

Waters Pacific Pte Ltd

1 Science Park Road, #02-08 The Capricorn, Singapore Science Park II, Singapore 117528

X	Original (please process)
	Confirming (do not duplicate)
X	Quote Attached
Purchase Order Number	
WPPL-OP-012	

Supplier	
Venture International Pte Ltd	
5006 Ang Mo Kio Ave 5, #05-01/12 TECHplace II, Singapore 569873	
Fax Number +65.6368 7617	
Phone:	+65.6732 9898

Requested by:	Luo HuaZhen	Tel	6593.7044
Date:	27.Apr.20	Mail Stop	
Deliver to:		Ext.	
Department:	WPPL	Mail Stop	
Ship to Location:	1 Science Park Road,#02-08 The Capricorn, Singapore Science Park II, S 117528		

P.O. Date		Delivery Date		Terms	Taxable	Freight		F.O.B		Ship Via	Confirming to	Buyer
27.Apr.20				30 Days							Jenny	Luo HuaZhen
Item	Qty	U/M	Manufacturer's Part Number	Description				Unit Price	Total Price (USD)	G/L Account Number (Financial Line/Account No.)	CEA Number	
1	1	EA	N/A	Subtotal Calibration Cost (Instrument)				\$ 4,087.69	\$ 4,087.69	WP21 615150		
2	1	EA	N/A	Subtotal Calibration Cost (PCBA)					\$ -	WP21 615150		
3	1	EA	N/A	At hoc-Spare and Misc				\$ 724.66	\$ 724.66	WP21 615150		
4												
5												
6				Kindly quote our PO number on all your documents.								
7												
8												
9												
10												
11												
12												
13												
14												
15												
Grand Total - USD									\$4,812.35			

Remarks

Approvals

1.

Edwin Koh, Snr Operations Manager

2

Alan Tan, Snr Finance Manager

Purchasing Copy



Summary	Amount (US\$)	
Calibration \$ to Venture Box Build	USD	4,087.69
Calibration \$ to Venture PCBA	USD	-
Adhoc cost - spare & misc	USD	724.66
Total	USD	4,812.35

Verified By: [HZ 27 Apr 2020](#)

External Calibration for Equipment (Instrument)

Q1 2020 (Mar'20)

SUM	USD	3,716.08
10% Support Cost	USD	371.61
Subtotal	USD	4,087.69

S/N	Location	Name	Equipment ID	Model	Serial No	Manufacturer	Purpose	Source	CAL DATE	Due	Cycle	Invoice #	Cost USD	COST SGD	Remarks
1	WATERS (RACAL TESTER)	Keithley 236 Source Measure unit	PWAT-16GC0024	236	0683301(ID#90744)	Keithley	For Testing used	Keysight	17/03/2020	17/03/2021	12	1143957	USD 392.00	SGD 490.00	
2	WATERS (UNIVERSAL TESTER)	Keithley 236 Source Measure unit	PWAT-16GC0026	236	497638	Keithley	For Testing used	Keysight	17/03/2020	17/03/2021	12	1143958	USD 392.00	SGD 490.00	
3	WATERS (CLEAN ROOM)	Leak Detector	W1-17GC0095	PhoenixL 300i	90001301209	Leybold	For Testing used	Leybold	19/02/2020	19/02/2021	12	9325001163 9325001196	USD 1,188.08	SGD 1,485.10	
4	Waters (QDa/Beacon)	Leak Detector (Inficon)	W1-19GC0151	TL7	90001370779	Inficon	For Testing used	Inficon	09/03/2020	09/03/2021	15	71193701	USD 1,744.00	SGD 2,180.00	

Verified By: HZ 27 Apr 2020

Miscellaneous Materials

Q1 2020 (Mar'20)

SUM	USD	658.78
10% Support Cc	USD	65.88
Subtotal	USD	724.66

S/N	Part No.	Description	Quantity	Unit Price(US\$)	Ext Cost(US\$)	Remarks	Date
1	205001922	CM SALE ONLY, 289010045, 40 PIEC	1	USD 27.900	USD 27.900	For FTN Tester TE83064-15 part replacements, approved by HuaZhen as on Thursday, 5 March 2020 10:53 am	09.Mar.20
2	205001924	CM SALE ONLY, 405015367, 16 PIEC	1	USD 76.620	USD 76.620	For FTN Tester TE83064-15 part replacements, approved by HuaZhen as on Thursday, 5 March 2020 10:53 am	09.Mar.20
3	205001476	(279002426) 10PK ASSY VALVE VENT 18	1	USD 420.800	USD 420.800	For FTN Tester TE83064-15 part replacements, approved by HuaZhen as on Thursday, 5 March 2020 10:53 am	09.Mar.20
4	WAT076152	RC O-RING 2-016 TEFLON (CRC)	2	USD 0.400	USD 0.800	For FTN Tester TE83064-15 part replacements, approved by HuaZhen as on Thursday, 5 March 2020 10:53 am	09.Mar.20
5	425000930	SEAL WASH .0787 ID FIXE	2	USD 26.710	USD 53.420	For FTN Tester TE83064-15 part replacements, approved by HuaZhen as on Thursday, 5 March 2020 10:53 am	09.Mar.20
6	425001037	SEAL HIGH PRESS DUAL SPRG .045 GLD PS	2	USD 39.620	USD 79.240	For FTN Tester TE83064-15 part replacements, approved by HuaZhen as on Thursday, 5 March 2020 10:53 am	09.Mar.20
7							
8							
9							
10							
11							
12							

Verified By: HZ 27 Apr 2020



Tax Invoice

Customer Purchase Order Number 4730028360		
Invoice Number 1143957	Invoice Date 18-Mar-2020	Service Order Number 1-12382924122
Payment Terms NET 30 DAYS		

Attention: Kwang Quek LEE

Bill To:

GES Singapore Pte Ltd
28 Marsiling Ln
GES Bldg
SINGAPORE 739152
Singapore

Attention: Kwang Quek LEE

Ship To:

GES Singapore Pte Ltd
28 Marsiling Ln
GES Bldg
SINGAPORE 739152
Singapore

Please Send Your Remittances To:

SGD: Citibank N.A. Singapore
8 Marina View #16-01 Asia Square Tower 1 Singapore 018960
Acc. No: 0-858158-036 SWIFT Code: CITISGSG
Bank Code / Branch Code: 7214 / 001

Keysight Technologies Singapore (Sales) Pte. Ltd.
No 1 Yishun Ave 7
SINGAPORE 768923
Singapore

Please Direct Inquiries To:

Singapore Customer Contact Center
Telephone: 1800-375 8100/ (65) 6375-8100
Fax: (65) 6755-1214
Email: instruments_services@keysight.com

Keysight Sales Office:

Keysight Technologies Singapore (Sales) Pte Ltd
Company Registration No 201400782D
No 1 Yishun Ave 7
SINGAPORE 768923
Singapore

Item	Product Number/Serial Number Service Description	Service Price	Quantity	Extended Price SGD
1	KEI236/ 497638 Calibration (non-Keysight product) - Per Incident	490.00	1	490.00
Item Net Total				490.00

Payment is due on 17-Apr-2020	Net Total		490.00
	GST	7.00%	34.30
	Total		SGD 524.30

Comments:

All requests for 3rd party payment must be stated in writing with supporting documents. Keysight reserves sole discretion to accept or reject payment from a third party who is not the Buyer or contractual party.

Tax is calculated based on applicable tax rate in effect today from delivery location(s). Tax rate and taxability of deliverable(s) is subject to change based on prevailing laws. If you dispute the tax rate, please contact your support administrator.

All orders for the sale of Services and spare parts referenced in this Invoice are subject to the then current version of Keysight's Service Terms and Keysight's Terms of Sale with respect to spare parts, and other terms referenced in the Quotation and Service Agreement document. If you have a separate agreement in effect with Keysight covering the sale of Services and spare parts referenced in this Invoice, the terms of that agreement will apply to those Services and spare parts.

Verified By: HZ 27 Apr 2020



Tax Invoice

Customer Purchase Order Number 4730028360		
Invoice Number 1143958	Invoice Date 18-Mar-2020	Service Order Number 1-12382924189
Payment Terms NET 30 DAYS		

Attention: Kwang Quek LEE

Bill To:

GES Singapore Pte Ltd
28 Marsiling Ln
GES Bldg
SINGAPORE 739152
Singapore

Attention: Kwang Quek LEE

Ship To:

GES Singapore Pte Ltd
28 Marsiling Ln
GES Bldg
SINGAPORE 739152
Singapore

Please Send Your Remittances To:

SGD: Citibank N.A. Singapore
8 Marina View #16-01 Asia Square Tower 1 Singapore 018960
Acc. No: 0-858158-036 SWIFT Code: CITISGSG
Bank Code / Branch Code: 7214 / 001

Keysight Technologies Singapore (Sales) Pte. Ltd.
No 1 Yishun Ave 7
SINGAPORE 768923
Singapore

Please Direct Inquiries To:

Singapore Customer Contact Center
Telephone: 1800-375 8100/ (65) 6375-8100
Fax: (65) 6755-1214
Email: instruments_services@keysight.com

Keysight Sales Office:

Keysight Technologies Singapore (Sales) Pte Ltd
Company Registration No 201400782D
No 1 Yishun Ave 7
SINGAPORE 768923
Singapore

Item	Product Number/Serial Number Service Description	Service Price	Quantity	Extended Price SGD
1	KEI236/ 0683301 Calibration (non-Keysight product) - Per Incident	490.00	1	490.00
Item Net Total				490.00

Payment is due on 17-Apr-2020	Net Total		490.00
	GST	7.00%	34.30
	Total		SGD 524.30

Comments:

All requests for 3rd party payment must be stated in writing with supporting documents. Keysight reserves sole discretion to accept or reject payment from a third party who is not the Buyer or contractual party.

Tax is calculated based on applicable tax rate in effect today from delivery location(s). Tax rate and taxability of deliverable(s) is subject to change based on prevailing laws. If you dispute the tax rate, please contact your support administrator.

All orders for the sale of Services and spare parts referenced in this Invoice are subject to the then current version of Keysight's Service Terms and Keysight's Terms of Sale with respect to spare parts, and other terms referenced in the Quotation and Service Agreement document. If you have a separate agreement in effect with Keysight covering the sale of Services and spare parts referenced in this Invoice, the terms of that agreement will apply to those Services and spare parts.

Verified By: HZ 27 Apr 2020



INFICON PTE LTD

Bill-To address
GES Singapore Pte Ltd
28 Marsiling Lane
Singapore 739152

Ship-to address
GES Singapore Pte Ltd
28 Marsiling Lane
Singapore 739152

TAX Invoice 71193701

Date
12.03.2020
Reference no./Date
4730028273 REV: 001 / 24.02.2020
Delivery note no./Date
61318061 / 16.03.2020
Order number/Date
50345561 / 25.02.2020
Customer number
739793

Handled by: Emeleen KOH
Phone: 65.6631.0302
Fax: 65.6795.3909
e-mail: Emeleen.KOH@inficon.com
Sales person: Customer Support

Requirements

Terms of payment Prepayment
Terms of delivery DDP Singapore
Despatch by by truck

Quote Ref: INF220DC001

Item	Material	Qty	Unit Price	Total / SGD
10	SA005-LD Refilling and recalibrate for Calibrated Leak, TL7 with certificate. (One time per year)	1 AU	2,180.00	2,180.00
Items total				2,180.00
GST				152.60
Final amount				2,332.60

The complete Terms and Conditions can be found on our website <https://goo.gl/Zwe9Ys>

We remind that INFICON will not be responsible for any payment of Government taxes, duties, levies and etc in any form not stipulated in this invoice.

All remittance bank charges to be borne by customer / remitter / payer of this invoice.

The Customer assumes the duty to dispose of the delivered goods in an appropriate manner, at their own expense and in accordance with legal regulations after end of use.

This is Computer Generated Invoice. No Signature Is Required.

INFICON PTE LTD

DBS Bank Ltd., Singapore / Branch: Jurong

Co.Reg./UEN No.: 200005332D / GST No.: 20-0005332-D
3A International Business Park Tower B
#06-13 ICON@IBP Singapore 609935
Tel: + 65.6631.0300 Fax: + 65.6795.3909

Account Name: INFICON PTE LTD
SGD A/C No. 002-027344-6 (SWIFT BIC for GIRO DBSSSGSGXXX)
USD A/C No. 0002-000624-01-0-022
Bank Code: 7171/Branch Code: 002 /Swift Code: DBSSSGSG

Verified By: [HZ 27 Apr 2020](#)

GES Singapore Pte Ltd
Singapore 739152

Date/Doc. no.
12.03.2020 / 71193701

Page
2

Verified By: HZ 27 Apr 2020

INFICON PTE LTD

DBS Bank Ltd., Singapore / Branch: Jurong

Co.Reg./UEN No.: 200005332D / GST No.: 20-0005332-D
3A International Business Park Tower B
#06-13 ICON@IBP Singapore 609935
Tel: + 65.6631.0300 Fax: + 65.6795.3909

Account Name: INFICON PTE LTD
SGD A/C No. 002-027344-6 (SWIFT BIC for GIRO DBSSSGSGXXX)
USD A/C No. 0002-000624-01-0-022
Bank Code: 7171/Branch Code: 002 /Swift Code: DBSSSGSG



LEYBOLD SINGAPORE PTE. LTD.

GES Singapore Pte Ltd
28 Marsiling Lane
SINGAPORE 739152
SINGAPORE

RECEIVED
07 APR 2020

Tax invoice

Please quote in any correspondence or paym.

Invoice no.	Account no.	Date
9325001196	346348	31.03.2020

E-Mail: Kartina.Sahrul@leybold.com
Tel: +65 6303 7030

Page: 1/ 2

Service address:
GES Singapore Pte Ltd
28 Marsiling Lane
SINGAPORE 739152
SINGAPORE

Your purchase order: 4730028125 / 17.01.2020

Start: 27.03.2020
Description: calibrated leak TL7 Phoenix / L200
Quantity: 1 Equipment: 31002103889
Material no.: 14023V01
Serial no: 900012348893

End: 10.04.2020

Item	Catalog no.	Quantity	Description	Unit price SGD	Total price SGD
00010	AS0013	2.00	Onsite Labour - Exchange TL7 Part Rev: 90001301209, Onsite Labour 90001301209 For exchange TL7	150.00	300.00
Total items					300.00
GST				7.00%	21.00
Final amount					321.00

EX Rate SGD 1 = SGD 1.00000
SUB-TOTAL = SGD 300.00
GST = SGD 21.00
Grand Total = SGD 321.00

Notification no: 300365759 / 27.03.2020
Service no: 40315953
Serv. Billing Request: 70376652 / 31.03.2020

VOUCHER NUMBER					
S/N	AC CODE	COST CTR	ENTITY	AMT USD/\$	REMARKS
1	611110	RS2030		30.00	
2					
3					
4					
5					
REMARKS PR203100140					
CHECKED BY		POSTED		APPROVED BY	
				DEPT HEAD	FINANCE

Please send your payments to LEYBOLD SINGAPORE PTE. LTD.

LEYBOLD SINGAPORE PTE. LTD.
42 Loyang Drive
Loyang Industrial Estate
Singapore 508962
Tel +65 6303 7030
Fax +65 6773 0039
service.sg@leybold.com

Banken:
Citibank N.A. Singapore Branch,
3 Changi Business Park Crescent
#07-00, Singapore 486026
LEYBOLD SINGAPORE PTE. LTD.
Account No. (EUR): 0864789013
Account No. (USD): 0864789021

Account No. (SGD): 0864789005
SWIFT Code: CITISGSG
Bank & Branch Code: 7214-001
Co. Reg. No./UEN No./GST No. 200005300-D
sales.sg@leybold.com

Verified By: HZ 27 Apr 2020



Invoice no.	Account no.	Date
9325001196	346348	31.03.2020

Page: 2/ 2

Payment:
Cash on delivery

We are liable for damages covered by insurance. Further claims are up to deliberate action or gross negligence.
Place of warranty is the Leybold office nearest to the place of delivery.

Performed by:
Leybold Singapore Pte. Ltd.
Service and Sales
42 Loyang Drive
Singapore 508962

VOUCHER NUMBER				
REMARKS	AMT USD	ENTY	COST CTR	AC CODE
REMARKS				
APPROVED BY				
POSTED				
CHECKED BY				
DEPT HEAD				
FINANCE				

Verified By: HZ 27 Apr 2020

Please send your payments to LEYBOLD SINGAPORE PTE. LTD.

LEYBOLD SINGAPORE PTE. LTD.
42 Loyang Drive
Loyang Industrial Estate
Singapore 508962
Tel +65 6303 7030
Fax +65 6773 0039
service.sg@leybold.com

Banken:
Citibank N.A. Singapore Branch,
3 Changi Business Park Crescent
#07-00, Singapore 486026
LEYBOLD SINGAPORE PTE. LTD.
Account No. (EUR): 0864789013
Account No. (USD): 0864789021

Account No. (SGD): 0864789005
SWIFT Code: CITISGSG
Bank & Branch Code: 7214-001
Co. Reg. No./UEN No./GST No. 200005300-D
sales.sg@leybold.com



LEYBOLD SINGAPORE PTE. LTD.

GES Singapore Pte Ltd
28 Marsiling Lane
SINGAPORE 739152
SINGAPORE

Tax invoice

Please quote in any correspondence or paym.

Invoice no.	Account no.	Date
9325001163	346348	28.02.2020

E-Mail: Kartina.Sahrul@leybold.com
Tel: +65 6303 7030

Page: 1/ 2

Consignee:
GES Singapore Pte Ltd
28 Marsiling Lane
SINGAPORE 739152
SINGAPORE

VOUCHER NUMBER					
S/N	A/C CODE	COST CTR	ENTITY	AMT USD/S\$	REMARKS
1	611110	RS2030		1,185.10	
2					
3					
4					
5					
REMARKS PR 203100140					
CHECKED BY		POSTED		APPROVED BY	
				DEPT HEAD	
				FINANCE	

Your purchase order: 4730028125 / 17.01.2020

We have received the following device.

Reference object

Description: calibrated leak TL7 Phoenix / L200
Quantity: 1 Equipment: 31002103889
Material no.: 14023V01
Serial no: 900012348893

Item	Catalog no.	Quantity	Description	Unit price SGD	Total price SGD
00040	AS15416	1	In-House: Factory calibration	1,185.10	1,185.10
			Total items		1,185.10
			GST 7.00%		82.96
			Final amount		1,268.06

EX Rate SGD 1 = SGD 1.00000
SUB-TOTAL = SGD 1,185.10
GST = SGD 82.96
Grand Total = SGD 1,268.06

Notification no: 300362036 / 07.02.2020
Service no: 40312609
Serv. Billing Request: 70375250 / 28.02.2020
Delivery no: 82010357 / 28.02.2020

Please send your payments to LEYBOLD SINGAPORE PTE. LTD.

LEYBOLD SINGAPORE PTE. LTD.
42 Loyang Drive
Loyang Industrial Estate
Singapore 508962
Tel +65 6303 7030
Fax +65 6773 0039
service.sg@leybold.com

Banken:
Citibank N.A. Singapore Branch,
3 Changi Business Park Crescent
#07-00, Singapore 486026
LEYBOLD SINGAPORE PTE. LTD.
Account No. (EUR): 0864789013
Account No. (USD): 0864789021

Account No. (SGD): 0864789005
SWIFT Code: CITISGSG
Bank & Branch Code: 7214-001
Co. Reg. No./UEN No./GST No. 200005300-D
sales.sg@leybold.com

Verified By: HZ 27 Apr 2020



Invoice no.	Account no.	Date
9325001163	346348	28.02.2020

Page: 2/ 2

Terms of delivery:

CIP Singapore : Carriage and insurance paid to

Payment:

Cash on delivery

We are liable for damages covered by insurance. Further claims are up to deliberate action or gross negligence.
Place of warranty is the Leybold office nearest to the place of delivery.

completion period:

02.2020

Location of service provision:

Leybold Singapore Pte. Ltd

Service and Sales

42 Loyang Drive

Singapore 508962

VOUCHER NUMBER					
S/N	AC CODE	COST CTR	ENTITY	TMA	AMOUNT
1					
2					
3					
4					
5					
TOTAL					
APPROVED BY					
DEPT HEAD		POSTED		CHECKED BY	

Verified By: HZ 27 Apr 2020

Please send your payments to LEYBOLD SINGAPORE PTE. LTD.

LEYBOLD SINGAPORE PTE. LTD.
42 Loyang Drive
Loyang Industrial Estate
Singapore 508962
Tel +65 6303 7030
Fax +65 6773 0039
service.sg@leybold.com

Banken:
Citibank N.A. Singapore Branch,
3 Changi Business Park Crescent
#07-00, Singapore 486026
LEYBOLD SINGAPORE PTE. LTD.
Account No. (EUR): 0864789013
Account No. (USD): 0864789021

Account No. (SGD): 0864789005
SWIFT Code: CITISGSG
Bank & Branch Code: 7214-001
Co. Reg. No./UEN No./GST No. 200005300-D
sales.sg@leybold.com

HuaZhen Luo

From: HuaZhen Luo
Sent: Thursday, 5 March, 2020 10:53
To: Htay Ei Lwin
Cc: Desmond Ann; Teo Yiek Tiong; Tan Hong Cheng; 'Khalip Mohamed'; Siddharth Udayshankar
Subject: RE: [EXT] RE: [EXT] FTN tester TE83064-15 - Leakage at BSM -OESR

Hi Lwin,

As communicated previously, we're ok with this repair.
Please put it into monthly claim and close this OESR.

Luo HuaZhen
Senior Test Engineer

[T] +65 6593 7044
[F] +65 6873 0820
[W] www.waters.com
[E] huazhen_luo@waters.com



Waters

THE SCIENCE OF
WHAT'S POSSIBLE.™

Waters Pacific Pte Ltd
1 Science Park Road
#02-08 The Capricorn
Singapore Science Park II
Singapore 117528

From: Htay Ei Lwin <EiLwin.Htay@venture.com.sg>
Sent: Monday, 2 March, 2020 14:41
To: HuaZhen Luo <HuaZhen_Luo@waters.com>
Cc: Desmond Ann <Desmond_Ann@waters.com>; Teo Yiek Tiong <yiektiong_teo@venture.com.sg>; Tan Hong Cheng <hongcheng_tan@venture.com.sg>; 'Khalip Mohamed' <khalip_m@venture.com.sg>; Siddharth Udayshankar <Siddharth_Udayshankar@waters.com>
Subject: [EXT] RE: [EXT] FTN tester TE83064-15 - Leakage at BSM -OESR

ATTENTION: This email originated from outside of the organization. Please do not open any attachments or click any links unless you recognize the sender and know the content is safe.

Hi HuaZhen,

Attached is an OESR for TE83064-15 - Leakage at BSM issue.

As of today, functional verification with both H Class and I Class has no BSM leakage related failure at TE15.

Please provide acknowledgment to this OESR and approval on part change list.

Thank you.

Regards,
Lwin

Verified By: HZ 27 Apr 2020

From: Htay Ei Lwin [<mailto:EiLwin.Htay@venture.com.sg>]
Sent: Monday, 24 February, 2020 2:53 PM
To: 'HuaZhen Luo'

Cc: 'Desmond Ann'; 'Teo Yiek Tiong'; 'Tan Hong Cheng'; 'Khalip Mohamed'
Subject: RE: [EXT] FTN tester TE83064-15 - Leakage at BSM - follow up II -update

Hi HuaZhen,

After changing the parts, TE15 was verified with both 5088 (I Class) and 5085 (H Class) for functional.

There was no failure due BSM leakage during verification. Meanwhile I am compiling the list of parts that changed and their prices.

I'll send OESR of this tester issue.

Thank you.

Regards,
Lwin

From: HuaZhen Luo [mailto:HuaZhen_Luo@waters.com]
Sent: Thursday, 20 February, 2020 9:45 AM
To: EiLwin.Htay
Cc: Desmond Ann; Teo Yiek Tiong; Tan Hong Cheng; 'Khalip Mohamed'
Subject: RE: [EXT] RE: [EXT] RE: [EXT] FTN tester TE83064-15 - Leakage at BSM - follow up II

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Lwin,

Yes, please go ahead to replace the faulty parts and update us the status.
Thank you

Luo HuaZhen
Senior Test Engineer

[T] +65 6593 7044
[F] +65 6873 0820
[W] www.waters.com
[E] huazhen_luo@waters.com



Waters
THE SCIENCE OF
WHAT'S POSSIBLE.™

Waters Pacific Pte Ltd
1 Science Park Road
#02-08 The Capricorn
Singapore Science Park II
Singapore 117528

Verified By: [HZ 27 Apr 2020](#)

From: Htay Ei Lwin <EiLwin.Htay@venture.com.sg>
Sent: Wednesday, 19 February, 2020 11:04
To: HuaZhen Luo <HuaZhen_Luo@waters.com>
Cc: Desmond Ann <Desmond_Ann@waters.com>; Teo Yiek Tiong <yiektiong_teo@venture.com.sg>; Tan Hong Cheng <hongcheng_tan@venture.com.sg>; 'Khalip Mohamed' <khalip_m@venture.com.sg>
Subject: [EXT] RE: [EXT] RE: [EXT] FTN tester TE83064-15 - Leakage at BSM - follow up II

ATTENTION: This email originated from outside of the organization. Please do not open any attachments or click any links unless you recognize the sender and know the content is safe.

Hi HuaZhen,

I wanted to make sure that you are clear about those parts which we proposed to change are not in the list of half-yearly PM.

Thanks for approval. Attached is price list.

I'll update you the status of tester after we changed the parts.

Thank you.

Regards,
Lwin

From: HuaZhen Luo [mailto:HuaZhen_Luo@waters.com]
Sent: Wednesday, 19 February, 2020 9:54 AM
To: EiLwin.Htay
Cc: Desmond Ann; Teo Yiek Tiong; Tan Hong Cheng; 'Khalip Mohamed'
Subject: RE: [EXT] RE: [EXT] FTN tester TE83064-15 - Leakage at BSM - follow up II

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Lwin,

Please let us know the cost of this repair as per previous email below and I didn't stop you to replace the part if it's defective.

Why do you still waiting? Please let me know if you have any unclear part from email below. Thanks

Hi Lwin,

Is this system due for half-yearly replacement soon? If it's due for half-yearly PM, then let's avoid double replacing for parts.

Please send us the repair parts list with price for approval and go ahead with replacement if it's found defective.

Luo HuaZhen
Senior Test Engineer

[T] +65 6593 7044
[F] +65 6873 0820
[W] www.waters.com
[E] huazhen_luo@waters.com



Waters

THE SCIENCE OF
WHAT'S POSSIBLE.™

Waters Pacific Pte Ltd
1 Science Park Road
#02-08 The Capricorn
Singapore Science Park II
Singapore 117528

Luo HuaZhen
Senior Test Engineer

[T] +65 6593 7044
[F] +65 6873 0820
[W] www.waters.com
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Singapore Science Park II
Singapore 117528

From: Htay Ei Lwin <EiLwin.Htay@venture.com.sg>
Sent: Wednesday, 19 February, 2020 09:35
To: HuaZhen Luo <HuaZhen_Luo@waters.com>
Cc: Desmond Ann <Desmond_Ann@waters.com>; Teo Yiek Tiong <yiektiong_teo@venture.com.sg>; Tan Hong Cheng <hongcheng_tan@venture.com.sg>; 'Khalip Mohamed' <khalip_m@venture.com.sg>
Subject: [EXT] RE: [EXT] FTN tester TE83064-15 - Leakage at BSM - follow up II

ATTENTION: This email originated from outside of the organization. Please do not open any attachments or click any links unless you recognize the sender and know the content is safe.

Hi HuaZhen,

Please advise your approval on proposed parts change for FTN tester TE83064-15 or please provide suggestion if you can't agreed on it.

We are waiting your acceptance to proceed to troubleshoot this tester.

Thank you.

Regards,
Lwin

From: Htay Ei Lwin [<mailto:EiLwin.Htay@venture.com.sg>]
Sent: Tuesday, 18 February, 2020 9:49 AM
To: 'HuaZhen Luo'
Cc: 'Desmond Ann'; 'Teo Yiek Tiong'; 'Tan Hong Cheng'; 'Khalip Mohamed'
Subject: RE: [EXT] FTN tester TE83064-15 - Leakage at BSM

Hi HuaZhen,

This tester is not due for half-yearly replacement. It was completed PM in Dec.

Thank you.

Regards,
Lwin

From: HuaZhen Luo [mailto:HuaZhen_Luo@waters.com]
Sent: Tuesday, 18 February, 2020 9:17 AM
To: EiLwin.Htay
Cc: Desmond Ann; Teo Yiek Tiong; Tan Hong Cheng; 'Khalip Mohamed'
Subject: RE: [EXT] FTN tester TE83064-15 - Leakage at BSM

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Lwin,

Is this system due for half-yearly replacement soon? If it's due for half-yearly PM, then let's avoid double replacing for parts.

Please send us the repair parts list with price for approval and go ahead with replacement if it's found defective.



From: Htay Ei Lwin <EiLwin.Htay@venture.com.sg>

Sent: Friday, 14 February, 2020 16:40

To: HuaZhen Luo <HuaZhen_Luo@waters.com>

Cc: Desmond Ann <Desmond_Ann@waters.com>; Teo Yiek Tiong <yiektiong_teo@venture.com.sg>; Tan Hong Cheng <hongcheng_tan@venture.com.sg>; 'Khalip Mohamed' <khalip_m@venture.com.sg>

Subject: [EXT] FTN tester TE83064-15 - Leakage at BSM

ATTENTION: This email originated from outside of the organization. Please do not open any attachments or click any links unless you recognize the sender and know the content is safe.

Hi HuaZhen,

As you have been informed on 12 Feb that there was leakage at BSM system at TE83064-15.

Based on our investigation, leakage at BSM was contributed by 2 locations, from pump B (Accumulator) and pump A (Primary).

	Accumulator		Primary	
Result:	Leak rate was above the acceptable limit		Test not run	
Leak Rate:	1459	nL/min	0	nL/min
Maximum Pressure:	17025	psi	0	psi
Percent of Final Stroke:	28	%	0	%
Compressed Volume:	262	uL	0	uL
Compression Strokes:	15		0	
Test Attempts:	1			

Actions taken

1. Change BSM seal of pump B (Accumulator). Verified and still leak.
2. Change BSM vent valve and verified. no more leakage at pump B (Accumulator). Please refers to below picture.

performance

Dynamic Leak Test			
Parameters	Status	Results	
		Pump B leak rate after vent valve changed	
		Accumulator	Primary
Result:		Passed	Passed
Leak Rate:		24 nL/min	13 nL/min
Maximum Pressure:		17022 psi	15034 psi
Percent of Final Stroke:		28 %	28 %
Compressed Volume:		16 uL	16 uL
Compression Strokes:		1	1
Test Attempts:		1	

3. But still have leakage at pump A (primary). Please refers to below picture.

Dynamic Leak Test

performance

Parameters | Status | Results

Pump A primary

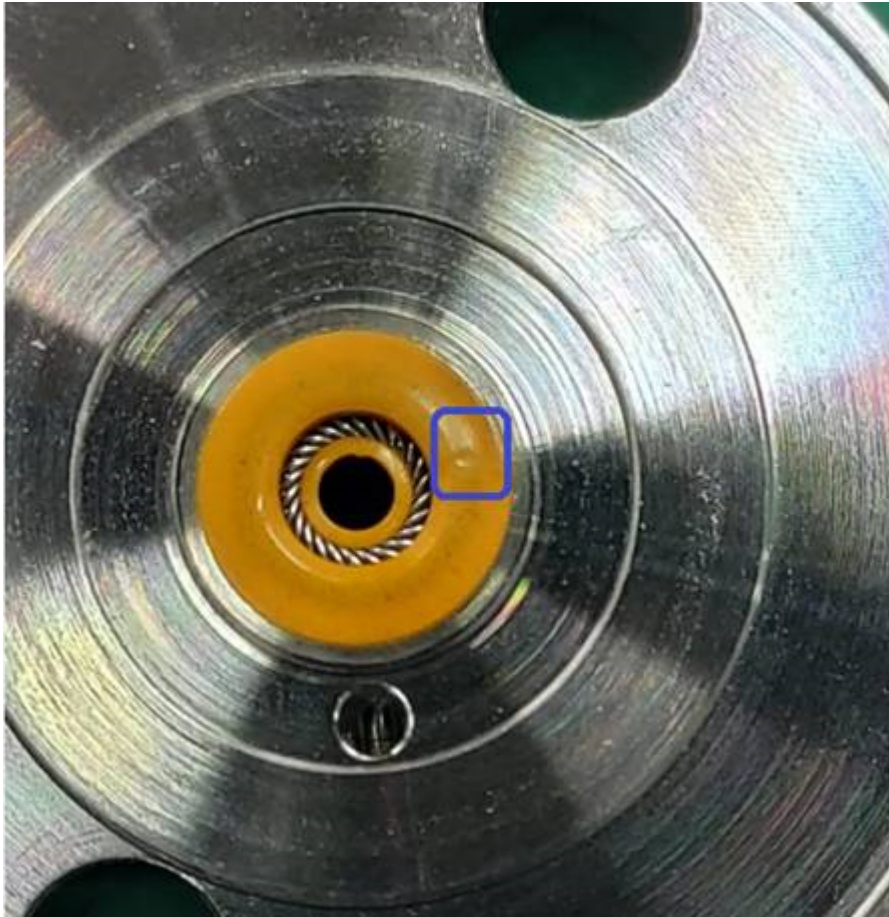
	Accumulator		Primary	
Result:	Passed		Unable to compress	
Leak Rate:	45	nL/min	0	nL/min
Maximum Pressure:	17038	psi	0	psi
Percent of Final Stroke:	28	%	50	%
Compressed Volume:	16	uL	29	uL
Compression Strokes:	1		1	
Test Attempts:	1			

+

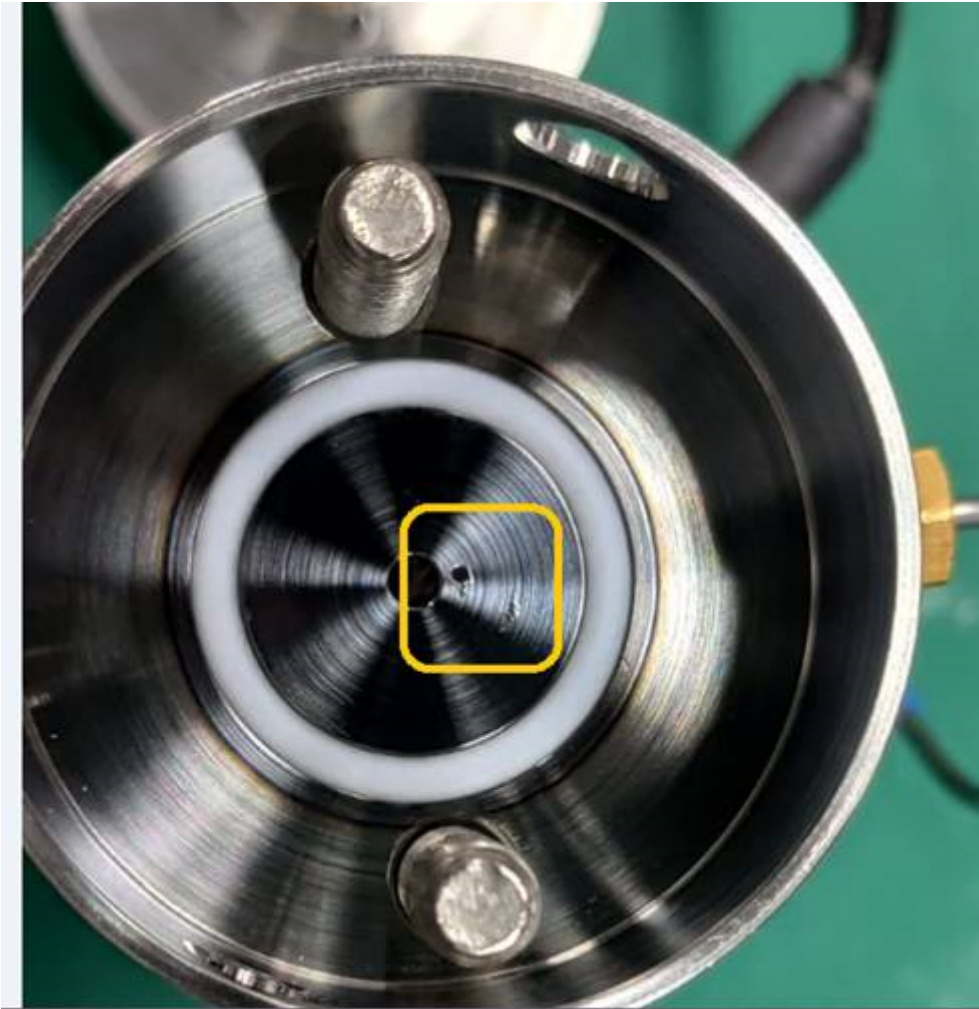
Print

Findings at pump A (primary)

1. Found dent at BSM seal. Please refers to below picture.



2. Found plating issue on the surface of pump head. Please refers to below picture.



Proposal

We propose to change seal wash housing (due to leakage and dent) and pump head of pump A (primary) due to plating issue which could contribute leakage issue later.

Please advise your acceptance of our proposal.

Thank you.

Regards,
Lwin

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S/N	Qty	Waters P/N:	Part Description	Unit Cost (USD)	Total Cost (USD)	Category	Remark
1	1	205001922	CM SALE ONLY, 289010045, 40 PIEC	27.9	27.9	Tester Replacement	NA
2	1	205001924	CM SALE ONLY, 405015367, 16 PIEC	76.62	76.62	Tester Replacement	NA
3	1	205001476	(279002426) 10PK ASSY VALVE VENT 18	420.8	420.8	Tester Replacement	NA
4	2	WAT076152	RC O-RING 2-016 TEFLON (CRC)	0.4	0.8	Tester Replacement	NA
5	2	425000930	SEAL WASH .0787 ID FIXE	26.71	53.42	Tester Replacement	NA
6	2	425001037	SEAL HIGH PRESS DUAL SPRG .045 GLD PS	39.62	79.24	Tester Replacement	NA