

SERVICE MANUAL & PARTS LIST

AEU-25 Endo DTC



Aseptic

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To prevent injury to people and damage to property, please heed relevant warnings and remarks. They are marked as follows:

- WARNING:** Serious injury or death may result if ignored.
- CAUTION:** Damage to property or the environment may result if ignored.
- NOTE:** Important additional information and hints.




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GENERAL SERVICE INFORMATION

This service and parts manual offers information and parts lists not available in the **AEU-25 Endo DTC** Operation and Maintenance Instruction Manual. It will help you better understand how the **Endo DTC** Unit works, thereby reducing service time. Parts are listed and referenced to callouts in the Parts List. Use the information in the Parts List when ordering replacement parts.

Inspection & Operation Verification

To verify that the **Endo DTC** unit is functioning properly, follow the set-up procedure in the Operation & Maintenance manual. First, check that the voltage selector is set to the proper voltage. Turn the fuseholder until the white lettering with the proper voltage is right side up. Use 115V for 110-120V 60 Hz voltages, and the 230V for 220-250V 50Hz voltages. Attach the power cord to the back of the console and plug into a grounded electrical outlet. Connect the AE-4B-30 motor to the receptacle on the lower front panel of the console. Attach the 'E' Type handpiece to the motor. Attach the supplied AE-7P On/Off foot switch to the connector on the back of the unit marked "Foot Switch". Turn the power switch on the rear panel of the console 'On' (-) position. The console LCD display should light up and the startup screen will be displayed for a few seconds. The screen should display the software version onboard your **Endo DTC**:

ASEPTICO AEU-25

Software Rev. (-Revision Number-)

Press, hold, and release the "CAL" button to enter the System Setup Menu. Follow the menu commands displayed on the screen to select appropriate menu options (refer to Operation and Maintenance Instruction Manual). Insert an endodontic rotary file into the handpiece. Use the calibration function ("CAL" button) to calibrate the **Endo DTC**

(refer to "FILE LIBRARY" and "OPERATION" chapters in the Operation Manual for complete file library selection and calibration instructions).

The above procedures describe basic inspection and verification of the **Endo DTC**. If the unit still does not perform as required, further diagnosis of components in the system may require service. Use the Troubleshooting section as a guide to symptoms and appropriate procedures to fix various problems.

Cleaning and Lubrication

When servicing the **Endo DTC** unit, a hot detergent solution or alcohol are effective cleaners on all non-electrical parts. Abrasive cleaners have the potential to damage surface finishes and should be avoided. Any wiping should be done with a soft lint-free cloth.

Electrical parts should be cleaned with an appropriate electrical parts cleaner or air.

Use a silicone base lubricating grease, such as Dow Corning No. 103 to lubricate O-rings and seals on handpieces. Before performing any reassembly of parts that contain O-rings or seals, apply a light coat of silicone grease. This will make installation easier and prevent the O-rings or seals from being damaged.

ONBOARD TEST PROGRAM

The Endo DTC provides a series of onboard tests that allows a technician to test/troubleshoot the following functions and components:

- LEDs
- LCD and console case
- Console control buttons
- Sleep mode
- Console output speeds and currents to the motor

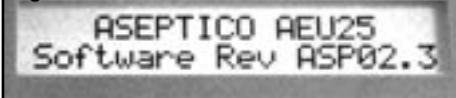
NOTE: A handpiece does not have to be attached to the system when performing these tests.

NOTE: The Onboard Test Program may be canceled at any time during this testing procedure by rebooting the unit (turning power Off, then On again). This will not harm the Unit or its software, however, the test will be interrupted and the entire procedure will have to be restarted.

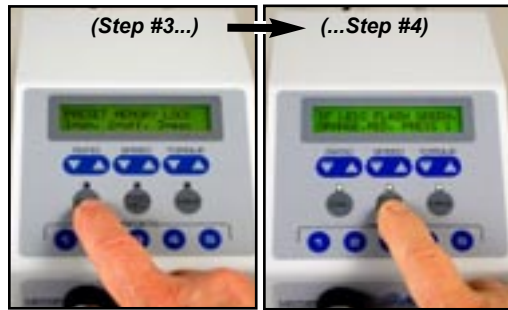
Test Program Access:

1. Set up the Endo DTC as described in the Operation Manual, page 2.
2. Turn the Power Switch on the rear panel of the console to the 'ON' (-) position. The Console LCD Display will light up and the Startup Screen will be displayed for a few seconds and then default to the file system information. The Startup Screen displays the installed software version (Fig. 1).

Figure 1



3. Press, hold, and release the "CAL" button until two beeps are heard. This will access the system setup menu (shown on the right) - **IMPORTANT: Ignore this setup menu prompt and go directly to Step 4.**

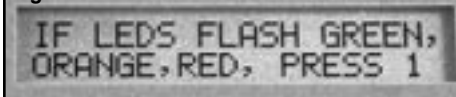


4. Press and hold the FWD/REV button until one beep is heard. Then release the button to access the Onboard Test Program. The first test menu (LED Test) will be displayed (see picture above).

Test #1 – LED Test:

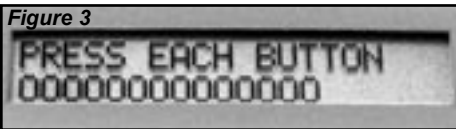
1. Once the Onboard Test Program has been accessed, the LED displays the "LEDs Menu" (Fig. 2). This test confirms the polarity of the LEDs by repeatedly illuminating all three LEDs through a sequence of green/orange/red colors.
2. Press the '1' button to access the next test menu (Button Test).

Figure 2

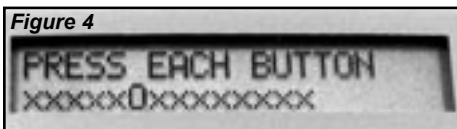


Test #2 – Button Test:

1. This test menu prompts the technician to press each button (Fig. 3), to confirm that each button switch is functioning properly.



As each button is pushed, the '0' digit on the menu turns to an 'X' digit (Fig. 4) and a single beep is heard for each button.



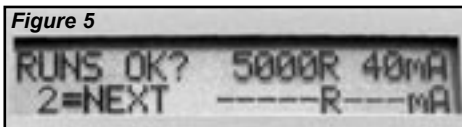
2. Once each button has been tested and all the 'X' digits are displayed, the unit automatically accesses the next motor run test menu (5,000 RPM Test).

NOTE: All buttons must be pressed before moving on to the next test.

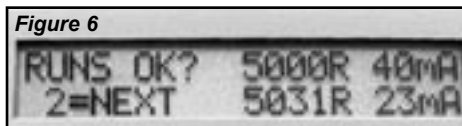


Test #3 – 5,000 RPM Test:

1. This test menu displays the actual output speed and current of the motor/handpiece at 5,000 RPM. The first menu screen displays the preset speed setting and milliamps on the top line (Fig. 5).



2. Depress the footswitch pedal to operate the motor/handpiece. The actual RPM and current load (see Note) will be displayed on the second line, in real time (Fig. 6).



3. Press the '2' button to access the next test (10,000 RPM Test). A single beep will be heard.

NOTE:
When performing motor speed test, actual current output may vary from preset mA value, depending upon type of motor used.



ONBOARD TEST PROGRAM - Cont'd

Test #4 – 10,000 RPM Test:

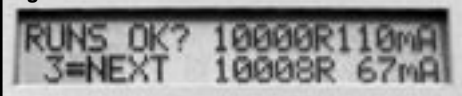
1. This test menu displays the actual output speed and current to the motor/handpiece at 10,000 RPM. The first menu screen displays the preset speed setting and milliamps on the top line (Fig. 7).

Figure 7



2. Depress the footswitch pedal to operate the motor/handpiece. The actual RPM and current load (see Note) will be displayed on the second line, in real time (Fig. 8).

Figure 8



NOTE:

When performing motor speed test, actual current output may vary from preset mA value, depending upon type of motor used.

3. Press the '3' button to access the next test (20,000 RPM Test). A single beep will be heard.



Test #5 – 20,000 RPM Test:

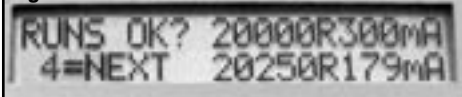
1. This test menu displays the actual output speed and current of the motor/handpiece at 20,000 RPM. The first menu screen displays the preset speed setting and milliamps on the top line (Fig. 9).

Figure 9



2. Depress the footswitch pedal to operate the motor/handpiece. The actual RPM and current load (see Note) will be displayed on the second line, in real time (Fig. 10)

Figure 10



NOTE:

When performing motor speed test, actual current output may vary from preset mA value, depending upon type of motor used.

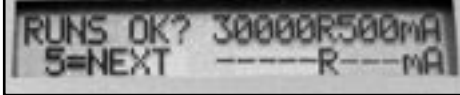
3. Press the '4' button to access the next test (30,000 RPM Test). A single beep will be heard.



Test #6 – 30,000 RPM Test:

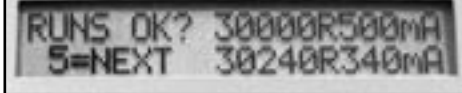
1. This test menu displays the actual output speed and current of the motor/handpiece at 30,000 RPM. The first menu screen displays the preset speed setting and milliamps on the top line (Fig. 11).

Figure 11



2. Depress the footswitch pedal to operate the motor/handpiece. The actual RPM and current load (see Note) will be displayed on the second line, in real time (Fig. 12)

Figure 12



NOTE:

When performing motor speed test, actual current output may vary from preset mA value, depending upon type of motor used.

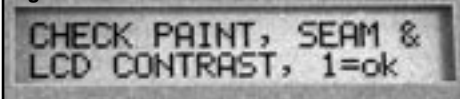
3. Press the '5' button to access the next test (LCD and Console Check). A single beep will be heard.



Test #7 – LCD & Console Check:

1. This test menu prompts the technician to visually check the status of the console paint finish, case seams, and the LCD display (Fig. 13).

Figure 13



Check for scratches and/or flaking in the

paint; check the fit between the upper and lower case halves; and, check the integrity and luminance of each LCD character/digit, and the background intensity.

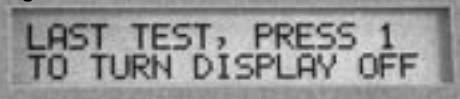
2. Press the '1' button to access the next test (Sleep Mode Test). A single beep will be heard.



Test #8 – Sleep Mode Test:

1. This final test of the onboard test program puts the Endo DTC professional into a sleep mode until reactivated (Fig. 14).

Figure 14



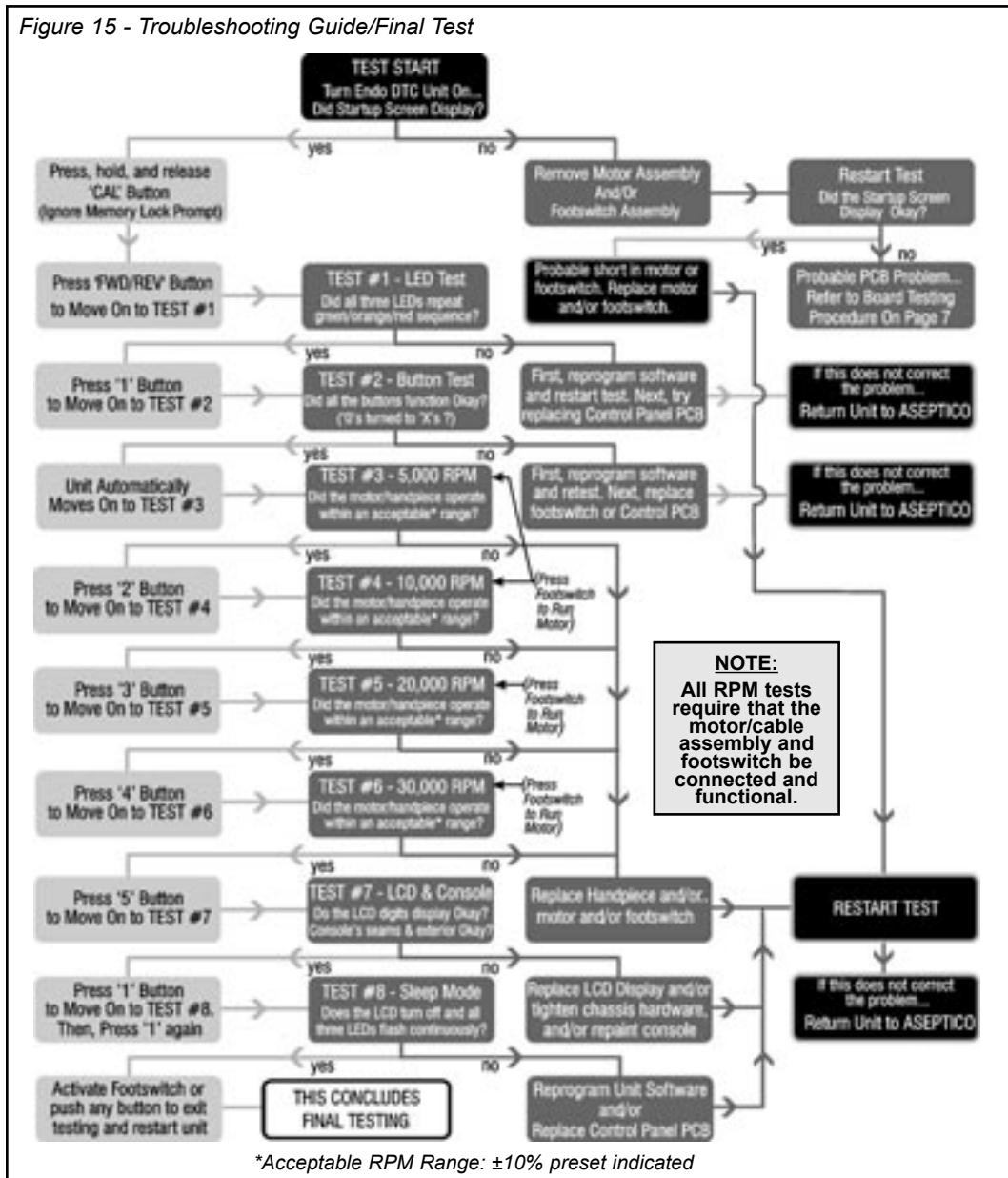
2. Press the '1' button to invoke the Sleep Mode. The LCD will turn off and all three LEDs will continually flash green.



3. Press the footswitch or any button to reactivate the unit. This will exit the onboard test program and reset the unit's LCD to the initial Startup Screen. A single beep will be heard.

ONBOARD TEST PROGRAM - Cont'd

Figure 15 - Troubleshooting Guide/Final Test

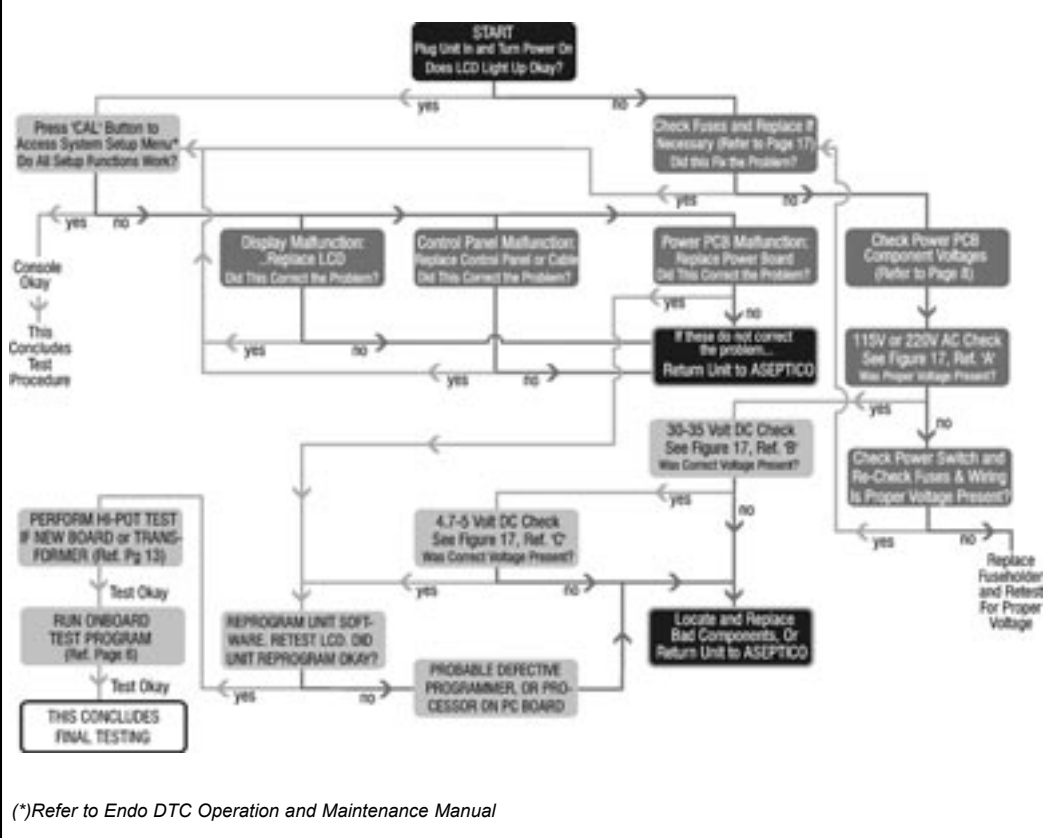


POWER PCB TESTING FLOWCHART

NOTE: If the test procedure on page 6 fails to start properly, use this troubleshooting guide to pinpoint the problem. This flowchart provides additional troubleshooting procedures for the **Endo DTC** main power printed circuit board (PCB). **NOTE:** If the

power PCB or transformer is replaced, the unit software must be reprogrammed and a hi-pot test performed on the new board (refer to pages 12 & 13). For troubleshooting procedures specific to the handpiece **motor**, refer to the motor testing chart on page 10.

Figure 16 - Power PCB Troubleshooting Guide



(*)Refer to Endo DTC Operation and Maintenance Manual

POWER PCB TESTING POINTS

WARNING

Dangerous voltages are present during the following board testing. Severe electric shock can result and could prove fatal. Only qualified technicians should perform these tests.

1. Turn **Endo DTC** power switch 'Off'. Disconnect motor/cable and footswitch. Disassemble top half of console chassis from bottom half (refer to page 12). Turn top half over and place on work bench to expose internal components.
2. **115V or 220V AC Check:** This test verifies that the fuses are good and that proper AC voltage is being provided to the PCB main power circuit. Connect voltmeter test leads to contacts as indicated in AC Voltage Ref. 'A', Fig. 17. Turn **Endo DTC** power switch 'On'.

CAUTION: High voltages present - only qualified technicians should perform test. Use extreme caution to avoid severe electric shock.

If 115V or 220 AC volts minimum are not present, check power switch and fuses first, then if proper voltage is still not present, replace fuseholder assembly.

3. **30-35V DC Check:** This test verifies that proper DC voltage is being provided to the board circuit. Connect voltmeter test leads to contacts as indicated in DC Voltage Reference 'B', Fig. 17. Turn Endo DTC power switch 'On'.

CAUTION: High voltages present -- only qualified technicians should perform test. Use extreme caution to avoid severe electric shock.

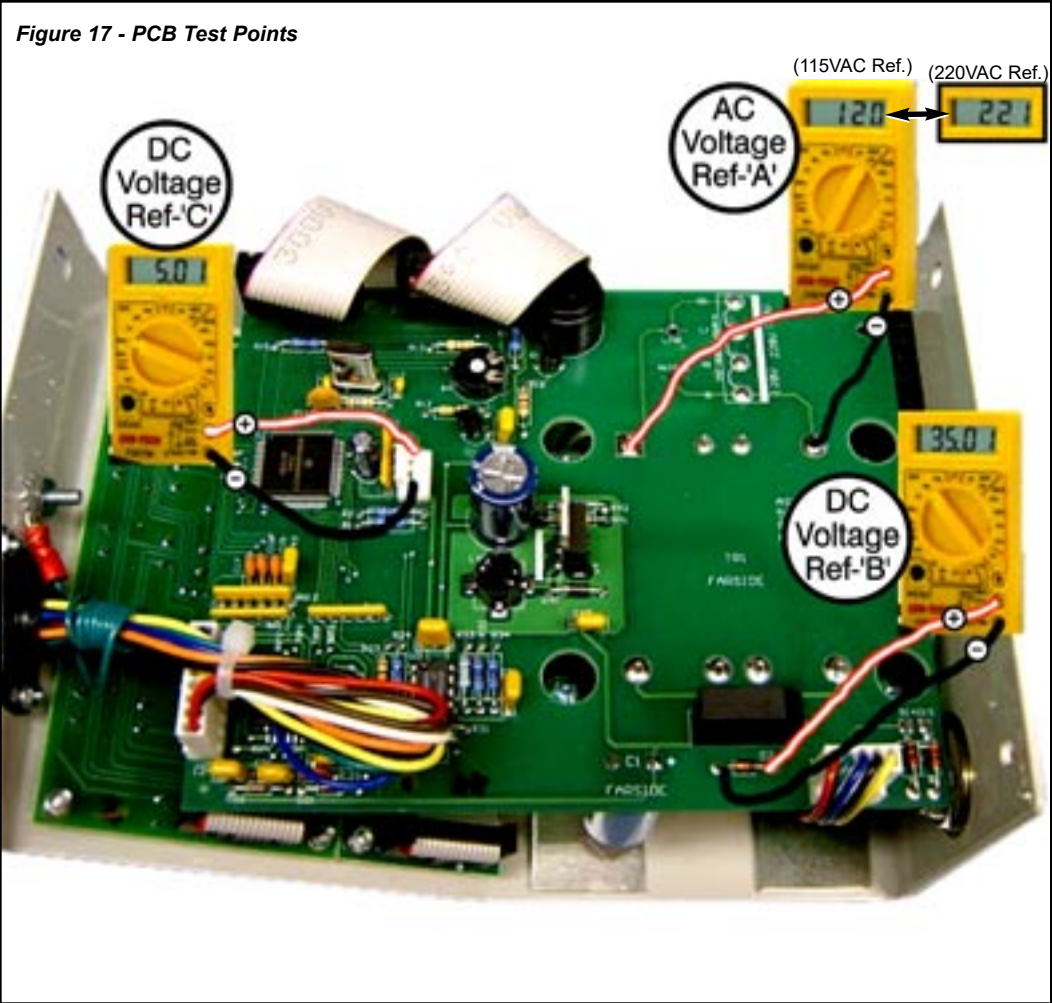
Replace PCB board if minimum 30 volts are not present.

4. **4.7-5V DC Check:** This test verifies that proper DC voltage is being provided to the reprogramming circuit. Connect voltmeter test leads to contacts as indicated in DC Voltage Reference 'C', Fig. 17. Turn Endo DTC power switch 'On'.

CAUTION: High voltages present - only qualified technicians should perform test. Use extreme caution to avoid severe electric shock.

Replace PCB board if minimum of 4.7 volts are not present.

Figure 17 - PCB Test Points



MOTOR CALIBRATION ERROR TESTING & FLOWCHART

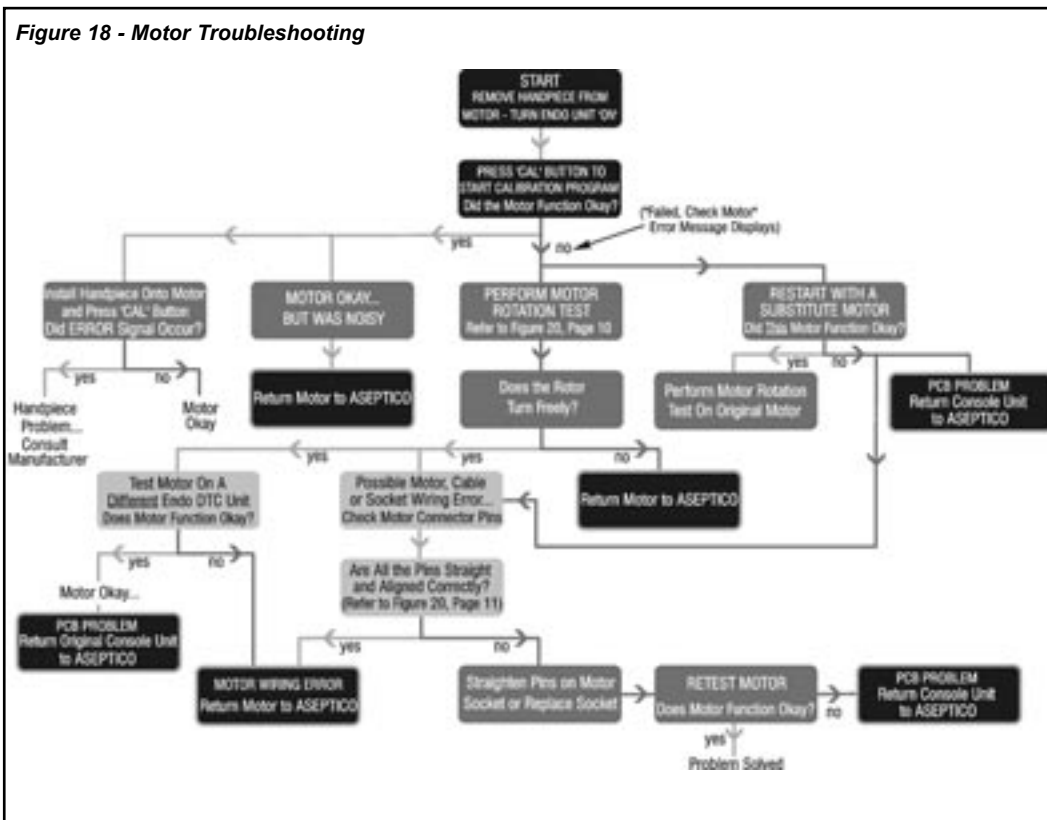
NOTE: This section provides troubleshooting procedures for the “Failed, Check Motor” error message which displays if the **Endo DTC** motor fails during a handpiece calibration test (refer to Operation Manual for complete handpiece calibration instructions). In the event that the troubleshooting information on Page 6 does not adequately pinpoint the problem, this information will help determine if the source of the problem is in the motor or the unit console.

1. Remove handpiece from motor. Turn **Endo** unit ‘On’. The Startup screen will appear.

2. Press ‘CAL’ button to enter the calibration test. If the motor is malfunctioning, jammed or disconnected, the message “Failed, Check Motor And Retest” will be displayed.

If the motor is functioning properly, the message “Testing In Progress - Please Wait” will display and the unit will automatically run through its calibration program. The **Endo DTC** power PCB board may be the source of the problem. For troubleshooting procedures specific to the PCB board, refer to the PCB testing chart on page 7.

Figure 18 - Motor Troubleshooting



MOTOR FIELD TESTING

NOTE: Endo DTC motor testing in the field is limited to simple manual and visual tests that help to determine the source of the problem. We recommend that the motor/cord assembly be returned to Aseptico for all repairs. **Do not attempt to disassemble the motor assembly.**

1. **Motor Rotation Test:** This test can be performed manually using a simple turning tool that can be improvised in the field or procured from Aseptico. The tool needs to be able to grasp the motor's internal rotor/magnet assembly and rotate it to determine if the assembly is damaged. Insert tool into motor tip and engage rotor shaft as shown in Figs. 19A & 19B. Turn tool back and forth to determine if rotor assembly moves freely (Fig. 19C). If resistance is felt, return motor/cord assembly to Aseptico for repair.
2. **Connector Pin Test:** This test consists of a simple visual check of the pin condition of the motor/cable connector socket on the lower front of the **Endo DTC** console. Refer to Figs. 20A, -B, and -C to determine if pins appear damaged. If pins cannot be repaired or the connector wiring assembly replaced in the field, return the unit to Aseptico for repairs.

Figure 19A - Motor Rotation Tool



Figure 19B - Motor Internals



Figure 19C - Rotor Rotation Test

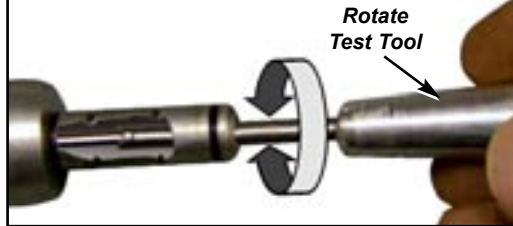


Figure 20A - Pins Normal



Figure 20B - Recessed Pin



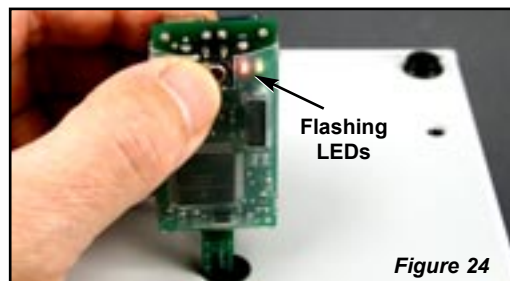
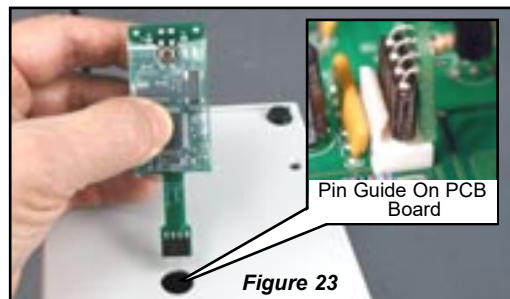
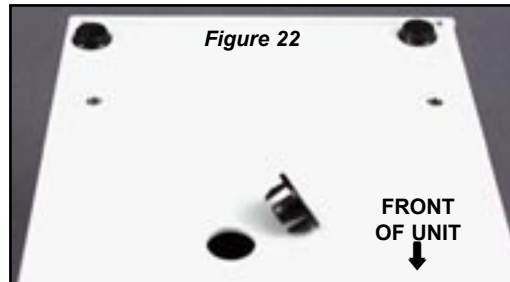
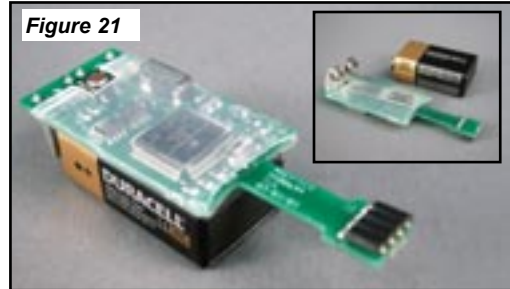
Figure 20C - Bent Pin



REPROGRAMMING THE UNIT

The **Endo DTC** provides a Field Programming tool (Ref PN AEU-25FP) that enables a technician to reprogram the **Endo DTC** software in the event the existing software is accidentally erased or corrupted. To reprogram the unit, follow the steps below:

1. Install a standard 9 Volt battery onto the Programmer (Fig. 21). The red and green LEDs will illuminate for approximately 30 seconds and then turn off.
2. Turn the **Endo DTC** unit over to expose the chassis bottom. Locate and remove the plastic hole plug with a slot-head screwdriver or other thin-edged tool. (Fig. 22).
3. Carefully insert the Programmer into the hole as shown in Fig. 23 and plug 4-pin socket into 4-pin connector port located on printed circuit board below. NOTE: The PCB includes a pin guide which prevents misalignment of the Programmer socket to the 4-pin connector (See inset in Fig. 23).
4. Press the small button switch located at the top end of the Programmer to initiate software download into the **Endo DTC** unit. (Fig. 24) The red and green LEDs will flash rapidly as the program downloads. If reprogramming was successful, the green LED will illuminate after the flashing stops, or if unsuccessful, the red LED will light.
5. Once reprogramming is completed, remove Field Programming tool, reinstall programming port plug, and place **Endo DTC** unit upright on its base. Turn unit power 'On' and ensure that the proper software level is shown on the startup screen.



HI-POT TEST (DIELECTRIC WITHSTAND VOLTAGE TEST)

⚡ WARNING
Dangerous voltages are present during the following Hi-Pot testing. Severe electric shock can result and could prove fatal. Only qualified technicians should perform these tests.

The Hi-Pot (High Potential) test should be performed each time a new power PCB board or transformer are installed in the **DTC** unit. Hi-Pot testing consists of two separate test routines, typically performed in tandem via two Hi-Pot test/measurement devices:

1. Dielectric Withstand Voltage Test -

This test stresses the **Endo DTC** unit's insulating material beyond what it will encounter during normal operation. It assures that the unit will withstand higher than normal voltage potentials before flashover or breakdown. To test the **Endo DTC**, set up the unit and test equipment as shown in Figures 25 & 26.

NOTE: Test equipment shown in example is the Associated Research, Inc. Model 3665 AC/DC Withstand Voltage Tester and Model 3130 Ground Bond Tester.

Configure the hi-pot tester to apply 3000 VAC for one second across the mains (appliance inlet) and the applied part (motor shaft), with the leakage trip level at the applied part set at 1.0mA.

NOTE: Ensure that the above test parameters are set up correctly before operating the test.

2. Ground Bond Test - This test is performed between the earth terminal on the appliance inlet and the applied part. Configure the ground tester to apply 25Amps at 6VAC for two seconds, with a limit of 0.1 Ohm.

NOTE: Ensure that the above test parameters are set up correctly before operating the test. Also, it may be necessary to offset the resistance of the power cord to achieve accurate readings.

IMPORTANT: Any system that fails either of the above tests must be removed from service and thoroughly examined, repaired and retested by a qualified technician.

Figure 25 - Example of Hi-Pot Equipment Set Up

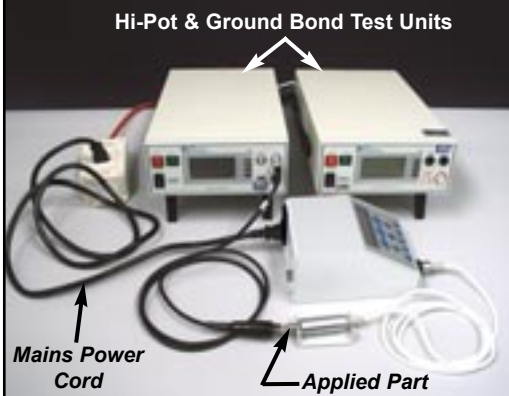
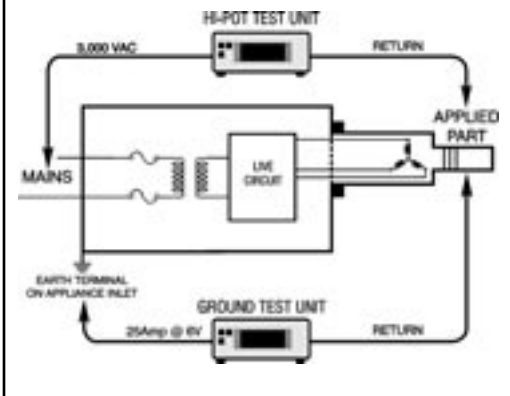


Figure 26 - Test Schematic



SYSTEM DISASSEMBLY

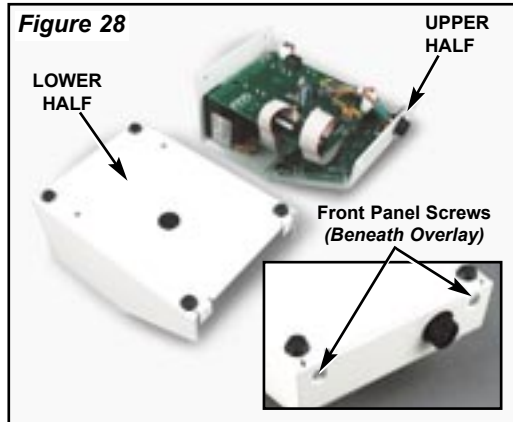
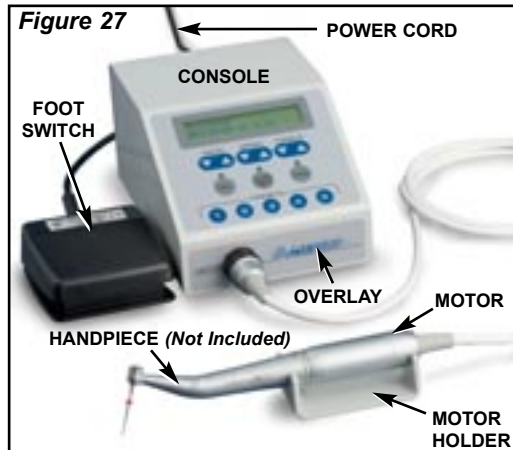
IMPORTANT: Ensure that the *Endo DTC* power is turned 'Off' and power disconnected before disassembling unit.

Console Chassis:

1. Turn *Endo DTC* power switch 'Off'. Disconnect main power and footswitch cables from back of console. Disconnect motor/cable assembly from front of console. (Fig. 27) **NOTE:** When removing cables from unit, grasp connector at end of cable. Do not pull on cords.
2. Remove lower front overlay from console to expose two flat-head mounting screws. Remove screws with a #2 Phillips head screwdriver. (Fig. 28)
3. Remove the two mounting screws on the back of the console with a 5/64-inch Allen (hexagonal tip) wrench.
4. Turn *Endo DTC* console over and rest on top side (place protective material under top, to prevent scratches). Carefully pull the bottom half of the chassis straight up and off top half to expose internal components. (Fig. 29)

Power Printed Circuit Board (PCB):

5. Disconnect footswitch 5-wire socket from 5-pin connector on power PCB. Take note of the alignment of socket to connector pin guide. (Fig. 29)
6. Disconnect motor 8-wire socket from 8-pin connector on power PCB. Take note of the alignment of socket to connector pin guide. (Fig. 29)
7. Disconnect the two ribbon cable sockets from their respective connectors on power PCB. Take note of the orientation of red stripe on each cable to their respective connectors. (Fig. 29)
8. Locate the four jumper wires underneath



the power PCB and disconnect their four terminals at the power/fuse box. Take note of the termination of each jumper wire from power board to its respective fuse connector on the box.

9. Locate the four holes on the PCB which provide access to the transformer mounting hardware (Fig. 29). Remove the four screws (and lockwashers) with a #2 Phillips head screwdriver. Carefully lift PCB/transformer assembly off the four standoffs and remove from chassis.

LCD Display Integrated Circuit (IC):

10. Disconnect ribbon cable from IC board connector. Note orientation of red stripe on cable with connector.
11. Remove the three mounting nuts, lockwashers, and insulators with a 3/16-inch wrench.
12. Carefully remove IC board from chassis. Remove the three spacers.

Control Printed Circuit Board (PCB):

13. Disconnect ribbon cable from connector on control PCB. Note orientation of red stripe on cable with connector.
14. Remove the four mounting nuts and lockwashers with a 3/16-inch wrench.
15. Carefully remove the PCB from chassis.

REASSEMBLY

Reassemble Control PCB, LCD Display IC, Power PCB and Console Chassis in the reverse order. Ensure all cable connectors are properly aligned and securely connected. When reattaching motor and footswitch cables, take note of keyways on connectors.

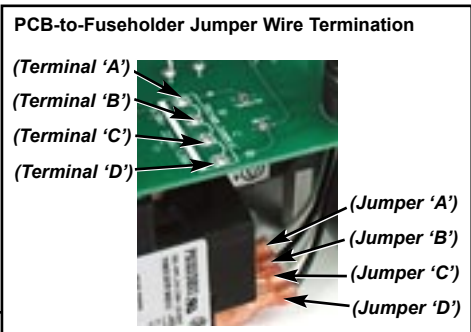
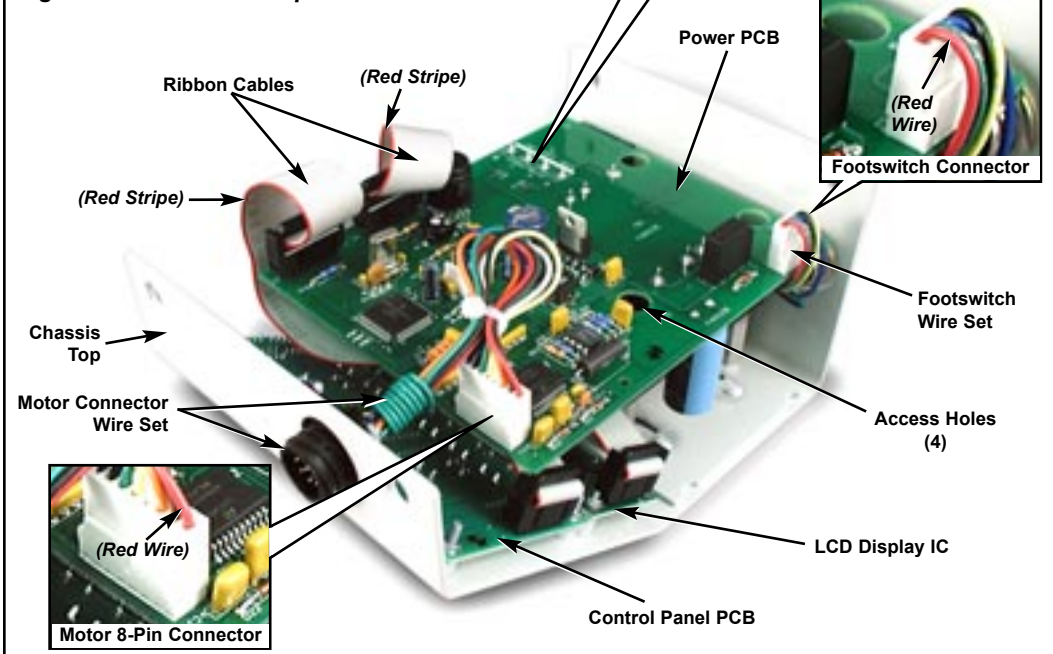


Figure 29 - Internal Components



STERILIZATION:



WARNING - Sterilize the motor between each patient use.

WARNING - Use of a sterilization method or temperatures other than what are prescribed may damage the motor or present a risk of cross-contamination between patients.

CAUTION - Do not soak or submerge the motor in any liquid.

STERILIZATION PROCEDURE:

Pre-clean

- 1) Thoroughly brush off any visible signs of debris from the motor and cord.
- 2) Thoroughly clean the device with a moist cloth or towel to remove any remaining signs of debris.

Sterilize

- 3) Select one of the three following sterilization methods (A. B. or C.):

Wrapped Sterilization – Place in an appropriately sized sterilization pouch and seal it.

A. Gravity Wrapped:

- **Minimum Temperature:** 132° C (270° F)
- **Full Cycle Time:** 20 minutes
- **Minimum Dry time:** 30 minutes

B. Prevacuum Wrapped:

- **Preconditioning Pulses:** 3
- **Minimum Temperature:** 132° C (270° F)
- **Full Cycle Time:** 4 minutes
- **Minimum Dry time:** 40 minutes

Flash Sterilization – For immediate use only.

C. Gravity Unwrapped:

- **Minimum Temperature:** 132° C (270° F)
 - **Full Cycle Time:** 10 minutes
- No dry time is required for flash sterilization.

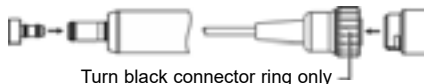
MOTOR & CORD ASSEMBLY:

- The entire motor and cord assembly is fully autoclavable. Before autoclaving the

assembly, remove any handpiece from motor and install autoclaving plugs into the end of the motor and motor cord connector as shown below. The plugs are supplied with the motor and cord.

- Loosely coil the motor cord when autoclaving. Avoid sharply bending the cord when autoclaving.

- Always install the autoclaving plugs into motor and motor connector before autoclaving.



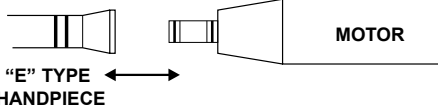
- If the autoclaving plug for the motor becomes difficult to remove or install, apply silicone grease or similar lubricant to the O-rings.

MAINTENANCE & CLEANING:

HANDPIECES - Thorough cleaning and lubrication of handpieces after each use and before sterilization is very important to ensure proper operation and service life of the handpiece. Follow the instructions provided with the handpiece purchased for complete maintenance instructions.

NOTE: A handpiece does not have to be attached to the system when performing the tests provided in this service manual.

Figure 30 - Connecting Handpiece & Motor



CONSOLE MAINTENANCE - The exterior of the console may be cleaned by wiping with a soft cloth moistened with mild detergent or disinfecting solution.

WARNING

- Do not attempt to disassemble the motor or motor connector.
- Do not oil or lubricate the motor.
- Do not attach a handpiece to the motor while motor is running.
- Do not bend motor cord sharply.

Failure to comply with any of the above instructions may void your warranty

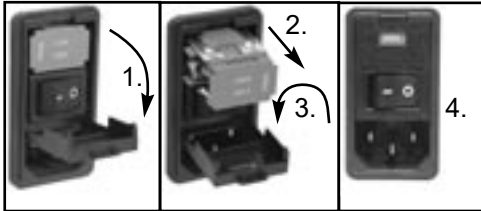
CHANGING THE FUSE OR VOLTAGE



WARNING

Turn the power off and unplug the unit before following the steps below.

Follow the corresponding steps to change the voltage:



1. Use a small flathead screwdriver to open the Fuse/Voltage Selector Panel on the back of the unit.
2. Remove the red Fuseholder from the unit.
3. Changing the fuse:
Replace the blown fuses on either side of the Fuseholder.

Replacement Fuses:
115V: 1.0A/250V slo-blo fuse
220/230V: 0.5A/250V slo-blo fuse
4. Changing the voltage:
The proper fuses for the country of use are sent in the unit. When changing voltage, replace the fuses with fuses that are rated for the new voltage.
Turn the Fuseholder until the white lettering with the proper voltage is right side up.
5. Replace the Fuseholder and close the Fuse/Voltage Selector Panel.



CAUTION

Do not attempt to operate the **Endo DTC professional** while configured in the 115V mode with a 220/230V power source. This could damage the electrical components and will void the warranty.

6. CHECKING THE FUSE & CONTACTS:

- Remove the Fuseholder from the unit as described in steps #1 & #2 and remove the cylindrical fuse (Fig. 31). Visually inspect the fuse for a blown (burnt) element. Replace fuse if necessary with properly rated fuse.

- The cylindrical fuse snaps into a spring-loaded contact in the fuseholder to ensure positive contact (Fig. 31). Check position of fuse/spring in holder (Fig. 32A). If fuse sits too low (Fig.32B), spring contact could be bent or broken. Carefully bend spring outward until proper fuse height is achieved. If spring is broken, replace entire fuseholder block.

- Check fuseholder block for bent or broken terminals. Replace block if necessary.

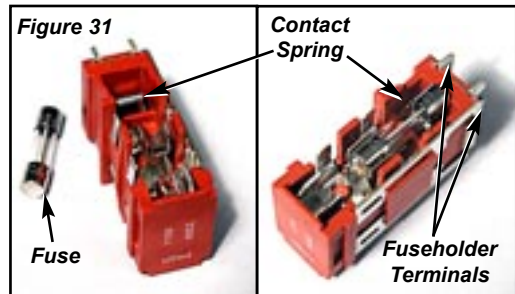
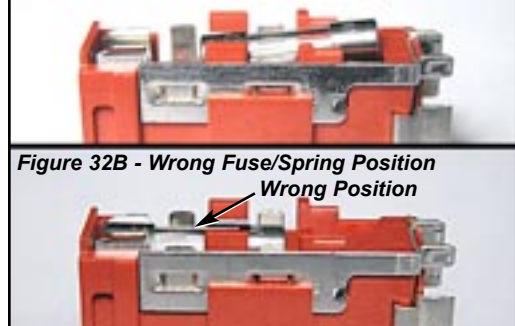


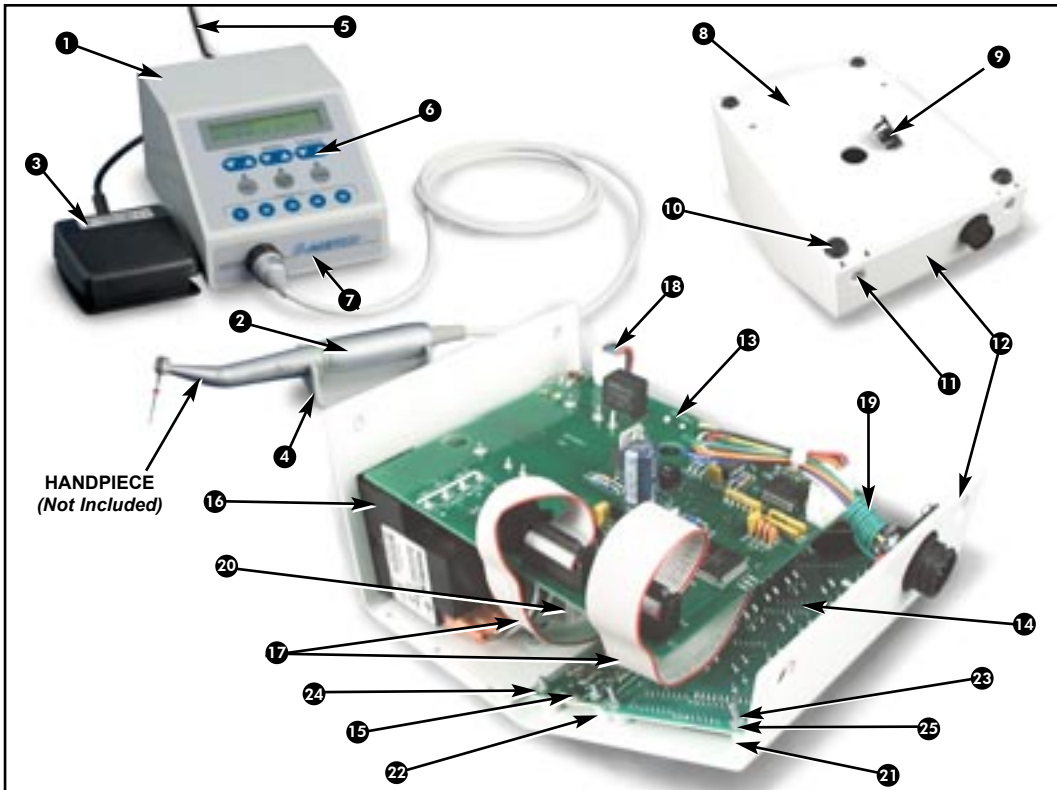
Figure 32A - Correct Fuse/Spring Position



PARTS LIST

ITEM	PART NO	QTY
1	Final Assy, AEU-25	120258 1
2	Motor/Cable Assy, AE-4B 30K	AE-4B-30 1
3	Footswitch, On/Off 8 Pin	AE-7P 1
4	Holder, Bench Mount, Mini Gry	AE-5FG 1
5	Linecord, Remote US Hosp Gry	.840001 1
6	Overlay, AEU-25 Control Panel	.420289 1
7	Overlay, AEU-25 Front Panel	.420290 1
8	Chassis, AEU-25 Base Cmpl	.460987-08 1
9	Hole Plug, 1/2" Nylon Blk Snap	.510512 1
10	Foot Bumper, .5 x .14 Cylin Blk	.850008 1
11	Screw, M/S Steel FlaPhl 6-32x3/8	.510071 2
12	Chassis, AEU-25 Top Cmpl Wht	.460988-08 1
13	PCB Assy, AEU-25 Power Complete	330329-01 1
14	PCB Assy, AEU-25 Control	.330328 1
15	IC, LCM-S02002DSF LCD Display	.880117 1

ITEM	PART NO	QTY
16	Power Inlet, Fused Dual-V Snap In	.840062 1
17	Cable Ribbon, 16 Pin x 8"	.870241 2
18	Wire Set, AEU-17BE Foot Switch	.875009 1
19	Wire Set, AEU-17BE Motor Conn	.875008 1
20	Spacer, Alum 10-32x1Lx5/16 Hex	.510480 4
21	Spacer, Nyl 1/4Rndx.210Lx.14ID	.510022 4
22	Spacer, Nyl 1/4ODx.14IDx.285	.460993 3
23	Nut, Hex 4-40 Sml Ptn Pltd	.510005 11
24	Insulator, PPS Shld/Washer #4	.850011 3
25	Washer, Split Pltd #4	.510004 11
Not Shown, Washer, Split Stnls #10		.510559 4
Not Shown, Nut, Keps Pltd 6-32		.510006 2
Not Shown, Screw, PanPhl 10-32x1-1/2		.510558 4
Not Shown, Screw, BtnSoc 6-32x1/4		.510037 2
Not Shown, Software, AEU-25		.890001 1



SPECIFICATIONS

Console Size: 3.5" x 5" x 7"
(9 cm x 13 cm x 18 cm)

Console Weight: 3.55 lbs (1.6 kg)

Power Source: Dual Voltage
115V or 230V AC

Power Consumption:

Maximum: 100 W (approx.)

Sleep Mode: 6 W

SYMBOL DEFINITIONS:



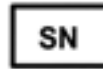
Type B
Equipment



Dangerous
Voltage



Attention - Consult
Accompanying
Documents



Serial Number

The UL 2601 Standard Duty Cycle for Intermittent Use is 1 min. on / 5 min. off.

SYSTEM TROUBLESHOOTING

Problem:	Correction:
Console does not light when turned on:	Check console to power connection. Check voltage setting. Check fuse. If blown, replace with 1.0A/250V slo-blo fuse for 115 volts, or 0.5A/250V slo-blo fuse for 230 volts. Refer to Troubleshooting Guide, Page 7
Console lights when turned on, but files in handpiece do not turn:	Check motor plug connection. Check foot switch connection, then... Depress foot switch. Check that a file is properly seated in the handpiece.
Improper display:	Verify that ratio setting matches handpiece ratio. Use Calibration function. Turn power switch off, wait 5 seconds, then turn back on to reset.
Motor slowing down or sluggish:	Dirty handpiece. Handpiece not lubricated. After lubricating and before autoclaving, set handpiece with head down to let excess lubricant drain out.

WARRANTY

Aseptico Inc. warrants its new products against defects in material and workmanship under normal and proper use, care, and maintenance for a period of two (2) years from date of original invoice. This two (2) year warranty does NOT apply nor is it extended to products that are not manufactured by Aseptico. These products may be covered by a separate limited warranty provided by the particular manufacturer, and all claims and questions regarding the same are to be directed to the particular manufacturer.

Expendable components, such as batteries, fuses, light bulbs, and tubing sets installed on Aseptico products are specifically excluded and have no warranty. Consumable goods are warranted for the stated expiration date of such goods.

Repair or replacement of any product(s) or part(s) under this warranty does not extend the term of this warranty, and such product(s) or part(s) shall remain covered by the unexpired portion of the warranty period, or for ninety (90) days from the date of return to Aseptico, whichever is later. This limited warranty applies only to the initial or first installation of the product or part.

During the specific warranty periods set forth above, Aseptico will, at its option, repair or replace the product(s) or particular part(s) that are found to be defective in either material or workmanship in part or whole. Aseptico shall be the sole arbiter of such action. In the event of alleged defect under warranty, the purchaser is to notify Aseptico's Customer Service department promptly. Customer Service will provide Return Material Authorization (RMA) instructions, usually directing that the product be returned for service, shipping prepaid by the buyer or end user, to Aseptico or its designated and authorized warranty service center.

This warranty shall not apply to products (1) that have been subjected to neglect, abuse, misuse, improper installation, inadequate maintenance, or damage due to improper use of cleaning materials or chemicals, or non-compliance with Aseptico's storage, installation, operation, maintenance or environmental requirements; (2) that have undergone any modification or repair not previously authorized by Aseptico in writing, or service, repair or modification by or from any facility other than an authorized Aseptico service center or technician, or that use non-authorized software or spare or replacement parts; or (3) that fail due to reasonable and normal use or wear and tear, or materials made, furnished or specified by the buyer or end user.

Aseptico does not assume under this warranty any risks or liabilities arising from the clinical use of its products, whether or not such use involves coincidental utilization of products manufactured by others. Under no circumstances will Aseptico be liable or responsible for special, compensatory, incidental, consequential or punitive damages, lost profits, lost sales, or loss of use or loss of business opportunity by or through the use of the product. Aseptico's sole and maximum liability with respect to the product, other than its obligations set forth above, shall be the total purchase price paid for the product.

For Further Service And/Or Technical Assistance, Contact:



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