



Waters Overall Account Update

06 May 2020

2020 Overall CI Update

In Progress
 Complete

Continuous Improvement Plan – Focus Areas		Objective/Goal	Responsible	Jan-Mar	Apr-Jun	Jul- Sep	Oct - Dec
Quality	1. Yield Improvement – Soft failures	Focus top 2 failures (Soft failures)	Joel / Hua Zhen	Comm Failure Dual Noise	Comm Failure Dual Noise	-	Leak Detection Failure
	2. Yield Improvement – Hard failures	Focus on top 2 failures (Hard failures)	KS Chua	M-210000520 GPV	Interface Tubing M-210000520 GPV	-	-
	3. Field data -> Factory quality improvement	Focus on Hot Part / Start up failures	KS Chua	HP	HP		
Enhancement	1. eDHR	Increased process robustness	Aldwin	BSM/QSM	BSM/QSM	Alliance	Alliance
	2. Pick to Scan (Supermart)	Enables picking using barcode.	Anil	Hardware Trial	Implementation for KTS	Enhancement for KTE	Implementation for KTE
	3. CR - Sheet metal Value Engineering.	Sheet metal CR	Amy	Phase 1	-	-	-
	4. CR - PCBA Value Engineering.	PCBA CR	Amy	Phase 1	-	-	-
	5. Shipping box optimization(Joint lean workshop) for Alliance & Detectors	Shipping Box optimization	Gary / Niu Niu	Pending ECO	Spares	Spares	-
	6. Automation serial number traceability to PO.	Enhanced Baan - for SN scanning during shipment	Niu Niu	Plan	Go Live	-	-
4M	1. Recertification and Competency Check	Operator compliance to ASP/TSP	Aldwin / Gary	Pumps	Alliance	BSM/QSM	Detectors
	2. Capacity review & enhancement.	Capacity	Amy / Aldwin				
	3. Q Alert linkage to eDHR.	Increased process robustness	Aldwin	-	-	BSM/QSM	-
	4. TMD linkage to eDHR.	Increased process robustness	Aldwin	-	-	-	BSM/QSM
	5. Testers upgrade	Refurbishment of test equipment	Joel/Hua Zhen	New pump tray tester	Alliance final testers(x4)	Alliance final testers(x4)	BSM/QSM final testers (x8)
	6. Tester capacity Review	Refurbishment of test equipment	Joel/Hua Zhen	Pump tray testers(3x)	Alliance final testers(x4)	Alliance final testers(x4)	BSM/QSM final testers (x8)

Comm Failure: Monitoring in progress

Dual Noise :Verification of screw head touching C-clip – Close

eDHR: PCN Approved. Flex Change Request Approval – in progress

Pick to Scan: hardware purchase completed – Trial run in progress

Shipping Box optimization: ECO receive. FlexQ Approval in progress

SN traceability : Implemented on BSM/QSM, Alliance, Detector, Pump

Competency check : 186001515 completed and report compilation submitted

Capacity Enhancement: New pump tray station release to production after validation.

flex

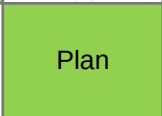
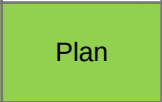
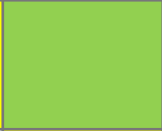
The background of the slide is a light gray with a complex pattern of thin, dark gray lines and circles. These elements are arranged in a way that suggests a technical or architectural drawing, with some lines forming rectangular frames and others creating circular paths or orbits. The overall effect is a clean, modern, and somewhat abstract aesthetic.

Quality

Yield Improvement Activity

 In Progress
 Complete

Gantt Chart:

No.	Activity	Jan '20	Feb '20	Mar '20	Apr '20	May '20	Jun '20	Jul '20	Aug '20	Sep '20	Oct '20	Nov '20	Dec '20
1	Data analysis and identify 2 top soft failures - Communication Failure - Leak Detection Failure												
1	Communication Failure: Investigation and 4M (Joint effort Flex and WPPL) - Perform SGA												
	Propose Corrective Action and review with WPPL		Plan										
	Implement of Corrective Action - Milford involvement												
	Monitoring of Effectiveness Check					Plan	Plan						
2	Dual Noise Failure: Investigation and 4M (Joint effort Flex and WPPL) - Perform SGA												
	Propose Corrective Action and review with WPPL		Plan										
	Implement of Corrective Action - Milford involvement		Plan										
	Monitoring of Effectiveness Check			Plan		Plan	Plan						

Yield Improvement Activity

 In Progress
 Complete

Gantt Chart:

No.	Activity	Jan '20	Feb '20	Mar '20	Apr '20	May '20	Jun '20	Jul '20	Aug '20	Sep '20	Oct '20	Nov '20	Dec '20
3	Interface Tubing: Investigation and 4M (Joint effort Flex and WPPL) - Perform SGA		Plan		Plan								
	Propose Corrective Action and review with WPPL		Plan	Plan	Plan								
	Implement of Corrective Action - Milford involvement			Plan	Plan	Plan							
	Monitoring of Effectiveness Check			Plan	Plan	Plan	Plan	Plan	Plan				
4	Leak Detection Failure: Investigation and 4M (Joint effort Flex and WPPL) - Perform SGA				Plan						Plan		
	Propose Corrective Action and review with WPPL					Plan					Plan		
	Implement of Corrective Action - Milford involvement					Plan	Plan					Plan	
	Monitoring of Effectiveness Check						Plan	Plan	Plan				Plan

Yield Improvement – Communication Failure

Project Title : Yield Improvement – Communication Failure

Line / Area : Detectors

Category : Operation

Type : SGA

Team Lead : Joel

Team Members : Hua Zhen, David, Shamsul, Aldwin

Presentation Situation and Problem :

Based on 2019 FPY data, current failure rate is 9.68%

Implemented daily clearing of DHCP, remove rogue IP address and uninitialized S/N but problem still exists.

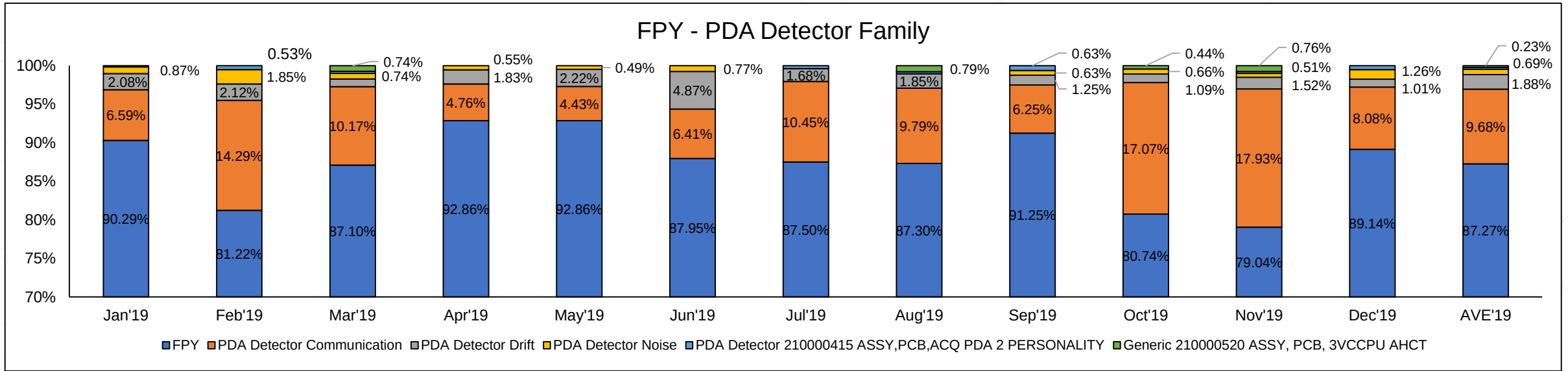
Objectives:

- To improve communication failure rate by 50%
- To gather 100 data points per station for 6 Tester (total of 600 data)
- To publish status on weekly Engineering Meeting

Goals:

No	CTQ	Before	Target	% Improvement
1	Communication failure rate	9.68%	5 %	51%

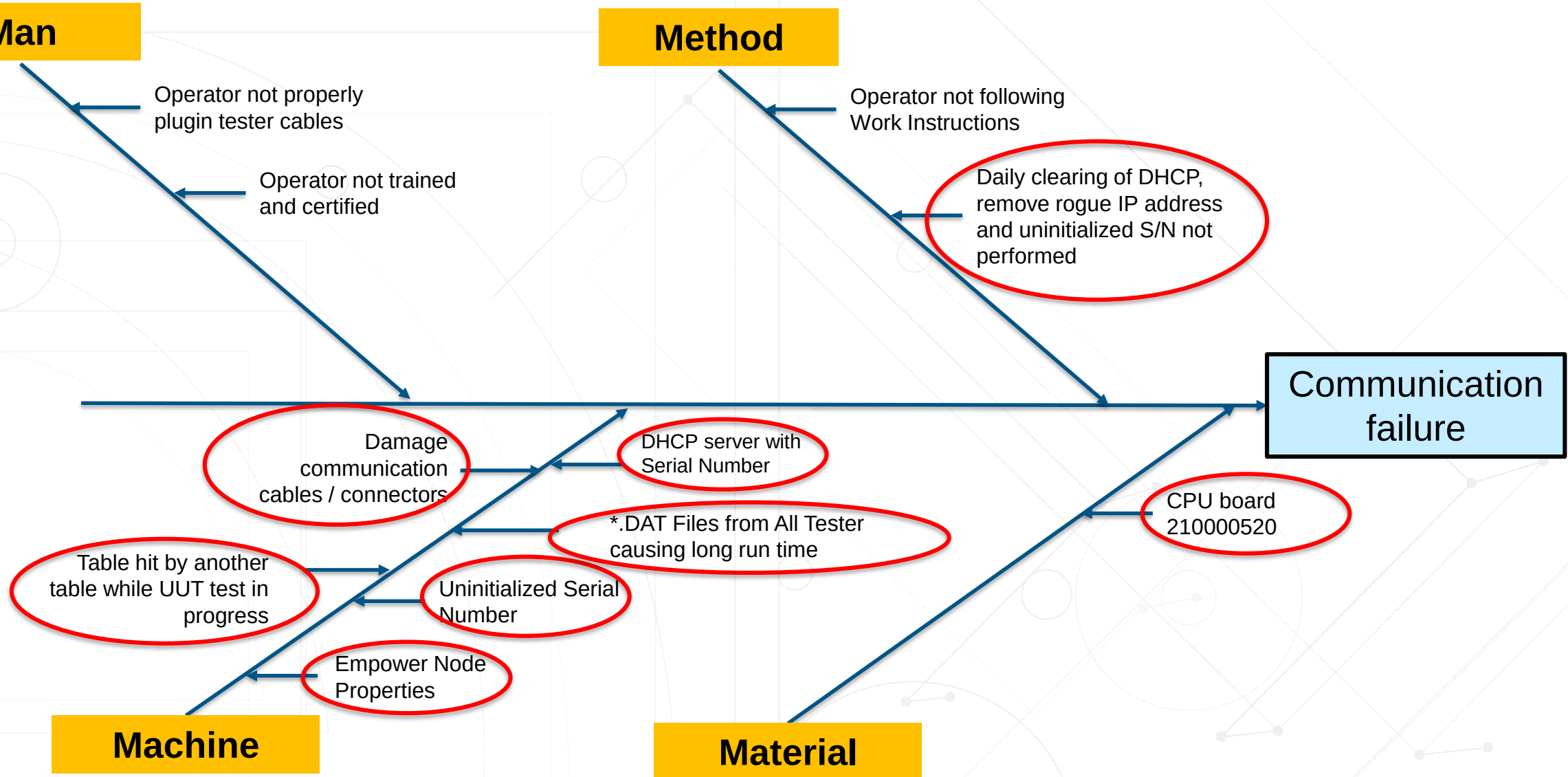
FPY – PDA Detector Family



	Jan'19	Feb'19	Mar'19	Apr'19	May'19	Jun'19	Jul'19	Aug'19	Sep'19	Oct'19	Nov'19	Dec'19	AVE'19
FPY	90.29%	81.22%	87.10%	92.86%	92.86%	87.95%	87.50%	87.30%	91.25%	80.74%	79.04%	89.14%	87.27%
Communication	6.59%	14.29%	10.17%	4.76%	4.43%	6.41%	10.45%	9.79%	6.25%	17.07%	17.93%	8.08%	9.68%
Drift	2.08%	2.12%	0.99%	1.83%	2.22%	4.87%	1.68%	1.85%	1.25%	1.09%	1.52%	1.01%	1.88%
Noise	0.87%	1.85%	0.74%	0.55%	0.49%	0.77%	0.00%	0.00%	0.63%	0.66%	0.51%	1.26%	0.69%
210000415 ASSY,PCB,ACQ PDA 2 PERSONALITY	0.17%	0.53%	0.25%	0.00%	0.00%	0.00%	0.37%	0.26%	0.63%	0.00%	0.25%	0.51%	0.25%
210000520 ASSY, PCB, 3VCCPU AHCT	0.00%	0.00%	0.74%	0.00%	0.00%	0.00%	0.00%	0.79%	0.00%	0.44%	0.76%	0.00%	0.23%

★ Communication Failure – Team to focus on this Soft Failure
Hard Failure such as part is low thus team to monitor through FPY

Yield Improvement – Communication Failure 4M



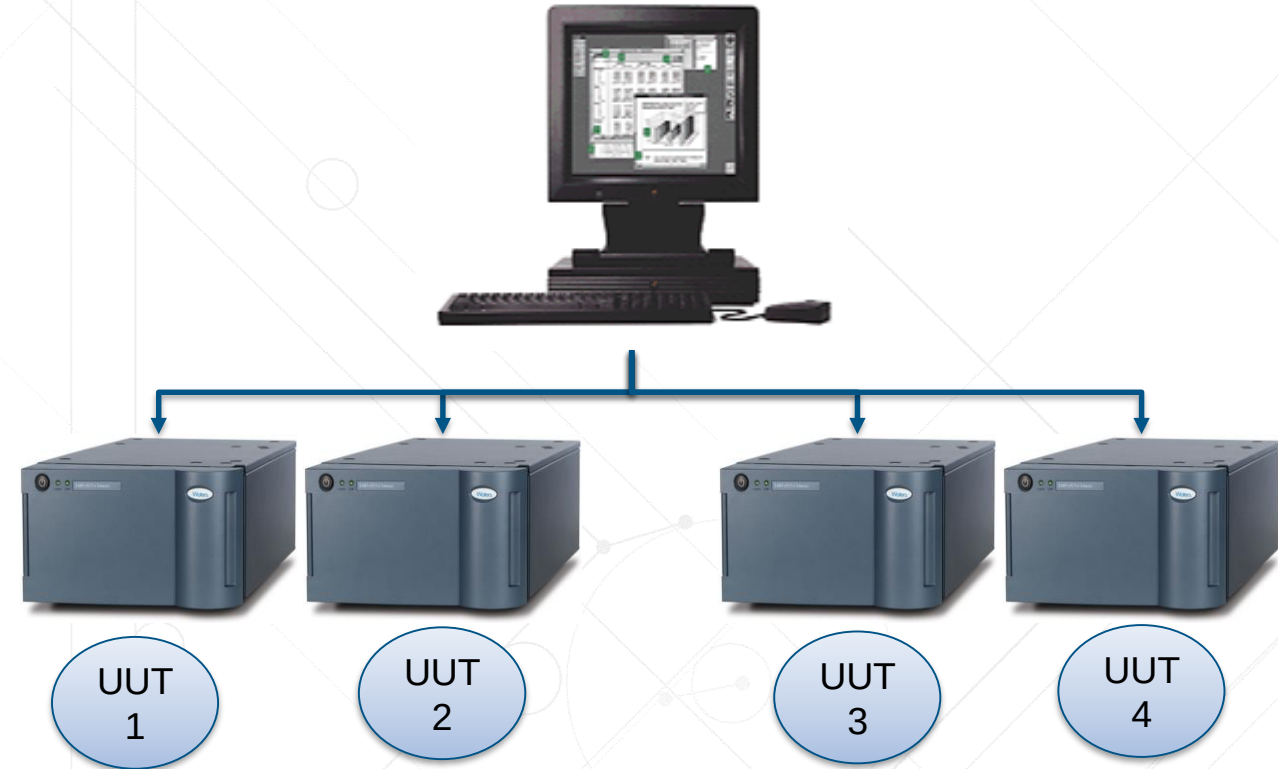
Yield Improvement – Communication Failure

Possible Cause:

When loss communication failure happens?

- Test Tech'n \ Operator did not do daily clearing of DHCP, remove rogue IP address and uninitialized S/N not performed
- There's defective CPU board 210000520
- TE82882 have defective Ethernet\RS232 interface headers.
- Empower Node have conflict of settings. additional units.
- Disturb units under test by inserting new UUT while there's UUT running on other port \ position
- Table hit by another table while UUT test in progress

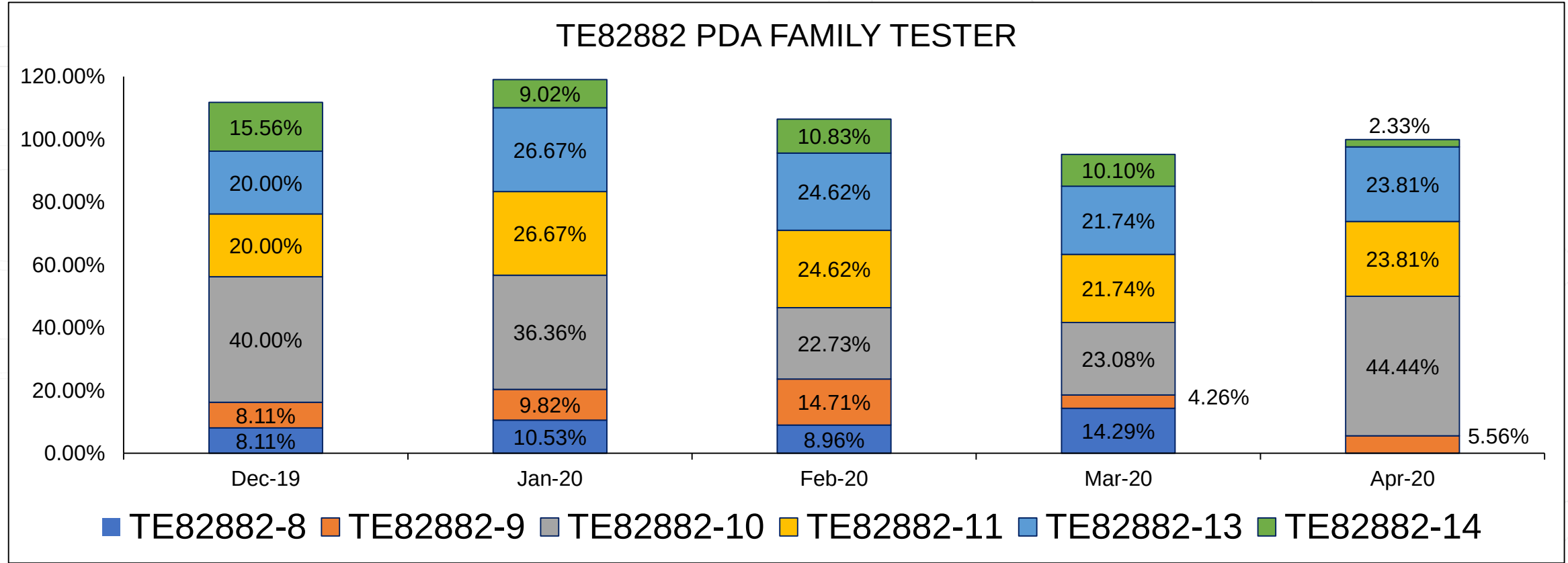
TE82882 PDA Final Tester



Yield Improvement – Communication Failure 4M

	Possible Causes	Verification	Possible cause (Y/ N)	Proposed Actions
Man	1) Operator not properly plugin tester cables	Verified, trained/ certified Tech/Operators performing Detector Testing as per document provide by WPPL. No abnormality found.	N	N/A
	2) Operator not trained and certified	Verified that Tech/Operators performing test for detectors as per document 735001616 provided by Waters. No abnormality found	N	N/A
Method	Operator not following Work Instructions	All test procedures as per TSP provide by Waters test PDA Detector Family. Refer to PN table at 735001613 No abnormality found	N	N/A
	Daily clearing of DHCP, remove rogue IP address and uninitialized S/N not performed	Daily clearing of DHCP, remove rogue IP address and uninitialized S/N is clearly mentioned and learned by technician / operator performing the test for PDA Detector Family	N	N/A
Material	CPU board 210000520	Verified NCMR flow and did not see reject related to CPU related to loss com	N	N/A
Machine	Test Station: 1. Old *.DAT file causing long test run time. 2. DHCP server with Serial Number 2.1 IP Address 2.2 Uninitialized Serial Number 3. Empower Node Properties 4. Damage communication cables / connectors 5. Using trolley instead of fixed table	26 Dec – 2019 Completed the removal of old *.DAT to all TE82882 PDA Final Tester. 03 Mar 2020 - UUT is tested as complete assembled unit and failure able to detect to below station. Test stations have yearly PM for CPU as per station required..	Y	To perform daily task by Test EA as below before release tester to production - Restart tester CPU (Workstation computer) - Click Stop Acquity Process - Clear Waters DHCP Server to address item 1, 2, 3, 4 - Ensure the Ethernet cable lock is not broken to address item 5.

Yield Improvement – Communication Failure



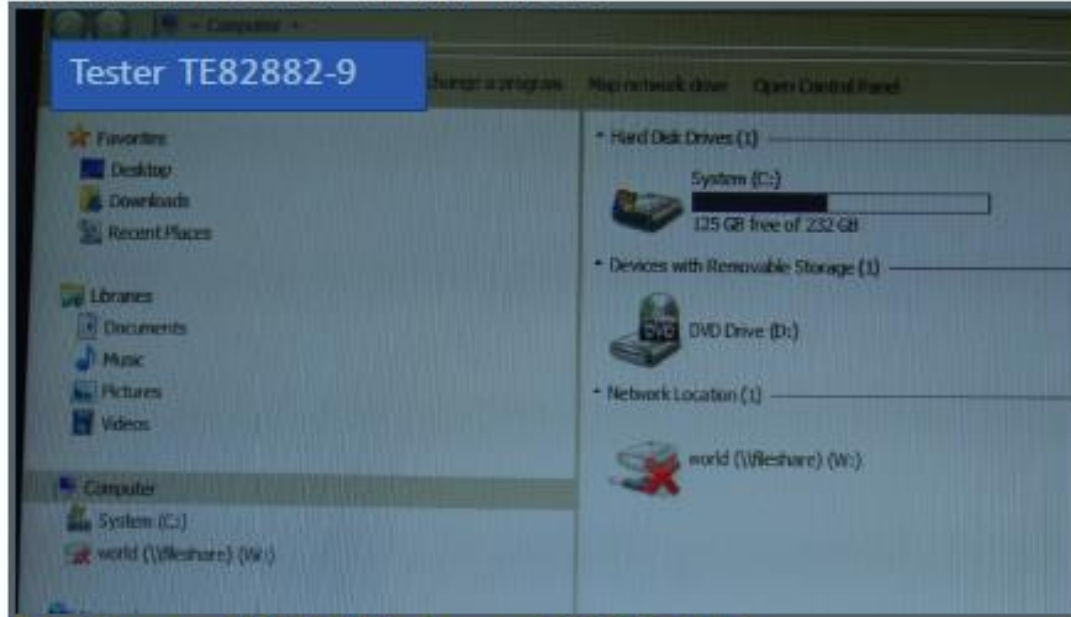
PDA TESTER	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20
TE82882-8	8.11%	10.53%	8.96%	14.29%	0.00%
TE82882-9	8.11%	9.82%	14.71%	4.26%	5.56%
TE82882-10	40.00%	36.36%	22.73%	23.08%	44.44%
TE82882-11	20.00%	26.67%	24.62%	21.74%	23.81%
TE82882-13	20.00%	26.67%	24.62%	21.74%	23.81%
TE82882-14	15.56%	9.02%	10.83%	10.10%	2.33%

- 26-Dec-19 Removed old *.DAT files from all testers completed on 26 Dec 2019.
 05-Feb-20 Cleared Uninitialized serial number/s in Empower Node before start of test
 03-Mar-20 Check sheet for production to tick root cause of failure Add pre-check conditions in check list
 06-Mar-20 Removed conflict address on Testers. (Joel Informed HZL and Eric on 06 Mar 2020)
 Tester TE82882-9 PDA conflicting address to 2998
 Tester TE82882-13 PDA conflicting address to 2998
 Tester TE82882-14 conflicting address to 2998
 08-Mar-20 Stop usage of TE82882-8 in an attempt to load other tester
 09-Mar-20 Installed with spacer in between UUT at TE82882-13 for simulation and study
- TE82882-8, 9 and 14 performed with lower loss comm failure
 - TE82882-10, 11 and 13 performed with higher loss comm failure

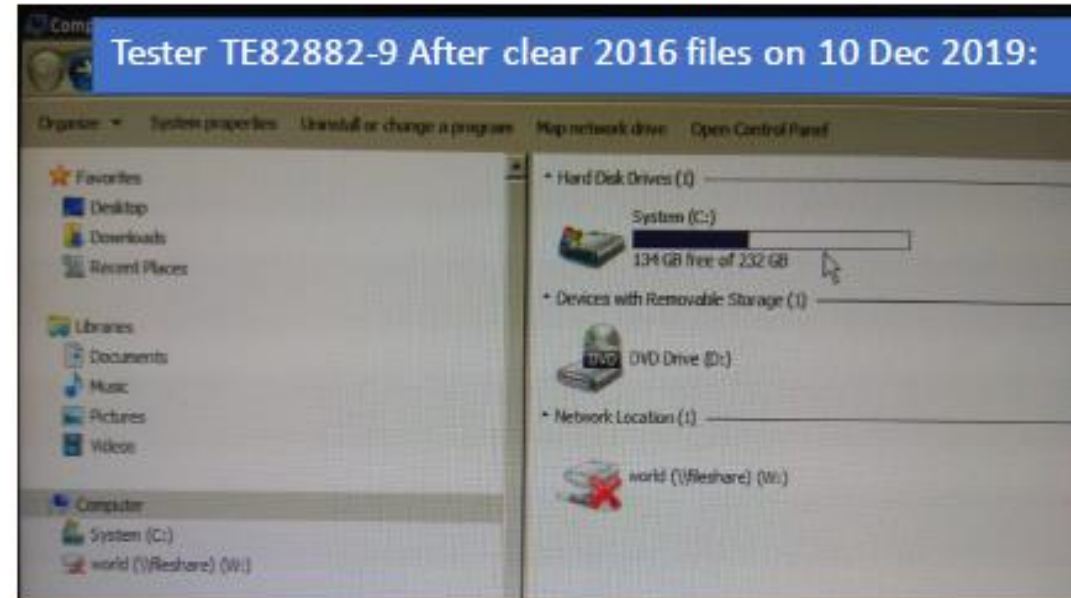
Yield Improvement – Communication Failure

26 Dec – 2019 Completed the removal of old *.DAT to all TE82882 PDA Final Tester.

Removed old *.DAT files.



Before : 125 GB free of 232 GB



After : 134 GB free of 232 GB

Plan Activity	Tester	Date	Status
Remove old DAT files	8, 13, 14	22 Nov 2019	Completed
Remove old DAT files (2016)	9	10-Dec-19	Completed
Remove old DAT files (2017-2018)	9	13-Dec-19	Completed
Remove old DAT files	10, 11	26-Dec-19	Completed

Yield Improvement – Communication Failure

- Updated the Empower Node Properties for Testers TE82882-8, -9, -10, -11, -13, -14 per TSP under section 6.5.1

6.5. To troubleshoot Lost Comm errors:

- 6.5.1. In the list of instruments, there should only be up to 20 systems (Address ACQ-PDA#1 through #4, and #9 through #12, W2998#5 through #8, A10#13-16, A30#17-20). If there are any other systems listed with typical serial numbers (A09UPD011M) or 'serial number uninitialized', click **remove**.

BEFORE

Empower Node Properties													
Empower	Node TE82882-8 Properties		Node TE82882-9 Properties		Node TE82882-10 Properties		Node TE82882-11 Properties		Node TE82882-13 Properties		Node TE82882-14 Properties		
	Type	Address	Type	Address	Type	Address	Type	Address	Type	Address	Type	Address	
1	ACQ-PDA	ACQ-PDA#1	ACQ-PDA	ACQ-PDA#9	ACQ-PDA	ACQ-PDA#12	W2998	W2998#5	W2998	W2998#5	A10-PDA	A10-PDA#16	
2	ACQ-PDA	ACQ-PDA#2	ACQ-PDA	ACQ-PDA#10	ACQ-PDA	ACQ-PDA#11	W2998	W2998#6	W2998	W2998#6	A10-PDA	A10-PDA#15	
3	ACQ-PDA	ACQ-PDA#3	ACQ-PDA	ACQ-PDA#11	ACQ-PDA	ACQ-PDA#10	W2998	W2998#7	W2998	W2998#7	A10-PDA	A10-PDA#14	
4	ACQ-PDA	ACQ-PDA#4	ACQ-PDA	ACQ-PDA#12	ACQ-PDA	ACQ-PDA#9	W2998	W2998#8	W2998	W2998#8	A10-PDA	A10-PDA#13	
5	W2998	W2998#5	W2998	W2998#8	W2998	W2998#5	ACQ-PDA	ACQ-PDA#9	A10-PDA	A10-PDA#13	W2998	W2998#5	
6	W2998	W2998#6	W2998	W2998#7	W2998	W2998#6	ACQ-PDA	ACQ-PDA#10	A10-PDA	A10-PDA#14	W2998	W2998#6	
7	W2998	W2998#7	W2998	W2998#6	W2998	W2998#7	ACQ-PDA	ACQ-PDA#11	A10-PDA	A10-PDA#15	W2998	W2998#7	
8	W2998	W2998#8	W2998	W2998#5	W2998	W2998#8	ACQ-PDA	ACQ-PDA#12	A10-PDA	A10-PDA#16	W2998	W2998#8	
9	ACQ-PDA	ACQ-PDA#9	ACQ-PDA	ACQ-PDA#1	ACQ-PDA	ACQ-PDA#1	ACQ-PDA	ACQ-PDA#1	W2998	W2998#4	A10-PDA	A10-PDA#7	
10	ACQ-PDA	ACQ-PDA#10	ACQ-PDA	ACQ-PDA#2	ACQ-PDA	ACQ-PDA#2	ACQ-PDA	ACQ-PDA#2	W2998	W2998#1	ACQ-PDA	ACQ-PDA#4	
11	ACQ-PDA	ACQ-PDA#12	ACQ-PDA	ACQ-PDA#3	ACQ-PDA	ACQ-PDA#3	ACQ-PDA	ACQ-PDA#3	A10-PDA	A10-PDA#7	ACQ-PDA	ACQ-PDA#9	
12	ACQ-PDA	ACQ-PDA#11	ACQ-PDA	ACQ-PDA#4	ACQ-PDA	ACQ-PDA#4	ACQ-PDA	ACQ-PDA#4	A10-PDA	A10-PDA#6	ACQ-PDA	ACQ-PDA#10	
13	A30-PDA	A30-PDA#18	A10-PDA	A10-PDA#14	A30-PDA	A30-PDA#20	A10-PDA	A10-PDA#14	ACQ-PDA	ACQ-PDA#2	ACQ-PDA	ACQ-PDA#11	
14	A30-PDA	A30-PDA#17	A10-PDA	A10-PDA#13	A30-PDA	A30-PDA#17	A10-PDA	A10-PDA#15	ACQ-PDA	ACQ-PDA#9	ACQ-PDA	ACQ-PDA#12	
15	A30-PDA	A30-PDA#19	A10-PDA	A10-PDA#15	A30-PDA	A30-PDA#19	A10-PDA	A10-PDA#16	ACQ-PDA	ACQ-PDA#10	ACQ-PDA	ACQ-PDA#1	
16	A30-PDA	A30-PDA#20	A10-PDA	A10-PDA#16	A30-PDA	A30-PDA#18	A10-PDA	A10-PDA#13	ACQ-PDA	ACQ-PDA#11	ACQ-PDA	ACQ-PDA#2	
17	A10-PDA	A10-PDA#13	ACQ-PDA	ACQ-PDA#5	A10-PDA	A10-PDA#14	A10-PDA	A10-PDA#7	ACQ-PDA	ACQ-PDA#12	ACQ-PDA	ACQ-PDA#3	
18	A10-PDA	A10-PDA#14	ACQ-PDA	ACQ-PDA#7	A10-PDA	A10-PDA#16			ACQ-PDA	ACQ-PDA#1			
19	A10-PDA	A10-PDA#15	ACQ-PDA	ACQ-PDA#8	A10-PDA	A10-PDA#15			ACQ-PDA	ACQ-PDA#3			
20	A10-PDA	A10-PDA#16	W2998	W2998#G199988578A	A10-PDA	A10-PDA#13			ACQ-PDA	ACQ-PDA#4			
21	W2998	W2998#2			A10-PDA	A10-PDA#7							

Uncommon Red syten

AFTER

Empower Node Properties													
Empower	Node TE82882-8 Properties		Node TE82882-9 Properties		Node TE82882-10 Properties		Node TE82882-11 Properties		Node TE82882-13 Properties		Node TE82882-14 Properties		
	Type	Address	Type	Address	Type	Address	Type	Address	Type	Address	Type	Address	
1	ACQ-PDA	ACQ-PDA#1	ACQ-PDA	ACQ-PDA#9	ACQ-PDA	ACQ-PDA#12	W2998	W2998#5	W2998	W2998#5	A10-PDA	A10-PDA#16	
2	ACQ-PDA	ACQ-PDA#2	ACQ-PDA	ACQ-PDA#10	ACQ-PDA	ACQ-PDA#11	W2998	W2998#6	W2998	W2998#6	A10-PDA	A10-PDA#15	
3	ACQ-PDA	ACQ-PDA#3	ACQ-PDA	ACQ-PDA#11	ACQ-PDA	ACQ-PDA#10	W2998	W2998#7	W2998	W2998#7	A10-PDA	A10-PDA#14	
4	ACQ-PDA	ACQ-PDA#4	ACQ-PDA	ACQ-PDA#12	ACQ-PDA	ACQ-PDA#9	W2998	W2998#8	W2998	W2998#8	A10-PDA	A10-PDA#13	
5	W2998	W2998#5	W2998	W2998#8	W2998	W2998#5	ACQ-PDA	ACQ-PDA#9	A10-PDA	A10-PDA#13	W2998	W2998#5	
6	W2998	W2998#6	W2998	W2998#7	W2998	W2998#6	ACQ-PDA	ACQ-PDA#10	A10-PDA	A10-PDA#14	W2998	W2998#6	
7	W2998	W2998#7	W2998	W2998#6	W2998	W2998#7	ACQ-PDA	ACQ-PDA#11	A10-PDA	A10-PDA#15	W2998	W2998#7	
8	W2998	W2998#8	W2998	W2998#5	W2998	W2998#8	ACQ-PDA	ACQ-PDA#12	A10-PDA	A10-PDA#16	W2998	W2998#8	
9	ACQ-PDA	ACQ-PDA#9	ACQ-PDA	ACQ-PDA#1	ACQ-PDA	ACQ-PDA#1	ACQ-PDA	ACQ-PDA#1	ACQ-PDA	ACQ-PDA#2	ACQ-PDA	ACQ-PDA#4	
10	ACQ-PDA	ACQ-PDA#10	ACQ-PDA	ACQ-PDA#2	ACQ-PDA	ACQ-PDA#2	ACQ-PDA	ACQ-PDA#2	ACQ-PDA	ACQ-PDA#9	ACQ-PDA	ACQ-PDA#9	
11	ACQ-PDA	ACQ-PDA#12	ACQ-PDA	ACQ-PDA#3	ACQ-PDA	ACQ-PDA#3	ACQ-PDA	ACQ-PDA#3	ACQ-PDA	ACQ-PDA#10	ACQ-PDA	ACQ-PDA#10	
12	ACQ-PDA	ACQ-PDA#11	ACQ-PDA	ACQ-PDA#4	ACQ-PDA	ACQ-PDA#4	ACQ-PDA	ACQ-PDA#4	ACQ-PDA	ACQ-PDA#11	ACQ-PDA	ACQ-PDA#11	
13	A30-PDA	A30-PDA#18	A10-PDA	A10-PDA#14	A30-PDA	A30-PDA#20	A10-PDA	A10-PDA#14	ACQ-PDA	ACQ-PDA#2	ACQ-PDA	ACQ-PDA#12	
14	A30-PDA	A30-PDA#17	A10-PDA	A10-PDA#13	A30-PDA	A30-PDA#17	A10-PDA	A10-PDA#15	ACQ-PDA	ACQ-PDA#1	ACQ-PDA	ACQ-PDA#1	
15	A30-PDA	A30-PDA#19	A10-PDA	A10-PDA#15	A30-PDA	A30-PDA#19	A10-PDA	A10-PDA#16	ACQ-PDA	ACQ-PDA#3	ACQ-PDA	ACQ-PDA#2	
16	A30-PDA	A30-PDA#20	A10-PDA	A10-PDA#16	A30-PDA	A30-PDA#18	A10-PDA	A10-PDA#13	ACQ-PDA	ACQ-PDA#4	ACQ-PDA	ACQ-PDA#3	
17	A10-PDA	A10-PDA#13			A10-PDA	A10-PDA#14							
18	A10-PDA	A10-PDA#14			A10-PDA	A10-PDA#16							
19	A10-PDA	A10-PDA#15			A10-PDA	A10-PDA#15							
20	A10-PDA	A10-PDA#16			A10-PDA	A10-PDA#13							

- 06 March 2020 After the Empower Node Properties update:
 - Tester TE82882-8, -10 having 20 system address.
 - Tester TE82882-11, -13, -14 having 16 system address.
 - A10-PDA and A30-PDA are not currently running at Flex

Yield Improvement – Communication Failure

Damage communication cables / connectors



Ethernet Connector Lock
– Good Condition



Ethernet Connector Lock
– Not good Condition

	PDA FAMILY TEST STATION with Good Latch																								Check Date
Tester ID	TE82882-8				TE82882-9				TE82882-10				TE82882-11				TE82882-13				TE82882-14				
Position	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Good Lock																									
Damage Lock																									20-Mar-20
Good Lock																									
Damage Lock																									23-Mar-20
Good Lock																									27-Mar-20
Damage Lock																									

- All ethernet ports has been verified in good condition **(27-Mar-2020)**
- Monitoring in progress

Loss Comm monitoring action items:

LOSS COMM IMPROVEMENT ACTIVITY

TE82882- 8 Month: MAR 2020

ITEM	DAILY TASK DESCRIPTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	Ensure the Ethernet Cable Lock is not broken or damage																															
2	Restart tester CPU (Workstation Computer)																															
3	Click Stop Acquty Process																															
4	Clear Waters DHCP Server																															

Performed By: Mohd Shamsul

NOTE:

23 Mar 2020 - DO NOT USE (POS 1,2,3,4, DAMAGED LOCK)
24 Mar 2020 - DO NOT USE (POS 3,4, Damaged lock)
25 Mar 2020 - All ethernet cable lock has been repaired.
End of data

LOSS COMM IMPROVEMENT ACTIVITY

TE82882- 9 Month: MAR 2020

ITEM	DAILY TASK DESCRIPTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	Ensure the Ethernet Cable Lock is not broken or damage																															
2	Restart tester CPU (Workstation Computer)																															
3	Click Stop Acquty Process																															
4	Clear Waters DHCP Server																															

Performed By: Mohd Shamsul

NOTE: N/A

LOSS COMM IMPROVEMENT ACTIVITY

TE82882- 10 Month: MAR 2020

ITEM	DAILY TASK DESCRIPTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	Ensure the Ethernet Cable Lock is not broken or damage																															
2	Restart tester CPU (Workstation Computer)																															
3	Click Stop Acquty Process																															
4	Clear Waters DHCP Server																															

Performed By: Mohd Shamsul

NOTE: N/A

LOSS COMM IMPROVEMENT ACTIVITY

TE82882- 11 Month: MAR 2020

ITEM	DAILY TASK DESCRIPTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	Ensure the Ethernet Cable Lock is not broken or damage																															
2	Restart tester CPU (Workstation Computer)																															
3	Click Stop Acquty Process																															
4	Clear Waters DHCP Server																															

Performed By: Mohd Shamsul

NOTE: N/A

LOSS COMM IMPROVEMENT ACTIVITY

TE82882- 12 Month: MAR 2020

ITEM	DAILY TASK DESCRIPTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	Ensure the Ethernet Cable Lock is not broken or damage																															
2	Restart tester CPU (Workstation Computer)																															
3	Click Stop Acquty Process																															
4	Clear Waters DHCP Server																															

Performed By: Mohd Shamsul

NOTE: N/A

LOSS COMM IMPROVEMENT ACTIVITY

TE82882- 14 Month: MAR 2020

ITEM	DAILY TASK DESCRIPTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	Ensure the Ethernet Cable Lock is not broken or damage																															
2	Restart tester CPU (Workstation Computer)																															
3	Click Stop Acquty Process																															
4	Clear Waters DHCP Server																															

Performed By: Mohd Shamsul

NOTE: N/A

27 Mar 2020 – All connectors check and verified good until 20 Apr 2020

LOSS COMM IMPROVEMENT ACTIVITY

TE82882- 9 Month : Apr 2020

ITEM	DAILY TASK DESCRIPTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
1	Ensure the Ethernet Cable Lock is not broken or damage	MISA ✓	MISA ✓	MISA ✓	NA	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	N/A	N/A	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	NA	NA	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	NA	NA	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	NA
2	Restart tester CPU (Workstation Computer)																																
3	Click Stop Acquty Process																																
4	Clear Waters DHCP Server																																

Performed By: Mohd Shamsul

NOTE: NA

LOSS COMM IMPROVEMENT ACTIVITY

TE82882- 11 Month : Apr 2020

ITEM	DAILY TASK DESCRIPTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	Ensure the Ethernet Cable Lock is not broken or damage	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓
2	Restart tester CPU (Workstation Computer)	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓
3	Click Stop Acuity Process	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓
4	Clear Waters DHCP Server	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓	MISA ✓

Performed By: Moud Shamsul

NOTE: NA

LOSS COMM IMPROVEMENT ACTIVITY

TE82882- 13 Month: Apr 2020

ITEM	DAILY TASK DESCRIPTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	Ensure the Ethernet Cable Lock is not broken or damaged	MSEA ✓	MSEA ✓	MSEA ✓	NA	NA	NA	MSEA ✓	MSEA ✓	MSEA ✓	N/A	N/A	MSEA ✓	MSEA ✓	MSEA ✓	MSEA ✓	MSEA ✓	NA	NA	MSEA ✓	MSEA ✓	MSEA ✓	MSEA ✓	MSEA ✓	MSEA ✓	NA	NA	MSEA ✓	MSEA ✓	MSEA ✓	MSEA ✓	NA
2	Restart tester CPU (Workstation Computer)	MSEA ✓	MSEA ✓	MSEA ✓	NA	NA	NA	MSEA ✓	MSEA ✓	MSEA ✓	N/A	N/A	MSEA ✓	MSEA ✓	MSEA ✓	MSEA ✓	MSEA ✓	NA	NA	MSEA ✓	MSEA ✓	MSEA ✓	MSEA ✓	MSEA ✓	MSEA ✓	NA	NA	MSEA ✓	MSEA ✓	MSEA ✓	MSEA ✓	NA
3	Click Stop Acquity Process	MSEA ✓	MSEA ✓	MSEA ✓	NA	NA	NA	MSEA ✓	MSEA ✓	MSEA ✓	N/A	N/A	MSEA ✓	MSEA ✓	MSEA ✓	MSEA ✓	MSEA ✓	NA	NA	MSEA ✓	MSEA ✓	MSEA ✓	MSEA ✓	MSEA ✓	MSEA ✓	NA	NA	MSEA ✓	MSEA ✓	MSEA ✓	MSEA ✓	NA
4	Clear Waters DHCP Server	MSEA ✓	MSEA ✓	MSEA ✓	NA	NA	NA	MSEA ✓	MSEA ✓	MSEA ✓	N/A	N/A	MSEA ✓	MSEA ✓	MSEA ✓	MSEA ✓	MSEA ✓	NA	NA	MSEA ✓	MSEA ✓	MSEA ✓	MSEA ✓	MSEA ✓	MSEA ✓	NA	NA	MSEA ✓	MSEA ✓	MSEA ✓	MSEA ✓	NA

Performed By: Mond Shamsul

NOTE: NA

LOSS COMM IMPROVEMENT ACTIVITY

TE8282- 14 Month: Apr 2020

ITEM	DAILY TASK DESCRIPTION																														
1	Ensure the Ethernet Cable Lock is not broken or damage																														
2	Restart tester CPU (Workstation Computer)																														
3	Click Stop Acuity Process																														
4	Clear Waters DHCP Server																														

Performed By: Mohd Shamsul

NOTE: NA

Yield Improvement – Communication Failure

09 Mar 2020 Table hit by another table while UUT test in progress

BEFORE :



Tester without spacer in between UUT

Tester with spacer in between UUT accidental bumps on the UUT potentially disturbing communication between UUT and Tester



AFTER:



Tester with spacer in between UUT

Tester with spacer in between UUT avoid accidental bumps on the UUT potentially disturbing communication between UUT and Tester



TE82882-13 Introduced a spacer between test position to avoid knocking table – 09 Mar 2020

Yield Improvement – Communication Failure

Item	1	R1 (LC/P)	2	R2 (LC/P)	3	R3 (LC/P)	4	R4 (LC/P)
1	D20UPL606A	P	D20UPL606A	P	D20UPL606A	P	D20UPL606A	P
2	D20UPL606A	P	D20UPL606A	1 x LC	D20UPL606A	P	D20UPL606A	P
3	D20UPL606A	P	D20UPL606A	P	D20UPL606A	P	D20UPL606A	P
4	D20UPL606A	P	D20UPL606A	P	D20UPL606A	P	D20UPL606A	P
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Note:
LC Loss Comm
P PASS

Item	1	R1 (LC/P)	2	R2 (LC/P)	3	R3 (LC/P)	4	R4 (LC/P)
1	D20UPL606A	P	D20UPL606A	P	D20UPL606A	P	D20UPL606A	P
2	D20UPL606A	P	D20UPL606A	P	D20UPL606A	P	D20UPL606A	P
3	D20UPL606A	P	D20UPL606A	P	D20UPL606A	P	D20UPL606A	P
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Note:
LC Loss Comm
P PASS

Item	1	R1 (LC/P)	2	R2 (LC/P)	3	R3 (LC/P)	4	R4 (LC/P)
1	D20UPL606A	P	D20UPL606A	P	D20UPL606A	P	D20UPL606A	P
2	D20UPL606A	P	D20UPL606A	P	D20UPL606A	P	D20UPL606A	P
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Note:
LC Loss Comm
P PASS

Item	1	R1 (LC/P)	2	R2 (LC/P)	3	R3 (LC/P)	4	R4 (LC/P)
1	D20UPL606A	3 x LC	D20UPL606A	1 x LC	D20UPL606A	P	D20UPL606A	P
2	D20UPL606A	P	D20UPL606A	P	D20UPL606A	P	D20UPL606A	P
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Note:
LC Loss Comm
P PASS

Item	1	R1 (LC/P)	2	R2 (LC/P)	3	R3 (LC/P)	4	R4 (LC/P)
1	D20UPL606A	P	D20UPL606A	P				
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Note:
LC Loss Comm
P PASS

Item	1	R1 (LC/P)	2	R2 (LC/P)	3	R3 (LC/P)	4	R4 (LC/P)
1	D20UPL606A	P	D20UPL606A	P	D20UPL606A	P	D20UPL606A	P
2	D20UPL606A	P	D20UPL606A	P	D20UPL606A	P	D20UPL606A	P
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Note:
LC Loss Comm
P PASS

Yield Improvement – Communication Failure

Monitoring in 2020 – Loss Comm \ Run Count Model – PDA Family

This slide should only start showing from APR 2020. From Mar 2020 only started to put several actions

Month	Total Unit Tested	Loss Comm (failure%)
		2019 Ref rate 9.68 %
Apr -2020		

Yield Improvement – Communication Failure Activities

Action Item	Who	Due Date	Actual Date	% Completed
1. Removal of old *.DAT files	Joel/David	26 Dec 19	26 Dec 19	
2. Check sheet for production to tick root cause of failure	Joel	03 Mar 20	03 Mar 20	
3. Add pre-check conditions in check list	Joel	03 Mar 20	03 Mar 20	
4. Tester 8 blocked for PM of Ethernet Heads	Joel	02 Mar 20	02 Mar 20 Only Tester 8	
5. Removed other systems listed and other serial number uninitialized from Testers TE82882-8, TE82882-9, TE82882-10, TE82882-11, TE82882-13, TE82882-14	Joel, David, Aldwin	06 Mar 20	06 Mar 20	
6. Installed with spacer in between UUT at TE82882-13 for simulation and study	Joel, Aldwin	09 Mar 20	09 Mar 20	
7. Introduce check list of daily checking of : (1) Ethernet cable lock not damage (2) Restart tester CPU (3) Click Stop Acquity Process (4) Clear Waters DHCP Server	Joel, Shamsul	23 Mar 20	23 Mar 20	
8. Check sheet for production to tick root cause of failure	Joel	03 Mar 20	03 Mar 20	



Yield Improvement – Communication Failure Activities

Action Item	Who	Due Date	Actual Date	% Completed
9. Replace Ethernet Headers per test position	Joel	05 Mar 20	27 Mar 20	
10. Collect 100 data points per tester	Joel	15 Apr 20	30 Jun 20	

