

HuaZhen Luo

From: Richard Davis
Sent: Friday, 24 April, 2020 19:56
To: HuaZhen Luo; Desmond Ann; Edwin Koh
Cc: Kris Bujold
Subject: RE: Arc FTN tester preparation

Hi HuaZhen,

I will ship monitors for the 4 Final test stations as they are touch screen, but not keyboards or mouse. Every other test station you should source all locally.

I would also suggest Flex look into monitor arms for the 4 final test stations. There is significant benefit to locating the monitor directly above the UUT.

Did you and Flex review the document I sent about Needlewash and Blank sample preparation? They will need 1-2 liter bottles, graduated cylinders and pipettes as well as a clean enclosure to store them.

By the way I seriously doubt the FTN transfer will occur this year.

We shipped the MSV tester to Venture yesterday, along with a gold unit to practice on. I will follow up with a tracking number soon. They will need to acquire Acetonitrile. I will also send some guidance on a pressure gauge for MSV tester calibration.

Regards
Rick

Richard Davis
Principal Test Engineer



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From: HuaZhen Luo <HuaZhen_Luo@waters.com>
Sent: Friday, April 24, 2020 6:03 AM
To: Richard Davis <Richard_Davis@waters.com>; Desmond Ann <Desmond_Ann@waters.com>; Edwin Koh <Edwin_Koh@waters.com>
Cc: Kris Bujold <Kris_Bujold@waters.com>
Subject: RE: Arc FTN tester preparation

Hi Rick,

Thank you. Will share this picture with Flex and close this request for fixture drawing.

By the way, shall purchase testers PC peripherals, such as monitor/keyboard/mouse locally? Or will you ship whole testers including PC peripherals for this Arc FTN project?



From: Richard Davis <Richard_Davis@waters.com>

Sent: Thursday, 23 April, 2020 19:52

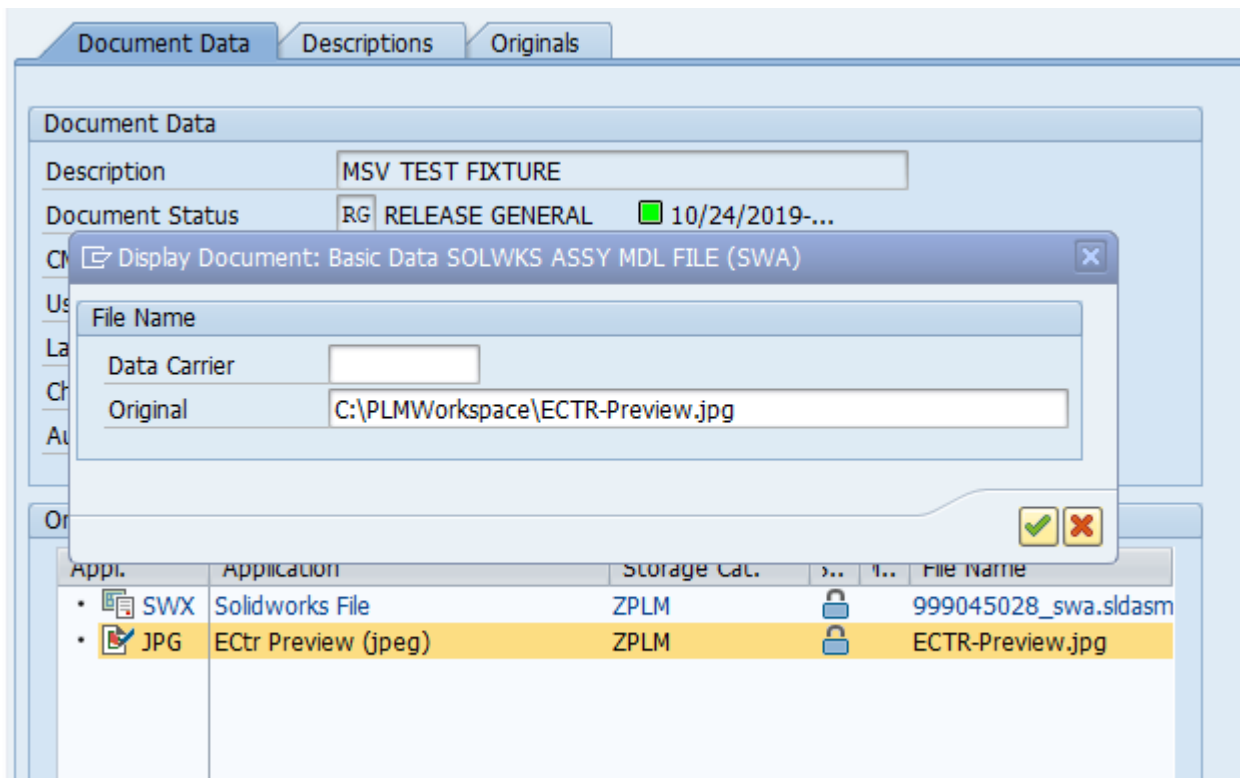
To: HuaZhen Luo <HuaZhen_Luo@waters.com>; Desmond Ann <Desmond_Ann@waters.com>; Edwin Koh <Edwin_Koh@waters.com>

Cc: Kris Bujold <Kris_Bujold@waters.com>

Subject: RE: Arc FTN tester preparation

Hi HuaZhen,

You cant open a Unigraphics or Solid Works file unless you have the CAD software installed. There is a jpeg file, a picture of the fixture. You have to copy this file to your local machine by right click on the file, select "copy to". Then select "Original" and give it a path. Once on your local machine it opens as any picture.



Regards
Rick

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Principal Test Engineer



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From: HuaZhen Luo <HuaZhen_Luo@waters.com>

Sent: Thursday, April 23, 2020 4:27 AM

To: Richard Davis <Richard_Davis@waters.com>; Desmond Ann <Desmond_Ann@waters.com>; Edwin Koh <Edwin_Koh@waters.com>

Cc: Kris Bujold <Kris_Bujold@waters.com>

Subject: RE: Arc FTN tester preparation

Hi Rick,

Thank you for advice!

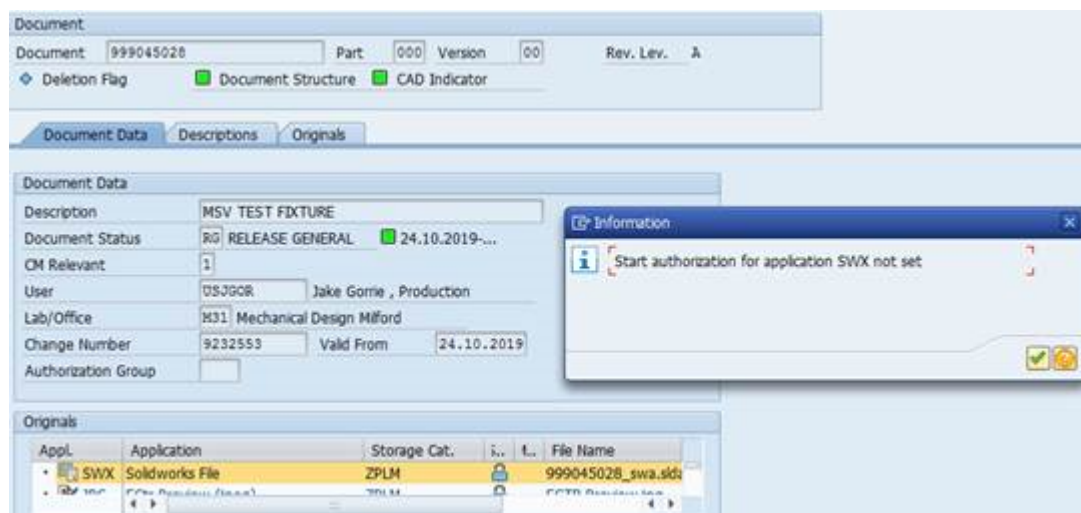
Yes, I can download TSP and Cal_PM procedures from SAP and send to Flex as I mentioned in Blue text in previous email. No problem.

Only test fixture 999045026 shows some message to prevent me from viewing solidworks file and there's no other drawing document available in SAP. That's why I'm checking with you see if can get one as per Flex's request. I will review with Flex see if it's really necessary about this particular drawing or picture of fixture is sufficient.

Sorry for the confusion caused.

Regarding the consumable list, I will check on Venture's usage and advise Flex.

Again, thank for your advice and will work with Flex to address these requests.



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From: Richard Davis <Richard_Davis@waters.com>

Sent: Thursday, 23 April, 2020 00:39

To: HuaZhen Luo <HuaZhen_Luo@waters.com>; Desmond Ann <Desmond_Ann@waters.com>; Edwin Koh <Edwin_Koh@waters.com>

Cc: Kris Bujold <Kris_Bujold@waters.com>

Subject: RE: Arc FTN tester preparation

Hi HuaZhen,

Every item below with a Waters part number can be accessed on SAP. Download the DWG. It shows an approved source.

I don't understand the confusion. This is not new. Venture has been using every one of these items for years, except the MSV Leak Tester items.

I would think you could get a real world estimate of consumption from Venture. Plus, the majority of disposables are used in the manufacture of the FTN or Alliance, Detectors, and Pumps.

I would think that any item with a Waters part number would not be unique.

Fisher Optima Methanol - Fisher Scientific – Catalog No. A454-4. Use this for all items requiring Methanol. MSDS sheets for the methanol and Acetonitrile are available online, <https://www.fishersci.com/us/en/home.html>

I have already sent a picture of TE0084040. It shows the fixture 999045028. As does the TSP does.

I will get a pic of the other two testers as soon as I someone is available to go take the picture.

Again, you can get all the TSP's and CAL/PM's from SAP.

By the time Flex is ready to use the test stations you will not need 700004106, Acquity UPLC Blank Test Solution. See the attached document.

Needlewash & Mobile Phase solution, 5%/95% MeOH/Milli-Q H2O, they will be making this. They will need a Milli-Q deionizing water dispenser, if they already don't have one.

Regards

Rick

Richard Davis
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From: HuaZhen Luo <HuaZhen_Luo@waters.com>

Sent: Wednesday, April 22, 2020 3:58 AM

To: Richard Davis <Richard_Davis@waters.com>; Desmond Ann <Desmond_Ann@waters.com>; Edwin Koh

<Edwin_Koh@waters.com>

Cc: Kris Bujold <Kris_Bujold@waters.com>

Subject: RE: Arc FTN tester preparation

Hi Rick,

We had discussion with Flex regarding testers after having your input on 09 Apr 2020. Below is some requests from Flex, and also a TSP Disposable list was added for your review especially usage of consumables. I have added this list into attached file. Please kindly help to review and advise the requests below. Thank you

Equipment list : Please help to get

Pictures & Approx dimension for 735003838 (TE0084021) , 735004416 (TE0084040), 735002271 (both Assy combination - 289004640, 279003321). **Need Milford to provide** PM/CAL Document no: 735003028 & 735002816. **Waters SG will send requested documents from SAP to Flex together with 735003900 for TE0084021.**

DWG / Document for 999045028. **Waters SG cannot download it from SAP, need Milford to provide this drawing.**

PC + **Monitor** Consignment confirmation for 735002271 , 735003838 , 735004416. **Need Milford to advise**

Source details for Flex to source items – 405006712, 735003828 (430000715, 430000589, 410000890, Syringe suitable for priming tester) **Need Milford to advise**

Consumable list : Please help to get

Frequency & Estimated usage for consumables **Need Milford to advise, please refer to attached TSP Disposable list for details**

MSDS Document for below list, **Need Milford to advise**

TSP Doc No	Test Eq.No	Part Number	Description
735002984	TE83064	700004107	Acquity UPLC Carryover Test Solutions (Carryover Challenge & Calibration Standard)
735002984	TE83064	700004105	Acquity UPLC Production Test Solution (Precision and Linearity)
735002984	TE83064	700004106	Acquity UPLC Blank Test Solution
735002984	TE83064		Needlewash & Mobile Phase solution, 5%/95% MeOH/Milli-Q H2O
735002984	TE83064		Fisher, Optima Methanol
735003828	TE0084021	N/A	Methanol
735004416	TE0084040	N/A	Acetonitrile – Fisher Chemical Optima A996-4

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From: Richard Davis <Richard_Davis@waters.com>
Sent: Thursday, 9 April, 2020 22:32
To: Desmond Ann <Desmond_Ann@waters.com>; Edwin Koh <Edwin_Koh@waters.com>
Cc: HuaZhen Luo <HuaZhen_Luo@waters.com>; Kris Bujold <Kris_Bujold@waters.com>
Subject: RE: Arc FTN tester preparation

Hello All,
See my response below in red and in the spreadsheet, attached.

Regards
Rick

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Principal Test Engineer

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From: Desmond Ann <Desmond_Ann@waters.com>
Sent: Thursday, April 9, 2020 8:09 AM
To: Richard Davis <Richard_Davis@waters.com>; Edwin Koh <Edwin_Koh@waters.com>
Cc: HuaZhen Luo <HuaZhen_Luo@waters.com>; Kris Bujold <Kris_Bujold@waters.com>
Subject: RE: Arc FTN tester preparation

Hi Rick,

Flex have the below queries.

- 1) I have strike off TE83027, TE83061 and TE83062 from their list since based on our last discussion, Flex will not need both TE83027 and TE83061. For TE83062, please advise if my assumption is correct that Flex will not need TE83062 too. **Correct**
- 2) I see that there is a tester TE84035 CPSM Z-Carriage Flex Cable Tester, I believe this is not required for Flex as well? **Correct**
- 3) Equipment list – confirm if column I (Customer consigned) identification for each item is correct & if items listed on column J (Flex to buy) are correct. **See my comments in the spreadsheet**
- 4) Equipment list – PM/Calibration reference summarized in column, please advise if it is wrong. **See my comments in the spreadsheet**
- 5)

Thank you.

Regards,
Desmond.

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From: Richard Davis <Richard_Davis@waters.com>
Sent: Friday, 20 March, 2020 03:17 AM
To: Edwin Koh <Edwin_Koh@waters.com>; Desmond Ann <Desmond_Ann@waters.com>
Cc: HuaZhen Luo <HuaZhen_Luo@waters.com>
Subject: RE: Arc FTN tester preparation

Hi Edwin,

RTZ test system \$8000
Metering Syringe Tester \$6000
MSV Tester \$23,300

We are investigating if we even have a need for both TE83084 and TE82858. Either way these testers are only approximately \$500 each.

You will not need both TE83027 or TE83061

Regards
Rick

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From: Edwin Koh <Edwin_Koh@waters.com>
Sent: Wednesday, March 18, 2020 9:42 AM
To: Richard Davis <Richard_Davis@waters.com>; Desmond Ann <Desmond_Ann@waters.com>
Cc: HuaZhen Luo <HuaZhen_Luo@waters.com>
Subject: RE: Arc FTN tester preparation

Hi Rick,

Noted and thanks. I am previously given below estimate, during budget planning last year if that helps.
Hope the numbers did not change much. Will need an estimate on the other 2 testers TE83027 and TE83061 testers

1 x RTZ test system \$9500
1 x Metering Syringe tester \$ 7000

Thanks
Edwin

From: Richard Davis <Richard_Davis@waters.com>
Sent: Wednesday, March 18, 2020 21:36
To: Edwin Koh <Edwin_Koh@waters.com>; Desmond Ann <Desmond_Ann@waters.com>
Cc: HuaZhen Luo <HuaZhen_Luo@waters.com>
Subject: RE: Arc FTN tester preparation

Hi Edwin,

I will get the information about the RTZ and MSV tester to you soon. There is also TE0084021, Assy Syringe Drive Tester. Desmond also raised the question about two other testers below in this email. We also have question about who is going to build the Inject valve. If Flex builds them you will also need TE83027 and TE83061 testers. I'm waiting for an answer on who will build the inject valve.

Regards
Rick

From: Edwin Koh <Edwin_Koh@waters.com>
Sent: Wednesday, March 18, 2020 9:01 AM
To: Richard Davis <Richard_Davis@waters.com>; Desmond Ann <Desmond_Ann@waters.com>
Cc: HuaZhen Luo <HuaZhen_Luo@waters.com>
Subject: RE: Arc FTN tester preparation

Hi Rick,

Thanks, we trying to assess if we could get one TE004050 test station first so that the reason for the request. We in midst of raise the capex for the RTZ and MSV testers so that to include this if possible.

Thanks
Edwin

From: Richard Davis <Richard_Davis@waters.com>
Sent: Wednesday, March 18, 2020 20:32
To: Desmond Ann <Desmond_Ann@waters.com>
Cc: Edwin Koh <Edwin_Koh@waters.com>; HuaZhen Luo <HuaZhen_Luo@waters.com>
Subject: RE: Arc FTN tester preparation

Hi Desmond,

I don't know how to properly assess the Arc Ftn Test systems value/cost because we are not duplicating any testers. We are going to ship you 4 complete test stations that have been in used for the last several years in NPI. These test stations are identical to the 8 stations currently at Venture.
If the upgrade project is released and we have time to upgrade the TE83064 test stations to TE0084050 test stations we will. The costs to upgrade is approximately \$3400 each.
I'll try to find out more about transferring these test stations

Regards,
Rick

From: Desmond Ann <Desmond_Ann@waters.com>
Sent: Tuesday, March 17, 2020 9:28 PM

To: Richard Davis <Richard_Davis@waters.com>
Cc: Edwin Koh <Edwin_Koh@waters.com>; HuaZhen Luo <HuaZhen_Luo@waters.com>
Subject: RE: Arc FTN tester preparation

Hi Rick,

Will like to follow up on the query on the Arc FTN tester if you have any advise as we will need that to raise the CEA in preparation for the Arc FTN transfer.

Thank you.

Regards,
Desmond.

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From: Desmond Ann
Sent: Monday, 16 March, 2020 04:19 PM
To: Richard Davis <Richard_Davis@waters.com>
Cc: Edwin Koh <Edwin_Koh@waters.com>; HuaZhen Luo <HuaZhen_Luo@waters.com>
Subject: Arc FTN tester preparation

Hi Rick,

We are preparing to raise a CEA for the tester to be used on Arc FTN transfer.

I understand that there will be RZZ, MSV and Final Tester to be used for Arc FTN.

Current FTN in Venture is also using Front Bezel tester TE83084, and sensor/flag tester TE82858. Will these be required for Arc FTN? If yes, what is the cost to be budgeted for these 2 testers?

Thank you.

Regards,
Desmond.

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Team Lead, Manufacturing



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