

Report No. 24PTP\_01PM04240210

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# **Preventive Maintenance Action Report**

EQUIPMENT : DEFIBRILLATORS, EXTERNAL, MANUAL

ID CODE : PTP01518

MANUFACTURER : PHILIPS

MODEL : HeartStart XL+ (861290)

SERIAL No. : USO1518016

LOCATION : Patient Wards 404

SUBMITTED BY : PHYATHAI PHAHOLYOTHIN HOSPITAL

670/1 Phaholyothin Road, Samsen Nai, Phaya Thai, Bangkok 10400

Tel: 02-271-7000 Fax: -

PM. DATE : 22 APRIL 2024

ISSUE DATE : 1 MAY 2024

Supatcha

Performed by : \_\_\_\_\_ Approved by : \_\_\_\_\_

SUPATCHA BUAPUEAN PHUWASIN YIWKIM

#### **CONDITION OF THIS RESULT OF TEST**

#### 1. REFERENCE STANDARD INSTRUMENT:

MASTERMANUFACTURERMODELSERIAL NO.CERTIFICATE NO.DUE DATEElectrical SafetyFlukeESA615349403423MD7747 Jun 2024Analyzer

Defibrillator Fluke Impulse 7000DP 2079335 23MD775 7 Jun 2024

Analyzer

#### 2. THIS CERTIFICATION IS TRACEABLE TO:

- Technology Promotion Association (Thai-Japan)
- Technology Promotion Association (Thai-Japan)

## 3. THIS RESULT OF TEST WAS FOUND ACCURATE AS SHOW ON DATE AND PLACE OF TEST ONLY



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## 1. Qualitative Tests

No.	List	Pass	Fail	None	Comment
1	Chassis/Housing	/			
2	Mount/Fasteners	/			
3	Casters/Brakes	/			
4	AC Plug	/			
5	Receptacles	/			
6	Line Cord	/			
7	Strain Reliefs	/			
8	Cables	/			
9	Fittings/Connectors	/			
10	Paddles/Electrodes	/			
11	Controls/Switches	/			
12	Recorder (ECG)	/			
13	Lead Continuity (ECG)	/			
14	Data Recording	/			
15	Battery/Charger	/			
16	Indicators/Displays	/			
17	Self-Test	/			
18	Time/Date Settings	/			
19	Cybersecurity			/	
20	Synchronized Cardioverter	/			
21	Integral Output Tester	/			
22	Alarms	/			
23	Pacemaker Demand-Mode Activation/Inhibition	/			
24	Audible Signals	/			
25	Labeling	/			
26	Accessories	/			

## 2. Quantitative Tests

No.	List	Pass	Fail	None	Comment	
1	Grounding Resistance ≤0.5Ω	/			0.263 Ω	
2	Chassis Leakage Current ≤500µA	/			69.6 μΑ	
3	Lead -to-Ground Leakage Current ≤100μA	/			2.1 μΑ	
	grounded; ≤500μA ungrounded					



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### 2. Quantitative Tests (Continues)

No.	List	Pass	Fail	None	Comment
4	Manual Mode Defibrillator Output ±4 J low; ±15%	/			
	high				
5	Automated Mode Analysis and Defibrillator Output	/			AED 150J = 145.1J
	per mfr/hosp policy				
6	Multiple Discharge Output Energy and Charge	/			
	Time $\pm 15\%$ , $\leq 10$ sec				
7	Pediatric Mode Output Energy ≤50 J	/			
8	Internal Paddle Energy Limit ≤50 J			/	
9	Energy after 50 Sec (Manual Mode) ≥85%	/			
10	Synchronized Cardioverter Operation ≤60 msec	/			100J = 96.4J, 27ms
	after R-wave				
11	Paper Speed ±2%	/			
12	Heart Rate ±5%	/			
13	Heart Rate Alarm	/			
14	Pacing Rate ±5%	/			
15	Pacing Amplitude ±10%	/			
16	Pacing Pulse Width ±10%	/			
17	Demand-Mode Sensitivity ≤0.5 mV or mfr spec	/			

### 3. Preventive Maintenance

No.	List	Pass	Fail	None	Comment
1	Clean the exterior and accessories	/			
2	Lubricate			/	
3	Adjust			/	
4	Replace			/	

 $Electrical\ Safety\ Test: Master\ used\ Electrical\ Safety\ Analyzer\ (\ Metron\ /\ QA-90\ )\ according\ to\ IEC.60601.1$