



_____ Oscillator Replacement Procedure AT+

1. Turn the U5000AT+ system off and unplug the power cord.
2. Unhook all tubing from the pump, argon-in line, and sample out
3. Carefully flip the system over and lay it on its top
4. To remove the Oscillator, you must first take off the bottom cover, where all the electronic components are.
--There are 12 screws that need to be taken out. See figure 1-1.

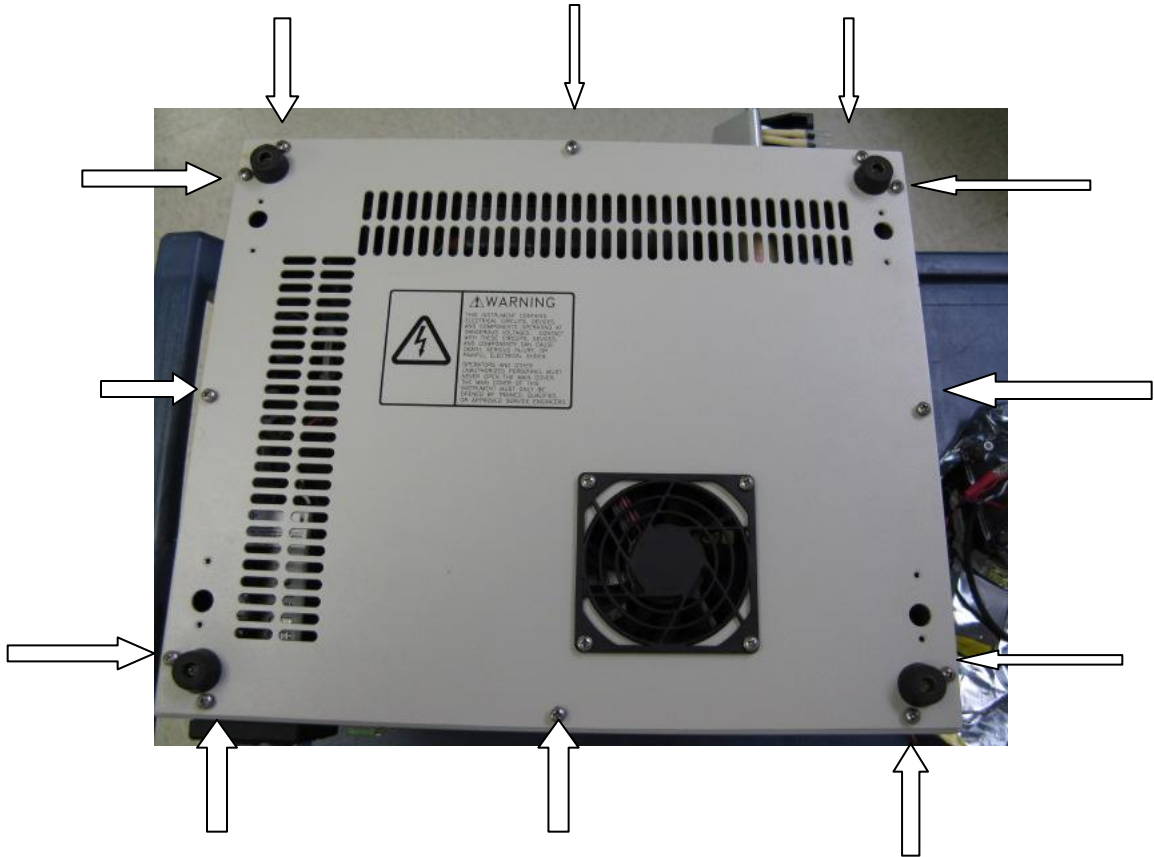


Figure 1-1

5. Unplug the fan connector before completely pulling the cover off.
See figure 1-2.

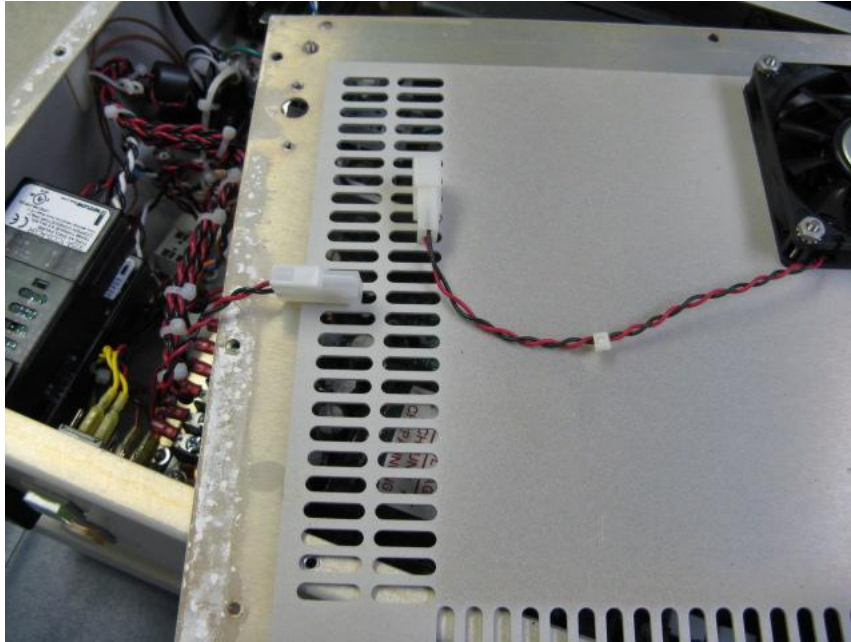


Figure 1-2

6. Now, there are a 9 screws on the back that need to be taken out to get the oscillator, serial connector, MOSFET transistor and the power resistor out. See figure 1-3.

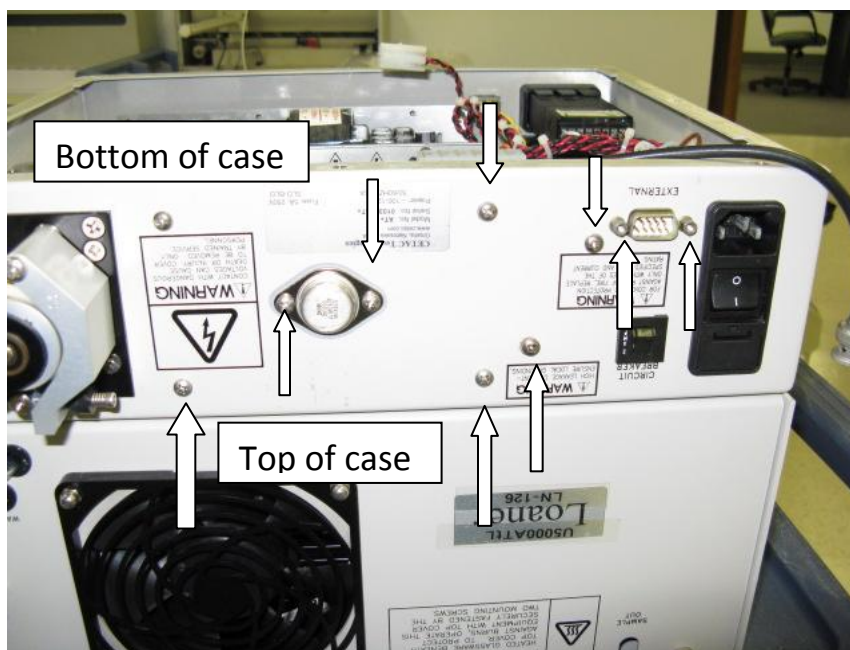


Figure 1-3

7. Figure 1-4 is a picture of the new oscillator, which will help you find and unplug the wires in the following steps.

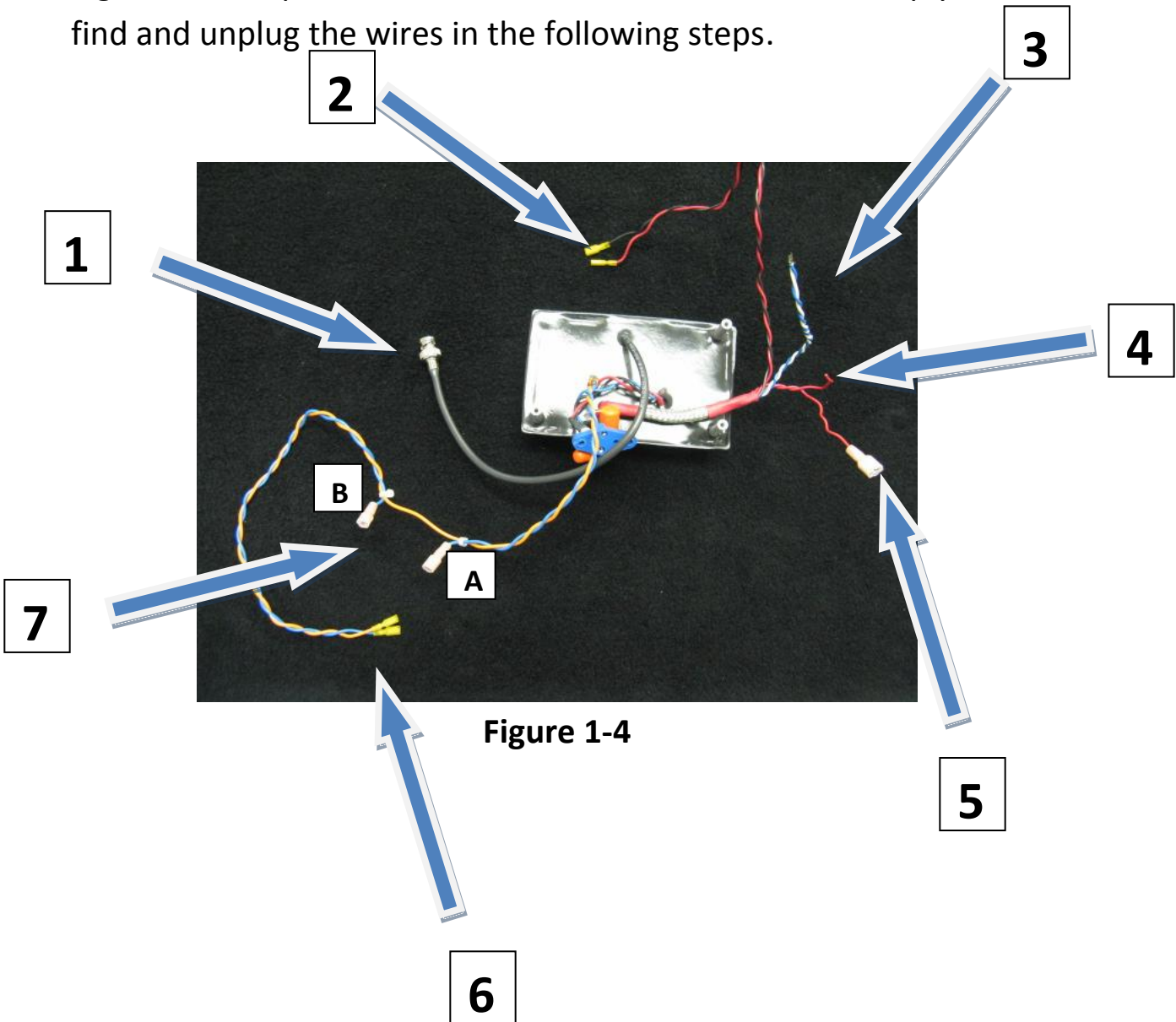


Figure 1-4

- 1) BNC Connector – Connects to female BNC connector mounted on the on the top of the case. See figure 1-5
- 2) Crimp connectors (black and red) – Connects to the operate switch mounted on the front of the case. See figure 1-6

- 3) Bare wires (blue and white) – Connects to serial connector that was mounted on the back of the case. See figure 1-7
- 4) Bare wire (red) – Connects to the gold power resistor that was mounted on the back of the case. See figure 1-8
- 5) Crimp connector (red) – connects to circuit breaker that is mounted on the back of the case. See figure 1-9
- 6) Crimp connectors (blue and orange) – Connect to the operate switch mounted on the front of the case. See figure 1-10
- 7) Crimp connectors (both blue) – Connect to the transformer mounted on the top of the case. See figure 1-11

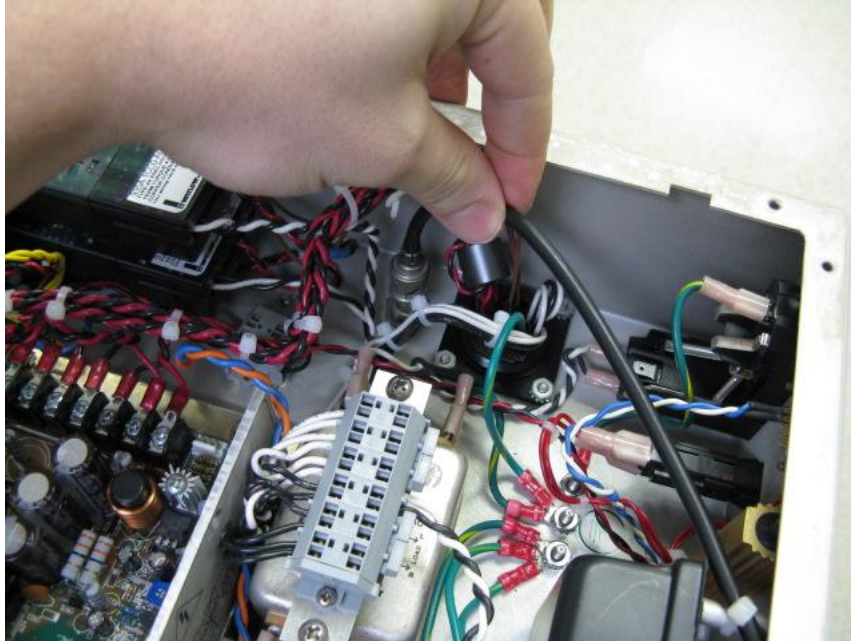


Figure 1-5



Figure 1-6

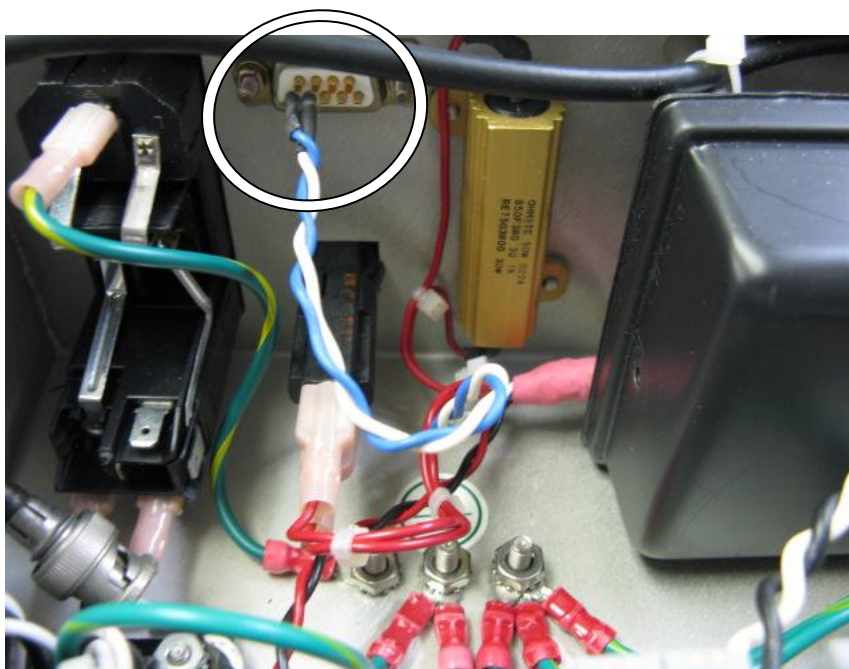


Figure 1-7

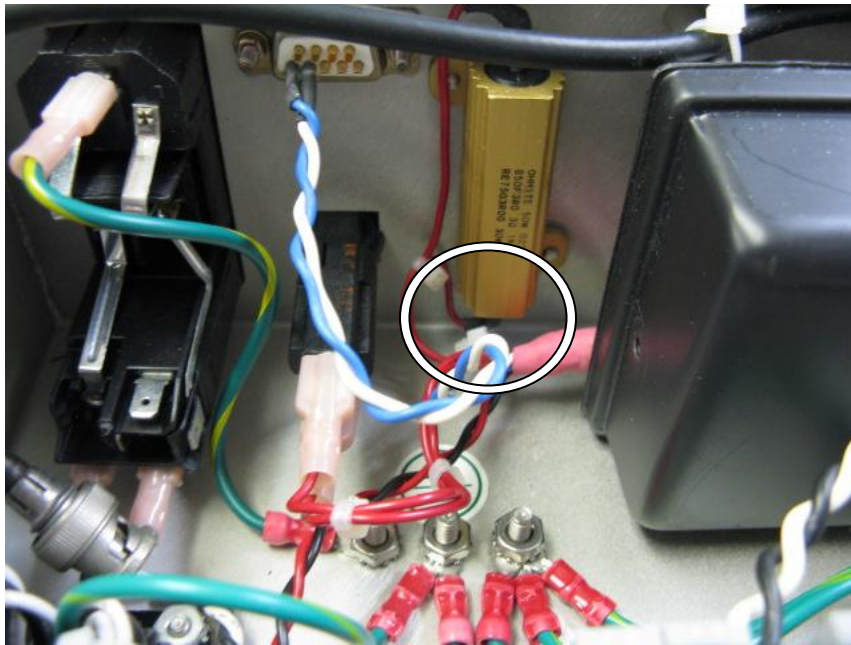


Figure 1-8

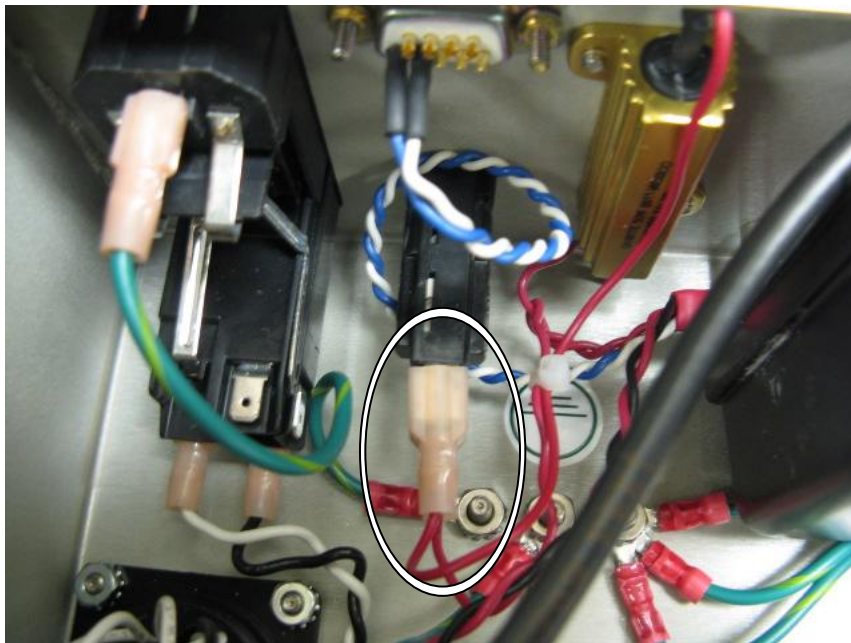


Figure 1-9

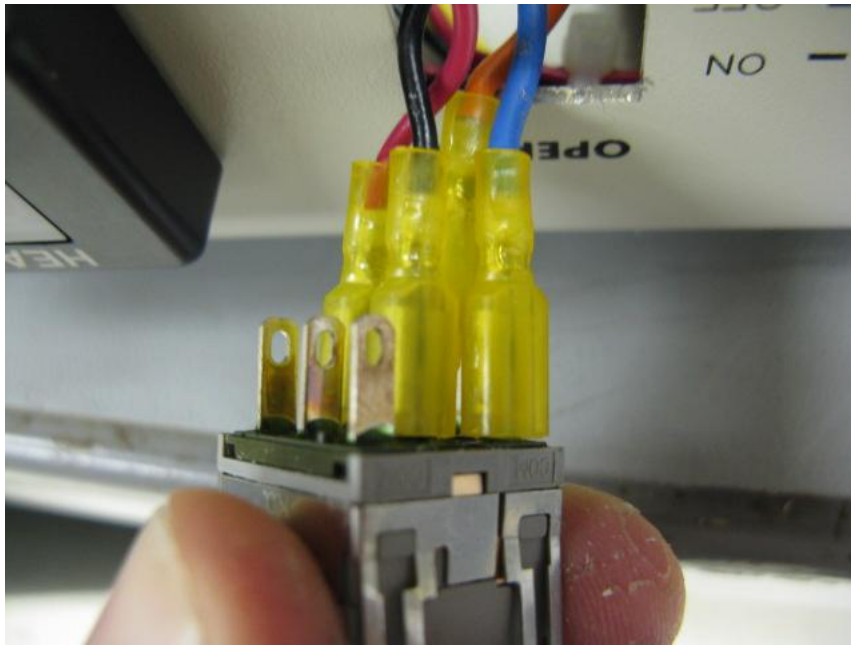


Figure 1-10

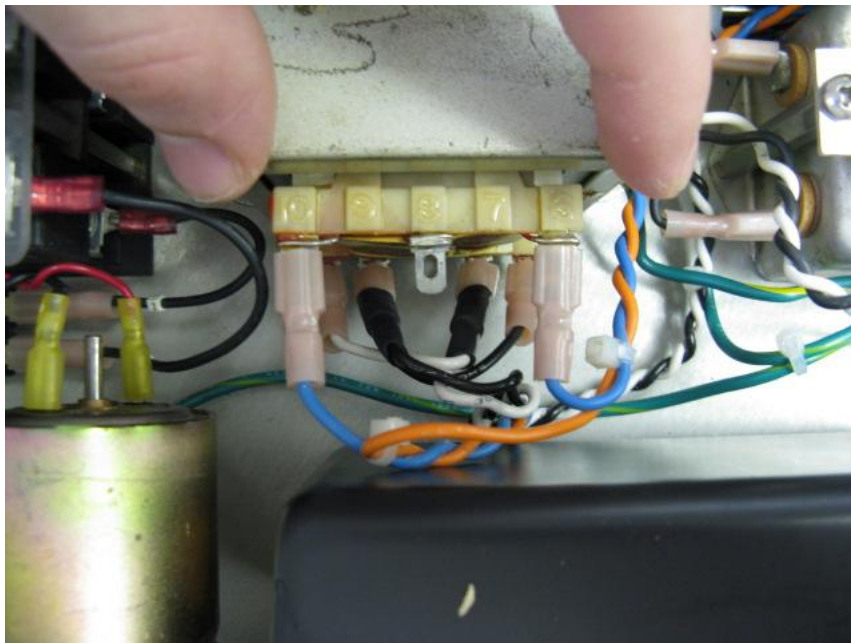


Figure 1-11

8. Follow the wiring to the transformer, circuit breaker, and power switch; unplug all oscillator wires, along with the BNC connector.

9. You'll need to de-solder and re-solder the serial connector and power resistor to the new Oscillator. Don't forget to use the heat-shrink.

10. Note the blue and white wire orientation. The top of the gold power resistor doesn't need resoldered; it goes to a connector on the circuit breaker. The bare red wire needs soldered to the bottom of the gold resistor, and the crimp connector goes to a circuit breaker connector also. See figures 1-12a & 1-12b.

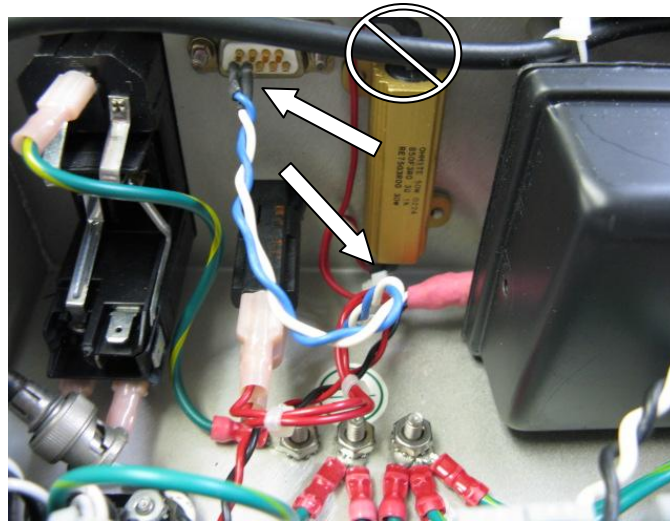


Figure 1-12a

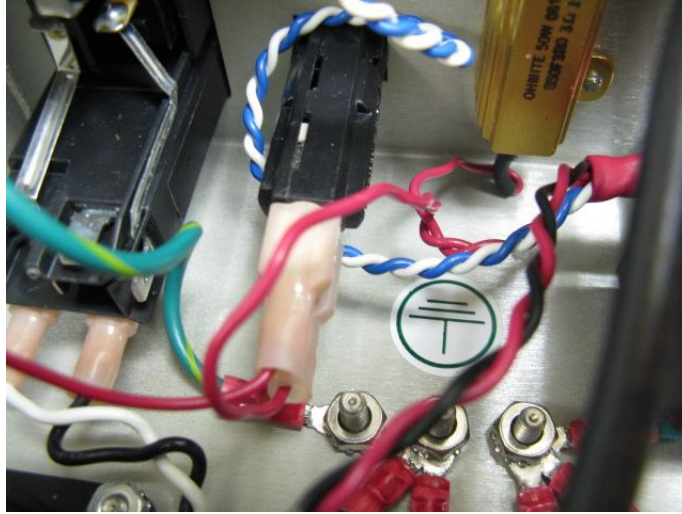


Figure 1-12b

11. From the orange and blue wires, the blue wires go on pins 6 and 10 of the transformer. The closest connector to the oscillator (A in figure 1-4) goes to pin 10. See figure 1-4 & 1-13.

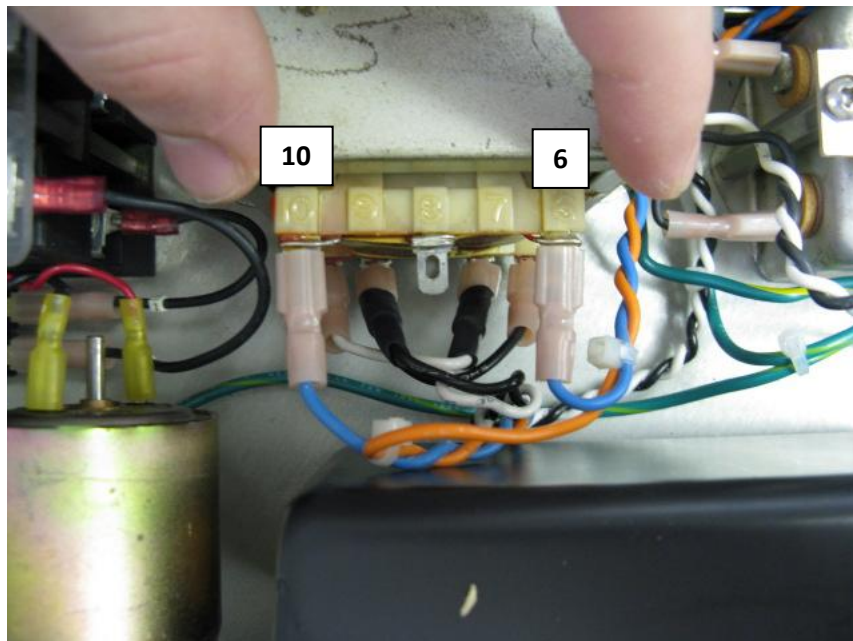


Figure 1-13.

12. The blue and orange wires then run to the front of the case to the Operate Switch, along with the black and red wires from the oscillator. See diagram & figure 1-14.

Top to you (actual bottom of the case)		
Empty	Empty	Empty
Black	Red	
Blue	Orange	Empty
Bottom to you (actual top of the case)		

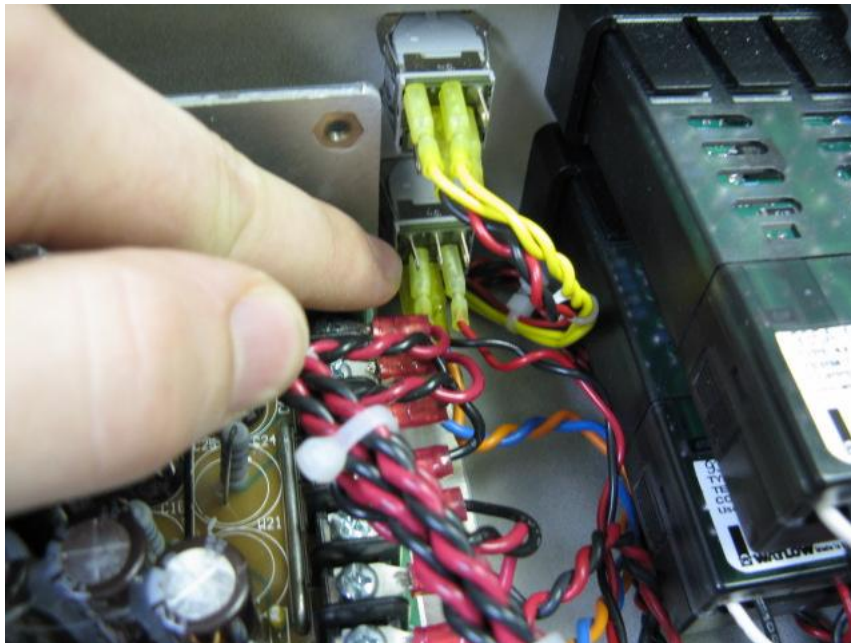


Figure 1-14.

13. There are also 2 red wires with crimp connectors that need to be re-attached to the circuit breaker on the back side of the case. It doesn't matter which wire goes up or down, just as long as they get a good connection. See figure 1-15.

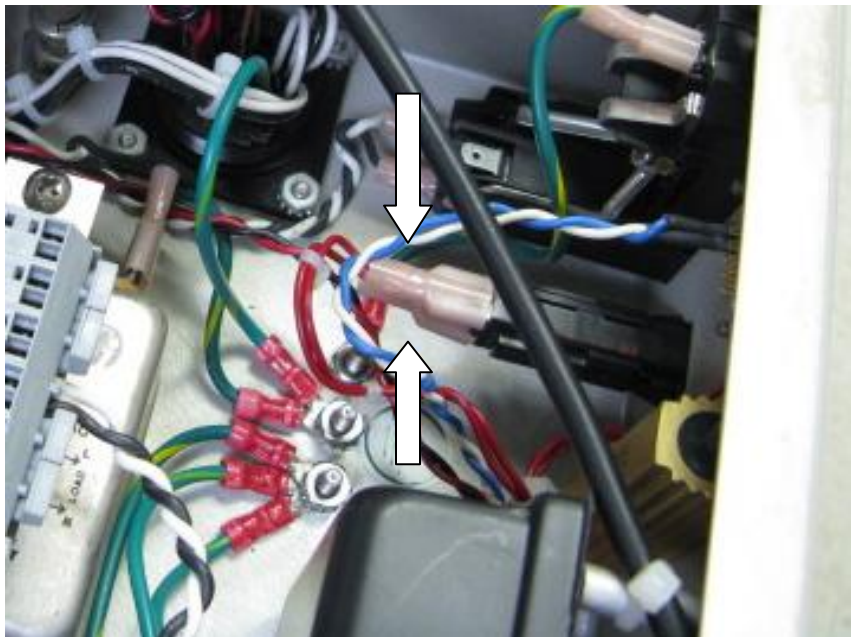


Figure 1-15.

14. You will also receive a new transistor with the oscillator. You are going to want to mount that transistor to the case before re-mounting the oscillator. See figure 1-16.



Figure 1-16.

15. Now you can begin to reassemble the oscillator. You left one screw in the case on the back so you know which way to mount the oscillator.

16. To re-assemble the rest of the unit connect the fan and screw the bottom cover to the case.