

From: [Eric Turner](#)
To: [HuaZhen Luo](#)
Subject: RE: Venture CPSM upgrade TE83064-15 to TE0084050-18
Date: Wednesday, 9 June, 2021 01:23:32
Attachments: [image016.png](#)
[image017.png](#)
[image004.png](#)

Hi HuaZhen

This email will serve as my digital signature in accordance with TMD010801

Thank you

Eric Turner
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From: HuaZhen Luo <HuaZhen_Luo@waters.com>

Sent: Tuesday, June 8, 2021 4:54 AM

To: Adam Townsend <Adam_Townsend@waters.com>; Eric Turner <Eric_Turner@waters.com>; Bill Bates <Bill_Bates@waters.com>

Cc: Matt Brule <Matt_Brue@waters.com>; Edwin Koh <Edwin_Koh@waters.com>

Subject: RE: Venture CPSM upgrade TE83064-15 to TE0084050-18

Hi Adam,

We verified with latest image (including test program 1.03) today. The same observation was found on this image. It may timeout intermittently if we keep running seal calibration in diagnostic mode.

We also tested on Golden Test Box, the same observation was found.

Now we're running a full test with local build test box and latest image. The run is still in progress, we didn't see error on seal calibration for this time.

Hi Eric,

Understand you're ok with IQ report as attached. Can we have your sign off of review on this IQR? So that we can send it for QA approval.

After then, we can proceed to next tester (TE83064-17) upgrade once 1st tester (TE0084050-18) IQ is approved per schedule.

Thank you and please advise if anything required to be done in Venture/WPPL.

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From: Adam Townsend <Adam_Townsend@waters.com>
Sent: Monday, 7 June, 2021 19:16
To: HuaZhen Luo <HuaZhen_Luo@waters.com>; Eric Turner <Eric_Turner@waters.com>; Bill Bates <Bill_Bates@waters.com>
Cc: Matt Brule <Matt_Brue@waters.com>; Edwin Koh <Edwin_Koh@waters.com>
Subject: RE: Venture CPSM upgrade TE83064-15 to TE0084050-18

Hello HuaZhen,

It would seem we ruled out the PC hardware as a source of the problem.
I thought the latest image supplied would have you at revision 1.03 of the software?

The Arc sample manger 186017007 ad 186017001 do not have a load cell and therefore do not run this test.

The 186015086, 186015040, and 18615051 are tested here at Milford without a problem.

Many of the program date codes look old.
How can we verify the latest image was loaded to this PC?

Adam

From: HuaZhen Luo <HuaZhen_Luo@waters.com>
Sent: Monday, June 07, 2021 6:41 AM
To: Eric Turner <Eric_Turner@waters.com>; Adam Townsend <Adam_Townsend@waters.com>
Cc: Matt Brule <Matt_Brue@waters.com>; Edwin Koh <Edwin_Koh@waters.com>
Subject: RE: Venture CPSM upgrade TE83064-15 to TE0084050-18

Hi Eric/Adam,

We verified this sealcal timeout on another PC, we're still seeing this happening on this new PC intermittently.
We connected an UUT to this tester for your access if required. PC is loaded with image from Bill with test program version 1.00.

We also checked the TSP, this Needle Seal Position test is showing on 3 places in TSP and 2 of them are related to Venture's part numbers (1st 2 tables below). Could this be part of reasons we're seeing this timeout often on this -18 system than other testers? We checked Flex's part number 186017007 and 186017001, we don't see this Needle Seal Position test under SPECIFICATIONS FOR ARC SAMPLE MANAGERS in TSP.

SPECIFICATIONS UNIQUE TO H-CLASS FTN SAMPLE MANAGERS

Applies to Part Numbers: 186015017, 186015040, 186015085, 186015086, N2971031, 186018002

TEST STEP	SPECIFICATION	721001299 REFERENCE
Jumper Configuration	Jumpers = 129	PSC - This step verifies the build process which is not validated
Needle Seal Calibration	Action - Completes without errors	5.15.2.8
Needle Seal Force	48 to 68 lbs/in	5.15.1.36
Needle Seal Position	55 to 58 mm	5.15.1.41

SPECIFICATIONS UNIQUE TO I-CLASS FTN SAMPLE MANAGERS

Applies to Part Numbers: 186015046, 186015088

TEST STEP	SPECIFICATION	721001299 REFERENCE
Jumper Configuration	Jumpers = 133	PSC - This step verifies the build process which is not validated
Needle Seal Calibration	Action - Completes without errors	5.15.2.8
Needle Seal Force	48 to 68 lbs/in	5.15.1.36
Needle Seal Position	55 to 58 mm	5.15.1.41

SPECIFICATIONS UNIQUE TO VEYRON FTN (APC) SAMPLE MANAGER

Applies to Part Numbers: 186015051

NOTE: FSD 721003992 Section 1 "The Veyron SM-FTN will conserve all functionality except if stated in the contents of this FSD performance and functionality of an H-Class FTN".

TEST STEP	SPECIFICATION	721003992 REFERENCE
Jumper Config	129	PSC - This step verifies the build process which is not validated
Needle Seal Calibration	Action - Completes without errors	5.16.2.8
Needle Seal Force	48 to 68 lbs/in	5.16.1.17
Needle Seal Position	55 to 58 mm	5.16.1.11

For IQR report, would you please share with us signed copy if everything is fine?

Please kindly let us know the next step if you need to do further investigation on this sealcal timeout.

Thank you

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From: HuaZhen Luo <HuaZhen_Luo@waters.com>

Sent: Friday, 4 June, 2021 23:12

To: Eric Turner <Eric_Turner@waters.com>; Adam Townsend <Adam_Townsend@waters.com>

Cc: Matt Brule <Matt_Brue@waters.com>; Edwin Koh <Edwin_Koh@waters.com>

Subject: Re: Venture CPSM upgrade TE83064-15 to TE0084050-18

Hi Eric,

Noted. Thanks for advice.

We're going to try on another PC next week.

Hope that can give us a good result. Will update you again after re-run this test on a different PC.

Thanks

HuaZhen

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From: Eric Turner <Eric_Turner@waters.com>
Sent: Friday, June 4, 2021, 21:49
To: HuaZhen Luo; Adam Townsend
Cc: Matt Brule; Edwin Koh
Subject: RE: Venture CPSM upgrade TE83064-15 to TE0084050-18

Hi HuaZhen – the report looks fine. There doesn't appear to be anything I can do to fix the needle seal cal short of a software change, but whereas we are not seeing this on any of our 10 systems I don't think that is the reason. I imagine if you have to try another PC, we'd need to run this again?

Best Regards,

Eric Turner
Principal Test Engineer

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From: HuaZhen Luo <HuaZhen_Luo@waters.com>
Sent: Friday, June 4, 2021 5:35 AM
To: Eric Turner <Eric_Turner@waters.com>; Adam Townsend <Adam_Townsend@waters.com>
Cc: Matt Brule <Matt_Brule@waters.com>; Edwin Koh <Edwin_Koh@waters.com>
Subject: RE: Venture CPSM upgrade TE83064-15 to TE0084050-18

Hi Eric,

In order for you to have further checking on this seal calibration intermittently time-out, I have asked Venture to hook up an UUT on -18 system tonight. So that you can run diagnostic if it's required. I also prepared IQ report as attached for your review and sign off. Please kindly let me know if it's okay to send for QA approval. Thank you.

[@Adam Townsend](#), Thank you for remote in and verify this observation last night.

Please kindly let us know if any action is required from WPPL/Venture.

Thank you!

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From: Eric Turner <Eric_Turner@waters.com>

Sent: Thursday, 3 June, 2021 23:30

To: Adam Townsend <Adam_Townsend@waters.com>; HuaZhen Luo <HuaZhen_Luo@waters.com>

Cc: Matt Brule <Matt_Brue@waters.com>; Edwin Koh <Edwin_Koh@waters.com>

Subject: RE: Venture CPSM upgrade TE83064-15 to TE0084050-18

HI – looks like the timeout is hardcoded in the needle seal routine. Question is, why is it only affecting the -18 system.

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From: Adam Townsend <Adam_Townsend@waters.com>

Sent: Thursday, June 3, 2021 9:50 AM

To: HuaZhen Luo <HuaZhen_Luo@waters.com>; Eric Turner <Eric_Turner@waters.com>

Cc: Matt Brule <Matt_Brue@waters.com>; Edwin Koh <Edwin_Koh@waters.com>

Subject: RE: Venture CPSM upgrade TE83064-15 to TE0084050-18

Hello Eric,

In regards to the “Needle Seal Calibration” problem mentioned by HuaZhen, I’ve done some testing and researching.

(Multiple machines tested) see attached video

https://waterscorp-my.sharepoint.com/:v/g/personal/huazhen_luo_waters_com/EcPRcQKkadv5Ld6C01AMEB_NB2TelgKwfiNbo7MykXlw?e=rCB1j5

At Venture on the new system TE0084050-18 the system times-out during the Needle Position test.

TestRun: 1.20		
Test	Needle Seal Position	Outcome: FAIL
StartTime:	2021-06-03, 10:50:06	EndTime: 1904-01-01, 06:55:25
Property		
Comparison	- LEGE (<=>=) -	
Notes	- Seal Calibration process timed out -	



Testing in diagnostics returns and “InF” result on the first few attempts.

Eventually it will show a result.

Manual testing (terminal command) shows that the “sealcal” command completes each time, but the result doesn’t get captured during diagnostic or the automated test

Once diagnostics returns a result it does seem to continue to work.

Restarting the diagnostic screen will cause the result to return as “InF” for the first attempt.

Lab testing on TE0084050-RD does NOT have the same problem.

Milford Production has not seen this error.

This seems to be isolated to just TE0084050-18 which was a recent update.

Any thoughts on what may cause a result not to be captured from the serial port readback?

Thanks,
Adam

From: HuaZhen Luo <HuaZhen_Luo@waters.com>
Sent: Thursday, June 03, 2021 5:37 AM
To: Adam Townsend <Adam_Townsend@waters.com>; Christopher Oski <Christopher_Oski@waters.com>
Cc: Matt Brule <Matt_Brule@waters.com>; Eric Turner <Eric_Turner@waters.com>; Bill Bates <Bill_Bates@waters.com>; Edwin Koh <Edwin_Koh@waters.com>
Subject: RE: Venture CPSM upgrade TE83064-15 to TE0084050-18

Hi Bill/Adam,

Thank you for updating the test program to 1.03.
We replaced the broken wire inside the local built box, and UUT has passed full test with this local build test box under version 1.03 today. The attached is passed test record. Next we're going to prepare IQ report.

One of observation we noticed is Seal Calibration intermittently failed to get readback from FTN Com port. Although sealcal is completed in FTN, but test program may not able to capture reading in time. We have to do multiple run to get it passed and proceed with rest of test. Please refer to the video we capture at the link below for details,
https://waterscorp-my.sharepoint.com/:v/g/personal/huazhen_luo_waters_com/EcPRcQKkadv5Ld6C01AMFB_NB2TelgKwfiNbo7MykXlw?e=rCB1j5

We have verified this observation on another unit and different account(both Te-1 and tester), it's the same status (sometimes need to run 2-3 times run on sealcal to get it passed).
Would you please help to check and advise a fix if necessary? We will connect an UUT for your remote access to verify this observation on FTN tonight.

Besides, would you able to share an instruction for this test program update? Or will you help to do the rest of 7 stations' test program update when it's ready?

Thank you

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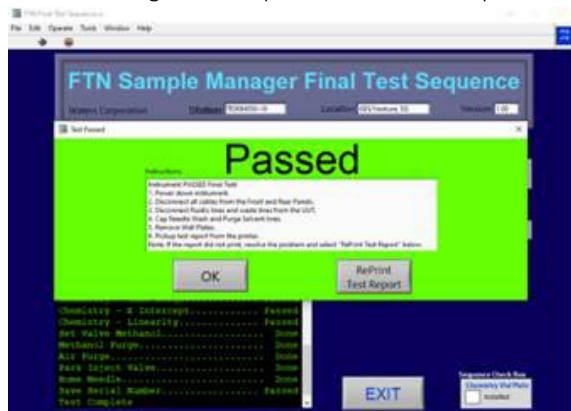
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From: HuaZhen Luo
Sent: Wednesday, 2 June, 2021 17:40
To: Adam Townsend <Adam_Townsend@waters.com>; Christopher Oski <Christopher_Oski@waters.com>
Cc: Matt Brule <Matt_Brule@waters.com>; Eric Turner <Eric_Turner@waters.com>; Bill Bates <Bill_Bates@waters.com>; Edwin Koh <Edwin_Koh@waters.com>
Subject: RE: Venture CPSM upgrade TE83064-15 to TE0084050-18

Hi Adam,

Thanks for advice. We fixed this valve controller issue by re-rightening the connections on the test box.

And we managed to complete 1st run on this system with Golden Test Box from Christ today.



However I noticed the test program is still running on version 1.00.

Could you please help to upgrade it to 1.03 per TSP?

PC IP address is 10.249.40.35

User ID is te-1

PC password is adminTE0084050-18

For 1st test box we upgraded yesterday, I found 1x wire to upper leak detection (Pin # 8 on CPC connector) is no connection. I will replace and fix this wire tomorrow.

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From: Adam Townsend <Adam_Townsend@waters.com>

Sent: Tuesday, 1 June, 2021 18:51

To: HuaZhen Luo <HuaZhen_Luo@waters.com>; Christopher Oski <Christopher_Oski@waters.com>

Cc: Matt Brule <Matt_Brue@waters.com>; Eric Turner <Eric_Turner@waters.com>; Bill Bates <Bill_Bates@waters.com>; Edwin Koh <Edwin_Koh@waters.com>

Subject: RE: Venture CPSM upgrade TE83064-15 to TE0084050-18

Hello Hello,

This looks like an error we had at Flex.

Below is the conversion in regards to the issue.

Hope this helps.

 **Edwin Koh** 04 May 7:19 AM



we see this error when we running the final test on valve

different from the error message you seeing now.

but also related to valve control.

04 May 7:23 AM

Yes please. I believe the 40pin ribbon cable is disconnected from the VICI controller



04 May 7:48 AM

i was able to break our testbox here in a same manner. give me a bit to explore resolution

04 May 8:00 AM

Alright, The error we are getting now happens only when i disconnect the 40 pin ribbon cable from the VICI controller (blackbox). The other end of that cable goes to the NI card installed on the side of the testbox. those connections are only screwed in.

From: HuaZhen Luo <HuaZhen_Luo@waters.com>
Sent: Tuesday, June 01, 2021 5:11 AM
To: Christopher Oski <Christopher_Oski@waters.com>
Cc: Matt Brule <Matt_Brue@waters.com>; Eric Turner <Eric_Turner@waters.com>; Adam Townsend <Adam_Townsend@waters.com>; Bill Bates <Bill_Bates@waters.com>; Edwin Koh <Edwin_Koh@waters.com>
Subject: Venture CPSM upgrade TE83064-15 to TE0084050-18

Hi Christopher,

We upgraded 1st test box for CPSM final tester TE0084050-18 today, and tried to configure/verify test box at Venture.

But I encountered the following error messages after I completed all hardware connections and started test program run.

Is PC required to have this test program upgraded? The existing version is one from PC imaged shared by Bill previously.

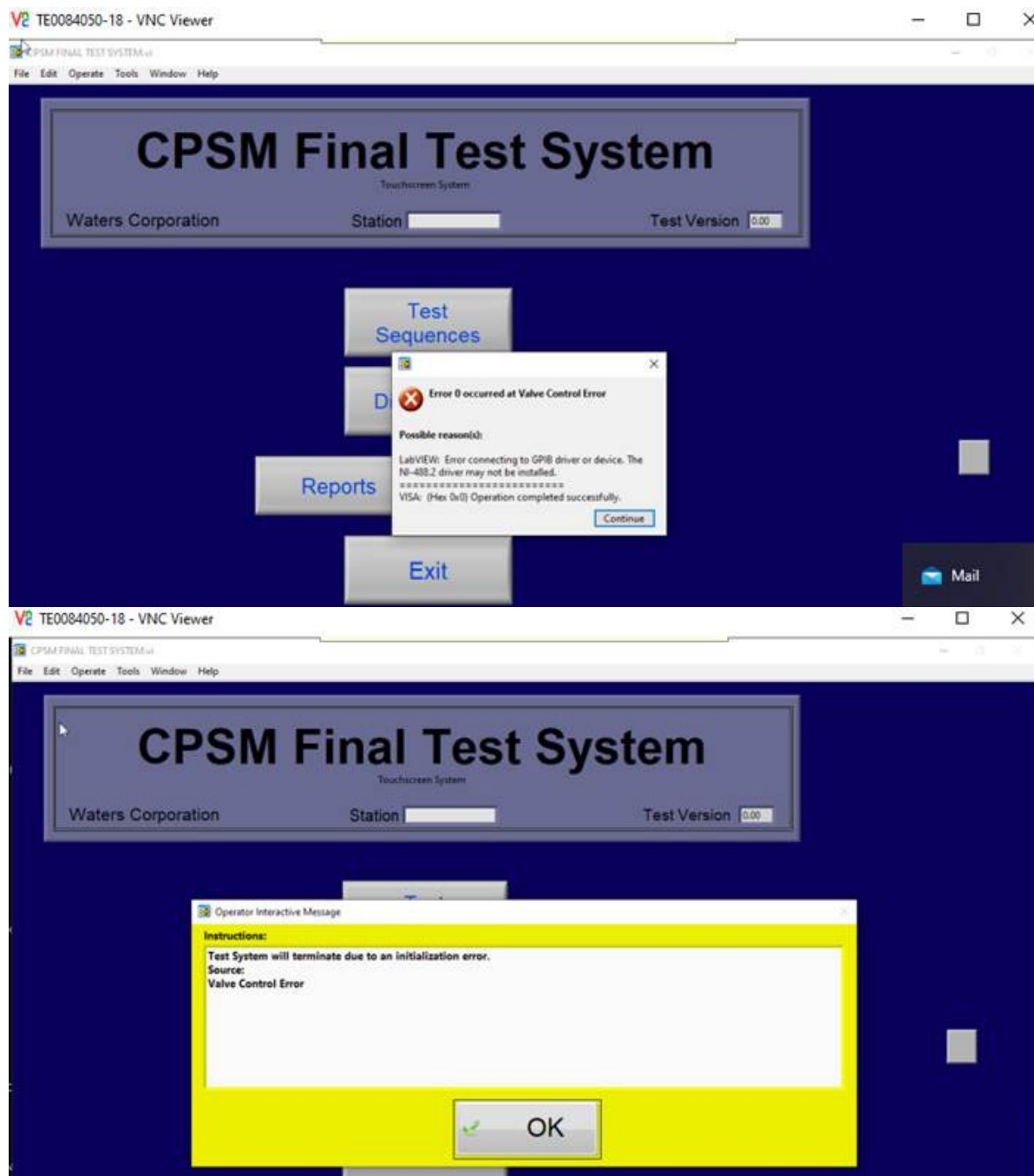
Please kindly help to remote in and check if test program or configuration update is required. Thank you

Tester has all new hardware with an UUT connected now. UUT P/N186015088 has S/N: B21FNP359G

PC IP address is 10.249.40.35

PC name is TE0084050-18

PC password is adminTE0084050-18



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