

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)	<input type="checkbox"/>	<input type="checkbox"/>		_____
b. Check device for loose/rattling hardware	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c. Check for damaged or missing rubber feet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d. Inspect battery pins as specified in the Service Manual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
e. Check if battery pins were replaced during this servicing event	<input type="checkbox"/>	Battery Pins Replaced		
f. Inspect therapy cable pins and connector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
g. Confirm spring button on therapy connector is functional	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
h. Inspect device connectors for damage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
i. Inspect keypads and overlays for damage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
j. Check device accessories for condition and expiration dates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
k. Inspect carrying case and carrying strap for damage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

- 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 Test** (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. CO2 Tests (if CO2 option is installed)	Pass	Fail	NA	Comments
a. Confirm change in vacuum reading is less than 15 mmHg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b. Record CO2 concentration reading is 5.0% \pm 0.5% <small>Measured Value</small> _____			<input type="checkbox"/>	_____
c. Was a successful Defibrillator Energy Calibration performed?	Yes	No	NA	_____

9. Temperature Calibration Check Test (if Temp option is installed)	Pass	Fail	NA	Comments
a. Confirm Temperature Cal Check complete.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b. Was a successful Temperature Calibration performed?	Yes	No	NA	_____
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

10. NIBP Tests (if NIBP option is installed)	Pass	Fail	NA	Comments
a. Confirm LEAKAGE TEST OK message	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b. Confirm 50 mmHg readings agree within \pm 20 mmHg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c. Confirm 150 mmHg readings agree within \pm 20 mmHg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d. Confirm the overpressure switch activates at 290 \pm 20 mmHg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

11. 25 mm/s Speed Printer Test	Pass	Fail	NA	Comments
a. Confirm printer test strip and CHECK PRINTER message	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b. Was a successful Printer Calibration Test at 25mm performed?	Yes	No	NA	_____
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

12. 12.5 mm/s Speed Printer Test	Pass	Fail	NA	Comments
a. Confirm printer 12.5 mm/s test strip	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b. Was a successful Printer Calibration Test at 12.5mm performed?	Yes	No	NA	_____
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

13. Keypad Test	Pass	Fail	NA	Comments
a. Confirm all control text boxes are highlighted and TEST COMPLETE message appears	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

14. Audio Test	Pass	Fail	NA	Comments
a. Confirm voice messages and tones are clear and not distorted.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

15. Record Operating Data (Optional)				
Total Shocks:			Fault Messages	_____
			Power Cycle Count	_____
360J Shocks	<input type="text"/>	_____	Pacing Count	_____
			Shock Count	_____
225-325J Shocks	<input type="text"/>	_____	Power On Time	_____
			Printer On Time	_____
0-200J Shocks	<input type="text"/>	_____	SPO2 Operating Time (if installed)	_____
			CO2 Operating Time (if installed)	_____
			NIBP Inflation Cycles (if installed)	_____

16. Invasive Blood Pressure Verification (if IP option is installed)				
	Pass	Fail	NA	Comments
a. Confirm P1 pressure channel zero	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b. Record P1 pressure reading of 250 ±8 mmHg			<input type="checkbox"/>	Measured Value _____
c. Record P1 pressure reading of 100 ±5 mmHg			<input type="checkbox"/>	Measured Value _____
d. Record P1 pressure reading of 20 ±3 mmHg			<input type="checkbox"/>	Measured Value _____
e. Record P1 pressure reading of -20 ±3 mmHg			<input type="checkbox"/>	Measured Value _____
f. Confirm P2 pressure channel zero	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
g. Record P2 pressure reading of 250 ±8 mmHg			<input type="checkbox"/>	Measured Value _____
h. Record P2 pressure reading of 100 ±5 mmHg			<input type="checkbox"/>	Measured Value _____
i. Record P2 pressure reading of 20 ±3 mmHg			<input type="checkbox"/>	Measured Value _____
j. Record P2 pressure reading of -20 ±3 mmHg			<input type="checkbox"/>	Measured Value _____

17. SpO2/SpCO/SpMet Tests		Pass	Fail	NA	Comments
a.	Confirm SpO2 reading is between 50% and 100% (if SpO2 is installed)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b.	Confirm SpCO reading is between 0% and 40% (if SpCO is installed)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c.	Confirm SpMet reading is between 0% and 15% (if SpMet is installed)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Data Management

18. Bluetooth Wireless Technology (if Bluetooth option is installed)		Pass	Fail	NA	Comments
a.	Verify Bluetooth Pairing Successful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

ECG Performance Testing

19. ECG Tests (12-lead, 3-lead or 5-wire ECG tests)		Pass	Fail	NA	Comments
a.	Confirm LEADS-OFF screen messages	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b.	Record Lead I gain (tolerance 25 to 31 mm)	Measured Value _____		<input type="checkbox"/>	_____
c.	Record Lead II gain (tolerance 36 to 44 mm)	Measured Value _____		<input type="checkbox"/>	_____
d.	Record Lead V1/C gain (tolerance 36 to 44 mm) (5-wire, 12-lead)	Measured Value _____		<input type="checkbox"/>	_____
e.	Record Lead V2 gain (tolerance 36 to 44 mm) (12-lead)	Measured Value _____		<input type="checkbox"/>	_____
f.	Record Lead V3 gain (tolerance 36 to 44 mm) (12-lead)	Measured Value _____		<input type="checkbox"/>	_____
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 _____			_____

20. ECG Analog Output (optional, perform as required)					
a.	Record signal amplitude (tolerance 0.90 to 1.10 Vp-p)	Measured Value _____			_____

Defibrillator/Pacing Testing

21. Delivered Energy Test		Pass	Fail	NA	Comments
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 _____			_____
d.	Was a successful Defibrillator Energy Calibration performed?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>	Comments _____

22. Synchronous Cardioversion Test				NA
a. Record Sync delay (maximum 60ms)	Measured Value _____			_____

23. Charge Time to 360J Test				
a. Confirm device charges to 360 J in less than 10 seconds	Measured Value _____			_____

24. Therapy ECG Characteristics		Pass	Fail	NA	
a. Record ECG paddle lead gain (tolerance 1mV = 36 to 44 mm)	Measured Value _____				_____
b. Fast-Restore baseline in 0.5 seconds		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c. Fast-Restore amplitude restored is >50% within 3 seconds		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d. Positive R-wave test		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

25. Standard Paddles User Test (N/A for QUIK-COMBO-only device)					
a. Confirm device passes test		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

26. Pacer Option Characteristics					
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 91 to 109 mA)	Measured Value _____			<input type="checkbox"/>	_____
d. 200 mA – Record current (tolerance 181 to 219 mA)	Measured Value _____			<input type="checkbox"/>	_____
e. Record pulse width (tolerance 19.2 to 20.8 ms)	Measured Value _____			<input type="checkbox"/>	_____
f. Was a successful Pacer Self-Calibration Test performed?		Yes	No	NA	
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

27. Patient Impedance Test		Pass	Fail	NA	Comments
a. Verify the PADDLES LEADS OFF message is not visible (50 ohms)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b. Verify the device displays PADDLES LEADS OFF message (370 ohms)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c. Verify the PADDLES LEADS OFF message is not visible (238 ohms)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

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 _____			<input type="checkbox"/>	_____
b. Therapy Direct Applied Part at 120 or 240 VAC Polarity NC/RM , Condition Normal , (5 µA - 2625 µA)	Measured Value _____			<input type="checkbox"/>	_____

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**

a. Maintenance prompt disabled or reset **Pass** **Completed** _____

Comments: