

## **PURPOSE**

This technical guideline describes troubleshooting and repair steps for the Aseptico DTC, AEU 25 instrument. This guideline also describes instructions for installing a prepared panel.

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## **IMPORTANT!**

**Before commencing on the following instructions, please read and follow all applicable warnings/cautions listed at the end of this technical guideline.**

## **INSTRUMENT TROUBLESHOOTING & REPAIR**

### **General Information**

Electric motor featuring auto-stop-reverse, digital torque control and five programmable memory settings. Includes integration into a ASI Advanced delivery system. Handpieces purchased separately.



### Specifics of Integrated Instrument



**Mounting Configuration**  
 One (1) panel installation



### Components

- One (1) Motor and cord
- One (1) Main Circuit Board
- Panel Stacked Boards
  - One (1) Display Board
  - One (1) Control Board
- Two (2) Connecting ribbon cables
- One (1) Wire harness from main circuit board to motor and cord
- One (1) Wire Connector to N/O A/E Switch
- One (1) Circuit breaker (Blue and Brown Wires)

### Serial Number Identification

OLD: EB34503-00-15  
           └─┬─┘└─┬─┘  
           day  year

NEW: EB3452014-00-15  
           └─┬─┘└─┬─┘  
           day  year

### Voltage Input Requirements

- Direct voltage from terminal block, 115V or 220V

### Schematics

- No applicable for DTC



## Troubleshooting

**Table 1 - Manufacturer's Troubleshooting Guide**

Problem	Correction
<b>Error Code: "Check Buttons and Foot Control"</b>	<ul style="list-style-type: none"> <li>• Ensure lockout lever on handpiece holder is pointed towards the floor, if applicable</li> <li>• Ensure foot control harness is attached to J3 connector on power board</li> <li>• Replace N/O A/E Switch (PN 95-0137)</li> </ul>
<b>Console does not light when turned on</b>	<ul style="list-style-type: none"> <li>• If lights are blinking, press a button or foot switch to exit Sleep Mode</li> <li>• Check console to power connection</li> <li>• Check voltage setting</li> <li>• Check fuse. If blow, replace with 1.0A/250V slo-blo fuse for 115 volts, and 0.5A/250V slo-blo fuse for 230 volts</li> </ul>
<b>Console lights when turned on, but handpiece does not turn</b>	<ul style="list-style-type: none"> <li>• Check motor plug connection</li> <li>• Check foot switch connection</li> <li>• Depress foot switch</li> <li>• Check that a file is properly seated in the handpiece and the latch is closed</li> </ul>
<b>Improper display</b>	<ul style="list-style-type: none"> <li>• Verify that ratio setting matches handpiece ratio</li> <li>• Use Calibration function</li> <li>• Turn power switch off, wait 5 seconds, then turn back on to reset</li> </ul>
<b>Motor slowing down or sluggish</b>	<ul style="list-style-type: none"> <li>• Dirty, under-lubricated handpiece</li> <li>• Handpiece lubricant is running into motor</li> <li>• After lubricating and before autoclaving, set handpiece with head down to let excess lubricant drain out</li> <li>• Check voltage setting</li> </ul>



**Table 2 - Additional Troubleshooting**

<b>Problem</b>	<b>Correction</b>
<b>Instrument Does Not Operate, Display is On</b>	<ul style="list-style-type: none"> <li>Verify the lock out lever on the side of the holder is pointing straight down to the floor. Make sure the correct adjustment stem on the control block portion for that handpiece has been opened for air signal to air/electric switch.</li> </ul>
<b>Motor not turning, proper handpiece pressure to air/electric switch</b>	<ul style="list-style-type: none"> <li>(If identical DTC available) Swap motor and cord from functional instrument               <ul style="list-style-type: none"> <li>If loaner motor and cord functions, repair/replace motor and cord</li> <li>If no function, see Repair Process</li> </ul> </li> </ul>
<b>Runs when not pressing Foot Control, stops running when Foot Control is pressed</b>	<ul style="list-style-type: none"> <li>Contacts in the air/electric switch are not working. Replace the switch (PN 95-0137).</li> <li>Make sure the correct adjustment stem on the control block portion for that handpiece has been opened to allow air to flow to the handpiece or activation switch for electric instruments.</li> </ul>
<b>No Display, Power to Other Instruments</b>	<ul style="list-style-type: none"> <li>Check circuit breaker on back of ASI unit.</li> <li>Check for proper connections on main circuit board and display boards.</li> <li>See Repair Process</li> </ul>
<b>Motor and Cord Tubing/Sheathing Damaged, Frayed</b>	<ul style="list-style-type: none"> <li>Replace cord (ASI PN 92-AIAE-4B-30) or send in for repair; see repair process</li> </ul>

### **Repair Process**

If troubleshooting did not resolve the issue, the instrument will need to be sent in for repair, following the steps below.

### **Motor and Cord Repairs Only**

Motor and cord repairs can be sent directly to:

**Aseptico | 8333 216th St. S.E. | Woodinville, WA 98072 | 800.426.5913**

### **For Full Instrument including Circuit Boards Repairs**

- A RMA will be required for ASI to process the repair. Contact ASI Customer Support to obtain a RMA.
- ASI does not repair the instrument but works with the manufacture, Aseptico, to assist the repair process in a timely manner. ASI receives the components and forwards to the manufacture for evaluation and repair. Once the instrument forwarded, ASI does not have a status of the repair until contacted by the Aseptico repair department.
- There is a minimum repair time of 2-3 weeks, which includes transit time.
- Per Aseptico's repair policy, estimates are not given. Repair pricing is not known until the repair is completed.
- ASI will contact the Customer's office when the instrument(s) are received at ASI for repair payment.



**Components Required for Full Evaluation and Repair**

- One (1) motor and cord
- One (1) main circuit board; remove stacked boards from panel:
  - One (1) display board
  - One (1) control board
- Two (2) connecting ribbon cables

**i** **IMPORTANT:** All items listed below are required to perform a complete instrument evaluation and repair. A delay will occur in the repair process if all items are not received. The office will be notified of missing items and the received items will be put on hold until missing items are received.

**REMOVAL OF INSTRUMENT COMPONENTS (FOR REPAIR)**

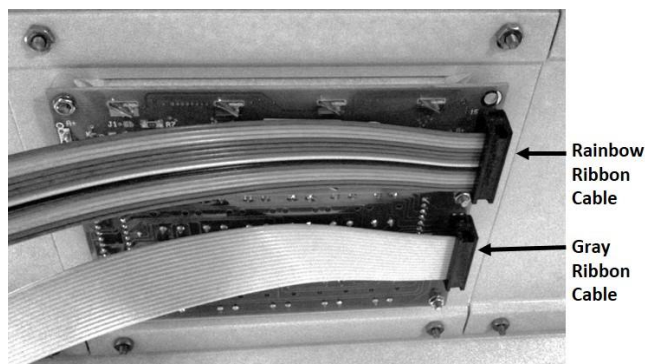
**Tools Needed**

- Phillips head screwdriver
- 3/16" nut driver

**Removal Instructions**

1. Turn off the main power and unplug the unit.
2. Open the cover to the delivery systems according to the delivery system type.
3. Disconnect the ribbon cables from the panel mounted display board and control board. (Fig. 1)

**i** **For re-installation, the ribbon cables are attached facing inwards across the board.**



**Fig. 1**



4. Using a 3/16" nut driver, remove the four (4) nuts that attach the control board to the bottom of the adapter plate. (Fig. 2)

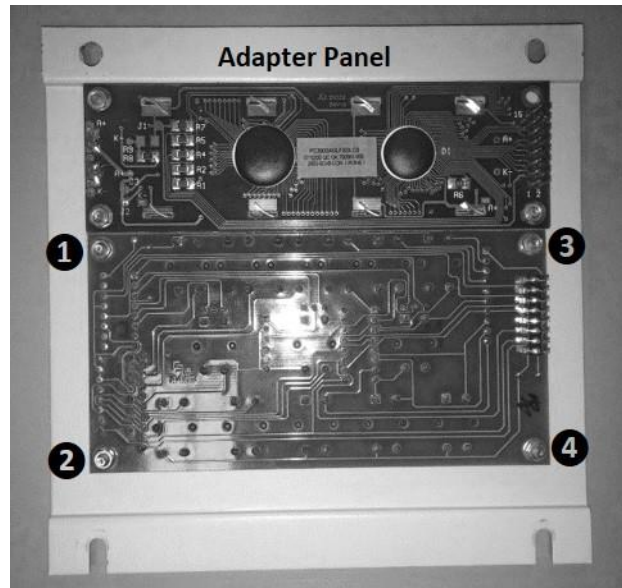


Fig. 2

5. Using a 3/16" nut driver, remove the three (3) nuts that attach the display board to the top of the adapter plate. (Fig. 3)

**i** **IMPORTANT:** When removing nuts from board, spacers may fall from threading. After removing board, secure spacers by rethreading nuts. The adapter panel will remain attached to the ASI unit.

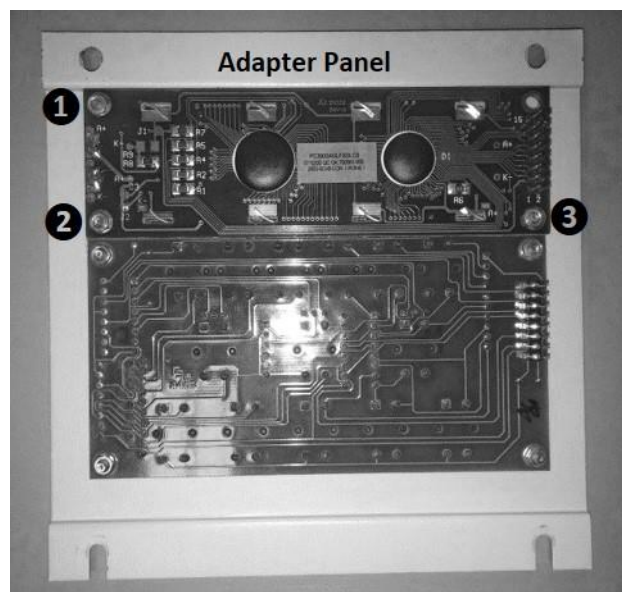


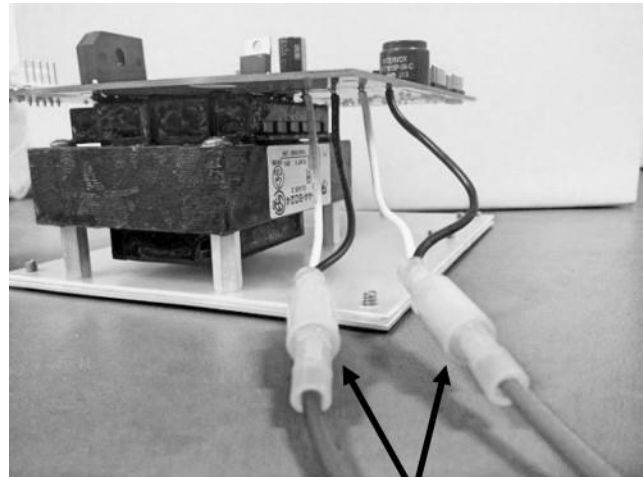
Fig. 3



6. Disconnect voltage bullet connectors from blue and brown wires. (Fig. 4)

**i** **TECHNICAL NOTE:** *Voltage Bullets -- tick-mark black and white to brown wire connection.*

**i** *For additional information of wire connections, see Fig 11 in section Installing Panel Prepped Aseptico DTC.*



**Voltage Bullet Connectors**

**Fig. 4**

7. Disconnect the J1 motor and cord wire harness from the main circuit board. (Fig. 5)

**i** *For reinstallation, the ribbon cables face inwards across the board.*



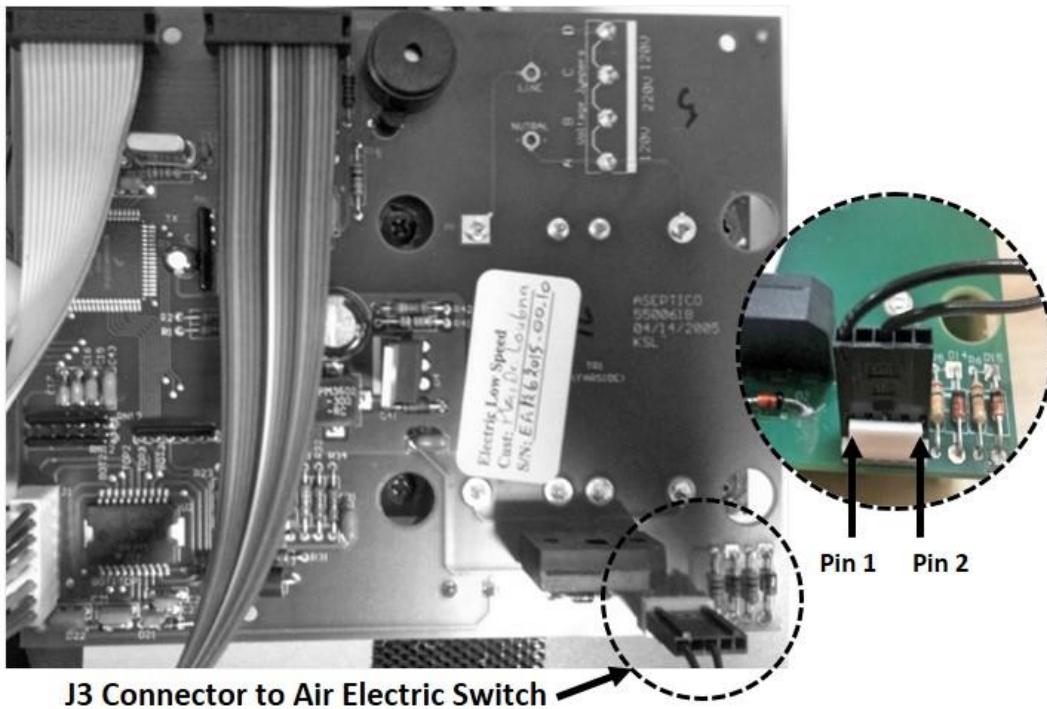
**J1 Motor and Cord Wire Harness**

**Fig. 5**



8. Disconnect J3 connector to air electric switch. (Fig 6)

**i IMPORTANT:** *If reinstalling, ensure proper position of Connector J3 (note inset).*





10. Remove motor and cord from underneath the baseplate of the unit. Unthread counter-clockwise. (Fig. 8)

**i** **IMPORTANT:** *Align pins when connecting.*



Fig. 8

11. Carefully package all removed components being sent for repair in bubble wrap. Insert RMA and ship to ASI Medical, Inc.

**ASI Medical Inc. | 8811 American Way, Suite 130 | Englewood, CO 80112**



**REINSTALLING REPAIRED ASEPTICO DTC****Tools Needed**

- Phillips Head Screwdriver
- 3/16" Nut Driver
- Crescent Wrench

For reinstalling after instrument is repaired, follow steps 3 through 10, in reverse order  
Fig. 1 and Fig. 4 show correct orientation of the cables.

**INSTRUMENT TESTING AFTER INSTALLATION OR REINSTALLATION**

After re-installed, test instrument for proper function. Refer to manufacture's manual for calibration and settings.

- Turn the power on and check that the console read-out lights up.
- Check buttons on the console control panel:
  - Press Ratio up and down, noting the ratio settings are changing the up and down on the console display.
  - Press Speed up and down, noting the speed settings are changing up and down on the console display.
  - Press Torque up and down, noting the torque settings are changing up and down on the console display.
  - Press Fwd/Rev, noting the button indicator light will illuminate when in reverse and an audible beep will sound.
  - Press Max, noting the button indicator light will illuminate when in max setting.
  - Press each Preset button 1-5, noting the settings are changing on the console display.
  - Attach the test contra angle handpiece onto the motor for instrument testing using the foot control.
  - Operate the unit by depressing the foot control noting that the motor runs. Release the foot control noting that the motor stops. Select the Reverse mode and then press the foot control again noting an audible beep occurs while the motor is running in reverse.
  - Place the motor back into the holder and ensure that it fits properly and that it does not operate when in the holder while depressing the foot control.

**i** *Aseptico's DTC, AEU-25 Online Manual can be found at <https://aseptico.com/aseptico-manuals/>*



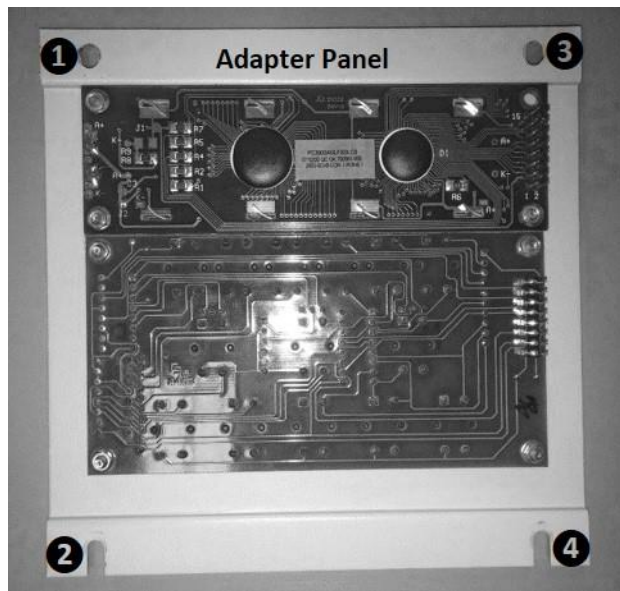
## INSTALLING PANEL PREPPED ASEPTICO DTC

### Tools Needed

- Phillips Head Screwdriver
- 3/16" Nut Driver
- Crescent Wrench

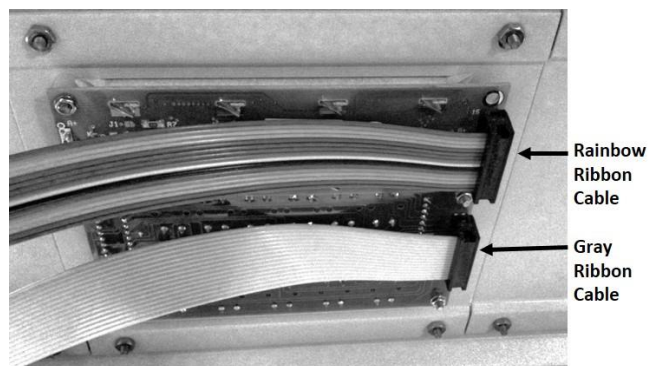
### Instructions for Field Installation

12. Turn off main power and unplug unit.
13. Open the cover to the delivery systems according to the delivery system type.
14. Using a 1/4" nut driver, install the adapter panel (which houses the control board and display board) using the four (4) nuts provided to hold to cover plate. (Fig. 9)



**Fig. 9**

15. Connect Rainbow Ribbon Cable to Display Board. The brown wire goes towards the top of the cart (Fig. 10)
16. Connect Gray Ribbon Cable to Control Board. The red wire goes towards the top of the cart. (Fig. 10)

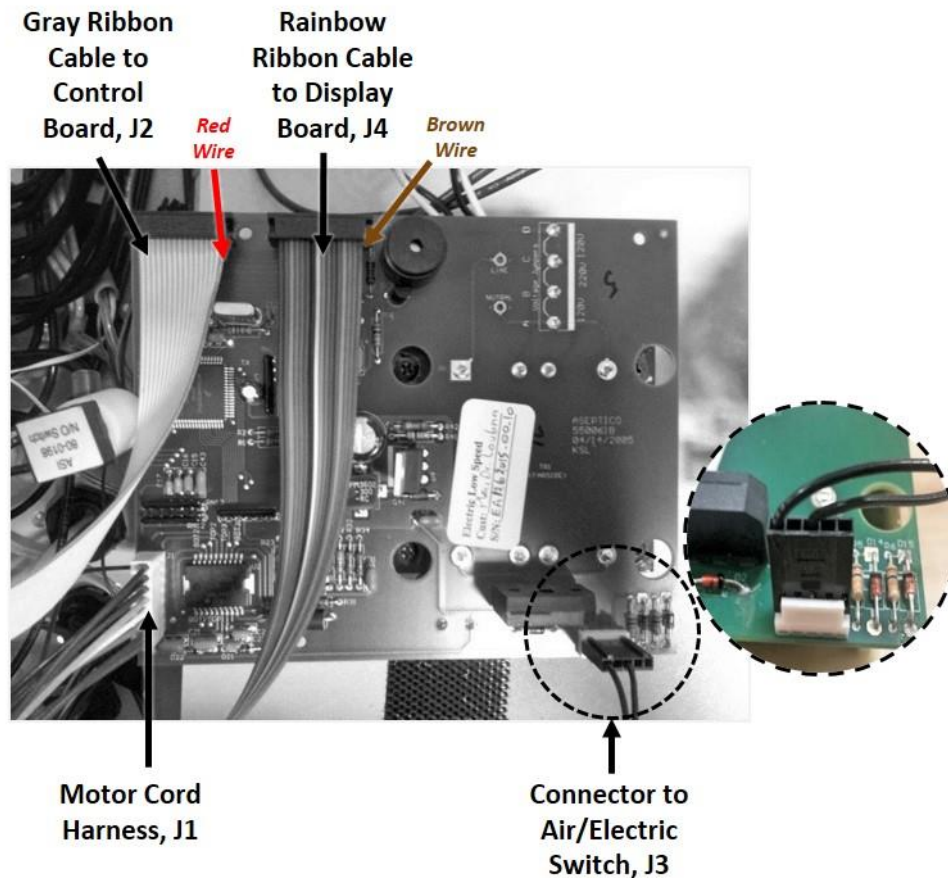


**Fig. 10**

17. Install the motor cord wire harness to specified hole in base. Using a Phillips head screwdriver, connect exterior mount to interior mount.
18. Mount the main circuit board in cleared space of baseplate. This is applied by using supplied double-sided tape.



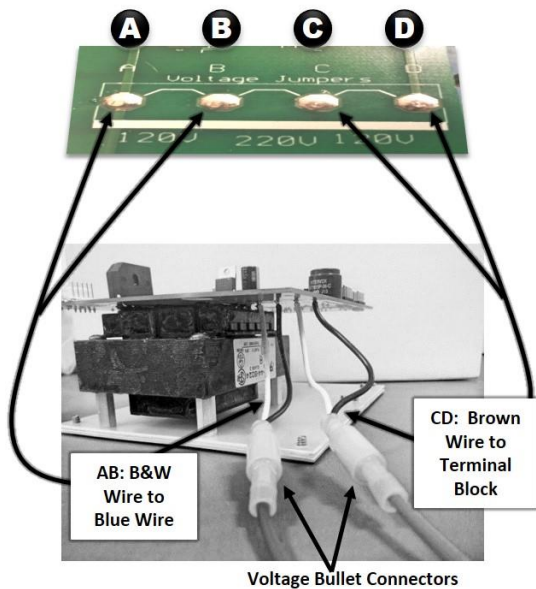
19. Connect, secure connections if pre-connected (Fig. 11)
  - a. Motor cord harness to main power board, J1
  - b. Gray ribbon cable to control board, J2. The red wire goes towards the center of the board.
  - c. Connector to air electric switch, J3
  - i** **IMPORTANT:** *Ensure proper position of connector; see inset.*
  - d. Rainbow ribbon cable to display board, J4. The brown wire goes towards the center of the board



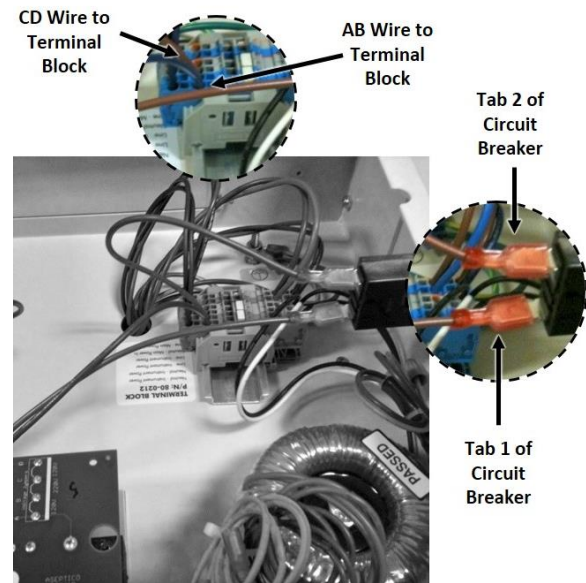
**Fig. 11**



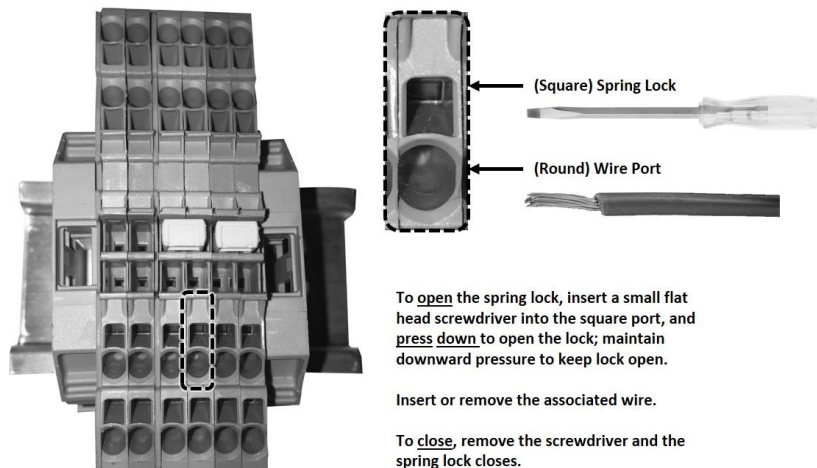
20. Connect and/or secure bullet connectors (Fig. 12, Fig. 13).
21. Then connect the wires to the terminal block, as noted. See Fig. 14 for unlocking/locking wire ports.
  - 115V Standard
    - AB= black & white connect to blue, blue wire to double blue of the terminal block
    - CD= white & black connect to brown, brown wire to tab 1 of circuit breaker. Tab 2 of circuit breaker, brown wire to terminal block
  - 220 V
    - A = white wire to blue wire, blue wire to double blue of the terminal block
    - B = black wire to brown wire connector
    - BC = jump with wire nut



**Fig. 12**

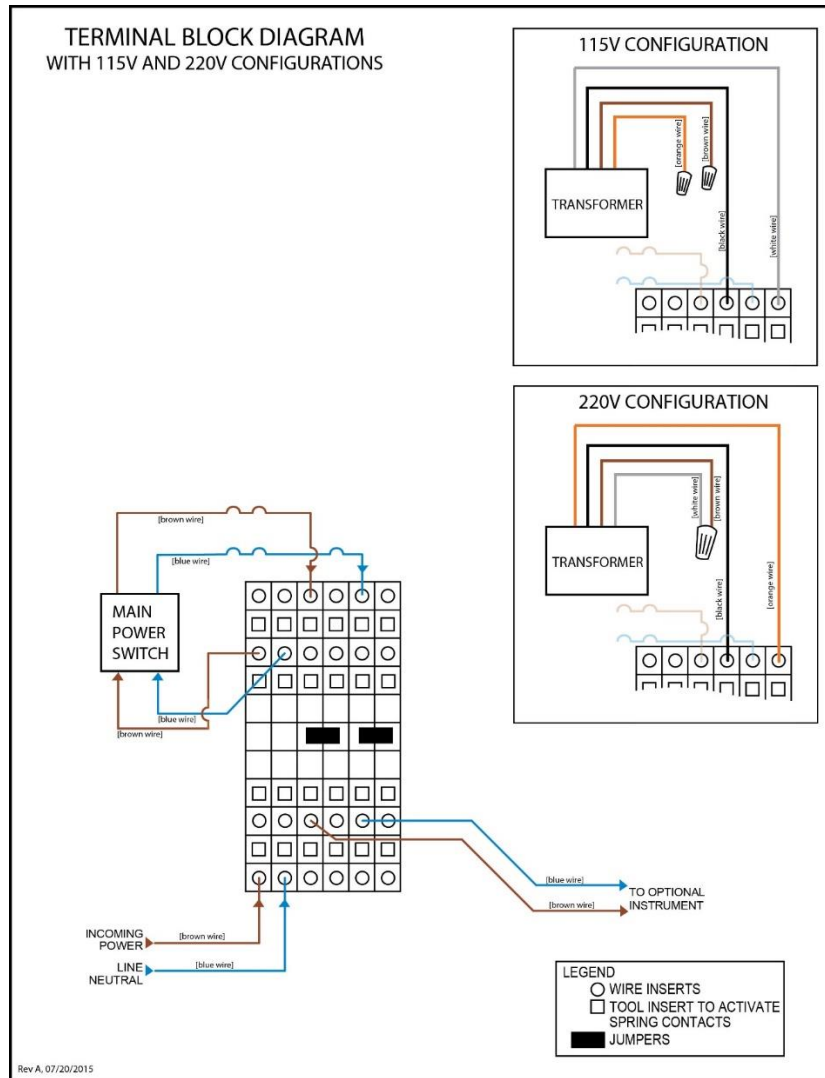


**Fig. 13**



**Fig. 14 Terminal Block**





**Fig. 15**

22. Install circuit breaker and secure nut using a crescent wrench.
23. Install N/O air electric switch to ELS/RTR position of control block. Refer to TG-95-0137, *Removing and Replacing Normally Closed and Normally Open Air Electric Switches*



24. Install motor and cord underneath the baseplate of unit by threading clock-wise to installed wire harness of step 17. (Fig. 16)

**i IMPORTANT: Align pins when connecting.**



**Fig. 16**

25. Install handpiece holder to holder bar. See ASI Technical Guideline, TG-95-2793, 95-2794, *Handpiece Holders, Removal/Replacement Instructions*.
26. Place motor in handpiece holder.
27. Restore main power to unit.
28. Test Instrument for proper function following testing steps from page 10.
- Refer to Manufacturer's manual for calibration and settings. Aseptico's DTC, AEU-25 Online Manual can be found at <https://aseptico.com/aseptico-manuals/>



**WARNINGS/CAUTIONS**

In addition to observing the normal precautions associated with standard dental practices and procedures, the following additional precautions should be strictly noted and observed during the set-up, operation, and maintenance of this system.

**⚠ WARNING****QUALIFIED PERSONNEL ONLY**

The product should only be operated by qualified personnel only. The operator bears responsibility for the correct settings and proper use of the system. ASI Dental (ASI) cannot be held liable for any malfunction of this product, or performance failure and/or its designed or desired utility, nor can ASI be held liable for injuries to persons or animals, in any case when the device is misused or not operated, applied or maintained in strict accordance with user/owner instructions set out in the operation manual. In the event of any doubt or question, the user is to contact ASI for clarification or assistance.

Improperly maintained or operated systems or instruments may void the associated warranties.

**⚠ WARNING****COMPRESSED AIR**

The compressed air system that operates this unit is under pressure. Compressed air can propel dust or loose particles and can cause bodily injury or damage. Always turn the system off and bleed off air pressure before attaching or removing air lines or accessories or servicing this unit. All air lines should be periodically inspected and replaced if worn or damaged.

If an outside compressed air supply is used to power this unit, the air supply must be regulated to 80 psi or below. Excessive air pressure could cause certain components to rupture.

**⚠ WARNING****ELECTRICAL VOLTAGE**

This system is powered by high voltage electricity. Like any other electrically powered device, if it is not used properly, it can cause electrical shock. Always plug the power cord into an electrical outlet with adequate fuse protection and proper grounding. In the event of a short circuit, grounding reduces the risk of shock by providing an escape wire for the electric current. Improper grounding of the unit can result in a risk of electric shock. Always unplug the unit before doing any service or repair to the unit.