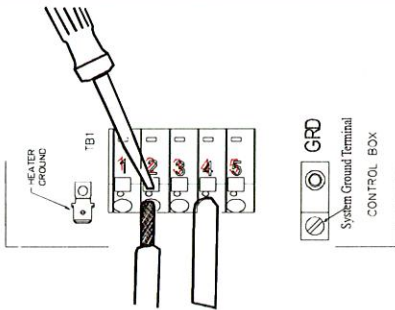
**FIGURE 3.1**



**FIGURE 3.2**

# TERMINAL BLOCK WIRE INSTALLATION

**IMPORTANT: Number of Terminals in block may vary depending on spa.**

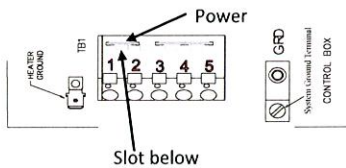


## How To Remove Power Jumpers From TB1

1. Insert small screwdriver into slot below the jumper.
2. Pull jumper up and out with blade of screwdriver

## How To Replace Power Jumpers Into TB1

Place jumper into position and push down on top of jumper until jumper is seated below terminal block.



## Wire Installation Steps

