
QDa Sub Contractor Preventive Maintenance Record

Instrument or Test Bay Serial Number	
Calibration Number	
Date (dd/mmm/yyyy)	
Performer – Block Capitals	
Performer – Signature	
Next Service Due Date	

Performance Maintenance Scope

This form is only applicable to the following installations:

- QDa Systems installed at Schivo Group.
- QDa Test Bays installed at GES Venture, Singapore
- QDa Assembly Screening System installed at WPPL Singapore

The Operating Procedure is [48550](#) –QDa Sub Contractor Preventative Maintenance Procedure.

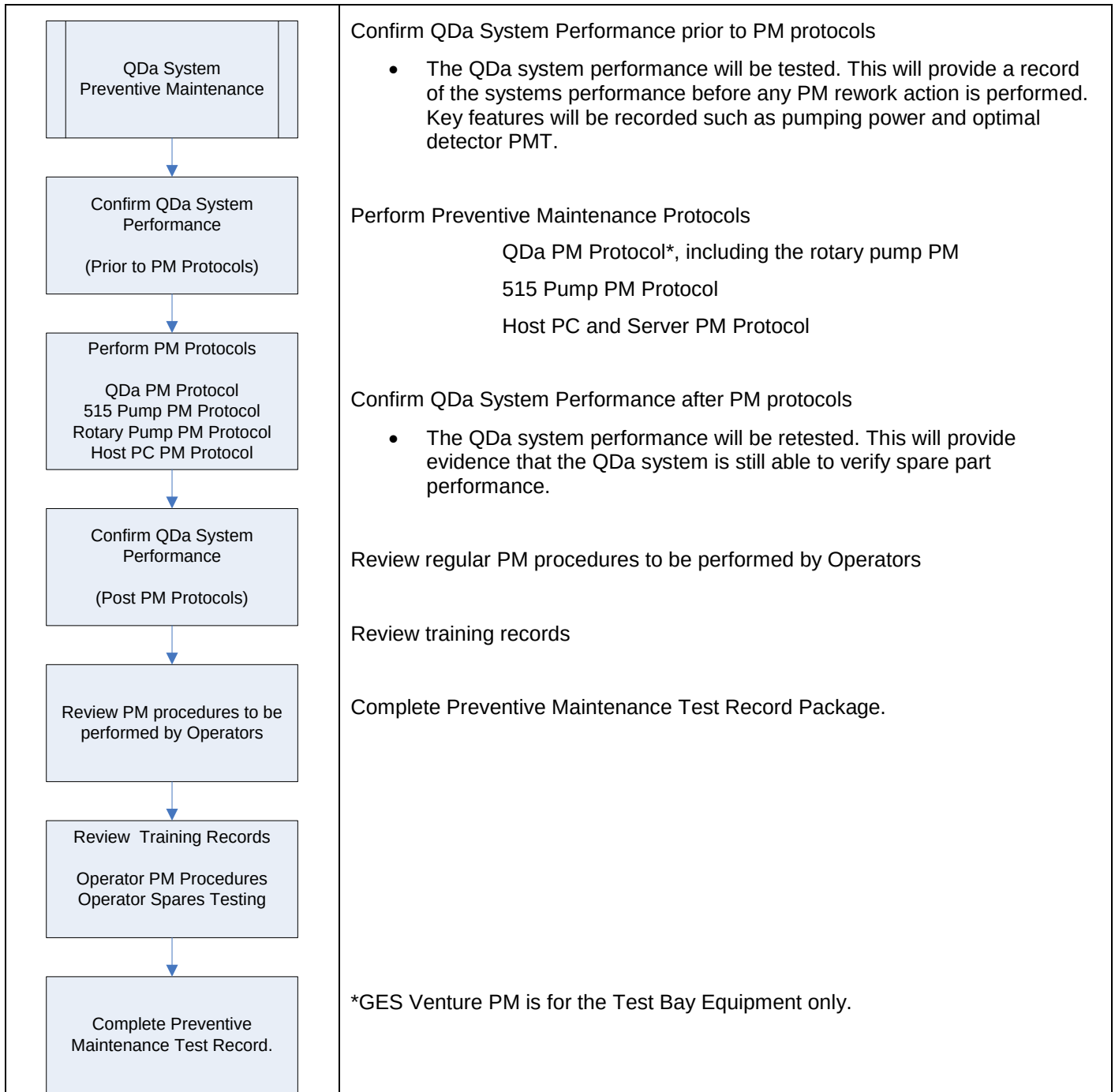
The test numbers within this document refer to the test numbers within the [48550](#) –QDa Sub Contractor Preventative Maintenance Procedure.

Schedule

The preventive maintenance operating procedure ([48550](#)) defines that performance maintenance is conducted annually unless the instrument documentation specifies otherwise. Systems under heavy use or using aggressive solvents may need more frequent maintenance.

Procedure Overview

The PM protocol organizes performance maintenance tasks into a number of sections:



Title: QDa Sub Contractor Preventative Maintenance Test Record

Document No: 48552

Version No: 02

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System Details

	Serial Number	Waters Control Number
QDa and Test Bay if applicable.		
Rotary Pump		
515 Pump		
TB668 Sample Divert		
Host PC		
Server PC		

Software Details

	Version	SCN
MassLynx		
AMITS		N/A

Confirm QDa System Performance (Pre PM Protocol)

Run section 8.3 from the QDa Sub Contractor Preventative Maintenance Procedure (48550)

	Serial Number	Goldbrick? (*Circle Selection)
Ion Block		Yes / No*
Source Enclosure		Yes / No*
QDa (GES Venture Only)		N/A
Segmented Quad (WPPL Only)		Yes / No*

Test Preparation

Test Number	Specification	Result
8.3.2	Nitrogen pressure supplying the QDa System Specification: Supply must be set between 6.5 to 7 Bar before starting PM	_____ Bar
8.3.11	MassLynx Tune Page Positive Mode PMT read back value with a gain of 1.	_____ V
8.3.12	MassLynx Tune Page Negative Mode PMT read back value with a gain of 1.	_____ V

AMITS Spare Ion Block Test (Pre PM Protocol)

Test Number	Specification	Result
8.3.15	Serial Number used for AMITS	
8.3.20	Basic Beam - Positive Mode PMT read back value.	_____ V
8.3.25	Basic Beam - Negative Mode PMT read back value.	_____ V
8.3.26	AMITS Spare QDa Ion Block test sequence completed, and the Summary, DHR, and History records have been printed.	Yes / No / NA

Notes or Observations

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AMITS Spare Source Enclosure Test (Pre PM Protocol)

Test Number	Specification	Result
8.3.27	Serial Number used for AMITS	
8.3.30	AMITS Spare QDa Source Enclosure test sequence completed, and the Summary, DHR, and History records have been printed.	Yes / No / NA

Notes or Observations

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AMITS Spare Segmented Quad Test (Pre PM Protocol)

Test Number	Specification	Result
8.3.27	Serial Number used for AMITS	
8.3.30	AMITS Spare QDa Segmented Quad test sequence completed, and the Summary, DHR, and History records have been printed.	Yes / No / NA

Notes or Observations

QDa and Rotary Pump PM Protocol

Run section 8.4 from the QDa Sub Contractor Preventative Maintenance Procedure ([48550](#))

Test Number	Specification	Result
8.4.4	“Calibrated” label completed and fitted to QDa	Yes / No / NA
8.4.6	Performance Maintenance Label (WAT053502) completed and fitted to QDa	Yes / No / NA
8.4.7	715004514 ACQUITY QDa Detector Performance Maintenance Protocol has been completed.	Yes / No

[illegible]

515 Pump PM Protocol

Run section 8.5 from the QDa Sub Contractor Preventative Maintenance Procedure ([48550](#))

Test Number	Specification	Result
8.5.4	“Calibrated” label completed and fitted to 515 Pump	Yes / No
8.5.6	Performance Maintenance Label (WAT053502) completed and fitted to 515 pump	Yes / No
8.5.7	WAT053014 – 515 Pump PM Protocol has been completed.	Yes / No

[illegible]

Confirm QDa System Performance (Post PM Protocol)

Run section 8.7 from the QDa Sub Contractor Preventative Maintenance Procedure ([48550](#))

(Not Applicable for GES Venture test bay PM)

Detector Performance

Test Number	Specification	Result
8.7.24	Positive Mode Detector Gain PMT value Lower specification limit (PLSL) for 8.7.31= Positive Mode Detector Gain PMT value- 10% Upper specification limit (PUSL) for 8.7.31= Positive Mode Detector Gain PMT value+ 10%	_____ V PLSL = _____ V PUSL = _____ V
8.7.26	Negative Mode Detector Gain PMT value Lower specification limit (NLSL) for 8.7.31= Negative Mode Detector Gain PMT value- 10% Upper specification limit (NUSL) for 8.7.31= Negative Mode Detector Gain PMT value+ 10%	_____ V NLSL = _____ V NUSL = _____ V
8.7.31	Basic Beam - Positive Mode PMT read back value Is the Basic Beam - Positive Mode PMT read back value between the positive mode PLSL and PUSL values? Was the AMITS Default positive PMT value updated to match 8.7.24	_____ V Yes / No Yes / No
8.7.31	Basic Beam - Negative Mode PMT read back value Is the Basic Beam – Negative Mode PMT read back value between the positive mode NLSL and NUSL values? Was the AMITS Default negative PMT value updated to match 8.7.26	_____ V Yes / No Yes / No

Test Preparation

	Serial Number	Goldbrick? (*Circle Selection)
Ion Block		Yes / No*
Source Enclosure		Yes / No*
QDa (GES Venture Only)		N/A
Segmented Quad (WPPL Only)		Yes / No*

Test Number	Specification	Result
8.7.33	Nitrogen pressure supplying the QDa System Specification: Supply must be set between 6.5 to 7 Bar before starting post PM evaluation.	_____ Bar

AMITS Spare Ion Block Test (Post PM Protocol)

Test Number	Specification	Result
8.7.39	Serial Number used for AMITS	_____
8.7.45	Basic Beam - Positive Mode PMT read back value.	_____ V
8.7.49	Basic Beam - Negative Mode PMT read back value.	_____ V
8.7.50	AMITS Spare QDa Ion Block test sequence completed, and the Summary, DHR, and History records have been printed.	Yes / No / NA

Notes or Observations

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AMITS Spare Source Enclosure Test (Post PM Protocol)

Test Number	Specification	Result
8.7.51	Serial Number used for AMITS	
8.7.54	AMITS Spare QDa Source Enclosure test sequence completed, and the Summary, DHR, and History records have been printed.	Yes / No / NA

Date	Time	Location

AMITS Spare Segmented Quad Test (Post PM Protocol)

Test Number	Specification	Result
8.3.27	Serial Number used for AMITS	
8.3.30	AMITS Spare QDa Segmented Quad test sequence completed, and the Summary, DHR, and History records have been printed.	Yes / No / NA

Notes or Observations

Review Operators Day to Day PM Tasks

Run section 8.8 from the QDa Sub Contractor Preventative Maintenance Procedure ([48550](#))

Review the Day to Day PM tasks that the Operators should be performing.

Procedure	Frequency
Clean the inside of the source enclosure	*Once a week
Empty the source exhaust trap bottle and source drain bottles	Check daily and empty as required.
IF possible, check and empty the test bay source exhaust system to release any condensed sample.	Once a month and empty as required.
Inspect and adjust the roughing pump oil level	Once a week, and top up as required.
Inspect the oil level within the oil mist filter on the roughing pump.	Once a week. Contact PAE if oil level exceeds 50% of the filter volume.
IF possible, check and empty the test bay rotary exhaust system to release any condensed oil vapor.	Once a month and empty as required.
Purge and prime the 515 pump	Whenever the sample batch is changed and whenever AMITS starts to fail pump stability tests. Review the pump stability value location within AMITS.
Check room Nitrogen Pressure. The pressure must never exceed 7Bar.	Check daily.
Check Host PC has applied any Windows or Security updates.	Once a Week.
Run a goldbrick ion block test at regular periods in between batch orders.	*To keep the systems performance optimal, do not leave it vented for long periods of time. Run a goldbrick ion block test at least once a week.

Test Number	Specification	Result
8.8.9	Confirm the operators understand the procedures, and when to perform them.	Yes / No

Notes or Observations

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Review Operators Training Records

Run section 8.9 from the QDa Sub Contractor Preventative Maintenance Procedure ([48550](#))

Test Number	Specification	Result
8.9.4	Confirm the training records are up to date, or have been updated.	Yes / No

Notes or Observations

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Compile PM Test Records ready for Storage

Run section 8.10 from the QDa Sub Contractor Preventative Maintenance Procedure ([48550](#))

Test Number	Specification	Result
8.10.1	Confirm the PM documentation package has been completed and compiled ready for storage The completed package will consist of the completed - QDa Schivo Preventative Maintenance Test Record (48552), and associated AMITS print outs. 515 pump PM protocol (WAT053014) - Acquity QDa Detector PM Protocol (715004514) - TSP training records, if updated.	Yes / No

Notes or Observations

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