# **MVSS**

## **Traffic Safety & Security Division**

## State Road & Tollway Authority (SRTA)

Toll Collection Systems Implementation and Maintenance

I-75 South and Northwest Corridor Managed Lanes Maintenance Online Management System (MOMS) First Article Test (FAT) Procedures

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## **Document Revision History**

Version	Date	Summary of Revisions
1.0	August 19, 2015	First Draft
2.0	October 3, 2015	Second Draft: Updated from SRTA V1 comments/review meeting.
3.0	November 05, 2015	Third Draft: Updated from Company Internal Testing
4.0	December XX, 2015	Fourth Draft: Updated from Company Internal Testing
5.0	February 18, 2016	Updated from Company Internal Testing



## 1 MOMS FAT Test Objectives

The MOMS FAT will consist of the Test Cases listed in Table 1-1 MOMS FAT Test Cases

**Table 1-1 MOMS FAT Test Cases** 

Test Case ID	Test Case Name	FAT Test Case Description
MOMS-01	MOMS Status Monitoring Display Test	Demonstrate the following: remote access to MOMS, MOMS Network Devices Displays, MOMS Network Status Map Displays, MOMS Process/Service Displays, AVI Traffic Data Subsystem Displays, and MOMS displays user input errors on it GUI.
MOMS-02	MOMS Report Test	Demonstrate MOMS reports
MOMS-03	MOMS Trouble Failure Report (TFR) Test	Demonstrate the following: creation of a Technician Work Schedule, MOMS displaying user input errors on its GUI, manual creation of a Problem Report, manual creation of a Work Order, Hardcat Log searches by Problem Report Info, Hardcat Log searches By Work Order Info, generation of a PM/PDM Schedule, generation of Work Orders from a PM/PDM Schedule, and Work Order searches by Work Order Code, Status, Location, and Asset Name
MOMS-04	MOMS Priority and Escalation Test	Demonstrate the following: Problem Report Configurable Priorities, manual creation of a: Priority 1 Problem Report and an Escalation Notification, Priority 2 Problem Report and an Escalation Notification, and Priority 3 Problem Report and an Escalation Notification
MOMS-05	MOMS Inventory Control Test	Demonstrate the following: the Monthly Inventory Report, Spares Inventory Report; Asset Inventory By End Of Life Date Report; Asset Inventory By Warranty End Date Report; for all repair activities, the details of the repair

Test Case ID	Test Case Name	FAT Test Case Description
		and the parts disposition, including parts retired, are recorded and tracked in MOMS; an automated email notification is generated when the level of spares reach a configurable threshold.
		Manually create a Problem Report and demonstrate the following: if an asset is under warranty, track the status and the movement of the part that was returned to the manufacturer for repair or replacement; if an asset is out of warranty, track the status and movement of the part through the repair process, and returned to inventory; if an asset is not within the warranty period is replaced (because a repair is not possible), create a purchase request for the part to be re-ordered.
		Inspect Inventory Records
MOMS-06	MOMS Component Monitoring Test	Demonstrate the following: Nagios XI Status Display, Remote Repair Scenarios, Onsite Repair Scenarios with a Technician Auto-Assigned to a Problem Report, On-site Repair Scenario with the Problem Report Assigned to Maintenance Manager (i.e. NOT auto-assigned to a Technician), Remote Repair/On-Site Repair Scenarios, Problem Report Searches by Location, Status, Asset Name, and Problem Code, MOMS maintaining time synchronization to the master NTP clock, the software used for time synchronization supports monotonic changes to time, and that the time is synchronized to the nearest millisecond
MOMS-07	MOMS SLA Test	Demonstrate the following: SLA Response Time Report, SLA Repair Time Report, SLA Automated Issue Notification Time Report, and the



Test Case ID	Test Case Name FAT Test Case Description	
		Subsystem/SLA (i.e. SLA) Availability Report.
MOMS-11	MOMS ITS/Dashboard Test	Verify MOMS ability to create and update the MOMS/ITS Dashboard.

## 2 Test Case MOMS-01. MOMS Status Monitoring Display Test

### **Table 2-1 MOMS-01 Test Objectives**

Demonstrate the following: remote access to MOMS, MOMS
Network Devices Displays, MOMS Network Status Map Displays,
MOMS Process/Service Displays, AVI Traffic Data Subsystem
Displays, and MOMS displays user input errors on it GUI.

## 2.1 Test Approach and Results Evaluation

### 2.1.1 Test Approach

- Demonstrate remote access to MOMS
- Demonstrate the MOMS Network Devices Displays
- Demonstrate the MOMS Network Status Map Displays
- Demonstrate the MOMS Process/Services Displays
- Demonstrate the AVI Traffic Data Subsystem Displays
- Demonstrate MOMS displays user input errors on it GUI

## 2.1.2 Test Facility

This test is run at the Cottage Grove, MN

#### 2.1.3 Test Evaluation

The Test Procedure in 2.3 will be determined to have passed if all the test scenarios pass.

## 2.2 Test Preparation

Table 2.2-1 MOMS-01 Pre-Test Items

	Pre-Test Item	Pass/Fail
1	FAT dry run testing is completed, Test Readiness Review meeting completed, and the system is under configuration control/lockdown	□



## 2.3 Test Procedure

**Table 2.3-1 MOMS-01 Test Procedure** 

Step	Action	<b>Expected Results</b>	Actual Results	Pass/Fail
	Demonstrate remote access to MOMS (i.e., using the FAT VPN)			
1.	Open the Cisco AnyConnect Secure Mobility Client Software	The "Cisco AnyConnect Secure Mobility Client" Dialog is displayed		P F
2.	Select VPN 50.233.84.62 (vpn.cg.Companytsrc.net) and click on the "Connect" Button	The "Cisco AnyConnect Secure Mobility Client Login" Dialog is displayed		P F
3.	Enter username, password, and then click on the "OK" Button	The "Cisco AnyConnect" Dialog is displayed		P F
4.	In the "Cisco AnyConnect" Dialog click on the "Accept" Button	The "Cisco AnyConnect" Dialog closes and the PC/Laptop is connected to the VPN		P F
5.	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
6.	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate the MOMS Network Devices Displays		
1.	Open Internet Explorer	Internet Explorer is displayed	□ □
2.	Enter the following URL http://MOMSNagiosServer/na giosxi	The Nagios XI Login Webpage Is displayed	P F
3.	Enter username and password, and click on the "Login" Button.	The Nagios XI Home Webpage is displayed	P F
	Login Role = System Administrator		
4.	On the Nagios Home Webpage select Details- >HostGroup Summary	The Host Group Status Summary View is displayed	P F
5.	Verify that the Network Devices Host Group Hosts and Services are all Green (OK)	Network Device Hosts and Services are Green (OK)	P F
6.	On the Nagios Home Webpage select Details- >HostGroup Overview	The Host Group Status Overview is displayed	P F
7.	Locate the Cottage Grove Network Device Table.  Verify that all Cottage Grove Network Devices Hosts Status's and Services are Green (OK)	All Cottage Grove Network Devices Hosts Status and Services are Green (OK)	P F
8.	In the Cottage Grove Network Devices Table locate a Cisco ASA 5516 Firewall Host - (hub-75a- 142-casa01) and Click on the Host	The Host Status Page is displayed for the Cisco ASA 5516 Firewall is displayed	P F



9.	On the Host Status Page click on the Service Icon.	The Services Status Display for the Cisco ASA 5516 Firewall is displayed	P F
10.	On the Service Status Display locate the Port Status Services and Port Bandwidth Services	All Port Status Services and Port Bandwidth Services are Green (OK)	P F
11.	In the Network Device Table locate a Cisco IE2000 Ethernet Switch Host (CAB-CG-2000-LANSW-01, CAB-CG-2250-LANSW-01, or CAB-CG-2230-LANSW-01. Click on the host	The Host Status Page is displayed for the Cisco IE2000 Ethernet Switch.	P F
12.	On the Host Status Page click on the Service Icon.	The Services Status Display for the Cisco IE 2000 Ethernet Switch is displayed	
13.	On the Service Status Display locate the following services: Power Supply A Status's Temperature Status CPU Busy Percentage_5_min CPU Memory Usage Status i.e. Driver Memory, IO Memory, Processor Memory	The Power Supply A Status's, Fan Status's, Temperature Status, CPU Busy Percentage_5_min, CPU Memory Usage Status i.e. Driver Memory, IO Memory, Processor Memory are displayed and the status is Green (OK)	P F
16.	In the Network Device Table locate a Cisco 5548 Ethernet Switch Host (hub-75a-142-nxus01 or hub-75a-142-nxus02).	The Host Status Details Page is displayed for the Cisco 5548 Ethernet Switch.	P F





	Click on host.		
17.	On the Host Status Detail Page Click on the Services Icon	The Services Status Display for the Cisco 5548 Ethernet Switch is displayed	
18.	On the Service Status Display locate the following services: Power Supply Status's Fan Status's Temperature Status CPU Busy Percentage_5_min CPU Memory Usage Status	The Power Supply Status's, Fan Status's, Temperature Status, CPU Busy Percentage_5_min, CPU Memory Usage Status are displayed and the status is Green (OK)	P F
19.	On the Service Status Display locate the Port Status Services and Port Bandwidth Services	All Port Status Services and Port Bandwidth Services are Green (OK)	P F
20.	In the Network Device Table locate a Cisco 3560 Ethernet Switch Host (CAB-75A-2270-LANSW1 or CAB-75A-2208-LANSW1. Click on the host Icon	The Host Status Details Page is displayed for the Cisco 3560 Ethernet Switch.	P F
21.	On the Host Status Details Page click on the Service Icon	The Services Status Display for the Cisco 3560 Ethernet Switch is displayed	





22.	On the Service Status Display locate the following services: Power Supply 1 Status's Fan Status's Temperature Status CPU Busy Percentage_5_min CPU Memory Usage Status i.e. Driver Memory, IO Memory, Processor Memory	The Power Supply 1 Status's, Fan Status's, Temperature Status, CPU Busy Percentage_5_min, CPU Memory Usage Status i.e. Driver Memory, IO Memory, Processor Memory are displayed and the status is Green (OK)		P F
23.	On the Service Status Display locate the Port Status Services and Port Bandwidth Services	All Port Status Services and Port Bandwidth Services are Green (OK)		P F
24.	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
25.	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	





	Demonstrate the MOMS Network Status Map Displays			
1.	On the Nagios Home Webpage select Maps-> HyperMap	The HyperMap is displayed		P F
2.	On the HyperMap click on the CAB-75A-227.0-LANSW-01	The HyperMap recenters itself		P F
3.	In the Nagios XI Home Webpage click on the "Logout" Hyperlink	The Nagios XI Login Webpage is displayed		P F
4.	Close the Internet Explorer	The Internet Explorer closes		P F
5.	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
6.	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate MOMS Process/Services Displays		
1.	Open Internet Explorer	Internet Explorer is displayed	□ □
2.	Enter the following URL http://MOMSNagiosServer/na giosxi	The Nagios XI Login Webpage Is displayed	P F
3.	Enter username and password, and click on the "Login" Button	The Nagios XI Home Webpage is displayed	P F
	Login Role = MOMS Administrator		
4.	On the Nagios Home Webpage select Details- >HostGroup Summary	The Host Group Status Summary View is displayed	P F
5.	Verify that the MOMS Servers Host Group Hosts and Services are all Green (OK)	MOMS Server Hosts and Services are Green (OK)	P F
6.	On the Nagios Home Webpage select Details- >HostGroup Overview	The Host Group Status Overview is displayed	D D
7.	Locate the MOMS Server Table (Cottage Grove Hub).  Verify that all MOMS Hosts Status's and Services are Green (OK)	All MOMS Server Hosts Status and Services are Green (OK)	P F
8.	In the MOMS Server Table locate a Hardcat Host (Hostname hub-75a-142-hcat00) Click on the Host	The Host Status Detail Page is displayed	P F



9.	On the Host Status Detail Page click on the Service	The Services Status Display for the Hardcat	
	Icon.	Host (Hostname hub-	
		75a-142-hcat00) are	
		displayed	
10.	On the Service Status Display	All Service Status's	
	locate	are Green (OK):	P F
	the following services:	CPU Usage	
	CPU Usage	Hardcat Drive C: Disk	
	Hardcat Drive C: Disk Usage	Usage	
	IIS Web Server	IIS Web Server	
	Memory Usage	Memory Usage	
	Ping	Ping	
11.	In the MOMS Server Table	The Host Status Detail	
	locate a Nagios XI Host	Page is displayed	P F
	(Hostname: hub-75a-142-		
	nagios) Click on the Host		
	Icon		
12.	On the Host Status Detail	The Services Status	
	Page click on the Service	Display for the Nagios	P F
	Icon.	XI Host –Hostnames	
12	T	are displayed	
13.	Locate the following service:	Verify that all Services	
	HTTP	are OK and are in Green	P F
	Current Load, Current User,	Giccii	
	Ping, Root Partition, SSH, Swap Usage, Total Processes		
	Swap Osage, Total Trocesses		
14.	In the Nagios XI Home	The Nagios XI Login	
	Webpage click on the	Webpage is displayed	P F
	"Logout" Hyperlink		1 1
15.	Close the Internet Explorer	The Internet Explorer	
		closes	P F
16.	<u>F</u>		
	Test Discrepancies /		P F



	Comments Report as		
	necessary.		
17.	Record Names of Test	Test Conductor:	
	Conductor and SRTA		
	Witness.	SRTA Witness:	
		Date/Time:	



	Demonstrate AVI Traffic Data Subsystem Displays		
1.	Open Internet Explorer	Internet Explorer is displayed	D D
2.	Enter the following URL http://MOMSNagiosServer/na giosxi	The Nagios XI Login Webpage Is displayed	P F
3.	Enter username and password, and click on the "Login" Button  Login Role = MOMS	The Nagios XI Home Webpage is displayed	P F
	Administrator		
4.	On the Nagios Home Webpage select Details- >HostGroup Summary	The Host Group Status Summary View is displayed	P F
5.	Verify that the AVI Traffic Data Host Group Hosts and Services are all Green (OK)	MOMS Server Hosts and Services are Green (OK)	P F
6.	On the Nagios Home Webpage select Details- >HostGroup Overview	The Host Group Status Overview is displayed	P F
7.	Locate the Cottage Grove AVI1 Table.  Verify that all AVI1 Traffic Data Hosts Status's and Services are Green (OK)	All Cottage Grove AVI1 Hosts Status and Services are Green (OK)	P F
8.	In the Cottage Grove AVI1 locate a Host (Hostname: CMS-CG-2230-UPS-01) Click on the Host Icon	The Host Status Detail Page Display is displayed	P F
9.	On the Host Status Detail Page click on the Service Icon	The Services Status Display for the AVI Traffic Data Host -	P F



		Hostnames are displayed		
10.	On the Service Status Display locate the following services (CMS-CG-2230-UPS-01): AVI1.UPS HTTP AVI1UPS Input Voltage AVI1UPS Output Source AVI1UPS Output Voltage AVI1UPS Ping	All Service Status's are Green (OK): AVI1.UPS HTTP AVI1UPS Input Voltage AVI1UPS Output Source AVI1UPS Output Voltage AVI1UPS Ping		P F
11.	Close the Internet Explorer	The Internet Explorer closes		□ □
12.	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
13.	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate MOMS displays user input errors on its GUI		
1.	Enter the following URL http://MOMSNagiosServer/na	The Nagios XI Login Webpage Is displayed	р F
	giosxi		1 1



2.	Enter username and password, and click on the "Login" Button  Login Role = MOMS  Administrator	The Nagios XI Home Webpage is displayed	P F
3.	On the Nagios Home Webpage select Incident Management->Schedule Downtime	The "All Hosts and Service Schedule Downtime" Webpage is displayed	P F
4.	Click the "Schedule host downtime" Hyperlink	The "You are requesting to schedule downtime for a particular host" Webpage is displayed	P F
5.	The following fields (in red font) are mandatory: Host name Author (Your name) Comment Start Time End Time		P F
6.	In the "Host Name" Field enter "TP-75A-2270-LED21- 01" and click the "Commit" Button	A Webpage is displayed with the following error "Comment was not entered Go back and verify that you entered all required information correctly. Return from whence you came"	P F
7.	In the Nagios XI Home Webpage click on the "Logout" Hyperlink	The Nagios XI Login Webpage is displayed	P F



8.	Close the Internet Explorer	The Internet Explorer closes		□ □ P F
9.	Complete Table 10-1, the			
	Test Discrepancies /			PF
	Comments Report as			
	necessary.			
10.	Record Names of Test		Test Conductor:	
	Conductor and SRTA			
	Witness.		SRTA Witness:	
			Date/Time:	

## 3 Test Case MOMS-02. MOMS Reports Test

## **Table 3-1 MOMS-02 Test Objectives**

1	Demonstrate MOMS reports	١
_	Demonstrate Moments reports	

## 3.1 Test Approach and Results Evaluation

## 3.1.1 Test Approach

- Demonstrate the Equipment Availability Report (DEFERRED TO INTEGRATION TEST)
- Demonstrate the Lane Availability Report (DEFERRED TO INTEGRATION TEST)
- Demonstrate the Subsystem Availability Report (DEFERRED TO INTEGRATION TEST)
- Demonstrate the System Availability Report(DEFERRED TO INTEGRATION TEST)
- Demonstrate the Summary and Detail Problem Report
  - Corrective (unscheduled) maintenance history by classification (minor and major), including component failure rates by equipment type, time period, location, and technician
- Demonstrate the Summary and Detail Work Order Report
- Demonstrate the Problem Report History Report
- Demonstrate the Work Order History Report
- Open Problem Reports
- Open Work Orders
- Demonstrate the Number of Problem Reports Exceeding Repair Times Report (DEFERRED TO INTEGRATION TEST)
- Demonstrate the Number of Problem Reports Exceeding Response Times Report (DEFERRED TO INTEGRATION TEST)
- Demonstrate the Mean-Time-To-Repair (MTR) Report(DEFERRED TO INTEGRATION TEST)
- Demonstrate the Mean-Time-To-Respond (MTTR) Report (DEFERRED TO INTEGRATION TEST)
- Demonstrate the Mean-Time-To-Respond and Repair (MTRR) Report (DEFERRED TO INTEGRATION TEST)



- Demonstrate the Mean-Time-Between-Failures (MTBF) Report (DEFERRED TO INTEGRATION TEST)
- Demonstrate the Equipment Inventory (Assets) Report
- Demonstrate the Equipment Inventory (Spare Assets) Report
- Demonstrate the Equipment Inventory (Stock) Report
- Demonstrate the Alarms Report
- Demonstrate the Incident Logs report
- Demonstrate the Acknowledgement, Response, and Repair Time Report (DEFERRED TO INTEGRATION TEST)
- Demonstrate the Preventive Maintenance/PDM Forecast Report
- Demonstrate the Equipment Use and Repair History by Equipment Type, Time Period, Location, and Technician Report
- Demonstrate the Equipment Use and Repair History by Equipment Type and Location Report

### 3.1.2 Test Facility

This test is run at the Cottage Grove, MN

#### 3.1.3 Test Evaluation

The Test Procedure in 3.3 will be determined to have passed if all the test scenarios pass.



## 3.2 Test Preparation

Table 3.2-1 MOMS-02 Pre-Test Items

	Pre-Test Item	Pass/Fail
1	FAT dry run testing is completed, Test Readiness Review meeting completed, and the system is under configuration control/lockdown	□
2	Completion of MOMS-03: MOMS Trouble Failure Reports Test, MOMS-04. MOMS Priorities and Escalation Test, and MOMS-06: MOMS Component Monitoring Test	□ □ P F

## 3.3 Test Procedure

Table 33.3-1 MOMS-02 Test Procedure

Step	Action	Expected Results	Actual Results	Pass/Fail
	Demonstrate the Equipment Availability Report (DEFERRED TO INTEGRATION TEST)			
1.	Open Internet Explorer	Internet Explorer is displayed		P F
2.	Enter the following URL: http://tableau.srta.local <enter></enter>	The Tableau Login Webpage is displayed		P F
3.	Log into the Tableau Web Interface Enter Username and Password Login Role = Report User			P F
4.	Select the Equipment Availability Report			P F
5.	Enter the Time Period and Location			□ □ □ P F



Step	Action	<b>Expected Results</b>	Actual Results	Pass/Fail
6.	Run the Report	The Equipment Availability Report pdf is displayed		P F
7.	Inspect the Equipment Availability Report (i.e. compare to the sample Equipment Availability Report)	The Equipment Availability Report is OK		P F
8.	Log out of the Tableau Web Interface			□ □
9.	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
10.	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate the Lane Availability Report (DEFERRED TO INTEGRATION TEST)			
1	Open Internet Explorer	Internet Explorer is displayed		□ □ P F
2	Enter the following URL:  http://tableau.srta.local hit <enter></enter>	The Tableau Login Webpage is displayed		P F
3	Log into the Tableau Web Interface Enter Username and Password Login Role = Report User			P F
4	Select the Lane Availability Report			□ □ P F
5	Enter the Time Period and Location			□ □
6	Run the Report	The Lane Availability Report pdf is displayed		□ □ P F
7	Inspect the Lane Availability Report (i.e. compare to the sample Lane Availability Report)	The Lane Availability Report is OK		P F
8	Log out of the Tableau Web Interface			□ □ P F
9	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
10	Record Names of Test Conductor and SRTA Witness.		Test Conductor: SRTA Witness:	





			Date/Time:	
	Demonstrate the Subsystem Availability Report (DEFERRED TO INTEGRATION TEST)			
1	Open Internet Explorer	Internet Explorer is displayed		□ □ □ P F
2	Enter the following URL: <a href="http://tableau.srta.local">http://tableau.srta.local</a> and <a href="http://tableau.srta.local">hit &lt; Enter &gt;</a>	The Tableau Login Webpage is displayed		P F
3	Log into the Tableau Web Interface Enter Username and Password Login Role = Report User			P F
4	Select the Subsystem Availability Report			D D
5	Enter the Time Period and Location			P F
6	Run the Report	The Subsystem Availability Report pdf is displayed		□ □ □ P F
7	Inspect the Subsystem Availability Report (i.e. compare to the sample Subsystem Availability Report)	The Subsystem Availability Report is OK		P F
8	Log out of the Tableau Web Interface			P F
9	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F



10	Record Names of Test	Test Conductor:	
	Conductor and SRTA		
	Witness.	SRTA Witness:	
		Date/Time:	



	Demonstrate the System Availability Report (DEFERRED TO INTEGRATION TEST)			
1	Open Internet Explorer	Internet Explorer is displayed		□ □ P F
2	Enter the following URL: <a href="http://tableau.srta.local">http://tableau.srta.local</a> and  hit <enter></enter>	The Tableau Login Webpage is displayed		P F
3	Log into the Tableau Web Interface Enter Username and Password Login Role = Report User			P F
4	Select the System Availability Report			□ □ P F
5	Enter the Time Period			P F
6	Run the Report	The System Availability Report pdf is displayed		P F
7	Inspect the System Availability Report (i.e. compare to the sample System Availability Report)	The System Availability Report is OK		P F
8	Log out of the Tableau Web Interface			P F
9	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
10	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:	



		Date/Time:	





	Demonstrate the Summary and Detail Problem Report		
1	Open Internet Explorer	Internet Explorer is displayed	□ □ P F
2	Enter the following URL: http://tableau.srta.local/#/site /SRTA_QA/projects	The Tableau Login Webpage is displayed	P F
3	Log into the Tableau Web Interface Enter Username and Password Login Role = Report User	Tableau folders are displayed.	P F
3	Click on the MOMS Folder after login.	Tableau MOMS reports are displayed.	□ □
4	Select the Problem Report Summary Report	Problem Summary Reports are displayed	□ □
3	Select the Problem Report Summary Report	Problem Summary Report are displayed	□ □ P F
5	Enter the Date/Time Period (Last five days, midnight to midnight) and Location (Default to All)	Date/Time Period and Location entered.	P F
6	Run the Report	The Problem Summary Report pdf is displayed	□ □ P F
7	Inspect the Problem Summary Report (i.e. compare to the sample Work Order Summary Report from the RRS)	The Problem Summary Report is OK	P F
8	Log out of the Tableau Web Interface	User logged out of Tableau	□ □ P F
9	Complete Table 10-1, the Test Discrepancies /		□ □ □ P F



	Comments Report as necessary.		
10	Record Names of Test	Test Conductor:	
	Conductor and SRTA Witness.	SRTA Witness:	
		Date/Time:	



	Search Problem Reports - By Date Raised and Location		
1	Open Hardcat Client	Hardcat Client is displayed	P F
2	Log into the Hardcat Client Enter Username and Password Login Role = Maintenance Manager	The Hardcat Client Interface is displayed	P F
3	Select menu item File->Administration->Reports	The "Generate Fixed Administration Report" Dialog is displayed	P F
4	In the "Generate Fixed Administration Report" Dialog List Box select "Help Desk"	The "Generate Fixed Problem Report" Dialog is displayed	P F
5	In the "Generate Fixed Problem Report" Dialog Box scroll and select "Problem Individual Details"	The "Select a Previously Stored Search Criteria" Dialog is displayed	P F
	Under "Scope of Report" select "This Search" Radio Button, and then click on the "Use Search" Button		
6	On "Previously Stored Search Criteria" Dialog select "Problem Reports Search By Date Raised and Location Folder" and then Click the "Edit" Button	The "Reviewing Problem Search Specification: Problem Reports Search By Date Raised and Location Folder" Dialog is displayed	P F
7	Choose the Date Raised - "Date" From and "Date" To Parameters	The Problem Reports are filtered by Location Folder Name and Date Raised	P F



	Choose the Location Folder Name "Chose" Option and select the Location Folder		
8	Click the "Apply" Button	The "Edit Details of	
8	On the "Reviewing Problem Search Specification: Problem Reports Search By Date Raised and Location Folder" Dialog click the "OK" Button	Search Problem Reports Search By Date Raised and Location Folder" Dialog is displayed	P F
9	On the "Edit Details of Search Problem Reports Search By Date Raised and Location Folder" Dialog click the "OK" Button	The "Select a Previously Stored Search Criteria" Dialog is displayed	P F
10	On the "Select a Previously Stored Search Criteria" Dialog click the "OK" Button	The "Generate Fixed Problem Report" Dialog is displayed	P F
11	On the "Generate Fixed Problem Report" Dialog click on the "View" Button	The Problem Individual Details Report pdf is generated filtered by Location and Date	P F
12	Inspect the Problem Individual Details Report (i.e. compare to the sample Problem Individual Details Report)	The Problem Individual Details Report is OK	P F
13	Close the pdf viewer	The "Generate Fixed Problem Report" Dialog is displayed	P F



14	In the "Generate Fixed Problem Report" Dialog click the "Close" Button	The "Generate Fixed Administration Report" Dialog is displayed		P F
15	In the "Generate Fixed Administration Report" click the "Close" Button	The "Hardcat Asset Management" Screen is displayed		P F
16	On the "Hardcat Asset Management" Screen select the "File->Exit" menu item	The Hardcat Client closes		P F
17	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
18	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate the Summary and Detail Work Order Report		
1	Open Internet Explorer	Internet Explorer is displayed	□ □ P F
2	Enter the following URL: http://tableau.srta.local/#/site /SRTA_QA/projects	The Tableau Login Webpage is displayed	P F
3	Log into the Tableau Web Interface Enter Username and Password Login Role= Report User		P F
4	Click on the MOMS Folder after login.	Tableau MOMS reports are displayed.	□ □ P F
5	Select the Work Order Summary Reports	Work Order Summary Reports	P F
6	Select the Work Order Summary Report	Problem Summary Report are displayed	P F
7	Enter the Date/Time Period (Last 15 days, midnight to midnight) and Location	Date/Time Period and Location entered.	D D
8	Run the Report	The Work Order Summary Report pdf is displayed	P F
9	Inspect the Work Order Summary Report (i.e. compare to the sample Work Order Summary Report from RRS)	The Work Order Summary Report is OK	P F
10	Log out of the Tableau Web Interface	User logged out of Tableau	□ □ P F
11	Complete Table 10-1, the Test Discrepancies /		□ □ P F



	Comments Report as necessary.		
12	Record Names of Test	Test Conductor:	
	Conductor and SRTA Witness.	SRTA Witness:	
		Date/Time:	



	Search Work Orders Reports - By Date Raised and Location		
1	Open Hardcat Client	Hardcat Client is displayed	□ □ □ P F
2	Log into the Hardcat Client Enter Username and Password Login Role= Maintenance	The Hardcat Client Interface is displayed	P F
	Manager		
3	Select menu item File->Administration->Reports	The "Generate Fixed Administration Report" Dialog is displayed	P F
4	In the "Generate Fixed Administration Report" Dialog List Box select "Maintenance"	The "Generate Fixed Maintenance Report" Dialog is displayed	P F
5	In the "Generate Fixed Maintenance Report" Dialog Box scroll and select "Work Order Individual Details"	The "Select a Previously Stored Search Criteria" Dialog is displayed	P F
	Under "Scope of Report" select "This Search" Radio Button, and then click on the "Use Search" Button		
6	On "Previously Stored Search Criteria" Dialog select "Work Orders Search By Date Raised and Location Folder" and then Click the "Edit" Button	The "Reviewing Work Orders Search Specification: Work Orders Search By Date Raised and Location Folder" Dialog is displayed	P F
7	Choose the Date Raised - "Date" From and "Date" To Parameters	The Work Orders are filtered by Location Folder Name and Date Raised	P F



	Choose the Location Folder Name "Chose" Option and select the Location Folder  Click the "Apply" Button		
8	On the "Reviewing Work Orders Search Specification: Work Orders Search By Date Raised and Location Folder" Dialog click the "OK" Button	The "Edit Details of Search Work Orders Search By Date Raised and Location Folder" Dialog is displayed	P F
9	On the "Edit Details of Search Work Orders Search By Date Raised and Location Folder" Dialog click the "OK" Button	The "Select a Previously Stored Search Criteria" Dialog is displayed	P F
10	On the "Select a Previously Stored Search Criteria" Dialog click the "OK" Button	The "Generate Fixed Maintenance Report" Dialog is displayed	P F
11	On the "Generate Fixed Maintenance Report" Dialog click on the "View" Button	The Work Order Individual Details Report pdf is generated filtered by Location and Date.	P F
12	Inspect the Work Order Individual Details Report (i.e. compare to the sample Work Order Individual Details Report)	The Work Order Individual Details Report is OK	P F
13	Close the pdf viewer	The "Generate Fixed Maintenance Report" Dialog is displayed	P F



14	In the "Generate Fixed Maintenance Report" Dialog click the "Close" Button	The "Generate Fixed Administration Report" Dialog is displayed		P F
15	In the "Generate Fixed Administration Report" click the "Close" Button	The "Hardcat Asset Management" Screen is displayed		P F
16	On the "Hardcat Asset Management" Screen select the "File->Exit" menu item	The Hardcat Client closes		P F
17	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
18	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate the Problem Report History Report		_	
1	Open Hardcat Client	Hardcat Client is displayed		P F
2	Log into the Hardcat Client Enter Username and Password Login Role = Maintenance Manager	The Hardcat Client Interface is displayed		P F
3	Select menu item File->Administration->Reports	The "Generate Fixed Administration Report" Dialog is displayed		P F
4	In the "Generate Fixed Administration Report" Dialog List Box select "Help Desk"	The "Generate Fixed Problem Report" Dialog is displayed		P F
5	In the "Generate Fixed Problem Report" Dialog Box scroll and select "Problem Individual Details"	The "Select a Previously Stored Search Criteria" Dialog is displayed		P F
	Under "Scope of Report" select "This Search" Radio Button, and then click on the "Use Search" Button			
6	On "Previously Stored Search Criteria" Dialog select "Problem Reports Search By Date Closed" and then Click the "Edit" Button	The "Reviewing Problem Search Specification: Problem Reports Search By Date Closed" Dialog is displayed		P F
7	Choose the Date Closed - "Date" From and "Date" To Parameters	The Problem Reports are filtered by Date Closed		P F
	Click the "Apply" Button			



8	On the "Reviewing Problem Search Specification: Problem Reports Search By Date Closed" Dialog click the "OK" Button	The "Edit Details of Search Problem Reports Search By Date Closed" Dialog is displayed	P F
9	On the "Edit Details of Search Problem Reports Search By Date Closed" Dialog click the "OK" Button	The "Select a Previously Stored Search Criteria" Dialog is displayed	P F
10	On the "Select a Previously Stored Search Criteria" Dialog click the "OK" Button	The "Generate Fixed Problem Report" Dialog is displayed	P F
11	On the "Generate Fixed Problem Report" Dialog click on the "View" Button	The Problem Individual Details Report pdf is generated filtered by Date Closed	P F
12	Inspect the Problem Individual Details Report (i.e. compare to the sample Problem Individual Details Report)	The Problem Individual Details Report is OK	P F
13	Close the pdf viewer	The "Generate Fixed Problem Report" Dialog is displayed	P F
14	In the "Generate Fixed Problem Report" Dialog click the "Close" Button	The "Generate Fixed Administration Report" Dialog is displayed	P F
15	In the "Generate Fixed Administration Report" click the "Close" Button	The "Hardcat Asset Management" Screen is displayed	D F
16	On the "Hardcat Asset Management" Screen select the "File->Exit" menu item	The Hardcat Client closes	D D



17	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.		P F
18	Record Names of Test Conductor and SRTA Witness.	Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate the Work Order History Report		
1	Open Hardcat Client	Hardcat Client is displayed	P F
2	Log into the Hardcat Client Enter Username and Password Login Role = Maintenance Manager	The Hardcat Client Interface is displayed	P F
3	Select menu item File- >Administration->Reports	The "Generate Fixed Administration Report" Dialog is displayed	P F
4	In the "Generate Fixed Administration Report" Dialog List Box select "Maintenance"	The "Generate Fixed Maintenance Report" Dialog is displayed	P F
5	In the "Generate Fixed Maintenance Report" Dialog Box scroll and select "Work Order Individual Details"  Under "Scope of Report" select "This Search" Radio	The "Select a Previously Stored Search Criteria" Dialog is displayed	P F
	Button, and then click on the "Use Search" Button		
6	On "Previously Stored Search Criteria" Dialog select ""Work Orders Search By Date Closed" and then Click the "Edit" Button	The "Reviewing Work Orders Search Specification: Work Orders Search By Date Closed" Dialog is displayed	P F
7	Choose the Date Closed - "Date" From and "Date" To Parameters	The Work Orders are filtered by Date Closed	P F
	Click the "Apply" Button		



8	On the "Reviewing Work Orders Search Specification: Work Orders Search By Date Closed" Dialog click the "OK" Button	The "Edit Details of Search Work Orders Search By Date Closed" Dialog is displayed	P F
9	On the "Edit Details of Search Work Orders Search By Date Closed" Dialog click the "OK" Button	The "Select a Previously Stored Search Criteria" Dialog is displayed	P F
10	On the "Select a Previously Stored Search Criteria" Dialog click the "OK" Button	The "Generate Fixed Maintenance Report" Dialog is displayed	P F
11	On the "Generate Fixed Maintenance Report" Dialog click on the "View" Button	The Work Order Individual Details Report pdf is generated filtered by Date Closed	P F
12	Inspect the Work Order Individual Details Report (i.e. compare to the sample Work Order Individual Details Report)	The Work Order Individual Details Report is OK	P F
13	Close the pdf viewer	The "Generate Fixed Maintenance Report" Dialog is displayed	P F
14	In the "Generate Fixed Maintenance Report" Dialog click the "Close" Button	The "Generate Fixed Administration Report" Dialog is displayed	D D
15	In the "Generate Fixed Administration Report" click the "Close" Button	The "Hardcat Asset Management" Screen is displayed	P F
16	On the "Hardcat Asset Management" Screen select the "File->Exit" menu item	The Hardcat Client closes	P F
17	Complete Table 10-1, the Test Discrepancies /		□ □



	Comments Report as necessary.		
18	Record Names of Test	Test Conductor:	
	Conductor and SRTA Witness.	SRTA Witness:	
		Date/Time:	



	Demonstrate the Open Problem Reports		
1	Open Hardcat Client	Hardcat Client is displayed	D D
2	Log into the Hardcat Client Enter Username and Password Login Role = Maintenance Manager	The Hardcat Client Interface is displayed	P F
3	Select menu item File- >Administration->Reports	The "Generate Fixed Administration Report" Dialog is displayed	P F
4	In the "Generate Fixed Administration Report" Dialog List Box select "Help Desk"	The "Generate Fixed Problem Report" Dialog is displayed	P F
5	In the "Generate Fixed Problem Report" Dialog Box scroll and select "Problem Individual Details"	The "Select a Previously Stored Search Criteria" Dialog is displayed	P F
	Under "Scope of Report" select "This Search" Radio Button, and then click on the "Use Search" Button		
6	On "Previously Stored Search Criteria" Dialog select "Problem Reports Search By NOT Closed or NOT Cancelled" and then "OK *Button	The "Generate Fixed Problem Report" Dialog is displayed	P F
7	On the "Generate Fixed Problem Report" Dialog click on the "View" Button	The Problem Individual Details Report pdf is generated filtered by NOT Closed or NOT Cancelled	P F



8	Inspect the Problem Individual Details Report (i.e. compare to the sample Problem Individual Details Report)	The Problem Individual Details Report is OK		P F
9	Close the pdf viewer	The "Generate Fixed Problem Report" Dialog is displayed		P F
10	In the "Generate Fixed Problem Report" Dialog click the "Close" Button	The "Generate Fixed Administration Report" Dialog is displayed		P F
11	In the "Generate Fixed Administration Report" click the "Close" Button	The "Hardcat Asset Management" Screen is displayed		P F
12	On the "Hardcat Asset Management" Screen select the "File->Exit" menu item	The Hardcat Client closes		P F
13	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
14	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate the Open Work Orders		
1	Open Hardcat Client	Hardcat Client is displayed	□ □ P F
2	Log into the Hardcat Client Enter Username and Password Login Role = Maintenance Manager	The Hardcat Client Interface is displayed	P F
3	Select menu item File->Administration->Reports	The "Generate Fixed Administration Report" Dialog is displayed	P F
4	In the "Generate Fixed Administration Report" Dialog List Box select "Maintenance"	The "Generate Fixed Maintenance Report" Dialog is displayed	P F
5	In the "Generate Fixed Maintenance Report" Dialog Box scroll and select "Work Order Individual Details"  Under "Scope of Report"	The "Select a Previously Stored Search Criteria" Dialog is displayed	P F
	select "This Search" Radio Button, and then click on the "Use Search" Button		
6	On "Previously Stored Search Criteria" Dialog select ""Work Orders Search By NOT Closed or NOT Cancelled" and then Click the "OK" Button	The "Generate Fixed Maintenance Report" Dialog is displayed	P F
7	On the "Generate Fixed Maintenance Report" Dialog click on the "View" Button	The Work Order Individual Details Report pdf is generated filtered by NOT Closed or NOT Cancelled	P F



8	Inspect the Work Order Individual Details Report (i.e. compare to the sample Work Order Individual Details Report)	The Work Order Individual Details Report is OK		P F
9	Close the pdf viewer	The "Generate Fixed Maintenance Report" Dialog is displayed		P F
10	In the "Generate Fixed Maintenance Report" Dialog click the "Close" Button	The "Generate Fixed Administration Report" Dialog is displayed		P F
12	In the "Generate Fixed Administration Report" click the "Close" Button	The "Hardcat Asset Management" Screen is displayed		P F
13	On the "Hardcat Asset Management" Screen select the "File->Exit" menu item	The Hardcat Client closes		P F
14	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
15	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate the Number of Problem Reports Exceeding Repair Times Report (DEFERRED TO		
	INTEGRATION TEST)		
1	Open Internet Explorer	Internet Explorer is displayed	□ □ P F
2	Enter the following URL: <a href="http://tableau.srta.local">http://tableau.srta.local</a> and  hit <enter></enter>	The Tableau Login Webpage is displayed	P F
3	Log into the Tableau Web Interface Enter Username and Password Login Role = Report User		P F
4	Select the Problem Report Exceeding Repair Times Report		D D
5	Enter the filter criteria: Date Range, Time Range, Day(s) of the Week, and Priority(s)		P F
6	Run the Report	The Problem Report Exceeding Repair Times pdf Report is displayed	P F
7	Inspect the Problem Report Exceeding Repair Times Report (i.e. compare to the sample Problem Report Exceeding Repair Times Report)	The Problem Report Exceeding Repair Times Report is OK	P F
8	Log out of the Tableau Web Interface		P F



9	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.		P F
10	Record Names of Test Conductor and SRTA Witness.	Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate the Number of Problem Reports Exceeding Response Times Report (DEFERRED TO INTEGRATION TEST)		
1	Open Internet Explorer	Internet Explorer is displayed	□ □ P F
2	Enter the following URL: <a href="http://tableau.srta.local">http://tableau.srta.local</a> and  hit <enter></enter>	The Tableau Login Webpage is displayed	P F
3	Log into the Tableau Web Interface Enter Username and Password Login Role = Report User		P F
4	Select the Problem Report Exceeding Response Times Report		D D
5	Enter the filter criteria: Date Range, Time Range, Day(s) of the Week, and Priority(s)		P F
6	Run the Report	The Problem Report Exceeding Response Times pdf Report is displayed	P F
7	Inspect the Problem Report Exceeding Response Times Report (i.e. compare to the sample Problem Report Exceeding Response Times Report)	The Problem Report Exceeding Response Times Report is OK	P F
8	Log out of the Tableau Web Interface		P F



9	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.		P F
10	Record Names of Test Conductor and SRTA Witness.	Test Conductor:  SRTA Witness:  Date/Time:	





	Demonstrate the Mean- Time-To-Repair (MTR)		
	Report (DEFERRED TO INTEGRATION TEST)		
1	Open Internet Explorer	Internet Explorer is displayed	□ □
2	Enter the following URL: <a href="http://tableau.srta.local">http://tableau.srta.local</a> and  hit <enter></enter>	The Tableau Login Webpage is displayed	P F
3	Log into the Tableau Web Interface Enter Username and Password		P F
4	Select the Mean-Time-To- Repair (MTR) Report		□ □
5	Enter the filter criteria: Date Range, Time Range, and Priority(s)		P F
6	Run the Report	The Mean-Time-To- Repair (MTR) pdf Report is displayed	P F
7	Inspect the Mean-Time-To-Repair (MTR) Report (i.e. compare to the sample Mean-Time-To-Repair (MTR) Report Times Report)	The Mean-Time-To-Repair (MTR) Report is OK	P F
8	Log out of the Tableau Web Interface		□ □ P F
9	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.		□ □ P F



10	Record Names of Test	Test Conductor:	
	Conductor and SRTA		
	Witness.	SRTA Witness:	
		Date/Time:	



	Demonstrate the Mean- Time-To-Respond (MTTR) Report (DEFERRED TO INTEGRATION TEST)		
1	Open Internet Explorer	Internet Explorer is displayed	□ □ P F
2	Enter the following URL: <a href="http://tableau.srta.local">http://tableau.srta.local</a> and  hit <enter></enter>	The Tableau Login Webpage is displayed	P F
3	Log into the Tableau Web Interface Enter Username and Password Login Role = Report User		P F
4	Select the Mean-Time-To- Respond (MTTR) Report		□ □
5	Enter the filter criteria: Date Range, Time Range, and Priority(s)		P F
6	Run the Report	The Mean-Time-To- Respond (MTTR) pdf Report is displayed	P F
7	Inspect the Mean-Time-To-Respond (MTTR) Report (i.e. compare to the sample Mean-Time-To-Respond (MTTR) Report Times Report)	The Mean-Time-To-Respond (MTTR) Report is OK	P F
8	Log out of the Tableau Web Interface		□ □ P F
9	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.		P F



10	Record Names of Test	Test Conductor:	
	Conductor and SRTA		
	Witness.	SRTA Witness:	
		Date/Time:	



	Demonstrate the Mean- Time-To-Respond and Repair (MTRR) Report (DEFERRED TO INTEGRATION TEST)		
1	Open Internet Explorer	Internet Explorer is displayed	□ □ P F
2	Enter the following URL: <a href="http://tableau.srta.local">http://tableau.srta.local</a> and  hit <enter></enter>	The Tableau Login Webpage is displayed	P F
3	Log into the Tableau Web Interface Enter Username and Password Login role = Report User		P F
4	Select the Mean-Time-To- Respond and Repair (MTRR) Report		P F
5	Enter the filter criteria: Date Range, Time Range, and Priority(s)		
6	Run the Report	The Mean-Time-To- Respond and Repair (MTRR) pdf Report is displayed	P F
7	Inspect the Mean-Time-To-Respond and Repair (MTRR) Report (i.e. compare to the sample Mean-Time-To-Respond and Repair (MTRR) Report Times Report)	The Mean-Time-To-Respond and Repair (MTRR) Report is OK	P F
8	Log out of the Tableau Web Interface		□ □



9	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.		P F
10	Record Names of Test Conductor and SRTA Witness.	Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate the Mean- Time-Between-Failures (MTBF) Report (DEFERRED TO INTEGRATION TEST)		
1	Open Internet Explorer	Internet Explorer is displayed	□ □
2	Enter the following URL: <a href="http://tableau.srta.local">http://tableau.srta.local</a> and <a href="http://tableau.srta.local">hit &lt; Enter &gt;</a>	The Tableau Login Webpage is displayed	P F
3	Log into the Tableau Web Interface Enter Username and Password Login Role = Report User		P F
4	Select the Mean-Time- Between Failures (MTBF) Report		P F
5	Enter the filter criteria: Date Range, Time Range, and Asset Name(s)		P F
6	Run the Report	The Mean-Time- Between-Failures (MTBF) pdf Report is displayed	P F
7	Inspect the Mean-Time-Between-Failures (MTBF) Report (i.e. compare to the sample Mean-Time-Between-Failures (MTBF) Report)	The Mean-Time- Between-Failures (MTBF) Report is OK	P F
8	Log out of the Tableau Web Interface		□ □
9	Complete Table 10-1, the Test Discrepancies /		P F



	Comments Report as necessary.		
10	Record Names of Test	Test Conductor:	
	Conductor and SRTA Witness.	SRTA Witness:	
		Date/Time:	



	Demonstrate the Equipment Inventory (Assets) Report		
1	Open Hardcat Client	Hardcat Client is displayed	P F
2	Log into the Hardcat Client Enter Username and Password Login Role = Maintenance Manager	The Hardcat Client Interface is displayed	P F
3	Select menu item File- >Administration->Reports	The "Generate Fixed Administration Report" Dialog is displayed	P F
4	In the "Generate Fixed Administration Report" Dialog List Box select "Assets"	The "Generate Fixed Asset Report" Dialog is displayed	P F
5	In the "Generate Fixed Asset Report" Dialog Box scroll and select "Asset Individual Details"	The Asset Individual Details Report pdf is generated	P F
6	Click the "View" Button  Inspect the Asset Individual Details Report (i.e. compare to the sample Asset Individual Details Report)	The Asset Individual Details Report is OK	P F
7	Close the pdf viewer	The "Generate Fixed Asset Report" Dialog is displayed	P F
8	In the "Generate Fixed Asset Report" Dialog click the "Close" Button	The "Generate Fixed Administration Report" Dialog is displayed	P F



9	In the "Generate Fixed Administration Report" click the "Close" Button	The "Hardcat Asset Management" Screen is displayed		P F
10	On the "Hardcat Asset Management" Screen select the "File->Exit" menu item	The Hardcat Client closes		P F
11	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			D D
12	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate the Equipment Inventory		
1	(Spare Assets) Report  Open Hardcat Client	Hardcat Client is displayed	☐ ☐ ☐ P F
2	Log into the Hardcat Client Enter Username and Password Login Role = Maintenance Manager	The Hardcat Client Interface is displayed	P F
3	Select menu item File->Administration->Reports	The "Generate Fixed Administration Report" Dialog is displayed	P F
4	In the "Generate Fixed Administration Report" Dialog List Box select "Assets"	The "Generate Fixed Asset Report" Dialog is displayed	P F
5	In the "Generate Fixed Asset Report" Dialog Box click on the "Custom" Button	The "Generate Custom Asset Report" Dialog is displayed	P F
6	In the "Generate Custom Asset Report" Dialog select the 'Asset Inventory by Location" item.  Under "Scope of Report"	The "Select a Previously Stored Search Criteria" Dialog is displayed	P F
	select "This Search" Radio Button, and then click on the "Use Search" Button		
7	On "Previously Stored Search Criteria" Dialog select "Asset Inventory Spares" and then Click the "OK" Button	The "Generate Custom Asset Report" Dialog is displayed	P F



8	In the "Generate Custom Asset Report" Dialog click on the "View" Button	The "Asset Inventory By Location" Report is displayed filtered by Asset Status i.e. Spare		P F
9	Inspect the Asset Inventory By Locations Report (i.e. compare to the sample Asset Inventory By Locations Report)	The Asset Inventory By Locations Report is OK		P F
10	Close the pdf viewer	The "Generate Fixed Asset Report" Dialog is displayed		P F
11	In the "Generate Fixed Asset Report" Dialog click the "Close" Button	The "Generate Fixed Administration Report" Dialog is displayed		P F
12	In the "Generate Fixed Administration Report" click the "Close" Button	The "Hardcat Asset Management" Screen is displayed		P F
13	On the "Hardcat Asset Management" Screen select the "File->Exit" menu item	The Hardcat Client closes		P F
14	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
15	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate the Equipment Inventory (Stock) Report		
1	Open Hardcat Client	Hardcat Client is displayed	D D
2	Log into the Hardcat Client Enter Username and Password Login Role = Maintenance Manager	The Hardcat Client Interface is displayed	P F
3	Select menu item File->Administration->Reports	The "Generate Fixed Administration Report" Dialog is displayed	P F
4	In the "Generate Fixed Administration Report" Dialog List Box select "Stock"	The "Generate Fixed Stock Report" Dialog is displayed	P F
5	In the "Generate Fixed Stock Report" Dialog Box scroll and select "Stock Individual Details"	The Stock Individual Details Report pdf is generated	P F
6	Click the "View" Button  Inspect the Stock Individual	The Stock Individual	
	Details Report (i.e. compare to the sample Stock Individual Details Report)	Details Report is OK	P F
7	Close the pdf viewer	The "Generate Fixed Stock Report" Dialog is displayed	P F
8	In the "Generate Fixed Stock Report" Dialog click the "Close" Button	The "Generate Fixed Administration Report" Dialog is displayed	P F



9	In the "Generate Fixed Administration Report" click the "Close" Button	The "Hardcat Asset Management" Screen is displayed		P F
10	On the "Hardcat Asset Management" Screen select the "File->Exit" menu item	The Hardcat Client closes		P F
11	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			D D
12	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	





	Demonstrate the Alarms Report		
1	Open Internet Explorer	Internet Explorer is displayed	□ □ □ P F
2	Enter the following URL: <a href="http://nagios.srta.local/nagiosxi/">http://nagios.srta.local/nagiosxi/</a> <a href="http://nagios.srta.local/nagiosxi/">Enter&gt;</a>	The Nagios Login Webpage is displayed	P F
3	Log into the Nagios Web Interface Enter Username and Password Login Role = System Administrator	The Nagios Home Webpage is displayed	P F
4	Click on the Incident Management->Notifications	The Notifications Webpage is displayed	□ □
5	On the Notifications Webpage select Period "Custom" and then select/enter the From Date and To Date.  Click the "Update" Button	Notifications filtered by Time Periods are displayed	P F
6	In the search box enter the name of the Host e.g. CAB-75A-227 <enter></enter>	The Notifications filtered by Location is displayed	D D
7	Click the pdf icon to display the Notification Report	The Notifications Report filtered by Date and Location pdf is displayed.	P F
9	In the Nagios XI Home Webpage click on the "Logout" Hyperlink	The Nagios XI Login Webpage is displayed	P F
10	Close the Internet Explorer	The Internet Explorer closes	□ □ □ P F



11	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.		P F
12	Record Names of Test Conductor and SRTA Witness.	Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate the Incident Logs report		
1	Open Internet Explorer	Internet Explorer is displayed	P F
2	Enter the following URL: <a href="http://nagios.srta.local/nagiosxi/">http://nagios.srta.local/nagiosxi/</a> <a href="http://example.com/smill.com/smill.com/">sxi/</a> <a href="http://example.com/smill.com/">Enter</a> <a href="http://example.com/smill.com/">sxi/</a> <a href="http://example.com/smill.com/">Enter</a>	The Nagios Login Webpage is displayed	D D
3	Log into the Nagios Web Interface Enter Username and Password Login Role = System Administrator	The Nagios Home Webpage is displayed	P F
4	Click on the Monitoring Process->Event Log	The Event Log Webpage is displayed	P F
5	On the Event Log Webpage select Period "Custom" and then select/enter the From Date and To Date.  Click the "Update" Button	Event Log filtered by Time Periods are displayed	P F
6	In the search box enter the name of the Host e.g. CAB-75A-220 <enter></enter>	The Event Log filtered by Equipment Type/Location is displayed	P F
7	Click the pdf icon to display the Event Log Report	The Event Log Report filtered by Date and Equipment Type/Location pdf is displayed.	P F
9	In the Nagios XI Home Webpage click on the "Logout" Hyperlink	The Nagios XI Login Webpage is displayed	P F
10	Close the Internet Explorer	The Internet Explorer closes	



			P F
11	Complete Table 10-1, the		
	Test Discrepancies /		PF
	Comments Report as		1 1
	necessary.		
12	Record Names of Test	Test Conductor:	
	Conductor and SRTA		
	Witness.	SRTA Witness:	
		Date/Time:	



	Demonstrate the Acknowledgement, Response, and Repair Time Report (DEFERRED TO INTEGRATION TEST)			
1	Open Internet Explorer	Internet Explorer is displayed		□ □ P F
2	Enter the following URL: <a href="http://tableau.srta.local">http://tableau.srta.local</a> and <a href="http://tableau.srta.local">hit &lt; Enter &gt;</a>	The Tableau Login Webpage is displayed		P F
3	Log into the Tableau Web Interface Enter Username and Password Login Role = Report User			P F
4	Select the Response and Repair Times Report			P F
5	Enter the Time Period, Priority, Technician, and Location			P F
6	Run the Report	The Response and Repair Times Report pdf is displayed		P F
7	Log out of the Tableau Web Interface			P F
8	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
9	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate the Preventive Maintenance/PDM Forecast Report		
1	Open Hardcat Client	Hardcat Client is displayed	P F
2	Log into the Hardcat Client Enter Username and Password Login Role = Maintenance Manager	The Hardcat Client Interface is displayed	P F
3	Select menu item Modules- >Maintenance	The Maintenance Dialog is displayed	P F
4	On the Maintenance Dialog click on Maintenance Forecast	The Maintenance Forecast Dialog is displayed	P F
5	Enter the following Selected Number of Periods for Forecast = 6 Months Start Date: Today's Date Location: TP-75A-220.8- VES-02 Engineer: Jody Mullings Task: All Tasks (Default)	The Maintenance Forecast Dialog is populated	P F
6	Click on the "Generate" Button	The Maintenance Forecast is generated and the "Send to" Dialog is displayed	P F
7	Click the "View" Button	The Maintenance Forecast Report pdf is displayed	P F
8	Close the pdf viewer	The "Send to" Dialog is displayed	□ □ □ P F



9	In the "Send to" Dialog click the "Close" Button	The "Maintenance Forecast" Dialog is displayed		P F
10	In the "Maintenance Forecast" Dialog click the "Close" Button	The "Hardcat Maintenance" Dialog is displayed		P F
11	In the "Hardcat Maintenance" Dialog click the "Close" Button	The "Hardcat Asset Management" Screen is displayed		P F
12	On the "Hardcat Asset Management" Screen select the "File->Exit" menu item	The Hardcat Client closes		P F
13	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
14	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



1 2	Demonstrate the Equipment Use and Repair History by Equipment Type, Time Period, Location, and Engineer Report Open Hardcat Client  Log into the Hardcat Client	Hardcat Client is displayed The Hardcat Client	□ □ P F
	Enter Username and Password Login Role = Maintenance Manager	Interface is displayed	P F
3	Select menu item File- >Administration->Reports	The "Generate Fixed Administration Report" Dialog is displayed	D D
4	In the "Generate Fixed Administration Report" Dialog List Box select "Help Desk"	The "Generate Fixed Problem Report" Dialog is displayed	P F
5	In the "Generate Fixed Problem Report" Dialog Box scroll and select "Problem Individual Details"  Under "Scope of Report" select "This Search" Radio Button, and then click on the "Use Search" Button	The "Select a Previously Stored Search Criteria" Dialog is displayed	P F
6	On "Previously Stored Search Criteria" Dialog select "Problem Reports Search By Asset, Date, Location, Engineer" and then Click the Edit Button	The "Reviewing Problem Search Specification: Problem Reports Search By Asset, Date, Location, Engineer" Dialog is displayed	P F



	1		
7	Choose the Date Closed - "Date" From and "Date" To	The Problem Reports are filtered by Asset,	
	Parameters (Last 15 Days)	Date, Location,	P F
	, ,	Engineer	
	Choose the Asset Type		
	Name		
	"Choose" Option and select		
	the Asset Type (Control)		
	Choose the Location Folder		
	Name		
	"Choose" Option and select		
	the Location Folder Name		
	(227)		
	Choose the Engineer		
	"Chose" Option and select		
	the Engineer (Jody)		
	Click the "Apply" Button		
8	On the "Reviewing Problem	The "Edit Details of Search Problem	
	Search Specification: Problem Reports Search By	Reports Search By	P F
	Asset, Date, Location,	Asset, Date, Location,	
	Engineer" Dialog click the	Engineer" Dialog is displayed	
	"OK" Button	aispiayea	
9	On the "Edit Details of	The "Select a	
	Search Problem Reports	Previously Stored Search Criteria" Dialog	P F
	Search By Asset, Date, Location, Engineer" Dialog	is displayed	
	click the "OK" Button		
10	On the "Select a Previously	The "Generate Fixed	
	Stored Search Criteria"	Problem Report"	P F
	Dialog click the "OK"	Dialog is displayed	- <del>-</del>
	Button		





11	On the "Generate Fixed Problem Report" Dialog click on the "View" Button	The Problem Individual Details Report pdf is generated filtered by Asset, Date, Location, Engineer		P F
12	Inspect the Problem Individual Details Report (i.e. compare to the sample Problem Individual Details Report)	The Problem Individual Details Report is OK		P F
13	Close the pdf viewer	The "Generate Fixed Problem Report" Dialog is displayed		P F
14	In the "Generate Fixed Problem Report" Dialog click the "Close" Button	The "Generate Fixed Administration Report" Dialog is displayed		P F
15	In the "Generate Fixed Administration Report" click the "Close" Button	The "Hardcat Asset Management" Screen is displayed		P F
16	On the "Hardcat Asset Management" Screen select the "File->Exit" menu item	The Hardcat Client closes		P F
17	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
18	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate Equipment Use and Repair History by Equipment Type and Location Report		
1	Open Hardcat Client	Hardcat Client is displayed	D D
2	Log into the Hardcat Client Enter Username and Password Login Role = Maintenance Manager	The Hardcat Client Interface is displayed	P F
3	Select menu item File->Administration->Reports	The "Generate Fixed Administration Report" Dialog is displayed	P F
4	In the "Generate Fixed Administration Report" Dialog List Box select "Assets"	The "Generate Fixed Asset Report" Dialog is displayed	P F
5	In the "Generate Fixed Asset Report" Dialog Box scroll and select "Asset Individual Details"  Under "Scope of Report" select "This Search" Radio Button, and then click on the	The "Select a Previously Stored Search Criteria" Dialog is displayed	P F
6	"Use Search" Button On "Previously Stored Search Criteria" Dialog select "Asset History By Asset Type and Loc Folder" and then Click the Edit Button	The "Reviewing Asset Search Specification: Asset Reports Search By Asset Type and Location" Dialog is displayed	P F
7	Choose the Asset Type Name	The Assets are filtered by Asset Type and Location	□ □ P F



	"Choose" Option and select the Asset Type (ALPR)		
	Choose the Location Folder		
	Name (227)		
	"Choose" Option and select		
	the Location Folder Name		
	Click the "Apply" Button		
8	On the "Reviewing Asset Search Specification: Asset History Details Search By Asset Type and Location" Dialog click the "OK" Button	The "Edit Details of Search Asset History Details Search By Asset Type and Location" Dialog is displayed	P F
9	On the "Edit Details of Search Asset History Details Search By Asset Type and Location" Dialog click the "OK" Button	The "Select a Previously Stored Search Criteria" Dialog is displayed	P F
10	On the "Select a Previously Stored Search Criteria" Dialog click the "OK" Button	The "Generate Fixed Asset Report" Dialog is displayed	P F
11	On the "Generate Fixed Asset Report" Dialog click on the "View" Button	The Asset Individual Details Report pdf is generated filtered by Asset Type and Location	P F
12	Inspect the Asset Individual Details Report (i.e. compare to the sample Asset Individual Details Report)	The Asset Individual Details Report is OK	P F
13	Close the pdf viewer	The "Generate Fixed Asset Report" Dialog is displayed	P F



14	In the "Generate Fixed Asset Report" Dialog click the "Close" Button	The "Generate Fixed Administration Report" Dialog is displayed		P F
15	In the "Generate Fixed Administration Report" click the "Close" Button	The "Hardcat Asset Management" Screen is displayed		P F
16	On the "Hardcat Asset Management" Screen select the "File->Exit" menu item	The Hardcat Client closes		P F
17	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
18	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



# 4 Test Case MOMS-03. MOMS Trouble Failure Reports Test

#### **Table 4-1 MOMS-03 Test Objectives**

Demonstrate the following: creation of a Technician Work Schedule, MOMS displaying user input errors on its GUI, manual creation of a Problem Report, manual creation of a Work Order, Hardcat Log searches by Problem Report Info, Hardcat Log searches By Work Order Info, generation of a PM/PDM Schedule, generation of Work Orders from a PM/PDM Schedule, and Work Order searches by Work Order Code, Status, Location, and Asset Name

### 4.1 Test Approach and Results Evaluation

### 4.1.1 Test Approach

1

- Demonstrate remote access to MOMS (i.e. using the FAT VPN)
- Demonstrate the creation of a Technician Work Schedule
- Demonstrate MOMS displays user input errors on its GUI
- Demonstrate manual creation of a Problem Report
- Demonstrate manual creation of a Work Order
- Demonstrate Hardcat Log Searches By Problem Report Info
- Demonstrate Hardcat Log Searches By Work Order Info
- Demonstrate the generation of a PM/PDM Schedule
- Demonstrate the generation of Work Orders from a PM/PDM Schedule
- Demonstrate Work Order Searches by Work Order Code, Status, Location, and Asset Name
- Demonstrate creation of a Purchase Order (work order) for an Inventory Issue i.e. Stock Quantity below Re-order Point

### 4.1.2 Test Facility

This test is run at the Cottage Grove, MN

#### 4.1.3 Test Evaluation

The Test Procedure in 4.2 will be determined to have passed if all the test scenarios pass.



## 4.1.4 Test Preparation

#### **Table 4.1.4-1 MOMS-03 Pre-Test Items**

	Pre-Test Item	Pass/Fail
1	FAT dry run testing is completed, Test Readiness Review meeting completed, and the system is under configuration control/lockdown	D D

#### 4.2 Test Procedure

#### **Table 4.2-1 MOMS-03 Test Procedure**

Step	Action	<b>Expected Results</b>	Actual Results	Pass/Fail
	Demonstrate remote access to MOMS (i.e. using the FAT VPN)			
1	Open the Cisco AnyConnect Secure Mobility Client Software	The Cisco AnyConnect Secure Mobility Client Dialog is displayed		P F
2	Select VPN 50.233.84.62 (vpn.cg.Companytsrc.net) and click on the "Connect" Button	The Cisco AnyConnect Secure Mobility Client Login Dialog is displayed		P F
3	Enter username, password, and then click on the "OK" Button	The Cisco AnyConnect Dialog is displayed		P F
4	In the Cisco AnyConnect Dialog click on the "Accept" Button	The Cisco AnyConnect Dialog closes and the PC/Laptop is connected to the VPN		P F
6	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
7	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:	
			Date/Time:	



Step	Action	<b>Expected Results</b>	Actual Results	Pass/Fail
	Demonstrate Viewing a Technician Work Schedule			
1	Open Hardcat Client	Hardcat Client is displayed		□ □ P F
2	Log into the Hardcat Client Enter Username and Password	The Hardcat Client Interface is displayed		□ □ □ P F
	Login Role= Maintenance Manager			
3	Select menu item Lists->People	The "List of People" Dialog is displayed		□ □
4	In the "List of People" Dialog Box click on the Company Employees Folder	The list of Company Employees is displayed		P F
6	Click on a Company Employee i.e. Sandra Bennett, then click on the "Edit" Button	The "Details for Person" Dialog is displayed		P F
7	In the "Details for Person" Dialog click on the "Preset" Tab	The Technician Work Schedule is displayed		P F
8	Inspect the Technician Work Schedule	The Technician Work Schedule is OK		□ □
	Demonstrate Viewing a Technician Work Schedule - Alternate			
9	In the "Details for Person" Dialog click on the "Files" Tab	The "Files" Tab is displayed		P F
10	Select the "Work_Schedule_Example.d ocx" File	The "Work_Schedule_Exa		P F





Step	Action	<b>Expected Results</b>	Actual Results	Pass/Fail
		mple.docx" File is selected		
11	Click the "Open" Button	The Wordpad Application opens and the Technician Work Schedule is displayed		P F
12	Inspect the Technician Work Schedule (i.e. compare to the sample Technician Work Schedule Document)	The Technician Work Schedule Document is OK		P F
13	In the Wordpad Application select the menu item File->Exit	The Wordpad Application closes and "Details for Person" Dialog File Tab is displayed		P F
14	Click the "OK" Button	The "List of People" Dialog is displayed		□ □ □ P F
15	In the "List of People" Dialog click the "Close" Button	The Hardcat Asset Management Window is displayed		P F
16	On the "Hardcat Asset Management" Screen select the "File->Exit" menu item	The Hardcat Client closes		P F
17	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
18	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



	View and Update Configured Locations		
1.	Open Hardcat Client	Hardcat Client is displayed	□ □ P F
2.	Log into the Hardcat Client Enter Username and Password Login Role = Maintenance Manager	The Hardcat Client Interface is displayed	P F
3.	Select menu item Lists->Locations	The "List of Locations" Dialog is displayed	□ □ P F
4.	In the "List of Locations" Dialog Box click on the CG Folder	The list of configured Locations at Cottage Grove is displayed	P F
5.	Click on TP1	The list of devices configured at CG TP1 is displayed	D D
6.	Click on any device in the list	The location(s) of the selected device are displayed	D D
7.	In the "List of Locations" Dialog Box click on the 75A Folder	The list of configured Locations at I75A is displayed	P F
8.	Verify that the list includes:  • 220.8 (Toll Point 2)  • 227.0 (Toll Point 1)  CG (Cottage Grove)	Both "simulated" I75S TPs are listed along with the CG location	P F
9.	Click on 227.0 (Toll Point 1)	The list of configured locations at TP 1 is displayed	P F
10.	Click on 227.0 RSE Equipment Cabinet	The list of devices contained within the RSE cabinet is displayed	P F



11.	Click on New to add a new location to the folder	The location Code Popup displays		□ □
12.	Click on Cancel to abort the operation	The new location is not created		□ □
13.	In the "List of Locations" Dialog click the "Close" Button	The Hardcat Asset Management Window is displayed		P F
14.	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary			P F
15.	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate MOMS displays user input errors on its GUI		
1	Open Internet Explorer	Internet Explorer is displayed	□ □ P F
2	Enter the following URL http://hardcat.srta.local/HardcatWeb/	The Hardcat Login Webpage Is displayed	P F
3	Enter username and password, and click on the "Login" Button Login Role = Technician	The Hardcat Business Intelligence Webpage is displayed	P F
4	Click on the Problem Management Tab	The Problem Management Webpage is displayed	D D
6	Click on the "Create a Problem" Button	A new Problem Report Webpage is displayed.	P F
7	The following Problem Report Fields (in red font) are mandatory: Summary Caller Problem Type		P F
8	Click the "Save" Button	An error dialog is displayed "Could not find requested item Summary"	P F
9	Enter "Test Problem" in the Summary Field and click the "Save" Button	An error dialog is displayed "Could not find requested item Caller"	P F



10	Click on the "Return to List" Button	The Problem Management Webpage is displayed		P F
11	Click the "Logout" Button	The Hardcat Login Webpage is displayed		P F
12	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
13	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate manual		
	creation of a Problem Report		
1.	Open Internet Explorer	Internet Explorer is displayed	□ □ □ P F
2.	Enter the following URL http://hardcat.srta.local/HardcatWeb/	The Hardcat Login Webpage Is displayed	D D
3.	Enter username and password, and click on the "Login" Button  Login Role = Technician	The Hardcat Business Intelligence Webpage is displayed	P F
4.	Click on the Problem  Management Tab	The Problem Management Webpage is displayed	P F
5.	Click on the Create a Problem Button		□ □
6.	Click on the Problem Type Magnifying Glass	The Select a Problem Type Dialog is displayed	P F
7.	Click on the Toll Point Folder	The Toll Point Folders are displayed	□ □
8.	Click on the VES Folder	The VES Folder Items are displayed	□ □
9.	Click on the ALPR Camera  – Problem	The Problem Type is ALPR Camera – Problem	□ □ P F
10.	Click on Caller Magnifying Glass	The Caller Dialog is displayed	□ □ P F
11.	Click on the Company Employees Folder	The Company Employees are displayed	P F
12.	Click on Bruce Orenstein	The Caller is Bruce Orenstein	□ □





13.	Click on Asset Management		□ □
14.	Click on Asset Management Magnifying Glass	The Asset Dialog is displayed	□ □ P F
15.	Click on AS002001	The Asset is <del>Company</del> P492 ALPR Camera- <del>Wide FOV</del> is displayed	P F
16.	Click on Location Magnifying Glass	The Location Dialog is displayed	□ □ P F
17.	Click on 75A Folder and then select FAT Toll Point 1 (227.0 (Toll Point 1: 2 Lanes + 1 Shoulder) Folder	The FAT Toll Point 1 (227.0 (Toll Point 1:2 Lanes + 1 Shoulder) Folders are displayed	P F
18.	Click on the 227.0 VES Folder	The VES Camera and Illuminators are displayed	P F
19.	Click on FAT TP1 N Gantry VES Camera 1 (TP-75A- 227.0-N-VES-01)	The Location is FAT TP1 N Gantry VES Camera 1 (TP-75A- 227.0-N-VES-01)	P F
20.	Click on the Priority Drop Down	Select Priority 1	□ □ P F
21.	Click on More Text and describe the problem e.g., FAT TP1 N Gantry VES Camera 1 (TP-75A-227.0-N-VES-01) displays no video	The More Text Box displays FAT TP1 N Gantry VES Camera 1 (TP-75A-227.0-N-VES- 01) displays no video	P F
22.	Click the Save Button		□ □ P F
23.	Mouse over PRand select the Edit Menu Item		P F
24.	Verify the Priority is set to 1	Priority:	P F



25.	From the Priority Lis, set the Priority to 3		D F
26.	From the Status List select Acknowledge	Acknowledge is selected	<u>г г</u> ПП
27.	Click the Save Button	PR Status is Acknowledged	P F
28.	Mouse over PRand select the Edit Menu Item		D D
29.	Verify the Priority is set to 3	Priority:	□ □ P F
30.	From the Priority List, set the Priority to 2		□ □
31.	From the Status List select Suspended	Suspended is selected	□ □
32.	Click the Save Button	PR Status is Suspended	P F
33.	Mouse over PRand select the Edit Menu Item		P F
34.	From the Status List select On-Hold	On-Hold is selected	□ □ P F
35.	Click the Save Button	PR Status is On-Hold	□
36.	Mouse over PRand select the Edit Menu Item		P F
37.	From the Status List select In-process	In-process is selected	P F
38.	Verify the Priority is set to 1	Priority:	D D
39.	Click the Save Button	PR Status is In-process	□ □



40.	Mouse over PRand select the Edit Menu Item		P F
41.	Click on More Text	The More Text Dialog is displayed	□ □
42.	Enter removed and replaced VES Camera	Removed and Replaced VES Camera is displayed	P F
43.	Click the Save Button	PRis saved	P F
44.	Select the Asset Management Tab	The Asset Management Webpage is displayed	P F
45.	Click the Move an Asset Button		P F
46.	Click on the Asset Barcode Magnifying Glass	The Asset Dialog is displayed	□ □ P F
47.	Click on AS002001	The AS2001 Dialog Box is displayed	□ □ □ P F
48.	Click on the Location Magnifying Glass	The Locations Dialog is displayed	P F
49.	Click on the FAT Depot Folder	The FAT Depot Cabinet 1 Spare Parts is displayed	P F
50.	Click on FAT Depot Cabinet 1 Spare Parts	The Location is FAT Depot Cabinet 1 Spare Parts	P F
51.	Click the Save Button		□ □
52.	Mouse over AS002001 and then select the Edit Menu Item	The Asset AS002001 Webpage is displayed	D D
53.	Click on Information	The Information fields are displayed	□ □ P F





54.	Click on the Status List and select Spares Inventory	Status is Spares Inventory	□ □ P F
55.	Click on the Save Button	The Asset Display is updated i.e. Status is Spares_Inventory_Non -Operational	P F
56.	Click on the Asset Management Tab	The Assets are displayed	□ □ P F
57.	In the Search Field Box select Location And Equals Click on the Folder Button	The Location Folders are displayed	P F
58.	Click on SRTA FAT Locations	The SRTA FAT Location Folders are displayed	P F
59.	Click on FAT Depot	The FAT Depot Cabinet Spare Parts is displayed	P F
60.	Click on FAT Depot Cabinet Spare Parts	The Location is equal to FAT Depot Cabinet 1 Spare Parts	P F
61.	Click the Apply Button	The Assets filtered by Location are displayed.	□ □ P F
62.	Locate the Barcode of a spare VES Camera		P F
63.	Click on Move an Asset	The Asset Dialog is displayed	P F
64.	Enter the Asset Barcode in the Asset Barcode Textbox (or click in the Asset Barcode Textbox, and then use the portable scanner to scan the Barcode Label) and click the Apply Button	The Asset Dialog is displayed	P F



65.	Click on the Location Magnifying Glass	The Location Dialog is displayed	□ □ P F
66.	Click on the SRTA FAT Locations Folder	The SRTA FAT Locations Folders are displayed	P F
67.	Click on the FAT Toll Point 1 (2 Lanes + 1 Shoulder)  Click on the VES Folder	The TP1 VES locations are displayed	P F
68.	Select FAT TP1 N Gantry VES Camera 1	The Location is FAT TP1 N Gantry VES Camera 1	P F
69.	Click on the Save Button	The Asset Management Display indicates the Asset is located at FAT TP1 N Gantry VES Camera 1	P F
70.	Mouse over  AS x and then select the Edit Menu Item	The Asset AS Webpage is displayed	D D
71.	Click on Information	The Information fields are displayed	□ □
72.	Click on the Status List and select Operational_Deployed	Status is Operational_Deployed	□ □
73.	Click on the Save Button	The Asset Display is updated i.e. Status is Operational_Deployed	P F
74.	Click on the Problem  Management Tab	The Problem Management Webpage is displayed	P F
75.	Mouse over PRand then select the Edit Menu Item	PRis displayed	D D



76.	From the Status List select Completed	Completed is selected		□ □
77.	Click the Save Button	PRStatus is Completed		□ □
78.	Mouse over PRand then select the Edit Menu Item	PRis displayed		□ □ P F
79.	From the Status List select Closed	Closed is selected		□ □ P F
80.	Click the Save Button	PRStatus is Closed		□ □ P F
81.	Click the "Logout" Button	The Hardcat Login Webpage is displayed		□ □
82.	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
83.	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate manual creation of a Work Order		
1	Open Hardcat Client	Hardcat Client is displayed	□ □ P F
2	Log into the Hardcat Client Enter Username and Password Login Role = Technician	The Hardcat Client Interface is displayed	P F
3	Select menu item Modules- >Maintenance	The "Maintenance" Dialog is displayed	□ □ P F
4	In the "Maintenance" Dialog click on New Work Order	The "New Work Order" Dialog is displayed	P F
5	Click on Task	The Task Dialog is displayed	P F
6	Select the FAT TP1 N Gantry Reader 1 – Antenna 3 Semi-Annual PM Task i.e. TK	The Work Order Description is FAT TP1 N Gantry Reader 1 – Antenna 3 Semi-Annual PM	P F
7	Click the OK Button  Click on the Caller	The Persons Dialog and Folders are displayed	□ □ □ P F
8	Click the Company Employees Folder	The Company employees are displayed	D D
9	Click on Bruce Orenstein then click the OK Button	The caller is displayed (i.e. Bruce Orenstein)	□ □ P F
10	Click on the Asset	The Asset List is displayed	□ □
11	Go to the Location Name Column and locate FAT TP1 N Gantry Reader 1 -	The asset is AVI Antenna, 30 Deg	P F





	Antenna 3, and select the row.			
	Click on the OK Button			
12	Click on the New Work Order OK Button	The Work Order is created		□ □ □ P F
13	On the Hardcat Maintenance Dialog click on Work Orders	The Search Work Orders Dialog is displayed		P F
14	Locate the new work order with the description: FAT TP1 N Gantry Reader 1 - Antenna 3 Semi-Annual PM, select the row, and click on the edit Button	The Work Orders is displayed		P F
15	In the Search Work Orders Dialog click on the "Close" Button	The "Hardcat Maintenance" Dialog is displayed		P F
16	In the "Hardcat Maintenance" Dialog click on the "Close" Button	The "Hardcat Asset Management" Screen is displayed		P F
17	On the "Hardcat Asset Management" Screen select File-> Exit menu item	The Hardcat Client closes		P F
18	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
19	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate Hardcat Log Searches By Problem Report Info		
1	Open Hardcat Client	Hardcat Client is displayed	□ □ P F
2	Log into the Hardcat Client Enter Username and Password Login Role = Maintenance Manager	The Hardcat Client Interface is displayed	P F
3	Select menu item File- >Administration->Reports	The "Generate Fixed Administration Report" Dialog is displayed	P F
4	In the "Generate Fixed Administration Report" Dialog List Box select "Administration"	The Administration Reports are displayed	P F
5	Select the "Hardcat Log"  Under "Scope of Report" select "This Search" Radio Button, and then click on the "Use Search" Button	The "Select a Previously Stored Search Criteria" Dialog is displayed	P F
6	On "Previously Stored Search Criteria" Dialog select "Hardcat Log Search By Problem Report Info" and then Click the "Edit" Button	The "Reviewing History Search Specification: Hardcat Log Search By Problem Report Info" Dialog is displayed	P F
7	In the "Actual Date" "Is within the range" choose the from "Date" and to "Date" To Parameters	The Hardcat Log is filtered for Problem Report Data by Date and Time	P F





	In the "Actual Time" "Is within the range" choose the from time and to time  Parameters		
	Click the "Apply" Button		
8	On the "Reviewing History Search Specification: Hardcat Log Search By Problem Report Info" click the "OK" Button	The "Edit Details of Search Hardcat Log Search By Problem Report Info" Dialog is displayed	P F
9	On the "Edit Details of Search Hardcat Log Search By Problem Report Info" Dialog click the "OK" Button	The "Select a Previously Stored Search Criteria" Dialog is displayed	P F
10	On the "Select a Previously Stored Search Criteria" Dialog click the "OK" Button	The "Generate Fixed Problem Report" Dialog is displayed	P F
11	Click the "View" Button	The Hardcat Log Report Problem Report Data - filtered by Date and Time is displayed	P F
12	Inspect the Hardcat Log Report (i.e. compare to the sample Hardcat Log Report)	The Hardcat Log Report is OK	P F
13	Close the pdf Viewer	The "Generate Fixed Administration Report" Dialog is displayed	P F
14	In the "Generate Fixed Administration Report" Dialog click the "Close" Button	The "Hardcat Asset Management" Screen is displayed	P F



15	On the "Hardcat Asset Management" Screen select File-> Exit menu item	The Hardcat Client closes		P F
16	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
17	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	





	Demonstrate Hardcat Log Searches By Work Order Info		
1	Open Hardcat Client	Hardcat Client is displayed	P F
2	Log into the Hardcat Client Enter Username and Password	The Hardcat Client Interface is displayed	P F
3	Select menu item File- >Administration->Reports	The "Generate Fixed Administration Report" Dialog is displayed	P F
4	In the "Generate Fixed Administration Report" Dialog List Box select "Administration"	The Administration Reports are displayed	P F
5	Select the "Hardcat Log"  Under "Scope of Report" select "This Search" Radio Button, and then click on the "Use Search" Button	The "Select a Previously Stored Search Criteria" Dialog is displayed	P F
6	On "Previously Stored Search Criteria" Dialog select "Hardcat Log Search By Work Order Info" and then Click the "Edit" Button	The "Reviewing History Search Specification: Hardcat Log Search By Work Order Info" Dialog is displayed	P F
7	In the "Actual Date" "Is within the range" choose the from "Date" and to "Date" To Parameters	The Hardcat Log is filtered for Work Order Data by Date and Time	P F
	In the "Actual Time" "Is within the range" choose the		





	from time and to time		
	Parameters		
	Click the "Apply" Button		
8	On the "Reviewing History Search Specification: Hardcat Log Search By Work Order Info" click the "OK" Button	The "Edit Details of Search Hardcat Log Search By Work Order Info" Dialog is displayed	P F
9	On the "Edit Details of Search Hardcat Log Search By Work Order Info" Dialog click the "OK" Button	The "Select a Previously Stored Search Criteria" Dialog is displayed	P F
10	On the "Select a Previously Stored Search Criteria" Dialog click the "OK" Button	The "Generate Fixed Problem Report" Dialog is displayed	P F
11	Click the "View" Button	The Hardcat Log Report Work Order Data - filtered by Date and Time is displayed	P F
12	Inspect the Hardcat Log Report (i.e. compare to the sample Hardcat Log Report)	The Hardcat Log Report is OK	P F
13	Close the pdf Viewer	The "Generate Fixed Administration Report" Dialog is displayed	□ □ □ P F
14	In the "Generate Fixed Administration Report" Dialog click the "Close" Button	The "Hardcat Asset Management" Screen is displayed	P F
15	On the "Hardcat Asset  Management" Screen select  File-> Exit menu item	The Hardcat Client closes	P F



16	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.		P F
17	Record Names of Test Conductor and SRTA Witness.	Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate the generation of a PM/PDM Schedule		
1	Open Hardcat Client	Hardcat Client is displayed	□ □ P F
2	Log into the Hardcat Client Enter Username and Password Login Role = Maintenance Manager	The Hardcat Client Interface is displayed	P F
3	Select menu item Modules- >Maintenance	The "Maintenance" Dialog is displayed	P F
4	In the "Maintenance" Dialog click on Maintenance Forecast	The "Maintenance Forecast" Dialog is displayed	P F
5	Select the number of periods for the forecast: 1 years		P F
6	Click on Projects	The Project Dialog is displayed	P F
7	Click on 75A	The 75A Location Folders are displayed	P F
8	Click on FAT Toll Point 1 (2 Lanes + 1 Shoulder)	The TP1 PMs are displayed	P F
9	Select TP1 Monthly PM  Click the OK Button	The Project is TP1 Monthly PM	P F
10	Click on the Generate Button	The Forecast is generated and the Send to Dialog is displayed	P F
11	On the Send to Dialog - Click the View Button	The Maintenance Forecast Report pdf is displayed	P F
12	Inspect the Maintenance Forecast pdf for Scope of Work, Frequency, and Task	The Maintenance Forecast pdf is OK	□ □ □ P F





	Duration (i.e. compare to the sample Maintenance Forecast)			
13	Close the pdf Viewer	The "Send to" Dialog is displayed		□ □
14	In the "Send to" Dialog click the "Close" Button	The "Maintenance Forecast" Dialog is displayed		P F
15	In the "Maintenance Forecast" Dialog click the "Close" Button	The "Hardcat Maintenance" Dialog is displayed		P F
16	In the "Hardcat Maintenance" Dialog click the "Close" Button	The "Hardcat Asset Management" Screen is displayed		P F
17	On the "Hardcat Asset Management" Screen select File-> Exit menu item	The Hardcat Client closes		P F
18	Check for email notification (with your email client) with the subject Line "	An email notification is received with Subject Line " PM/PDM Schedule Generated:" i.e. PD/PDM schedule has been created		P F
19	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
20	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	





	Demonstrate the generation of Work Orders from PM/PDM Schedule		
1	Open Hardcat Client	Hardcat Client is displayed	□ □ P F
2	Log into the Hardcat Client Enter Username and Password Login Role = Maintenance Manager	The Hardcat Client Interface is displayed	P F
3	Select menu item Modules- >Maintenance	The "Maintenance" Dialog is displayed	□ □ P F
4	In the "Maintenance" Dialog click on Generate Work Orders	The "Generate Work Orders" Dialog is displayed	□
5	Enter the date two months from today xx/xx/2016	The date is displayed	□ □ P F
6	Click on Projects	The Project Dialog is displayed	□ □
7	Click on 75A	The 75A Location Folders are displayed	P F
8	Click on FAT Toll Point 1 (2 Lanes + 1 Shoulder)	The TP1 PMs are displayed	□ □
9	Select TP1 Monthly PM  Click the OK Button	The Project is TP1 Monthly PM	P F
10	Click on Generate and the Work Orders are generated and the Send to Dialog is displayed		P F
11	On the Send to Dialog - Click the View Button	The Work Orders Generation Summary Report pdf is displayed	P F





12	Inspect the Work Orders Generation Summary pdf (i.e., compare to the sample Work Orders Generation on Summary pdf)  Write down the Work Order Codes e.g. WO	The Work Orders Generation Summary pdf is OK	P F
13	Click on "Close" in the "Send To" Dialog.	"Send To" Dialog closes	□ □ P F
14	Click on "Close" in the "Generate Work Orders" Dialog.	"Generate Work Orders" Dialog closes.	D D
15	In the "Maintenance" Dialog click on Work Orders	The "Search Work Orders" Dialog is displayed	D D
16	Locate the Work Orders using the Work Order Codes from the Work Order Generation Summary	The Work Orders are listed in the "Search Work Orders" Dialog Box	P F
17	In the "Search Work Orders" Dialog click the "Close" Button	The "Hardcat Maintenance" Dialog is displayed	D D
18	In the "Hardcat Maintenance" Dialog click the "Close" Button	The "Hardcat Asset Management" Screen is displayed	P F
19	On the "Hardcat Asset Management" Screen select File-> Exit menu item	The Hardcat Client closes	P F
20	Check for email notification (with your email client) with the subject Line "	An email notification is received with Subject Line " PM/PDM Schedule Generated:	P F



	Work Order Created:	" i.e.  PD/PDM Work Oder has been created		
21	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
22	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate Work Order Searches by Work Order Code, Status, Location, and Asset Name		
1	Open Hardcat Client	Hardcat Client is displayed	□ □ P F
2	Log into the Hardcat Client Enter Username and Password Login Role = Maintenance Manager	The Hardcat Client Interface is displayed	P F
3	Select menu item Lists- >Work Orders	The "Search Work Orders" Dialog is displayed	P F
4	In the "Search Work Orders" Dialog click on "Clear Current Criteria", and then click on "Apply" Button	The complete list of Work Orders in the Hardcat Database is displayed	 P F
5	In the "Search Work Orders" Dialog – Load Saved Search List Box select Work Orders Search (SRD 2481)	The search options are displayed	P F
	Search By Work Order Code		
6	In the Code Search Box change the * to WOXXXXX, and then click the Apply Button	Work Order WOXXXXX is displayed	P F
7	Click on Edit Button	The Work Order is displayed	□ □
8	In the Work Order Details Dialog click on the Cancel Button	The Search Work Orders Dialog is displayed	P F





9	In the Code Search Box change the * and then click the Apply Button	The complete list of Work Orders in the Hardcat Database is displayed	P F
	Search By Status Description		
10	In the Status Description Search Box change the * to Closed and then click the Apply Button	All of the Closed Work Orders are displayed	P F
11	Click on Edit Button	The Closed Work Order is displayed	□ □ P F
12	In the Work Order Details Dialog click on the Cancel Button	The Search Work Orders Dialog is displayed	D D
13	In the Status Description Search Box change the * and then click the Apply Button	The complete list of Work Orders in the Hardcat Database is displayed	P F
	Search By Location Name		
14	In the Location Name Search Box change the * to <location_name> e.g. 75A- 227.0-VES and then click the Apply Button</location_name>	All of the Work Orders at the Location Name are displayed	P F
15	Click on Edit Button	The Work Order is displayed	□ □ P F
16	In the Work Order Details Dialog click on the Cancel Button	The Search Work Orders Dialog is displayed	P F
17	In the Location Name Search Box change the * and then click the Apply Button	The complete list of Work Orders in the Hardcat Database is displayed	P F



	Search By Asset Name			
18	In the Asset Name Search Box change the * to ALPR and then click the Apply Button	All of the Work Orders with an Asset Name containing ALPR are displayed		P F
19	Click on Edit Button	The Work Order is displayed		□ □ P F
20	In the Work Order Details Dialog click on the Cancel Button	The Search Work Orders Dialog is displayed		P F
21	In the Asset Name Search Box change the * and then click the Apply Button	The complete list of Work Orders in the Hardcat Database is displayed		P F
22	In the "Search Work Orders" Dialog click on the "Close" Button	The "Hardcat Asset Management" Screen is displayed		□ □ □ P F
23	On the "Hardcat Asset Management" Screen select File-> Exit menu item	The Hardcat Client closes		P F
24	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
25	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	





	Demonstrate creation of a Purchase Order (work order) for an Inventory Issue – i.e. Stock Quantity below Re- order Point		
1	Open Internet Explorer	Internet Explorer is displayed	□ □ P F
2	Enter the following URL http://hardcat.srta.local/Hard catWeb/	The Hardcat Login Webpage Is displayed	P F
3	Enter username and password, and click on the "Login" Button Login Role = Technician	The Hardcat Business Intelligence Webpage is displayed	P F
4	Click on the Stock Management Tab	The Stock Management Webpage is displayed	□ □ P F
5	In the Stock Management Webpage Filter select "Description" select "Contains" and enter "UPS" then click the "Apply" Button	The UPS Battery Stock Record – Stock Code SK is displayed	P F
6	Mouse over the  SK and a menu is displayed, select the "Edit" menu item	SKWebpage is displayed	P F
7	SK Webpage click on the "Stock On Hand"	The Stock on Hand is displayed by Location (i.e. "Show Locations" check box is checked  Note: The Quantity (e.g. 6) and Re-order Point (e.g. 3).	P F



8	Click on the "Transfer Button"	The Transfer Webpage is displayed	
9	In the Transfer To -	Transfer Quantity 3 is	P F
	Transfer Quantity enter "3"	displayed	P F
10	Click on the Magnifying Glass next to the Destination	The Locations Dialog is displayed	□ □ P F
11	Click on "CG (Cottage Grove)" Folder	The SRTA FAT Locations Folders are displayed	P F
12	Click on "227.0 (Toll Point 1)" Folder	The SRTA FAT Toll Point 1 Folders are displayed	D D
13	Click on the "227.0-SPARE PARTS CABINENT" Folder	The FAT Toll Point 1 Spare Parts Cabinet Folder is selected	P F
14	Click on the "Save" Button	The Stock Transformation Webpage is displayed	P F
15	Inspect the data on Stock Transformation Webpage, and then click the "Continue" Button	The SKWebpage is displayed	P F
16	On the SK	The Stock on Hand By Location is displayed	P F
17	Inspect the Description and Quantity	Description is "FAT Toll Point 1 Spare Parts Cabinet" and Quantity is "3"	P F
18	On the SK Webpage click on the Return to List	The Stock Management Webpage is displayed	P F
19	Click on the "Logout" Button	The user is logged out	



20	Check for email notification (with your email client) with the subject Line  " Purchase Order Opened:"	An email notification is received with Subject Line  " Purchase Order Opened: i.e. Purchase Order has been opened		P F
21	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
22	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



#### 5 Test Case MOMS-04. MOMS Priorities and Escalation Test

#### **Table 5-1 MOMS-04 Test Objectives**

Demonstrate the following: Problem Report Configurable Priorities, manual creation of a: Priority 1 Problem Report and an Escalation

Notification, Priority 2 Problem Report and an Escalation Notification, and Priority 3 Problem Report and an Escalation Notification

### 5.1 Test Approach and Results Evaluation

#### 5.1.1 Test Approach

- Demonstrate remote access to MOMS (i.e. using the FAT VPN)
- Demonstrate Problem Report Configurable Priorities
- Demonstrate the manual creation of a Priority 1 Problem Report and an Escalation Notification i.e. where the technician fails to respond within the allotted time.
- Demonstrate the manual creation of a Priority 2 Problem Report and an Escalation Notification i.e. where the technician fails to respond within the allotted time.
- Demonstrate the manual creation of a Priority 3 Problem Report and an Escalation Notification i.e. where the technician fails to respond within the allotted time.

#### 5.1.2 Test Facility

This test is run at the Cottage Grove, MN

#### 5.1.3 Test Evaluation

The Test Procedure in 5.3 will be determined to have passed if all the test scenarios pass.

## **5.2 Test Preparation**

Table 5.2-1 MOMS-04 Pre-Test Items

	Pre-Test Item	Pass/Fail
1	FAT dry run testing is completed, Test Readiness Review meeting completed, and the system is under configuration control/lockdown	□



# **5.3 Test Procedure**

**Table 5.3-1 MOMS-04 Test Procedure** 

Step	Action	<b>Expected Results</b>	Actual Results	Pass/Fail
	Demonstrate remote access to MOMS (i.e. using the FAT VPN)			
1	Open the Cisco AnyConnect Secure Mobility Client Software	The Cisco AnyConnect Secure Mobility Client Dialog is displayed		P F
2	Select 50.233.84.62VPN and click on the "Connect" Button	The Cisco AnyConnect Secure Mobility Client Login Dialog is displayed		P F
3	Enter username, password, and then click on the "OK" Button	The Cisco AnyConnect Dialog is displayed		P F
4	In the Cisco AnyConnect Dialog click on the "Accept" Button	The Cisco AnyConnect Dialog closes and the PC/Laptop is connected to the VPN		P F
5	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
6	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate Problem Report Configurable Priorities		
1	Open Hardcat Client	Hardcat Client is displayed	□ □ P F
2	Log into the Hardcat Client Enter Username and Password Login Role = MOMS Administrator	The Hardcat Client Interface is displayed	P F
3	Select menu item Modules- >Help Desk	The "Hardcat Help Desk" Dialog is displayed	P F
4	On the "Hardcat Help Desk" Dialog under Configuration click on Priority	The "List of Priority Levels" Dialog is displayed (with Priority 1, 2, and 3)	P F
5	In the "List of Priority Levels" Dialog click on the New Button	The "Details for Priority Level" Dialog is displayed	P F
6	Add a new Priority called Priority 1A and Select Level 4, Hit OK button	The newly added shows up in the List of Priority Levels dialog	P F
7	Click on the Delete Button	The "List of Priority Levels" Dialog is displayed	P F
8	Click the Close Button	The "Hardcat Help Desk" Dialog is displayed	P F
9	Click the Close Button	The Hardcat Asset Management Screen is displayed	P F
10	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.		P F



11	Record Names of Test	Test Conductor:	
	Conductor and SRTA		
	Witness.	SRTA Witness:	
		Date/Time:	





	Demonstrate the manual		
	creation of a Priority 1		
	Problem Report and cause		
	an Escalation Notification		
1	Start escalation 32 .exe		□ □ P F
2	Open Internet Explorer	Internet Explorer is displayed	□ □ P F
3	Enter the following URL <a href="http://hardcat.srta.local/HardcatWeb/">http://hardcat.srta.local/HardcatWeb/</a>	The Hardcat Login Webpage Is displayed	P F
4	Enter username and password, and click on the "Login" Button	The Hardcat Business Intelligence Webpage is displayed	P F
	Login Role = Technician		
5	Click on the Problem Management Tab	The Problem Management Webpage is displayed	P F
6	Click on the Create a Problem Button		□ □
7	Click on the Problem Type Magnifying Glass	The Select a Problem Type Dialog is displayed	P F
8	Click on the Toll Point Folder	The Toll Point Folders are displayed	□ □
9	Click on the VES Folder	The VES Folder Items are displayed	□ □
10	Click on the ALPR Camera – Problem	The Problem Type is ALPR Camera – Problem	P F
11	Click on Caller Magnifying Glass	The Caller Dialog is displayed	□ □ □ P F



12	Click on the Company	The Company		
	Employees Folder	Employees are		P F
		displayed		
13	Click on Bruce Orenstein	The Caller is Bruce		
		Orenstein		P F
14	Click on Asset Management			
				P F
15	Click on Asset Management	The Asset Dialog is		
	Magnifying Glass	displayed		□ □ P F
16	Click on AS002001	The Asset is Company		P F
10	Click oil AS002001	P492 ALPR Camera-		
		Wide FOV is displayed		P F
17	Click on Location	The Location Dialog is		
	Magnifying Glass	displayed		
10		T1 754 1007 0 (T 11		P F
18	Click on 75A and then 227.0	The 75A and 227.0 (Toll Point 1) Folders are		
	(Toll Point 1) Folder	displayed		P F
19	Click on the 227.0-VES	The VES Camera and		
	Folder	Illuminators are		
	1 Glaci	displayed		P F
20	Click on FAT TP1 N Gantry	The Location is FAT		
	VES Camera 1 (TP-75A-	TP1 N Gantry VES		P F
	227.0-N-VES-01)	Camera 1		РГ
21	Click on More Text and	The More Text Box		
	describe the problem e.g.	displays FAT TP1 N		
	FAT TP1 N Gantry VES	Gantry VES Camera 1		P F
	Camera 1 displays no video	displays no video		
	1 / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / /			
	Note:			
	1.000			
22	Click on the Escalation List	The P1 Response is		
	and select P1 Response	displayed		
23				P F
23	Click on the Priority and Select Priority 1			
1	SCIECT FIIOTILY I		1	ΡF





24	Click the Save Button	The Problem Report is saved	□ □ P F
25	A Priority 1 Response is escalated and an email is sent if the Problem Report is created (opened) and not acknowledged within 10 minutes		P F
26	Uncheck "Show only problems I own". Then Mouse over the Problem Report and select the Edit Menu Item	The Problem Report is displayed	P F
27	Click on Audit History	The Audit History is displayed	□ □
28	Write down the Date/Time that the Problem Report was created i.e. Description is Created via Web		P F
29	Wait approx. 10 minutes and check for an email i.e. Hardcat Escalation Notice for PR	A Hardcat Escalation Notice Email for PR is received	P F
30	Login Hardcat Client as SUPER. Click on the Status List and select Acknowledged	The Acknowledged is displayed	D D
31	LoginHardCat Client as Super and Click on the Escalation List and select No Escalation	The No Escalation is displayed	P F
32	Click on History	The History is displayed	□ □
33	Click on record and then edit log button. Write down the Date/Time that the Problem	Problem Report Escalation Date/Time:	P F



	Report Escalation was			
	changed i.e. Description is			
	Escalation Code changed			
	from P1_RESPONSE to			
	<none></none>			
34	Click the "Logout" Button	The user is logged out		P F
35	Wait approx. 10 minutes and	No escalation email is		
	check for an email i.e.	sent		D E
	Hardcat Escalation Notice for			1 1
	PR			
36	Complete Table 10-1, the			
	Test Discrepancies /			D E
	Comments Report as			1 1
	necessary.			
37	Record Names of Test		Test Conductor:	
	Conductor and SRTA			
	Witness.		SRTA Witness:	
			Date/Time:	
		l		





	Demonstrate the manual creation of a Priority 2 Problem Report and cause an Escalation Notification		P F
1	Open Internet Explorer	Internet Explorer is displayed	□ □ P F
2	Enter the following URL <a href="http://hardcat.srta.local/HardcatWeb/">http://hardcat.srta.local/HardcatWeb/</a>	The Hardcat Login Webpage Is displayed	P F
3	Enter username and password, and click on the "Login" Button Login Role = Technician	The Hardcat Business Intelligence Webpage is displayed	P F
4	Click on the Problem  Management Tab	The Problem Management Webpage is displayed	P F
6	Click on the Create a Problem Button		□ □ □ P F
7	Click on the Problem Type Magnifying Glass	The Select a Problem Type Dialog is displayed	P F
8	Click on the Toll Point Folder	The Toll Point Folders are displayed	P F
9	Click on the VES Folder	The VES Folder Items are displayed	□ □ □ P F
10	Click on the ALPR Camera Problem	The Problem Type is ALPR Camera Problem	□ □ □ P F
11	Click on Caller Magnifying Glass	The Caller Dialog is displayed	P F
12	Click on the Company Employees Folder	The Company Employees are displayed	P F
13	Click on Bruce Orenstein	The Caller is Bruce Orenstein	□ □ P F





14	Click on Asset Management		□ □ P F
15	Click on Asset Management Magnifying Glass	The Asset Dialog is displayed	□ □
16	Click on AS002002	The Asset is Company P492 ALPR Camera- Wide FOV is displayed	P F
17	Click on Location Magnifying Glass	The Location Dialog is displayed	□ □ P F
18	Click on FAT Toll Point 1 (75A) Folder and then 227.0 Folder.	The FAT Toll Point 1 (75A) 227.0 Folders are displayed	D D
19	Click on the 227.0-VES Folder	The VES Camera and Illuminators are displayed	P F
20	Click on FAT TP1 N Gantry VES Camera 2 (TP-75A- 227.0-N-VES-02)	The Location is FAT TP1 N Gantry VES Camera 2	P F
21	Click on More Text and describe the problem e.g. FAT TP1 N Gantry VES Camera 2 displays no video	The More Text Box displays FAT TP1 N Gantry VES Camera 2 displays no video	P F
22	Click on the Escalation List and select P2_Response	The P2_Response is displayed	□ □
23	Click the Save Button	The Problem Report is saved	□ □
24	A Priority 2 Response is escalated and an email is sent if the Problem Report is created (opened) and not acknowledged within 20 minutes		P F
25	Uncheck "Show only problems I own". Then Mouse over the Problem	The Problem Report is displayed	P F





	Report and select the Edit Menu Item		
26	Click on Problem Audit History	The Audit History is displayed	□ □
27	Write down the Date/Time that the Problem Report was created i.e. Description is Created via Web		P F
28	Wait approx. 20 minutes and check for an email i.e. Hardcat Escalation Notice for PR	A Hardcat Escalation Notice Email for PR is received	P F
29	Login Hardcat Client as SUPER. Click on the Status List and select Acknowledged	The Acknowledged is displayed	P F
30	Click on the Escalation List and select No Escalation	The No Escalation is displayed	□ □ P F
32	Click on History	The History is displayed	□ □ P F
33	Click on record and then edit log button. Write down the Date/Time that the Problem Report Escalation was changed i.e. Description is Escalation Code changed from P2_RESPONSE to <none></none>	Problem Report Escalation Date/Time:	P F
34	Click the "Logout" Button	The user is logged out	□ □ P F
35	Wait approx. 20 minutes and check for an email i.e. Hardcat Escalation Notice for PR	No escalation email is sent	P F



36	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.		P F
37	Record Names of Test Conductor and SRTA Witness.	Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate the manual creation of a Priority 3 Problem Report and cause an Escalation Notification		
1	Open Internet Explorer	Internet Explorer is displayed	□ □ P F
2	Enter the following URL http://hardcat.srta.local/Hard catWeb/	The Hardcat Login Webpage Is displayed	P F
3	Enter username and password, and click on the "Login" Button Login Role = Technician	The Hardcat Business Intelligence Webpage is displayed	P F
4	Click on the Problem  Management Tab	The Problem Management Webpage is displayed	P F
5	Click on the Create a Problem Button		□ □
6	Click on the Problem Type Magnifying Glass	The Select a Problem Type Dialog is displayed	P F
7	Click on the Toll Point Folder	The Toll Point Folders are displayed	P F
8	Click on the VES Folder	The VES Folder Items are displayed	P F
9	Click on the ALPR Camera Problem	The Problem Type is ALPR Camera Problem	□ □ P F
10	Click on Caller Magnifying Glass	The Caller Dialog is displayed	□ □ P F
11	Click on the Company Employees Folder	The Company Employees are displayed	D D
12	Click on Bruce Orenstein	The Caller is Bruce Orenstein	□ □ P F





13	Click on Asset Management		□ □ □ P F
14	Click on Asset Management Magnifying Glass	The Asset Dialog is displayed	P F
15	Click on AS000003	The Asset is Company P492 ALPR Camera- Wide FOV is displayed	P F
16	Click on Location Magnifying Glass	The Location Dialog is displayed	□ □
17	Click on FAT Toll Point 1 (75A) and then 227.0 Folder	The FAT Toll Point 1 (75A) and 227.0 Folders are displayed	P F
18	Click on the 227.0VES Folder	The VES Camera and Illuminators are displayed	P F
19	Click on FAT TP1 N Gantry VES Camera 3 (TP-75A- 227.0-N-VES-03)	The Location is FAT TP1 N Gantry VES Camera 3	D D
20	Click on More Text and describe the problem e.g. FAT TP1 N Gantry VES Camera 3 displays no video	The More Text Box displays FAT TP1 N Gantry VES Camera 3 displays no video	P F
21	Click on the Escalation List and select P3_Response	The P3_Response is displayed	□ □
22	Click the Save Button	The Problem Report is saved	□ □
23	A Priority 3 Response is escalated and an email is sent if the Problem Report is created (opened) and not acknowledged within 20 minutes		P F
24	Uncheck "Show only problems I own". Then Mouse over the Problem	The Problem Report is displayed	D D





	Report and select the Edit Menu Item		
25	Click on Problem Audit History	The Audit History is displayed	□ □
26	Write down the Date/Time that the Problem Report was created i.e. Description is Created via Web		P F
27	Wait 129pprox 20 minutes and check for an email i.e. Hardcat Escalation Notice for PR	A Hardcat Escalation Notice Email for PR is received	P F
28	Login Hardcat Client as SUPER. Click on the Status List and select Acknowledged	The Acknowledged is displayed	P F
29	Click on the Escalation List and select No Escalation	The No Escalation is displayed	□ □ P F
30	Click on History	The History is displayed	□ □
31	Click on record and then edit log button. Write down the Date/Time that the Problem Report Escalation was changed i.e. Description is Escalation Code changed from P3_RESPONSE to <none></none>	Problem Report Escalation Date/Time:	P F
32	Click the "Logout" Button	The user is logged out	□ □ P F
33	Wait approx. 20 minutes and check for an email i.e. Hardcat Escalation Notice for PR	No escalation email is sent	P F



34	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.		P F
35	Record Names of Test Conductor and SRTA Witness.	Test Conductor:  SRTA Witness:  Date/Time:	



## 6 Test Case MOMS-05. MOMS Inventory Control Test

## **Table 6-1 MOMS-05 Test Objectives**

Demonstrate the following: the Monthly Inventory Report, Spares Inventory Report; Asset Inventory By End Of Life Date Report; Asset Inventory By Warranty End Date Report; for all repair activities, the details of the repair and the parts disposition, including parts retired, are recorded and tracked in MOMS; an automated email notification is generated when the level of spares reach a configurable threshold.

Manually create a Problem Report and demonstrate the following: if an asset is under warranty, track the status and the movement of the part that was returned to the manufacturer for repair or replacement; if an asset is out of warranty, track the status and movement of the part through the repair process, and returned to inventory; if an asset is not within the warranty period is replaced (because a repair is not possible), create a purchase request for the part to be re-ordered.

Inspect Inventory Records

### 6.1 Test Approach and Results Evaluation

## 6.1.1 Test Approach

- Demonstrate the Monthly Inventory Report
- Inspect Inventory Records
- Manually create a Work Order and run the Inventory Report
- Demonstrate the "Spares Inventory" Report
- Demonstrate the "Asset Inventory By End Of Life Date" Report
- Demonstrate the "Asset Inventory By Warranty End Date" Report
- Manually create a Problem Report. The asset is under warranty, track the status and the
  movement of the part that was returned to the manufacturer for repair or replacement. For
  all repair activities, the details of the repair and the parts disposition is recorded and tracked
  in MOMS.
- Manually create a Problem Report. The asset is out of warranty, track the status and movement of the part through the repair process, and returned to inventory
- Manually create a Problem Report. An asset that is not within the warranty period is replaced (because a repair is not possible). Create a purchase request for the part to be reordered.
- Demonstrate For all repair activities, the details of the repair and the parts disposition, including parts retired, are recorded and tracked in MOMS.





• Demonstrate that an automated email notification is generated when the level of spares reach a configurable threshold

## 6.1.2 Test Facility

This test is run at the Cottage Grove, MN

### 6.1.3 Test Evaluation

The Test Procedure in 6.2 will be determined to have passed if all the test scenarios pass.



# 6.1.4 Test Preparation

Table 6.1.4-1 MOMS-05 Pre-Test Items

	Pre-Test Item	Pass/Fail
1	FAT dry run testing is completed, Test Readiness Review meeting completed, and the system is under configuration control/lockdown	□ □ P F

## **6.2 Test Procedure**

**Table 6.2-1 MOMS-05 Test Procedure** 

Step	Action	<b>Expected Results</b>	Actual Results	Pass/Fail
	Demonstrate remote access to MOMS (i.e. using the FAT VPN)			
1	Open the Cisco AnyConnect Secure Mobility Client Software	The Cisco AnyConnect Secure Mobility Client Dialog is displayed		P F
2	Select VPN 50.233.84.62 (vpn.cg.Companytsrc.net) and click on the "Connect" Button	The Cisco AnyConnect Secure Mobility Client Login Dialog is displayed		P F
3	Enter username, password, and then click on the "OK" Button	The Cisco AnyConnect Dialog is displayed		P F
4	In the Cisco AnyConnect Dialog click on the "Accept" Button	The Cisco AnyConnect Dialog closes and the PC/Laptop is connected to the VPN		P F
5	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
6	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:	



Step	Action	<b>Expected Results</b>	Actual Results	Pass/Fail
			Date/Time:	
			<del></del>	



	Demonstrate the Monthly Inventory Report		
1	Open Hardcat Client	Hardcat Client is displayed	□ □ P F
2	Log into the Hardcat Client Enter Username and Password Login Role = Maintenance Manager	The Hardcat Client Interface is displayed	P F
3	Select menu item Reports->Custom->Assets	The "Generate Custom Asset Report" Dialog is displayed	D D
4	In the "Generate Custom Asset Report" Dialog List Box select "Asset Inventory By Location" and Scope of Report select "All of Hardcat" and then click on the View Button	The Asset Inventory By Location Report pdf is generated	P F
5	Inspect the Asset Inventory By Location pdf (i.e. compare to the sample Asset Inventory By Location)	The Asset Inventory By Location pdf is OK	P F
6	Close the pdf reader	The pdf reader closes	□ □
7	In the "Generate Custom Asset Report" Dialog click the Close Button	The Generate Custom Asset Report" Dialog closes	P F
8	On the Hardcat Menu Bar select menu item Lists- >Notifications	The "List of Notifications" Dialog is displayed	P F
9	In the List of Notifications" Dialog select Area List Box "Assets"	The Asset Notifications are displayed	P F





10	Select the "Asset Inventory By Location" Notification  Click on the Edit Button	The "Details of Notification" Dialog with the "Asset Inventory By Location" Details is displayed	P F
11	Under Cycle Pattern - Change the Base Date to current date and Time to current time	The Base Date and Time are updated to current date and time	P F
12	Click on the OK Button	The "List of Notifications" Dialog is displayed	D D
13	Click on the Close Button	The "Hardcat Asset Management" Screen is displayed	D D
14	On the "Hardcat Asset Management" Screen select File->Exit Menu item	The Hardcat Client closes	P F
15	Check for an "Asset Inventory By Location Notification" automated email notification (i.e. subject line) with an attached "Asset Inventory By Location Report" pdf file	The email is received with the pdf attachment	P F
16	Inspect the email and the "Asset Inventory By Location Report" pdf (i.e. compare to the sample Asset Inventory By Location Report)	The Asset Inventory By Location Report is OK	P F
17	Complete Table 10-1, the Test Discrepancies /		□ □



	Comments Report as necessary.		
18	Record Names of Test Conductor and SRTA	Test Conductor:	
	Witness.	SRTA Witness:	
		Date/Time:	



	Inspect Inventory Records		
1	Open Hardcat Client	Hardcat Client is displayed	□ □ P F
2	Log into the Hardcat Client Enter Username and Password Login Role = Maintenance Manager	The Hardcat Client Interface is displayed	P F
3	Select menu item Lists->Assets	The "Search Assets" Dialog is displayed	□ □
4	In the "Search Assets" Dialog Box click on "Clear Current Criteria" Button and click the 'Apply" Button	The Asset Inventory is displayed	P F
5	Click the "Edit" Button	The "Edit Details of Asset AS " is displayed	P F
6	Inspect the: Part Description – i.e. "Description" Field Serial Number – i.e. "Serial No" Field	The Part Description and Serial Number are displayed	P F
7	Click on the "Product" Button	The Product (e.g. AVI Antenna) Dialog is displayed and the Product is selected	P F
8	Click the "Edit" Button	The "Product Details" Dialog is displayed	□ □
9	Inspect the Part Number: i.e. "Brand" Field and "Supp's Part No" Field	The Part Number is displayed	P F
10	Click the "Cancel" Button	The Product Dialog e.g. AVI Antenna is displayed	P F





11	Click the "Cancel" Button	The "Edit Details of Asset 'AS" Dialog is displayed	D D
12	Click on the "History" Tab and find a "Location Code…" Change Record.	A "Location Code" Change Record is displayed	P F
13	Select the "Location Code" Change Record and click the "Edit Log" Button	The "Details of History Item" Dialog is displayed	P F
14	Inspect the "Details of History Item" Dialog for times and dates of changes to location	The times and dates of changes to location are displayed	P F
15	Click the "OK" Button	The "History" Tab is displayed	□ □
16	Click on the "Finance" Tab	The "Finance" Tab is displayed	P F
17	Locate the "Warranty End"  Date	The "Warranty End" Date is displayed	D D
18	Click "Add Costs" Button	The "Additional Costs for AS" Dialog is displayed	D D
19	Click the "New" Button	The "New Additional Costs for AS" Dialog is displayed	P F
20	In the "Description" Text Box enter "Vendor Repair 1"	"Vendor Repair 1 " is displayed	□
21	In the "Type" List Box select "Repair Cost"	"Repair Cost" is displayed	□ □ P F
22	Click on the "Date" Button	The "Choose Date" Dialog is displayed	□ □



23	Select todays date, and the click on the "OK" Button	The "New Additional Costs for AS" Dialog is displayed	P F
24	In the "Quantity" Text Box enter 1.000	1.000 is displayed	□ □ P F
25	In the "Amount" Text Box enter \$1000.00	\$1000.00 is displayed	□ □ P F
26	Click the "OK" Button	The "Additional Costs for AS" Dialog is displayed with the Vendor Repair 1 Data and "Total Additional Costs: \$1000.00"	P F
27	Click the "New" Button	The "New Additional Costs for AS" Dialog is displayed	P F
28	In the "Description" Text Box enter "Vendor Repair 2"	"Vendor Repair 2" is displayed	P F
29	In the "Type" List Box select "Repair Cost"	"Repair Cost" is displayed	□ □ P F
30	Click on the "Date" Button	The "Choose Date" Dialog is displayed	□ □ P F
31	Select month before date, and the click on the "OK" Button	The "New Additional Costs for AS" Dialog is displayed	P F
32	In the "Quantity" Text Box enter 1.000	1.000 is displayed	P F
33	In the "Amount" Text Box enter \$2000.00	\$2000.00 is displayed	P F



34	Click the "OK" Button	The "Additional Costs		
		for AS"		P F
		Dialog is displayed		
		with the Vendor		
		Repair 1 and 2 Data		
		and "Total Additional		
		Costs: \$3000.00" is		
		displayed		
35	Complete Table 10-1, the			
	Test Discrepancies /			<u> — —</u> Р F
	Comments Report as			
	necessary.			
36	Record Names of Test		Test Conductor:	
	Conductor and SRTA			
	Witness.		SRTA Witness:	
			Date/Time:	



	Manually create a Work Order and run the		
	Inventory Report		
1	Open Hardcat Client	Hardcat Client is displayed	□ □ P F
2	Log into the Hardcat Client Enter Username and Password Login Role = Maintenance Manager	The Hardcat Client Interface is displayed	P F
3	Select menu item Modules- >Maintenance	The "Maintenance" Dialog is displayed	□ □ P F
4	In the "Maintenance" Dialog click on New Work Order	The "New Work Order" Dialog is displayed	P F
5	Click on Task	The Task Dialog is displayed	□ □ P F
6	Select the FAT TP1 N Gantry Laser Scanner 1 Semi-Annual PM Task i.e. TK	The Work Order Description is FAT TP1 N Gantry Laser Scanner 1 – Semi-Annual PM	P F
7	Click on the Caller	The Persons Dialog and Folders are displayed	□ □ □ P F
8	Click the Company Employees Folder	The Company employees are displayed	P F
9	Click on Bruce Orenstein then click the OK Button	The caller is displayed (i.e. Bruce Orenstein)	□ □ P F
10	Click on the Asset	The Asset List is displayed	P F
11	Click on the New Work Order OK Button	The Work Order is created	



			ם מ
12	On the Hardcat Maintenance Dialog click on Work Orders	The Search Work Orders Dialog is displayed	P F  D F  P F
13	Locate the new work order with the description: FAT TP1 N Gantry Laser Scanner 1 Semi-Annual PM, select the row, and click on the edit Button	The Work Orders is displayed	P F
14	Open Internet Explorer	Internet Explorer is displayed	□ □
15	Enter the following URL http://hardcat.srta.local/Hard catWeb/	The Hardcat Login Webpage Is displayed	P F
16	Enter username and password of the Maintenance Manager, and click on the "Login" Button	The Hardcat Business Intelligence Webpage is displayed	P F
17	Click on the Work Order Management Tab	The Work Order Management Webpage is displayed	P F
18	Mouse over the Work Order and select the Edit Menu Item	The Work Order is displayed	P F
19	From the Status List select Acknowledge	Acknowledge is selected	P F
20	Click the Save Button	The Work Order is saved	□ □
21	Mouse over the Work Order and select the Edit Menu Item	The Work Order is displayed	D D
22	From the Status List select In-Process	In-process is selected	□ □ P F



23	Click the Save Button	The Work Order is saved	□ □
24	Mouse over the Work Order and select the Edit Menu Item	The Work Order is displayed	D F
25	Click on More Text and enter "Removed and replaced the Laser Scanner per manufacturers PDM Task"	More Text displays "Removed and replaced the Laser Scanner per manufacturers PDM Task"	P F
26	Click the Save Button	The Work Order is saved	□ □ P F
27	Click on Hardcat Business Intelligence Tab	The Hardcat Business Intelligence Webpage is displayed	P F
28	Click on the Reports Button	The Reports Webpage is displayed	□ □ P F
29	Click on Asset in Column 1	Asset is highlighted	□ □ P F
30	Click on Asset_Inventory by Location in Column 2	Asset_Inventory is highlighted	□ □
31	Under Scope of Report click the All Radio Button	All is selected	P F
32	Click on the Run Report Button	The Asset Inventory pdf is displayed	□ □ P F
33	Inspect the Asset Inventory Report (i.e. compare to the sample Asset Inventory Report)	The Asset Inventory Report is OK	P F
34	Click on the Asset Management Tab	The Asset Management Web Page is displayed	D D



35	In the Search Filter select Location and Equals	The Search Filter displays Location and Equal	P F
36	Click on the Folder	The Locations Dialog is displayed	□ □ P F
37	75A and then 227.0	The folder list for 227.0-AVC is displayed	D F
38	Click on the AVC Folder and select FAT TP1 N Gantry Laserscanner 1	The Search Filter displays FAT TP1 N Gantry Laserscanner 1	P F
39	Click on Apply Button	The Search Filter shows the Asset.	□ □ P F
40	Record the Asset Code and Barcode		□ □ P F
41	Click on Asset Management Tab -> Move an Asset Button	The Move an Asset Dialog is displayed	D D
42	Enter the Asset Barcode in the Asset Barcode Textbox (or click in the Asset Barcode Textbox, and then use the portable scanner to scan the Barcode Label) and click the Apply Button	The Asset Dialog is displayed	P F
43	Click on the Location Field Magnifying Glass	The Location Dialog is displayed	D D
44	Click on the SRTA FAT Location Folder	The SRTA FAT Location Folders are displayed	P F
45	Click on FAT Depot	The FAT Depot Cabinet 1 Spare Parts is displayed	D D



46	Click on FAT Depot Cabinet 1 Spare Parts	The Asset Dialog Location Field displays FAT Depot Cabinet 1 Spare Parts	P F
47	Click the Save Button		□ □
48	In the Search Filter select Location and Equals	The Search Filter displays Location and Equal	P F
49	Click on the Folder	The Locations Dialog is displayed	□ □ P F
50	Click on SRTA FAT Locations	The SRTA FAT Location Folders are displayed	P F
51	Click on SRTA FAT Depot	The FAT Depot Cabinet 1 Spare Parts is displayed	D D
52	Click on FAT Depot Cabinet 1 Spare Parts	The Search Filter displays FAT Depot Cabinet 1 Spare Parts	D D
53	Click on Apply Button	The Search Filter shows the Assets	P F
54	Mouse over the Asset (i.e. Deployed_Operational) and select the Edit Button	The Asset Record is displayed	P F
55	Click on Information, then update the Status to Spare_Inventory_Non-Operational, and then click on the Save Button	The Status is Spare_Inventory_Non- Operatonal	P F
56	Click on Hardcat Business Intelligence Tab	The Hardcat Business Intelligence Webpage is displayed	D D



57	Click on the Reports Button	The Reports Webpage is displayed	□ □ P F
58	Click on Asset in Column 1	Asset is highlighted	□ □
59	Click on Asset_Inventory by Location in Column 2	Asset_Inventory by Location is highlighted	□ □
60	Under Scope of Report click the All Radio Button	All is selected	□ □ P F
61	Click on the Run Report Button	The Asset Inventory pdf is displayed	□ □
62	Inspect the Asset Inventory Report (i.e. compare to the sample Asset Inventory Report)	The Asset Inventory Report is OK	P F
63	Click on the Asset Management Tab	The Asset Management Web Page is displayed	□ □ P F
64	In the Search Filter select Location and Equals	The Search Filter displays Location and Equal	D D
65	Click on the Folder	The Locations Dialog is displayed	P F
66	Click on SRTA FAT Locations	The SRTA FAT Location Folders are displayed	P F
67	Click on SRTA FAT Depot	The FAT Depot Cabinet 1 Spare Parts is displayed	P F
68	Click on FAT Depot Cabinet 1 Spare Parts	The Search Filter displays FAT Depot Cabinet 1 Spare Parts	D D
69	Click on Apply Button	The Search Filter shows the Assets	□ □



70	Identify a Laser Scanner whose status is		
	Spares_Inventory_Operation		P F
	al,		
	and record the Barcode		
71	Click on the Move an Asset	The Move an Asset	
	Button	Dialog is displayed	P F
72	Enter the Asset Barcode in the Asset Barcode Textbox (or click in the Asset Barcode Textbox, and then use the portable scanner to scan the Barcode Label) and click the Apply Button	The Asset Dialog is displayed	P F
73	Click on the Location Field Magnifying Glass	The Location Dialog is displayed	□ □ P F
74	Click on the 75A Location Folder	The 75A Location Folders are displayed	□ □
75	Click on 227.0 Toll Point 1	227.0 Toll Point 1 (2	
	(2 Lanes + 1 Shoulder)	Lanes + 1 Shoulder is	P F
		displayed	
76	Click on AVC Folder	The AVC Location are displayed	□ □ P F
77	Click on FAT TP1 N Gantry Laser Scanner 1	The Asset Record is displayed with the Location FAT TP1 N Gantry Laser Scanner 1	P F
78	Click the Save Button		□ □
79	In the Search Filter select Location and Equals	The Search Filter displays Location and Equal	D F
80	Click on the Folder	The Locations Dialog is displayed	□ □



81	Click on SRTA FAT Locations	The SRTA FAT Location Folders are displayed	P F
82	Click on SRTA FAT Toll Point 1 (2 Lanes + 1 Shoulder)	The SRTA FAT Toll Point 1 (2 Lanes + 1 Shoulder) is displayed	P F
83	Click on AVC, then click on FAT TP1 Laser Scanner 1	The Search Filter displays FAT TP1 Laser Scanner 1	P F
84	Click on Apply Button	The Search Filter shows the Assets	□ □ P F
85	Mouse over the Asset (i.e. Spare_Inventory_Operationa l) and select the Edit Menu Item	The Asset Record is displayed	P F
86	Click on Information, then update the Status to Deployed_Operational, and then click on the Save Button	The Status is Deployed_Operational	P F
87	Click on Hardcat Business Intelligence Tab	The Hardcat Business Intelligence Webpage is displayed	D D
88	Click on the Reports Button	The Reports Webpage is displayed	P F
89	Click on Asset in Column 1	Asset is highlighted	□ □
90	Click on Asset_Inventory by Location in Column 2	Asset_Inventory by Location is highlighted	□ □
91	Under Scope of Report click the All Radio Button	All is selected	P F
92	Click on the Run Report Button	The Asset Inventory pdf is displayed	□ □



93	Inspect the Asset Inventory Report (i.e. compare to the sample Asset Inventory Report)	The Asset Inventory Report is OK		P F
94	Click on Work Order Management	The Work Order Management Webpage is displayed		P F
95	Mouse over the Laserscanner Work Order and select the Edit Menu Item	The Work Order is displayed		P F
96	Select Completed from the Status List	Completed is displayed		□ □
97	Click on the Save Button	The Laser Scanner Work Order is Completed		P F
98	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
99	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate the "Spares Inventory" Report		
1	Open Hardcat Client	Hardcat Client is displayed	P F
2	Log into the Hardcat Client Enter Username and Password Login Role = Maintenance Manager	The Hardcat Client Interface is displayed	P F
3	Select menu item Reports- >Custom->Assets	The "Generate Custom Asset Report" Dialog is displayed	P F
4	In the "Generate Custom Asset Report" Dialog List Box select "Asset Inventory by Location, under Scope of Report" select This Search, and click on Use Search Button	The "Select a Previously Stored Search Criteria" Dialog is displayed	P F
5	On "Previously Stored Search Criteria" Dialog select "Asset Inventory Search By Location Folder Name" and then Click the Edit Button	The "Reviewing Asset Search Specification: Asset Inventory Search By Location Folder Name" Dialog is displayed	P F
6	Change the "Location Folder Name" "is equal to" and select the "Choose" Option	The 'Choose OK to Select Locations" Dialog is displayed	□ □ □ P F
7	Click on the SRTA FAT Location Folder	The SRTA FAT Location Folders are displayed	P F
8	Click on the Apply Button	The Assets Filtered By FAT Depot Location are displayed	P F



9	Click the OK Button	The "Edit Details of Search "Asset Inventory Search By Location" Dialog is displayed		P F
10	Click the OK Button	The Select a Previously Stored Search Criteria Dialog is displayed		P F
11	Click the OK Button	The Generate Custom Asset Dialog is displayed		P F
12	On the "Generate Custom Asset Report" Dialog click on the "View" Button	The Asset Inventory pdf is generated filtered by Location		P F
13	Inspect the Asset Inventory Report (i.e. compare to the sample Asset Inventory Report)	The Asset Inventory Report is OK		P F
14	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
15	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate the "Asset Inventory By End Of Life Date" Report			
1	Open Hardcat Client	Hardcat Client is displayed		□ □ P F
2	Log into the Hardcat Client Enter Username and Password Login Role = Maintenance Manager	The Hardcat Client Interface is displayed		P F
3	Select menu item Reports- >Custom->Assets	The "Generate Custom Asset Report" Dialog is displayed		P F
4	In the "Generate Custom Assets Report" Dialog Box scroll and select "Asset Inventory By End of Life Date"  Under "Scope of Report" select "All of Hardcat" Radio Button, and then click on the "View" Button	The Asset Inventory By End of Life Date Report pdf is displayed		P F
5	Inspect the Asset Inventory By End of Life Report (i.e. compare to the sample Asset Inventory By End of Life Report)	The Asset Inventory By End of Life Report is OK		P F
6	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
7	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:	



		Date/Time:	





	Demonstrate the "Asset Inventory By Warranty End Date" Report		
1	Open Hardcat Client	Hardcat Client is displayed	□ □ P F
2	Log into the Hardcat Client Enter Username and Password Login Role = Maintenance Manager	The Hardcat Client Interface is displayed	P F
3	Select menu item Reports- >Custom->Assets	The "Generate Custom Asset Report" Dialog is displayed	D D
4	In the "Generate Custom Assets Report" Dialog Box scroll and select "Asset Inventory By Warranty End Date"  Under "Scope of Report" select "All of Hardcat" Radio Button, and then click on the "View" Button	The Asset Inventory By Warranty End Date Report pdf is displayed	P F
5	Inspect the Asset Inventory By Warranty End Date Report (i.e. compare to the sample Asset Inventory By Warranty End Date Report)	The Asset Inventory By Warranty End Date Report is OK	P F
6	Close the pdf reader	The pdf reader closes	□ □
7	In the "Generate Custom Asset Report" Dialog click the Close Button	The Generate Custom Asset Report" Dialog closes	P F

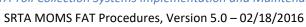




8	On the Hardcat Menu Bar select menu item Lists->Notifications	The "List of Notifications" Dialog is displayed	P F
9	In the List of Notifications" Dialog select Area List Box "Assets"	The Asset Notifications are displayed	P F
10	Select the "Asset Inventory By Warranty End Date" Notification Click on the Edit Button	The "Details of Notification" Dialog with the "Asset Inventory By Warranty End Date" Details is displayed	P F
11	Under Cycle Pattern - Change the Base Date to today's date and time to current time	The Base Date and Time are updated to current data and time	P F
12	Click on the OK Button	The "List of Notifications" Dialog is displayed	D D
13	Click on the Close Button	The Hardcat Asset Management Main Windows is displayed	D D
14	Check for an "Asset Inventory By Warranty End Date Notification" automated email notification (i.e. subject line) with an attached "Asset Inventory By Warranty End Date Report" pdf file	The email is received with the pdf attachment	P F
15	Inspect the email and the "Asset Inventory By Warranty End Date Report" pdf (i.e. compare to the	The Asset Inventory By Warranty End Date Report is OK	P F



	sample Asset Inventory By Warranty End Date Report)		
16	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.		P F
17	Record Names of Test Conductor and SRTA Witness.	Test Conductor:  SRTA Witness:  Date/Time:	





	Manually create a Problem Report. The asset is under warranty, track the status and the movement of the part that was returned to the manufacturer for repair or replacement  For all repair activities, the details of the repair and the parts disposition is recorded and tracked in MOMS.		
1	Open Internet Explorer	Internet Explorer is displayed	□ □ P F
2	Enter the following URL http://hardcat.srta.local/Hard catWeb/	The Hardcat Login Webpage Is displayed	P F
3	Enter username and password, and click on the "Login" Button Login Role = Technician	The Hardcat Business Intelligence Webpage is displayed	P F
4	Click on the Problem  Management Tab	The Problem Management Webpage is displayed	D D
5	Click on the Create a Problem Button		□ □
6	Click on the Problem Type Magnifying Glass	The Select a Problem Type Dialog is displayed	P F
7	Click on the Toll Point Folder	The Toll Point Folders are displayed	P F
8	Click on the VES Folder	The VES Folder Items are displayed	□ □ P F



9	Click on the ALPR Camera Problem	The Problem Type is ALPR Camera Problem	□ □ P F
10	Click on Caller Magnifying Glass	The Caller Dialog is displayed	□ □
11	Click on the Company Employees Folder	The Company Employees are displayed	P F
12	Click on Bruce Orenstein	The Caller is Bruce Orenstein	□ □ P F
13	Click on Asset Management		P F
14	Click on Asset Management Magnifying Glass	The Asset Dialog is displayed	□ □ P F
15	Click on AS002002	The Asset is ALPR Camera is displayed	P F
16	Click on Location Magnifying Glass	The Location Dialog is displayed	□ □
17	Click on 75A -227.0 (2 Lanes + 1 Shoulder) Folder	The 75A -227.0 (2 Lanes + 1 Shoulder) Folders are displayed	D D
18	Click on the VES Folder	The VES Camera and Illuminators are displayed	P F
19	Click on FAT TP1 N Gantry VES Camera 2	The Location is FAT TP1 N Gantry VES Camera 2	P F
20	Click on More Text and describe the problem e.g. FAT TP1 N Gantry VES Camera 2 displays no video	The More Text Box displays FAT TP1 N Gantry VES Camera 2 displays no video	P F
21	Click the Save Button		□ □ P F



22	Mouse over PRand select the Edit Menu Item		P F
23	From the Status List select Acknowledge	Acknowledge is selected	P F
24	Click the Save Button	PR Status is Acknowledged	P F
25	Mouse over PRand select the Edit Menu Item		P F
26	From the Status List select Suspended	Suspended is selected	□ □ P F
27	Click the Save Button	PR Status is Suspended	P F
28	Mouse over PRand select the Edit Menu Item		P F
29	From the Status List select On-Hold	On-Hold is selected	D D
30	Click the Save Button	PRStatus is On-Hold	P F
31	Mouse over PRand select the Edit Menu Item		P F
32	From the Status List select In-process and Select Escalation P2_Repair_WkDay->	In-process is selected and P2_Repair_WkDay is selected	P F
33	Click the Save Button	PRStatus is In-process	P F
34	Mouse over PRand select the Edit Menu Item		P F





35	Click on More Text	The More Text Dialog is displayed	□ □ P F
36	Enter removed and replaced VES Camera	Removed and Replaced VES Camera is displayed	P F
37	Click the Save Button	PRis saved	□ □ P F
38	Select the Asset Management Tab	The Asset Management Webpage is displayed	□ □
39	In the Asset Filter enter "Code" "Contains" "AS002002"	The AS002002 Asset Record is displayed	D D
40	Mouse over AS002002 and then select the Edit Menu Item	The Asset AS002002 Webpage is displayed	D D
41	Click on the Finance Link	The Financial Information is displayed	D D
42	Locate the "Warranty Exp Date" and verify the part (i.e. AS002002) is under warranty	AS002002 is under warranty	P F
43	On the "Asset Management" Webpage click the "Return to List" Button	The AS002002 Asset Record is displayed	D D
44	On the "Asset Management" Webpage click the Move an Asset Button		D D
45	Click on the Asset Barcode Magnifying Glass	The Asset Dialog is displayed	P F
46	Click on AS002002	The AS2002 Dialog Box is displayed	□ □
47	Click on the Location Magnifying Glass	The Locations Dialog is displayed	P F



48	Click on the FAT Vendor Folder	The FAT Vendor is displayed	□ □ P F
49	Click on FAT Vendor	The Location is FAT Vendor	□ □ P F
50	Click the Save Button		D D
51	Mouse over AS002002 and then select the Edit Menu Item	The Asset AS002002 Webpage is displayed	D D
52	Click on Information	The Information fields are displayed	□ □ P F
53	Click on the Status List and select "In Repair"	Status is "In Repair"	□ □
54	Click on the Save Button	The Asset Display is updated i.e. Status is "In Repair"	D D
55	Click on the "Logout" Button	The user is logged out of the Hardcat Web Interface	D D
56	Open Hardcat Client	Hardcat Client is displayed	P F
57	Log into the Hardcat Client Enter Username and Password Login Role = Maintenance Manager	The Hardcat Client Interface is displayed	P F
58	Select menu item Reports->- >Assets	The "Generate Fixed Asset Report" Dialog is displayed	D D
59	In the "Generate Fixed Asset Report" Dialog click on the "Custom Button"	The "Generate Custom Assets Report" Dialog is displayed	P F





60	In the "Generate Custom Assets Report" Dialog Box scroll and select "Asset Inventory By Location"	The Asset Inventory By Location Report pdf is displayed	P F
	Under "Scope of Report" select "All of Hardcat" Radio Button, and then click on the "View" Button		
61	Inspect the Asset Inventory By Location Report i.e. AS002002 (compare to the sample Asset Inventory By Location Report)	The Asset Inventory By Location Report is OK	P F
62	Close the pdf reader	The pdf reader closes	□ □
63	In the "Generate Custom Asset Report" Dialog click the Close Button	The "Generate Custom Asset Report" Dialog closes	P F
64	In the "Generate Fixed Asset Report" Dialog select "Asset History Details (Landscape)" Under "Scope of Report" select "All of Hardcat"	The "Asset History Details (Landscape)" Report is displayed	P F
	Radio Button, and then click on the "View" Button		
65	Inspect the Asset History Details (Landscape)" Report i.e. AS002002 (compare to the sample Asset History Details (Landscape) Report)	The Asset History Details (Landscape) Report is OK	P F
66	Close the pdf reader	The pdf reader closes	□ □ P F





67	In the "Generate Fixed Asset Report" Dialog click the "Close" Button	The "Hardcat Asset Management" screen is displayed	P F
68	When the Vendor repairs the asset i.e. AS002002 the vendor provides a description of the repair to Company.  The description of the vendor repair is attached as a file to the asset i.e. AS002002 record as follows:		P F
69	Select Lists->Assets	The "Search Assets" Dialog is displayed	□ □
70	In the "Search Assets" Dialog locate and then select AS002002 and click the "Edit" Button	The "Edit Details of Asset AS002002" Dialog is displayed	P F
71	In the "Edit Details of Asset AS002002" Dialog click on the Files Tab	The Files Tab is displayed	P F
72	Click on the "Import" Button	The "Import From File" Dialog is displayed	P F
73	Locate the vendor repair description file e.g. vendor_description_of_asset _repair.txt and then click on the "Open" Button	The file is displayed in Files Dialog Window	P F
74	In the Files Dialog Window select the file e.g. vendor_description_of_asset _repair.txt and then click on the "Open" Button	The file e.g. vendor_description_of_ asset_repair.txt is opened and displayed	P F



75	Close the file	The "Edit Details of Asset AS002002" Dialog is displayed	P F
76	In the "Edit Details of Asset AS002002" Dialog click on the "Cancel" Button	The "Search Assets" Dialog is displayed	P F
77	In the "Search Assets" Dialog click on the "Close" Button	The "Hardcat Asset Management" screen is displayed	P F
78	Select menu item Reports->->Assets	The "Generate Fixed Asset Report" Dialog is displayed	P F
79	In the "Generate Fixed Asset Report" Dialog select "Assets" from the pulldown menu, and the select the "Asset Individual Details" Report.  Under "Scope of Report" select "All of Hardcat" Radio Button, and then click on the "View" Button	The Asset Individual Details Report pdf is displayed	P F
80	In the pdf viewer use the find function i.e. Cntl + F to locate AS002002	Asset AS002002 data is displayed	P F
81	Inspect the AS002002 "Attached Files".	The e.g. vendor_description_of_ asset_repair.txt is listed	P F
82	Close the pdf reader	The pdf reader closes and the "Generate Fixed Asset Report" Dialog is displayed	P F



83	In the "Generate Fixed Asset Report" Dialog click on the "Close" Button	The Hardcat Asset Management Screen is displayed		P F
84	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
85	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



	Manually create a Problem Report. The asset is out of warranty, track the status and movement of the part through the repair process, and returned to inventory		
1	Open Internet Explorer	Internet Explorer is displayed	□ □ P F
2	Enter the following URL http://hardcat.srta.local/HardcatWeb/	The Hardcat Login Webpage Is displayed	D D
3	Enter username and password, and click on the "Login" Button Login Role = Technician	The Hardcat Business Intelligence Webpage is displayed	P F
4	Click on the Problem Management Tab	The Problem Management Webpage is displayed	P F
5	Click on the Create a Problem Button		P F
6	Click on the Problem Type Magnifying Glass	The Select a Problem Type Dialog is displayed	P F
7	Click on the Toll Point Folder	The Toll Point Folders are displayed	P F
8	Click on the VES Folder	The VES Folder Items are displayed	□ □ P F
9	Click on the ALPR Camera  -Problem	The Problem Type is ALPR Camera Problem	□ □ P F
10	Click on Caller Magnifying Glass	The Caller Dialog is displayed	□ □ P F
11	Click on the Company Employees Folder	The Company Employees are displayed	P F



12	Click on Bruce Orenstein	The Caller is Bruce Orenstein	□ □ P F
13	Click on Asset Management		P F
14	Click on Asset Management Magnifying Glass	The Asset Dialog is displayed	□ □ P F
15	Click on AS002003	The Asset is ALPR Camera- is displayed	□ □ P F
16	Click on Location Magnifying Glass	The Location Dialog is displayed	□ □ P F
17	Click on 75A-227.0 Toll Point 1 (2 Lanes + 1 Shoulder) Folder	The 75A-227.0 Toll Point 1 (2 Lanes + 1 Shoulder) Folders are displayed	P F
18	Click on the VES Folder	The VES Camera and Illuminators are displayed	P F
19	Click on FAT TP1 N Gantry VES Camera 3	The Location is FAT TP1 N Gantry VES Camera 3	P F
20	Click on More Text and describe the problem e.g. FAT TP1 N Gantry VES Camera 3 displays no video	The More Text Box displays FAT TP1 N Gantry VES Camera 3 displays no video	P F
21	Click the Save Button		P F
22	Mouse over PRand select the Edit Menu Item		D D
23	From the Status List select Acknowledge	Acknowledge is selected	□ □
24	Click the Save Button	PR Status is Acknowledged	□ □



25	Mouse over PR		
	and select the Edit Menu Item		P F
26		0 11' 1 1	
20	From the Status List select Suspended	Suspended is selected	P F
27	Click the Save Button	PR Status is Suspended	□ □ P F
28	Mouse over PRand select the Edit Menu Item		P F
29	From the Status List select On-Hold	On-Hold is selected	P F
30	Click the Save Button	PRStatus is On-Hold	P F
31	Mouse over PRand select the Edit Menu Item		□ □ P F
32	From the Status List select In-process	In-process is selected	□ □ P F
33	Click the Save Button	PRStatus is In-process	□ □ P F
34	Mouse over PRand select the Edit Menu Item		P F
35	Click on More Text	The More Text Dialog is displayed	P F
36	Enter removed and replaced VES Camera	Removed and Replaced VES Camera is displayed	P F
37	Click the Save Button	PRis saved	□ □ □ P F
38	Select the Asset Management Tab	The Asset Management Webpage is displayed	□ □





39	In the Asset Filter enter "Code" "Contains" "AS002003"	The AS002003 Asset Record is displayed	P F
40	Mouse over AS002003 and then select the Edit Menu Item	The Asset AS002003 Webpage is displayed	P F
41	Click on the Finance Link	The Financial Information is displayed	P F
42	Locate the "Warranty Exp Date" and verify the part (i.e. AS002003) is out of warranty	AS002003 is not under warranty	P F
43	On the "Asset Management" Webpage click the "Return to List" Button	The AS002003 Asset Record is displayed	P F
44	On the "Asset Management" Webpage click the Move an Asset Button		P F
45	Click on the Asset Barcode Magnifying Glass	The Asset Dialog is displayed	D D
46	Click on AS002003	The AS002003 Dialog Box is displayed	P F
47	Click on the Location Magnifying Glass	The Locations Dialog is displayed	□ □
48	Click on the FAT Vendor Folder	The FAT Vendor is displayed	□ □
49	Click on FAT Vendor	The Location is FAT Vendor	□ □
50	Click the Save Button		□ □ P F
51	Mouse over AS002003 and then select the Edit Menu Item	The Asset AS002003 Webpage is displayed	D F



52	Click on Information	The Information fields are displayed	□ □ P F
53	Click on the Status List and select "In Repair"	Status is "In Repair"	□ □ P F
54	Click on the Save Button	The Asset Display is updated i.e. Status is "In Repair"	P F
55	Click on the "Logout" Button	The user is logged out of the Hardcat Web Interface	P F
56	Open Hardcat Client	Hardcat Client is displayed	□ □ P F
57	Log into the Hardcat Client Enter Username and Password Login Role = Maintenance Manager	The Hardcat Client Interface is displayed	P F
58	Select menu item Reports->->Assets	The "Generate Fixed Asset Report" Dialog is displayed	D D
59	In the "Generate Fixed Asset Report" Dialog click on the "Custom Button"	The "Generate Custom Assets Report" Dialog is displayed	P F
60	In the "Generate Custom Assets Report" Dialog Box scroll and select "Asset Inventory By Location" Under "Scope of Report" select "All of Hardcat" Radio Button, and then click	The Asset Inventory By Location Report pdf is displayed	P F
61	on the "View" Button  Inspect the Asset Inventory	The Asset Inventory By	
	By Location Report i.e. AS002003 (compare to the	Location Report is OK	P F





	sample Asset Inventory By Location Report)		
62	Close the pdf reader	The pdf reader closes	□ □
63	In the "Generate Custom Asset Report" Dialog click the Close Button	The "Generate Custom Asset Report" Dialog closes	□ □ P F
64	In the "Generate Fixed Asset Report" Dialog select "Asset History Details (Landscape)"	The "Asset History Details (Landscape)" Report is displayed	P F
	Under "Scope of Report" select "All of Hardcat" Radio Button, and then click on the "View" Button		
65	Inspect the Asset History Details (Landscape)" Report i.e. AS002003 (compare to the sample the Asset History Details (Landscape) Report)	The Asset History Details(Landscape) Report is OK	P F
66	Close the pdf reader	The pdf reader closes	□ □ P F
67	In the "Generate Fixed Asset Report" Dialog click the "Close" Button	The "Hardcat Asset Management" screen is displayed	D D
68	The asset (i.e. AS002003) is repaired by the vendor, and returned to Company (i.e. FAT Depot Cabinet 1 Spare Parts Location)		P F
69	Log into the Hardcat Client Enter Username and Password	The Hardcat Client Interface is displayed	P F
70	Select menu item File- >Move Assets	The "Move Assets" Dialog is displayed	□ □ P F





71	In the "Move Assets" Dialog click on the "Choose Location" Button	The Locations Dialog is displayed	P F
72	In the Locations Dialog click on the SRTA FAT Locations Folder	The SRTA FAT Locations Folders are displayed	P F
73	Click on the FAT Depot Folder	The FAT Depot Cabinet 1 Spare Parts is displayed	P F
74	Click the OK Button	The Move Assets Dialog is displayed	□ □ P F
75	In the "Move Assets" Dialog click on the "Choose Asset" Button	The "Search Assets and make selection" Dialog is displayed	D D
76	Locate and select the AS002003 record and then click on the "OK" Button	An Asset Movement pdf is displayed	D D
77	Inspect the Asset Movement pdf (i.e. compare to the sample Asset Movement pdf )	The Asset Movement pdf is OK	P F
78	Close the pdf	The pdf closes and the Move Asset Dialog is displayed	D D
79	In the Move Asset Dialog click on the Close Button	The Hardcat Asset Management Screen is displayed	D D
80	Select menu item Lists-> Assets	The "Search Assets" Dialog is displayed	□ □ P F
81	Locate and select the AS002003 record and then click on the "Edit" Button	The "Edit Details of Asset AS002003" Dialog is displayed	P F
82	In the "Edit Details of Asset AS002003" Dialog change the "Asset Status" to	The "Edit Details of Asset AS002003" Dialog is displayed and	D D



	"Spares_Inventory_Operational" and then click the "OK" Button	the AS002003 Status Description is "Spare_Inventory_Ope rational"	
83	In the "Edit Details of Asset AS002003" click the "Close Button"	The Hardcat Asset Management Screen is displayed	D F
84	Select menu item Reports->- >Assets	The "Generate Fixed Asset Report" Dialog is displayed	P F
85	In the "Generate Fixed Asset Report" Dialog click on the "Custom Button"	The "Generate Custom Assets Report" Dialog is displayed	P F
86	In the "Generate Custom Assets Report" Dialog Box scroll and select "Asset Inventory By Location"  Under "Scope of Report" select "All of Hardcat" Radio Button, and then click on the "View" Button	The Asset Inventory By Location Report pdf is displayed	P F
87	Inspect the Asset Inventory By Location Report i.e. AS002003 (compare to the sample Asset Inventory By Location Report)	The Asset Inventory By Location Report is OK	P F
88	Close the pdf reader	The pdf reader closes	P F
89	In the "Generate Custom Asset Report" Dialog click the Close Button	The "Generate Custom Asset Report" Dialog closes	D D
90	In the "Generate Fixed Asset Report" Dialog select "Asset History Details (Landscape)"	The "Asset History Details (Landscape)" Report is displayed	D D



Under "Scope of Report" select "All of Hardcat" Radio Button, and then click on the "View" Button			
Inspect the Asset History Details (Landscape)" Report i.e. AS002003 (i.e. compare to the sample Asset History Details (Landscape) Report)	The Asset History Details (Landscape) Report is OK		P F
Close the pdf reader	The pdf reader closes		□ □ □ P F
In the "Generate Fixed Asset Report" Dialog click the "Close" Button	The "Hardcat Asset Management" screen is displayed		P F
Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	
	select "All of Hardcat" Radio Button, and then click on the "View" Button  Inspect the Asset History Details (Landscape)" Report i.e. AS002003 (i.e. compare to the sample Asset History Details (Landscape) Report)  Close the pdf reader  In the "Generate Fixed Asset Report" Dialog click the "Close" Button  Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.  Record Names of Test Conductor and SRTA	select "All of Hardcat" Radio Button, and then click on the "View" Button  Inspect the Asset History Details (Landscape)" Report i.e. AS002003 (i.e. compare to the sample Asset History Details (Landscape) Report)  Close the pdf reader  The pdf reader closes  In the "Generate Fixed Asset Report" Dialog click the "Close" Button  Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.  Record Names of Test Conductor and SRTA	select "All of Hardcat" Radio Button, and then click on the "View" Button  Inspect the Asset History Details (Landscape)" Report i.e. AS002003 (i.e. compare to the sample Asset History Details (Landscape) Report)  Close the pdf reader  The pdf reader closes  In the "Generate Fixed Asset Report" Dialog click the "Close" Button  Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.  Record Names of Test Conductor and SRTA Witness.  The Asset History Details (Landscape) Report is OK  The pdf reader closes  The "Hardcat Asset Management" screen is displayed  Test Conductor:  Test Conductor: SRTA Witness:



		T. Comments of the comments of	
	Manually create a Problem Report. An asset that is not within the warranty period is replaced (because a repair is not possible). Create a purchase request for the part to be re-		
	ordered.		
1	Open Internet Explorer	Internet Explorer is displayed	□ □ P F
2	Enter the following URL http://hardcat.srta.local/Hard catWeb/	The Hardcat Login Webpage Is displayed	P F
3	Enter username and password, and click on the "Login" Button Login Role = Technician	The Hardcat Business Intelligence Webpage is displayed	P F
4	Click on the Problem  Management Tab	The Problem Management Webpage is displayed	P F
5	Click on the Create a Problem Button		□ □
6	Click on the Problem Type Magnifying Glass	The Select a Problem Type Dialog is displayed	P F
7	Click on the Toll Point Folder	The Toll Point Folders are displayed	□ □ P F
8	Click on the AVC Folder	The AVC Folder Items are displayed	□ □
9	Click on the Laser Scanner Problem	The Problem Type is Laser Scanner Problem	□ □ P F
10	Click on Caller Magnifying Glass	The Caller Dialog is displayed	P F





11	Click on the Company	The Company	
	Employees Folder	Employees are	<u> </u>
		displayed	
12	Click on Bruce Orenstein	The Caller is Bruce	
		Orenstein	P F
13	Click on Asset Management		
			P F
14	Click on Asset Management	The Asset Dialog is	
	Magnifying Glass	displayed	P F
15	Click on AS002017	The Asset is Laser	
		Scanner is displayed	P F
16	Click on Location	The Location Dialog is	
	Magnifying Glass	displayed	P F
17	Click on FAT Toll Point 1 (2	The FAT Toll Point 1 (2	
	Lanes + 1 Shoulder) Folder	Lanes + 1 Shoulder)	P F
		Folders are displayed	
18	Click on the AVC Folder	The Laser Scanners are	
		displayed	P F
19	Click on FAT TP1 N Gantry	The Location is FAT	
	Laser Scanner 1	TP1 N Gantry Laser	P F
20		Scanner 1	
20	Click on More Text and	The More Text Box	
	describe the problem e.g. FAT TP1 N Gantry Laser	displays FAT TP1 N Gantry Laser Scanner 1	P F
	Scanner 1 failure	failure	
21	Click the Save Button		
			□ □ P F
22	Mouse over PR		
	and select the Edit Menu		P F
	Item		1 1
23	From the Status List select	Acknowledge is	
	Acknowledge	selected	P F
24	Click the Save Button	PRStatus	
		is Acknowledged	P F



25	Mouse over PRand select the Edit Menu Item		P F
26	From the Status List select Suspended	Suspended is selected	□ □
27	Click the Save Button	PRStatus is Suspended	□ □ □ P F
28	Mouse over PRand select the Edit Menu Item		D D
29	From the Status List select On-Hold	On-Hold is selected	□ □
30	Click the Save Button	PRStatus is On-Hold	P F
31	Mouse over PRand select the Edit Menu Item		D D
32	From the Status List select In-process	In-process is selected	□ □
33	Click the Save Button	PRStatus is In-process	P F
34	Mouse over PRand select the Edit Menu Item		D D
35	Click on More Text	The More Text Dialog is displayed	□ □
36	Enter removed and replaced Laser Scanner	Removed and Replaced Laser Scanner is displayed	P F
37	Click the Save Button	PRis saved	P F
38	Select the Asset Management Tab	The Asset Management Webpage is displayed	□ □





39	In the Asset Filter enter "Code" "Contains"	The AS002017 Asset Record is displayed	
	"AS002017"	receita is displayed	P F
40	Mouse over AS002017 and then select the Edit Menu Item	The Asset AS002017 Webpage is displayed	P F
41	Click on the Finance Link	The Financial Information is displayed	P F
42	Locate the "Warranty Exp Date" and verify the part (i.e. AS002017) is out of warranty	AS002017 is not under warranty	P F
43	On the "Asset Management" Webpage click the "Return to List" Button	The AS002017 Asset Record is displayed	D D
44	On the "Asset Management" Webpage click the Move an Asset Button		□ □ P F
45	Click on the Asset Barcode Magnifying Glass	The Asset Dialog is displayed	□ □ P F
46	Click on AS002017	The AS002017 Dialog Box is displayed	P F
47	Click on the Location Magnifying Glass	The Locations Dialog is displayed	□ □
48	Click on the FAT Vendor Folder	The FAT Vendor is displayed	□ □
49	Click on FAT Vendor	The Location is FAT Vendor	□ □
50	Click the Save Button		□ □
51	Mouse over AS002017 and then select the Edit Menu Item	The Asset AS002017 Webpage is displayed	P F



52	Click on Information	The Information fields are displayed	□ □
53	Click on the Status List and select "In Repair"	Status is "In Repair"	□ □ P F
54	Click on the Save Button	The Asset Display is updated i.e. Status is "In Repair"	P F
55	Click on the "Logout" Button	The user is logged out of the Hardcat Web Interface	P F
56	The vendor calls Company and states that the Laser Scanner (i.e. AS002017) cannot be repaired, and Company requests that the Laser Scanner be returned.  The vendor sends the Laser Scanner to the FAT Depot		
57	Location  Log into the Hardcat Client Enter Username and Password Login Role = Maintenance Manager	The Hardcat Client Interface is displayed	P F
58	Select menu item File->Move Assets	The "Move Assets" Dialog is displayed	□ □
59	In the "Move Assets" Dialog click on the Choose Location Button	The Locations Dialog is displayed	P F
60	In the Locations Dialog click on the SRTA FAT Location Folder	The SRTA FAT Location Folders are displayed	D D



61	Click on the FAT Depot Folder	The FAT Depot Cabinet 1 Spare Parts is displayed	P F
62	In the Location Dialog click the OK Button	The Move Asset Dialog is displayed	□ □ P F
63	In the "Move Assets" Dialog click on the "Choose Asset" Button	The Search Asset Dialog is displayed	P F
64	In the Search Assets Dialog locate and select AS002017 record and then click on the OK Button	The Asset Movement pdf is displayed	P F
65	Close the Asset Movement pdf	The Asset Movement Dialog is displayed	P F
66	In the Asset Movement Dialog click on the Close Button	The Hardcat Asset Management Screen is displayed	D D
67	Select menu item List->Assets	The "Search Assets" Dialog is displayed	
68	In the "Search Assets" Dialog locate and select AS002017 then click the "Edit" Button	The "Edit Details of Asset AS002017" Dialog is displayed	P F
69	In the "Edit Details of Asset AS002017" Dialog click on the Finance Tab	The Finance Tab is displayed	D D
70	In the Finance Tab click on the Dispose Button	The "Disposal of Asset AS002017" Dialog is displayed	P F
71	In the "Disposal of Asset AS002017" Dialog select the "Disposal Status - >Scrap" pulldown selection and then click the "OK" Button	The "Edit Details of Asset AS002017" Dialog is displayed	P F





72	In the "Edit Details of Asset AS002017" Dialog click the "OK" Button	The "Search Assets" Dialog is displayed	P F
73	Inspect the "Search Assets" Dialog AS002017 record – the Status Description is retired	The status description is retired	P F
74	In the "Search Assets" Dialog click on the Close Button	The Hardcat Asset Management Screen is displayed	P F
75	Select menu item Lists- >Purchase Orders	The "Search Purchase Orders" Dialog is displayed	D D
76	In the "Search Purchase Orders" Dialog click on the "New Button"	The "Purchase Order Template" Dialog is displayed	P F
77	In the "Purchase Order Template" Dialog click on the "OK" Button	The "Purchase Order Details" Dialog is displayed	D D
78	In the "Purchase Order Details" Dialog click on the "Supplier" Button	The Supplier Dialog is displayed	P F
79	In the Supplier Dialog locate and select OSI Laserscan, and then click the "OK" Button	The "Purchase Order Details" Dialog is displayed	P F
80	In the "Purchase Order Details" Dialog click on the "Deliver to" Button	The Locations Dialog is displayed	P F
81	In the Locations Dialog click on the SRTA FAT Location Folder	The SRTA FAT Location Folders are displayed	D D
82	Click on the FAT Depot Folder	The FAT Depot Cabinet 1 Spare Parts location is displayed	P F



83	In the Locations Dialog click on the "OK" Button	The "Purchase Order Details" Dialog is displayed	P F
84	In the "Purchase Order Details" Dialog click on the "Contact" Button	The Person Dialog is displayed	P F
85	In the Persons Dialog click on the Company Employees Folder	The Company Employees are displayed	P F
86	Locate and select Bruce Orenstein, and then click on the "OK" Button	The "Purchase Order Details" Dialog is displayed	D D
87	In the "Purchase Order Details" Dialog click on the "New" Button	The "Purchase Order Item" is displayed	D D
88	In the "Purchase Order Item" Dialog click on the Product Button	The Product Dialog is displayed	P F
89	Click on the Toll Point Folder	The Toll Point Folders are displayed	□ □
90	Click on the AVC Folder	The Laser Scanner Unit displayed	□ □
91	Click on the "OK" Button	The "Purchase Order Item" Dialog is displayed	D D
92	In the "Purchase Order Item" Dialog click the "Create Asset on Delivery" checkbox and the "Requires Serial Number" checkbox	The "Create Asset on Delivery" checkbox and the "Requires Serial Number" checkbox are checked	P F
93	In the "Purchase Order Item" Dialog click on the "Asset Type Button	The Asset Type Dialog is displayed	P F





94	In the Asset Type Dialog click on the SRTA FAT Locations Folder	The SRTA FAT Locations Folder are displayed	D D
95	Click on the FAT Toll Point 1 (2 Lanes + 1 Shoulder) Folder	The FAT Toll Point 1 (2 Lanes + 1 Shoulder) Folder are displayed	D D
96	Click on the AVC Folder	The Laser Scanner Unit is displayed	□ □ P F
97	Click on the OK Button	The "Purchase Order Item" Dialog is displayed	P F
98	In the "Purchase Order Item" Dialog click on the "OK:" Button	The "Purchase Order Details" Dialog is displayed	P F
99	In the "Purchase Order Details" Dialog click on the "OK:" Button	The "Search Purchase Orders" Dialog is displayed	D D
100	In the "Search Purchase Orders" Dialog select the Purchase Order	The Purchase Order is selected	D D
101	In the "Search Purchase Orders" Dialog click the "Print" Button	The "Printing Purchase Order X" Dialog is displayed	D D
102	In the "Printing Purchase OrderX" Dialog select the "Confirmed" Radio Button	The "Confirmed" Radio Button is selected	P F
103	In the "Printing Purchase Order X" Dialog click on the "View" Button	The "Page Setup" Dialog is displayed	D D
104	Click on the "Landscape" Radio Button and the click the "OK" Button	A pdf of the Purchase Order is displayed	P F
105	Close the pdf viewer	A "Hardcat Asset Management" Dialog is	



		displayed with the question "Change the status to Confirmed"		P F
106	In the "Hardcat Asset Management" Dialog click on the "Yes" Button	The "Printing Purchase OrderX" Dialog is displayed		P F
107	In the "Printing Purchase OrderX" Dialog click on the "Close" Button	The "Search Purchase Orders" Dialog is displayed the Purchase Order Status "Confirmed"		P F
108	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
109	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate - For all repair activities, the details of the repair and the parts disposition, including parts retired, are recorded and tracked in MOMS.		
1	Open Hardcat Client	Hardcat Client is displayed	P F
2	Log into the Hardcat Client Enter Username and Password Login Role = Maintenance Manager	The Hardcat Client Interface is displayed	P F
3	Select menu item Reports->->Assets	The "Generate Fixed Asset Report" Dialog is displayed	P F
4	In the "Generate Fixed Asset Report" Dialog click on the "Custom Button"	The "Generate Custom Assets Report" Dialog is displayed	P F
5	In the "Generate Custom Assets Report" Dialog Box scroll and select "Asset Inventory By Location"  Under "Scope of Report" select "All of Hardcat" Radio Button, and then click on the "View" Button	The Asset Inventory By Location Report pdf is displayed	P F
6	Inspect the Asset Inventory By Location Report i.e. AS002003 (compare to the sample the Asset Inventory By Location Report)	The Asset Inventory By Location Report is OK	P F
7	Close the pdf reader	The pdf reader closes	P F



8	In the "Generate Custom Asset Report" Dialog click the Close Button	The "Generate Custom Asset Report" Dialog closes		P F
9	In the "Generate Fixed Asset Report" Dialog select "Asset History Details (Landscape)" Under "Scope of Report" select "All of Hardcat" Radio Button, and then click on the "View" Button	The "Asset History Details (Landscape)" Report is displayed		P F
10	Inspect the Asset History Details (Landscape)" Report i.e. AS002003 (compare to the sample Asset History Details (Landscape) Report	The Asset History Details (Landscape) Report is OK		P F
11	Close the pdf reader	The pdf reader closes		P F
12	Close the pdf reader	The pdf reader closes		P F
13	In the "Generate Fixed Asset Report" Dialog click the "Close" Button	The "Hardcat Asset Management" screen is displayed		P F
14	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
15	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate that an automated email notification is generated when the level of spares reach a configurable threshold		
1	Open Hardcat Client	Hardcat Client is displayed	□ □
2	Log into the Hardcat Client Enter Username and Password Login Role = Maintenance Manager	The Hardcat Client Interface is displayed	P F
3	Select menu item Lists->Stock	The "Search Stock" Dialog is displayed	P F
4	Locate the Stock Description "External UPS Battery Kit" and then click the "Edit" Button	The "Stock Details" Dialog is displayed	P F
5	Click on the "Stock on Hand" Tab	The "Stock on Hand" Tab is displayed	P F
6	Observe the Quantity (on Hand) and the Reorder (Point)	Quantity on Hand = 6.000 Reorder Point = 3.000	P F
7	Click on the "Transfer" Button	The "Issue Stock" Dialog is displayed	P F
8	In the "Quantity to Issue" enter 4.000	The "Quantity to Issue" displays 4.000	□ □ P F
9	Under Stock Destination select the "Location" Radio Button	The "Location" Radio Button is selected	P F
10	Click on the "Location" Button	The "Location" Dialog is displayed	□ □





11	Select the FAT Toll Point 1- >Spare Parts Cabinet Folder	The "FAT Toll Point 1 Spare Parts Cabinet" Location is displayed (and selected)	P F
12	Click on the "OK" Button	The "Issue Stock" Dialog is displayed	P F
13	Click the "Issue Now" Button	The Stock Issue Report pdf is generated and displayed	P F
14	Inspect the Stock Issue Report pdf (compare to the sample Stock Issue Report)	The Stock Issue Report is OK	D D
15	Close the PDF Reader	The PDF Reader is closed	□ □
16	In the "Issue Stock" Dialog click the "Close" Button	The "Stock Details" Dialog is displayed	□ □
17	In the "Stock on Hand" Tab verify that the FAT Depot Cabinet 1 Spare Parts Quantity is 2.000	The FAT Depot Cabinet 1 Spare Parts Quantity is 2.000	P F
18	Click on the "OK" Button	The "Search Stock" Dialog is displayed	P F
19	Click the "Close" Button	The Hardcat Asset  Management Window is displayed	P F
20	Wait a few minutes and an email notification with the Subject Line "Purchase Order Opened" will be sent with a Purchase Order Fixed Format 1 pdf attachment	The email with pdf attachment are received	P F
21	Open the email and then open the Purchase Order	The email and Purchase Order Fixed Format 1 pdf	P F



	Fixed Format 1 pdf attachment	attachment are displayed		
22	Inspect the Purchase Order Fixed Format 1 pdf attachment (compare to the sample the Purchase Order Fixed Format 1 pdf)	The Purchase Order Fixed Format 1 pdf is OK		P F
23	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
24	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



### 7 Test Case MOMS-06. MOMS Component Monitoring Test

### **Table 7-1 MOMS-06 Test Objectives**

Demonstrate the following: Nagios XI Status Display, Remote Repair Scenarios, Onsite Repair Scenarios with a Technician Auto-Assigned to a Problem Report, On-site Repair Scenario with the Problem Report Assigned to Maintenance Manager (i.e. NOT auto-assigned to a Technician), Remote Repair/On-Site Repair Scenarios, Problem Report Searches by Location, Status, Asset Name, and Problem Code, MOMS maintaining time synchronization to the master NTP clock, the software used for time synchronization supports monotonic changes to time, and that the time is synchronized to the nearest millisecond.

### 7.1 Test Approach and Results Evaluation

#### 7.1.1 Test Approach

1

- Demonstrate remote access to MOMS (i.e. using the FAT VPN)
- Demonstrate the Nagios XI Status Display. Refer to the Master Fault List Spreadsheet in Section 10.
- Demonstrate Remote Repair Scenarios. Refer to the Master Fault List Spreadsheet in Section 10.
- Demonstrate Onsite Repair Scenarios Technician Auto-Assigned to Problem Report. Master Fault List Spreadsheet in Section 10.
- Demonstrate On-site Repair Scenario Problem Report Assigned to Maintenance Manager (i.e. NOT auto-assigned to a Technician). Master Fault List Spreadsheet in Section 10.
- Demonstrate Remote Repair/On-Site Repair Scenarios. Master Fault List Spreadsheet in Section 10.
- Demonstrate Problem Report Searches by Location, Status, Asset Name, and Problem Code
- Demonstrate MOMS maintaining time synchronization to the master NTP clock
- Demonstrate that the software used for time synchronization supports monotonic changes to time
- Demonstrate that the time is synchronized to the nearest millisecond.



# 7.1.2 Test Facility

This test is run at the Cottage Grove, MN

#### 7.1.3 Test Evaluation

The Test Procedure in 7.2 will be determined to have passed if all the test scenarios pass.

### 7.1.1 Test Preparation

**Table 7.1.1-1 MOMS-06 Pre-Test Items** 

	Pre-Test Item	Pass/Fail
1	FAT dry run testing is completed, Test Readiness Review meeting completed, and the system is under configuration control/lockdown	P F

#### 7.2 Test Procedure

**Table 77.2-1 MOMS-06 Test Procedure** 

Step	Action	<b>Expected Results</b>	<b>Actual Results</b>	Pass/Fail
	Demonstrate remote access to MOMS (i.e. using the FAT VPN)			
1	Open the Cisco AnyConnect Secure Mobility Client Software	The Cisco AnyConnect Secure Mobility Client Dialog is displayed		P F
2	Select 50.233.84.62 (vpn.cg.Companytsrc.net) VPN and click on the "Connect" Button	The Cisco AnyConnect Secure Mobility Client Login Dialog is displayed		P F
3	Enter username, password, and then click on the "OK" Button	The Cisco AnyConnect Dialog is displayed		P F
4	In the Cisco AnyConnect Dialog click on the "Accept" Button	The Cisco AnyConnect Dialog closes and the PC/Laptop is connected to the VPN		P F
5	Complete Table 10-1, the Test Discrepancies /			□ □



Step	Action	<b>Expected Results</b>	Actual Results	Pass/Fail
	Comments Report as necessary.			
6	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:	
			Date/Time:	



	Demonstrate the Nagios XI Status Display		
1	Open Internet Explorer	Internet Explorer is displayed	P F
2	Enter the following URL http://MOMSNagiosServer/na giosxi	The Nagios XI Login Webpage Is displayed	P F
3	Enter username and password, and click on the "Login" Button Login Role = System Administrator	The Nagios XI Home Webpage is displayed	P F
4	On the Nagios Home Webpage select Details- >HostGroup Summary	The Host Group Status Summary View is displayed	P F
5	Verify that the "Status Summary For All Host Groups" Table Hosts and Services are all Green (OK)	All Host and Service are Green (OK)	P F
6	Insert the fault from the FAT Master Fault List Spreadsheet 30 - VES Camera (RSE-011) 31 - AVC Loop Controller (RSE-011) 32 - AVC Main Loop Card (RSE-011) 33 - AVC Axle Loop Card (RSE-011) 34 - AVI Reader (RSE-011) 35 - AVI Antenna (RSE-011) 36 - Laser Scanner (RSE-011) 37 - VES Illuminator (RSE-011) 38 - TZC (RSE-011)		P F





	39 - NAS (RSE-011)		
7	Verify that the "Status Summary For All Host Groups" Table Hostgroup <see for<br="" spreadsheet="">Hostgroup Name&gt; Hosts <see for="" host<br="" spreadsheet="">Status&gt;, and Services <see Spreadsheet for Service Status&gt;</see </see></see>	Hostgroup <see for="" hostgroup="" name="" spreadsheet=""> Hosts <see for="" host="" spreadsheet="" status="">, and Services <see for="" service="" spreadsheet="" status=""></see></see></see>	P F
8	On the Nagios Home Webpage select Details- >HostGroup Overview	The Host Group Status Overview is displayed	P F
9	Verify that the "Status Summary For All Host Groups" Hosts and Services are all critical	All Host and Service are critical	P F
10	Proceed to one of the following <see for="" repair="" scenario="" spreadsheet="" type=""> Remote Repair Scenario/ On-site Repair Scenario/ Remote Repair/On-site Repair Scenario</see>		P F
11	Remove the fault from the FAT System – See FAT Master Fault List Spreadsheet for removal procedure		P F
12	Open Internet Explorer	Internet Explorer is displayed	□ □
13	Enter the following URL http://MOMSNagiosServer/na giosxi	The Nagios XI Login Webpage Is displayed	D D



14	Enter username and password, and click on the "Login" Button Login Role = System Administrator	The Nagios XI Home Webpage is displayed		P F
15	On the Nagios Home Webpage select Details- >HostGroup Summary	The Host Group Status Summary View is displayed		P F
16	Verify that the "Status Summary For All Host Groups" Hosts and Services are all Green (OK)	All Host and Service are Green (OK)		P F
17	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
18	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	





	Demonstrate Remote Repair Scenarios		
1	Check for an email notification (with your email client) with the subject Line "PR – Opened"	An email notification is received with Subject Line "PR Opened"	P F
2	Open Internet Explorer	Internet Explorer is displayed	□ □ P F
3	Enter the following URL http://hardcat.srta.local/HardcatWeb/	The Hardcat Login Webpage Is displayed	D F
4	Enter username and password, and click on the "Login" Button Login Role = Maintenance	The Hardcat Business Intelligence Webpage is displayed	P F
	Manager		
5	Click on the Problem Management Tab. Uncheck Show Only Problems I own and Show only My Problems	The Problem Management Webpage is displayed	P F
6	Mouse over PR and select the Edit Menu Item		P F
7	From the Status List select Acknowledge	Acknowledge is selected	D D
8	Click the Save Button	PR Status is Acknowledged	□ □ P F
9	Mouse over PR and select the Edit Menu Item		□ □ P F
10	From the Status List select Suspended	Suspended is selected	P F
11	Click the Save Button	PR Status is Suspended	□ □ P F



12	Wait for SRTA Authorization to Proceed before continuing to the next step		D F
13	Mouse over PR and select the Edit Menu Item		□ □ P F
14	From the Status List select Inprocess	In-process is selected	P F
15	Click the Save Button	PRStatus is In-process	□ □ P F
16	Mouse over PR and select the Edit Menu Item		□ □ P F
17	Click on More Text	The More Text Dialog is displayed	□ □ P F
18	Enter a description of the remote repair action e.g. Ran equipment diagnostics – rebooted equipment - fixed problem	The remote repair action is displayed	P F
19	Click the Save Button	PRis saved	□ □ P F
20	Mouse over PRand then select the Edit Menu Item	PR is displayed	P F
21	From the Status List select Completed	Completed is selected	□ □ P F
22	Click the Save Button	PR Status is Completed	□ □ P F
23	Mouse over PR and then select the Edit Menu Item	PRis displayed	P F
24	From the Status List select Closed	Closed is selected	□ □



25	Click the Save Button	PRStatus is Closed		□ □ P F
26	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
27	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate Onsite Repair Scenarios – Technician Auto-Assigned to Problem Report (DEFERRED TO INTEGRATION TESTING		
1	Check for an email notification (with your email client) with the subject Line "PR – Opened"	An email notification is received with Subject Line "PROpened"	P F
2	Open Internet Explorer	Internet Explorer is displayed	□ □ P F
3	Enter the following URL http://hardcat.srta.local/HardcatWeb/	The Hardcat Login Webpage Is displayed	□ □ P F
4	Enter username and password, and click on the "Login" Button Login Role = See Master Fault List Spreadsheet	The Hardcat Business Intelligence Webpage is displayed	P F
5	Click on the Problem Management Tab	The Problem Management Webpage is displayed	P F
6	Mouse over PR and select the Edit Menu Item		P F
7	From the Status List select Acknowledge	Acknowledge is selected	□ □
8	Click the Save Button	PRStatus is Acknowledged	□ □ P F
9	Mouse over PRand select the Edit Menu Item		□ □ P F
10	From the Status List select Suspended	Suspended is selected	□ □ P F
11	Click the Save Button	PR Status is Suspended	□ □ P F



12	Wait for SRTA Authorization to Proceed before continuing to the next step		P F
13	Mouse over PRand select the Edit Menu Item		□ □ P F
14	From the Status List select On-Hold	On-Hold is selected	□ □ P F
15	Click the Save Button	PR Status is On-Hold	□ □ P F
16	Mouse over PR_and select the Edit Menu Item		P F
17	From the Status List select Inprocess	In-process is selected	□ □ P F
18	Click the Save Button	PRStatus is In-process	□ □ □ P F
19	Mouse over PR_ and select the Edit Menu Item		□ □ P F
20	Click on More Text	The More Text Dialog is displayed	□ □ □ P F
21	Enter a description of the on- site repair action	The on-site repair action is displayed	□ □ P F
22	Click the Save Button	PRis saved	□ □ P F
23	Select the Asset Management Tab	The Asset Management Webpage is displayed	□ □ P F
24	Click the Move an Asset Button		□ □ P F
25	Click on the Asset Barcode Magnifying Glass	The Asset Dialog is displayed	□ □ P F
26	Click on AS	The AS Dialog Box is displayed	D D



27	Click on the Location Magnifying Glass	The Locations Dialog is displayed	P F
28	Click on the FAT Depot Folder	The FAT Depot Cabinet 1 Spare Parts is displayed	D D
29	Click on FAT Depot Cabinet 1 Spare Parts	The Location is FAT Depot Cabinet 1 Spare Parts	D D
30	Click the Save Button		P F
31	Mouse over AS and then select the Edit Menu Item	The Asset AS_ Webpage is displayed	P F
32	Click on Information	The Information fields are displayed	□ □ P F
33	Click on the Status List and select Spares Inventory	Status is Spares Inventory	□ □ P F
34	Click on the Save Button	The Asset Display is updated i.e. Status is Spares_Inventory_Non -Operational	P F
35	Click on the Asset Management Tab	The Assets are displayed	□ □ P F
36	In the Search Field Box select Location And Equals Click on the Folder Button	The Location Folders are displayed	P F
37	Click on SRTA FAT Locations	The SRTA FAT Location Folders are displayed	P F
38	Click on FAT Depot	The FAT Depot Cabinet Spare Parts is displayed	P F





39	Click on FAT Depot Cabinet Spare Parts	The Location is equal to FAT Depot Cabinet 1 Spare Parts	P F
40	Click the Apply Button	The Assets filtered by Location are displayed.	□ □ P F
41	Locate the Barcode of a spare asset		P F
42	Click on Move an Asset	The Asset Dialog is displayed	□ □ P F
43	Enter the Asset Barcode in the Asset Barcode Textbox (or click in the Asset Barcode Textbox, and then use the portable scanner to scan the Barcode Label) and click the Apply Button	The Asset Dialog is displayed	P F
44	Click on the Location Magnifying Glass	The Location Dialog is displayed	□
45	Click on the SRTA FAT Locations Folder	The SRTA FAT Locations Folders are displayed	P F
46	Click on the FAT Site  Click on the XXX Folder	The FAT Site locations are displayed	P F
47	Select FAT XXX	The Location is FAT XXX	P F
48	Click on the Save Button	The Asset Management Display indicates the Asset is located at FAT XXX Location	P F
49	Mouse over  ASx and then select the Edit Menu Item	The Asset AS Webpage is displayed	P F
50	Click on Information	The Information fields are displayed	P F



51	Click on the Status List and select Operational_Deployed	Status is Operational_Deployed		P F
52	Click on the Save Button	The Asset Display is updated i.e. Status is Operational_Deployed		P F
53	Click on the Problem  Management Tab	The Problem Management Webpage is displayed		P F
54	From the Status List select Completed	Completed is selected		P F
55	Click the Save Button	PR Status is Completed		P F
56	Mouse over PRand then select the Edit Menu Item	PRis displayed		P F
57	From the Status List select Completed	Completed is selected		P F
58	Click the Save Button	PR Status is Completed		P F
59	Mouse over PRand then select the Edit Menu Item	PR is displayed		P F
60	From the Status List select Closed	Closed is selected		P F
61	Click the Save Button	PRStatus is Closed		P F
62	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
63	Record Names of Test Conductor and SRTA Witness.		Test Conductor: SRTA Witness:	



		Date/Time:	
		<del></del>	



	Demonstrate On-site Repair Scenario – Problem Report Assigned to Maintenance Manager (i.e. NOT auto-assigned to a Technician)		
1	Check for an email notification (with your email client) with the subject Line "PR Opened"	An email notification is received with Subject Line "PROpened"	P F
2	Open Hardcat Client	Hardcat Client is displayed	□ □ P F
3	Log into the Hardcat Client Enter Username and Password Login Role = Maintenance Manager	The Hardcat Client Interface is displayed	P F
4	Select menu item Lists- >People. Select Company Employees Folder. Select a Maintenance Manager. Click on the Edit Button. Click Presets	The "List of People" Dialog is displayed	P F
5	In the "List of People" Dialog check the "Technician_Schedules"	The "Detail for Person" Dialog is displayed	P F
6	Click on the Files Tab	The Files Tab is displayed with a file named "Work_Schedule_Exa mple"	P F
7	In the Files Tab click the click on the "Open" Button	The Work Schedule is displayed	□ □ P F
8	Review the Work Schedule		□ □ P F





9	Click on the "Detail for Person" Dialog and then click on the "Cancel" Button	The "List of People" Dialog is displayed	P F
10	In the "List of People" Dialog click on the "Close" Button	The Hardcat Asset Management Screen is displayed	P F
11	Select menu item Lists->Problems	The "Search Problems" Dialog is displayed	□ □ P F
12	In the "Search Problems" Dialog click on the "Clear current criteria" Button and the click on the "Apply" Button	The list of Problem Reports is displayed	P F
13	Locate and select PR, and then click on the "Edit" Button	The "Problem" Dialog is displayed	D D
14	Reassign the Problem Report to a Technician		P F
15	In the "Problem" Dialog click on the "Engineer"	The "Choose OK to select Person "" Dialog is displayed	P F
16	Select a Company technician and click on the "OK" Button	The "Problem" Dialog is displayed	P F
17	In the "Search Problems" Dialog click on the "Close" Button	The Hardcat Asset Management Screen is displayed	P F
18	Check for an email notification (with your email client) with the subject Line "PR Problem Report Re-Assigned"	An email notification is received with Subject Line "PR	P F
19	Open Internet Explorer	Internet Explorer is displayed	□ □ P F





20	Enter the following URL http://hardcat.srta.local/HardcatWeb/	The Hardcat Login Webpage Is displayed	P F
21	Enter username and password, and click on the "Login" Button Login Role = See Master Fault List Spreadsheet	The Hardcat Business Intelligence Webpage is displayed	P F
22	Click on the Problem Management Tab. Uncheck the Show Only Problems I Own.	The Problem Management Webpage is displayed	D D
23	Mouse over PR and select the Edit Menu Item		□ □ P F
24	From the Status List select Acknowledge	Acknowledge is selected	D D
25	Click the Save Button	PRStatus is Acknowledged	D D
26	Mouse over PRand select the Edit Menu Item		□ □ P F
27	From the Status List select Suspended	Suspended is selected	D D
28	Click the Save Button	PRStatus is Suspended	□ □ P F
29	Wait for SRTA Authorization to Proceed before continuing to the next step		D D
30	Mouse over PR and select the Edit Menu Item		□ □ P F
31	From the Status List select On-Hold	On-Hold is selected	D D
32	Click the Save Button	PRStatus is On-Hold	□ □ □ P F



33	Mouse over PR		
	and select the Edit Menu Item		P F
34	From the Status List select In-	In-process is selected	
	process		P F
35	Click the Save Button	PRStatus	
		is In-process	P F
36	Mouse over PR		
	and select the Edit Menu Item		PF
37	Click on More Text	The More Text Dialog	
		is displayed	P F
38	Enter a description of the on-	The on-site repair	
	site repair action	action is displayed	P F
39	Click the Save Button	PR is	
		saved	P F
40	Select the Asset Management	The Asset Management	
	Tab	Webpage is displayed	P F
41	Click the Move an Asset		
	Button		P F
42	Click on the Asset Barcode	The Asset Dialog is	
	Magnifying Glass	displayed	PF
43	Click on	The	
	AS002002	AS002002 Dialog Box is	P F
		displayed	
44	Click on the Location	The Locations Dialog	
	Magnifying Glass	is displayed	PF
45	Click on the 75A-227.0	The 75A-227.0Cabinet	
	Folder	1 Spare Parts is	$\begin{array}{c c} & \square & \square \\ & P & F \end{array}$
		displayed	
46	Click on 227.0-Spare Parts	The Location is 227.0- Spare Parts Cabinet 1	
	Cabinet 1	Spare I arts Caomet I	P F
47	Select CAB-75A-227.0-SPC-		
	01 and Click the Save Button		P F



48	Mouse over AS002002 and then select the Edit Menu Item	The Asset AS002002 Webpage is displayed	P F
49	Click on Information	The Information fields are displayed	P F
50	Click on the Status List and select Spares Inventory Non- Operational	Status is Spares Inventory Non- Operational	P F
51	Click on the Save Button	The Asset Display is updated i.e. Status is Spares_Inventory_Non -Operational	P F
52	Click on the Asset Management Tab	The Assets are displayed	P F
53	In the Search Field Box select Location And Equals Click on the Folder Button	The Location Folders are displayed	P F
54	Click on 75A Locations	The 75A Folders are displayed	□ □ P F
55	Click on 227.0	The 227.0is displayed	□ □ P F
56	Click on 227.0-Spare Parts Cabinet	The Location is equal to 227.0-Spare Parts Cabinet	P F
57	Select CAB-75A-227.0- SPC-01 and Click the Apply Button	The Assets filtered by Location are displayed.	P F
58	Locate the Barcode of a spare asset AS002002		D D
59	Select Asset Management Tab Click on Move an Asset	The Asset Dialog is displayed	D D





60	Enter the Asset Barcode in the Asset Barcode Textbox (or click in the Asset Barcode Textbox, and then use the portable scanner to scan the Barcode Label) and click the Apply Button	The Asset Dialog is displayed	P F
61	Click on the Location Magnifying Glass	The Location Dialog is displayed	P F
62	Click on the 75A Locations Folder	The 75A Locations Folders are displayed	□ □ P F
63	Click on the 227.0	The 227.0 locations are displayed	P F
64	Select 227.0-VES and select TP-75A-227.0-N-VES-02	The Location is FAT TP-75A-227.0-N-VES-02	□ □ P F
65	Click on the Save Button	The Asset Management Display indicates the Asset is located at FAT TP-75A-227.0-N-VES- 02Location	P F
66	Search for asset code AS002002 and Mouse over AS002002 and then select the Edit Menu Item	The Asset AS002002 Webpage is displayed	P F
67	Click on Information	The Information fields are displayed	□ □ P F
68	Click on the Status List and select Deployed_ Operational	Status is Deployed_ Operational	D D
69	Click on the Save Button	The Asset Display is updated i.e. Status is Deployed_Operational	P F



70	Click on the Problem  Management Tab  Mouse over PRXXXXXX  and then select the Edit  Menu Item	The Problem Management Webpage is displayed for PRXXXXXX		P F
71	From the Status List select Completed	Completed is selected		P F
72	Click the Save Button	PR Status is Completed		P F
73	Mouse over PRand then select the Edit Menu Item	PR is displayed		P F
74	From the Status List select Closed	Closed is selected		P F
75	Click the Save Button	PRStatus is Closed		P F
76	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
77	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	





	Demonstrate Remote Repair/On-Site Repair Scenarios		D D
1	Check for an email notification (with your email client) with the subject Line "PR Opened"	An email notification is received with Subject Line "PROpened"	P F
2	Open Internet Explorer	Internet Explorer is displayed	□ □ P F
3	Enter the following URL http://hardcat.srta.local/Hard catWeb/	The Hardcat Login Webpage Is displayed	D D
4	Enter username and password, and click on the "Login" Button Login Role = See Master Fault List Spreadsheet	The Hardcat Business Intelligence Webpage is displayed	P F
5	Click on the Problem Management Tab. Uncheck Show Only My Problems and Show Only Problems I Own	The Problem Management Webpage is displayed	P F
6	Mouse over PRand select the Edit Menu Item		D D
7	From the Status List select Acknowledge	Acknowledge is selected	□ □ P F
8	Click the Save Button	PRStatus is Acknowledged	P F
9	Mouse over PRand select the Edit Menu Item		D D
10	From the Status List select Suspended	Suspended is selected	□ □ P F



11	Click the Save Button	PR Status is Suspended	□ □ P F
12	Wait for SRTA Authorization to Proceed before continuing to the next step		P F
13	Mouse over PRand select the Edit Menu Item		P F
14	From the Status List select In-process	In-process is selected	□ □ P F
15	Click the Save Button	PR Status is In-process	□ □ P F
16	Mouse over PRand select the Edit Menu Item		P F
17	Click on More Text	The More Text Dialog is displayed	D D
18	Enter a description of the remote repair action e.g. Ran equipment diagnostics – rebooted equipment – did not fix problem	The remote repair action is displayed	P F
19	Click the Save Button	PRis saved	D D
20	Mouse over PRand select the Edit Menu Item		P F
21	From the Status List select On-Hold	On-Hold is selected	□ □ P F
22	Click the Save Button	PRStatus is On-Hold	D D
23	Assign the Problem to a Technician	Problem is assigned to Technician	□ □ P F



24	Click on the "Logout" Button	The Hardcat Login Webpage is displayed	□ □ P F
25	A technician is dispatched to the site, when the technician arrives at the site proceed to the next step		P F
26	Open Internet Explorer	Internet Explorer is displayed	D D
27	Enter the following URL http://hardcat.srta.local/Hard catWeb/	The Hardcat Login Webpage Is displayed	P F
28	Enter username and password, and click on the "Login" Button Login Role = Technician	The Hardcat Business Intelligence Webpage is displayed	P F
29	Click on the Problem Management Tab. Uncheck Show Only Problems I Own	The Problem Management Webpage is displayed	D D
30	Mouse over PR and select the Edit Menu Item		□ □ P F
31	From the Status List select Inprocess	In-process is selected	□ □ P F
32	Click the Save Button	PR Status is In-process	P F
33	Mouse over PR and select the Edit Menu Item		□ □ P F
34	Click on More Text	The More Text Dialog is displayed	D D
35	Enter a description of the onsite repair action	The on-site repair action is displayed	□ □ P F
36	Click the Save Button	PRis saved	□ □



37	Select the Asset Management Tab	The Asset Management Webpage is displayed	D D
38	Click the Move an Asset Button		□ □ P F
39	Click on the Asset Barcode Magnifying Glass	The Asset Dialog is displayed	□ □ P F
40	Click on AS	The AS Dialog Box is displayed	□ □ P F
41	Click on the Location Magnifying Glass	The Locations Dialog is displayed	□ □ P F
42	Click on the 75A Folder	The 75A is displayed	D D
43	Click on 227.0- Spare Parts Cabinet Folder	The Location is Spare Parts Cabinets Folder	D D
44	Click the Save Button		□ □ □ P F
45	Mouse over AS and then select the Edit Menu Item	The Asset AS Webpage is displayed	D D
46	Click on Information	The Information fields are displayed	P F
47	Click on the Status List and select Spares Inventory_Non_Operational	Status is Spares Inventory	P F
48	Click on the Save Button	The Asset Display is updated i.e. Status is Spares_Inventory_Non -Operational	P F
49	Click on the Asset Management Tab	The Assets are displayed	□ □ P F
50	In the Search Field Box select Location And Equals	The Location Folders are displayed	P F



	Click on the Folder Button		
51	Click on 75A Locations	The 75A Location Folders are displayed	□ □ P F
52	Click on 227.0	The 227.0is displayed	□ □ P F
53	Click on 227.0- Spare Cabinet 1	The Location is equal to 227.0- Spare Cabinet 1	P F
54	Select CAB-75A-227.0- SPC-01 and Click the Apply Button	The Assets filtered by Location are displayed.	P F
55	Locate the Barcode of a spare asset		□ □ P F
56	Select Asset Management Tab and Click on Move an Asset	The Asset Dialog is displayed	D D
57	Enter the Asset Barcode in the Asset Barcode Textbox and click the Apply Button	The Asset Dialog is displayed	P F
58	Click on the Location Magnifying Glass	The Location Dialog is displayed	P F
59	Click on the 75A Locations Folder	The 75A Locations Folders are displayed	□ □ P F
60	Click on the 227.0-Toll Point	The 227.0-Toll Point locations are displayed	P F
61	Select 227.0-VES	The Location is 227.0-VES	D D
62	Selecet TP-75A-227.0-N-VES-03 and Click on the Save Button	The Asset Management Display indicates the Asset is located at 227.0-VES Location	P F



63	Click on Asset Management Tab. In the Search Filed Box select Code contains AS000003. Mouse over AS000003 and then select the Edit Menu Item	The Asset AS002002 Webpage is displayed	P F
64	Click on Information	The Information fields are displayed	□ □ P F
65	Click on the Status List and select Deployed_Operational	Status is Deployed_Operational	P F
66	Click on the Save Button	The Asset Display is updated i.e. Status is Deployed_ Operational	P F
67	Click on the Problem  Management Tab	The Problem Management Webpage is displayed	P F
68	Mouse Over the PRXXXXXX and Click on Edit.From the Status List select Completed	Completed is selected	P F
69	Click the Save Button	PR Status is Completed	□ □ P F
70	Mouse over PRand then select the Edit Menu Item	PRis displayed	P F
71	From the Status List select Closed	Closed is selected	□ □ P F
72	Click the Save Button	PR Status is Closed	P F
73	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.		P F



74	Record Names of Test	Test Conductor:	
	Conductor and SRTA		
	Witness.	SRTA Witness:	
		Date/Time:	
		- <del></del> -	



	Demonstrate Problem		
	Report Searches by		
	Location, Status		
	Description, Asset Name,		
	and Problem Code	** 1 GH :	
1	Open Hardcat Client	Hardcat Client is displayed	□ □ P F
2	Log into the Hardcat Client Enter Username and Password Login Role = Maintenance Manager	The Hardcat Client Interface is displayed	P F
3	Select menu item Lists->Problems	The "Search Problems" Dialog is displayed	P F
4	In the "Search Problems" Dialog click on Clear Current Criteria, and then click on Apply Button	The complete list of Problem Reports in the Hardcat Database is displayed	P F
5	In the "Search Problems"  Dialog – Load Saved Search List Box select Problem Report Search by Asset Name, Location, Status Description and Problem Code	The search options are displayed	P F
	Search By Problem Code		
6	In the Problem Code Search Box change the * to PRXXXXX, and then click the Apply Button	Problem Report PRXXXXX is displayed	P F
7	Click on Edit Button	The Problem Report is displayed	□ □ P F
8	In the Problem Dialog click on the Cancel Button	The Search Problems Dialog is displayed	□ □ P F



9	In the Problem Code Search Box change the * and then click the Apply Button	The complete list of Problem Reports in the Hardcat Database is displayed	P F
	Search By Status Description		
10	In the Status Description Search Box enter * change the * to Closed and then click the Apply Button	All of the Closed Problem Reports are displayed	P F
11	Click on Edit Button	The Closed Problem Report is displayed	□ □ P F
12	In the Problem Dialog click on the Cancel Button	The Search Problems Dialog is displayed	P F
13	In the Status Description Search Box change the * and then click the Apply Button	The complete list of Problem Reports in the Hardcat Database is displayed	P F
	Search By Location Name		
14	In the Location Name Search Box change the * to VES and then click the Apply Button	All of the Problem Reports at the Location Name are displayed	P F
15	Click on Edit Button	The Problem Report is displayed	□ □ P F
16	In the Problem Dialog click on the Cancel Button	The Search Problems Dialog is displayed	P F
17	In the Location Name Search Box change the VES to * and then click the Apply Button	The complete list of Problem Reports in the Hardcat Database is displayed	P F



	Search By Asset Name			
18	In the Asset Name Search Box change the * to ALPR and then click the Apply Button	All of the Problem Reports with an Asset Name containing ALPR are displayed		P F
19	Click on Edit Button	The Problem Report is displayed		P F
20	In the Problem Dialog click on the Cancel Button	The Search Problems Dialog is displayed		P F
21	In the Asset Name Search Box change the * and then click the Apply Button	The complete list of Problem Reports in the Hardcat Database is displayed		P F
22	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
23	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate Linux Server maintaining time synchronization to the master NTP clock	Procedure executed as Part of RSE-09	
1.	Run the Linux Operating System ntpq -p command  Inspect the command output to verify that the MOM Nagios Server ntp daemon is configured to synchronize to the NTP clocks	Validate that there is an asterisk (*) next to one of the NTP master clocks	P F
2.	Verify that the clock offset displayed is less than 1 msec		□ □ P F
3.	Change the IP addresses of the master clocks to an invalid IP address in the ntp.conf file.  Restart the NTP daemon	Validate that NTP synchronization does not occur by running ntpq –p to see the absence of an asterisk. Wait at least 10 minutes as this may take some time to occur.	P F
4.	Manually change the system clock to be 5 minutes behind the actual time	Validate local time has been changed	P F
5.	Change the IP addresses of the master clocks back to the valid clock IP address in the ntp.conf file.  Restart the NTP daemon	Validate that NTP synchronization is now true again occur by running ntpq –p to see the presence of an asterisk. Record the	P F



		clock offset:		
6.	Continue to monitor the clock offset over the next $5-10$ minutes to determine that the offset is decreasing			P F
7.	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
8.	Record Names of Test Conductor and SRTA Witness.		Test Conductor: SRTA Witness: Date/Time:	



	Demonstrate that the software used for time synchronization supports monotonic changes to time			
1	Run the Linux Operating System ntpq -np command	The command output is OK		P F
	Inspect the command output to verify that the MOMS Nagios Server ntp daemon supports monotonic changes in time (i.e. compare to the sample output)			
2	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
3	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



	Demonstrate that the time is synchronized to the nearest millisecond.			
1	Run the Linux Operating System time command (ntpq -np).	The command output is OK		P F
	Inspect the command output to verify that the MOM Nagios Server time is synchronized to the nearest millisecond (i.e. compare to the sample output)			
2	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
3	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	



#### 8 Test Case MOMS-07. MOMS SLA Test

#### **Table 8-1 MOMS-07 Test Objectives**

	Demonstrate the following: SLA Response Time Report, SLA
1	Repair Time Report, SLA Automated Issue Notification Time
	Report, and the Subsystem/SLA (i.e. SLA) Availability Report.

#### 8.1 Test Approach and Results Evaluation

#### 8.1.1 Test Approach

- Demonstrate the SLA Response Time Report
- Demonstrate the SLA Repair Time Report
- Demonstrate the SLA Automated Issue Notification Time Report
- Demonstrate the Subsystem/SLA (i.e. SLA) Availability Report

#### 8.1.2 Test Facility

This test is run at the Cottage Grove, MN

#### 8.1.3 Test Evaluation

The Test Procedure in 8.2 will be determined to have passed if all the test scenarios pass.

#### 8.1.1 Test Preparation

Table 8.1.1-1 MOMS-07 Pre-Test Items

	Pre-Test Item	Pass/Fail
1	FAT dry run testing is completed, Test Readiness Review meeting completed, and the system is under configuration control/lockdown	□ □ P F
2	Completion of MOMS-03: MOMS Trouble Failure Reports Test, MOMS-04. MOMS Priorities and Escalation Test, and MOMS-06: MOMS Component Monitoring Test	□ □ P F



## 8.2 Test Procedure

**Table 8.2-1 MOMS-07 Test Procedure** 

Step	Action	<b>Expected Results</b>	<b>Actual Results</b>	Pass/Fail
	Demonstrate the SLA Response Time Report			
1	Open Internet Explorer	Internet Explorer is displayed		□ □ □ P F
2	Enter the following URL: <a href="http://tableau.srta.local">http://tableau.srta.local</a> and <a href="http://tableau.srta.local">hit &lt; Enter &gt;</a>	The Tableau Login Webpage is displayed		D D
3	Log into the Tableau Web Interface Enter Username and Password Login Role = Report User			P F
4	Select the SLA Response Times Report			□ □ P F
5	Enter the Time Period and Priority			P F
6	Run the Report	The SLA Response Times Report pdf is displayed		P F
7	Inspect the SLA Response Times Report (compare to the sample SLA Response Time Report)	The SLA Response Time Report is OK		P F
8	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
9	Record Names of Test Conductor and SRTA Witness.		Test Conductor: SRTA Witness:	



Step	Action	<b>Expected Results</b>	Actual Results	Pass/Fail
			Date/Time:	





	Demonstrate the SLA Repair Time Report			
1	Open Internet Explorer	Internet Explorer is displayed		P F
2	Enter the following URL: <a href="http://tableau.srta.local">http://tableau.srta.local</a> and hit <enter></enter>	The Tableau Login Webpage is displayed		P F
3	Log into the Tableau Web Interface Enter Username and Password Login Role = Report User			P F
4	Select the SLA Repair Times Report			P F
5	Enter the Time Period and Priority			□ □ P F
6	Run the Report	The SLA Repair Times Report pdf is displayed		P F
7	Inspect the SLA Repair Times Report (compare to the sample SLA Response Time Report)	The SLA Repair Time Reports is OK		P F
8	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
9	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	





	Demonstrate the SLA Automated Issue Notification Time Report			
1	Open Internet Explorer	Internet Explorer is displayed		P F
2	Enter the following URL: <a href="http://tableau.srta.local">http://tableau.srta.local</a> and <a href="http://tableau.srta.local">hit &lt; Enter &gt;</a>	The Tableau Login Webpage is displayed		P F
3	Log into the Tableau Web Interface Enter Username and Password Login Role = Report User			P F
4	Select the SLA Automated Issue Notification Times Report			D D
5	Enter the Time Period and Priority			P F
6	Run the Report	The SLA Automated Issue Notification Times Report pdf is displayed		P F
7	Inspect the SLA Automated Issue Notification Times Report (compare to the sample SLA Automated Issue Notification Times Report)	the SLA Automated Issue Notification Times Report		P F
8	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
9	Record Names of Test Conductor and SRTA Witness.		Test Conductor: SRTA Witness:	



		Date/Time:	





	Demonstrate the Subsystem/SLA (i.e. SLA) Availability Report			
1	Open Internet Explorer	Internet Explorer is displayed		P F
2	Enter the following URL: <a href="http://tableau.srta.local">http://tableau.srta.local</a> and <a href="http://tableau.srta.local">hit &lt; Enter &gt;</a>	The Tableau Login Webpage is displayed		P F
3	Log into the Tableau Web Interface Enter Username and Password Login Role = Report User			P F
4	Select the Subsystem/SLA Availability Report			P F
5	Enter the Date Range and SLA Name (i.e. Toll Zone Controller Availability)			P F
6	Run the Report	The SLA/Subsystem Availability Report pdf is displayed		P F
7	Inspect the SLA/Subsystem Availability Report (compare to the sample SLA/Subsystem Availability Report)	The SLA/Subsystem Availability Report is OK		P F
8	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary.			P F
9	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time:	

## 9 MOMS/ITS Dashboard Test (MOMS-11)

#### **Table 9-1 MOMS-11 Test Objectives**

1	Verify MOMS ability to create and update the MOMS/ITS
1.	Dashboard.

#### 9.1 Test Approach and Results Evaluation

#### 9.1.1 Test Approach

The MOMS/ITS Dashboard will be run for the duration of the FAT. Observations of the data displayed during the various FAT tests (primarily RSE and AVITD tests) will be used to verify required functionality. Note that the dashboard displays will match functionally to those illustrated in SDDD Chapter 16, but the implemented appearance may differ in detail

#### 9.1.2 Test Facility

This test is run at the Cottage Grove, MN test track

#### 9.1.3 Test Evaluation

The Test Procedure in 9.2 will be determined to have passed if all the test scenarios pass.

#### 9.2 Test Preparation

Table 9.2-1 MOMS-11 Pre-Test Items

	Pre-Test Item	Pass/Fail
1	FAT dry run testing is completed, Test Readiness Review meeting completed, and the system is under configuration control/lockdown	P F
2	RSE testing is underway	□

#### 9.3 Test Scenarios

The Test Scenarios include:

• Verification that format and content of the MOMS/ITS dashboard is consistent with its allocated requirements as described in the SDDD, Chapter 16.



- Verification of dashboard access permissions
- Verify that the MOMS/ITS dashboard
  - o Is updated in accordance with its specified refresh rate
  - Displays overall system health and Level Of Service (LOS) via a schematic map and detailed data displays
  - o Provides the ability to refresh the display upon command.
  - Displays a real-time, operational, color-coded schematic map of the entire express lane corridor(s) along with current state of the devices and processes along the corridor—both in the Express and GP lanes
    - Real time, operational, color coded map of the EL and GP lanes by Facility, including current status of ITS devices (MDS, AVI Scan Sites, CCTV, generators, Hubs, and TR CMS
    - Drill down into more detailed layers of dashboard data
  - o Displays MDS status and traffic by EL and GP lanes
  - Permits an authorized user to logically enable and disable MDS data for use by the DPS



#### 9.4 Test Procedure

**Table 9.4-1 Test Procedure: MOMS-11 Test** 

Step	Action	<b>Expected Results</b>	Actual Results	Pass/Fail
1	User logs in to the TFH Tableau with a username and password for a user not authorized to view the MOMS/ITS dashboard	User is logged in, but cannot navigation to the MOMS/ITS dashboard.		P F
2	User logs in to the TFH Tableau with a username and password for a user authorized to view the MOMS/ITS dashboard	User is logged in, and is provided with a menu item to navigate to the MOMS/ITS dashboard.		P F
3	Logged-in user navigates to the MOMS/ITS dashboard	Top-level MOMS/ITS dashboard is displayed.		□ □ □ P F
4	Verify that the dashboard displays a schematic map of the entire express lane corridor(s) along with current state of the devices and processes along the corridor—both in the Express and GP lanes.	Entire roadway is displayed as illustrated in SDDD Chapter 16, Figure 16-17		P F
5	Verify that the current date and facility are shown at the top of the display	Current date and facility are displayed		P F
6	Mouse-click on the "Facility" button and select "Interstate-75A South"	Drop-down menu lists Interstate-75A South.		P F
7	Mouse-click on the "Refresh" button	Dashboard Last Update is set to the current time.		P F
8	User mouse-clicks on each of the Legend icons in turn, observing the results, and then mouse-clicking on the same icon again to turn off the display of those devices.	The corresponding device icons are displayed along the roadway as each legend icon is selected, and turned off when the		P F



Step	Action	<b>Expected Results</b>	Actual Results	Pass/Fail
		legend icon is mouse- clicked the second time.		
9	Mouse-click on the icon on the roadway for TP1 and TP2	A drill-down next page is displayed, as shown in the representative sample of RRS MOMS/ITS Dashboard, providing the status of the equipment as provided by the MOMS for each of the monitored components comprising the set of Toll Point equipment.		P F
10	Mouse-click on one of the components listed in the Toll Point drill-down.	The next page shows detailed MOMS data for the selected device, as shown in the representative sample of RRS MOMS/ITS Dashboard, is displayed		P F
11	If no faulted MDS units are displayed, mouse-click on the Legend MDS icon to force display of all MDS units.	All MDS unit icons are displayed along the roadway.		P F
12	Mouse-click on any one of the MDS icons along the roadway.	A Pop-Up window appears that shows the status of all MDS units, as shown in the representative sample of SDDD Chapter 16, Figure 16-20.		P F
13	User mouse-clicks on one of the radio buttons in the "ONLINE" column to take the selected MDS "Offline."	Selected radio button turns from green to red.		P F



14	User mouse-clicks on the red radio buttons in the "ONLINE" column to take the selected MDS "Online."	Selected radio button turns from red to green.	P F
15	Observe the chart on the right side of the Pop-Up, which should display the current traffic volume and speed at each MDS site.	Chart displays traffic volume and speed at each MDS site. Data will only be displayed if vehicle runs are in progress, or that occurred during the previous sampling interval (20 second nominal)	P F
16	User mouse-clicks on the "Close" button for the Pop- Up window.	The Pop-Up window is removed from the display.	P F
17	User mouse-clicks on the Legend TR CMS Sign icon	All TR CMS locations at Cottage Grove are displayed along the roadway	P F
18	Mouse-click on one of the TR CMS icons shown on the roadway	A display the status of the TR CMS, as well as the current sign image, as shown in the representative sample of RRS MOMS/ITS Dashboard.	P F
19	Mouse-click on the Back To Previous Dashboard link.	Previous Dashboard displayed	□ □
20	Repeat steps 15 through 17 for the remaining legend icons:  Example  • Hub Building • AVI Scan Site  Note: No Generator at the test track	Display of equipment status as reported by MOMS is displayed for each of the selected devices.	P F





21	Observe the LOS (Traffic Conditions) indicated on the GP and EL lanes.  NOTE: This is simulated data.	Traffic conditions indicators will be grey when no traffic is on the test track passing an MDS site (or passed within the previous 20 second period). Traffic conditions should indicate "red" (less than 25 MPH) or "green" (greater than 45 MPH) while vehicles are traveling on the test track.		P F
22	Complete Table 10-1, the Test Discrepancies / Comments Report as necessary			P F
23	Record Names of Test Conductor and SRTA Witness.		Test Conductor:  SRTA Witness:  Date/Time	



# 10 Test Discrepancies/Comments Report

## **Table 10-1 Test Discrepancies**

TEST DISCREPANCIES/COMMENTS REPORT				
Test No.	Procedure Step	Date	Discrepancy/Comment	

# 11 MOMS Master Fault List - See Master\_Fault\_List\_8\_12\_2015.xlsx