LIFEPAK® 15
Performance Inspection Procedure (PIP) Checklist

stryker

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	**Pass**	**Fail**	**NA**	**Comments**
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	**Pass**	**Fail**	**NA**	**Comments**
a. All items are conforming	☐	☐	☐	_____

5. Auxiliary Power Switching Test (if Auxiliary Power Connector is installed)	**Pass**	**Fail**	**NA**	
a. Battery icons appear but neither is highlighted.	☐	☐	☐	_____

6. Power Source Management	Pass	Fail	NA	
a. Confirm battery status indicator switching	☐	☐	☐	_____

7. User Test and Date/Time Verification	Pass	Fail	NA	
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	☐	☐	☐	_____
b. Record CO2 concentration reading is 5.0% ±0.5% Measured Value_____			☐	_____
c. Was a successful CO2 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.	☐	☐	☐	_____
b. Was a successful Temperature Calibration performed?	**Yes**	**No**	**NA**	
	☐	☐	☐	_____

10. **NIBP Tests** (if NIBP option is installed)	Pass	Fail	NA	Comments
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	Pass	Fail	NA	Comments
a. Confirm printer test strip and CHECK PRINTER message	☐	☐	☐	_____
b. Was a successful Printer Calibration Test at 25mm performed?	**Yes**	**No**	**NA**	
	☐	☐	☐	_____

12. 12.5 mm/s Speed Printer Test	Pass	Fail	NA	Comments
a. Confirm printer 12.5 mm/s test strip	☐	☐	☐	_____
b. Was a successful Printer Calibration Test at 12.5mm performed?	**Yes**	**No**	**NA**	
	☐	☐	☐	_____

13. Keypad Test	Pass	Fail	NA	Comments
a. Confirm all control text boxes are highlighted and TEST COMPLETE message appears	☐	☐	☐	_____

14. Audio Test	Pass	Fail	NA	
a. Confirm voice messages and tones are clear and not distorted.	☐	☐	☐	_____

15. 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) _____

16. Invasive Blood Pressure Verification (if IP option is installed)		Pass	Fail	NA	Comments
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		Pass ☐	Fail ☐	NA ☐	Comments _____
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_____			☐	_____

	Pass	Fail	NA	Comments
17. SpO2/SpCO/SpMet Tests				
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)	☐	☐	☐	_____

Data Management

	Pass	Fail	NA	Comments
18. Bluetooth Wireless Technology (if Bluetooth option is installed)				
a. Verify Bluetooth Pairing Successful	☐	☐	☐	_____

ECG Performance Testing

		Pass	Fail	NA	Comments
19. ECG Tests (12-lead, 3-lead or 5-wire ECG tests)					
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_____			☐	_____
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

		Pass	Fail	NA	Comments
21. 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_____			☐	_____
d. Was a successful Defibrillator Energy Calibration performed?		**Yes** ☐	**No** ☐	**NA** ☐	**Comments** _____

22. Synchronous Cardioversion Test				**NA**	**Comments**
a. Record Sync delay (maximum 60ms)	Measured Value_____			☐	_____
23. Charge Time to 360J Test				**NA**	**Comments**
a. Confirm device charges to 360 J in less than 10 seconds	Measured Value_____			☐	_____
24. Therapy ECG Characteristics		**Pass**	**Fail**	**NA**	**Comments**
a. Record ECG paddle lead gain (tolerance 1mV = 36 to 44 mm)	Measured Value_____			☐	_____
b. Fast-Restore baseline in 0.5 seconds (LP15 **V4-IMX6** excluded)		☐	☐	☐	_____
c. Fast-Restore amplitude restored is >50% within 3 seconds		☐	☐	☐	_____
d. Positive R-wave test		☐	☐	☐	_____
25. Standard Paddles User Test (N/A for QUIK-COMBO-only device)		**Pass**	**Fail**	**NA**	**Comments**
a. Confirm device passes test		☐	☐	☐	_____
26. Pacer Option Characteristics		**Pass**	**Fail**	**NA**	**Comments**
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_____			☐	_____
f. Was a successful Pacer Self-Calibration Test performed?		**Yes** ☐	**No** ☐	**NA** ☐	_____
27. Patient Impedance Test		**Pass**	**Fail**	**NA**	**Comments**
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)		☐	☐	☐	_____

Leakage Current Test

28. Leakage Test Battery Powered		**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_____	☐	_____

28. Leakage Test Battery Powered (cont.)		NA	Comments
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)		NA	Comments
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)		NA	Comments
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	Comments
a. Maintenance prompt disabled or reset	☐		_____

Comments: