



LIFEPAK 20/20e Defibrillator/Monitor

Performance Inspection Procedure Checklist

Model # _____ Department/Location _____

Serial # _____ Performed By _____

Type of PIP: Post-Repair Annual Date _____

Inspection	Pass	Fail	NA	Comments
A Physical Inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Testing				
1 Power On				
a. Confirm the Service indicator is off.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Confirm the device completes the Power On sequence.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2 Date and Time				
Check/set date and time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3 ECG Lead Characteristics				
a. Confirm leads off screen messages.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Record lead II ECG gain (tolerance 36 to 44 mm)	Measured Value _____		<input type="checkbox"/>	
c. Record lead I ECG gain (tolerance 18 to 22 mm)* *(Test Equipment other than 215A/217A may have different output)	Measured Value _____		<input type="checkbox"/>	
d. Record lead V1/C ECG gain (tolerance 36 to 44 mm) (N/A if 3 Lead)	Measured Value _____		<input type="checkbox"/>	
4 Printer Test				
Confirm printed test strip and CHECK PRINTER message.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5 SpO2 Oximeter (if SpO2 option is installed)				
Confirm SpO2 reading is between 90% and 100%.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6 Therapy Impedance Sense				
a. Confirm display of PADDLES LEADS OFF message. (248 Ohms)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Confirm no display of PADDLES LEADS OFF message. (182 Ohms)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7 Therapy User test				
Confirm Device passes User Test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8 Therapy Delivered Energy and Sync				
a. Record Sync R-wave delay (maximum 60 ms):	Measured Value _____		<input type="checkbox"/>	
b. 2 J – Record delivered energy (tolerance 1.0 to 3.0 J).	Measured Value _____		<input type="checkbox"/>	
c. 70 J – Record delivered energy (tolerance 65.1 to 74.9 J).	Measured Value _____		<input type="checkbox"/>	
d. 360 J – Record delivered energy (tolerance 334.8 to 385.2 J).	Measured Value _____		<input type="checkbox"/>	
9 Therapy Paddles ECG Gain and AED mode Test				
a. Record ECG gain (tolerance 36 to 44 mm) (Note: 38 to 50 mm with QED-6)	Measured Value _____		<input type="checkbox"/>	
b. AED / Manual modes check	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10 Therapy Remote Sync Test				
a. Confirm Remote Sync: Sync LED is flashing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Confirm correct response to energy transfer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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Testing (continued)		Pass	Fail	NA	Comments
11	Pacer Option Characteristics (If Pacer option is installed)				
	a. Confirm leads off detection.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	b. 10 ma – Record current (tolerance 5 to 15 ma).	Measured Value _____		<input type="checkbox"/>	
	c. 100 ma – Record current (tolerance 95 to 105 ma).	Measured Value _____		<input type="checkbox"/>	
	d. 200 ma – Record current (tolerance 190 to 210 ma).	Measured Value _____		<input type="checkbox"/>	
	e. Record pulse width (tolerance 19.0 to 21.0 ms).	Measured Value _____		<input type="checkbox"/>	
12	Ground Resistance Test				
	Record Ground Resistance Test (Less than 0.5 Ohms).	Measured Value _____		<input type="checkbox"/>	
13	Chassis Leakage Current				
	a. Neutral Closed, Polarity Normal Lead-Chassis, N.C. (less than 90 μ A)	Measured Value _____		<input type="checkbox"/>	
	b. Neutral Closed, Polarity Normal, Lead-Chassis, S.F.C. (less than 270 μ A @ 120 Vac).(less than 450 μ A @ 240 Vac).	Measured Value _____		<input type="checkbox"/>	
	c. Neutral Closed, Polarity Reversed, Lead-Chassis, N.C. (less than 90 μ A)	Measured Value _____		<input type="checkbox"/>	
	d. Neutral Closed, Polarity Reversed, Lead-Chassis, S.F.C. (less than 270 μ A @ 120 Vac).(less than 450 μ A @ 240 Vac).	Measured Value _____		<input type="checkbox"/>	
14	Earth Leakage Current				
	a. Neutral Closed, Polarity Normal, Earth (less than 450 μ A)	Measured Value _____		<input type="checkbox"/>	
	b. Neutral Closed, Polarity Reversed, Earth (less than 450 μ A)	Measured Value _____		<input type="checkbox"/>	
	c. Neutral Open, Polarity Normal, Earth (less than 900 μ A)	Measured Value _____		<input type="checkbox"/>	
	d. Neutral Open, Polarity Reversed, Earth (less than 900 μ A)	Measured Value _____		<input type="checkbox"/>	
15	ECG Lead Leakage Current				
	a. Neutral Closed, Polarity Normal, Lead-Gnd, N.C. (less than 10 μ A)	Measured Value _____		<input type="checkbox"/>	
	b. Neutral Closed, Polarity Normal, Lead-Gnd, S.F.C. (less than 50 μ A)	Measured Value _____		<input type="checkbox"/>	
	c. Neutral Closed, Polarity Reversed, Lead-Gnd, N.C. (less than 10 μ A)	Measured Value _____		<input type="checkbox"/>	
	d. Neutral Closed, Polarity Reversed, Lead-Gnd, S.F.C. (less than 50 μ A)	Measured Value _____		<input type="checkbox"/>	
	e. Neutral Closed, Polarity Normal, Lead-Lead, N.C. (RA, LA, LL) (less than 10 μ A)	Measured Value _____		<input type="checkbox"/>	
	f. Neutral Closed, Polarity Normal, Lead-Lead, S.F.C. (RA, LA, LL) (less than 50 μ A)	Measured Value _____		<input type="checkbox"/>	
	g. Neutral Closed, Polarity Reversed, Lead-Lead, N.C. (RA, LA, LL) (less than 10 μ A)	Measured Value _____		<input type="checkbox"/>	
	h. Neutral Closed, Polarity Reversed, Lead-Lead, S.F.C. (RA, LA, LL) (less than 50 μ A)	Measured Value _____		<input type="checkbox"/>	
	i. Neutral Closed, Polarity Normal, Lead-Lead, N.C. (RL, C for 5-wire only) (less than 10 μ A)	Measured Value _____		<input type="checkbox"/>	
	j. Neutral Closed, Polarity Normal, Lead-Lead, S.F.C. (RL, C for 5-wire only) (less than 50 μ A)	Measured Value _____		<input type="checkbox"/>	
	k. Neutral Closed, Polarity Reversed, Lead-Lead, N.C. (RL, C for 5-wire only) (less than 10 μ A)	Measured Value _____		<input type="checkbox"/>	
	l. Neutral Closed, Polarity Reversed, Lead-Lead, S.F.C. (RL, C for 5-wire only) (less than 50 μ A)	Measured Value _____		<input type="checkbox"/>	
	m. Neutral Closed, Polarity Normal, Lead Iso (less than 45 μ A)	Measured Value _____		<input type="checkbox"/>	

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Testing (continued)		Pass	Fail	NA	Comments
16	SpO2 Leakage Current (If SpO2 option is installed) Neutral Closed, Polarity Normal, Lead Iso (less than 90 µA @ 120Vac) (less than 450 µA @ 240Vac)	Measured Value _____		<input type="checkbox"/>	
17	Therapy Leakage Current				
a.	Neutral Closed, Polarity Normal, Lead-Gnd, N.C. (less than 10 µA)	Measured Value _____		<input type="checkbox"/>	
b.	Neutral Closed, Polarity Normal, Lead-Gnd, S.F.C. (less than 50 µA)	Measured Value _____		<input type="checkbox"/>	
c.	Neutral Closed, Polarity Reversed, Lead-Gnd, N.C. (less than 10 µA)	Measured Value _____		<input type="checkbox"/>	
d.	Neutral Closed, Polarity Reversed, Lead-Gnd, S.F.C. (less than 50 µA)	Measured Value _____		<input type="checkbox"/>	
e.	Neutral Closed, Polarity Normal, Lead-Lead, N.C. (RL, C/V1) (less than 10 µA)	Measured Value _____		<input type="checkbox"/>	
f.	Neutral Closed, Polarity Normal, Lead-Lead, S.F.C. (RL, C/V1) (less than 50 µA)	Measured Value _____		<input type="checkbox"/>	
g.	Neutral Closed, Polarity Reversed, Lead-Lead, N.C. (RL, C/V1) (less than 10 µA)	Measured Value _____		<input type="checkbox"/>	
h.	Neutral Closed, Polarity Reversed, Lead-Lead, S.F.C. (RL, C/V1) (less than 50 µA)	Measured Value _____		<input type="checkbox"/>	
i.	Neutral Closed, Polarity Normal, Lead Iso (less than 90 µA @ 120Vac) (less than 450 µA @ 240Vac)	Measured Value _____		<input type="checkbox"/>	
18	Record Operating Data (optional)				
	360J shocks	<input type="text"/>	_____	Power Cycle Count	_____
	225 – 325J shocks	<input type="text"/>	_____	Pacing Count (if installed)	_____
	100 – 200J shocks	<input type="text"/>	_____	Shock Count	_____
	0 – 70J shocks	<input type="text"/>	_____	Power On Time	_____
				Printer On Time	_____
				SpO2 Operating Time (if installed)	_____
	Total Shocks		_____		
19	Contrast Test (optional test)				
	Confirm contrast test.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
20	Pixel Test (optional test)				
	Confirm pixel test.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
21	Keypads Test (optional test)				
	Confirm all control text boxes are highlighted.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
22	Audio Test (optional test)				
	Confirm voice messages and tones are clear and not distorted.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
23	ECG Analog Output (optional test)				
	Record signal amplitude (tolerance 0.85 to 1.15 Vp-p).	Measured Value _____		<input type="checkbox"/>	

Comments: