LIFEPAK®15
Performance Inspection Procedure (PIP) Checklist

Model #_____ **Department/Location**_____
Serial # _____ **Performed By** _____
Type of PIP **Post-Repair** ☐ **Annual** ☐ **Date** _____

Manual Mode Access

1. Manual Mode Access

a. Record customer-selected MANUAL ACCESS configuration _____

Exterior Physical Inspection

2. Exterior physical inspection	**Pass**	**Fail**	**NA**	**Comments**
a. Device exterior damage (general)	☐	☐	☐	_____
b. Check device for loose/rattling hardware	☐	☐	☐	_____
c. Check for damaged or missing rubber feet	☐	☐	☐	_____
d. Inspect battery pins as specified in the Service Manual	☐	☐	☐	_____
e. Check if battery pins were replaced during this servicing event	☐	Battery Pins Replaced		
f. Inspect therapy cable pins and connector	☐	☐	☐	_____
g. Confirm spring button on therapy connector is functional	☐	☐	☐	_____
h. Inspect device connectors for damage	☐	☐	☐	_____
i. Inspect keypads and overlays for damage	☐	☐	☐	_____
j. Check device accessories for condition and expiration dates	☐	☐	☐	_____
k. Inspect carrying case and carrying strap for damage	☐	☐	☐	_____

3. Device Setup

a. Insert two fully charged Li-ion batteries into the device

b. Install a roll of 100-mm printer paper

c. Connect therapy cable or standard paddles to the device ☐ **Completed** _____

4. **Power On/Self –Test**

a. All items are conforming ☐ ☐ ☐ _____

5. Auxiliary Power Switching (if Auxiliary Power Connector is installed)

a. Battery icons appear but neither is highlighted. ☐ ☐ ☐ _____

6.	**Power Source Management**				
	a. Confirm battery status indicator switching	☐	☐	☐	_____
7.	**User Test and Date/Time Verification**				
	a. Confirm device passes User Test	☐	☐	☐	_____
	b. Confirm Time and Date are correct	☐	☐	☐	_____
Miscellaneous Function					
8.	**Temperature Calibration Check Test** (if Temp option is installed)	**Pass**	**Fail**	**NA**	**Comments**
	c. Confirm Temperature Cal Check complete	☐	☐	☐	_____
9.	**CO2 Tests** (if CO2 option is installed)				
	a. Confirm change in vacuum reading is less than 15 mmHg	☐	☐	☐	_____
	b. Record CO2 concentration reading is 5.0% ±0.5%	Measured Value_____		☐	_____
10.	**NIBP Tests** (if NIBP option is installed)				
	a. Confirm LEAKAGE TEST OK message	☐	☐	☐	_____
	b. Confirm 50 mmHg readings agree within ±20 mmHg	☐	☐	☐	_____
	c. Confirm 150 mmHg readings agree within ±20 mmHg	☐	☐	☐	_____
	d. Confirm the overpressure switch activates at 290 ±20 mmHg	☐	☐	☐	_____
11.	**25 mm/s Speed Printer Test**				
	a. Confirm printer test strip and CHECK PRINTER message	☐	☐	☐	_____
12.	**12.5 mm/s Speed Printer Test**				
	a. Confirm printer 12.5 mm/s test strip	☐	☐	☐	_____
13.	**Keypad Test**				
	a. Confirm all control text boxes are highlighted and TEST COMPLETE message appears	☐	☐	☐	_____
14.	**Audio Test**				
	a. Confirm voice messages and tones are clear and not distorted	☐	☐	☐	_____
15.	**Invasive Blood Pressure Verification** (if IP option is installed)				
	a. Confirm P1 pressure channel zero	☐	☐	☐	_____
	b. Record P1 pressure reading of 250 ±8 mmHg	Measured Value_____		☐	_____
	c. Record P1 pressure reading of 100 ±5 mmHg	Measured Value_____		☐	_____
	d. Record P1 pressure reading of 20 ±3 mmHg	Measured Value_____		☐	_____

e.	Record P1 pressure reading of -20 ±3 mmHg	Measured Value_____		☐	_____
f.	Confirm P2 pressure channel zero	☐	☐	☐	_____
g.	Record P2 pressure reading of 250 ±8 mmHg	Measured Value_____		☐	_____
h.	Record P2 pressure reading of 100 ±5 mmHg	Measured Value_____		☐	_____
i.	Record P2 pressure reading of 20 ±3 mmHg	Measured Value_____		☐	_____
j.	Record P2 pressure reading of -20 ±3 mmHg	Measured Value_____		☐	_____

16. **SpO2/SpCO/SpMet Tests**	Pass	Fail	NA	Comments
a. Confirm SpO2 reading is between 50% and 100% (if SpO2 is installed)	☐	☐	☐	_____
b. Confirm SpCO reading is between 0% and 40% (if SpCO is installed)	☐	☐	☐	_____
c. Confirm SpMet reading is between 0% and 15% (if SpMet is installed)	☐	☐	☐	_____

17. Record Operating Data (Optional)

Total Shocks:

360J Shocks ☐ _____

225-325J Shocks ☐ _____

0-200J Shocks ☐ _____

Fault Messages _____

Power Cycle Count _____

Pacing Count _____

Shock Count _____

Power On Time _____

Printer On Time _____

SPO2 Operating Time (if installed) _____

CO2 Operating Time (if installed) _____

NIBP Inflation Cycles (if installed) _____

ECG Performance Testing

18. **ECG Tests** (12-lead, 3-lead or 5-wire ECG tests)	Pass	Fail	NA	Comments
a. Confirm LEADS-OFF screen messages	☐	☐	☐	
b. Record Lead I gain (tolerance 25 to 31 mm)	Measured Value_____		☐	_____
c. Record Lead II gain (tolerance 36 to 44 mm)	Measured Value_____		☐	_____
d. Record Lead V1/C gain (tolerance 36 to 44 mm) (5-wire, 12-lead)	Measured Value_____		☐	_____

e.	Record Lead V2 gain (tolerance 36 to 44 mm) (12-lead)	Measured Value_____	☐	_____
f.	Record Lead V3 gain (tolerance 36 to 44 mm) (12-lead)	Measured Value_____	☐	_____
g.	Record Lead V4 gain (tolerance 36 to 44 mm) (12-lead)	Measured Value_____	☐	_____
h.	Record Lead V5 gain (tolerance 36 to 44 mm) (12-lead)	Measured Value_____	☐	_____
i.	Record Lead V6 gain (tolerance 36 to 44 mm) (12-lead)	Measured Value_____	☐	_____

19. **ECG Analog Output** (optional, perform as required)

a.	Record signal amplitude (tolerance 0.90 to 1.10 Vp-p)	Measured Value_____	☐	_____

Defibrillator/Pacing Testing

		Pass	Fail	NA	Comments
20.	**Delivered Energy Test**				
a.	10 J – Record delivered energy (tolerance 9.1 to 10.9 J)	Measured Value_____		☐	_____
b.	200 J – Record delivered energy (tolerance 186.0 to 214.0 J)	Measured Value_____		☐	_____
c.	360 J – Record delivered energy (tolerance 334.9 to 384.9 J)	Measured Value_____		☐	_____
21.	**Charge Time to 360J Test**				
a.	Confirm device charges to 360 J in less than 10 seconds	Measured Value_____		☐	_____
22.	**Synchronous Cardio version Test**				
a.	Record Sync delay (maximum 60ms)	Measured Value_____		☐	_____
23.	**Therapy ECG Characteristics**				
a.	Record ECG paddle lead gain (tolerance 1mV = 36 to 44 mm)	Measured Value_____		☐	_____
b.	Fast-Restore baseline in 0.5 seconds	☐	☐	☐	_____
c.	Fast-Restore amplitude restored is >50% within 3 seconds	☐	☐	☐	_____
d.	Positive R-wave test	☐	☐	☐	_____
24.	**Standard Paddles User Test** (N/A for QUIK-COMBO-only device)				
a.	Confirm device passes test	☐	☐	☐	_____
25.	**Pacer Option Characteristics**				
a.	Confirm leads-off detection	☐	☐	☐	_____
b.	10 mA– Record current (tolerance 5 to 15 mA)	Measured Value_____		☐	_____
c.	100 mA – Record current (tolerance 91 to 109 mA)	Measured Value_____		☐	_____
d.	200 mA – Record current (tolerance 181 to 219 mA)	Measured Value_____		☐	_____
e.	Record pulse width (tolerance 19.2 to 20.8 ms)	Measured Value_____		☐	_____

26. Patient Impedance Test

a. Verify the PADDLES LEADS OFF message is not visible (50 ohms)	☐	☐	☐	_____
b. Verify the device displays PADDLES LEADS OFF message (370 ohms)	☐	☐	☐	_____
c. Verify the PADDLES LEADS OFF message is not visible (238 ohms)	☐	☐	☐	_____

Data Management

27. **Bluetooth Wireless Technology** (if Bluetooth option is installed) **a.** Verify Bluetooth Pairing Successful	☐	☐	☐	_____

Leakage Current Test

28. Leakage Test Battery Powered

	Pass	Fail	NA	Comments
a. ECG Direct Applied Part at 120 or 240 VAC Polarity **NC/RM**, Condition **Normal**, (5 µA - 45 µA)	Measured Value_____		☐	_____
b. Therapy Direct Applied Part at 120 or 240 VAC Polarity **NC/RM**, Condition **Normal**, (5 µA - 2625 µA)	Measured Value_____		☐	_____
c. SpO2 Direct Applied Part at 120 or 240 VAC Polarity **NC/RM**, Condition **Normal**, (5 µA - 2625 µA)	Measured Value_____		☐	_____

29. Leakage Test AC Powered Device at 120VAC (If Aux power is installed)

a. Direct Equipment Leakage at 120 VAC Polarity **NC/RM**, Condition **Open Earth**, (15 µA - 270 µA)	Measured Value_____		☐	_____
b. ECG Direct Applied Part at 120 VAC Polarity **NC/RM**, Condition **Normal**, (5 µA - 45 µA)	Measured Value_____		☐	_____
c. Therapy Direct Applied Part at 120 VAC Polarity **NC/RM**, Condition **Normal**, (5 µA - 2625 µA)	Measured Value_____		☐	_____
d. SpO2 Direct Applied Part at 120 VAC Polarity **NC/RM**, Condition **Normal**, (5 µA - 2625 µA)	Measured Value_____		☐	_____

30. Leakage Test AC Powered Device at 240 VAC (if Aux power is installed)

a. Direct Equipment Leakage at 240 VAC Polarity **NC/RM**, Condition **Open Earth**, (15 µA - 450 µA)	Measured Value_____		☐	_____
b. ECG Direct Applied Part at 240 VAC Polarity **NC/RM**, Condition **Normal**, (5 µA - 45 µA)	Measured Value_____		☐	_____

c. Therapy Direct Applied Part at 240 VAC

Polarity **NC/RM**, Condition **Normal**, (5 µA - 2625 µA) Measured Value_____ ☐ _____

d. SpO2 Direct Applied Part at 240 VAC

Polarity **NC/RM**, Condition **Normal**, (5 µA - 2625 µA) Measured Value_____ ☐ _____

31. LIFEPAK 15 Maintenance Instruction **Pass** ☐ **Completed** _____

a. Maintenance prompt disabled or reset

Comments: