



**Preventive Maintenance Procedure
for Pump Tray Test Station
WAT-RW-SKI00306 Rev B**

Document Title: Preventive Maintenance Procedure for Pump Tray Test Station	Engineering Change No.: NA	Document #: WAT-RW-SKI00306	Organization: Kallang
Revision: B	Document Owner: Deduyo Joel Mamalateo	Customer: WATERS	Effective Date: FlexQ – On File
Applicable To:	☐ ALL CUSTOMER ☒ PLS SPECIFY: WATERS		

APPROVALS			
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Chua Kim Seng	Staff Engineer	Product Quality	FlexQ – On File
Gary Lai Yam Bee	Senior Engineer	Manufacturing Engineering	FlexQ – On File
Wong Suie Tong	Senior Supervisor	Production	FlexQ – On File
Niu Niu	Assistant Manager	Program Management	FlexQ – On File
REVIEW / APPROVAL BY CUSTOMER			
NAME	TITLE	SIGNATURE	DATE
NA	NA	NA	NA

REVISION HISTORY				
REV.	ECN	DESCRIPTION OF CHANGE	ORIGINATOR	RELEASE DATE
A	NA	Initial Release (Converted from MCWT-0013_F01_r01). Revise the procedure to accommodate new legacy documents & form	Deduyo Joel Mamalateo	FlexQ – On File
B	NA	Revised document from excel to word format, changed “Version” to “Revision” on clause 6.4 and changed “4.2” to “4.1” on clause 7.0	Mohammad Shamsul Bin Afandi	FlexQ – On File

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1.0 PURPOSE

- 1.1 To establish a document procedure for the Preventive Maintenance of Pump Tray Test Station

2.0 SCOPE

- 2.1 Applicable for Waters Alliance 2690 Series Pump Tray Units

3.0 DEFINITIONS and ABBREVIATIONS

- 3.1 PM --- Preventive Maintenance
- 3.2 EA --- Engineering Assistant
- 3.3 TE --- Test Engineer

4.0 REFERENCES

- 4.1 Functional Tester PM Master Schedule (6 months monthly cycle)

5.0 PROCESS FLOW CHART

- 5.1 N/A

6.0 PROCEDURES

6.1 Domestics Cleaning

- 6.1.1 Power down the Tester
- 6.1.2 Clean the tester thoroughly with vacuum cleaner and brush.

6.2 Visual Inspection

- 6.2.1 Inspect all Test probes, springs, keyboard and vacuum tube to ensure there is no wear and tear. Make replacement if necessary.

6.3 Tester Grounding

6.3.1 Ensure that the tester is powered off.

6.3.2 By using the DMM in "ohm" range, place one DMM probe at the power plug's earth and the other DMM probe at the Tester casing, check the continuity (1 ohm or less) or else repair problem.

6.4 Functional Software Verification

6.4.1 Record down the System Software Revision in the Preventive Checklist.

6.5 Functional Testing

6.5.1 Power up the Functional Test.

6.5.2 Perform the Functional Test with a Known Good Board.

7.0 RESPONSIBILITY

7.1 It is the responsibility of Test Technician and EA to ensure that the preventive maintenance of the tester is carried out periodically as per clause 4.1

7.2 It is the responsibility of Test Technician and EA to ensure that the checklists are properly filled out prior to the release of the tester to production.

8.0 TRAINING REQUIREMENTS

8.1 Prior to testing, users should be trained on this procedure.

8.2 Training records are maintained.

9.0 ASSESSMENT OF CONFORMANCE METHOD

9.1 The compliance with this procedure is audited during the scheduled Internal audits.

10.0 RECORD RETENTION REQUIREMENT

Record ID	Storage Location	Protection	Indexed By	Accessible By	Retention Period	Disposition
Equipment Management	Flex-Q	Locked	Project Number	Engineering Staff	Life time until obsolescence + 5 years	Delete

11.0 DOCUMENT REVIEW AND APPROVAL REQUIREMENTS

11.1 The document review and approval requirements is defined in SKW-DCM2002.

12.0 ATTACHMENT / APPENDICES

	Document Title	Document No.
12.1	Preventive Maintenance Checklist for Pump Tray Test Station	WAT-RW-SKI00307

FLEXQ - SIGNATURE MANIFEST

DOCUMENT NUMBER:	WAT-RW-SKI00306
DOCUMENT TITLE:	Preventive Maintenance Procedure for Pump Tray Test Station
NOTES:	Revised document from excel to word format.

Document Information

Revision:	B	Document Type:	Project Documents
Status:	Released	Document Category:	Equipment Management
Department:	N/A	Applicable for:	N/A

Review Interval:	N/A
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Originator:	MOHAMMAD SHAMSUL BIN AFANDI
Document Owner:	JOEL MAMALATEO DEDUYO

Approval Signatures

Approval Date:	07,Dec,2015 06:36:58-PM (GMT +8:0)	Release/Effectivity Date:	08,Dec,2015 (GMT +8:0)
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Originator	
Name	Digital Signature
MOHAMMAD SHAMSUL BIN AFANDI	MOHAMMAD SHAMSUL BIN AFANDI Digitally signed in FlexQ. Reason: Create/Change Document 03,Dec,2015 10:53:59-AM (GMT +8:0) Copy of original digital signature.

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WEI PENG WONG	WEI PENG WONG Digitally signed in FlexQ. Reason: Review and Approve Document 07,Dec,2015 04:16:33-PM (GMT +8:0) Copy of original digital signature.
JOEL MAMALATEO DEDUYO	JOEL MAMALATEO DEDUYO Digitally signed in FlexQ. Reason: Review and Approve Document 07,Dec,2015 06:27:28-PM (GMT +8:0) Copy of original digital signature.
GARY YAM BEE LAI	GARY YAM BEE LAI Digitally signed in FlexQ. Reason: Review and Approve Document 04,Dec,2015 07:19:46-PM (GMT +8:0) Copy of original digital signature.
ANDREW LOW CHOON HOCK Sign on behalf of SUIE TONG WONG	ANDREW LOW CHOON HOCK Digitally signed in FlexQ. Reason: Review and Approve Document 07,Dec,2015 06:36:58-PM (GMT +8:0) Copy of original digital signature.

NIU NIU	NIU NIU Digitally signed in FlexQ. Reason: Review and Approve Document 03,Dec,2015 11:53:42-AM (GMT +8:0) FLEXQ <u>Copy of original digital signature.</u>
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Observer(s)	
Name	Feedback
N/A	N/A

Revision History

Rev.	Description of Change	DC Workflow Number
	Preventive Maintenance Procedure for Pump Tray Station	DC-RW003168
A	Reason for Change	Release Date
	Initial Release (Converted from MCWT-G00013). Revise the procedure to accomodate new legacy documents & form	24,Feb,2010 08:00:00-AM (GMT +8:0)
Rev.	Description of Change	DC Workflow Number
	Revised document from excel to word format, changed "Version" to "Revision" on clause 6.4 and changed "4.2" to "4.1" on clause 7.0	DC-RW050133
B	Reason for Change	Release Date
	Correction of entry and revised document format.	08,Dec,2015 07:01:31-AM (GMT +8:0)

Notifications

Approval Notification List	
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References Information

Internal

Number	Description	Location	Type	Originator	Hierarchy	Alert
WAT-RW-SKI00307	Preventive Maintenance Checklist For Pump Tray Test Station	FlexQ	Project Documents	JOEL MAMALATEO DEDUYO	Higher Level	On

External

Number	Description	Location	Type	Originator	Hierarchy	Alert
N/A	N/A	N/A	N/A	N/A	N/A	N/A