

Form B03

Scheduled Maintenance Work Order



Quantum Medical Solutions sdn bhd
transcending boundaries, transforming life

Format Ref: - QMS/TSD-022 Rev.01

Work Order No.	PWO366616	Schedule Month	July 2018
Work Order Date	01/07/2018	Completed Date	10/7/2018
Clinic Name	Klinik Kesihatan Sungai Rengit	Clinic Code	JHR047
BE No.	JHNOXP054	Distict	KOTA TINGGI
BE Category	Oximeters, Pulse	WO Assigned to	1c+96 me3
Ownership	<input type="checkbox"/> Existing Equipment	<input type="checkbox"/> Purchase	<input checked="" type="checkbox"/> New
BE Condition	<input checked="" type="checkbox"/> Active	<input type="checkbox"/> BER Proposed	
Work Order Type	<input checked="" type="checkbox"/> Preventive Maintenance (PM)	<input type="checkbox"/> Third Party Calibration (TPC)	
	<input type="checkbox"/> Routine Inspection (RI)	<input type="checkbox"/> Statutory Certification (SC)	
Reschedule Date	NA		

BE Third Party Calibration / Statutory Certification Details

Company Name	N/A	Cal / Cert Date	N/A
Contact Number	N/A	Cal / Cert Expiry Date	N/A

Action Taken

☒ PM / RI job done as per checklist. Unit tested functioning good & ready to use.

☐ Corrective Maintenance / ☐ Breakdown

BE Sticker Availability: ☒ Yes / ☐ NA

Remarks:

Manufacturer: Mindray

Model: PM-60

Serial No: -

Schedule Maintenance Execution Details

SI No	QMS Engineer / Technician Name	Date	Start Time	End Time
NA	SAFWAN	10/7/18	14 ⁰⁰	14 ³⁰

Customer Remarks

NA

Engineer / Technician Signature

Name

MOHAMMAD SAFWAN BIN ROSLAN
Biomedical Technician
Quantum Medical Solution Sdn. Bhd

Date

10/7/18

Customer Signature

Name

Designation

Date

Seal

NORHASTIN BINTI BAHRUN
Jururawat Kesihatan U29
KK Sungai Rengit

10/7/18

For Internal Use

MUHD RAMADHAN BUKHARI JAYA
Biomedical Engineer

First Verification
Quantum Medical Solutions Sdn. Bhd.
QMS Circle Incharge Tel: +60 12-396 1697

Final Verification
QMS State Incharge



KEMENTERIAN KESIHATAN MALAYSIA

MEET Planned Preventive Maintenance Checklist

Oximeters, Pulse

BE CODE: 17-148

CHECKLIST NO: CL-107-000
REV.000

PART 1 ASSET DETAILS

WORK ORDER NO ▶ PW0366016 ASSET NO ▶ JHNOXP 054
MANUFACTURER ▶ Mindray MODEL ▶ PM-60
FREQUENCY ▶ 3 MONTHLY () 6 MONTHLY () 12 MONTHLY (✓) PPM HOURS ▶ 1.00

PART 2 SPECIAL PRECAUTION

If there is evidence of body fluid contamination, submit the device for cleaning and decontamination before inspecting it.

Wear appropriate Personnel Protection Equipment (PPE) during work.

Wear grounded electrostatic wristband when handling PCB or electronic components.

Refer to the safety procedure for additional precautions and guidance as per manufacturer guidelines.

Make sure the test equipment used are duly calibrated.

PART 3 TEST APPARATUS

Tick (✓) where appropriate

NO	ASSET NO	DESCRIPTION	SERIAL NO	CALIBRATION DUE ON
1	3218071	ELECTRICAL SAFETY ANALYZER	3218071	24/8/18
2	TESA 0010*	OXYGEN SATURATION/PULSE RATE ANALYZER	NA	NA

PART 4 QUALITATIVE TASKS

Tick (✓) where appropriate

	PASS	FAIL	NA		PASS	FAIL	NA
1 Chassis - verify physical integrity, cleanliness and condition	(✓)	()	()	9 Alarms / Interlocks - check all alarms available	(✓)	()	()
2 Power Cord - verify proper insulation and integrity	(✓)	()	(✓)	10 SpO2 Probe - verify physical integrity	(✓)	()	()
3 Strain Relief - verify physical integrity at both ends of line cord	()	()	(✓)	11 Power ON Self Test	(✓)	()	()
4 Circuit Breaker / Fuse - verify integrity of external circuit breaker and/or rating of external fuse	()	()	(✓)	12 Battery test - refer to service manual	(✓)	()	()
5 Fittings / Connectors - check all fittings / connectors	(✓)	()	()				
6 Controls / Switches - verify proper operation of controls	(✓)	()	()				
7 Label - verify physical integrity	(✓)	()	()				
8 Indicators / Displays - verify proper illumination and operation	(✓)	()	()				

PART 5 PREVENTIVE MAINTENANCE TASKS

Tick (✓) where appropriate

	DONE	NOT DONE**	NA	
1 Inspect, Clean Interior and Exterior	(✓)	()	()	Notes: * For all Parts, NA is defined as NOT APPLICABLE
2 Battery - check/ replace***	(✓)	()	()	** If you have ticked 'NOT DONE', then justify in Part 8

*** Choose Whichever Applicable



KEMENTERIAN KESIHATAN MALAYSIA

MEET Planned Preventive Maintenance Checklist

Oximeters, Pulse

BE CODE : 17-148

CHECKLIST
F

WORK ORDER NO

PW0366616

PART 6

QUANTITATIVE TASKS

(Continues)

Tick (✓) where appropriate

No	Description	Units / UOM	Set Values	Measured Values	Limit/Tolerance	PASS	FAIL
1	SpO2 Accuracy	%	80	80	78 - 82	(✓)	()
		%	90	91	88 - 92	(✓)	()
		%	97	97	95 - 99	(✓)	()
2	Pulse Rate Accuracy	bpm	60	62	57 - 63	(✓)	()
		bpm	120	202	197 - 203	(✓)	()
		bpm	200	198	197-203	(✓)	()

PART 7 ELECTRICAL SAFETY TEST

ELECTRICAL SAFETY TEST, (attach report)

Tick (✓) where appropriate

Standard use

☒ IEC 60601

☐ IEC 61010

☐ IEC 62353

☒ Result
PASS

☐ FAIL

☐ NA

PART 8 NOTES

Part 5 - Item 2

Please indicate the part number, description of PPM Kit and any repair work to be carried out (if any):

NA

☐ CORRECTIVE MAINTENANCE REQUIRED

☒ FUNCTIONING

☐ NOT FUNCTIONING

WORK ORDER NO

NA

NEXT PPM DATE

July 2019

PPM has been performed in accordance to the checklist and the equipment is functioning to the intended purpose.

COMPLETED BY: **MOHAMAD SAFFIAN BIN ROSLAN**
Biomedical Technician
Quantum Medical Solution Sdn. Bhd

Test Setup

Operator ID :
 Calibration Tech : MOHANA
 Calibration Date : 24/08/2018
 Firmware Version : 2.08.01
 Serial Number : 3218071
 Date & Time : 10/07/2018 & 2:20pm
 JOB Name :

DUT Information

Equipment Number : JHNOXP054
 Serial Number :
 Manufacturer :
 Model :
 Location : KK SUNGAI RENGIT
 Other :

Template Information

Template Name :		Standard :	IEC60601-DIRECT
Pause after Power ON:	NO	Pause before Power OFF:	NO
Power ON delay:	2	Power OFF delay:	0
Test Speed:	NORMAL	Test Mode:	AUTO
Halt on Test Failure:	YES	Multi PE Test:	NO
Include Time:	YES	Multi Restore:	WORST/LAST
Insulation Resistance Voltage:	500V	Reverse Polarity:	YES
Multi Enclosure Test :	NO	Classification:	I

PLC Configuration-Applied part setup

AP Name	AP Type	AP Num
---------	---------	--------

ESA615 Test Results

Test Name	Value	High Limits	Low Limits	Status
Protective Earth Resistance	0.361 Ohm	0.2 -		F
Insulation Resistance				P
Mains to Protective Earth	49.0 MOhm	-		P
Mains to Non-Earth Accessible Conductive Part	999 MOhm	-		P
Mains Voltage				P
Live to Neutral	259.5 V	-	-	P
Neutral to Earth	5.4 V	-	-	P
Live to Earth	254.0 V	-	-	P
Equipment Current	0.0 A	-	-	P
Earth Leakage Current				P
Normal Condition	50.6 uA-OP	500 -		P
Open Neutral	58.9 uA-OP	1000 -		P
Open Neutral- Reversed Mains	27.4 uA-OP	1000 -		P
Normal Condition- Reversed Mains	15.4 uA-OP	500 -		P
Enclosure Leakage Current				P
Normal Condition	0.6 uA-OP	100 -		P
Open Earth	1.1 uA-OP	500 -		P
Open Neutral	0.7 uA-OP	500 -		P
Open Neutral- Reversed Mains	0.7 uA-OP	500 -		P
Normal Condition- Reversed Mains	0.6 uA-OP	100 -		P
Open Earth- Reversed Mains	0.7 uA-OP	500 -		P


 Signature