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)

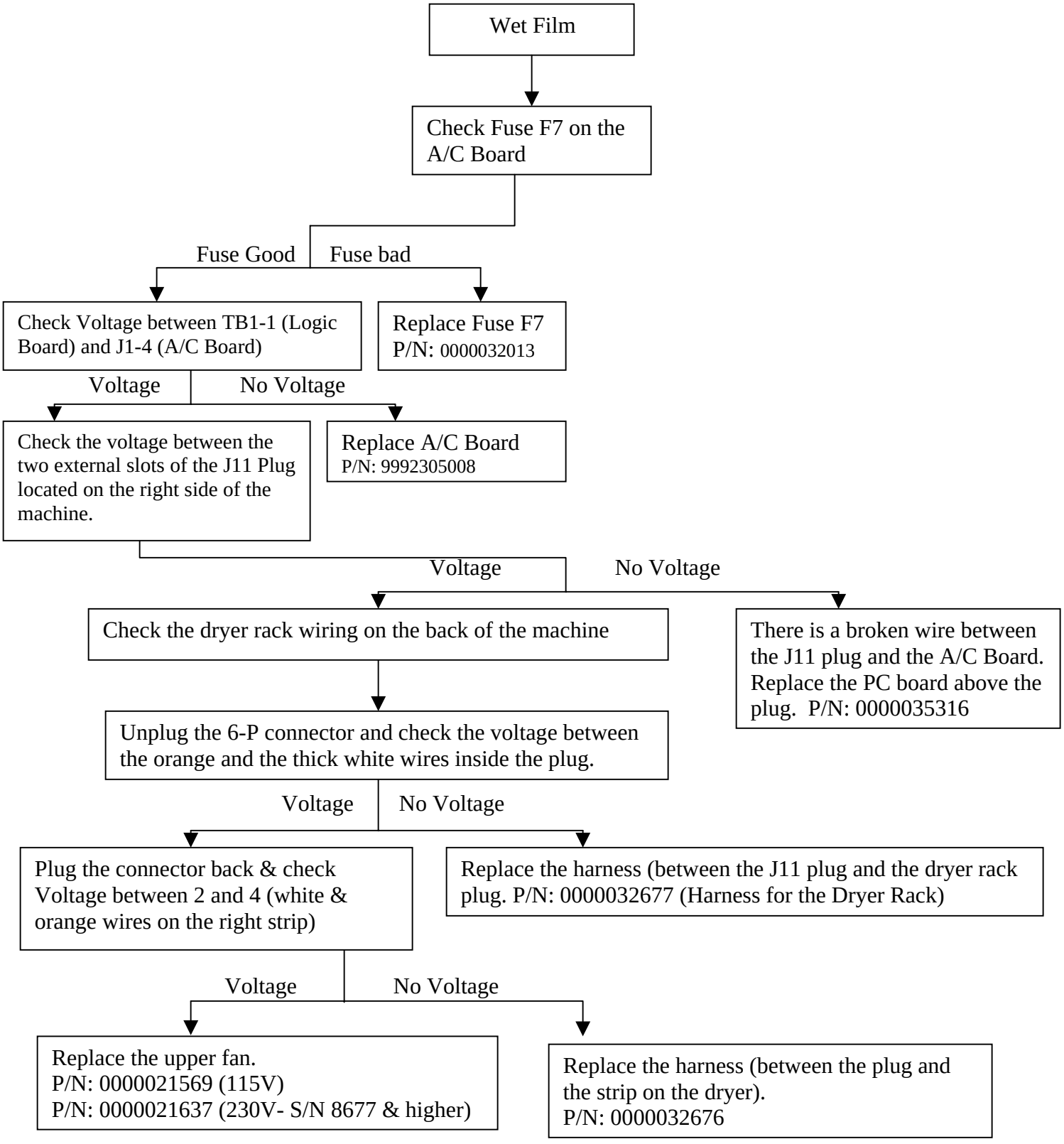
Table of Contents

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

Key

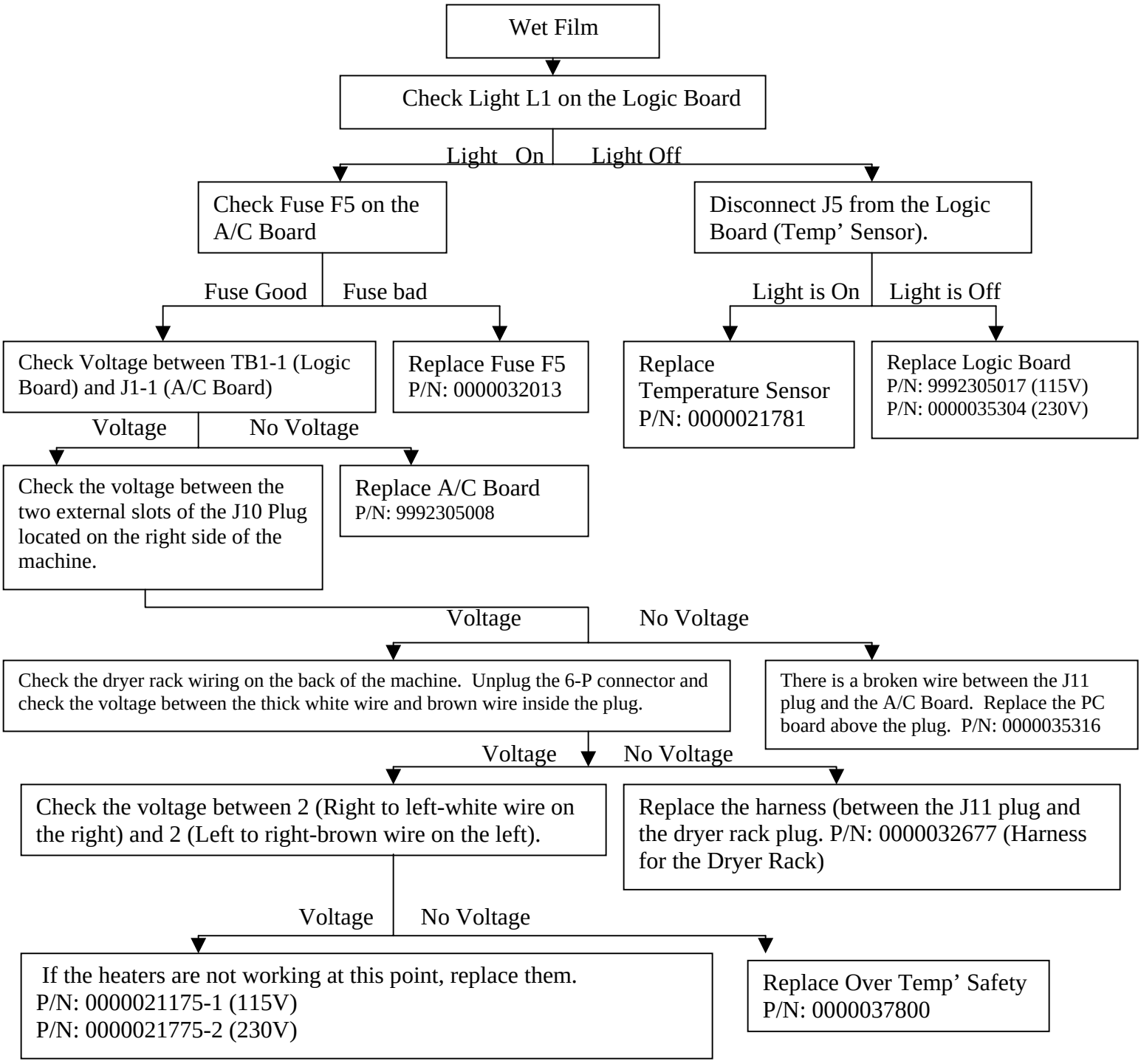
> Greater Than
< Lower Than
= Equal To
≈ About the Same

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



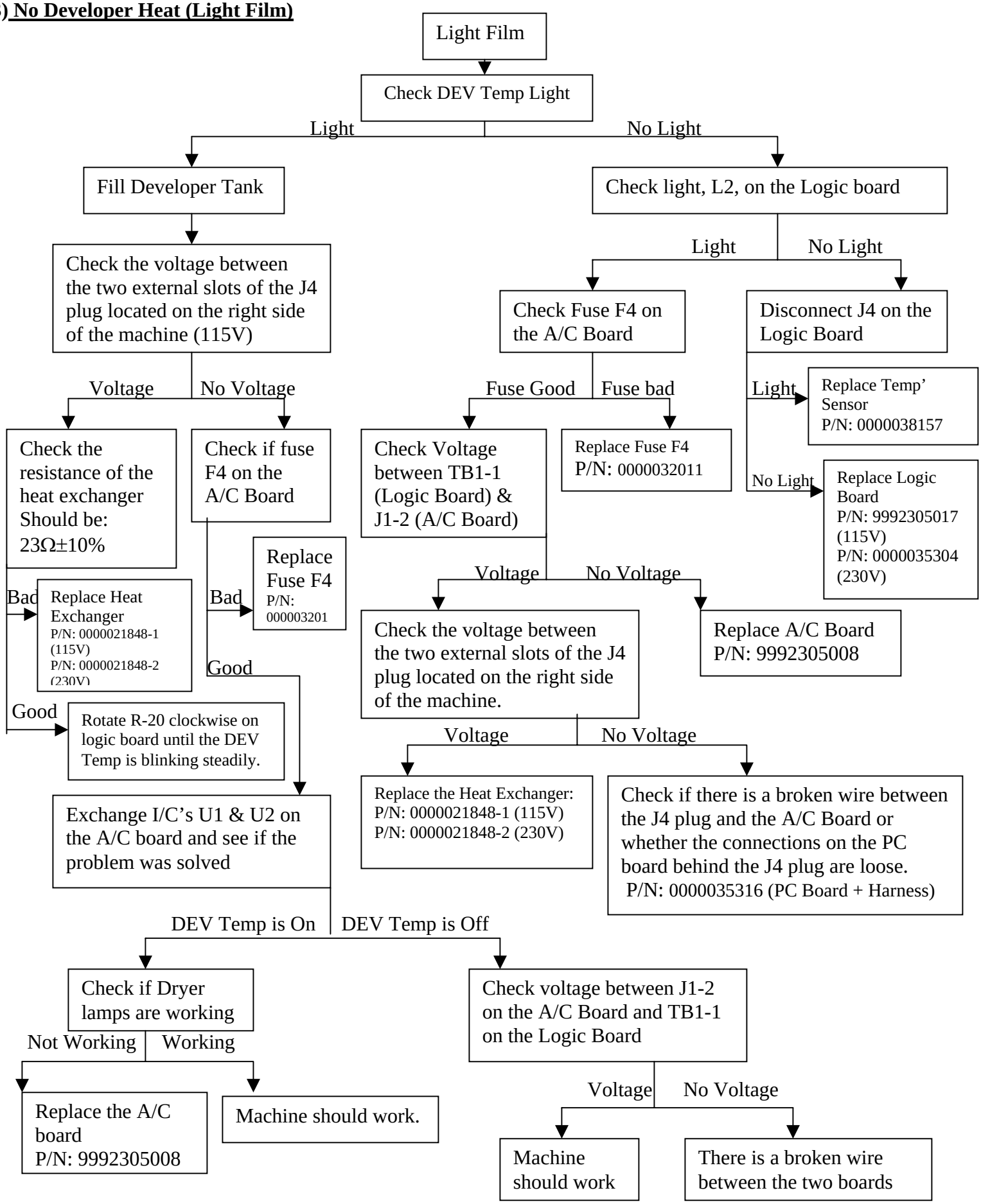
Note: If the dryer is working check / fix replenishment rates:
Weak fixer doesn't harden well and therefore, the film will not dry adequately.

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



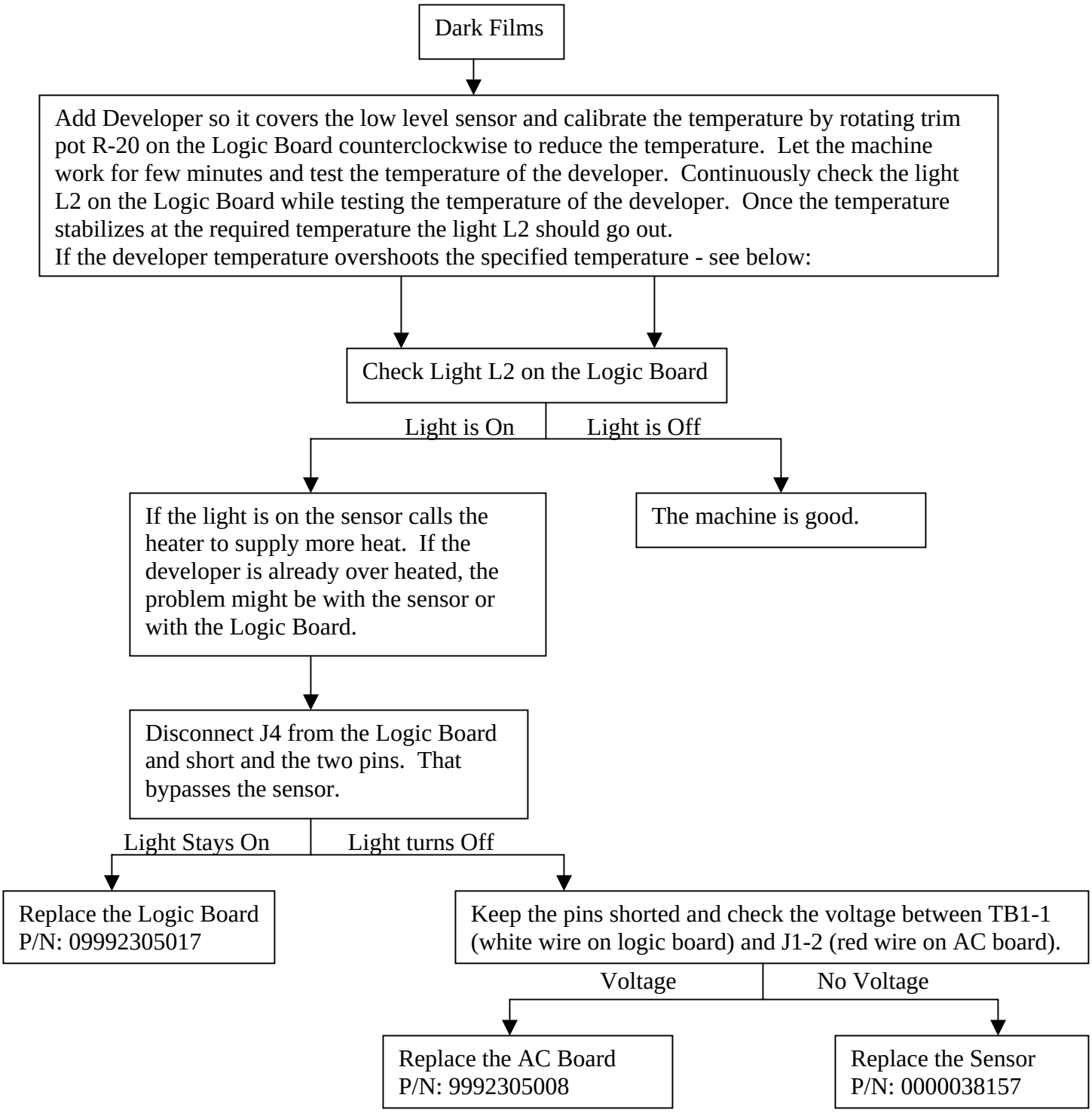
Note: If the dryer is working check / fix replenishment rates:
Weak fixer doesn't harden well and therefore, the film will not dry adequately.

3) No Developer Heat (Light Film)



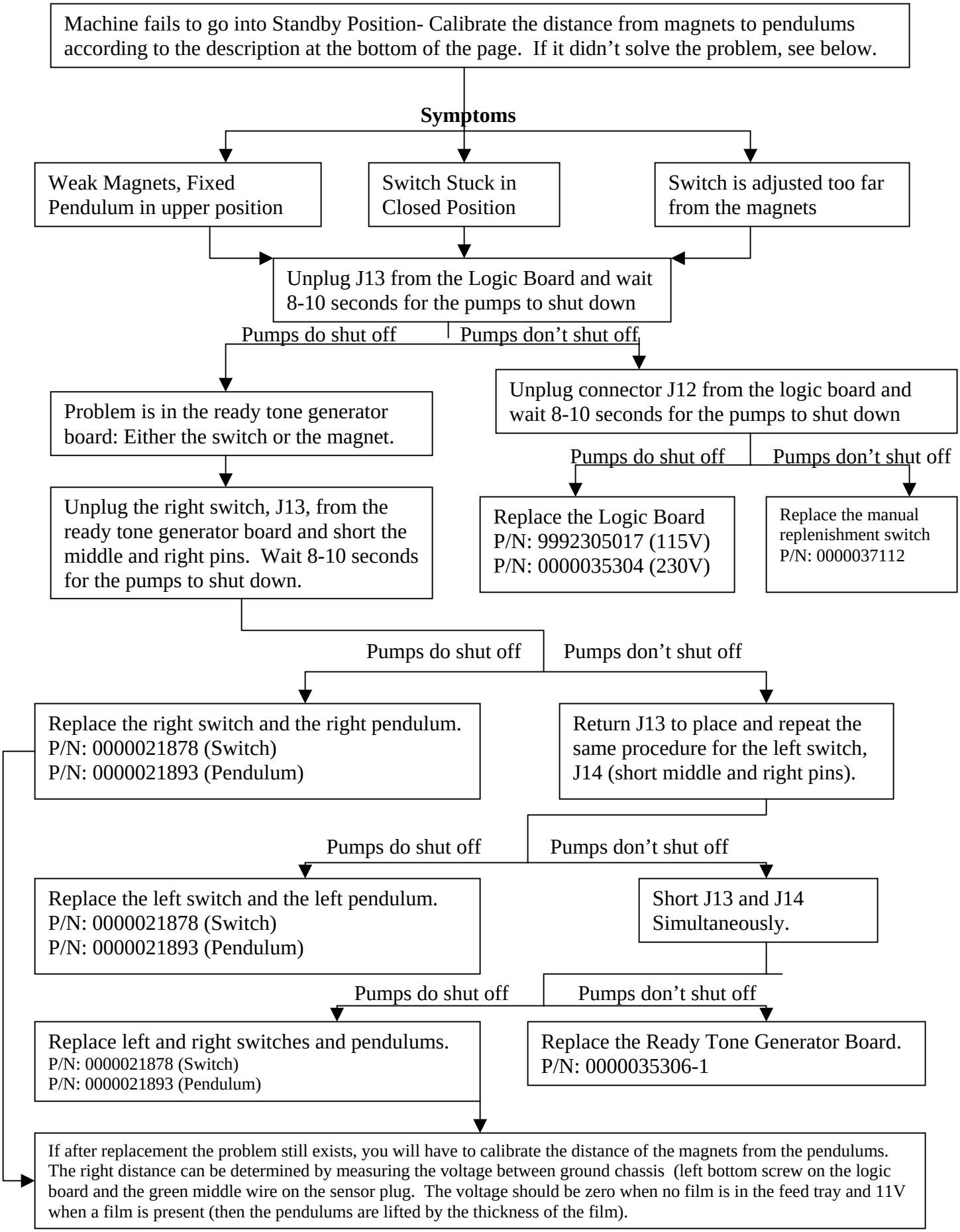
Note: check / fix developer replenishment rates: Weak developer chemistry will not develop well.

4) **Dark Films-Over Heated Developer**

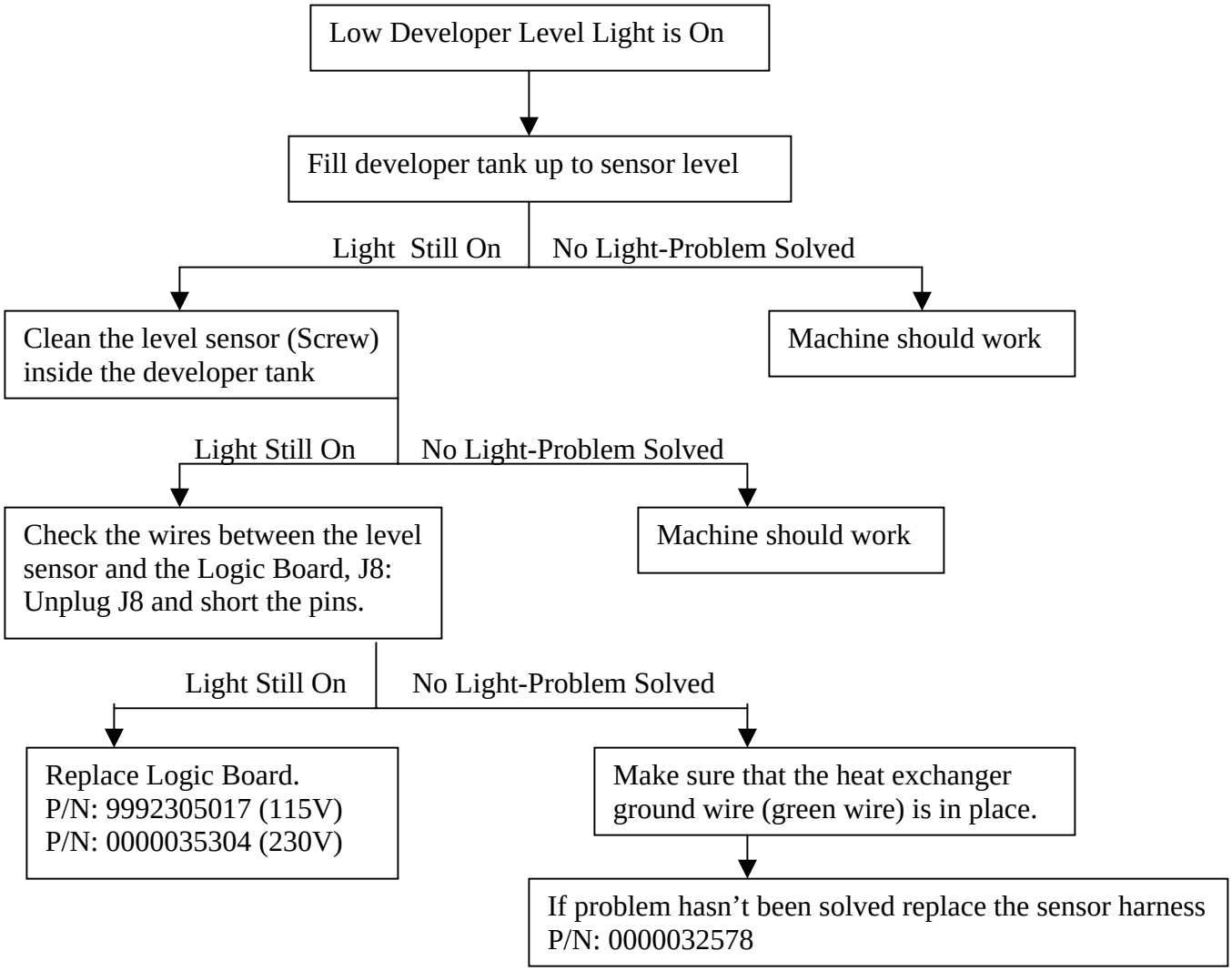


Note: Be sure the darkroom does not have light leaks that will pre-expose the film.

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



6) Low Developer Level Light is always ON



5A)

Q)
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.

7) **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.

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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.

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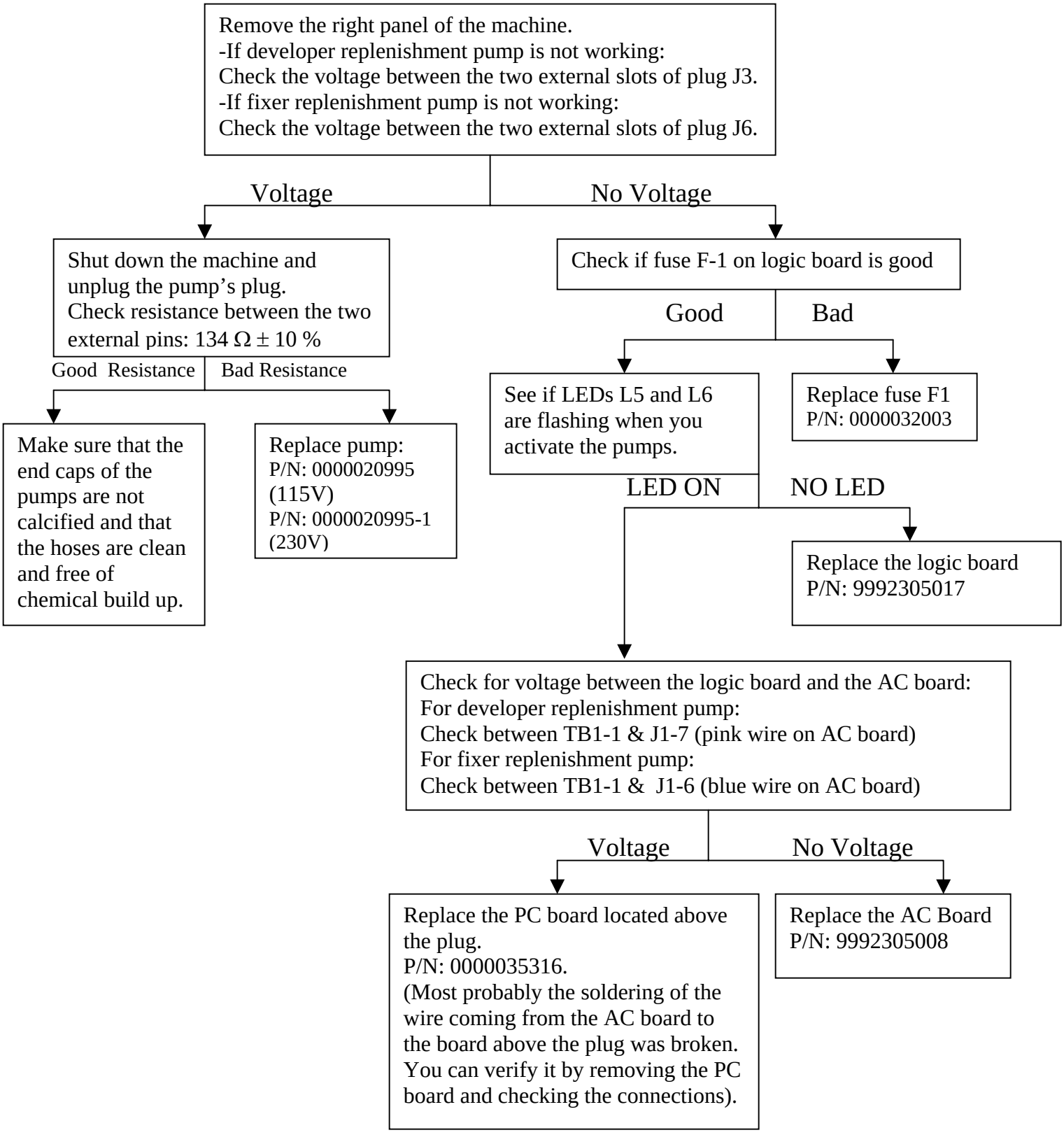
If the re-circulation pump is not working appropriately and the developer flow is too weak than the pump has to be replaced.
P/N: 0000022100 (115V-Newer model, blue/green pump)
P/N: 0000022101 (230V- Newer model, blue/green pump)
P/N: 0000021145 (115V-Older model, red/brown pump)
P/N: 0000021101 (230V-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

8) 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.

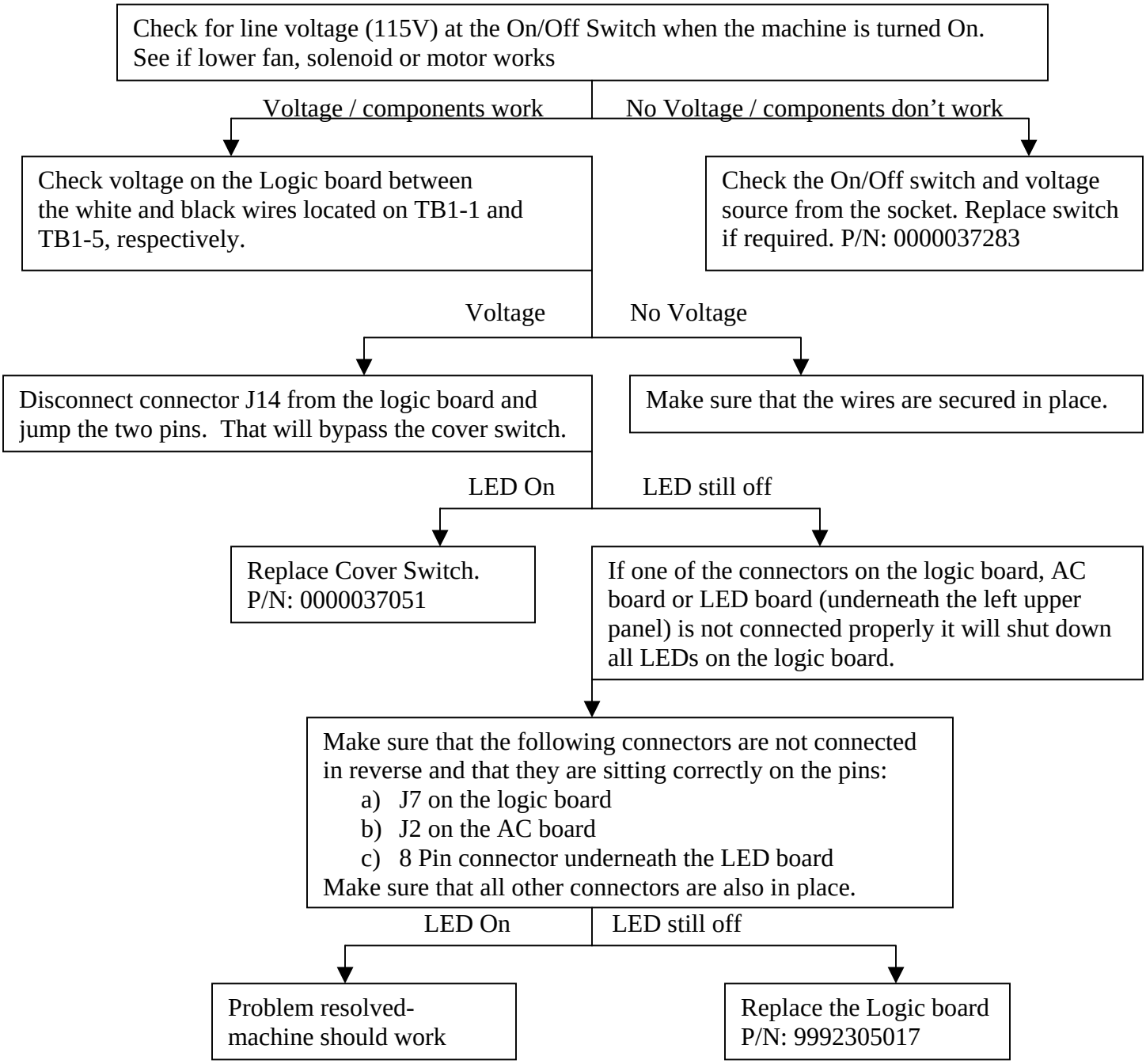
a)
If the temperature of the developer is about 95°F and therefore, the temperature of the fixer cannot be more than that, the chemical could not be evaporating.

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. <u>The Machine Doesn't Come On: No LED on the Logic Board.</u>



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

Turn off the unit and remove the right panel from the processor.

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Disconnect all plugs from the unit and then turn it back on.

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Connect the plugs one by one to determine which is causing the main breaker to be turned off.

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

If only one replenishment pump is working all the time check if the corresponding LED on the logic board in On or Off:
LED L5-Developer Replenishment.
LED L6-Fixer Replenishment

LED OFF

Replace the A/C Board.
P/N: 9992305008

LED ON

If both LEDs are flashing all the time we have two problems:

1. The pumps should be flashing only for 8-10 seconds when a film is inserted.
2. One pump is not working.

To resolve the first problem you should consult with troubleshooting chart number 5.
To resolve the second problem you should consult with troubleshooting chart number 8.

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Mini Medical Resistance
120 Volt

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

Mini Medical Resistance
230 Volt

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

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