

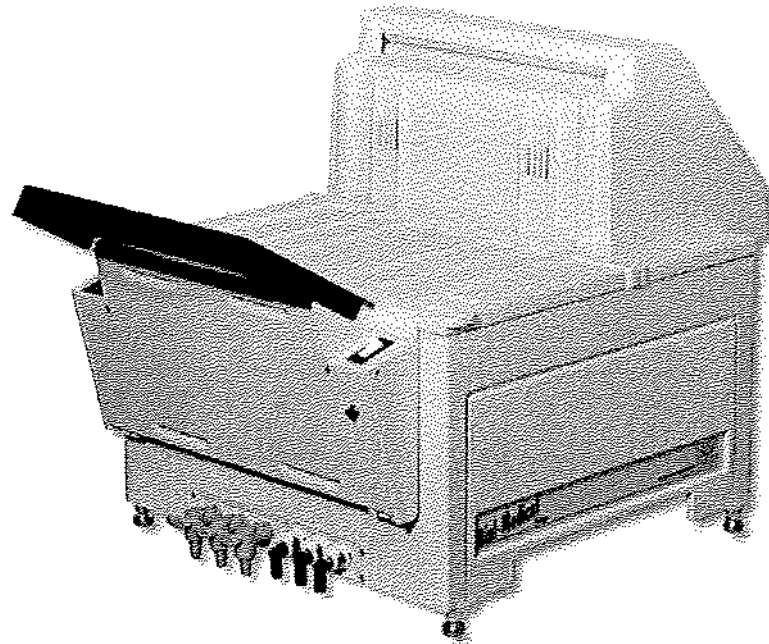
# TROUBLESHOOTING MANUAL FOR DENT-X & AFP PRODUCTS



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# Mini-Medical Series



## Troubleshooting Reference

**Trained Service Personal ONLY**

Observe ALL safety Procedures in the service manual

Reference: Installation, Operation, Service & parts Manual (P/N:0000061122)

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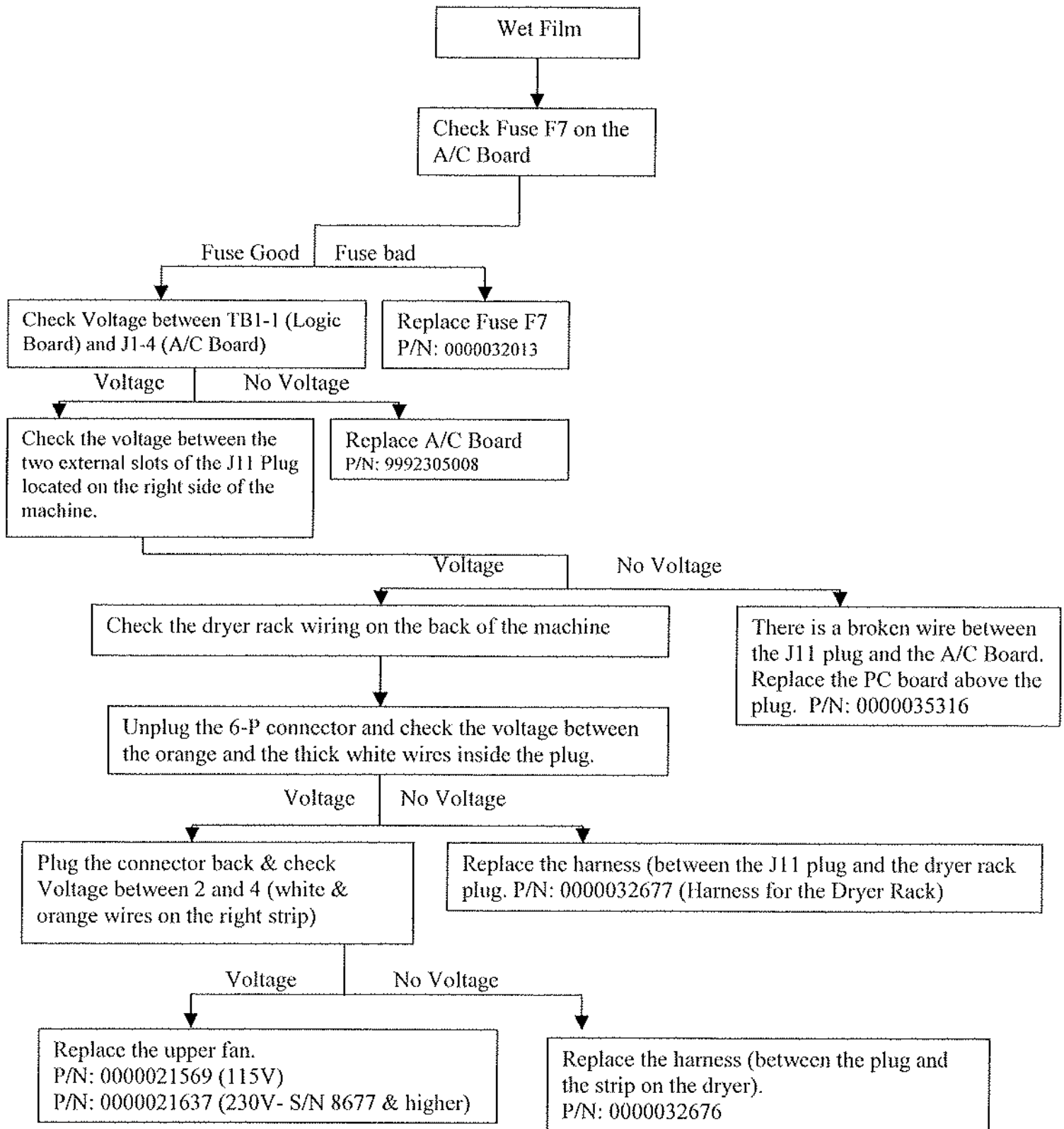
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**Note:** If you have a 230V Processor, please consult page 11 for common resistances values and parts numbers.

### Key

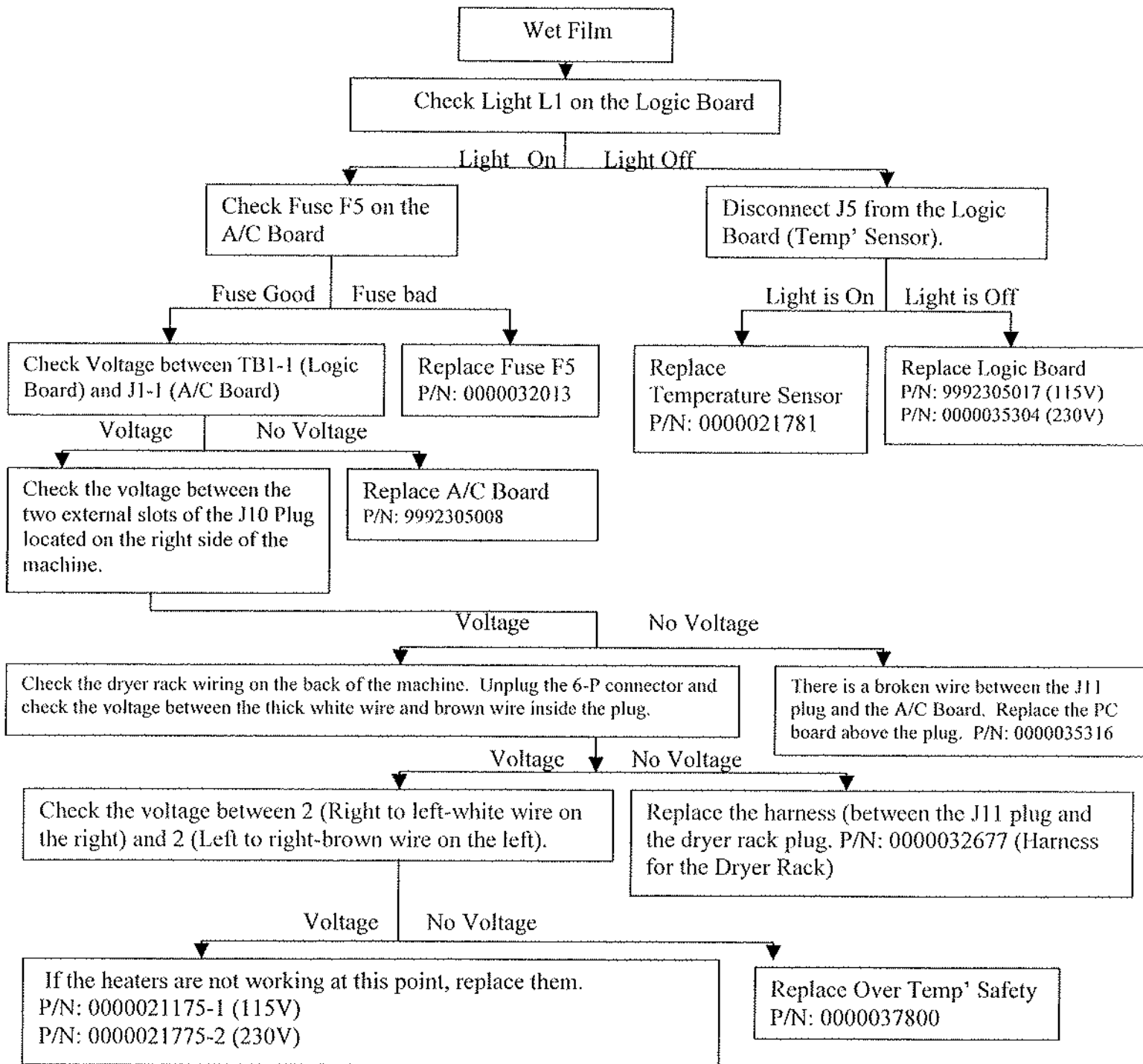
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<	<b>Lower Than</b>
=	<b>Equal To</b>
≈	<b>About the Same</b>

**) No Dry Heat -Wet Film (Upper Fan is not Working)**



Note: If the dryer is working check / fix replenishment rates:  
Weak fixer doesn't harden well and therefore, the film will not dry adequately.

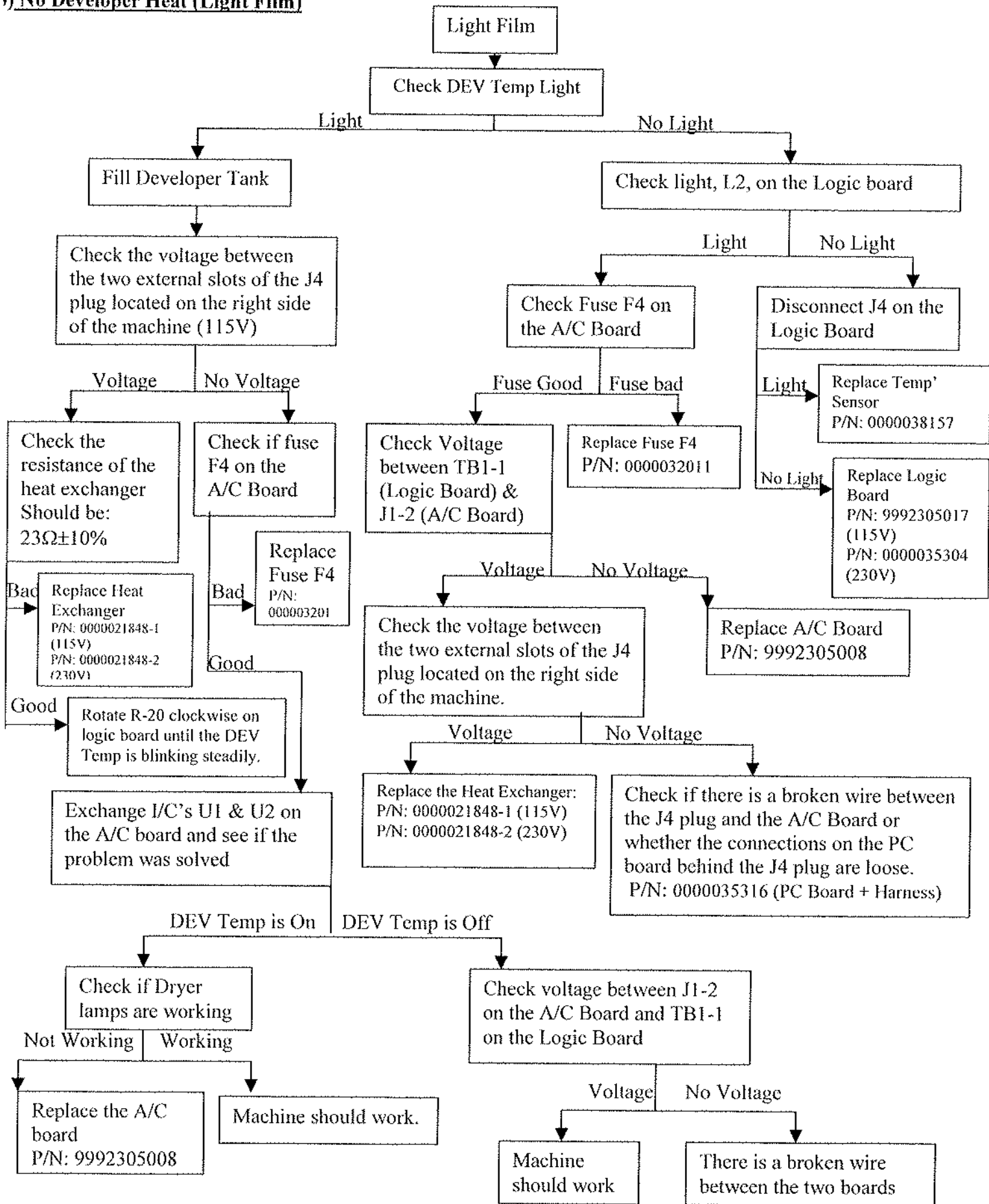
**) No Dry Heat -Wet Film (Dryer Lamps are not Working)**



Note: If the dryer is working check / fix replenishment rates:

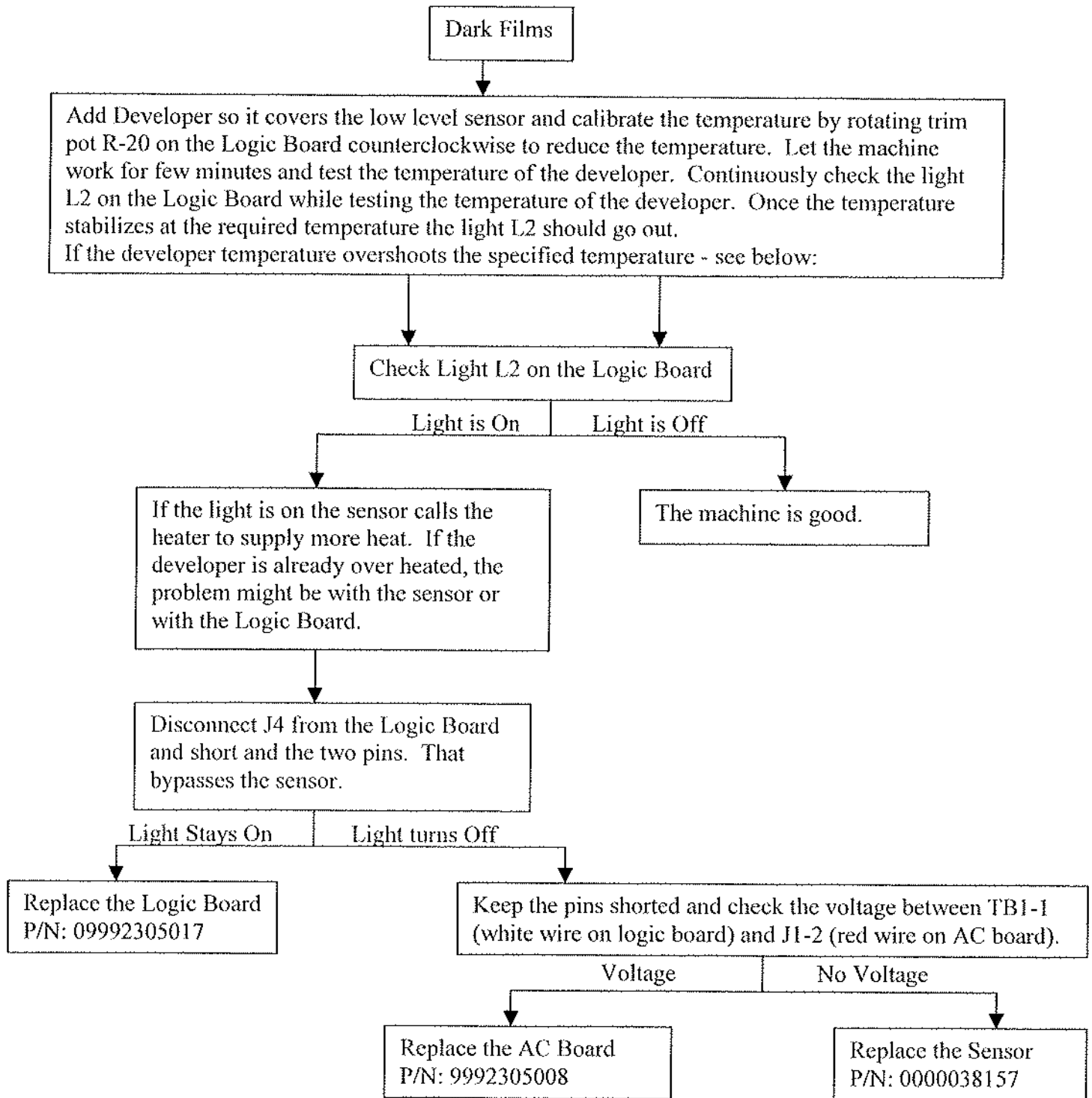
Weak fixer doesn't harden well and therefore, the film will not dry adequately.

**1) No Developer Heat (Light Film)**



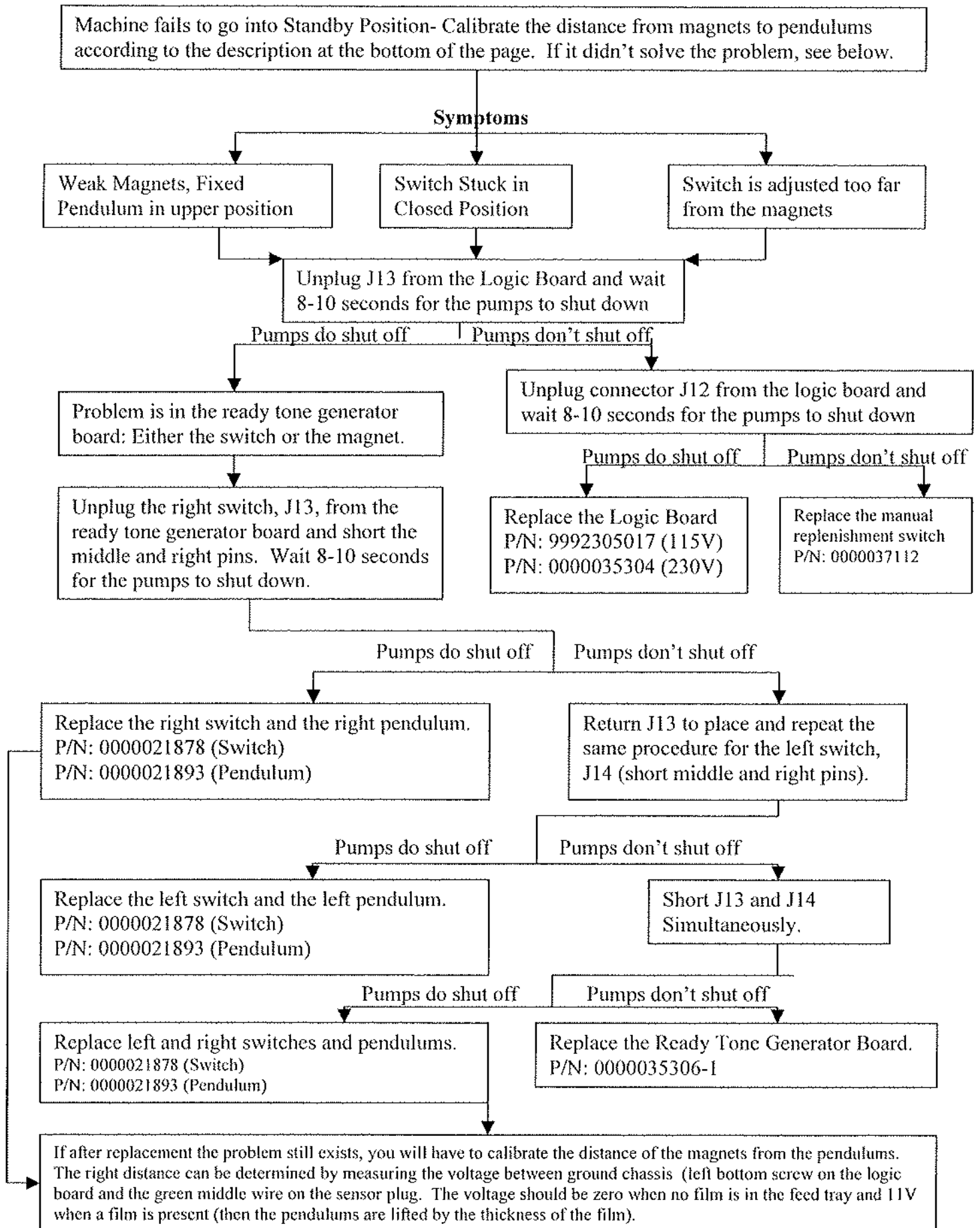
**Note:** check / fix developer replenishment rates: Weak developer chemistry will not develop well.

## 1) Dark Films-Over Heated Developer

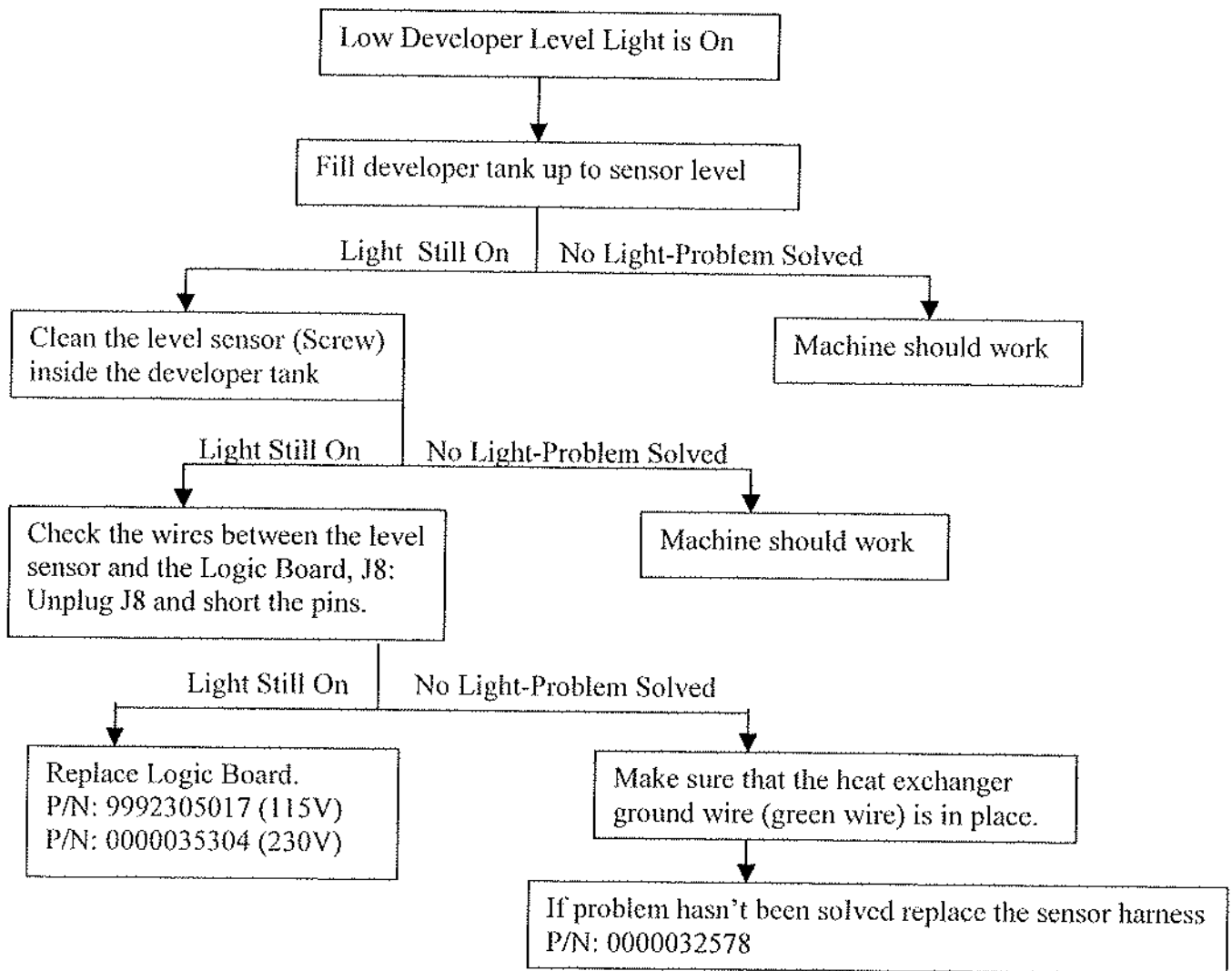


**Note: Be sure the darkroom does not have light leaks that will pre-expose the film.**

**) Pumps Work Continuously-Machine doesn't go into Standby mode**



**i) Low Developer Level Light is always ON**



iA)

ii)

During installation and initial set-up, the LOW DEV and DEV TEMP lights are ON even when the developer tank is full with water.

A)

As water cannot conduct well enough, the level sensor will signal a low solution level to the PC board and automatically disable the developer heater. Make sure to add kosher/coarse salt or some developer chemical to the water to allow conductivity.

## ) Developer Heating Time is too Long

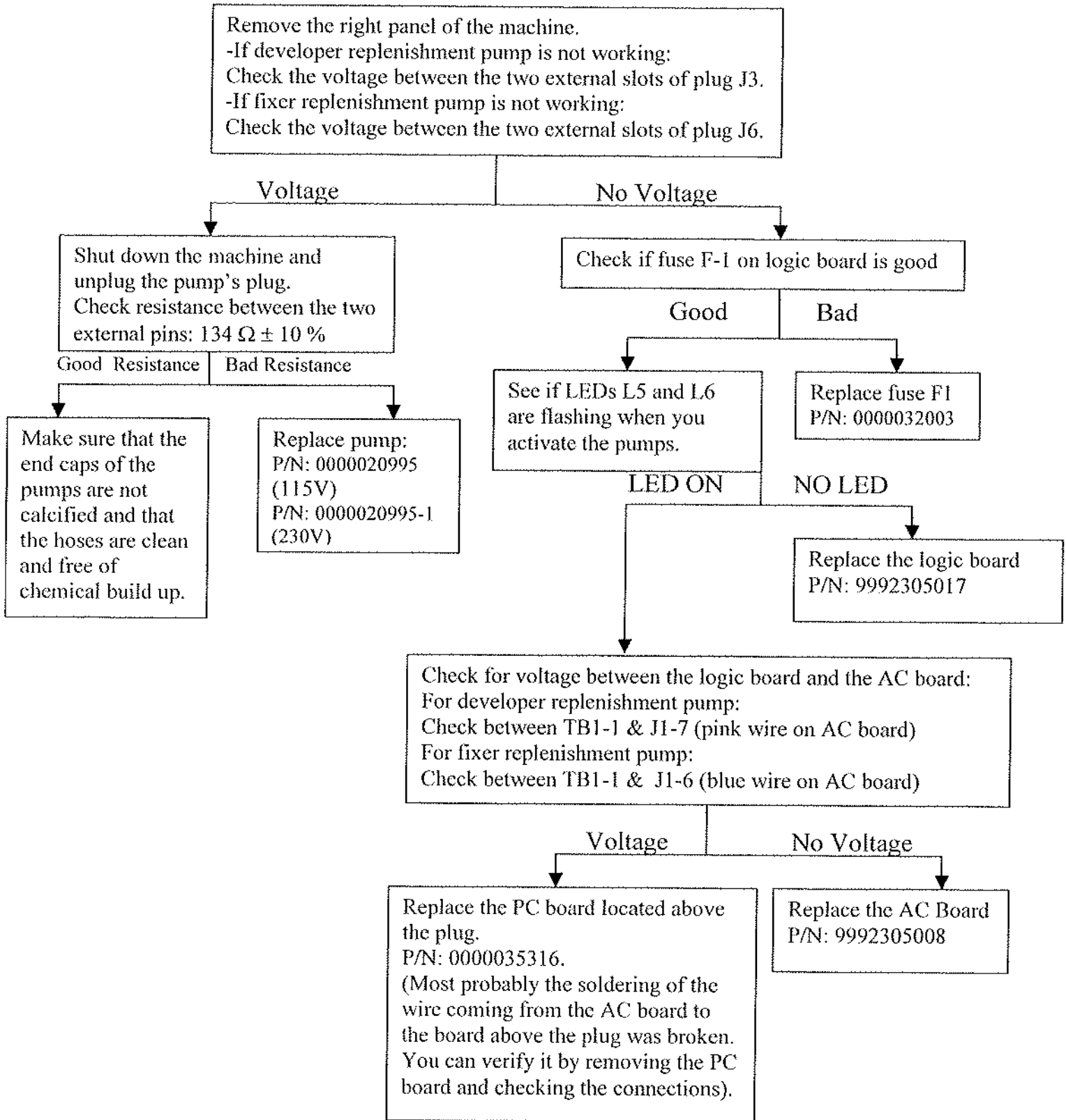
### Background:

The re-circulation pump circulates the developer through the heat exchanger and into the developer tank. A thermostat measures the developer temperature at the exit from the heat exchanger. When the temperature exceeds 165 F the thermostat will divert the current from the heat exchanger and by that will prevent further heating. It will allow heating only when the temperature of the developer drops back to the reset point. When the developer re-circulation pump is not working properly the amount of developer going through the heat exchanger is small and therefore, heated fairly quickly. Since the thermostat senses only the temperature of the fluid in its proximity, which reaches 165 F quickly when the volume of fluid is small, it opens up and prevents additional heating. As a result, the developer heating time is extended significantly.

Check if the re-circulation pump is working by physically listening to it or touching it, or by observing the developer flow coming into the developer tank. The inlets are located under the white plastic diffuser and on the left wall of the developer tank.

If the re-circulation pump is not working appropriately and the developer flow is too weak than the pump has to be replaced.  
P/N: 0000022100 (115V-Newer model, blue/green pump)  
P/N: 0000022101 (230V- Newer model, blue/green pump)  
P/N: 0000021145 (115V-Older model, red/brown pump)  
P/N: 0000021101 (230V- Older model, red/brown pump)

**5) The Replenishment Pump/s are not Working (Developer and/or Fixer Pumps).**



## 9) Fixer/Developer is Disappearing from the Machine

Chemical can be disappearing from the machine in three different ways:

- a) Evaporating.
- b) Siphoning.
- c) Leaking.

a)

If the temperature of the developer is about 95°F and therefore, the temperature of the fixer cannot be more than that, the chemical could not be evaporating.

b)

Siphoning can happen when the white gooseneck tube outlet is inside the chemical: the chemical will flow back to the reservoir tanks outside the machine. To prevent it, reposition the gooseneck slightly above the chemical level. Don't raise it to much in order to prevent splashing of chemical during replenishment.

c)

Check the drainage ball valve located at the front of the processor. If this valve is leaking the chemical will go directly to the drainage without anybody noticing it.

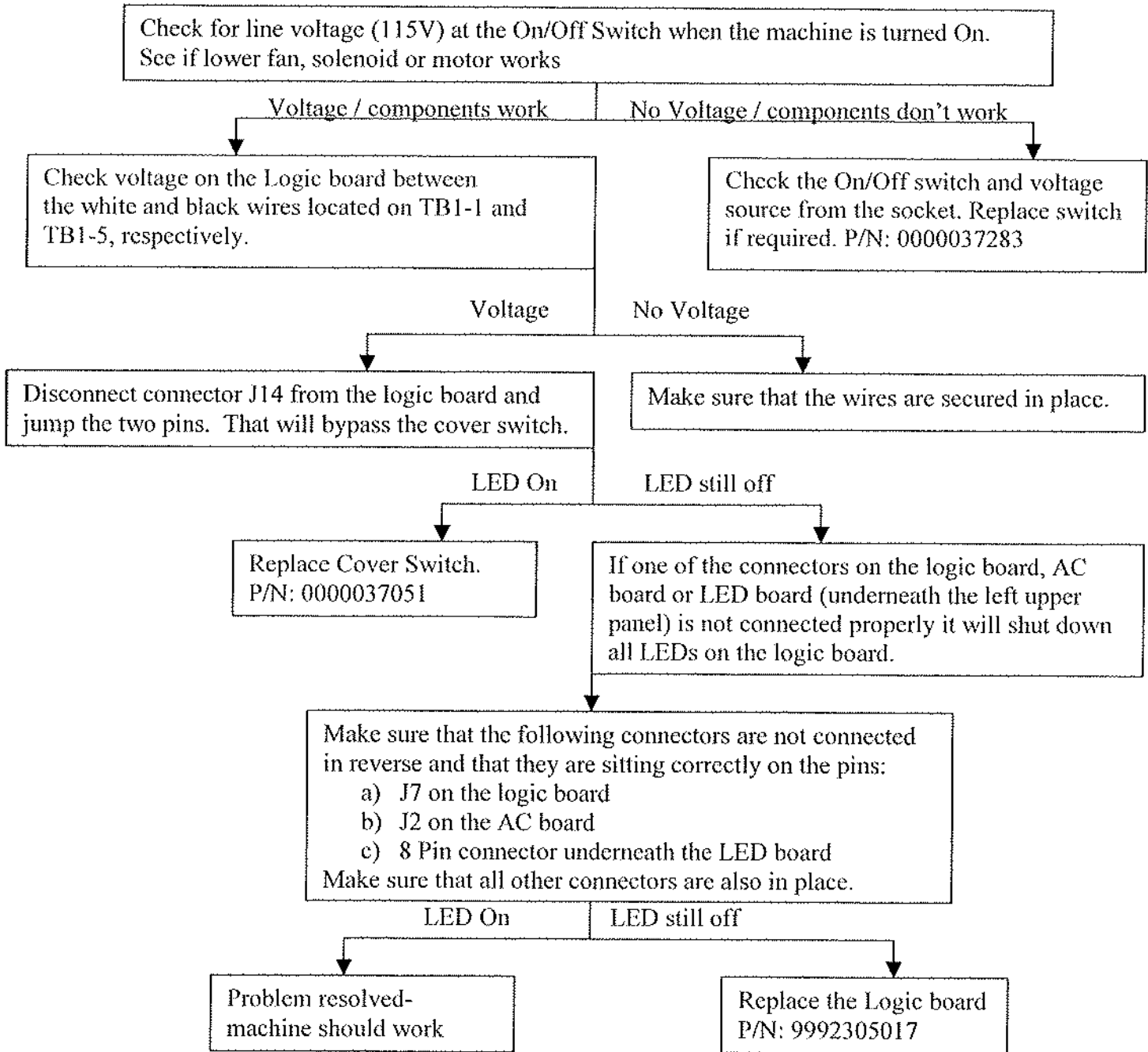
P/N: 0000087222 (Gray W/Blue Handle)

P/N: 0000087220 (Black-older style)

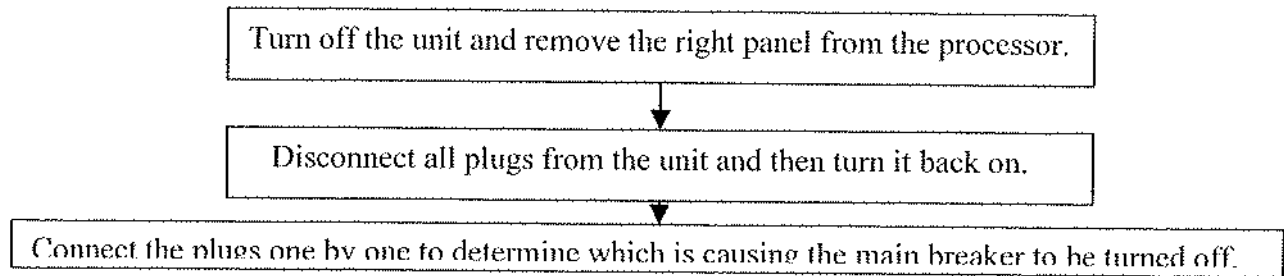
If you will increase the replenishment rate to compensate the disappearance of the chemical the problem will not be solved. The outcome will be a greater rate of disappearance, as you will use more chemistry per sheet.

And by comparing it to the other chemical (that does not disappear and has a regular replenishment rate) it will seem as if the disappearance rate is greater.

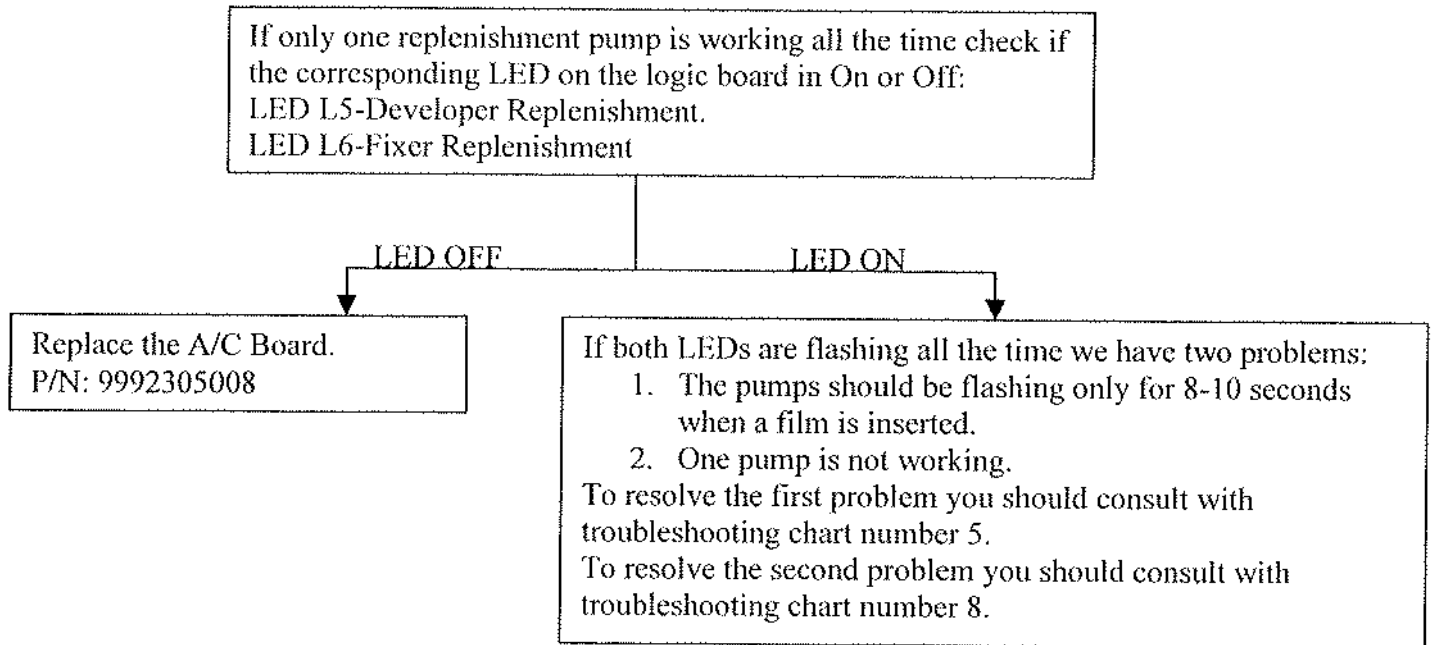
## 10. The Machine Doesn't Come On: No LED on the Logic Board.



**11. The Main Breaker turns off When the Machine is turned On.**



**12. One Replenishment Pump is Working Continuously**





AFP Imaging  
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Elmsford, NY 10523  
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www.afpimaging.com

**Mini Medical Resistance  
120 Volt**

Description	Part Number	Resistance Value
Recirculation Pump March (red) (Old Style)	9992305035 (21145)	31.8 $\Omega$ $\pm$ 10%
Recirculation Pump Iwaki (blue/green) (New Style)	0000022100	116 $\Omega$ $\pm$ 10%
Developer Heater	0000021848-1	23 $\Omega$ $\pm$ 10%
Replenish Pump	0000020995	134 $\Omega$ $\pm$ 10%
Water Solenoid	0000049008	430 $\Omega$ $\pm$ 10%
Dryer Lamps (Heaters)	0000021175-1	43 $\Omega$ $\pm$ 10%
Dryer Fan	0000021569	26 $\Omega$ $\pm$ 10%
Drive Motor	9992305311	104.5 $\Omega$ $\pm$ 10%



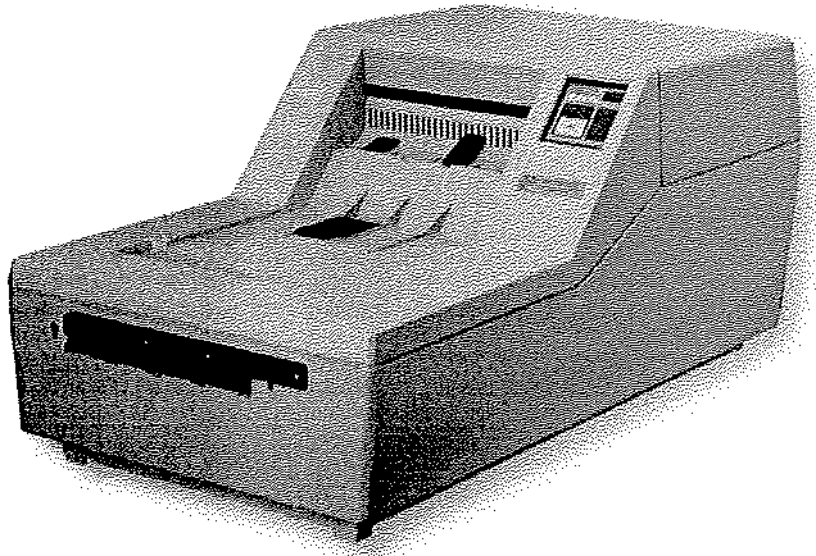
**Mini Medical Resistance  
230 Volt**

Description 230 Volt	Part Number	Resistance Value $\pm$ 5%
Recirculation Pump March (red) (Old Style)	0000021525	1 K $\Omega$ %
Recirculation Pump Iwaki (blue/green)	00000022101	470 $\Omega$
Developer Heater	0000021848-2	90 $\Omega$
Replenish Pump	0000020995-1	560 $\Omega$
Water Solenoid	0000049013	2.5 K $\Omega$
Dryer Lamps (Heaters)	0000021175-2	170 $\Omega$ ca.
Dryer Fan	0000021637	100 $\Omega$
Drive Motor 230 50/60Hz	0000021490	410 $\Omega$

**Parts List for 230V**

PC Logic Board	0000035304
Drive Motor	0000021507
Heater Assembly	0000021848-2
Replenishment Pump	0000020995-1
Heating Lamps I.R	0000021175-2
Recirculation Pump (old style-red/brown)	0000021101
Recirculation Pump (new style-blue/green)	0000022101
Fan Assy, Lower	0000021637
Heater, 550W	0000021848-2

# Dent-X Processors



810 Basic (Manual P/N: 801-050253)

810 Plus

9000 (Manual P/N: 801-050253)

Excel (Manual P/N: 801-050253-1)

## Troubleshooting Reference

**Trained Service Personal ONLY**

Observe ALL safety Procedures in the service manual

Reference: Installation, Operation and Maintenance Manual

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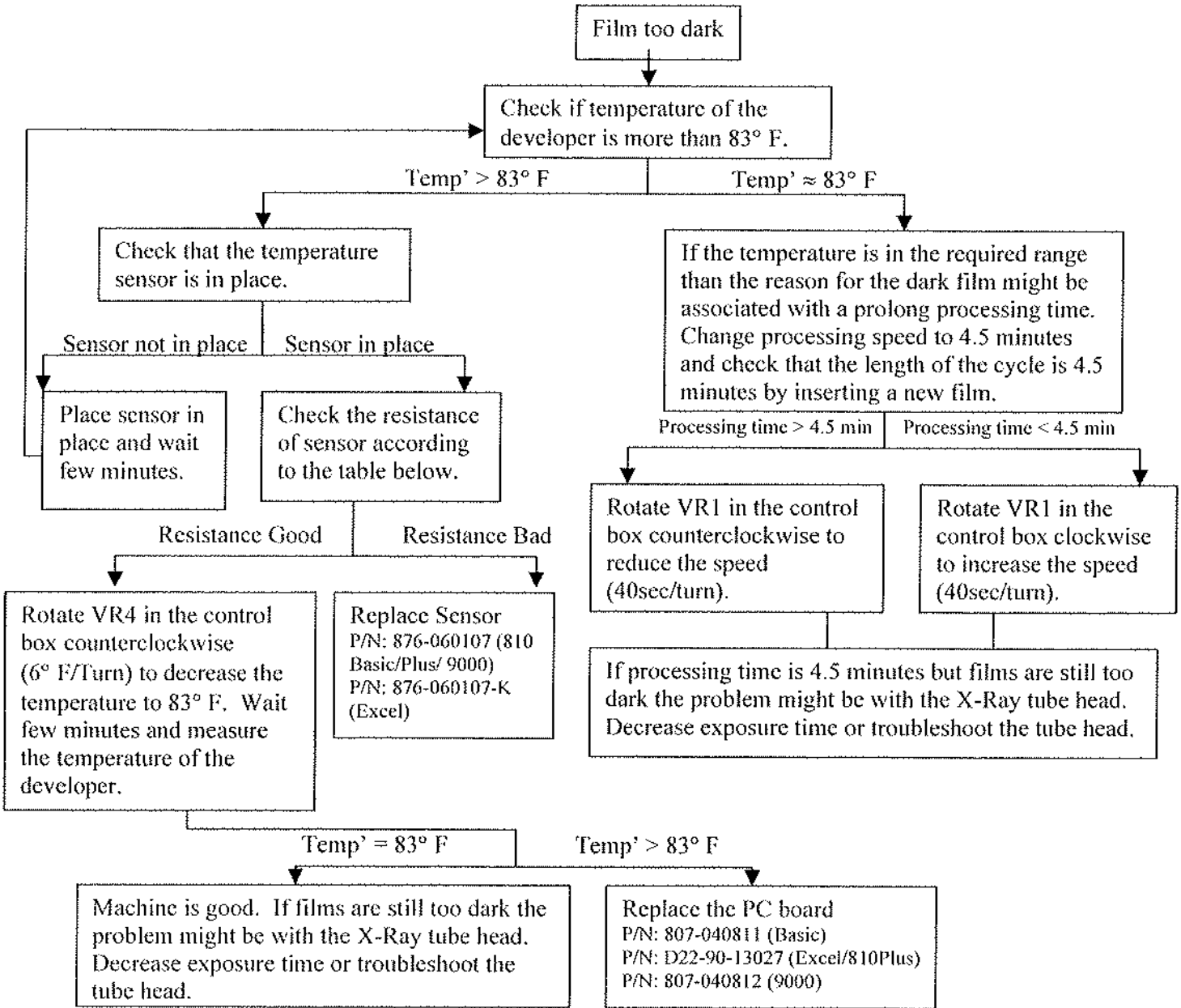
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<u>Key</u>	
>	<b>Greater Than</b>
<	<b>Lower Than</b>
=	<b>Equal To</b>
≈	<b>About the Same</b>

**Note:** If you have 220V film processor, please consult page 10 for common resistance values and parts numbers.

**1) Dark Film: Over Heated Developer or Prolong Processing Time**

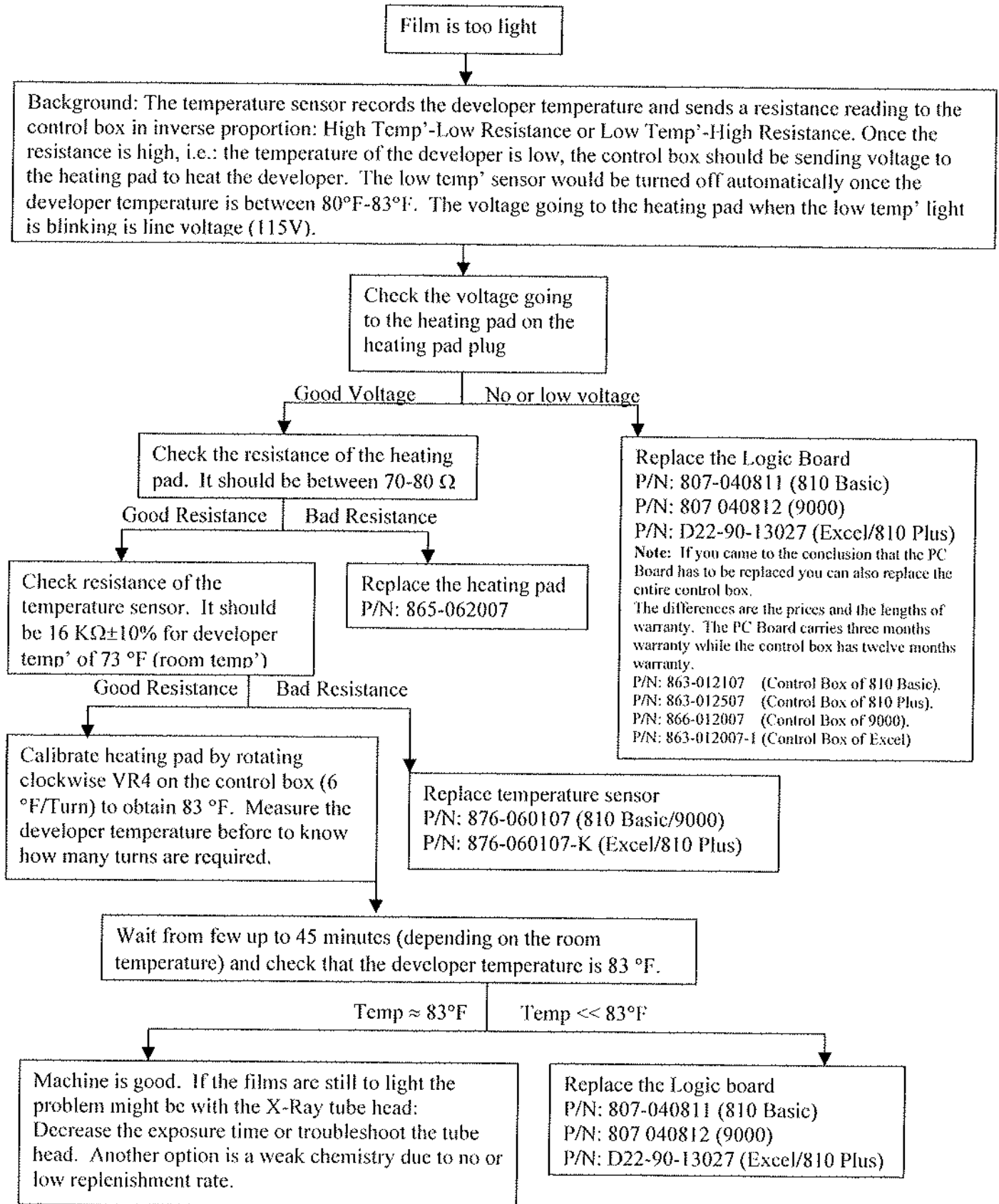
810 Basic/ 810 plus/Excel/ 9000



Developer Temp		Resistance
F	C	K Ohms
97	36.1	9.5
95	34.9	9.75
93	33.8	9.95
91	32.6	10.5
89	31.5	11
87	30.4	11.6
85	29.3	12.4
83	28.2	13
81	27.3	12.5
80	26.8	13.8
76	24.4	14.8
74	23.3	15.6
72	22.2	16.25

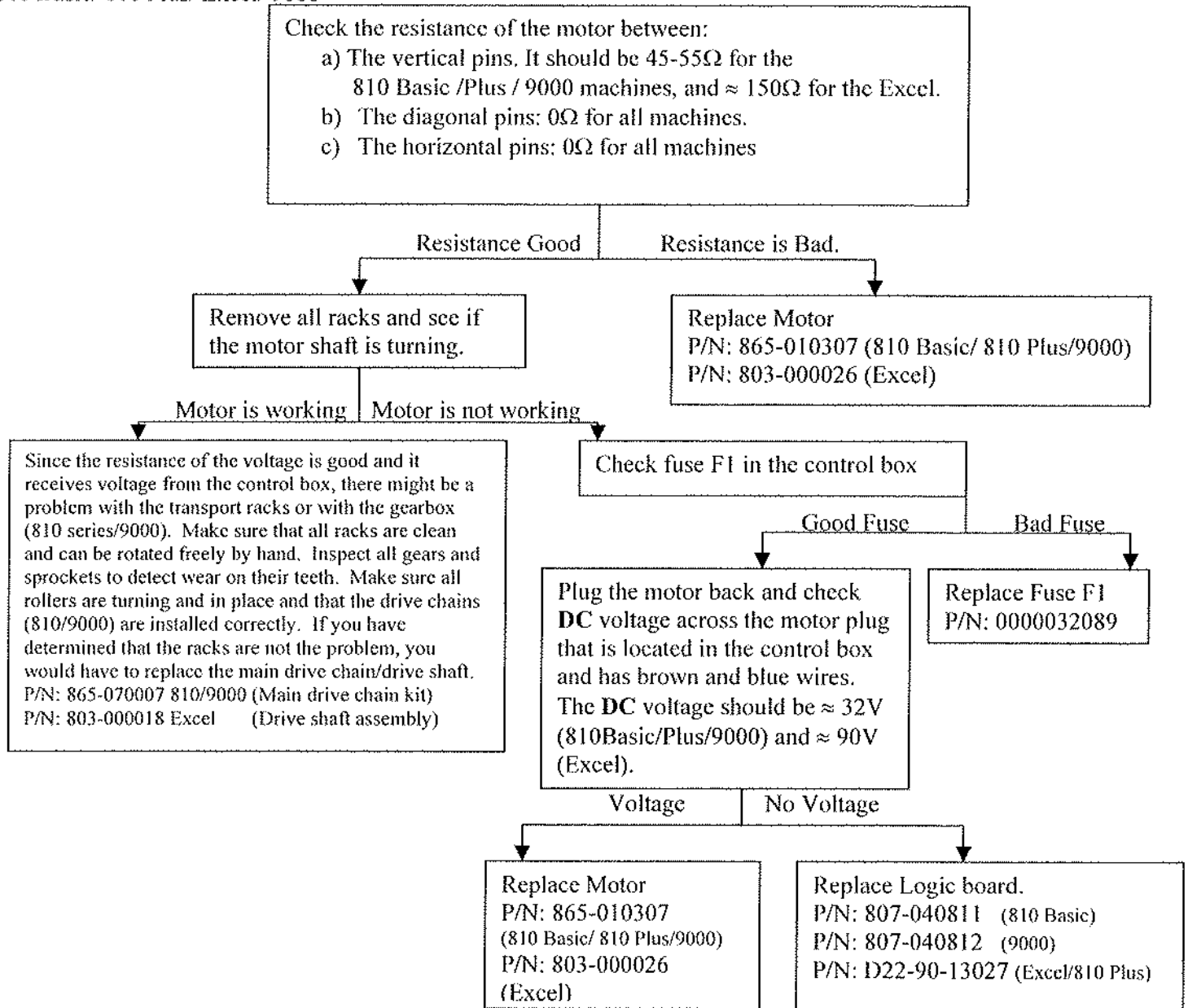
**Note:** Dark films can also be associated with light leaks in the darkroom or with wrong filter in safelight.

**2) No Heat-Low Temp' Light doesn't Come off**  
 810 Basic/ 810 Plus/ Excel/ 9000



### 3) Motor Not Working

810 Basic/ 810 Plus/ Excel/ 9000



**Note:** If you came to the conclusion that the PC Board has to be replaced you can also replace the entire control box. The differences are the prices and the lengths of warranty. The PC Board carries three months warranty while the control box has twelve months warranty.

P/N: 863-012107 (Control Box of 810 Basic).

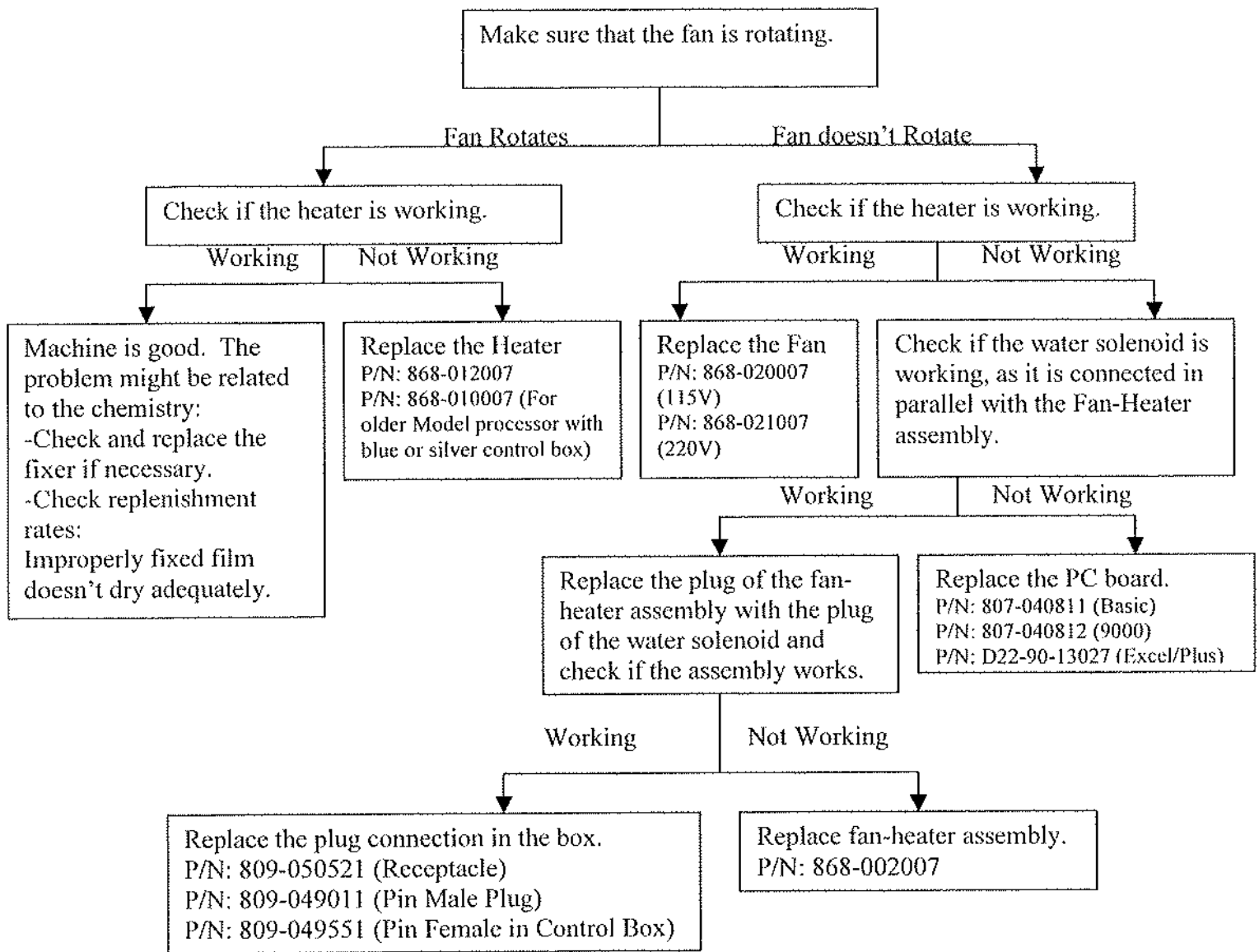
P/N: 863-012507 (Control Box of 810 Plus).

P/N: 863-012007 (Control Box of 9000).

P/N: 863-012007-1 (Control Box of Excel)

**) Fan or Heater don't work-Film Coming Out Wet**

10 Basic/ 810 Plus/ Excel/ 9000

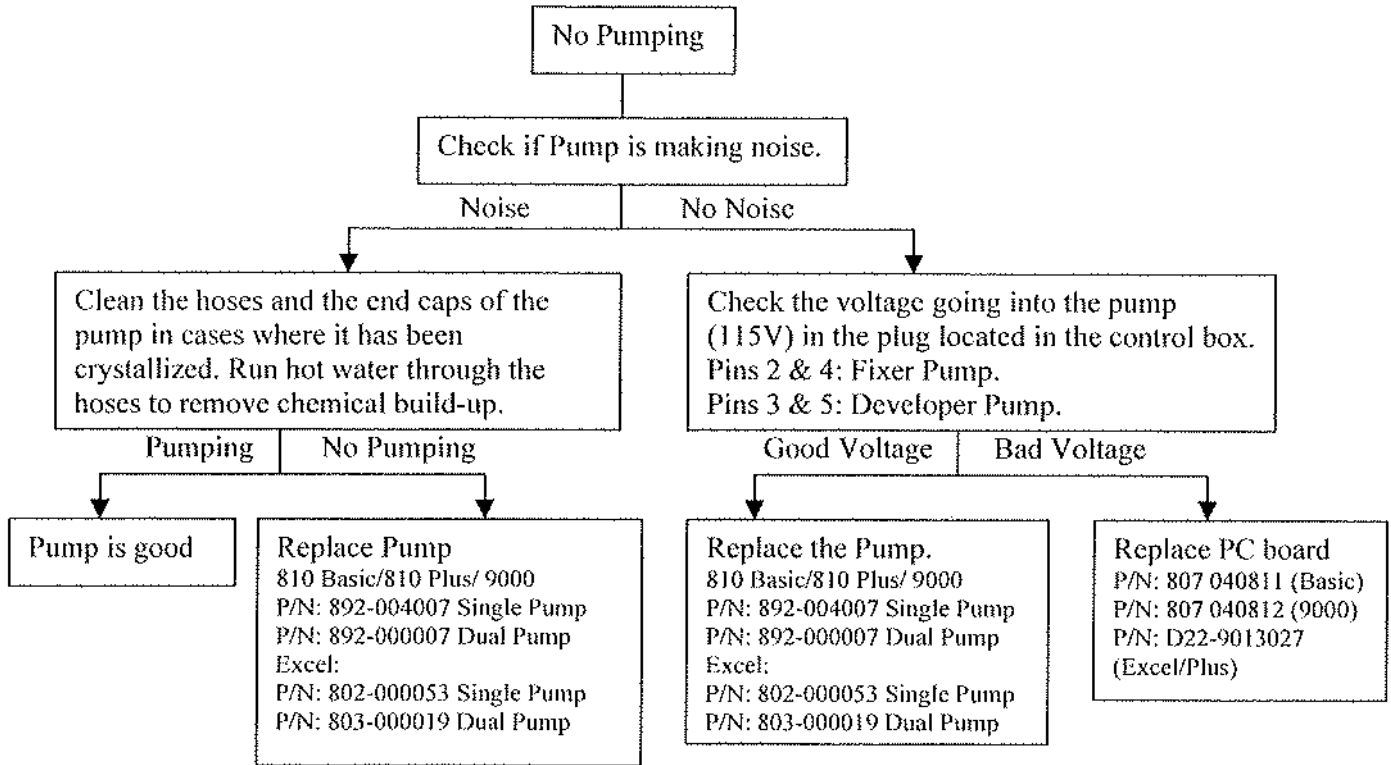


**Note:** If you came to the conclusion that the PC Board has to be replaced you can also replace the entire control box. The differences are the prices and the lengths of warranty. The PC Board carries three months warranty while the control box has twelve months warranty.

- P/N: 863-012107 (Control Box of 810 Basic).
- P/N: 863-012507 (Control Box of 810 Plus).
- P/N: 863-012007 (Control Box of 9000).
- P/N: 863-012007-1 (Control Box of Excel)

### 5) Pumps Do Not Work

810 Plus / Excel / 9000 technician



**Note:** If the pump is working but not a sufficient amount of fluid is being pumped, rotate pot VR7/VR6 in the control box clockwise to increase the pumping rate of the Fixer/Developer, respectively.

### Continuous Flow of Water

-If water is running continuously open the water solenoid and clean it thoroughly.

-**Note:** If you came to the conclusion that the PC Board has to be replaced you can also replace the entire control box. The differences are the prices and the lengths of warranty. The PC Board carries three months warranty while the control box has twelve months warranty.

P/N: 863-012107 (Control Box of 810 Basic).

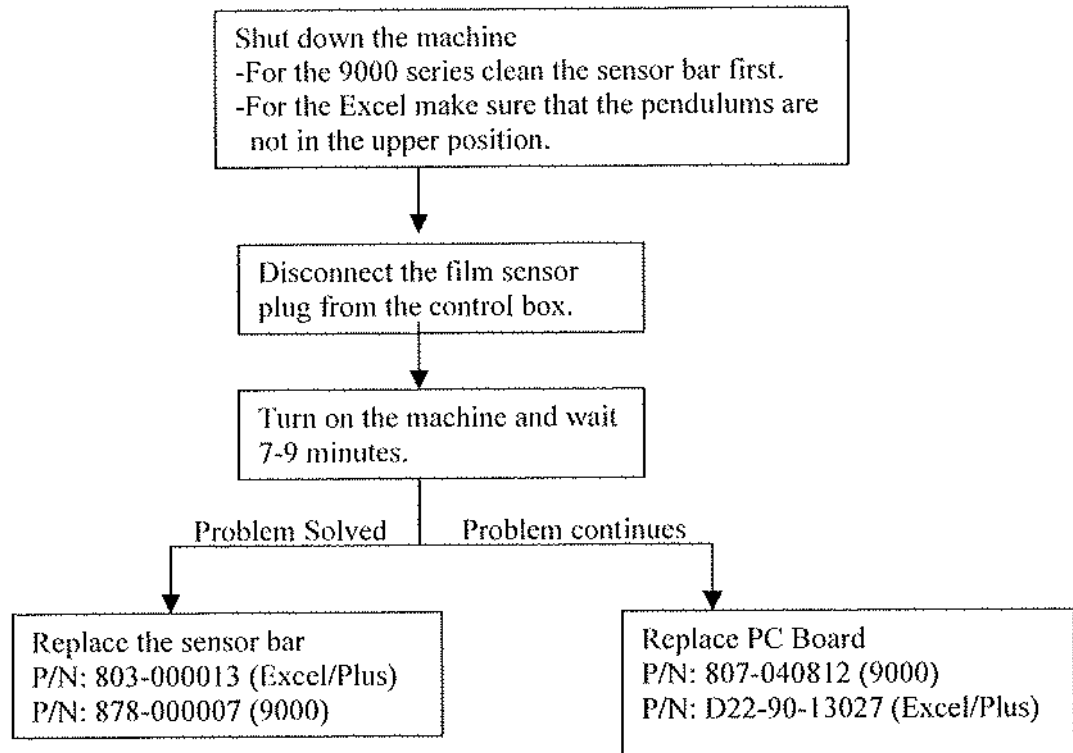
P/N: 863-012507 (Control Box of 810 Plus).

P/N: 863-012007 (Control Box of 9000).

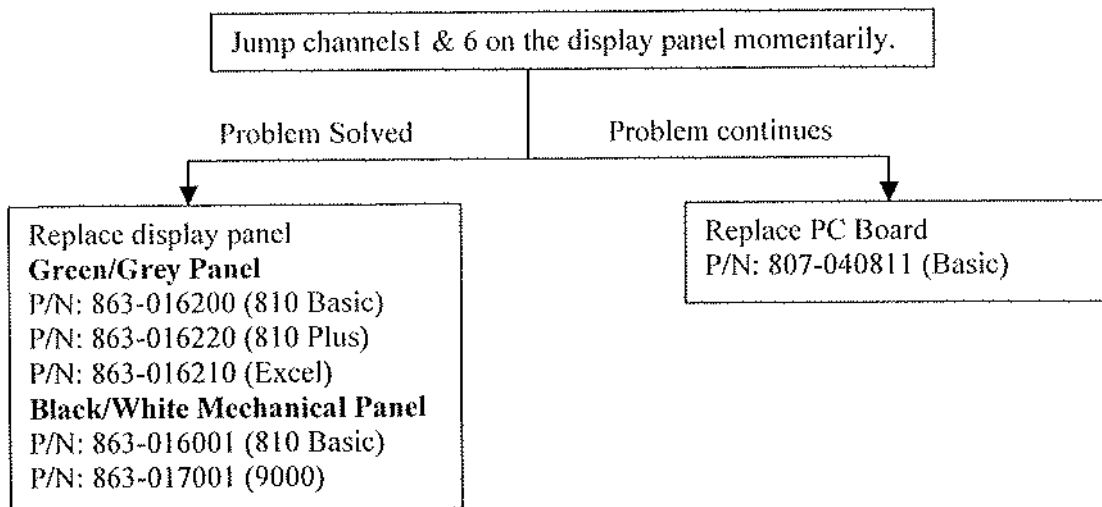
P/N: 863-012007-1 (Control Box of Excel)

## 6) Machine Runs Continuously

### a) 810 Plus / Excel / 9000



### b) 810 Basic



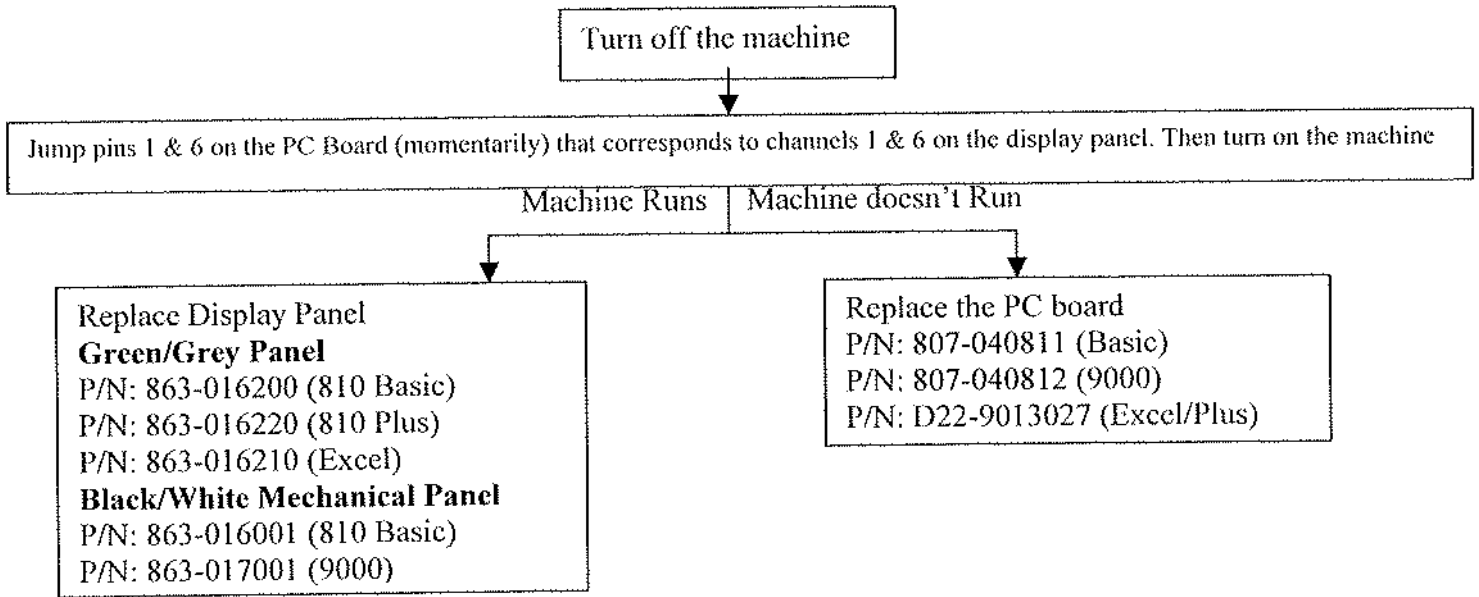
**Note:** If you came to the conclusion that the PC Board has to be replaced you can also replace the entire control box. The differences are the prices and the lengths of warranty. The PC Board carries three months warranty while the control box has twelve months warranty.

P/N: 863-012107 (Control Box of 810 Basic).  
P/N: 863-012507 (Control Box of 810 Plus).  
P/N: 863-012007 (Control Box of 9000).  
P/N: 863-012007-1 (Control Box of Excel).

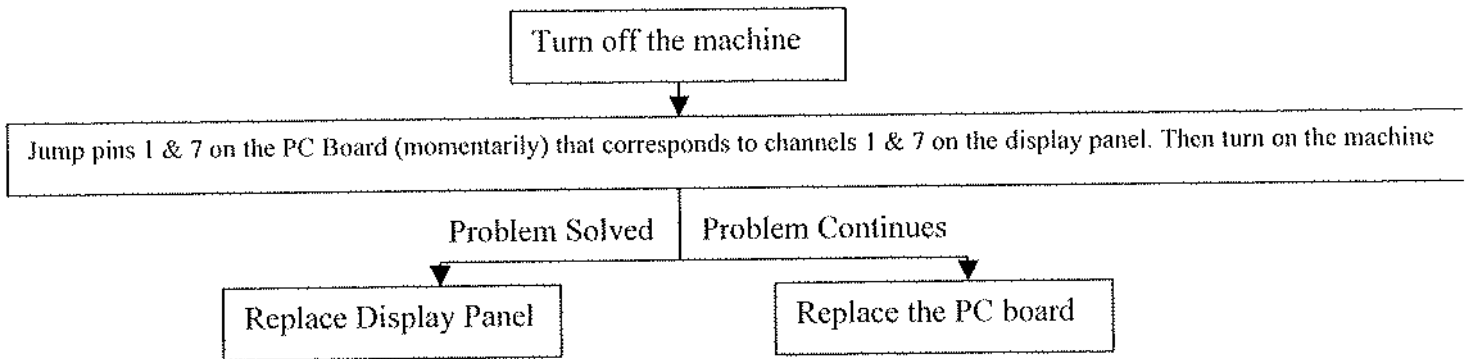
) Troubleshooting the control box.

10 basic / 810 Plus / Excel / 9000

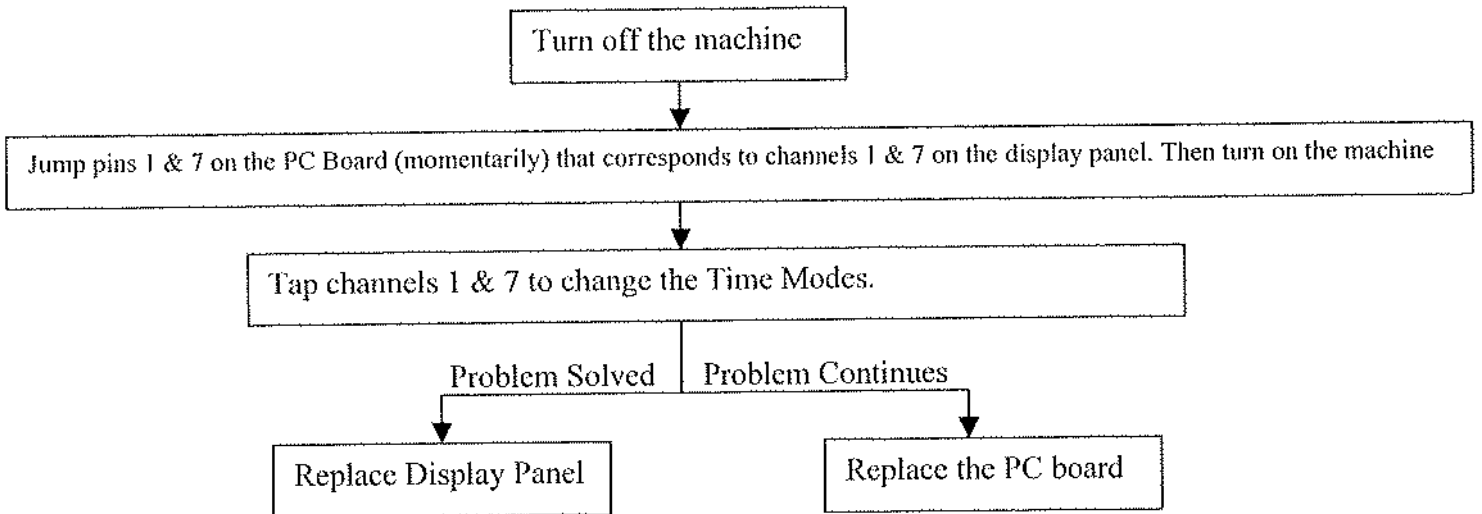
) Machine Doesn't Work but Mode Switch Works.



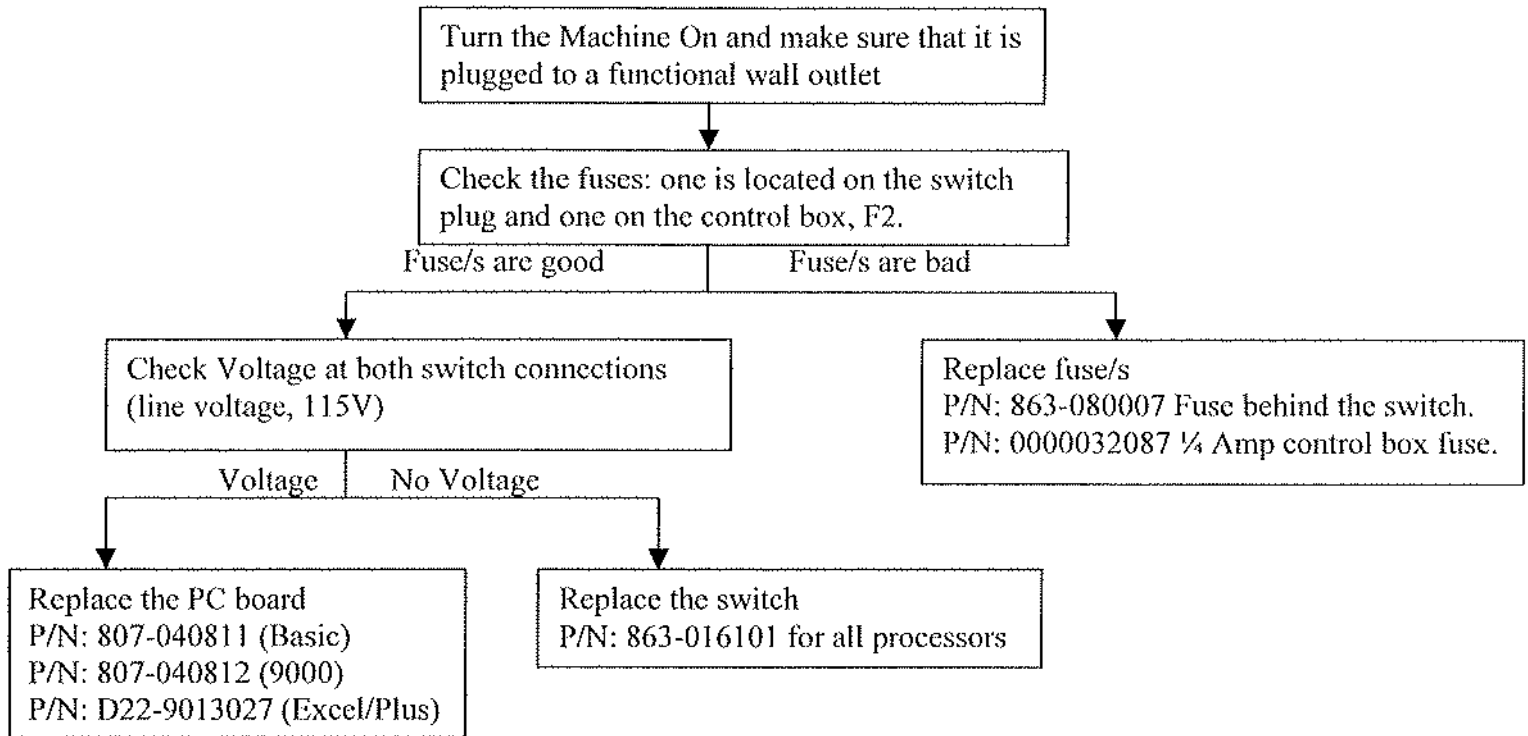
) Machine Works but the Time Mode Doesn't Work



) Only One Time Mode Works (Endo, 4.5 min, 6 min)



) No Display



**Note:** If you came to the conclusion that the PC Board has to be replaced you can also replace the entire control box. The differences are the prices and the lengths of warranty. The PC Board carries three months warranty while the control box has twelve months warranty.

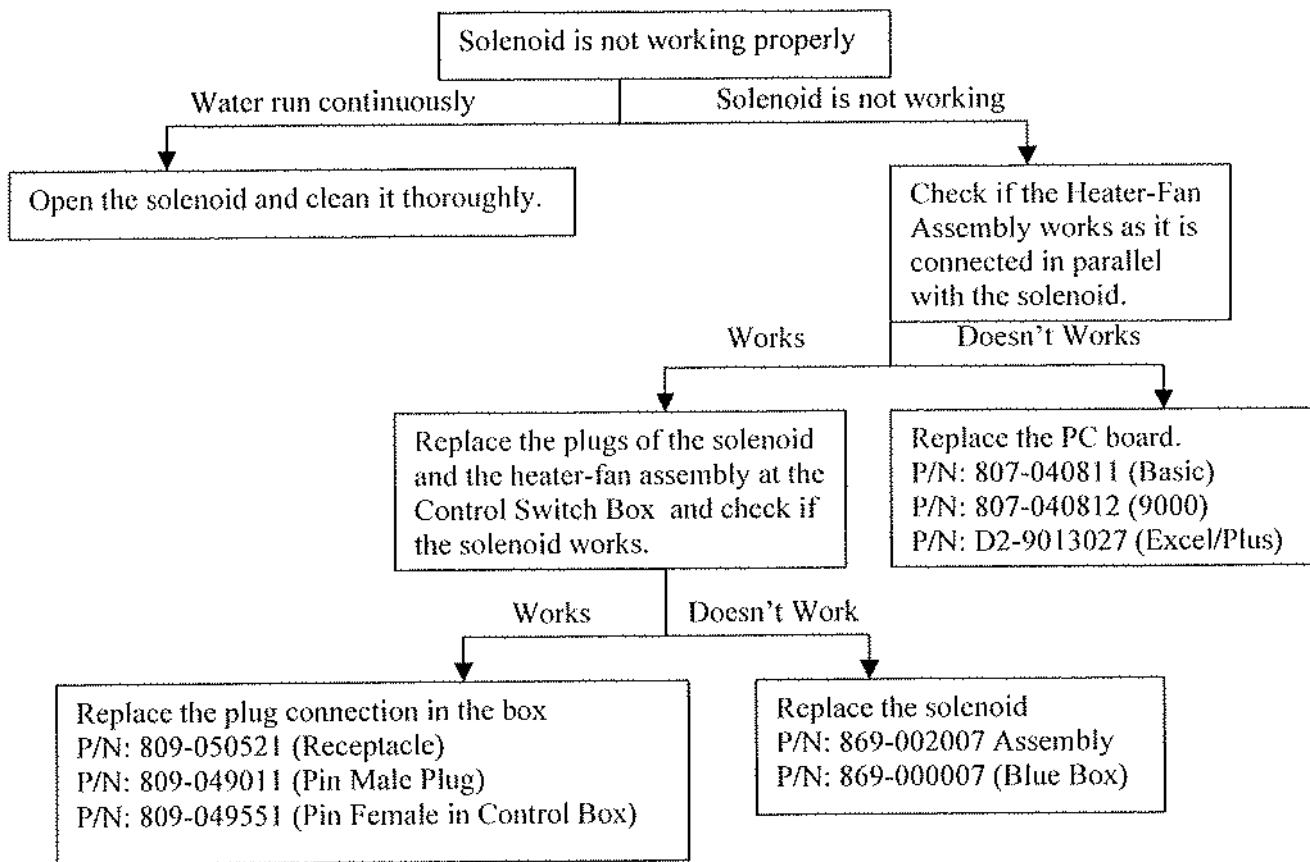
P/N: 863-012107 (Control Box of 810 Basic).

P/N: 863-012507 (Control Box of 810 Plus).

P/N: 863-012007 (Control Box of 9000).

P/N: 863-012007-1 (Control Box of Excel)

8) Solenoid is Not Working Properly



**Note:** If you came to the conclusion that the PC Board has to be replaced you can also replace the entire control box. The differences are the prices and the lengths of warranty. The PC Board carries three months warranty while the control box has twelve months warranty.

P/N: 863-012107 (Control Box of 810 Basic).

P/N: 863-012507 (Control Box of 810 Plus).

P/N: 863-012007 (Control Box of 9000).

P/N: 863-012007-1 (Control Box of Excel)

**Philips 810, 810 XL, 810 Basic, 810 Plus, 9000 and Excel**

**Resistance Values**

Component	120 V	220 V
	Ohms	Ohms
heater pad	70-80	230-240
Heater -Fan Assembly	38-40	145-165
Heater Element	47-49	175-200
Dryer Fan	205-210	845-860
Solenoid	500	1500
Motor (Blue Box)	150-170	
Motor (Black Box)	45-55	
Excel Motor	130-160	

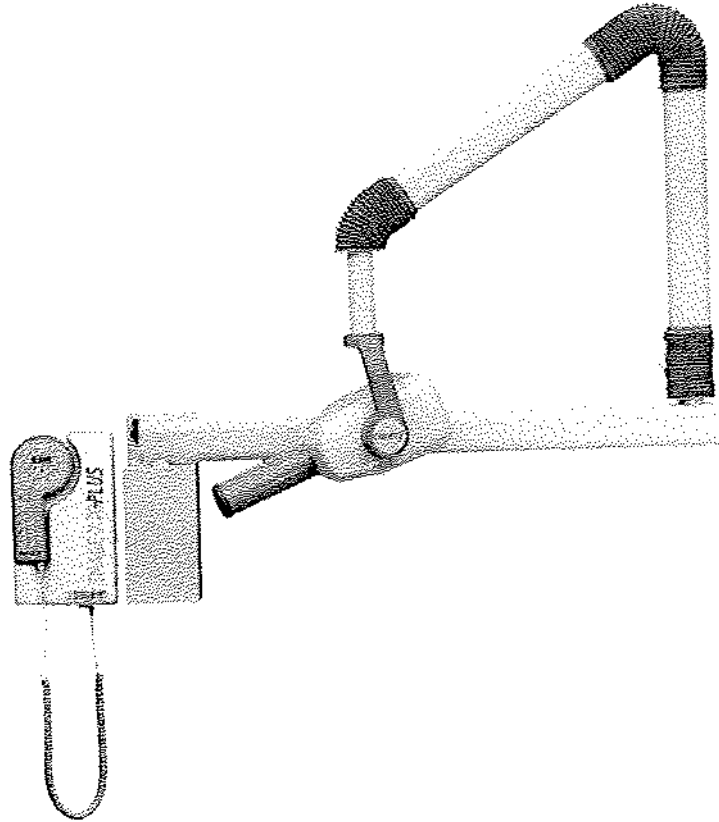
**Temperature Sensor Values**

Developer Temp		Resistance
F	C	K Ohms
97	36.1	9.5
95	34.9	9.75
93	33.8	9.95
91	32.6	10.5
89	31.5	11
87	30.4	11.6
85	29.3	12.4
83	28.2	13
81	27.3	12.5
80	26.8	13.8
76	24.4	14.8
74	23.3	15.6
72	22.2	16.25

**220 V Parts List**

Part	P/N	Note
810 Control Box	863-013107	
9000 Control Box	863-013207	
Excel Control Boc	863-012007-2	
4 Amp fuse	809-090031	Main fuse
Heater-Fan assembly	868-002107	810/9000 only
Heater Element assembly	868-013007	All machines
Dryer Fan	868-021007	All machines
Solenoid Assembly	869-003007	All machines
Water recirculator Ass.	9992405201	All machines
Heating Pad	865-061007	

# IMAGE-X 70 PLUS



## Troubleshooting Reference

**Trained Service Personal ONLY**

Observe ALL safety Procedures in the service manual

Reference: Installation, Operation, Service & parts Manual (P/N:897-000001)

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### Key

>	Greater Than
<	Lower Than
=	Equal To
≈	About the Same

### 1) I. Wiring Connections

Three wiring are coming out of the x-ray tube and are connected as follows:

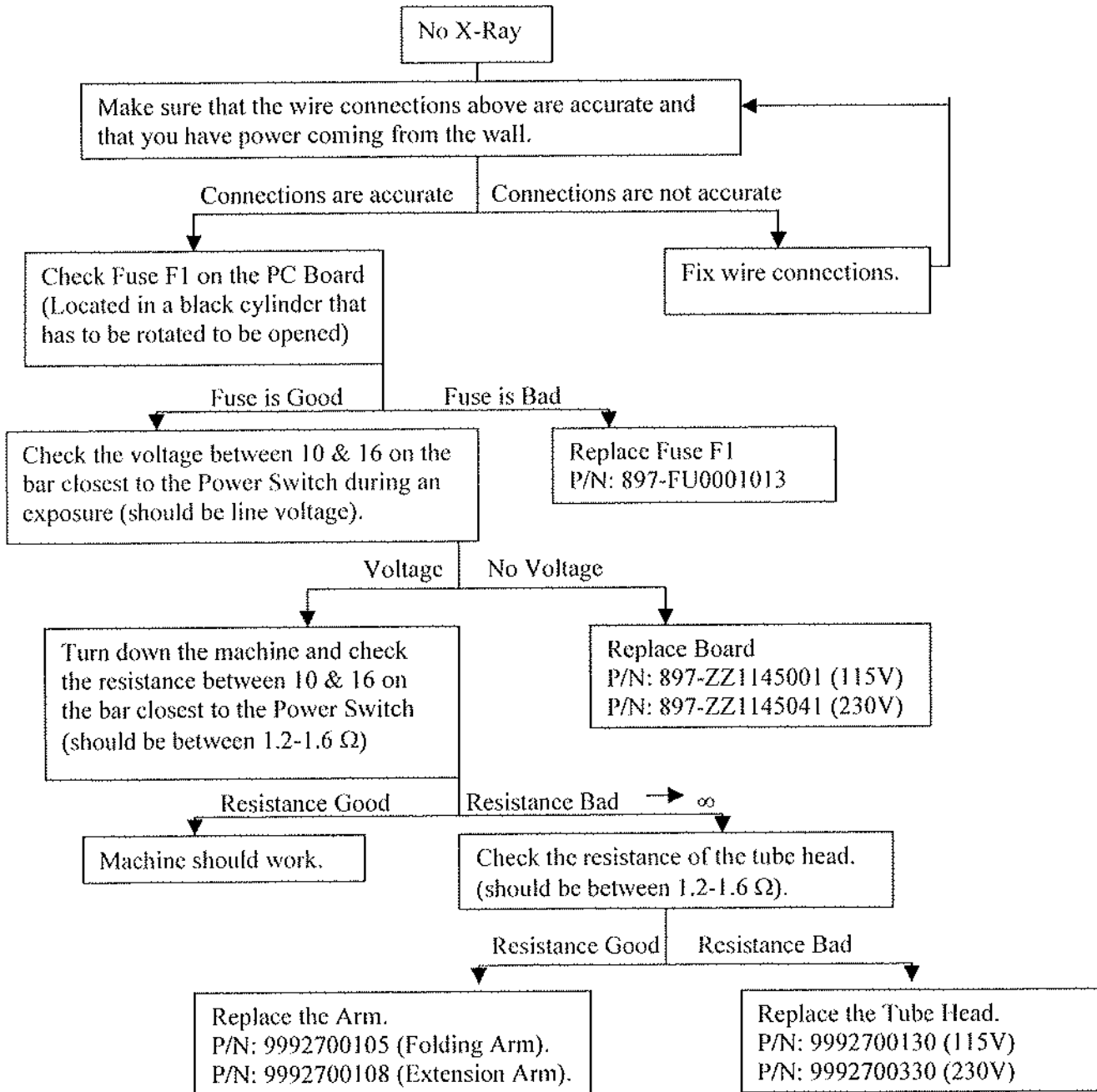
- The black wire (L) is connected to number 10 on the bar closest to the switch.
- The white wire (N) is connected to number 16 on the bar closest to the switch.
- Green-yellow is connected to ground (metal screw second on the left from the power switch).
- Place a jumper between 8 & 9 on the bar located further away from the switch (on the other side of the board).
- For Hand-Held usage make sure the jumper J1 (next to the above bar) is covering middle and right pins.
- For Remote Expose Switch make sure the jumper J1 (next to the above bar) is covering middle and left pins.

### II. Switch Connections

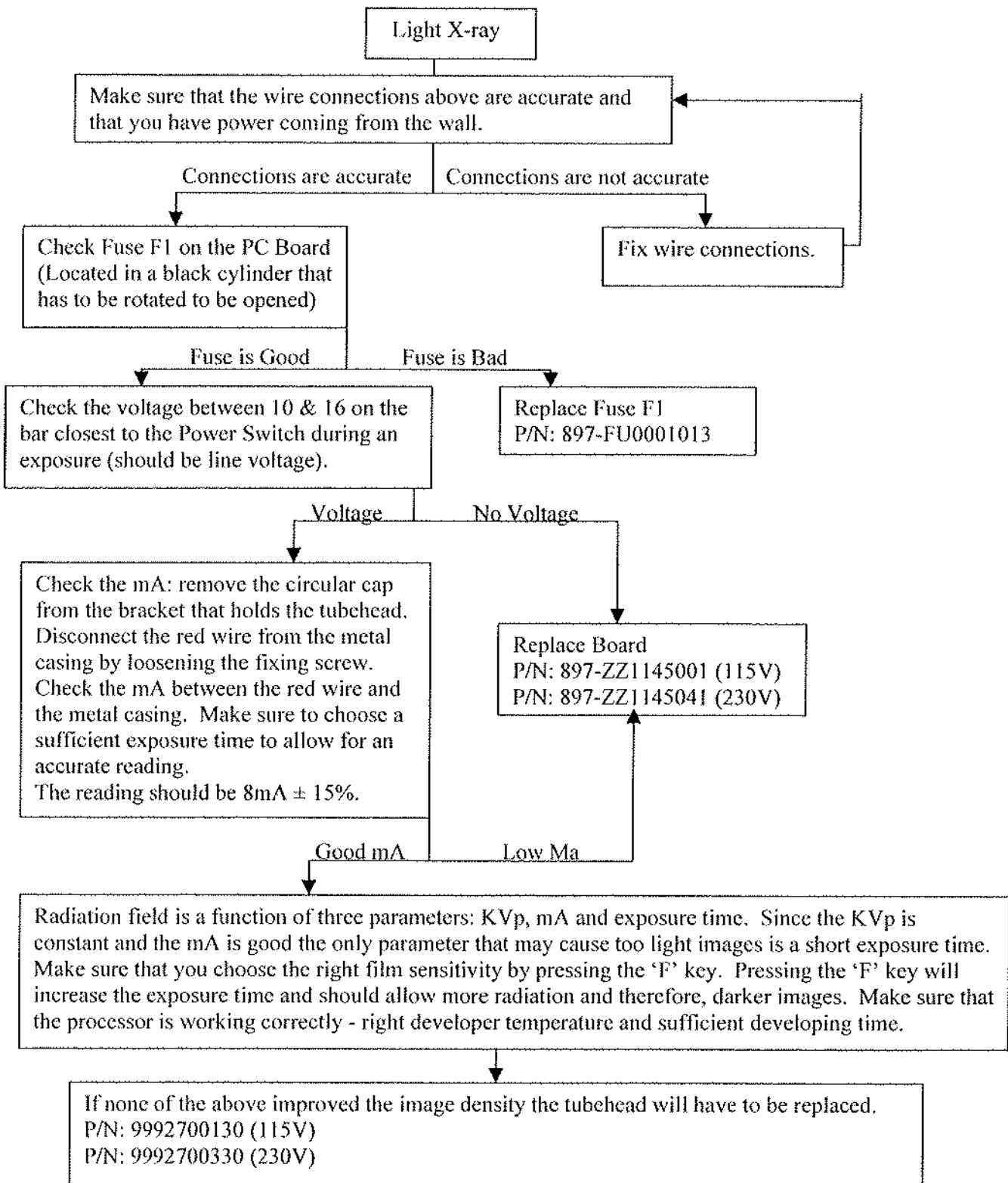
Position the control box so you can read the label next to the power switch.

- The upper left and upper right metal stripes of the power switch are connected to number 5 & 6 on the bar closest to the switch, respectively.
- The lower left and lower right metal stripes of the power switch are connected to number 4 & 7 on the bar closest to the switch, respectively.

### 2) No X-Ray

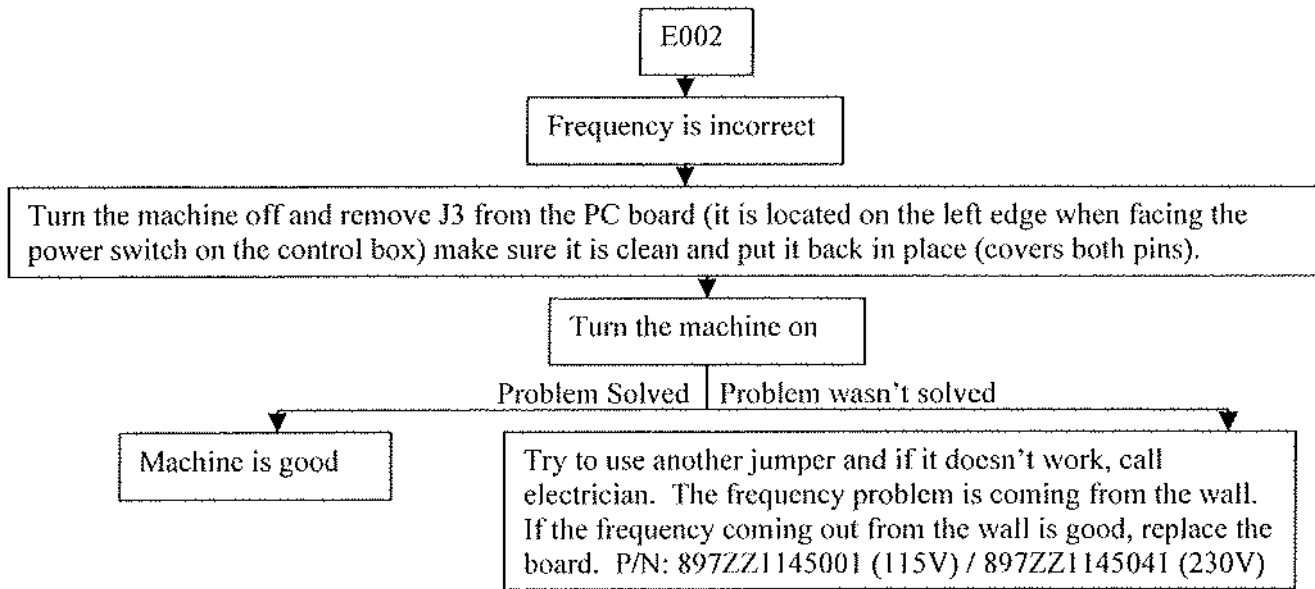


### 3) Light X-Ray.



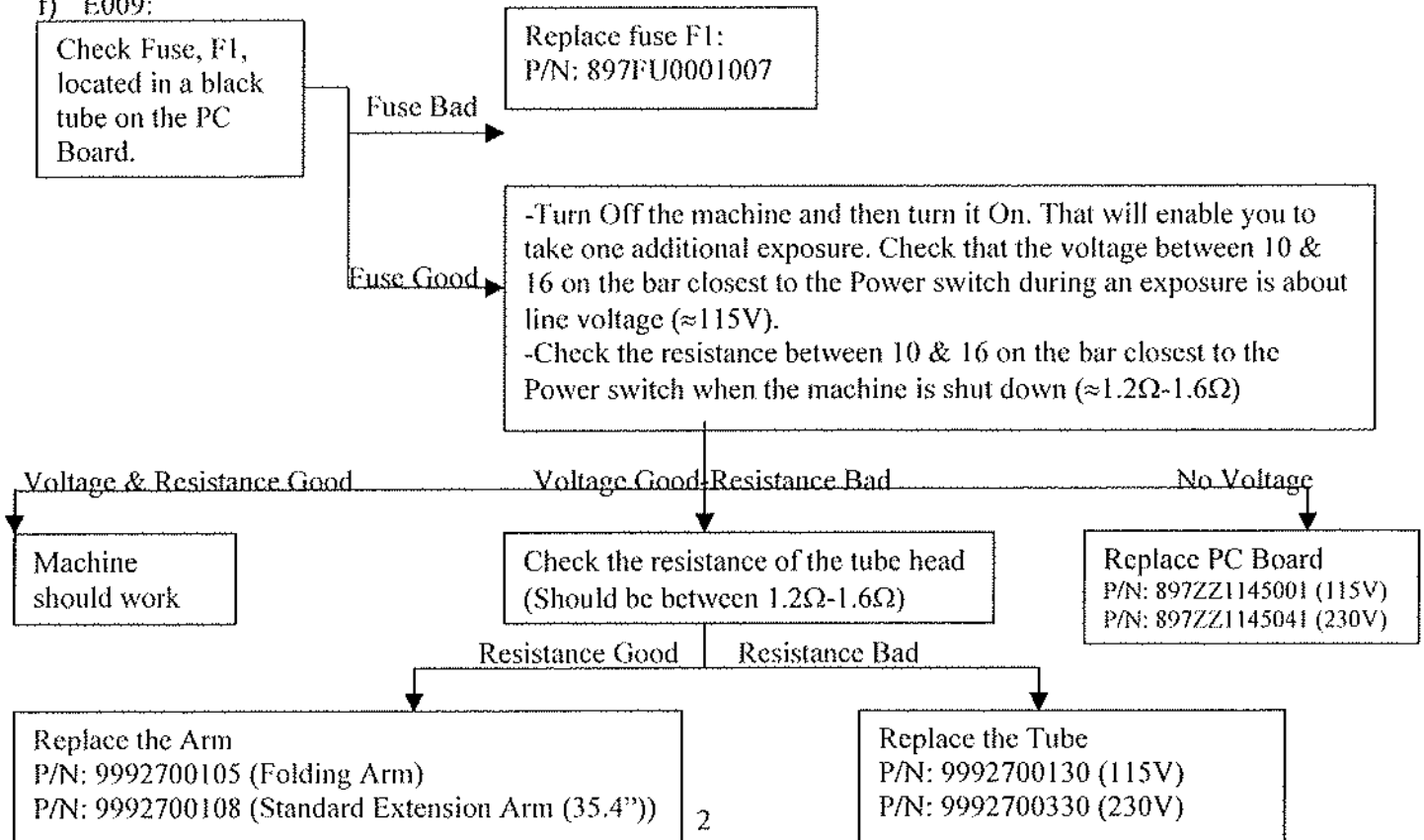
### 3) Error Codes

- a) E001: x-ray exposure button was released too fast.
- b) E002:

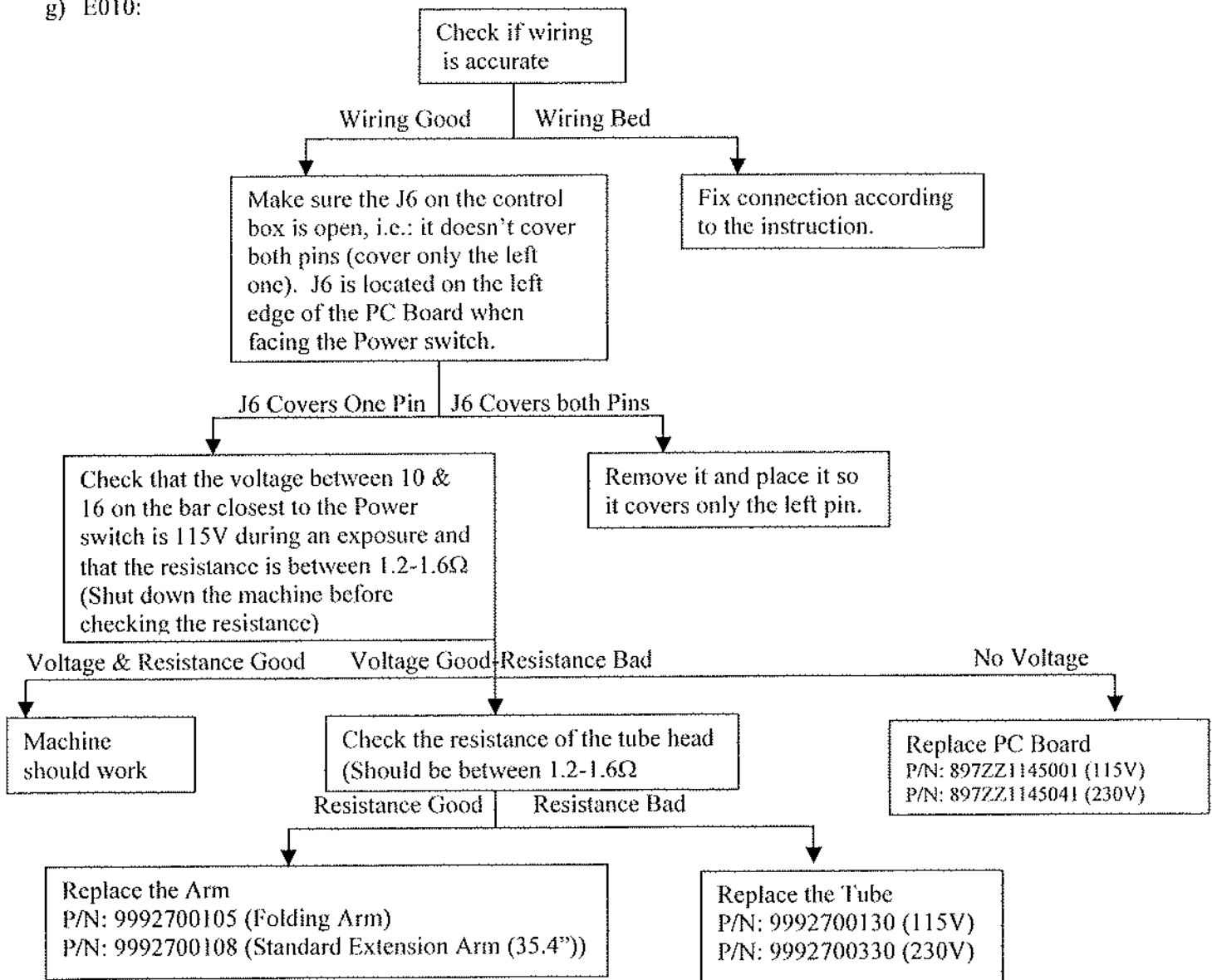


- c) E003-Turn the machine off and then on. If the problem persists, replace the PC Board.
- d) E004 / E005:  
The operational voltage range is  $108 < V < 126$ . If the error message is E004 / E005 than the voltage supply is above or below this range, respectively. Call an electrician to fix the problem.
- e) E006: -Two or more X-ray tubes may have been pulled out- Make sure that all tube heads besides one are in Position.  
-Equipment selector switch may be faulty.  
-Check wiring.

#### f) E009:



g) E010:



#### 4) Miscellaneous

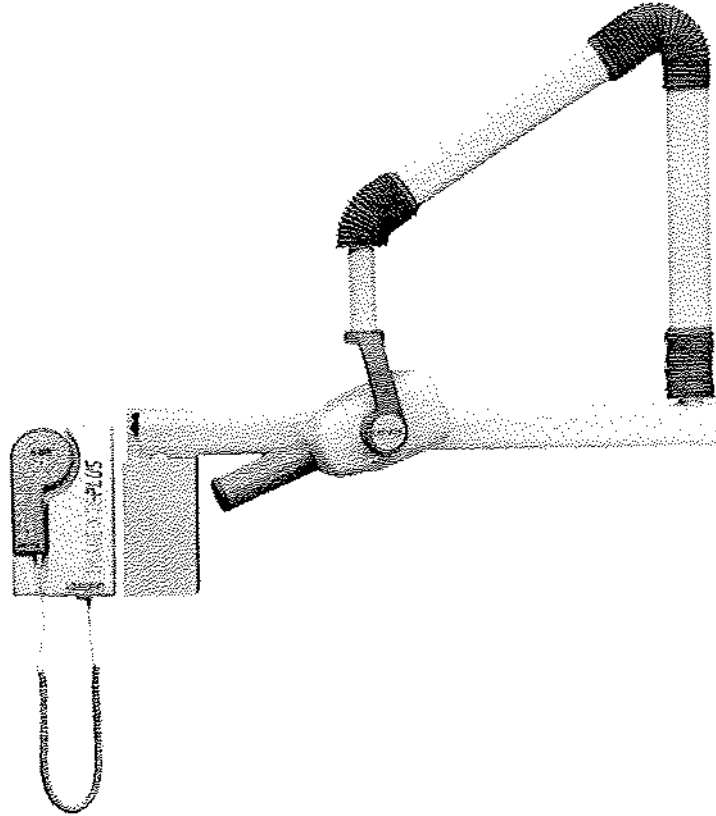
- a) No Ready Light: Make sure that the jumper between 8 & 9, on the bar furthest from the Power Switch, is in place.
- b) Machine Doesn't Work but Everything Else is Fine: Check that J1 is to the right and covers pins 1 & 2. J1 location determines whether the Hand-Held device is used or whether an external device is used (J1 is located on the opposite side to the Power Switch).
- c) Setting the System in Remote Control Mode: Move J1 to the right so it covers the left and middle pins (orient the control box so you would be able to read the label next to the Power Switch).
- d) Machine Just Clicks but doesn't operate: Check that K2 on the PC board is in place (located on the upper-right corner when you orient the control box so you are able to read the label next to the Power Switch). Check that the connections on the hand-held control are in place as well.
- e) For dual tube head operations place a jumper between 14 & 17 on bar M2.1 (The one closest to the Power Switch). In addition, connect:  
Number 13 on bar M2.1 to tube head B and to wall mount.  
Number 11 on bar M2.1 to tube head B and to wall mount.  
Number 10 on bar M2.1 to tube head A and to wall mount.

The micro-switches provided are to be connected as follows:

- Tube A is connected between terminals 8 & 9 on the M1 bar in the control box and the lower terminal 8 & 9 on the steel mounting plate.
- Tube B is connected between terminals 8 & 10 on the M1 bar in the control box and the lower terminal 8 & 9 on the steel mounting plate.

- f) A one head system must have 3 conductors 14 gauge up to 45 feet to go between the tube head and the timer. If it is a two head system it will need 3 conductor 14 gauge plus 2 conductors 20 gauge per head to go between each head.
- g) **E010:** Due to the difference in Tube Head Tolerances Error Code E010 may occur. If this should occur the Tolerance Window can be opened by removing the J6 Jumper located to the right of the CPU Chip (square brown chip with BASE number on it).

# IMAGE-VET 70 PLUS



## Troubleshooting Reference

**Trained Service Personal ONLY**

Observe ALL safety Procedures in the service manual

Reference: Installation, Operation, Service & parts Manual (P/N: 897-000002)

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4) Miscellaneous	4

### Key

>	Greater Than
<	Lower Than
=	Equal To
≈	About the Same

## 1) I. Wiring Connections

Three wiring are coming out of the x-ray tube and are connected as follows:

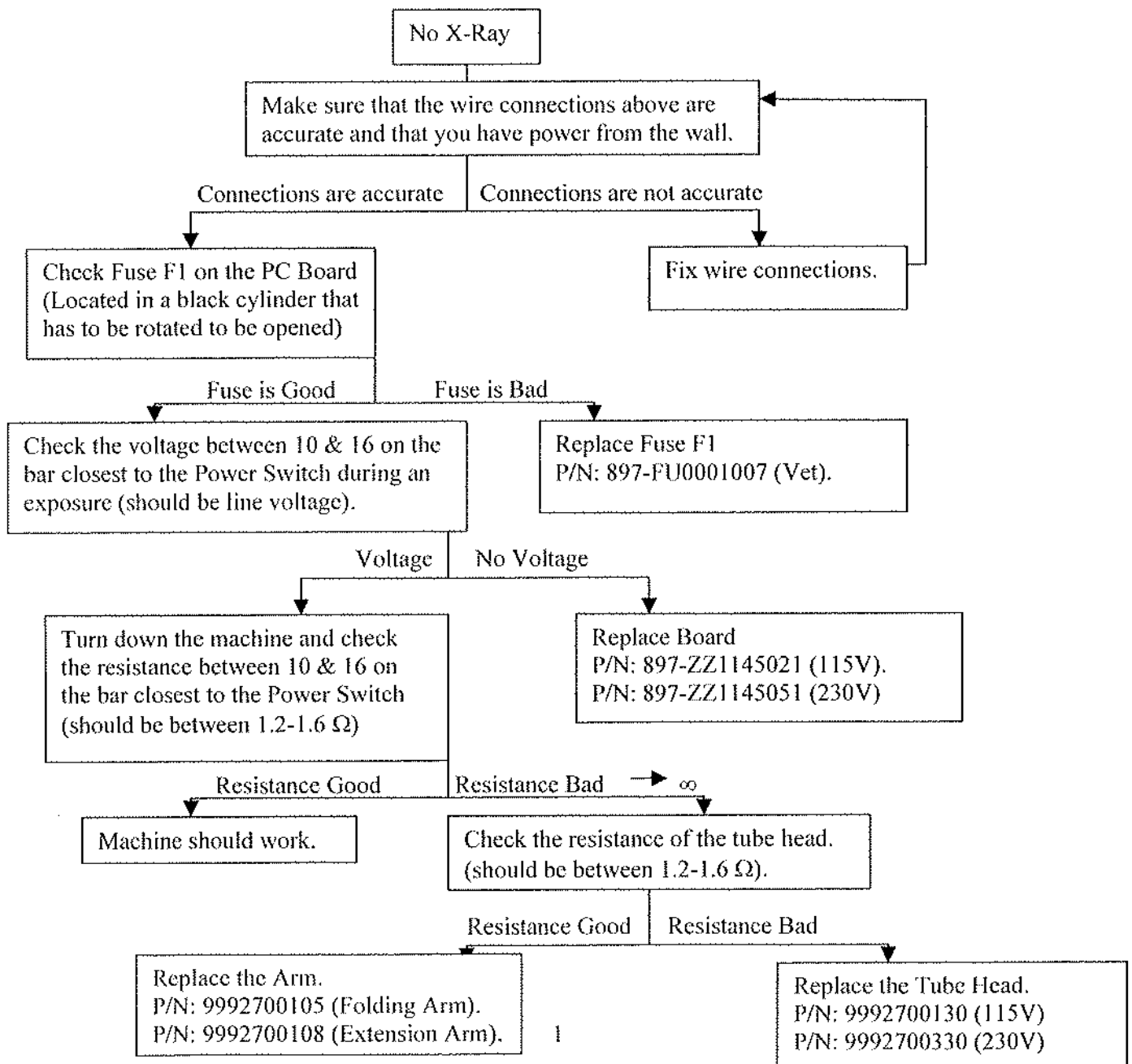
- The black wire (L) is connected to number 10 on the bar closest to the switch.
- The white wire (N) is connected to number 16 on the bar closest to the switch.
- Green-yellow is connected to ground (metal screw second on the left from the power switch).
- Place a jumper between 8 & 9 on the bar located further away from the switch (on the other side of the board).
- For Hand-Held usage make sure the jumper J1 (next to the above bar) is covering middle and right pins.
- For Remote Expose Switch make sure the jumper J1 (next to the above bar) is covering middle and left pins.

## II. Switch Connections

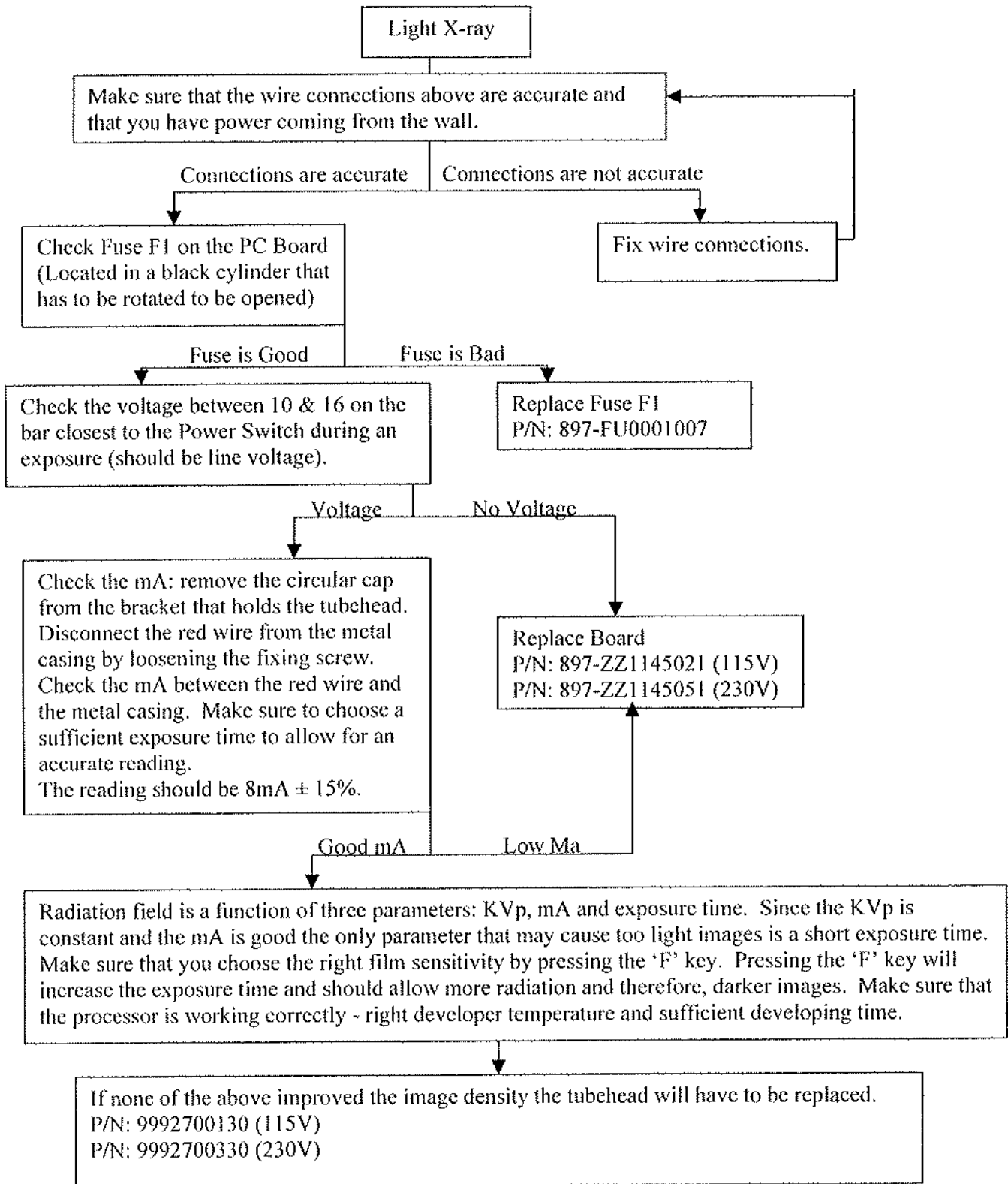
Position the control box so you can read the label next to the power switch.

- The upper left and upper right metal stripes of the power switch are connected to number 5 & 6 on the bar closest to the switch, respectively.
- The lower left and lower right metal stripes of the power switch are connected to number 4 & 7 on the bar closest to the switch, respectively.

## 2) No X-Ray

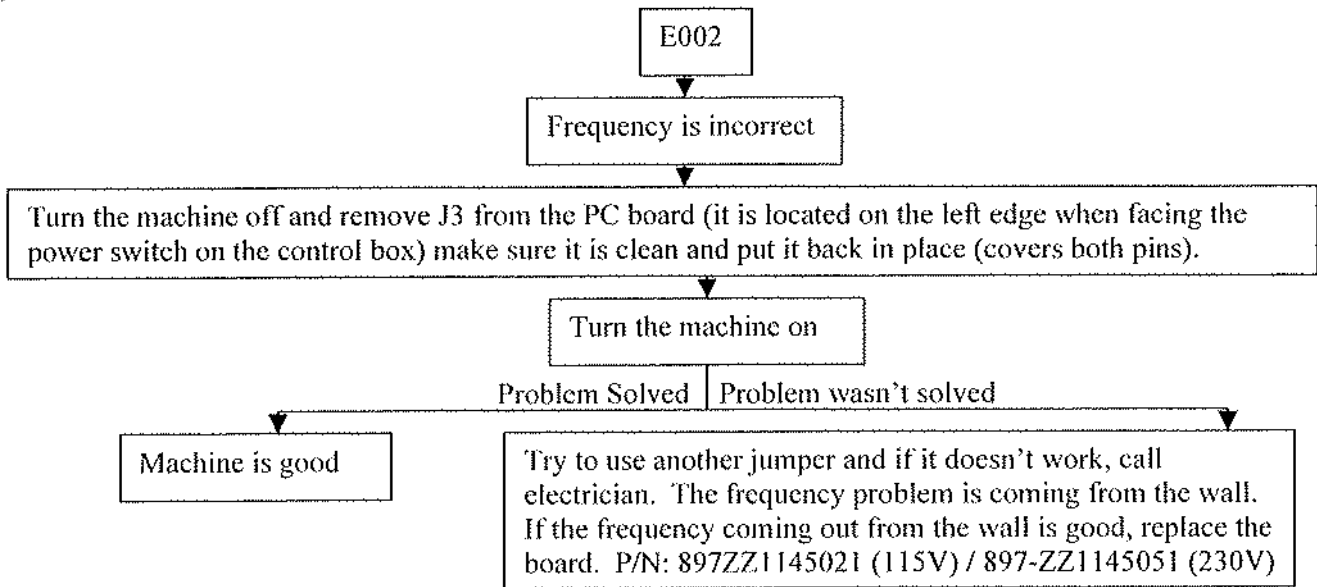


### 3) Light X-Ray.



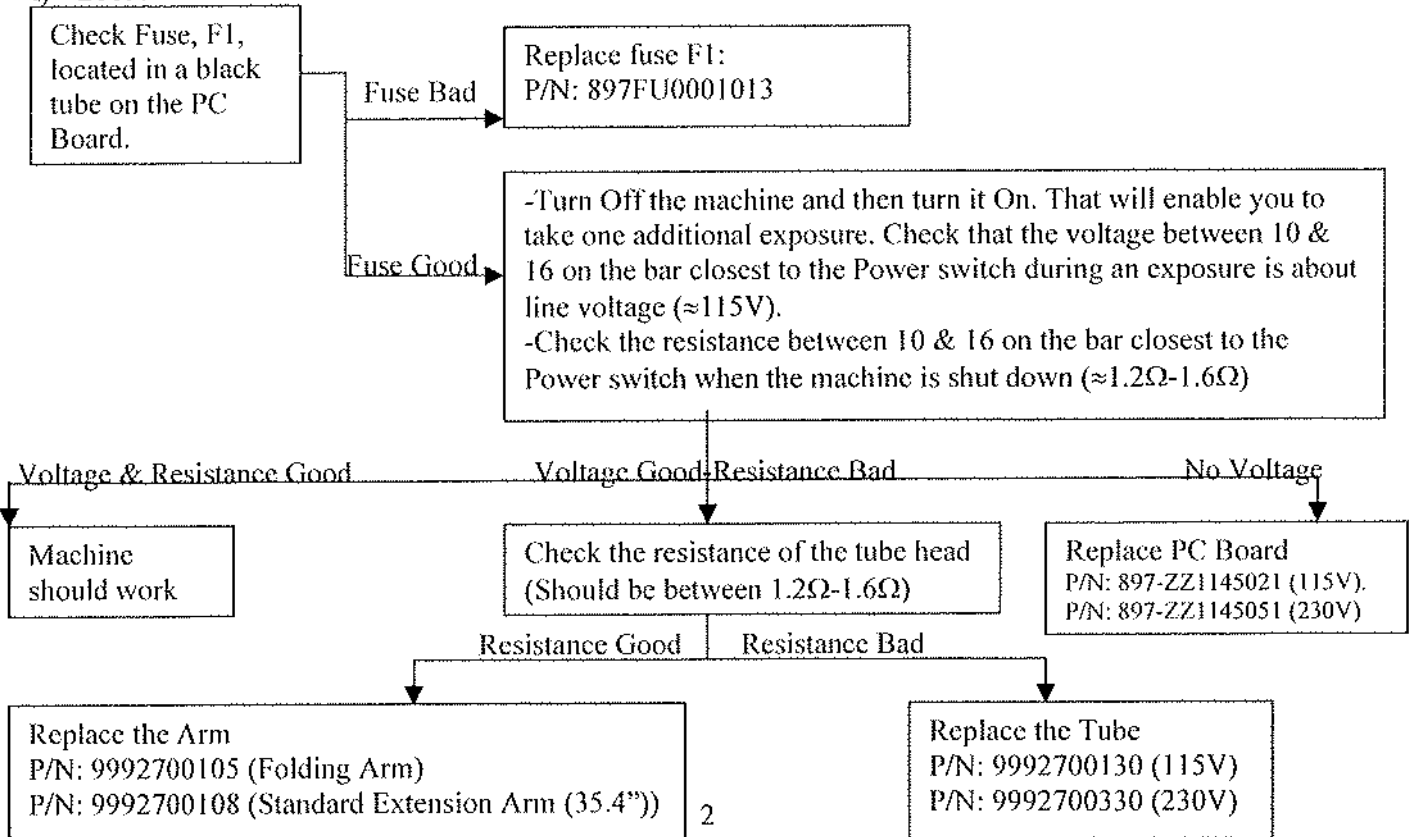
### 3) Error Codes

- a) E001: x-ray exposure button was released too fast.
- b) E002:

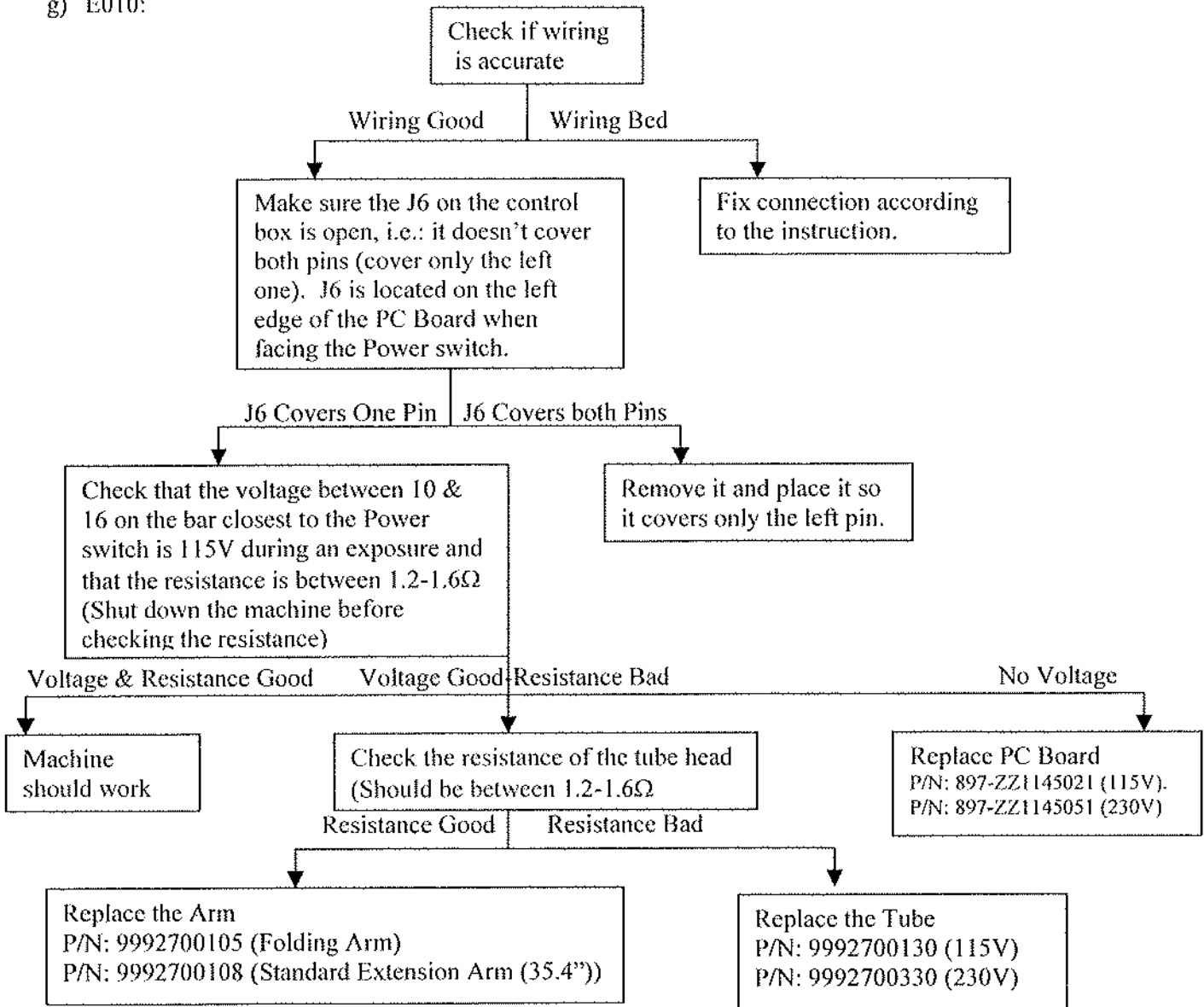


- c) E003-Turn the machine off and then on. If the problem persists, replace the PC Board.
- d) E004 / E005:  
The operational voltage range is  $108 < V < 126$ . If the error message is E004 / E005 than the voltage supply is above or below this range, respectively. Call an electrician to fix the problem.
- e) E006: -Two or more X-ray tubes may have been pulled out- Make sure that all tube heads besides one are in Position.  
-Equipment selector switch may be faulty.  
-Check wiring.

#### f) E009:



g) E010:



#### 4) Miscellaneous

- a) No Ready Light: Make sure that the jumper between 8 & 9, on the bar furthest from the Power Switch, is in place.
- b) Machine Doesn't Work but Everything Else is Fine: Check that J1 is to the right and covers pins 1 & 2. J1 location determines whether the Hand-Held device is used or whether an external device is used (J1 is located on the opposite side to the Power Switch).
- c) Setting the System in Remote Control Mode: Move J1 to the right so it covers the left and middle pins (orient the control box so you would be able to read the label next to the Power Switch).
- d) Machine Just Clicks but doesn't operate: Check that K2 on the PC board is in place (located on the upper-right corner when you orient the control box so you are able to read the label next to the Power Switch). Check that the connections on the hand-held control are in place as well.
- e) For dual tube head operations place a jumper between 14 & 17 on bar M2.1 (The one closest to the Power Switch). In addition, connect:
  - Number 13 on bar M2.1 to tube head B and to wall mount.
  - Number 11 on bar M2.1 to tube head B and to wall mount.
  - Number 10 on bar M2.1 to tube head A and to wall mount.

The micro-switches provided are to be connected as follows:

-Tube A is connected between terminals 8 & 9 on the M1 bar in the control box and the lower terminal 8 & 9 on the steel mounting plate.

-Tube B is connected between terminals 8 & 10 on the M1 bar in the control box and the lower terminal 8 & 9 on the steel mounting plate.

# **X-70 (X-Mind)**

## Troubleshooting Reference

**Trained Service Personal ONLY**

Observe ALL safety Procedures in the service manual

Reference: Installation, Operation, Service & parts Manual (P/N:853-000001)

# Table of Contents

1. Wiring	1
2. No X-Ray Emission	1

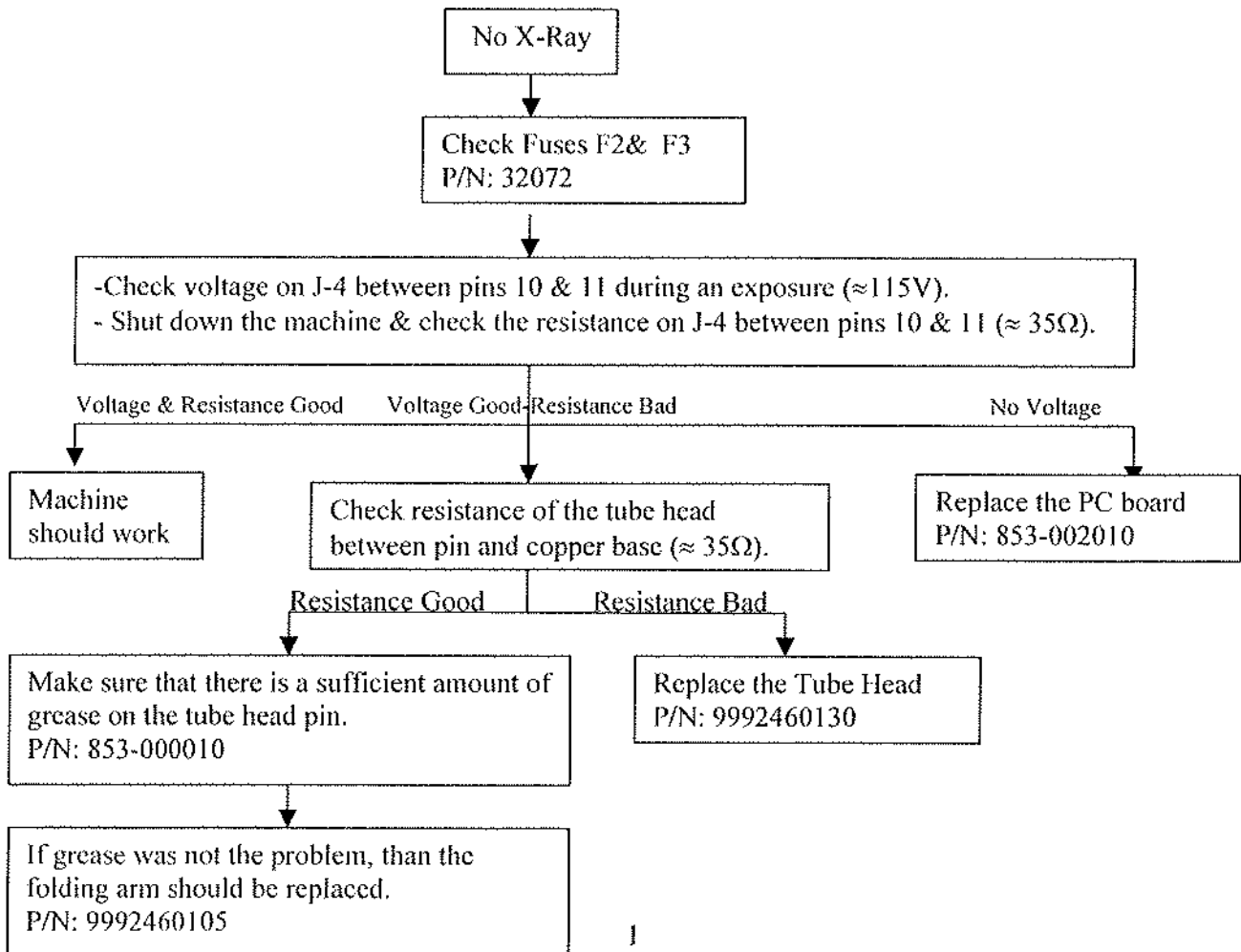
## Key

>	Greater Than
<	Lower Than
=	Equal To
≈	About the Same

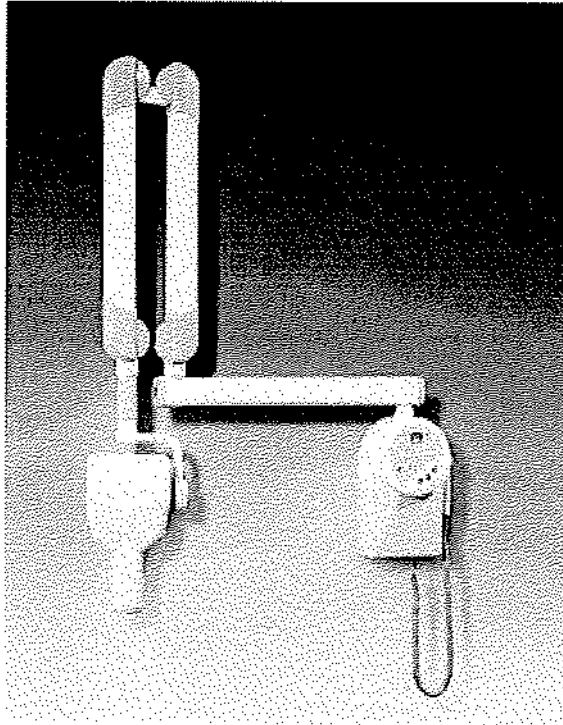
## 1) Wiring and Trouble Shooting

- Connecting the switch to the board:
  - a) L-wire (black or brown) is inserted into the right pin of J-5 (marked as number 13).
  - b) N-wire (Blue or white) is inserted into the left pin of J-5 (marked as number 12).
  - c) Ground wire (green/yellow) is inserted into the middle pin of J-5 (marked as ground).
  
- Connecting the remote switch to the board:
  - a) White wire is inserted into the middle pin of J-1 (marked as number 2).
  - b) Red wire is inserted into the left pin of J-1 (marked as number 1).
  
- Connecting single tube head to the board:
  - a) L-wire (black or brown) is inserted into the right pin of J-4 (marked as number 11).
  - b) N-wire (Blue or white) is inserted into the left pin of J-4 (marked as number 10).
  - c) Ground wire (green/yellow) is inserted into the middle pin of J-4 (marked as ground).
  
- Connecting dual tube head to the board:
  - a) L-wire (black or brown) is inserted into the right pin of J-3 (marked as number 9).
  - b) N-wire (Blue or white) is inserted into the left pin of J-4 (marked as number 8).
  - c) Ground wire (green/yellow) is inserted into the middle pin of J-5 (marked as ground).
  
- Make sure that the jumper on the lower left side of the board corresponds to the length of cone used:
  - a) Short cone (8 inches): the central x-ray beam should be perpendicular to the tooth/film (bisecting technique)
  - b) Long cone (12 Inches): the central x-ray beam should be perpendicular to the film (Paralleling technique).

## 2) No X-Ray



# Endo AC/ACP



## Trouble Shooting Reference

**Trained Service Personal ONLY**

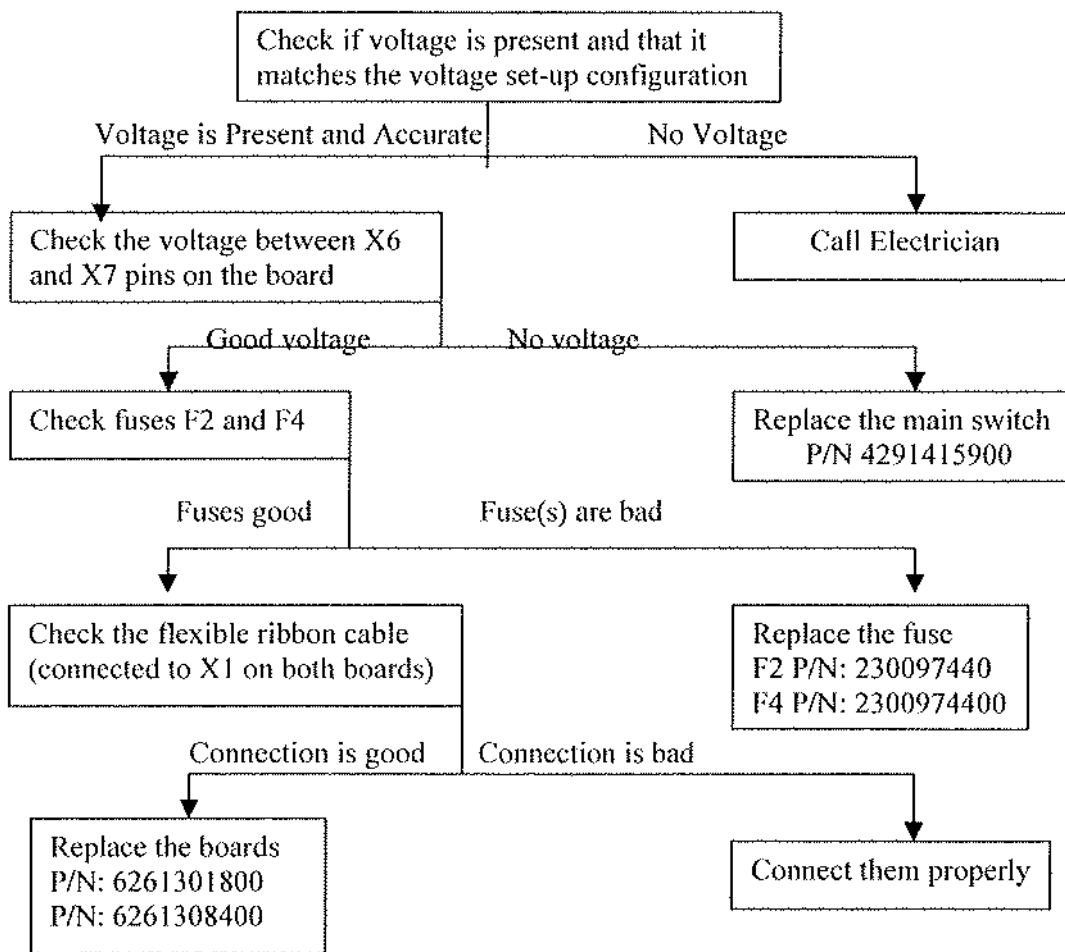
Observe ALL safety Procedures in the service manual

Reference: Installation, Operation, Service & parts Manual

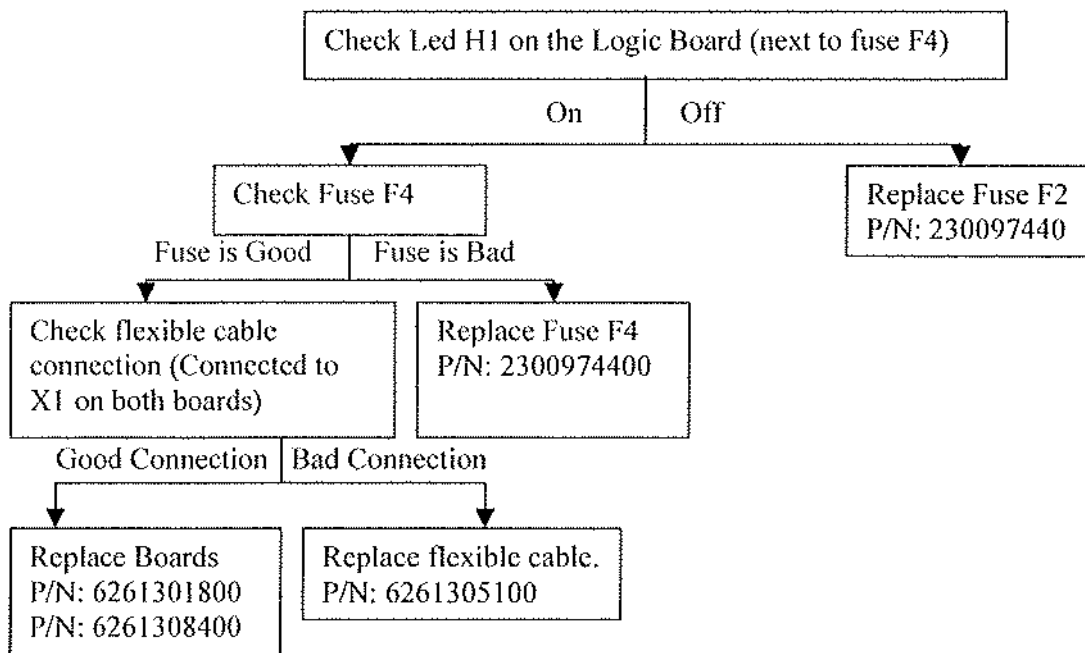
# Table of Contents

1. Timer Switch Doesn't Come On	1
2. No Display (Yet, Time Switch Comes On)	1
3. No X-Ray Emission or Error E23	2
4. Wiring Instructions	2
5. Disabling the 'Ready' light	3

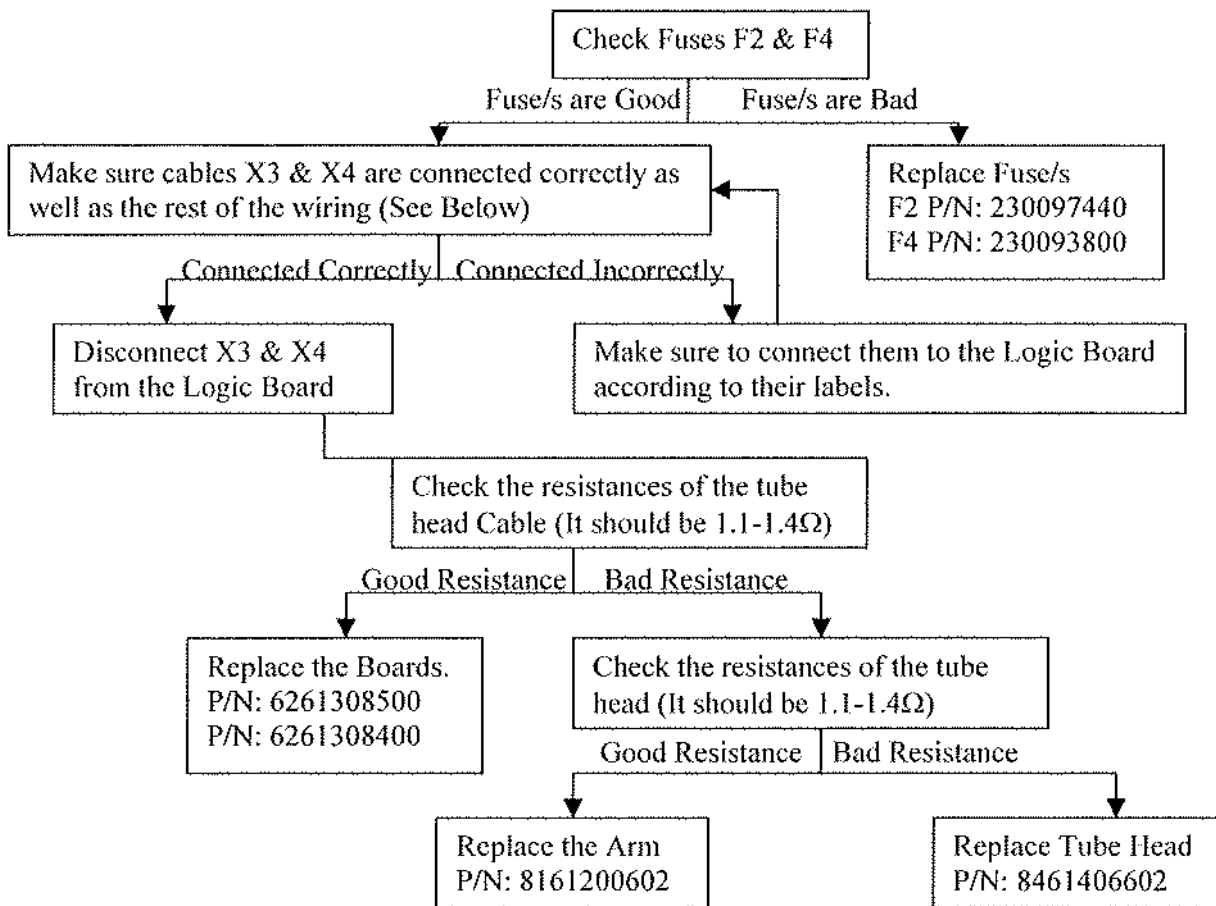
### 1) Timer Switch Doesn't Come On



### 2) No Display (Yet, Time Switch Comes On)



### 3) No X-Ray Emission or Error E23.



#### Wiring Instructions

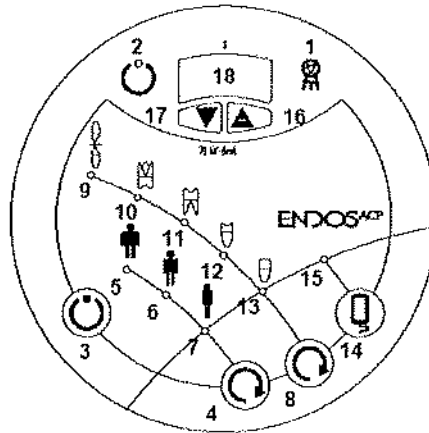
- X3 (Black wire) goes into L2 of the white plug next to the On/Off switch (First from the bottom).
- X4 (Blue wire) goes into N1 of the white plug next to the On/Off switch (Second from the bottom).
- Green wire goes into ground of the white plug next to the On/Off switch (Third from the bottom).
  
- X6 (Black wire) goes into the black plug of the On/Off switch. It is inserted into slot # 5 on the side closer to the machine.
- X7 (Black wire) goes into the black plug of the On/Off switch. It is inserted into slot # 2 on the side closer to the operator.
  
- X16/X17: Remote X-Ray button device
- X2/X11: The wires are labeled and are connected to the PC board of the timer.



250 Clearbrook Road, Elmsford, NY 10523 ♦ (914) 592-6665 ♦ Fax (914) 592-6148 ♦ www.dent-x.com ♦ e-mail: dent-x@dent-x.com

## **INSTRUCTION FOR DISABLING THE 'READY' BUTTON:**

1. Turn On the machine by pressing the main switch (I/O) on the lower part of the timer and wait for the display (number 18) to show the software version (For instance: 4.00). Once it shows the software version, simultaneously press the 'increase' and 'decrease' keys (numbers 16 and 17, respectively) for about 5 seconds.
2. The word 'Pr0' would appear on the display (number 18) for two seconds, and then would be replaced with 'P01'.
3. Go from 'P01' to 'P17' by pressing the Exposure Enabling key (number 3).
4. Once you are at 'P17' press the 'Increase' key (number 16). The display will show 'A=1', which means that the 'Ready' button is enabled. Since you want to disable the 'Ready' button, press the 'Decrease' key (number 17). The display will now show 'A=0' and the 'Ready' button is disabled.
5. Press the Exposure Enabling 'Ready' key (number 3) to save this configuration. The display now shows 'P18'.
6. Press the Exposure Enabling 'Ready' key (number 3) again to enter User Operation mode.
7. Check that the Green 'Ready for X-ray' LED is constantly On (number 2).



- |                                      |                                 |
|--------------------------------------|---------------------------------|
| 1. X-ray presence luminous indicator | 10. LED 'Upper Molar'           |
| 2. Green 'Ready for X-ray' LED       | 11. LED 'Lower Molar'           |
| 3. Exposure enabling 'Ready'         | 12. LED 'Premolars'             |
| 4. Selection key 'Size'              | 13. LED 'Incisors / Canines'    |
| 5. 'Large Size' LED                  | 14. 'Videography' selection key |
| 6. 'Medium Size' LED                 | 15. 'Videography' LED           |
| 7. 'Small size' LED                  | 16. Increase key.               |
| 8. 'Tooth anatomic' selection key    | 17. Decrease key.               |
| 9. LED 'Bite-Wing'                   | 18. Three figure display.       |

Dent-X Technical Support  
Phone: 1-800-225-1702  
Fax: 1-914-592-6148  
E-mail: [rsela@alpimaging.com](mailto:rsela@alpimaging.com)

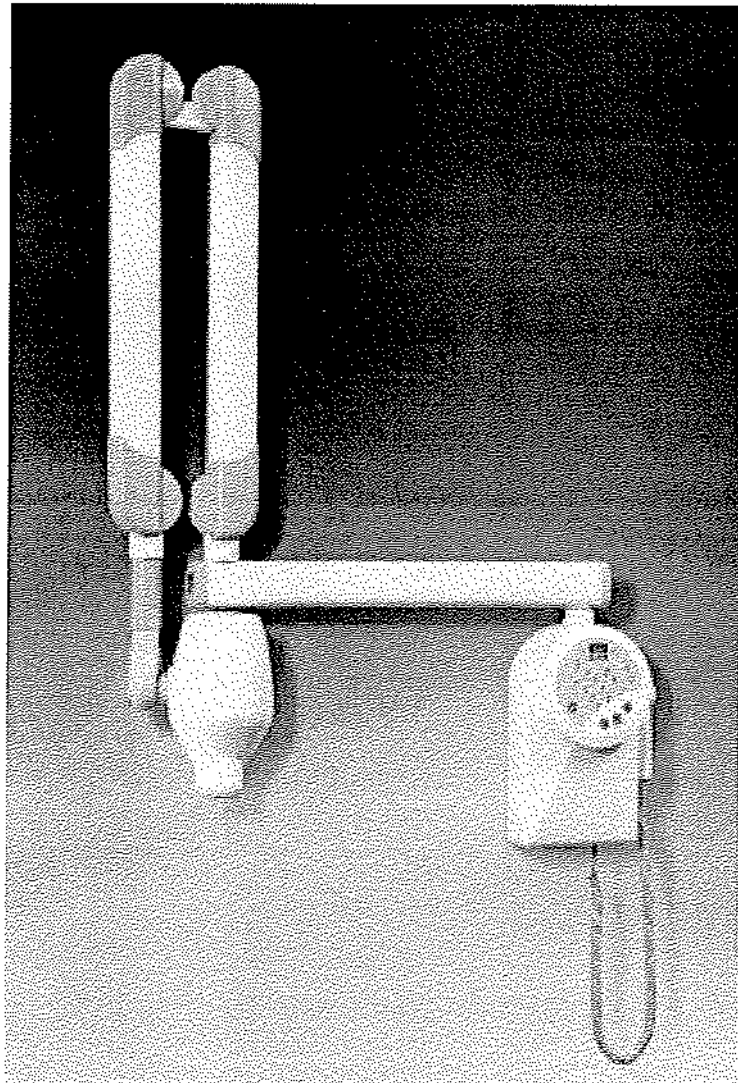
# DENTIX

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## ENDOS DC

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CE 0434

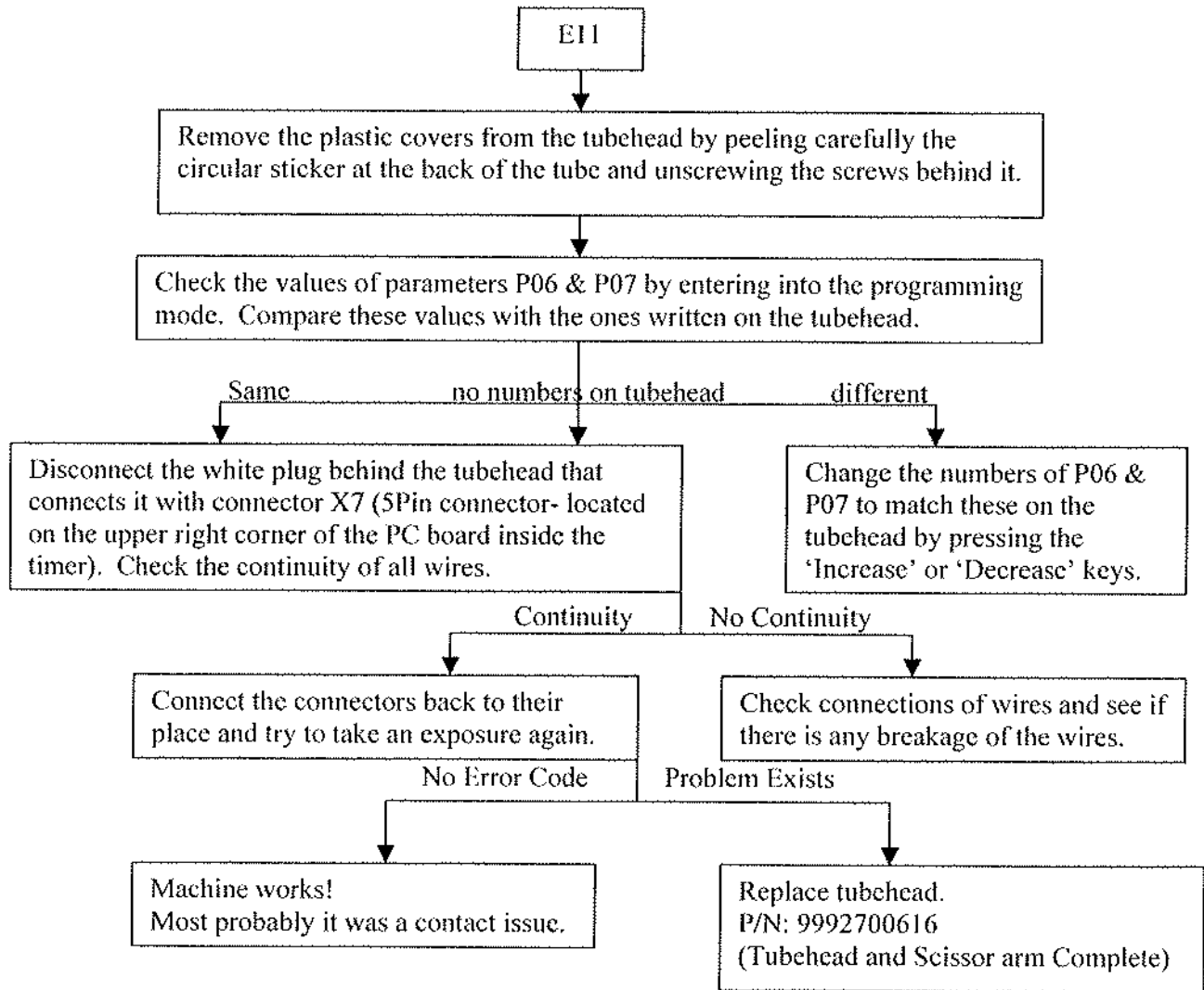


### Errors appearing during Start-Up

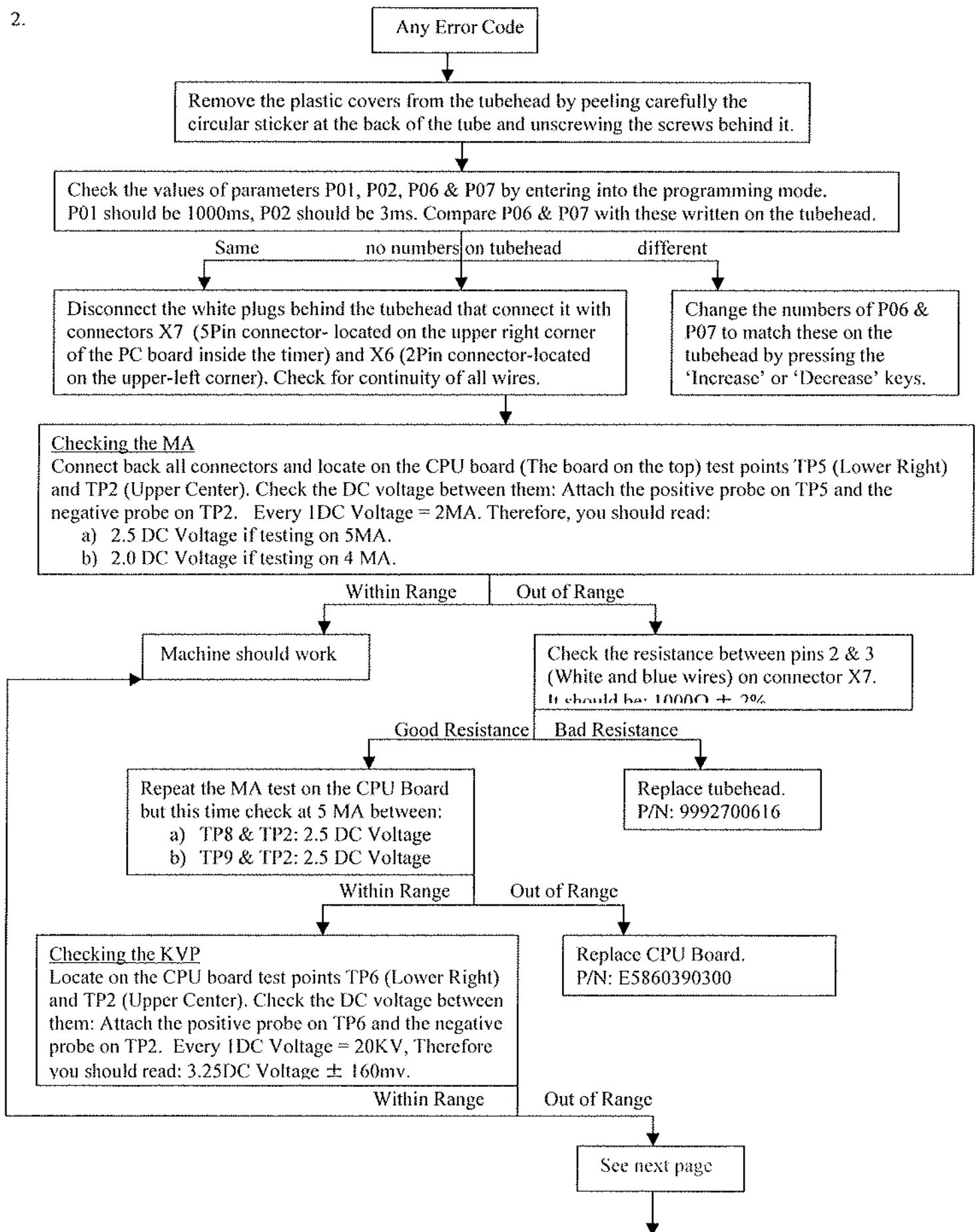
- 1) Error E01- X-ray button pressed at start up.
- 2) Error E02- a key pressed at start up (different from the X-ray key).  
Note: the LED next to the pressed key should be flashing.
- 3) Error E03- more then one key is pressed at start up.

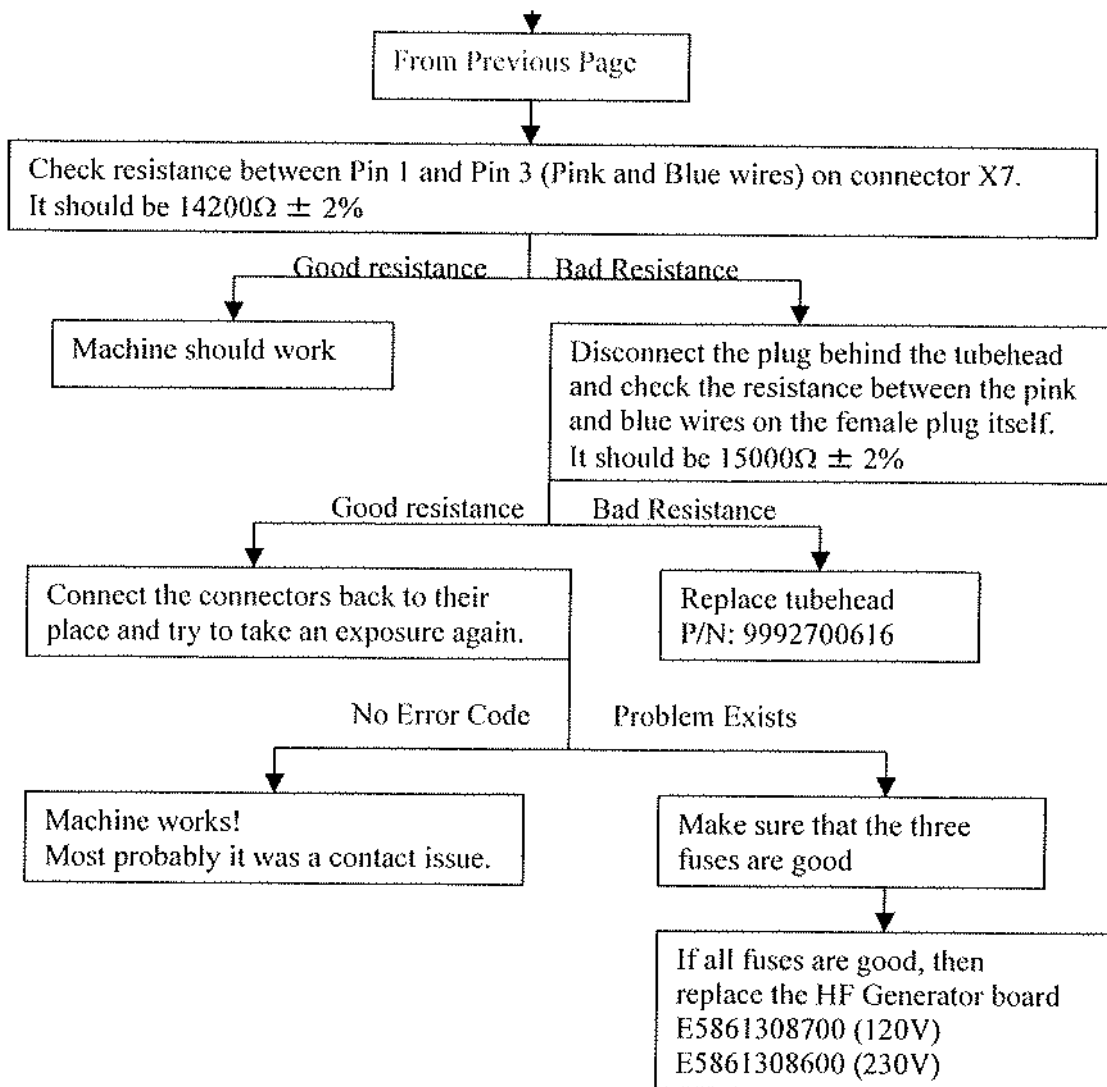
### Errors appearing during an exposure

1.



2.







***Visionary Imaging***

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## **Important Pre-Installation Information for Your New EVA System**

The ProImage CD provided with EVA System contains the following:

1. ProImage Dental Image Acquisition and Management Software.
2. The software “drivers” for your EVA sensor.
3. A copy of the ProImage User Guide, Installation & Operation Manual (requires Adobe Acrobat or Acrobat Reader).

### *Recommended Minimum Computer Requirements\**

**Dent-X recommends that you purchase a new computer for use with your EVA System.**

- Microsoft Windows XP (home or pro) or Windows 2000 Operation System
- PC with Pentium 4 – 1.5GHz (or equivalent)
- RAM 512 MB
- Available USB (V2.0 or 1.1) port with full 500 mA capacity
  - External self (ac wall plug) USB Hubs may be used.
- CD Rom drive (CD-R/CD-RW recommended but not required)
- HD 40 GB minimum recommended
  - Image storage space for 5,000 images/year = 10 GB (est.)
- High Quality Display (Flat Panel or CRT)
  - Minimum resolution of 1024x768 @ 32 bits color depth.
- Optional Equipment
  - Printer: Color Photo Quality Inkjet with 1200+ dpi
  - Data Back-up System (highly recommended)
  - Video Capture Card (for use with intra-oral video cameras sold separately)

\* Computer and Display monitor are NOT provided with the EVA/ProImage System.

Visit our web site to register your new EVA system and to check for any Updates or important user information posted on the EVA and ProImage pages.

[www.dent-x.com](http://www.dent-x.com)

## Networking ProImage Instructions

### networking ProImage between a few XP/98/ME/2000 client computers and an NT server computer:

1. A network has to be setup between the computers. ProImage runs independently of the method of networking used. If the computers are not networked together, that step has to be finished first before proceeding with the database sharing.
2. Install ProImage on each of the client computers in the operatory (besides the server).
4. Choose one of the client computers ("Computer A"), and run ProImage once on it.
5. On the server computer, create a directory for the database. Then, copy from "computer A", from the ProImage directory, the following files:
  1. The file "Image database.mdb"
  2. The "images" directory.
  3. The "modimages" directory.

Copy these files into the new database directory on the server.

6. On each of the client computers, run ProImage and go to:  
File - Database Connection. Find the server computer in the "look in" box. Then, go to the ProImage folder and choose "image database.mdb".
7. Run ProImage on each client computer, import test images on one of the computers and verify that all the computers are connected to the same database - verify that the imported images can be seen on each of the computers in the network.

### Networking ProImage between XP/98/ME/2000 client computers and a XP/98/ME/2000 server computer:

1. A network has to be setup between the computers. ProImage runs independently of the method of networking used. If the computers are not networked together, that step has to be finished first before proceeding with the database sharing.
2. Install ProImage on all of the computers in the operatory (besides the server).
3. Run ProImage once on the server computer.
4. On each of the client computers, run ProImage and go to:  
File - Database Connection. Find the server computer in the "look in" box. Then, go to the ProImage folder and choose "image database.mdb".
5. Run ProImage on each client computer, import test images on one of the computers and verify that all the computers are connected to the same database - verify that the imported images can be seen on each of the computers in the network.

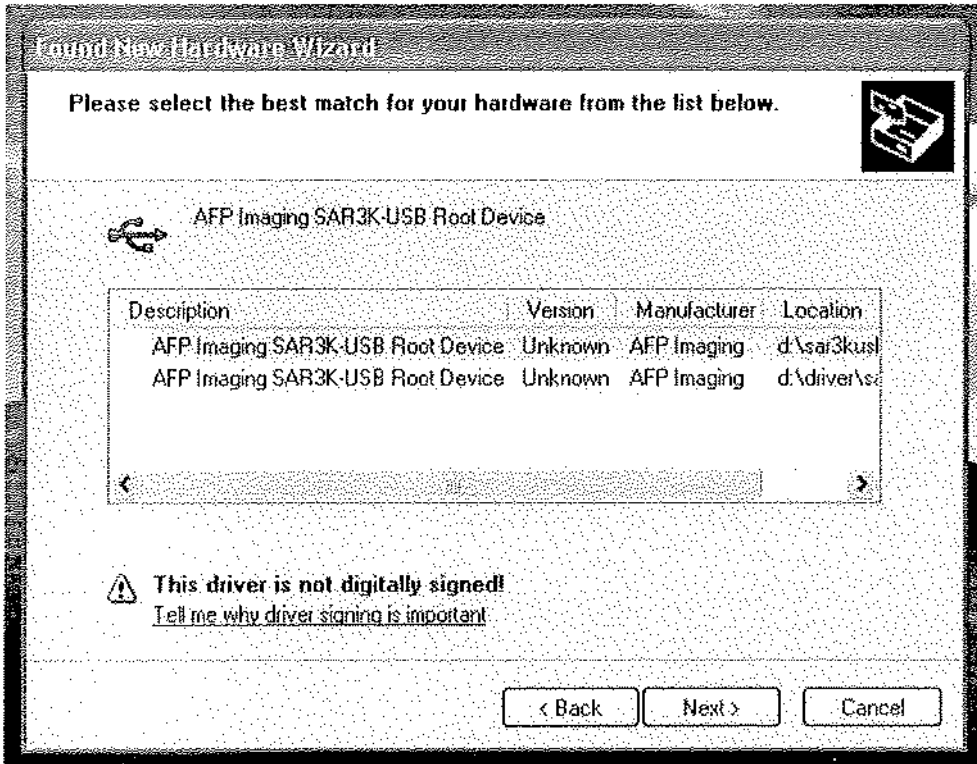
November 2002

### Installation instructions – Eva Hardware

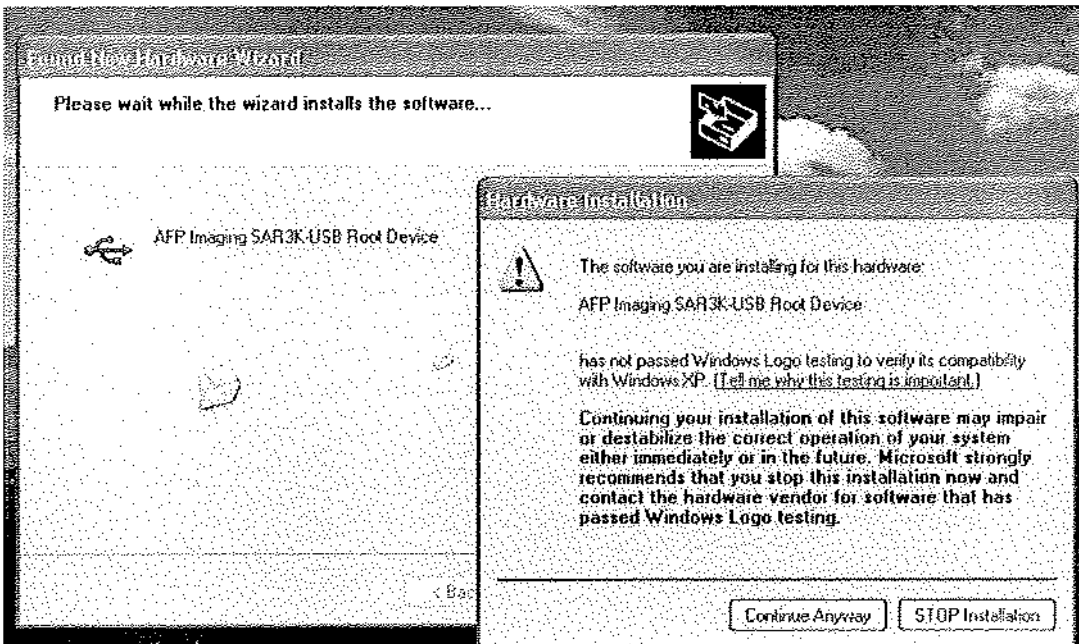
1. Insert the “Eva” CD inside the CD-ROM.
2. Plug the Eva HW into the USB port.
3. The computer will come up with the following message:  
“Found new hardware”



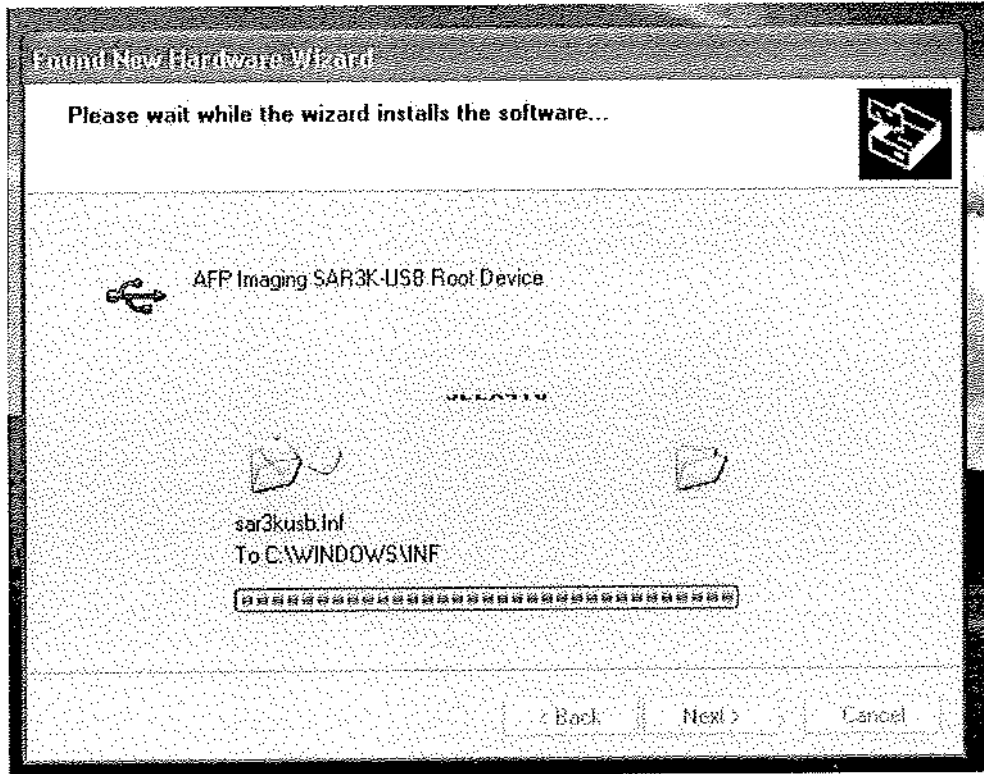
4. Next, a message will appear which asks which driver to choose. Choose the first one from the list with the name “AFP Imaging Corp. – USB Root Driver”.



- The driver will go through installation of the driver. In Windows XP, the following box will come up:



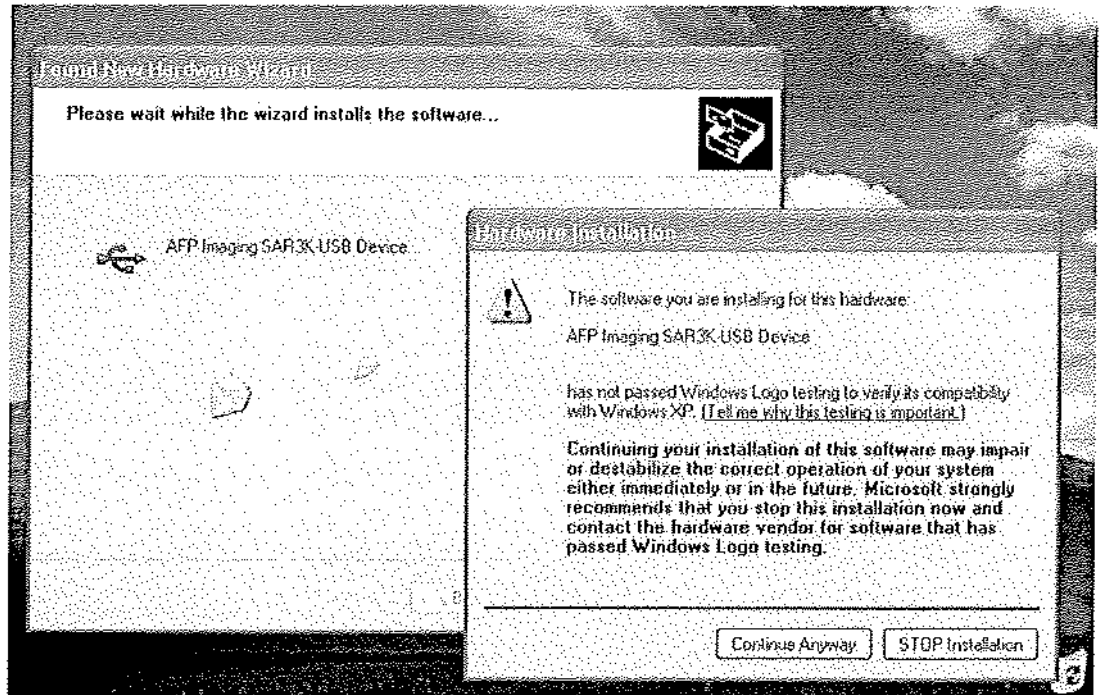
6. Choose "Continue anyway".
7. The installation will continue.



7. When finished, the following message will appear:

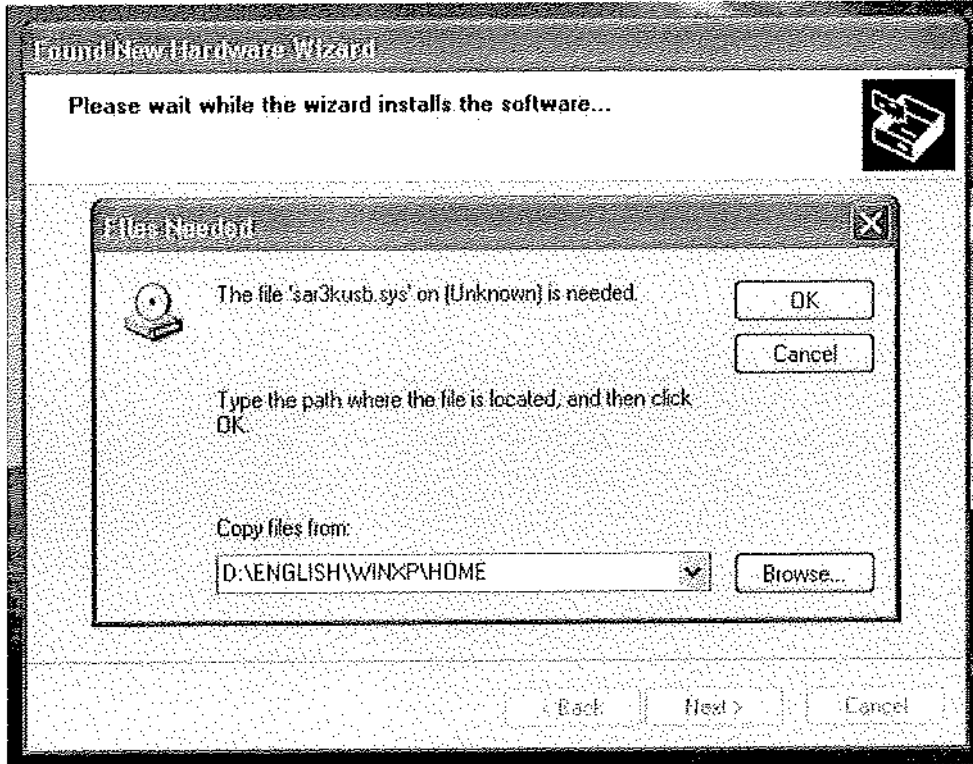


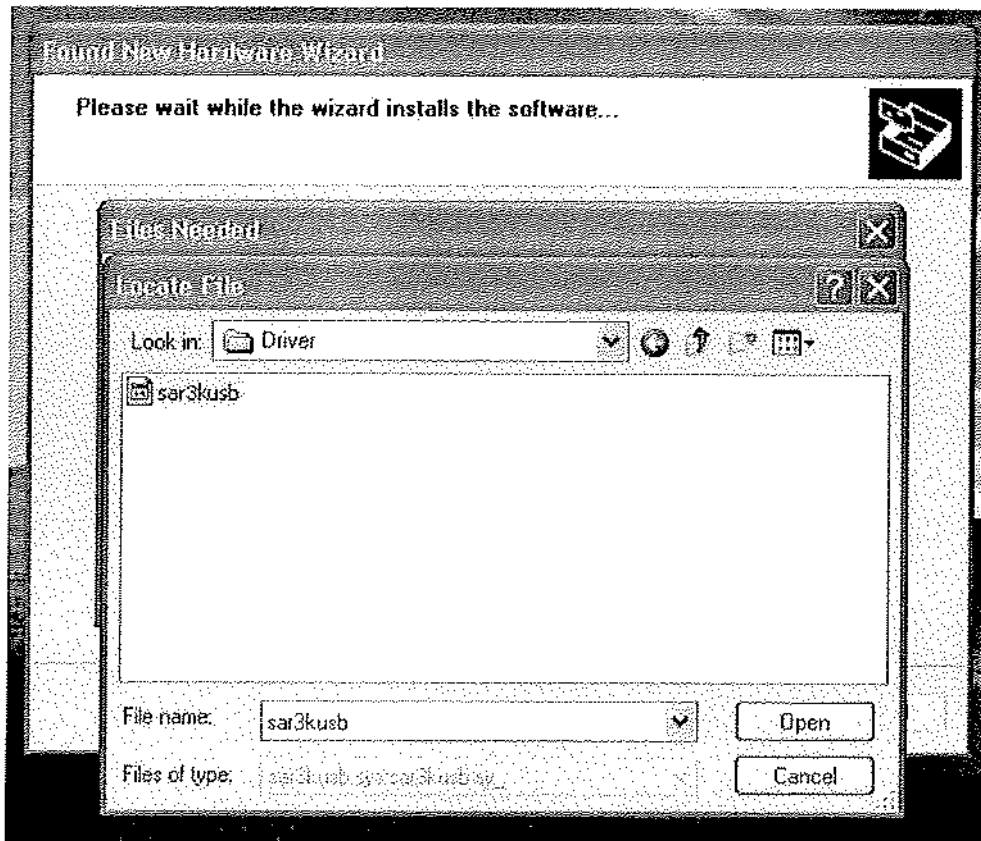
8. Choose next.



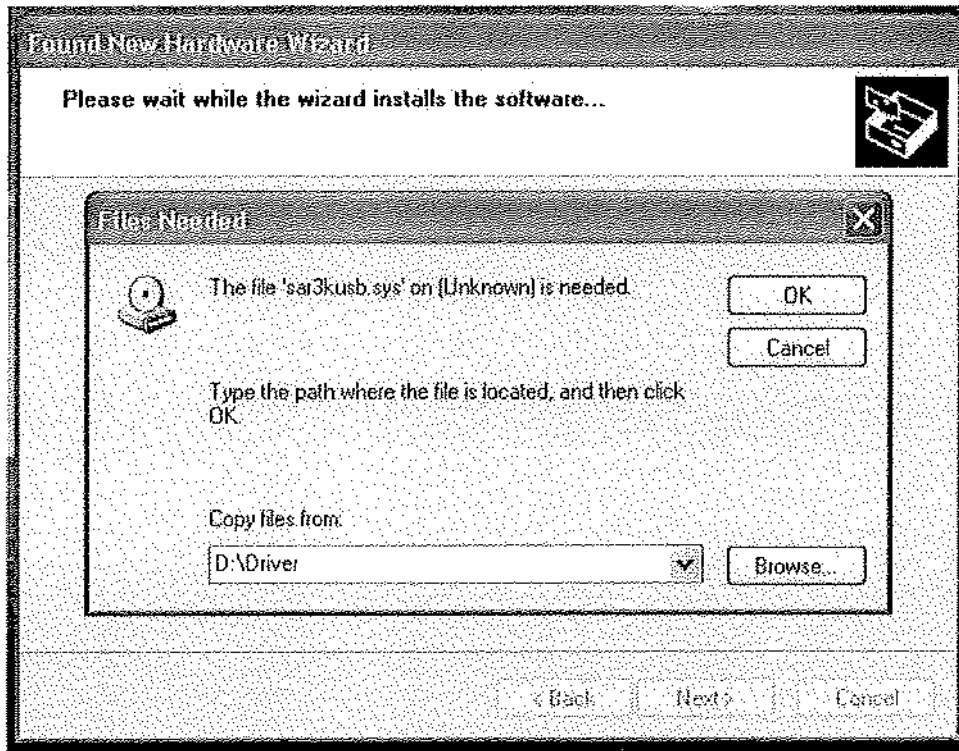
9. On Windows XP the installation warning will reappear. Click on "Continue anyway".

10. At this point, a message box might appear that will require finding the "sar3kusb.sys". Please click on browse and go to the "Driver" directory on the CD.





11. A message box might appear that requires the file "sar3kusb.sys". If so, browse in the "Driver" subdirectory on the CD and locate the file.



11. At this point, the installation will be completing. Click on "Finish" and the installation is done!



If at any point an error occurs, please restart the computer and start the installation from the beginning.

Note: Due to the differences between Windows Operating Systems versions, some of the screens might look different and some of the intermediate screens might be skipped. As long as the installation continues and finishes without error messages, the installation has been successful.

# Directions for disabling USB power management in Windows XP

Click on the "Start" button in the lower left-hand corner of your desk top. The following window should appear:



Select and click on "Control Panel"

## Directions for disabling USB power management in Windows XP

The Control Panel window should appear.

In the Control Panel window, double click on "System":

(Partial window shown)

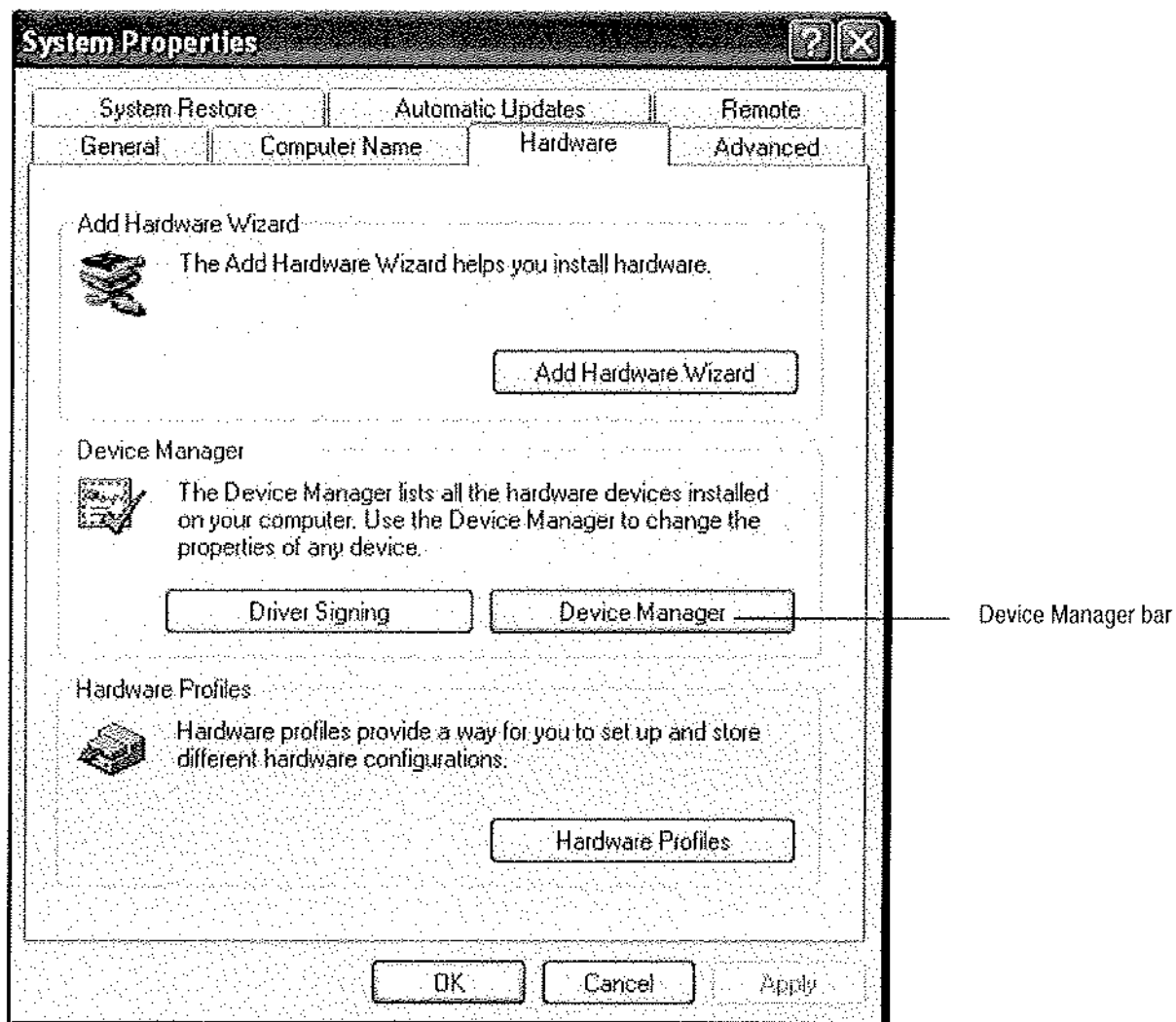


Double Click here:

The System Properties window should come up

## Directions for disabling USB power management in Windows XP

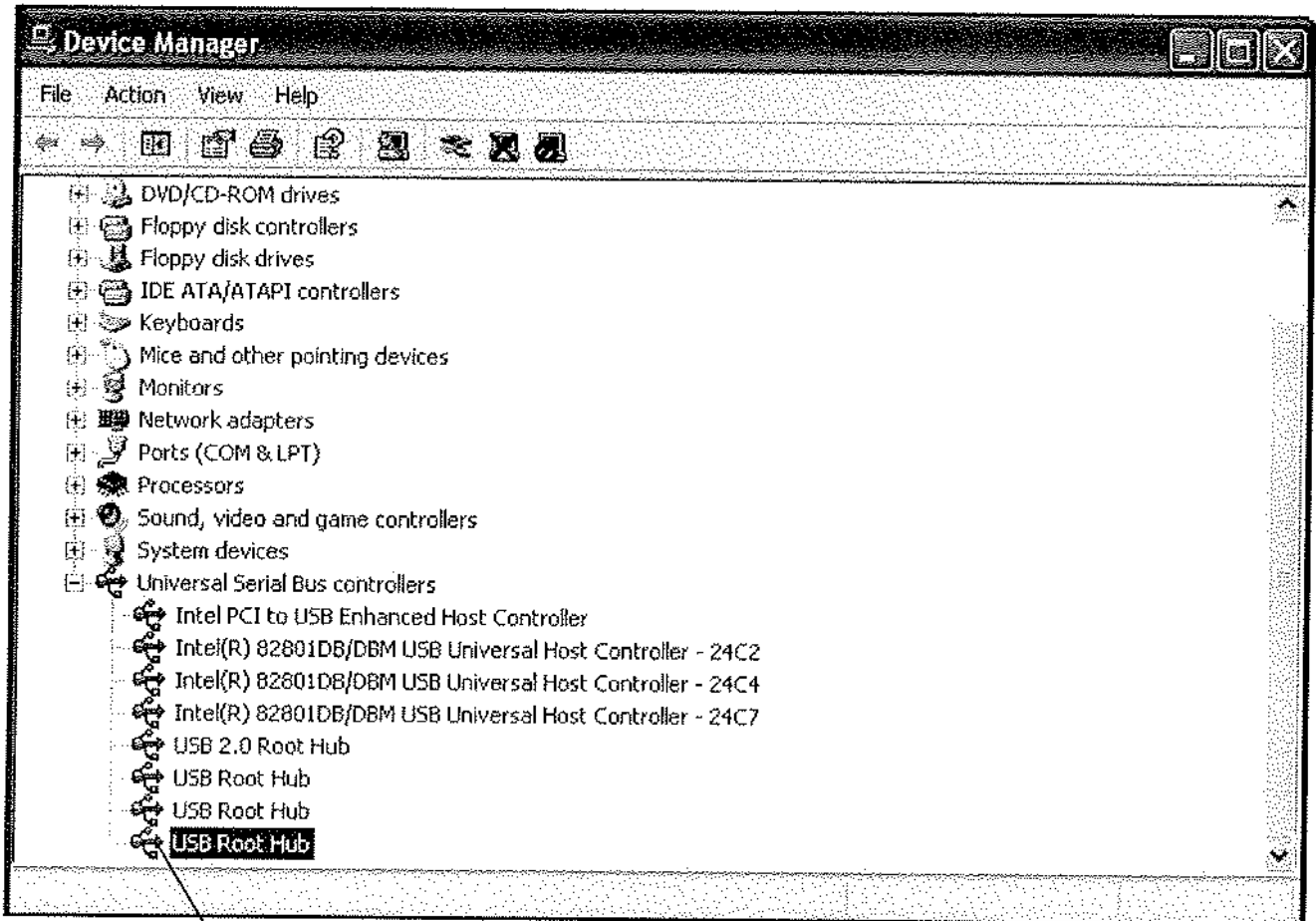
Click on the Device Manager bar under the Hardware tab:



The Device Manager window should appear:

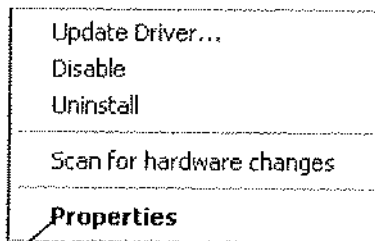
## Directions for disabling USB power management in Windows XP

Click on the "+" sign beside Universal Serial Bus controllers to drop down a list of all the controllers and hubs:



Select a Root Hub device and right click on it

The following window should appear:

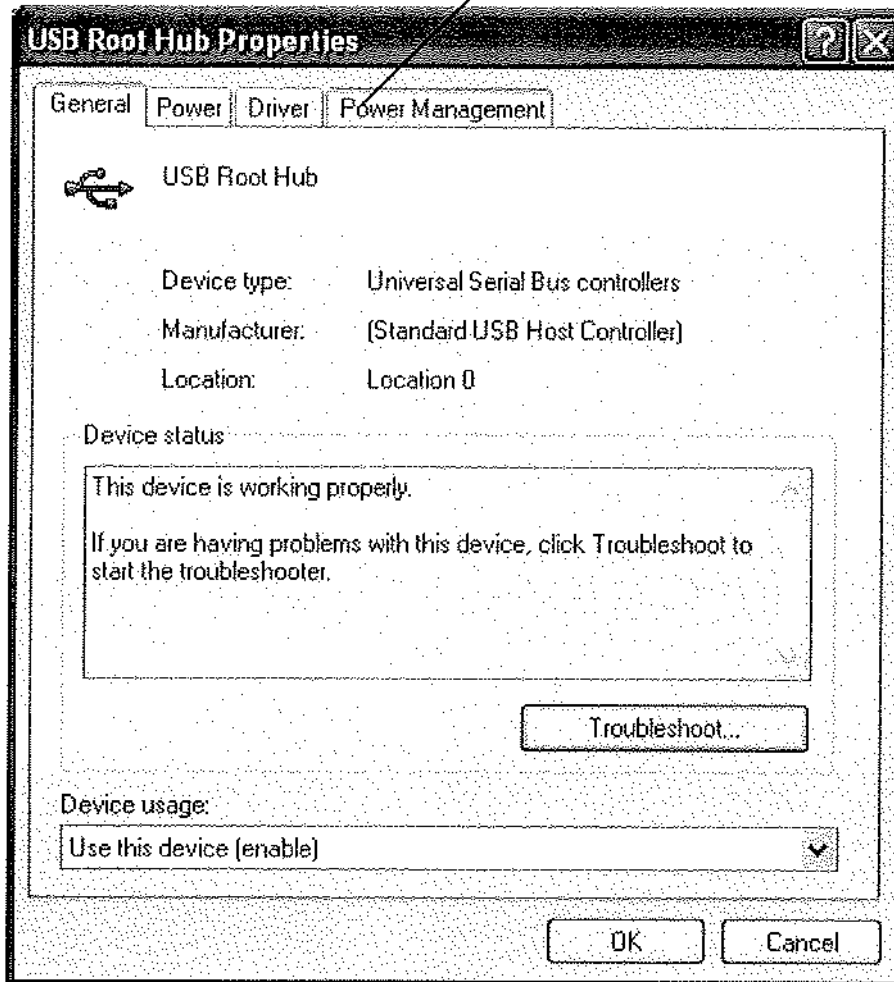


Click on Properties:

## Directions for disabling USB power management in Windows XP

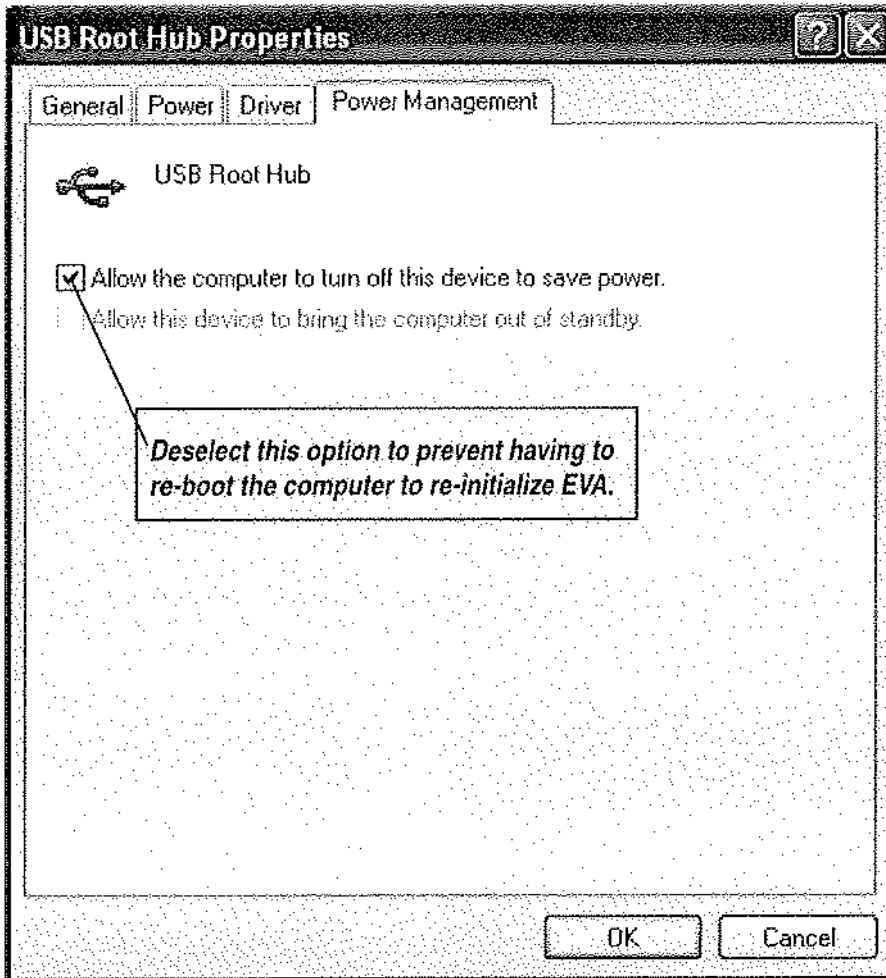
The following window should appear:

Click on the Power Management Tab:



## Directions for disabling USB power management in Windows XP

This window should appear:



Repeat this procedure for all Root Hub devices listed.