

Class 10K Clean Room: Tools, Fixtures and Test Stations Manual



06 Jul 2020 Rev H

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1 INTRODUCTION

In this manual, you can find the following information which is related to the detectors in Class 10K Clean Room in Flextronics:

- [Tools and Fixtures used in detectors production](#)
- [Testing Stations inside and outside of the clean room](#)

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2 TOOLS AND FIXTURES USED IN DETECTORS PRODUCTION

Below is a list of tools and fixtures transferred to Singapore for detectors production:

Location	Tool Number	Description	Quantity	Comments
2489 / TUV Optics Bench II	289002450	Optical Shunt Type M for TUV Optics Bench	4	Unique
	912000	Fiber Optic Source	1	Unique
	485	PicoAmmeter	2	Unique
	TE82874	TUV Lamp Supply	1 Set	Unique
	C9598-3000	Hamamatsu Deuterium Lamp Power Supply	1	Unique
2489 / TUV Optics Bench I	999026619	Target, Alignment	1	Unique
	999120000	Light Source Fixture	1	Unique
	9120067	Gasket Placement Fixture	1	Unique
	9120060	Alignment PIN, Grating	1	Unique
2489 / TUV Sub Assembly	9120029	Fixture for Grating Alignment	1	Unique
	9120033	Photo Diode holding Tool	1	Unique
	9120034	Lens Holding Tool	1	Unique
	9120021	Bench Holding Tool to assy the lens	1	Unique
	WAT081273	Alignment Bar	10	Unique
	NA	Torque Wrench 6.0 in/oz	1	Unique
2489 / TUV Filter Wheel and Flow Cell	9120091	Assembly Fixture Flow cell	1	Unique
	9120010	Flowcell Holding Fixture	1	Unique
	9120058	Assembly Fixture Cuvette Slide to Housing	1	Unique
	9120096	Tube Coil Fixture	1	Unique
	999026048	Lens Screw Holder	1	Unique
	9120003	Filter Wheel Assy Test Fixture & Assembly Fixture. Motor to filter Wheel	1	Unique

Location	Tool Number	Description	Quantity	Comments
2489 / TUV Filter Wheel and Flow Cell	9120012	Fixture Lens Assembly	1	Unique
	999120035	Retaining Ring Fixture	1	Unique
	9120011	Torque Wrench 100.0 in/oz	1	Unique
	NA	Torque Wrench 8.0 in/lbs	1	Unique
2998 Flow Cell Assembly	999031474	Cover Assembly Fixture	1	Unique
	999031568	Cover Assembly Fixture	1	Unique
	999031511	Spring Assembly Fixture	1	Unique
	9990294182	Target	1	Unique
	TE82916 TE82916-2	Flow Cell Alignment Fixture	1 Set	Unique
	999031309	Alignment Tool	1	Unique
	NA	Torque Wrench 4.5 in/lbs	1	Unique
2998 / PDA / eLambda Optics Bench Assembly	Starlite 150 999043875	Optical Measurement System with PDA Alignment Fixture (mounted to Starlite)	1	Unique
	999028958	Top Cover Gasket Alignment Fixture for 2998, PDA / eλ	2	Unique
	9120035	Retaining Ring Fixture	1	Unique
	NA	0.250" Gage Pin	1	Unique
	999029310	Filter wheel to motor fixture	1 Set	Unique
	999026549 999028950	Filter flag assembly gage	1 Set	Unique
	NA	T10 Torque Driver 40.0 in/oz	1	Unique
	NA	T10 Torque Driver 12.0 in/lbs	1	Unique

Location	Tool Number	Description	Quantity	Comments
2998 / PDA / eLambda Aperture Assembly	TE82868	Aperture Fixture with Test PC	1 Set	Unique
	119168 & 119169	Pin Peek Punch Assembly Fixture punch sets	1	Unique
2998 / PDA / eLambda PDA Assembly	TE82951	PDA Fixture with Test PC	1Set	Unique
	NA	Torque Wrench 32.0 in/oz	1	Unique
2998 Rough Alignment	TE82917	Alignment Tool Rough Optics Bench Alignment, 2 CCDs,LED Light Source, Electromechanical Device- ECCN: EAR999 TE# 82917 with Test PC	1 Set	Unique
2998 Fine Alignment	TE82918	2998 Fine Optics Bench Alignment Fixture, Test System and PC	1 Set	Unique
PDA / eLambda Rough Alignment	TE82880-2	Rough Alignment Fixture with Test PC	1 Set	Unique
	999029313	Rough Alignment Tool	1	Unique
PDA / eLambda Fine Alignment	TE82881-2	Fine Alignment Fixture, Test System and PC	1 Set	Unique
	289002227	Optical Shunt, Small	1	Unique
	289002226	Optical Shunt, Medium	7	Unique
	289002149	Optical Shunt, Large	1	Unique
	289002219	Linearity Shunt	1	Unique

Location	Tool Number	Description	Quantity	Comments
Detectors Chassis Assembly Hand tools	999026419	PCB Push Tool	2	Unique
	119646	Connector Tool	2	Unique
	999028339	Cap Removal Tool	1	Unique
	9027063	Connector Tool	2	Unique
	<u>NA</u>	<u>T20 Torque Driver 3.0 in/lbs</u>	<u>1</u>	<u>Unique</u>
	<u>NA</u>	<u>T20 Torque Driver 4.0 in/lbs</u>	<u>1</u>	<u>Unique</u>
	<u>NA</u>	<u>T20 Torque Driver 5.0 in/lbs</u>	<u>1</u>	<u>Unique</u>
PDA / eLambda Universal Fixture	TE83096-2	Universal Fixture for PDA / eLambda	1 Set	Unique
Spares	NA	Flow Cell Fixtures for Spares Assembly	1	Unique
	MI – 150	Fiber Optic Source for Flow Cell Fixture	1	Unique
Storage	999029418	Fixture for Optics Bench Assembly	1	Unique
	<u>999040526</u>	<u>Label Alignment Fixture (N2971013-2998)(N2971014-2489)</u>	<u>1</u>	<u>Unique</u>
	<u>999040724</u>	<u>Label Alignment Fixture (N2971035-TUV) (N2971036-PDA)</u>	<u>1</u>	<u>Unique</u>
	<u>WAT081337</u>	<u>2487 Grating Alignment PIN</u>	<u>10</u>	<u>Common</u>

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2.1 2489 / TUV Optics Bench II

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General Remark: For Testing purpose	PART INFORMATION	
	Part No: 289002450	Commodity Code:
	Description: Optical Shunt Type M for TUV Optics Bench	
Maintenance Remark: Flex PM 02758	Quantity Received: 4	
	Date Received:	
	Location: Flextronics Kallang	Used: No



General Remark: For Testing purpose	PART INFORMATION	
	Part No: 912000	Commodity Code:
	Description: Fiber Optic Source	
Maintenance Remark: NA	Quantity Received: 1	
	Date Received:	
	Location: Flextronics Kallang	Used: No



General Remark: For Testing purpose, <u>obsoleted.</u>	PART INFORMATION	
	Part No: 485	Commodity Code:
Maintenance Remark: NA	Description: <u>PicoAmmeter</u>	
	Quantity Received: 2	
	Date Received:	
	Location: Flextronics Kallang	Used: No

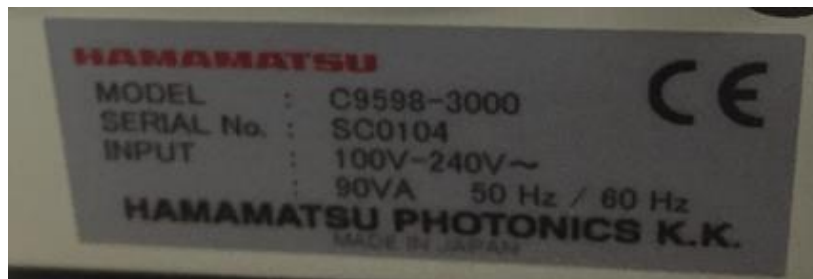


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General Remark: For Testing purpose	PART INFORMATION	
	Part No: TE82874	Commodity Code:
	Description: TUV Lamp Supply	
Maintenance Remark: Flex PM 01579	Quantity Received: 1	
	Date Received:	
	Location: Flextronics Kallang	Used: No



General Remark: For Testing purpose	PART INFORMATION	
	Part No: C9598-3000	Commodity Code:
	Description: Hamamatsu Deuterium Lamp Power Supply	
Maintenance Remark: NA	Quantity Received: 1	
	Date Received:	
	Location: Flextronics Kallang	Used: No

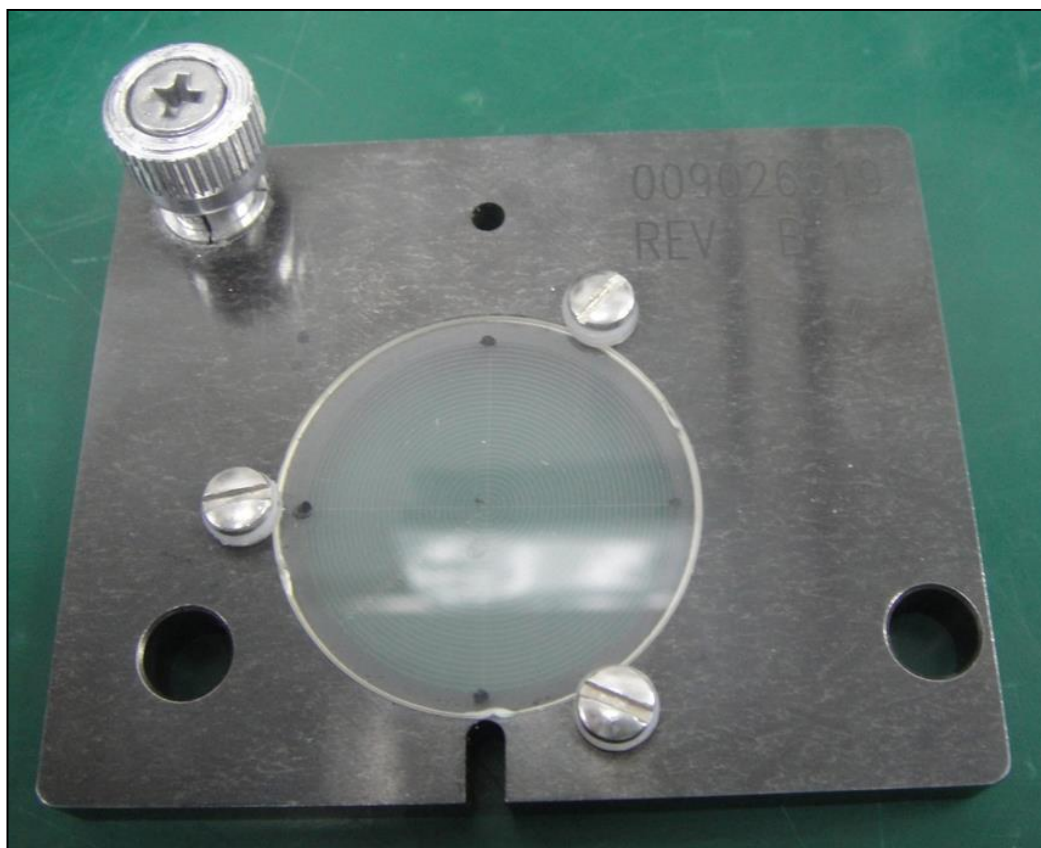
2.2 2489 / TUV Optics Bench I

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General Remark:
For Testing purpose

PART INFORMATION

Part No: 999026619

Commodity Code:

Description: Target, Alignment

Maintenance Remark:
NA

Quantity Received: 1

Date Received:

Location: Flextronics Kallang

Used: No



999120000-1



999120000-2



999120000-3

General Remark:	PART INFORMATION	
	Part No: 999120000	Commodity Code:
	Description: Assy,Fix , Optics Bench Light Source	
	Quantity Received: 1	
Maintenance Remark: NA	Date Received:	
	Location: Flextronics Kallang	Used: No



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General Remark:	PART INFORMATION	
	Part No: 9120067	Commodity Code:
	Description: Gasket Placement Fixture	
Maintenance Remark: Flex PM 00291	Quantity Received: 1	
	Date Received: 23 rd April 2008	
	Location: Flextronics Kallang	Used: No



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General Remark:	PART INFORMATION	
	Part No: 9120060	Commodity Code:
	Description: Alignment PIN, Grating	
Maintenance Remark:	Quantity Received: 1	
	Date Received: NA	
	Location: Flextronics Kallang	Used: No

2.3 2489 / TUV Sub Assembly

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General Remark:	PART INFORMATION	
	Part No: 9120029	Commodity Code:
	Description: Fixture for Grating Alignment	
Maintenance Remark: Flex PM 00295	Quantity Received: 1	
	Date Received: 23 rd April 2008	
	Location: Flextronics Kallang	Used: No



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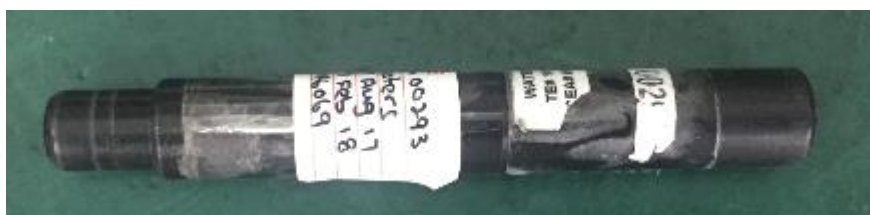


General Remark:	PART INFORMATION	
	Part No: 9120033	Commodity Code:
	Description: Photo Diode holding Tool	
Maintenance Remark: Flex PM 00294	Quantity Received: 1	
	Date Received: 23 rd April 2008	
	Location: Flextronics Kallang	Used: No



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General Remark:	PART INFORMATION	
	Part No: 9120034	Commodity Code:
	Description: Lens Holding Tool	
Maintenance Remark: Flex PM 00293	Quantity Received: 1	
	Date Received:	
	Location: Flextronics Kallang	Used: No



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General Remark:	PART INFORMATION	
	Part No: 9120021	Commodity Code:
	Description: Bench Holding Tool to assy the lens	
Maintenance Remark: Flex PM 00292	Quantity Received: 1	
	Date Received:	
	Location: Flextronics Kallang	Used: No



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General Remark:	PART INFORMATION	
	Part No: WAT081273	Commodity Code:
	Description: Alignment Bar	
Maintenance Remark: NA	Quantity Received: 10	
	Date Received:	
	Location: Flextronics Kallang	Used: No



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General Remark: Hand Tool T10 (50 mm)	PART INFORMATION	
	Part No: NA	Commodity Code:
	Description: Torque Wrench 6.0 in/oz	
	Quantity Received: 1	
Maintenance Remark: Flex PM 01631	Date Received:	
	Location: Flextronics Kallang	Used: No

2.4 2489 / TUV Filter Wheel and Flow Cell

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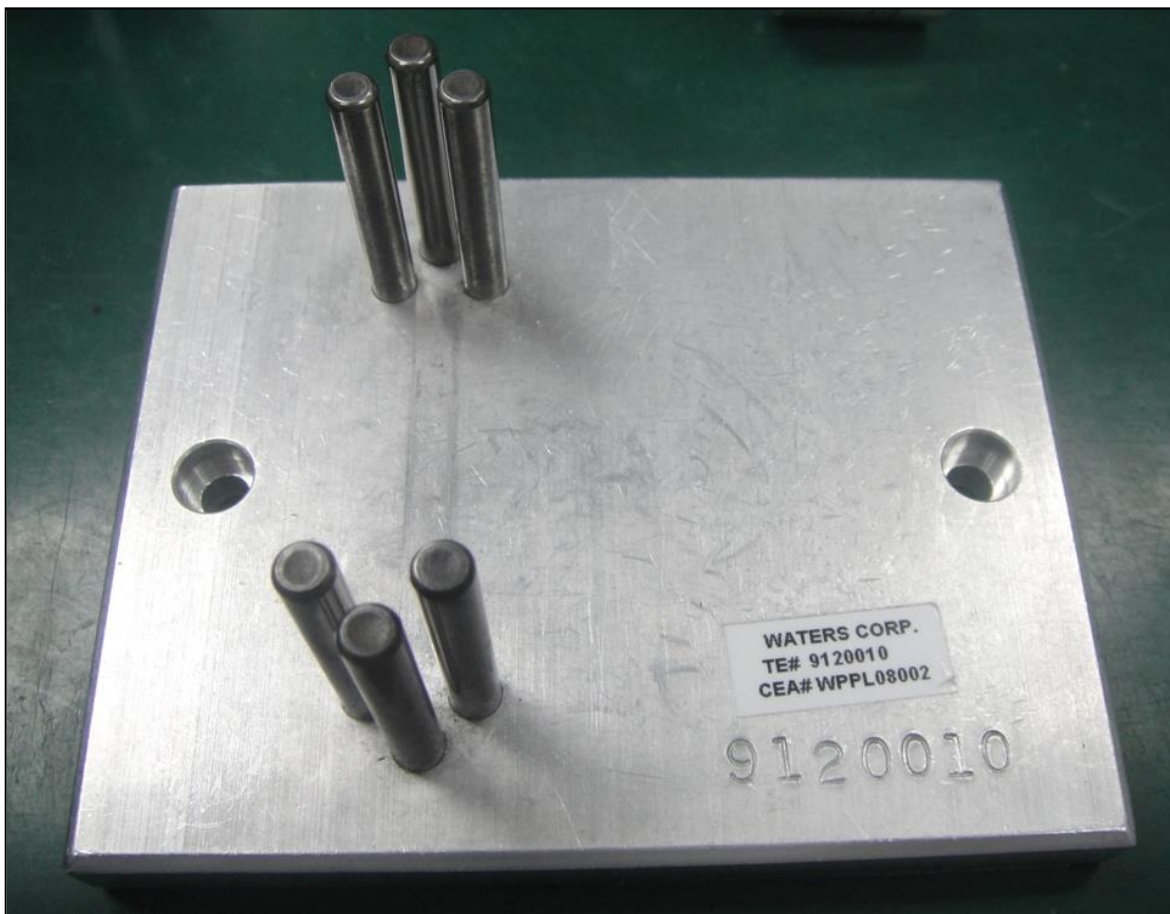


General Remark:	PART INFORMATION	
	Part No: 9120091	Commodity Code:
Maintenance Remark: Flex PM 00296	Description: Assembly Fixture Flow cell	
	Quantity Received: 1	
	Date Received: 23 rd April 2008	
	Location: Flextronics Kallang	Used: No



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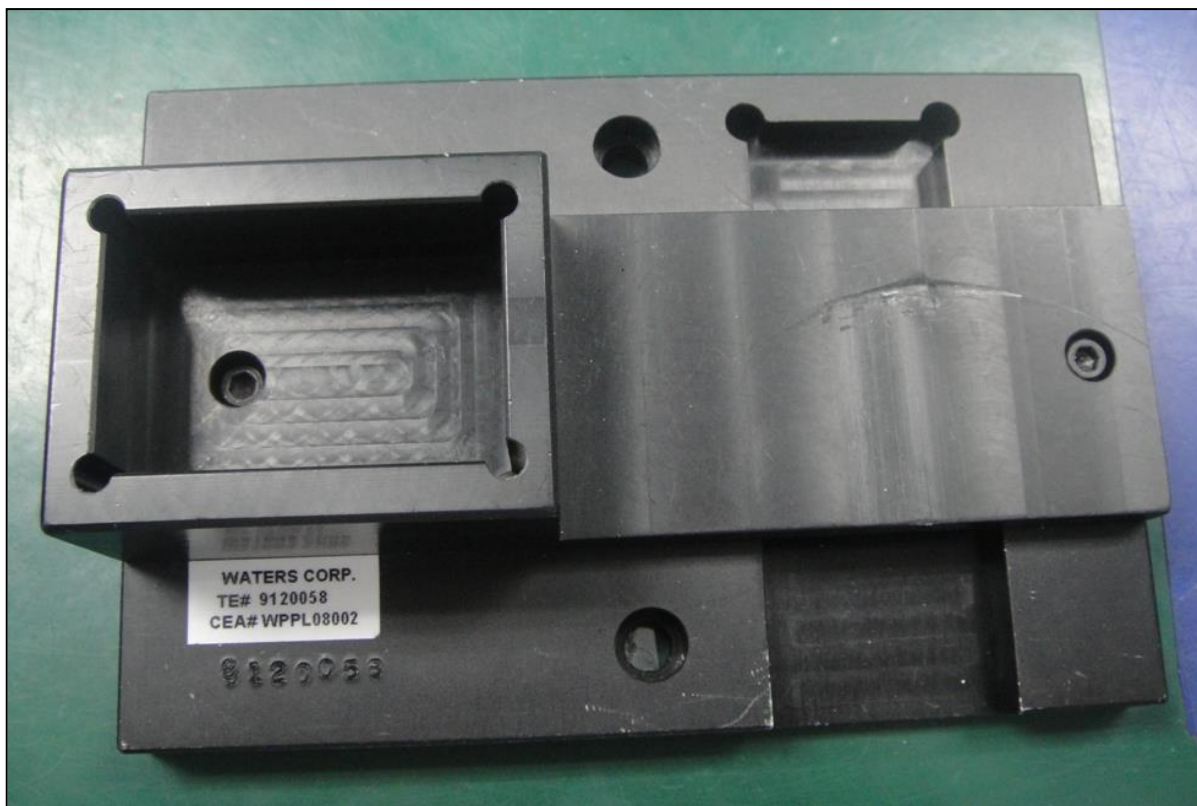


General Remark:	PART INFORMATION	
	Part No: 9120010	Commodity Code:
	Description: Flowcell Holding Fixture	
Maintenance Remark: Flex PM 00299	Quantity Received: 1	
	Date Received: 23 rd April 2008	
	Location: Flextronics Kallang	Used: No



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General Remark:	PART INFORMATION	
	Part No: 9120058	Commodity Code:
	Description: Assembly Fixture Cuvette Slide to Housing	
Maintenance Remark: Flex PM 00302	Quantity Received: 1	
	Date Received: 23 rd April 2008	
	Location: Flextronics Kallang	Used: No



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General Remark:	PART INFORMATION	
	Part No: 9120096	Commodity Code:
	Description: Tube Coil Fixture	
	Quantity Received: 1	
Maintenance Remark: Flex PM 00301	Date Received: 23 rd April 2008	
	Location: Flextronics Kallang	Used: No



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General Remark:	PART INFORMATION	
	Part No: 999026048	Commodity Code:
	Description: Lens Screw Holder	
	Quantity Received: 1	
Maintenance Remark: Flex PM 00300	Date Received: 23 rd April 2008	
	Location: Flextronics Kallang	Used: No



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999120003

General Remark:

- Use with 999120003

PART INFORMATION

Part No: 9120003

Commodity Code:

Description: Filter Wheel Assy Test Fixture & Assembly Fixture. Motor to filter Wheel

Maintenance Remark:

Flex PM 00297

Quantity Received: 1

Date Received: 23rd April 2008

Location: Flextronics Kallang

Used: No



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General Remark:	PART INFORMATION	
	Part No: 9120012	Commodity Code:
	Description: Fixture Lens Assembly	
Maintenance Remark: Flex PM 00311	Quantity Received: 1	
	Date Received:	
	Location: Flextronics Kallang	Used: No



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General Remark:	PART INFORMATION	
	Part No: 999120035	Commodity Code:
	Description: Retaining Ring Fixture	
Maintenance Remark: Flex PM 00298	Quantity Received: 1	
	Date Received: 23 rd April 2008	
	Location: Flextronics Kallang	Used: No



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General Remark: Hand Tool	PART INFORMATION	
	Part No: 9120011	Commodity Code:
	Description: Torque Wrench 100.0 in/oz	
Maintenance Remark: Flex PM 01630	Quantity Received: 1	
	Date Received:	
	Location: Flextronics Kallang	Used: No



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**General Remark:**

Hand Tool
Slotted Bit (20 mm)

PART INFORMATION

Part No: NA

Commodity Code:

Description: Torque Wrench 8.0 in/lbs

Maintenance Remark:

Flex PM 01694

Quantity Received: 1

Date Received:

Location: Flextronics Kallang

Used: No

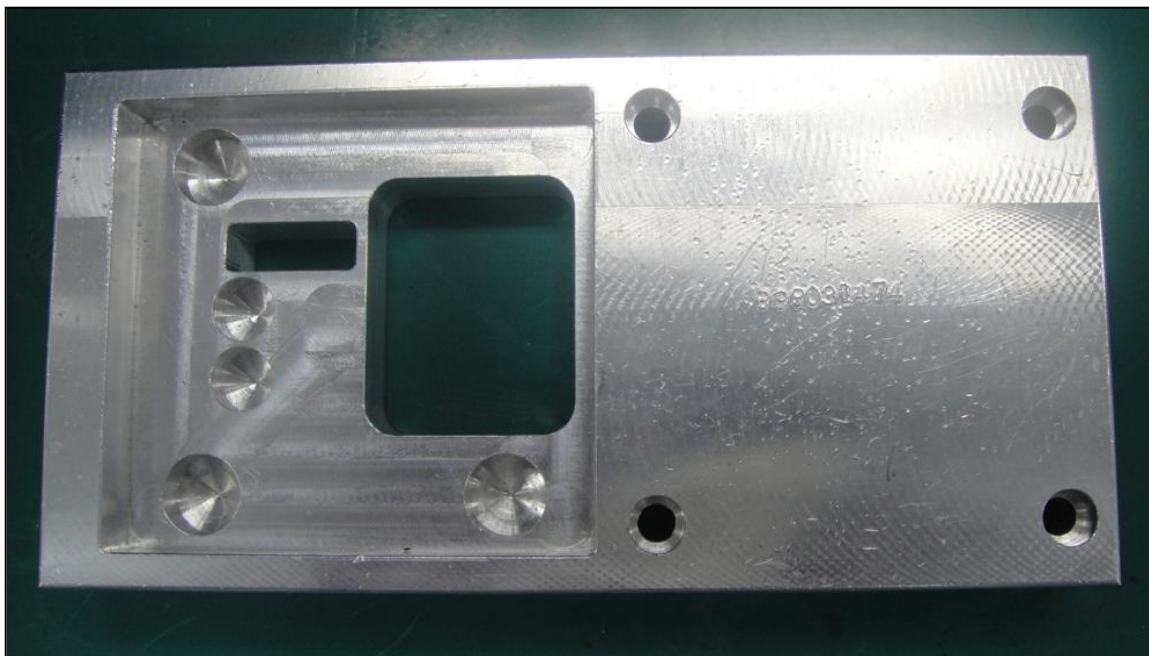
2.5 2998 Flow Cell Assembly

[BACK](#)



Waters

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General Remark:	PART INFORMATION	
	Part No: 999031474	Commodity Code:
	Description: Cover Assembly Fixture Flowcell alignment fixture	
Maintenance Remark: Flex PM 00314	Quantity Received: 1	
	Date Received:	
	Location: Flextronics Kallang	Used: No



Waters

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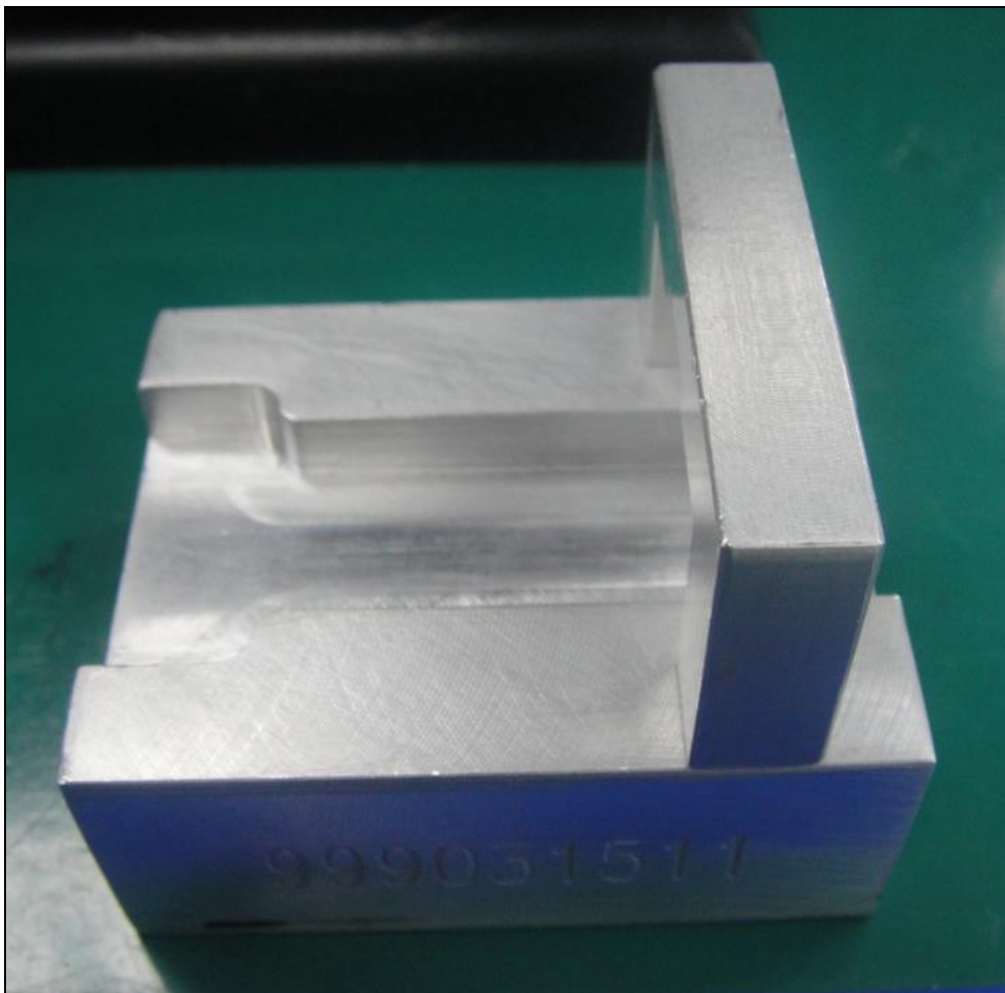


General Remark:	PART INFORMATION	
	Part No: 999031568	Commodity Code:
	Description: Cover Assembly Fixture	
Maintenance Remark: Flex PM 00312	Quantity Received: 1	
	Date Received:	
	Location: Flextronics Kallang	Used: No



Waters

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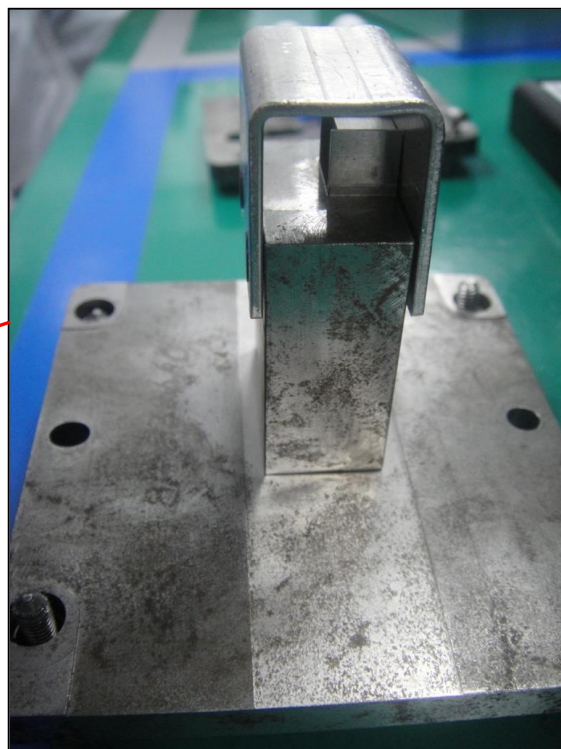


General Remark:	PART INFORMATION	
	Part No: 999031511	Commodity Code:
	Description: Spring Assembly Fixture	
Maintenance Remark: Flex PM 00312	Quantity Received: 1	
	Date Received:	
	Location: Flextronics Kallang	Used: No

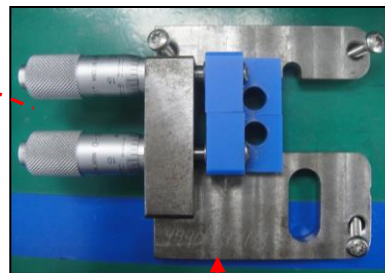
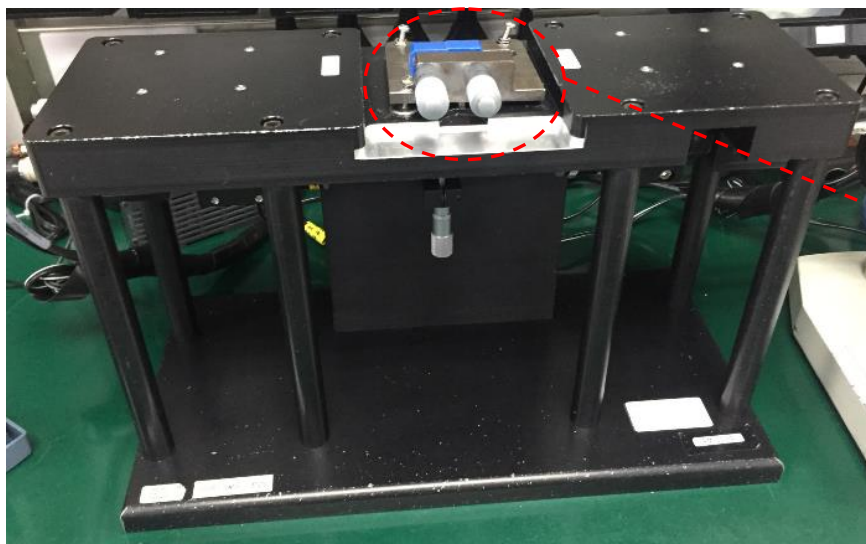


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General Remark: For Testing purpose	PART INFORMATION	
	Part No: 9990294182	Commodity Code:
	Description: Target	
Maintenance Remark: NA	Quantity Received: 1	
	Date Received:	
	Location: Flextronics Kallang	Used: No



999029418

TE82916 Alignment Fixture

TE82916 – 2 Alignment Fixture PC

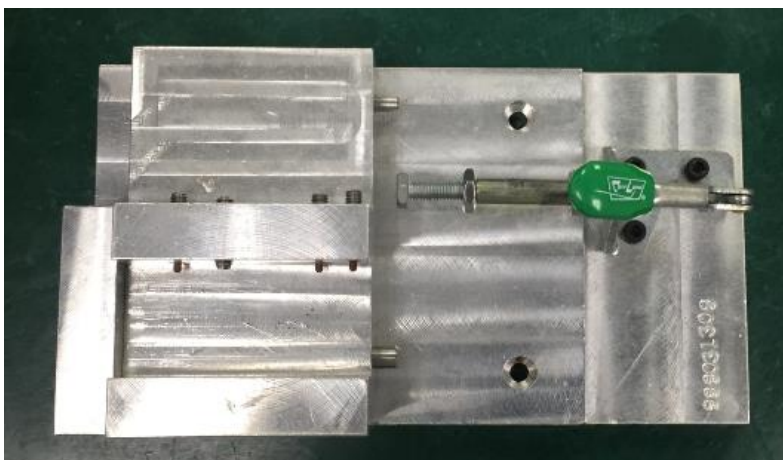


General Remark: Micrometer part no.: 999029418 to be used it with TE82916	PART INFORMATION	
	Part No: TE82916 TE82916-2	Commodity Code:
	Description: Flow Cell Alignment Fixture	
	Quantity Received: 1 Set	
Maintenance Remark: Flex PM 00319	Date Received:	
	Location: Flextronics Kallang	Used: No



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General Remark:	PART INFORMATION	
	Part No: 999031309	Commodity Code:
	Description: Alignment Tool	
Maintenance Remark: Flex PM 02353	Quantity Received: 1	
	Date Received:	
	Location: Flextronics Kallang	Used: No

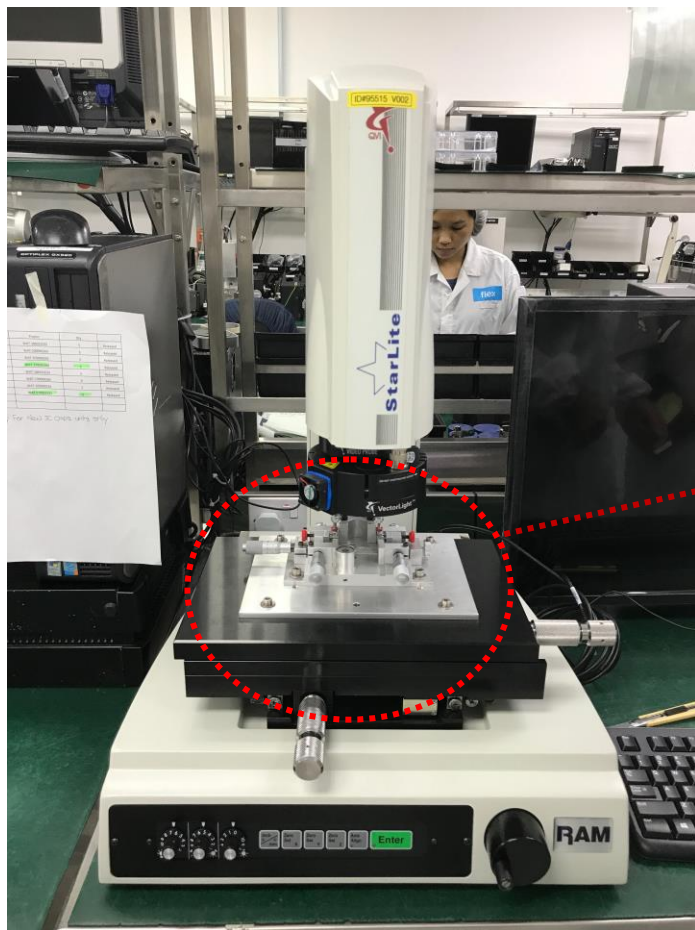


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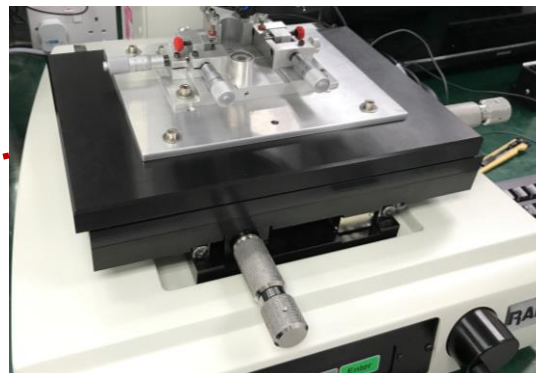
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General Remark: Hand Tool3 3/16 Bit	PART INFORMATION	
	Part No: NA	Commodity Code:
	Description: Torque Wrench 4.5 in/lbs	
Maintenance Remark: Flex PM 01695	Quantity Received: 1	
	Date Received:	
	Location: Flextronics Kallang	Used: No



Starlite 150 - Optical Measurement System

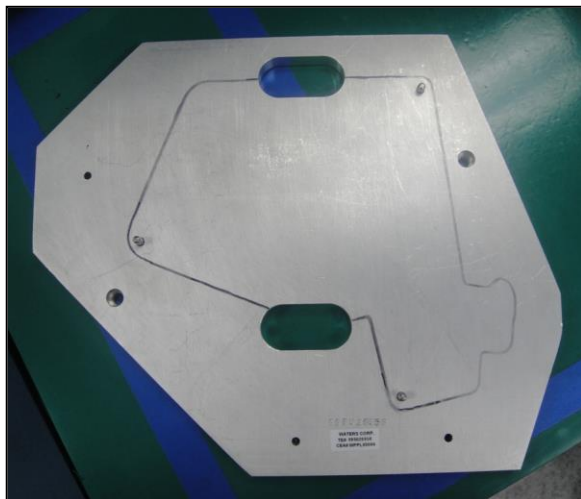


999043875 - PDA Alignment Fixture

General Remark:	PART INFORMATION	
	Part No: Starlite 150 999043875	Commodity Code:
Maintenance Remark: NA	Description: Optical Measurement System with PDA Alignment Fixture (mounted to Starlite)	
	Quantity Received: 1	
	Date Received: 11 Oct 2017	
	Location: Flextronics Kallang	Used: No

2.6 2998 / PDA / eLambda Optics Bench Assembly

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Top Cover Gasket Alignment Fixture for 2998



Top Cover Gasket Alignment Fixture for PDA / eλ

General Remark:	PART INFORMATION	
	Part No: 999028958	Commodity Code:
	Description: Top Cover Gasket Alignment Fixture for 2998, PDA / eλ	
	Quantity Received: 2	
Maintenance Remark: Alignment Fixture for 2998: Flex PM 00308 Alignment Fixture for PDA / eλ: Flex PM 00316	Date Received: 23 rd April 2008	
	Location: Flextronics Kallang	Used: No



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General Remark:	PART INFORMATION	
	Part No: 9120035	Commodity Code:
	Description: Retaining Ring Fixture	
Maintenance Remark: Flex PM 00313	Quantity Received: 1	
	Date Received:	
	Location: Flextronics Kallang	Used: No



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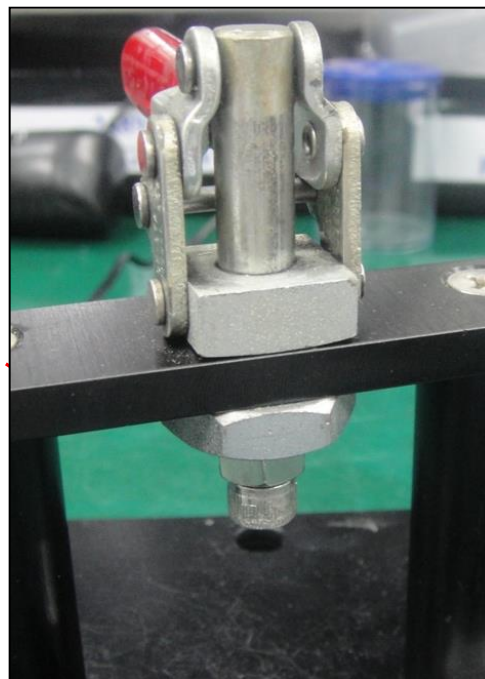
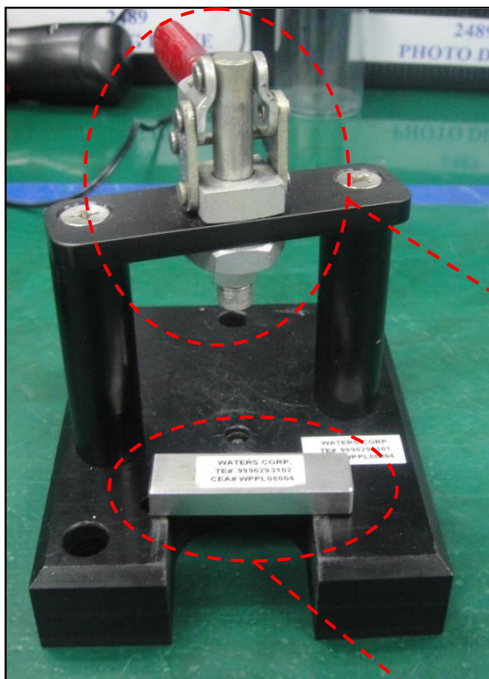


General Remark:	PART INFORMATION	
	Part No: NA	Commodity Code:
	Description: 0.250" Gage Pin	
Maintenance Remark: Flex PM 02764	Quantity Received: 1	
	Date Received:	
	Location: Flextronics Kallang	Used: No

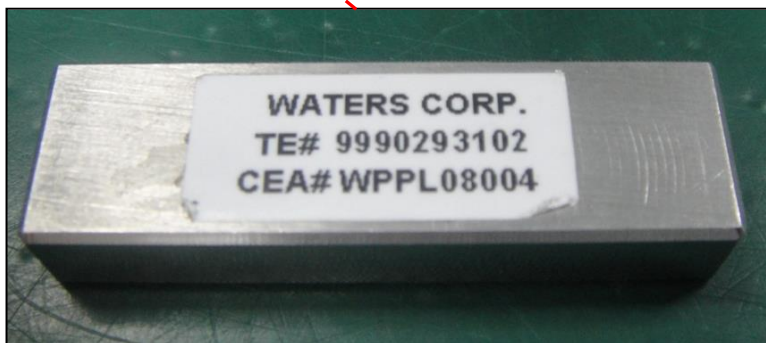


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Hand Tool



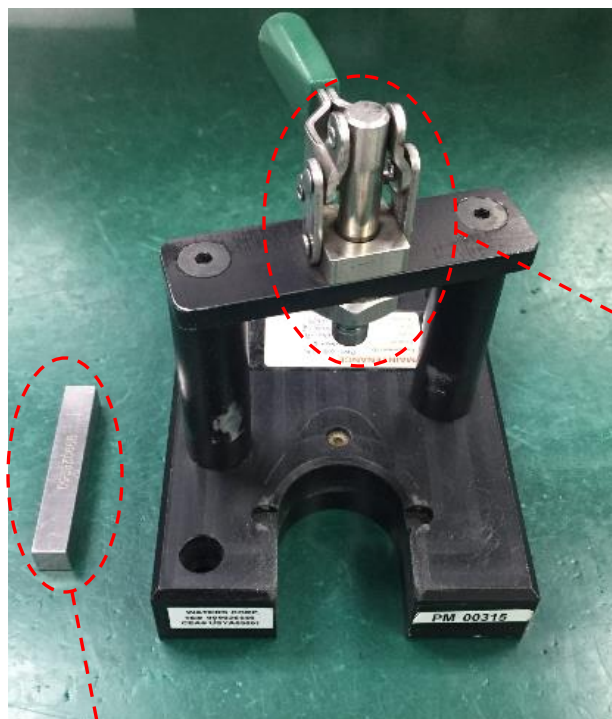
Fixture

General Remark: Hand Tool Part No: 999029310-1 Fixture Part No: 999029310-2	PART INFORMATION	
	Part No: 999029310	Commodity Code:
	Description: Filter wheel to motor fixture	
Maintenance Remark: Flex PM 00307	Quantity Received: 1 Set	
	Date Received: 23 rd April 2008	
	Location: Flextronics Kallang	Used: No



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Hand Tool



Fixture

General Remark:

Hand Tool Part No: 999026549
Fixture Part No: 999028950

PART INFORMATION

Part No: 999026549
999028950

Commodity Code:

Description: Filter flag assembly gage

Maintenance Remark:

Flex PM 00315

Quantity Received: 1 Set

Date Received:

Location: Flextronics Kallang

Used: No



General Remark: T10 Bit	PART INFORMATION	
	Part No: NA	Commodity Code: NA
	Description: T10 Torque Driver 40.0 in/oz	
Maintenance Remark: Flex PM 01634	Quantity Received: 01	
	Date Received: NA	
	Location: Flextronics Kallang	Used: No



Waters

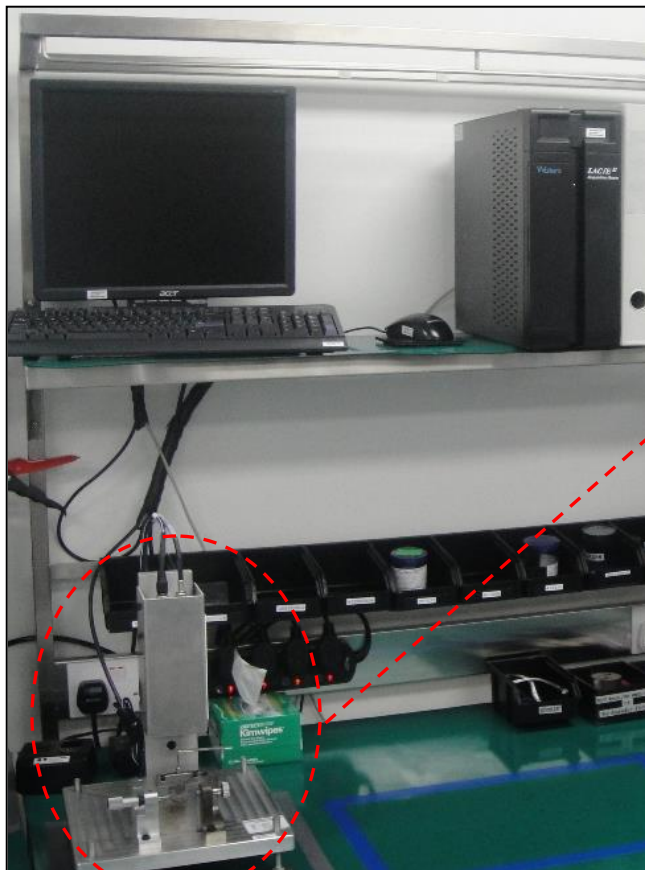
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General Remark: T10 Bit	PART INFORMATION	
	Part No: NA	Commodity Code: NA
	Description: T10 Torque Driver 12.0 in/lbs	
Maintenance Remark: Flex PM 01696	Quantity Received: 01	
	Date Received: NA	
	Location: Flextronics Kallang	Used: No

2.7 2998 / PDA / eLambda Aperture Assembly

[BACK](#)

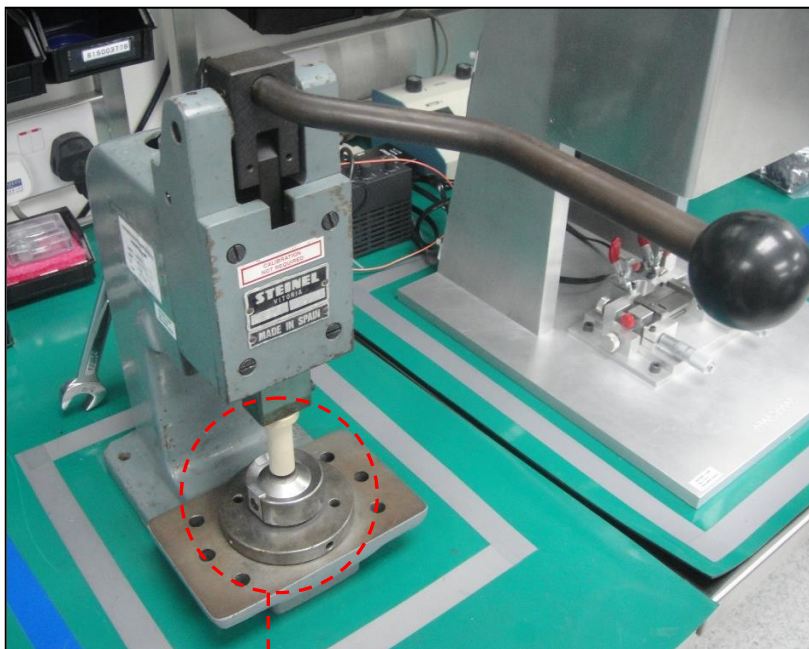


TE82868 Aperture Fixture and Test PC



Aperture Fixture

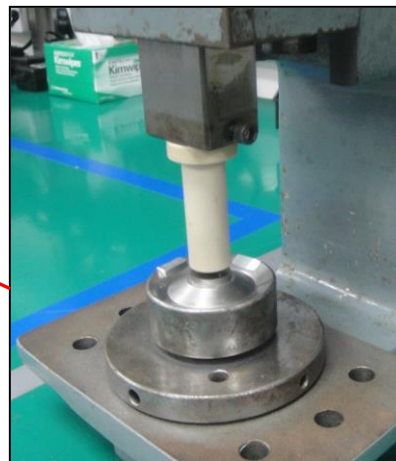
General Remark: Aperture Fixture Part No: 999028665	PART INFORMATION	
	Part No: TE82868	Commodity Code:
Maintenance Remark: Aperture Fixture : Flex PM 00303 Aperture Test PC : Flex PM 02683	Description: Aperture Fixture with Test PC	
	Quantity Received: 1 Set	
	Date Received: 23 rd April 2008	
	Location: Flextronics Kallang	Used: No



Pin punch sets Peek
Punch Assembly Fixture



Pin Assembly Fixture



Peek Punch Assembly Fixture

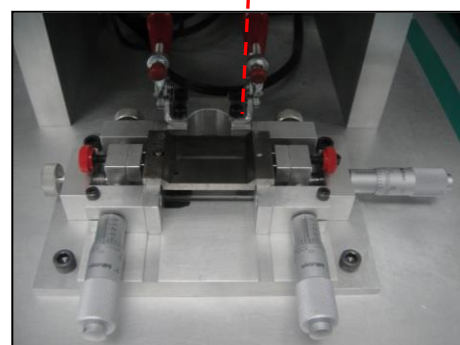
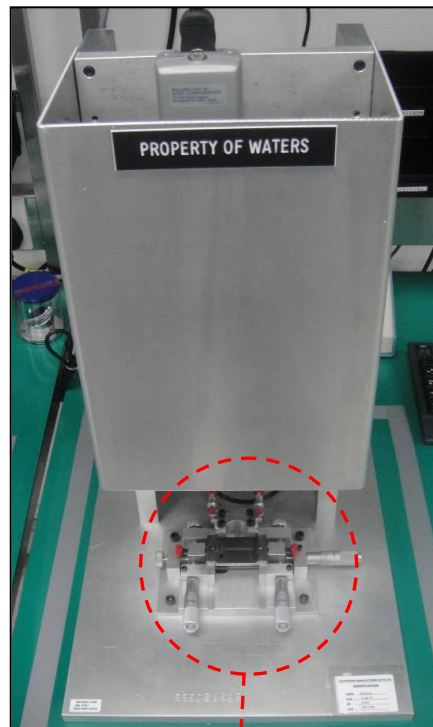
General Remark: Peek Punch Fixture Part no: 119168 Pin Assembly Fixture Part no: 119169	PART INFORMATION	
	Part No: 119168 & 119169	Commodity Code:
	Description: Pin punch sets Peek Punch Assembly Fixture	
	Quantity Received: 1	
Maintenance Remark: Flex PM 00304	Date Received: 23 rd April 2008	
	Location: Flextronics Kallang	Used: No

2.8 2998 / PDA / eLambda PDA Assembly

[BACK](#)



TE82951 PDA Fixture with Test PC



PDA Fixture



PDA Target

General Remark:

PDA Fixture Part No: 999029999

PDA Target Part No: 9030736

Maintenance Remark:

PDA Fixture : Flex PM 00306

PDA Test PC : Flex PM 02689

PART INFORMATION

Part No: TE82951

Commodity Code:

Description: PDA Fixture with Test PC

Quantity Received: 1 Set

Date Received: 23rd April 2008

Location: Flextronics Kallang

Used: No



Waters

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General Remark: Hand Tool T10 (20 mm)	PART INFORMATION	
	Part No: NA	Commodity Code:
	Description: Torque Wrench 32.0 in/oz	
Maintenance Remark: Flex PM 01633	Quantity Received: 1	
	Date Received:	
	Location: Flextronics Kallang	Used: No

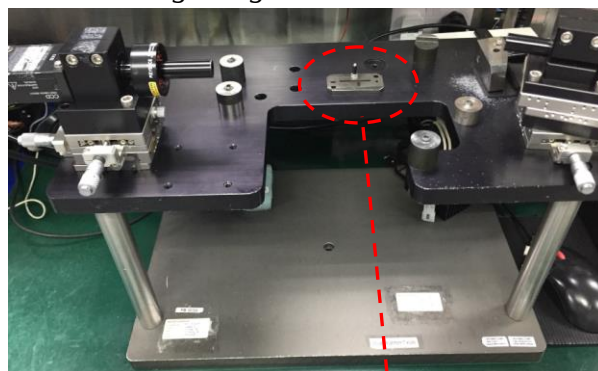
2.9 2998 Rough Alignment

[BACK](#)



TE82917 Rough Alignment Fixture
with Test PC

Rough Alignment Fixture



Pin Hole Aperture



Alignment tool



Target Reticle

Mercury Lamp

General Remark:

Rough Alignment Fixture Part No: 999029313-1
Alignment tool Part No.: 999029313-2
Mercury Lamp Part No.: 999029313-3
Target Reticle Part No. 999029313-5
Pin Hole Aperture Part No.: 999028665-1

PART INFORMATION

Part No: TE82917

Commodity Code:

Description: Alignment Tool Rough Optics Bench
Alignment, 2 CCDs, LED Light Source,
Electromechanical Device-ECCN: EAR999
TE# 82917 with Test PC

Maintenance Remark:

Rough Alignment Fixture: Flex PM 00309
Target Reticle: Flex PM 00338
Rough Alignment Test PC: Flex PM 02687

Quantity Received: 1 Set

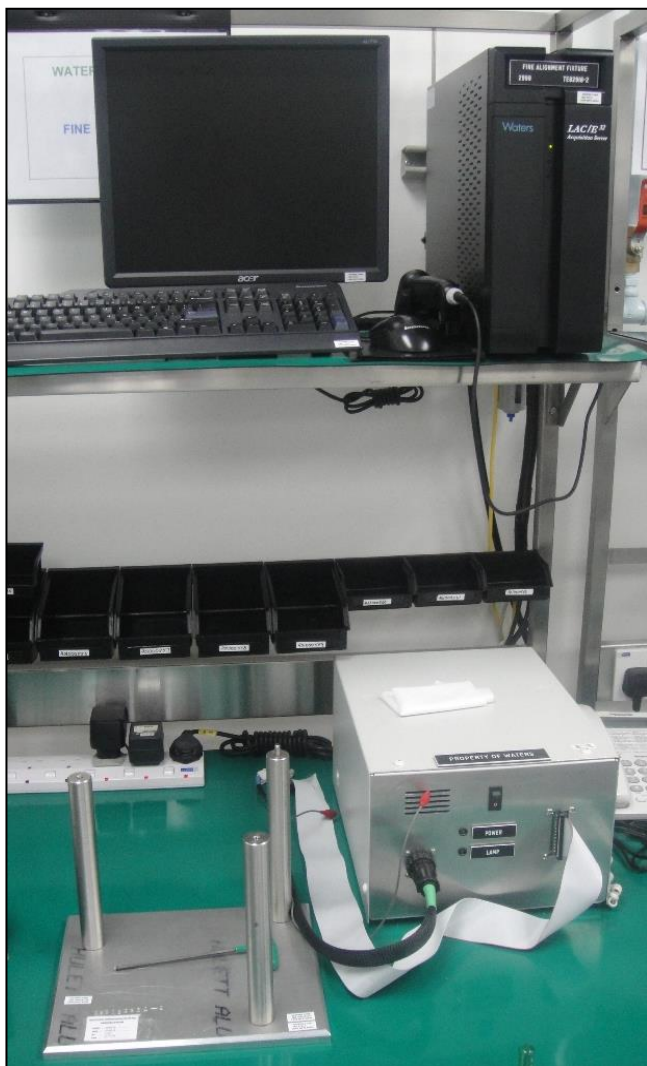
Date Received:

Location: Flextronics Kallang

Used: No

2.10 2998 Fine Alignment

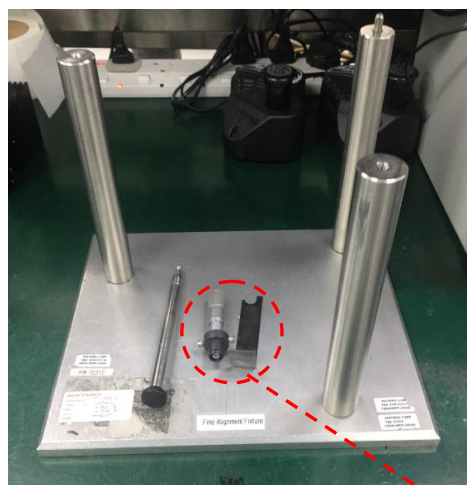
[BACK](#)



*TE82918 Fine Alignment Fixture, Test System
and PC Overview*



Fine Alignment Test System



Fine Alignment Fixture



CAM Tool

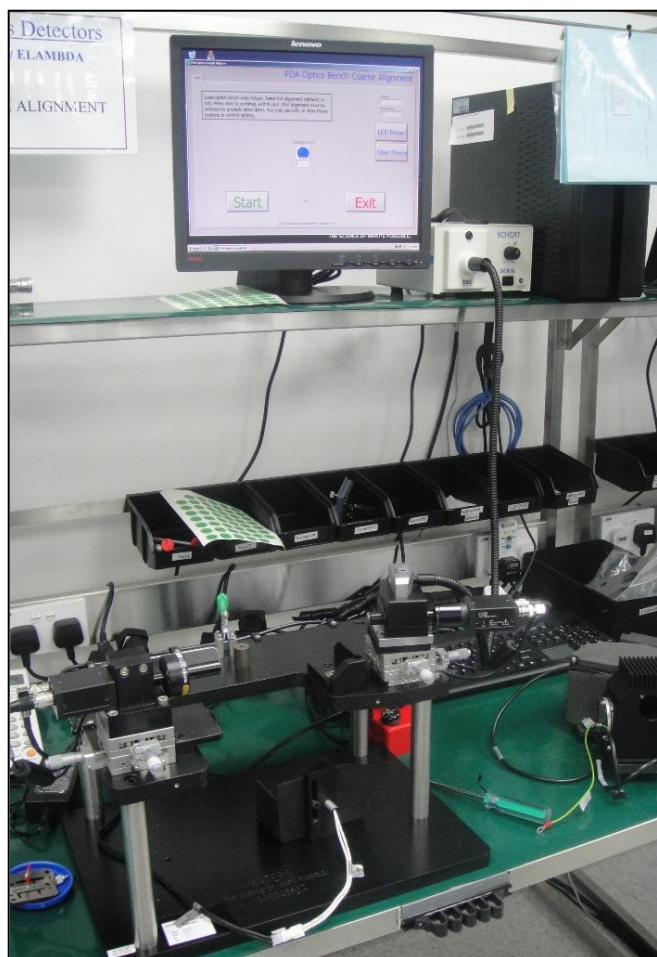


*Micrometer
with Clip*

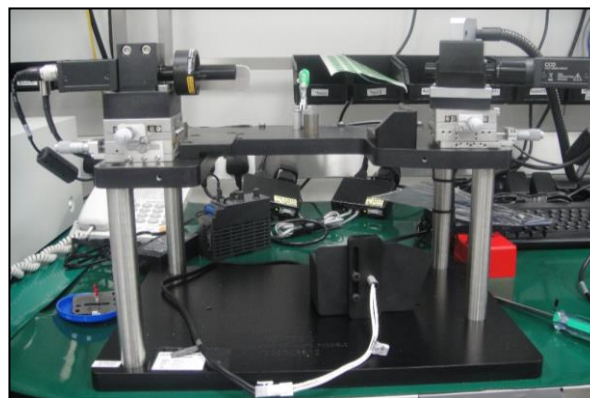
General Remark:	PART INFORMATION	
Fine Alignment Fixture Part No: 999029981-2 CAM Tool Part no.: 999029396 Micrometer with Clip Part No.: 9029313-6	Part No:TE82918	Commodity Code:
	Description: 2998 Fine Optics Bench Alignment Fixture, Test System and PC	
	Quantity Received: 1 Set	
Maintenance Remark: Fine Alignment Fixture: Flex PM 00310 Fine Alignment Test PC & System: Flex PM 02688	Date Received: 23 rd April 2008	
	Location: Flextronics Kallang	Used: No

2.11 PDA / eLambda Rough Alignment

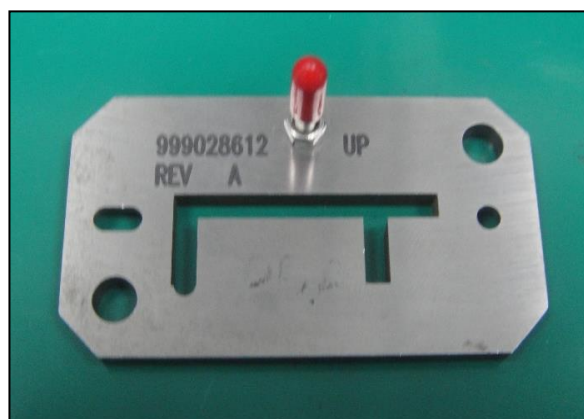
[BACK](#)



*TE82880-2 Rough Alignment Fixture with
Test PC*



Rough Alignment Fixture



Alignment tool



Pin Hole Aperture

General Remark:	PART INFORMATION	
	Part No: TE82880-2	Commodity Code:
Maintenance Remark: Rough Alignment: Flex PM 00317 Rough Alignment Test PC: Flex PM 02684	Description: Rough Alignment Fixture with Test PC	
	Quantity Received: 1 Set	
	Date Received: 23 rd April 2008	
	Location: Flextronics Kallang	Used: No



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General Remark:	PART INFORMATION	
	Part No: 999029313	Commodity Code:
	Description: Rough Alignment Tool	
Maintenance Remark: Flex PM 00317	Quantity Received: 1	
	Date Received:	
	Location: Flextronics Kallang	Used: No

2.12 PDA / eLambda Fine Alignment

[BACK](#)



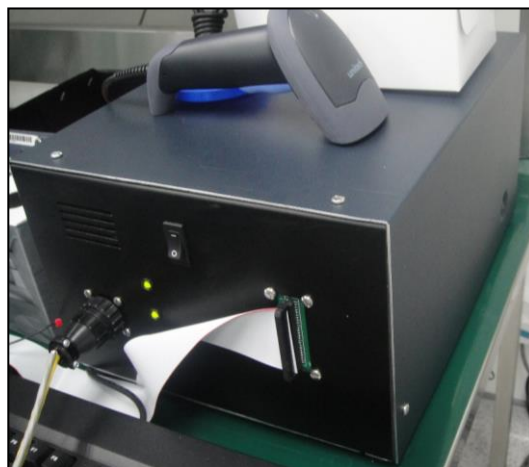
*TE82881-2 Fine Alignment
Fixture, Test System and PC*



Fine Alignment Fixture



Grating Adjusting Tool



Fine Alignment Test system

General Remark: Fine Alignment Fixture Part No: 999029221 Grating adjusting Tool Part No.: 999029396	PART INFORMATION	
	Part No:TE82881-2	Commodity Code:
	Description: Fine Alignment Fixture, Test System and PC	
	Quantity Received: 1 Set	
	Date Received:	
Maintenance Remark: Fine Alignment: Flex PM 00318 Fine Alignment Test PC & System: Flex PM 02685	Location: Flextronics Kallang	
	Used: No	

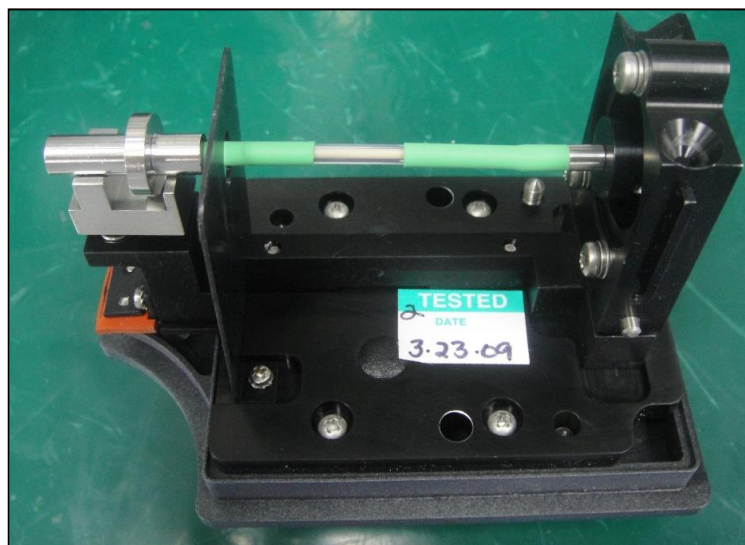


Waters

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Front View



Back View

General Remark: For Testing purpose	PART INFORMATION	
	Part No: 289002227	Commodity Code:
	Description: Optical Shunt, Small	
Maintenance Remark: Flex PM 00333	Quantity Received: 1	
	Date Received:	
	Location: Flextronics Kallang	Used: No

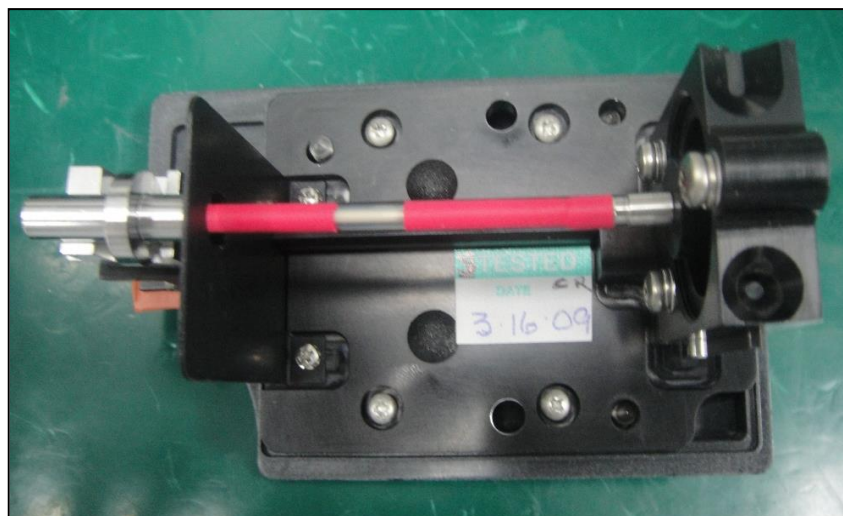


Waters

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Front View



Back View

General Remark: For Testing purpose	PART INFORMATION	
	Part No: 289002226	Commodity Code:
	Description: Optical Shunt, Medium	
Maintenance Remark: Flex PM 01508	Quantity Received: 7	
	Date Received:	
	Location: Flextronics Kallang	Used: No



Front View



Back View

General Remark: For Testing purpose	PART INFORMATION	
	Part No: 289002149	Commodity Code:
	Description: Optical Shunt, Large	
	Quantity Received: 1	
Maintenance Remark: Flex PM 01500	Date Received:	
	Location: Flextronics Kallang	Used: No

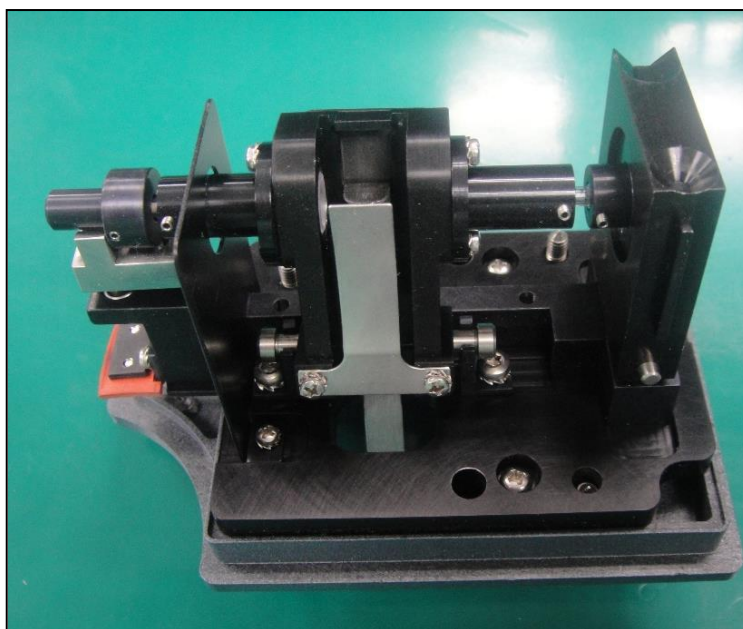


Waters

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Front View



Back View

General Remark:

For Testing purpose

PART INFORMATION

Part No: 289002219

Commodity Code:

Description: Linearity Shunt

Maintenance Remark:

Flex PM 01501

Quantity Received: 1

Date Received:

Location: Flextronics Kallang

Used: No

2.13 Detectors Chassis Assembly Hand Tools

[BACK](#)



Waters

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General Remark: Hand Tool	PART INFORMATION	
	Part No: 999026419	Commodity Code:
	Description: PCB Push Tool	
Maintenance Remark: NA	Quantity Received: 2	
	Date Received:	
	Location: Flextronics Kallang	Used: No



Waters

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General Remark: Hand Tool	PART INFORMATION	
	Part No: 119646	Commodity Code:
	Description: Connector Tool	
Maintenance Remark: NA	Quantity Received: 2	
	Date Received:	
	Location: Flextronics Kallang	Used: No



Waters

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General Remark: Hand Tool	PART INFORMATION	
	Part No: 999028339	Commodity Code:
	Description: Cap Removal Tool	
Maintenance Remark: NA	Quantity Received: 1	
	Date Received:	
	Location: Flextronics Kallang	Used: No



Waters

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General Remark: Hand Tool	PART INFORMATION	
	Part No: 9027063	Commodity Code:
	Description: Connector Tool	
Maintenance Remark: NA	Quantity Received: 2	
	Date Received:	
	Location: Flextronics Kallang	Used: No



Waters

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General Remark: T20 Bit	PART INFORMATION	
	Part No: NA	Commodity Code: NA
	Description: T20 Torque Driver 3.0 in/lbs	
Maintenance Remark: Flex PM 01698	Quantity Received: 01	
	Date Received: NA	
	Location: Flextronics Kallang	Used: No



Waters

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General Remark: T20 Bit	PART INFORMATION	
	Part No: NA	Commodity Code: NA
	Description: T20 Torque Driver 4.0 in/lbs	
Maintenance Remark: Flex PM 01697	Quantity Received: 01	
	Date Received: NA	
	Location: Flextronics Kallang	Used: No



Waters

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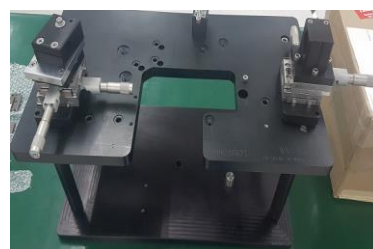
General Remark: T20 Bit	PART INFORMATION	
	Part No: NA	Commodity Code: NA
	Description: T20 Torque Driver 5.0 in/lbs	
Maintenance Remark: Flex PM 01699	Quantity Received: 01	
	Date Received: NA	
	Location: Flextronics Kallang	Used: No

2.14 PDA / eLambda Universal Fixture

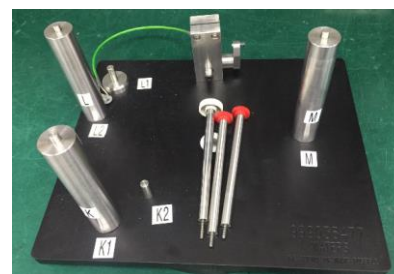
[BACK](#)



TE83096-2 Universal Fixture



Rough Alignment Fixture



Fine Alignment Fixture



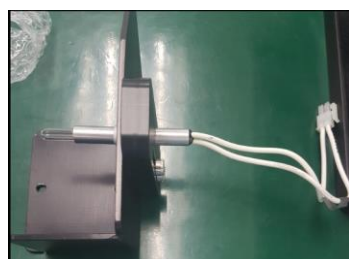
Alignment Tool-1



Alignment Tool-2



Infinistix (Infinity)



Mercury Lamp



PDA Target Cell



Alignment Reticle



CPU for Test

General Remark:

Rough Alignment Fixture Part No: 999038621
Fine Alignment Fixture Part No: 999038477
Alignment tool- 1 Part No.: 999041538
Alignment tool- 2 Part No.: 999041554
Alignment Reticle Part No.: 623970
CPU for Test Custom.ID: TE83096-2

PART INFORMATION

Part No:TE83096-2

Commodity Code:

Description: Universal Fixture for PDA / eLambda

Maintenance Remark:

NA

Quantity Received: 1 Set

Date Received:

Location: Flextronics Kallang

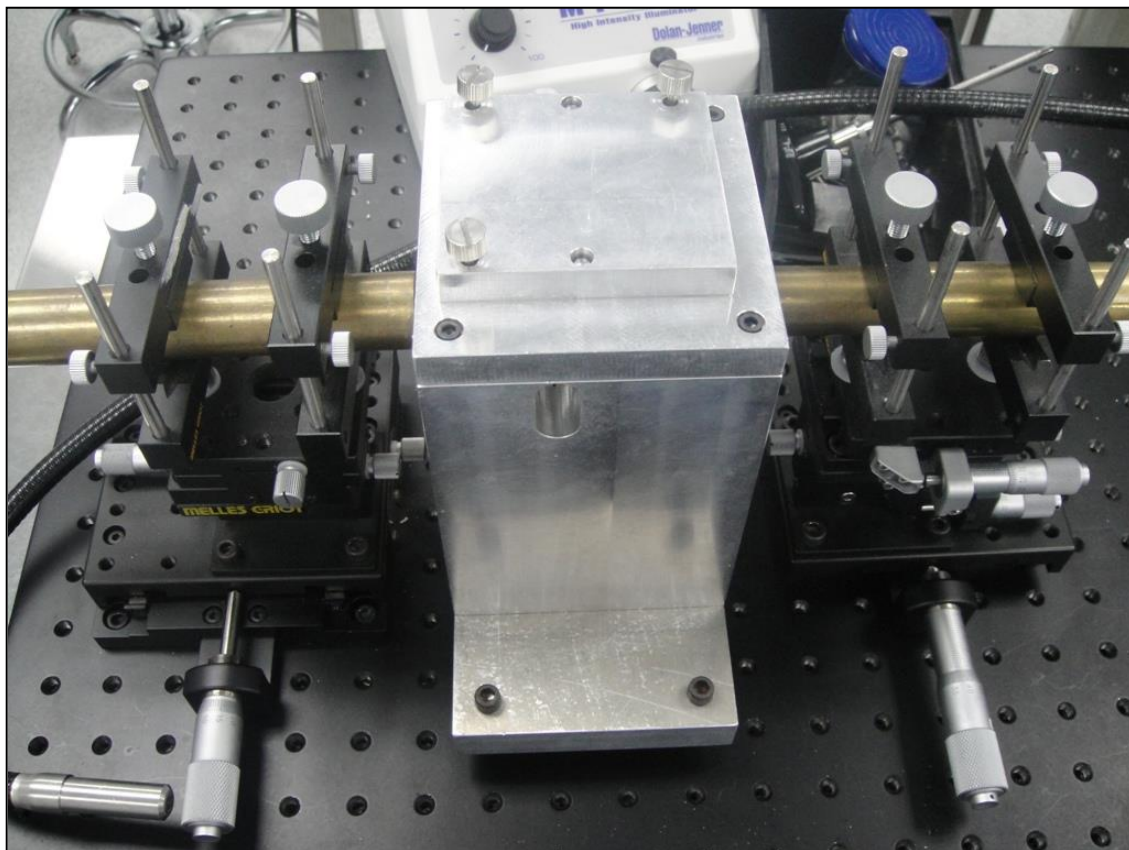
Used: No

2.15 Spares



Waters

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General Remark:

Obsoleted

PART INFORMATION

Part No: NA

Commodity Code:

Description: Flow Cell Fixtures for Spares Assembly

Maintenance Remark:

Flex PM 02481

Quantity Received: 1

Date Received:

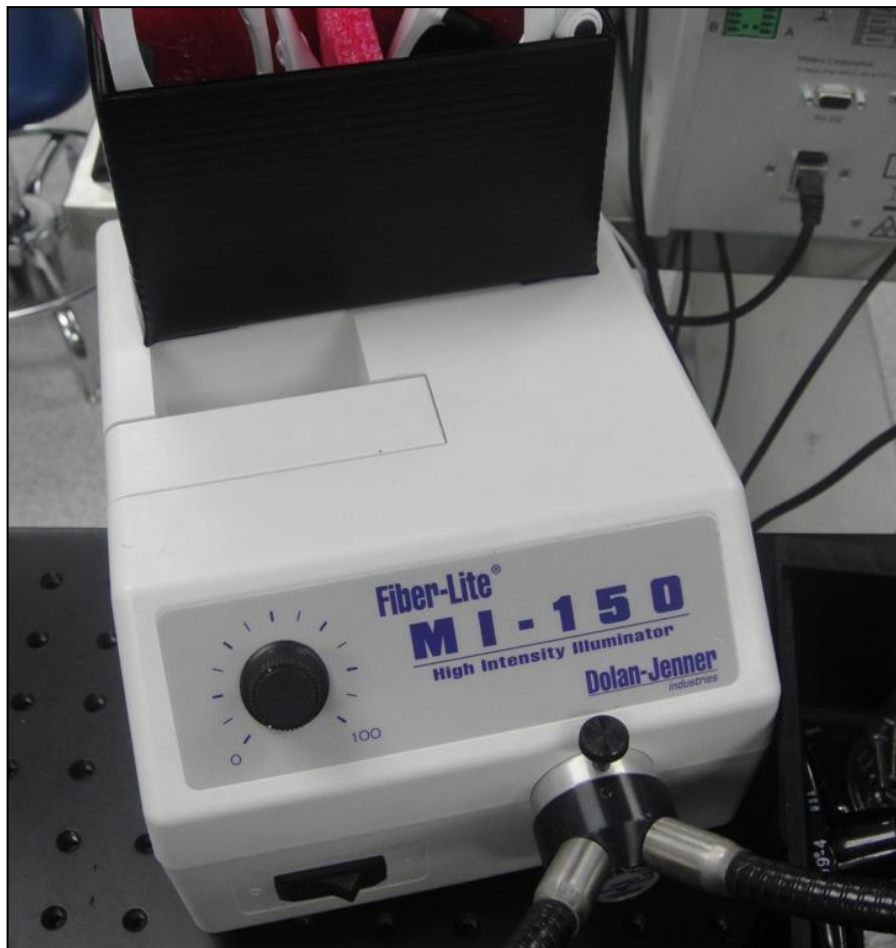
Location: Flextronics Kallang

Used: No



Waters

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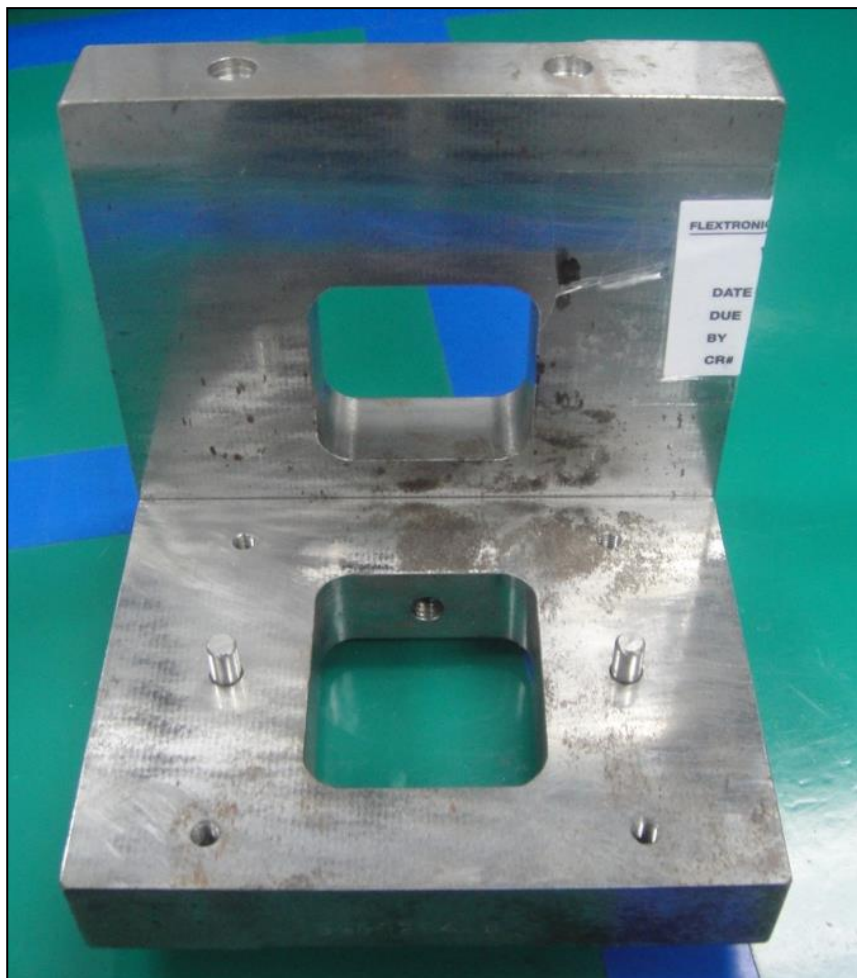
General Remark:	PART INFORMATION	
	Part No: MI – 150	Commodity Code:
	Description: Fiber Optic Source for Flow Cell Fixture	
Maintenance Remark: NA	Quantity Received: 1	
	Date Received:	
	Location: Flextronics Kallang	Used: No

2.16 Storage



Waters

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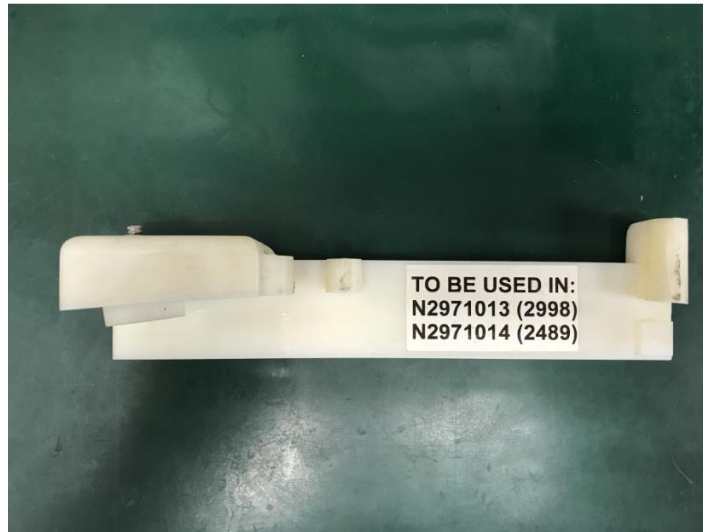


General Remark:	PART INFORMATION	
	Part No: 999029418	Commodity Code:
	Description: Fixture for Optics Bench Assembly	
Maintenance Remark: Flex PM 00305	Quantity Received: 1	
	Date Received: 23 rd April 2008	
	Location: Flextronics Kallang	Used: No

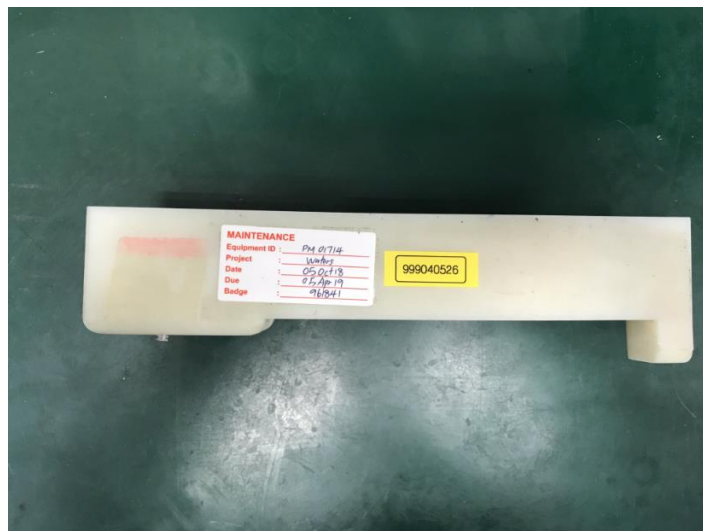


Waters

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FRONT



BEHIND

General Remark: For PKI Project, Obsoleted	PART INFORMATION	
	Part No: 999040526	Commodity Code: NA
	Description: Label Alignment Fixture (N2971013-2998)(N2971014-2489)	
Maintenance Remark: Flex PM 01714	Quantity Received: 1	
	Date Received: NA	
	Location: Flextronics Kallang	Used: No



FRONT



BEHIND

General Remark: For PKI Project, Obsoleted	PART INFORMATION	
	Part No: 999040724	Commodity Code: NA
Maintenance Remark: Flex PM 01715	Description: Label Alignment Fixture (N2971035-TUV) (N2971036-PDA)	
	Quantity Received: 1	
	Date Received: NA	
	Location: Flextronics Kallang	Used: No



General Remark:	PART INFORMATION	
	Part No: WAT081337	Commodity Code:
	Description: 2487 Grating Alignment PIN	
Maintenance Remark: NA	Quantity Received: 10	
	Date Received: NA	
	Location: Flextronics Kallang	Used: No

3. Testing Stations and Equipments

[BACK](#)

Below is a list of Detectors Test Stations located inside and outside the Clean Room.

1. Detector Flow Cell Pressure Test Station @ 2489 / TUV Filter Wheel and Flow Cell
 - [Filter Wheel Tester](#)
 - [Pressure Decay Tester](#)
2. Detector Flow Cell Test Station @ 2998 Flow Cell Assembly
 - [Flow Cell Tester for 2998](#)
 - [Flow Cell Test PC for 2998](#)
3. [TE 82903 2489 / TUV Test Station](#)
4. [TE 82882 2998 / PDA / eLambda Test Station](#)
5. [TE 82964 – 1 Hi Pot Test Station](#)
6. [TE 82969 – 1 Linearity Test Station for 2998 / PDA / eLambda](#)
7. [TE 82972 – 1 Programming & Downloading Station for 2489, 2998, TUV, PDA and eLambda](#)



Waters

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**General Remark:**

This Tester is located at the Flow Cell Pressure Test Station @ 2489 / TUV Filter Wheel and Flow Cell

Maintenance Remark:

Flex PM 01577

PART INFORMATION

Part No: TE82965

Commodity Code:

Description: Filter Wheel Tester for 2489

Quantity Received: 1

Date Received:

Location: Flextronics Kallang

Used: No

[BACK](#)



Waters

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General Remark:

This Tester is located at the Flow Cell Pressure Test Station @ 2489 / TUV Filter Wheel and Flow Cell

Maintenance Remark:

PART INFORMATION

Part No: TE82475

Commodity Code:

Description: Pressure Decay Tester

Quantity Received: 1

Date Received:

Location: Flextronics Kallang

Used: No

[BACK](#)



General Remark:	PART INFORMATION	
	Part No: F20998147A	Commodity Code:
Maintenance Remark: Flex PM 03198	Description: Flow Cell Tester for 2998	
	Quantity Received: 1	
	Date Received: 22 Jun 2020	
	Location: Flextronics Kallang	Used: No

[BACK](#)



Inventory List

No.	Description	Quantity
1	LCD Monitor	2
2	CPU	2
3	Mouse	2
4	Keyboard	2
5	Barcode Scanner	1

General Remark: This Test PC is located at the 2998 Flow Cell Assembly	PART INFORMATION	
	Part No: TE186002998	Commodity Code:
	Description: Flow Cell Test PC for 2998	
	Quantity Received: Refer above inventory list	
	Date Received:	
Maintenance Remark: Flex PM 02690	Location: Flextronics Kallang	
	Used: No	

[BACK](#)



2489 / TUV Test Station

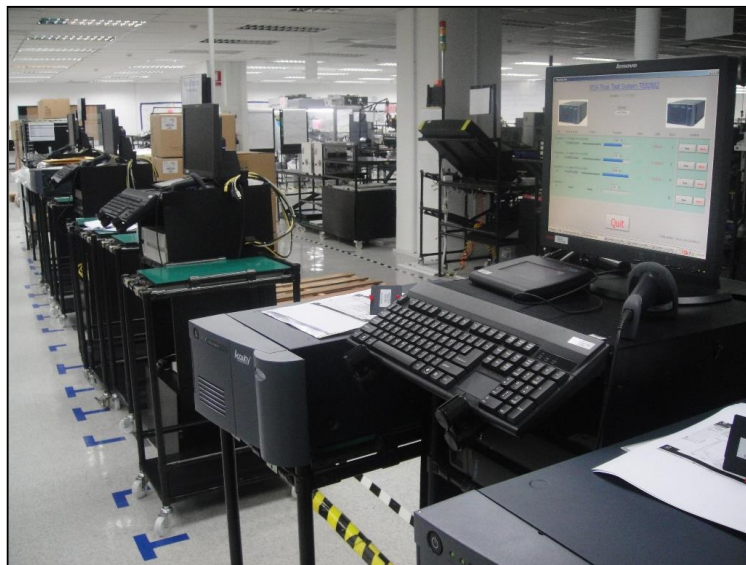


Layout of 2489 / TUV Test Stations

General Remark: Station IDs: TE 82903-6, TE 82903-8, TE 82903-9, TE 82903-10	PART INFORMATION	
	Part No: TE 82903	Commodity Code:
Maintenance Remark: TE 82903-6 ---- Flex PM 01527 TE 82903-8 ---- Flex PM 01529 TE 82903-9 ---- Flex PM 01528 TE 82903-10 ---- Flex PM 01530	Description: 2489 / TUV Test Station	
	Quantity Received: 4 stations	
	Date Received:	
	Location: Flextronics Kallang	Used: No



2998 / PDA / eLambda Test Station



Layout of 2998 / PDA / eLambda Test Stations

General Remark:	PART INFORMATION	
Station IDs: TE82882-8, TE82882-9, TE82882-10, TE82882-11, TE82882-13, TE82882-14, Maintenance Remark: TE 82882-8 ---- Flex PM 01531 TE 82882-9 ---- Flex PM 01733 TE 82903-10 ---- Flex PM 01734 TE 82903-11 ---- Flex PM 01735 TE 82903-13 ---- Flex PM 02120 TE 82903-14 ---- Flex PM 02121	Part No: TE82882	Commodity Code:
	Description: 2998 / PDA / eLambda Test Station	
	Quantity Received: 6 stations	
	Date Received:	
	Location: Flextronics Kallang	Used: No

[BACK](#)



Hi Pot Tester

General Remark: Hi Pot Tester Serial No: 08280865 EQID:0432	PART INFORMATION	
	Part No: Guardian 6000 Plus	Commodity Code:
	Description: Hi Pot Test Station (ID# 86041 12M V002)	
Maintenance Remark: Flex PM 01391	Quantity Received: 1 station	
	Date Received:	
	Location: Flextronics Kallang	Used: No

[BACK](#)



General Remark:	PART INFORMATION	
	Part No: TE82969 – 1	Commodity Code:
Maintenance Remark: Flex PM 01524	Description: Linearity and Calibration Test Station for 2998 / PDA / eLambda	
	Quantity Received: 1 station	
	Date Received:	
	Location: Flextronics Kallang	Used: No

[BACK](#)



General Remark:	PART INFORMATION	
	Part No: TE83057	Commodity Code:
Maintenance Remark: Flex PM 01525	Description: Programming & Downloading Station for 2489, PDA and eLambda	
	Quantity Received: 1 station	
	Date Received:	
	Location: Flextronics Kallang	Used: No



General Remark:	PART INFORMATION	
	Part No: TE82964 – 1	Commodity Code:
	Description: Programming & Downloading Station for 2998 and TUV.	
Maintenance Remark: Flex PM 01526	Quantity Received: 1 station	
	Date Received:	
	Location: Flextronics Kallang	Used: No