Overview

Reports

October 2009

Trimble
Mobile Resource Management

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Table of Contents

Table of Contents iii
Introduction to Reports 1
New in This Document 1
GeoManager Service Package 2
GeoManager Value Packages 4
Mobile Applications Value Packages 8
Standard Fleet Productivity & Management 10
Activity – Detail Report (Device Based) 11
Activity – Detail Report (Employee Based) 13
Activity – Detail Report with Ignition On/Off 15
Activity – Detail Report (LAT/LON) 18
Activity – Summary (Device Based) 19
Activity Summary Report (Employee Based) 21
Asset Snapshot Report 22
Consolidated Reports (Exception) 25
Data Usage Report 26
Handset Usage Report (Exception) 28
Idling Report (Exception) 30
Inactivity 31
Landmark Proximity Exception Report 35
Org Hierarchy Audit Report 36
Role Based Access Control (RBAC) Audit Trail Report 37
Speed Exception Report 38
Stop Report 40
User Logon Report 42
WLAN Hourly Usage Report (Wi-Fi) 44
Low Battery Exception Report 45
Odometer Report 47
Vehicle Maintenance Overdue 49
Vehicle Maintenance History 50
Mobile Worker Productivity 52
Mileage Totals Report 53
Mileage Exception Report 53
Mobile Device Vicinity Report 55
Off Hours Use Exception Report 56
Parameterized Stop 58
Stop Exception Report 60
Stop Count Exception Report 61
Stop Duration Exception Report 62
Stop Summary at Landmark Type by Device 64

Stop Summary at Landmark Type by Landmark 65
Trip Report - Summary 66
Trip Report - Detail 68
Zone Exception Report 75
Workshift Productivity 77
Workshift Productivity Reports 78
Count in Work Center, C.O., or Remote Exception Report 78
Time In Work Center Reports (Employee Based) 79
Count and Time at Work Center Detail Report (Employee Based) 79
Count and Time at Work Center Summary Report (Employee Based) 80
Time at Work Center (Employee Based) Exception Report 80
Count at Work Center Exception Report (Employee Based) 81
Time In Work Center Reports (Device Based) 82
Time in Yard – End Of Day Reports (Employee Based) 82
Early Arrival End of Day Report Detail (Employee Based) 82
Early Arrival End of Day Report Summary (Employee Based) 83
Time in Yard – End Of Day Reports (Device Based) 83
Mileage Reports 84
Detail – Mileage 84
Summary – Mileage 85
Out of Hours Reports 85
Time In Yard Reports (Employee Based) 87
Time at Start Location Before Departure Detail Report (Employee Based) 87
Time at Start Location Before Departure Summary Report (Employee Based) 88
Time at Start Location Before First Departure Exception Report (Employee Based) 88
Time In Yard Reports (Device Based) 90
Time In Yard Before First Departure Detail Report 90
Time In Yard Before First Departure Summary Report 91
Time In Yard Before First Departure Exception Report 91
Travel Time and Mileage Report Detail Report (Employee Based) 92
Travel Time and Mileage Report Summary Report (Employee Based) 93
Travel Time Report Exception Report (Employee Based) 94
Travel Time and Mileage Summary Report (Device Based) 95
Travel Time Exception Report 96
Time Period Evaluation Report 97
Weekly Time Variance 101
Advanced Fuel and Carbon Emission Management 103
Carbon Emission Detail Report 104
Carbon Emission Summary Report 106
Engine Speed / Road Speed Detail - Distance 107
Engine Speed / Road Speed Detail - Duration 110
Engine Speed / Road Speed Detail - Fuel 112
Engine Speed / Road Speed Detail - Fuel Economy 114
Engine Speed / Road Speed Summary - Duration 116

Engine Speed / Road Speed Summary - Fuel 119
Engine Speed / Road Speed Summary - Fuel Economy 122
Fuel Usage Summary 125
PTO Fuel Usage Report 128
State Mileage 132
Sudden Acceleration Exception 133
Time Period Evaluation Report 134
Trip Report - Detail 135
Trip Report - Summary 135
Advanced Engine Diagnostics Reports 136
Trip Report - Detail 137
Trip Report - Summary 137
Diagnostic Fault Exception 137
Diagnostic Fault Exception Report and (Rolling Freeze Frame) 140
Live Diagnostics (Vehicle Diagnostics Summary) 143
Live Diagnostics and (Rolling Freeze Frame) 144
Advanced Safety Management (Available with 45XX Only) 148
Brake Summary Report 149
Hard Brake Report (Exception) 151
Hard Brake Detail (Freeze Frame) 153
Following Distance - Detail Report (Requires VORAD) 155
Following Distance Trend Report 158
Time Period Evaluation Report 161
Sensor Connect 162
Switch Status Report 163
Switch Status Monitoring (Enhanced Activity Detail Report with Switch Status) 164
Switch Status Exception Report 165
Temperature Monitoring (Enhanced Activity Detail Report with Temp Status) 167
Temperature Status Report (Exception) 169
Timecard Reporting 172
TimeConnect Edit History Report 174
TimeConnect Summary Report 174
Messaging and Communications 177
Forms Sent Report 178
Form Report 178
Forms Reports (Exception) 180
Messaging Exception Report and Alert 180
Message Report 182
Workflow Status
(Includes Messaging) 184
Workflow Status Real Time View 185
Workflow Status 185
Hours of Service & Driver Log Compliance (Includes Messaging) 188

Audit History 189
Combined Report. 190
Daily Log Report as PDF with Grid Graph 191
Daily Log Report Un-edited as PDF. 193
Hours Worked and Available 193
Log Hours Detail Report 195
Log Hours Summary Report 197
Missing Logs Summary Report 197
Rule Exception Detail Report 198
Rule Exception Summary Report 199
Appendix A. 201
Report Generation. 201

1 Introduction to Reports

GeoManager reports are designed to help you improve productivity by providing information on current and the historical activities of your organization's mobile devices.

This feature allows you to generate reports based upon a set of parameters you define. Reports are available on demand, can be downloaded or emailed to specified personnel on a scheduled basis (i.e., daily, weekly, monthly, etc.) Reports can also be delivered to a custom-create FTP site address hosted by Trimble Mobile Resource Management (MRM) and set up for you to retrieve at your convenience.

GeoManager offers an array of features and reports about your workers, their work and your vehicles. Along with the standard features and reports, several value-added GeoManager packages are available to help you address the specific business needs and requirements of your company. Whether you need to reduce fuel costs, increase your workers' productivity, get advanced vehicle diagnostics for your fleet or encourage driver safety, GeoManager value-added packages deliver the information you need to help you efficiently manage your business.

The various GeoManager Reports Packages are:

- Standard Fleet Productivity & Management
- Mobile Worker Productivity
- Workshift Productivity
- Advanced Fuel and Carbon Emission Management
- Advanced Engine Diagnostics
- Advanced Safety Management
- Sensor Connect
- Timecard Reporting
- Messaging and Communications
- Workflow Status (includes Messaging and Communications)
- Hours of Service & Driver Log Compliance (includes Messaging and Communications)

New in This Document

Activity Detail with Ignition On/Off - The Activity Detail with Ignition On/Off report provides ignition On/Off event timestamps in addition to the vehicle location details of the regular Activity-Detail Report.

GeoManager Service Package

GEOMANAGER - SERVICE PACKAGE					
Package Type	Report Name	Available with In-Vehicle Hardware or Handheld Solutions			
		PE (Handheld)	27xx (In-Vehicle Hardware)	31xx (In-Vehicle Hardware)	45xx (In-Vehicle Hardware)
Standard Fleet Productivity & Management					
	Activity Detail Report (Employee or Device Based)	X	X	X	X
	Activity Detail with Ignition On/Off	X	X	X	X
	Activity Detail with LAT/LON Report	X	X	X	X
	Activity Summary Report (Employee or Device Based)	X	X	X	X
	Asset Snapshot Report		X	X	X
	Consolidated Exception Report	X	X	X	X
	Data Usage Report (Wireless Carrier or Satellite and Wireless Carrier)		X	X	X
	Handset Usage Exception Report	X			
	Idling Exception Report		X	X	X
	Inactivity Report		X	X	X
	Landmark Exception Report	X	X	X	X
	Landmark Proximity Exception Report	X	X	X	X

GEOMANAGER - SERVICE PACKAGE					
Package Type	Report Name	Available with In-Vehicle Hardware or Handheld Solutions			
		PE (Handheld)	27xx (In-Vehicle Hardware)	31xx (In-Vehicle Hardware)	45xx (In-Vehicle Hardware)
	Organizational Hierarchy Audit Report	X	X	X	X
	Role Based Access Control Audit Reports	X	X	X	X
	Speed Exception Report	X	X	X	X
	Stop Report	X	X	X	X
	User Logon Report	X	X	X	X
	WLAN Hourly Usage Report (Wi-Fi)			X	
	Low Battery Exception Report		X	X	X
	Odometer Report		X	X	X
	Vehicle Maintenance Overdue Report		X	X	X
	Vehicle Maintenance History Report		X	X	X

GeoManager Value Packages

GEOMANAGER - VALUE PACKAGES					
Package Type	Report Name	Available with In-Vehicle Hardware or Handheld Solutions			
		PE	27xx	31xx	45xx
MOBILE WORKER PRODUCTIVITY					
	Mileage Totals Report	X	X	X	X
	Mileage Exception Report	X	X	X	X
	Mobile Device Vicinity Exception Report	X	X	X	X
	Off Hours Use Exception Report	X	X	X	X
	Parameterized Stop Report	X	X	X	X
	Stop Exception Report	X	X	X	X
	Stop Count Exception Report	X	X	X	X
	Stop Duration Exception Report	X	X	X	X
	Stop Summary at Landmark Type by Device Report	X	X	X	X
	Stop Summary at Landmark Type by Landmark Report	X	X	X	X
	Trip Summary Report		**OJ**	**OJ**	X
	Trip Detail Report		**OJ**	**OJ**	X
	Zone Exception Report	X	X	X	X
WORKSHIFT PRODUCTIVITY					

GEOMANAGER - VALUE PACKAGES					
Package Type	Report Name	Available with In-Vehicle Hardware or Handheld Solutions			
		PE	27xx	31xx	45xx
	Count in Work Center, Report (Exception)		X	X	X
	Count and Time at Work Center Report (Detail and Summary)		X	X	X
	Count and Time at Work Center Report (Exception)		X	X	X
	Early Arrival End of Day Report (Detail and Summary)		X	X	X
	Mileage Report (Detail and Summary)		X	X	X
	Out of Hours Report		X	X	X
	Time at Start Location Before Departure Report (Detail and Summary)		X	X	X
	Time at Start Location Before Departure Report (Exception)		X	X	X
	Travel Time and Mileage Report (Detail and Summary)		X	X	X
	Travel Time and Mileage Report (Exception)		X	X	X
	Time Period Evaluation (driver score card)				X
	Weekly Time Variance		X	X	X
ADVANCED FUEL AND CARBON EMISSION MANAGEMENT					
	Carbon Emission Detail Report		J	J	X

GEOMANAGER - VALUE PACKAGES					
Package Type	Report Name	Available with In-Vehicle Hardware or Handheld Solutions			
		PE	27xx	31xx	45xx
	Carbon Emission Summary Report		J	J	X
	Engine Speed / Road Speed Detail Distance Report				X
	Engine Speed / Road Speed Detail Duration Report				X
	Engine Speed/ Road Speed Detail - Fuel Report				X
	Engine Speed / Road Speed Detail - Fuel Economy Report				X
	Engine Speed / Road Speed Summary - Duration Report				X
	Engine Speed / Road Speed Summary - Fuel Report				X
	Engine Speed / Road Speed Summary - Fuel Economy Report				X
	Fuel Usage Summary Report				X
	PTO Fuel Usage Report (Requires Sensor Connect Package)		J	J	X
	State Mileage Report		X	X	X
	Sudden Acceleration Exception Report				X
	Time Period Evaluation Report (Driver Scorecard)				X
	Trip Report (Detail and Summary)		OJ	OJ	X
ADVANCED ENGINE DIAGNOSTICS					

GEOMANAGER - VALUE PACKAGES					
Package Type	Report Name	Available with In-Vehicle Hardware or Handheld Solutions			
		PE	27xx	31xx	45xx
	Trip Report - Detail				X
	Trip Report - Summary				X
	Diagnostic Fault Exception Report		**OJ**	**OJ**	X
	Diagnostic Fault Exception Report w/ Rolling Freeze Frame				X
	Live Diagnostics				X
ADVANCED SAFETY MANAGEMENT					
	Braking Summary Report				X
	Hard Braking Exception Report w/ Rolling Freeze Frame and				X
	Following Distance Detail and Summary Reports (with Bendix [formerly Eaton] VORAD)				X
	Time Period Evaluation (with Bendix [formerly Eaton] VORAD)				X
SENSOR CONNECT					
	Switch Status Report (4 switches max per vehicle)		X	X	X
	Switch Status Monitoring (Enhanced Activity Detail Report)		X	X	X
	Switch Status Exception Report		X	X	X
	Temperature Monitoring (Enhanced Activity Detail Report)		X	X	X
	Temperature Exception Report		X	X	X

Mobile Applications Value Packages

MOBILE APPLICATIONS - VALUE PACKAGES					
Package Type	Report Name	Available with In-Vehicle Hardware or Handheld Solutions			
		PE	iDT3000 (all iLMs)	V4 (most WinMobile Devices)	iLM31XX or 45XX
TIMECARD REPORTING					
	TimeConnect Detail Report	X			X
	TimeConnect Edit History Report	X			X
	TimeConnect Summary Report	X			X
MESSAGING AND COMMUNICATIONS					
	Forms Sent Report	X	X		X
	Form Report	X	X		X
	Forms Exception Report	X	X		X
	Messaging Exception Report	X	X		X
	Message Report	X	X		X
WORKFLOW STATUS (Includes Messaging)					
	Workflow Status Real Time View	X	X		
	Workflow Status Report	X	X		
HOURS OF SERVICE & DRIVER LOG COMPLIANCE (Includes Messaging)					
	Audit History Report		X		X
	Combined Report		X		X
	Daily Log Report as PDF with Grid Graph		X		X
	Daily Log Report Un-edited as PDF		X		X
	Hours Worked and Available Report		X		X

MOBILE APPLICATIONS - VALUE PACKAGES					
Package Type	Report Name	Available with In-Vehicle Hardware or Handheld Solutions			
		PE	iDT3000 (all iLMs)	V4 (most WinMobile Devices)	iLM31XX or 45XX
	Log Hours Detail		X		X
	Log Hours Summary		X		X
	Missing Logs Summary		X		X
	Rule Exception Report (Detail and Summary)		X		X

O = OBDII
J = JBUS

In order to set-up or edit GeoManager reports, you will need to log into GeoManager and select **Administration**.

The GeoManager **Reports** screen has three tabbed areas for the different types of reports:

- Standard Reports
- Exception Reports
- Driver Logs (only subscribing customers will see this tab)

2 Standard Fleet Productivity & Management

Standard Fleet Productivity & Management reports help improve driver productivity with reports and real-time alerts about stops, trip times, mileage totals, off-hours vehicle use, inactivity and work zones.

Standard Fleet Productivity & Management reports deliver the following benefits:

- Track your vehicles in real-time
- Reduce fuel costs by tracking maintenance, reducing unauthorized stops, curbing excessive speeding and idling, as well as planning better routes
- Increase the number of jobs performed per day
- Reduce overtime costs with more accurate tracking of driver time
- Improve customer service with faster response times

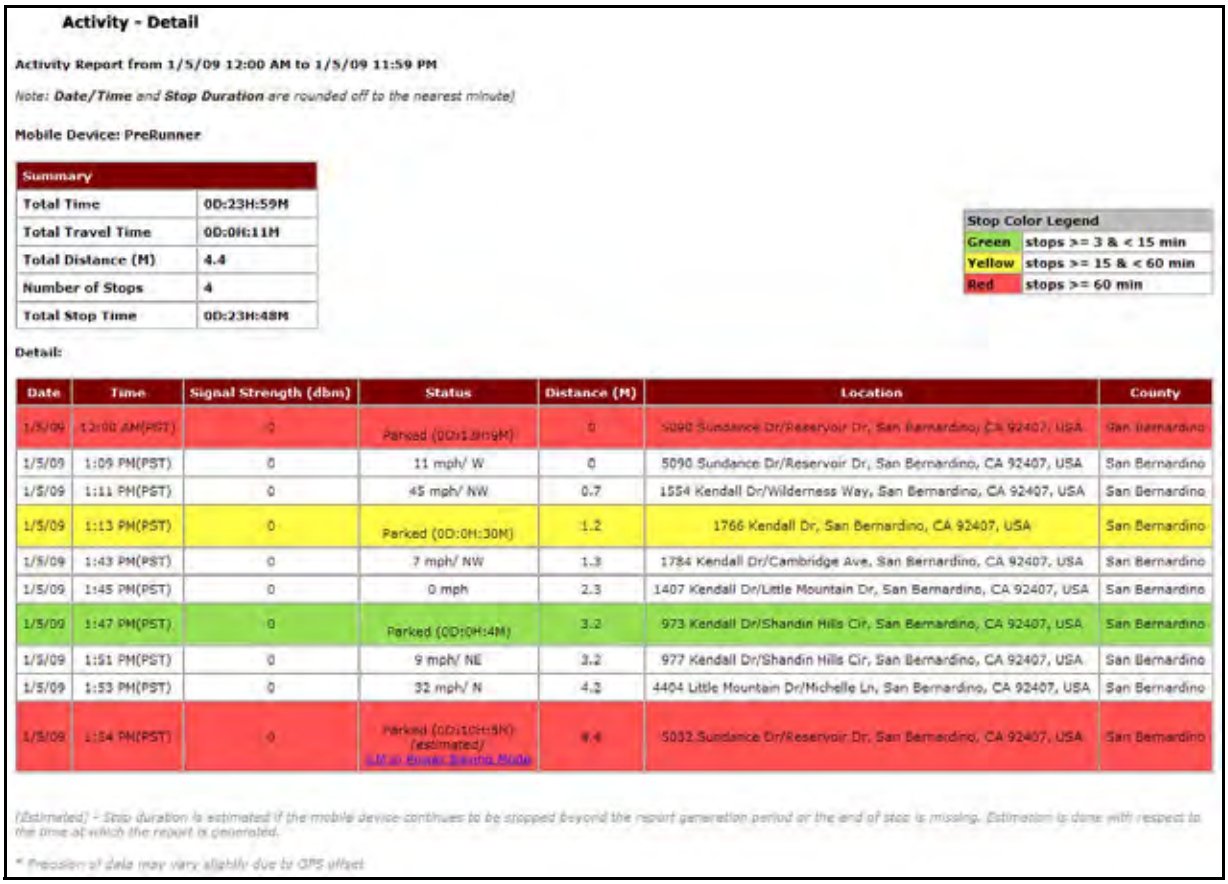
The various Standard Fleet Productivity & Management reports are:

- Activity Detail Report (Employee or Device Based)
- Activity Detail Report with Ignition On/Off
- Activity Detail with LAT/LON Report
- Activity Summary Report (Employee or Device Based)
- Asset Snapshot Report
- Consolidated Exception Report
- Data Usage Report (Wireless Carrier or Satellite and Wireless Carrier)
- Handset Usage Exception Report
- Idling Exception Report
- Inactivity Report
- Landmark Exception Report
- Landmark Proximity Exception Report
- Organizational Hierarchy Audit Report
- Role Based Access Control Audit Reports
- Speed Exception Report
- Stop Report
- User Logon Report
- WLAN Hourly Usage Report (Wi-Fi)

- Low Battery Exception Report
- Odometer Report
- Vehicle Maintenance Overdue Report
- Vehicle Maintenance History Report

Activity – Detail Report (Device Based)

The **Activity – Detail** report, shown in Figure 2–1, displays the driving activity for a mobile device as far back as 95 days from the current date. Customers who subscribe to Extended Storage can view data for a longer period of time that will vary according to their subscription.



Activity - Detail

Activity Report from 1/5/09 12:00 AM to 1/5/09 11:59 PM

*Note: **Date/Time** and **Stop Duration** are rounded off to the nearest minute)*

Mobile Device: PreRunner

Summary	
Total Time	0D:23H:59M
Total Travel Time	0D:0H:11M
Total Distance (M)	4.4
Number of Stops	4
Total Stop Time	0D:23H:48M

Stop Color Legend	
Green	stops >= 3 & < 15 min
Yellow	stops >= 15 & < 60 min
Red	stops >= 60 min

Detail:

Date	Time	Signal Strength (dbm)	Status	Distance (M)	Location	County
1/5/09	12:00 AM(PST)	0	Parked (0D:1H:9M)	0	5090 Sundance Dr/Reservoir Dr, San Bernardino, CA 92407, USA	San Bernardino
1/5/09	1:09 PM(PST)	0	11 mph/ W	0	5090 Sundance Dr/Reservoir Dr, San Bernardino, CA 92407, USA	San Bernardino
1/5/09	1:11 PM(PST)	0	45 mph/ NW	0.7	1554 Kendall Dr/Wilderness Way, San Bernardino, CA 92407, USA	San Bernardino
1/5/09	1:13 PM(PST)	0	Parked (0D:0H:30M)	1.2	1766 Kendall Dr, San Bernardino, CA 92407, USA	San Bernardino
1/5/09	1:43 PM(PST)	0	7 mph/ NW	1.3	1784 Kendall Dr/Cambridge Ave, San Bernardino, CA 92407, USA	San Bernardino
1/5/09	1:45 PM(PST)	0	0 mph	2.3	1407 Kendall Dr/Little Mountain Dr, San Bernardino, CA 92407, USA	San Bernardino
1/5/09	1:47 PM(PST)	0	Parked (0D:0H:4M)	3.2	973 Kendall Dr/Shandin Hills Cir, San Bernardino, CA 92407, USA	San Bernardino
1/5/09	1:51 PM(PST)	0	9 mph/ NE	3.2	977 Kendall Dr/Shandin Hills Cir, San Bernardino, CA 92407, USA	San Bernardino
1/5/09	1:53 PM(PST)	0	32 mph/ N	4.2	4404 Little Mountain Dr/Michelle Ln, San Bernardino, CA 92407, USA	San Bernardino
1/5/09	1:54 PM(PST)	0	Parked (0D:10H:5M) (estimated)	4.4	5032 Sundance Dr/Reservoir Dr, San Bernardino, CA 92407, USA	San Bernardino

(Estimated) - Stop duration is estimated if the mobile device continues to be stopped beyond the report generation period or the end of stop is missing. Estimation is done with respect to the time at which the report is generated.

** Precision of data may vary slightly due to GPS offset*

Figure 2–1: Activity - Detail Report

Item	Description
Summary	Shows the activity summary for the selected mobile device.
Total Time	The total amount of time selected for the report.

Item	Description
Total Travel Time	The total amount of time the mobile device was moving.
Total Distance	The total distance the mobile device traveled during the selected time period.
Number of Stops	The number of stops made by the mobile device during the selected time period.
Total Stop Time	The total amount of time accrued during stops.
Date	Date of the update, listed in mm/dd/yy format.
Time	Time of update, listed in hh:mm AM/PM format and time zone indicated (i.e. PST for Pacific Standard Time).
Status	Shows the duration if the mobile device is parked or stopped. The duration (length of time) will be in #D:##H:##M format. Displays the direction and speed of the mobile device when it is moving. Directions are indicated using standard symbols (i.e., N for North, SW for SouthWest).
Distance	Shows the distance the mobile device has traveled during the selected date range.
Location	Shows the closest address, cross street, city, state, and ZIP where mobile device was located at the time of last update.
County	County where mobile device was located at the time of update.

The report contains a header with the date range, followed by each mobile device's label, Summary and Detail.

The table displays the following information:

- White rows indicate the driving times of the mobile devices.
- Colored rows indicate the stop duration of the mobile devices.
- Stop duration defaults are:
  - A green highlight indicates 3 - 15 minutes.
  - A yellow highlight indicates a stop duration of 15 - 60 minutes.
  - A red highlight indicates a stop of 60 minutes or longer.

Note:
The color values can be defined in the Administration section.

Activity – Detail Report (Employee Based)

The **Activity – Detail (Employee Based)** report, shown in Figure 2–2, displays the driving activity for an employee as far back as 95 days from the current date. Customers who subscribe to Extended Storage can view data for a longer period of time that will vary according to their subscription.

Activity - Detail

Activity - Detail from 1/5/09 12:00 AM to 1/5/09 11:00 AM

*Note: **Date/Time** and **Stop Duration** are rounded off to the nearest minute)*

TWO, EMPLOYEE(22222)

Device	Shift Start	Shift End	Total Time	Total Travel Time	Total Distance	Number of Stops	Total Stop Time
U_807_00_KW	1/5/09 12:00 AM EST	1/5/09 EST	0D:11H:0M	0D:1H:56M	56.5	7	0D:9H:3M
Total			0D:11H:0M	0D:1H:56M	56.5	7	0D:9H:3M

Employee: TWO, EMPLOYEE(22222) Device: U_807_00_KW

Shift : 1/5/09 to 1/5/09

Stop Color Legend	
Green	stops >= 3 & < 15 min
Yellow	stops >= 15 & < 60 min
Red	stops >= 60 min

Date	Time	Signal Strength (dbm)	Status	Distance (M)	Location	County
1/5/09	12:00 AM(EST)	-74	Parked (0D:7H:13M)	0.0	8306 Boyle Pkwy, Twinsburg, OH 44087, USA	Summit
1/5/09	7:14 AM(EST)	-84	10mph/ E	0.0	8296 Boyle Pkwy, Twinsburg, OH 44087, USA	Summit
1/5/09	7:29 AM(EST)	-94	57mph/ NW	5.9	I 480, Macedonia, OH 44056, USA	Summit
1/5/09	7:44 AM(EST)	-69	56mph/ N	16.7	I 271, Pepper Pike, OH 44124, USA	Cuyahoga
1/5/09	7:59 AM(EST)	-60	29mph/ SE	29.7	Babbitt Rd/Lakeland Blvd, Euclid, OH 44123, USA	Cuyahoga
1/5/09	8:05 AM(EST)	-71	Parked (0D:0H:26M)	30.7	23176 Saint Clair Ave, Euclid, OH 44117, USA	Cuyahoga
1/5/09	8:32 AM(EST)	-64	10mph/ E	30.8	23226 Saint Clair Ave, Euclid, OH 44117, USA	Cuyahoga
1/5/09	8:48 AM(EST)	-82	Parked (0D:0H:36M)	35.2	15782 Mandalay Ave/Nathaniel Rd, Cleveland, OH 44110, USA	Cuyahoga
1/5/09	9:24 AM(EST)	-82	9mph/ SW	35.4	15742 Mandalay Ave/Ivanhoe Rd, Cleveland, OH 44110, USA	Cuyahoga
1/5/09	9:33 AM(EST)	-73	Parked (0D:0H:15M)	37.1	1170 Wayside Rd/Westfield Ave, Cleveland, OH 44110, USA	Cuyahoga
1/5/09	9:48 AM(EST)	-77	7mph/ NE	37.1	1158 Wayside Rd/Westfield Ave, Cleveland, OH 44110, USA	Cuyahoga
1/5/09	9:51 AM(EST)	-68	Parked (0D:0H:9M)	37.4	17733 Wickford Ct/Wickford Rd, Cleveland, OH 44112, USA	Cuyahoga
1/5/09	10:00 AM(EST)	-68	17mph/ NW	37.5	1665 Wayside Rd/Roseland Rd, Cleveland, OH 44112, USA	Cuyahoga
1/5/09	10:15 AM(EST)	-74	30mph/ SW	45.5	1347 Marquette St/Saint Clair Ave, Cleveland, OH 44114, USA	Cuyahoga
1/5/09	10:21 AM(EST)	-58	Parked (0D:0H:9M)	46.9	2963 Hamilton Ave/I 90, Cleveland, OH 44114, USA	Cuyahoga
1/5/09	10:31 AM(EST)	-64	10mph/ SW	46.9	2945 Hamilton Ave/I 90, Cleveland, OH 44114, USA	Cuyahoga
1/5/09	10:47 AM(EST)	-61	Parked (0D:0H:13M)	56.5	3014 W 121st St, Cleveland, OH 44111, USA	Cuyahoga

** Precision of data may vary slightly due to GPS offset*

Figure 2–2: Activity Detail (Employee Based) Report Example

Item	Description
Employee Name	The employee's name and employee number.
Summary	Shows the activity summary for the selected mobile device.
Device	The ID number of the mobile device associated with the employee.
Shift Start	The date and time of day the employee's shift began.
Shift End	The date and time of day the employee's shift ended.
Total Time	The total amount of time selected for the report.
Total Travel Time	The total amount of time the mobile device was moving.
Total Distance	The total distance the mobile device traveled during the selected time period.
Number of Stops	The number of stops made by the mobile device during the selected time period.
Total Stop Time	The total amount of time accrued during stops.
Date	Date of the update, listed in mm/dd/yy format.
Time	Time of update, listed in hh:mm AM/PM format and time zone indicated (i.e. PST for Pacific Standard Time).
Vehicle Battery Voltage	The amount of charge in the battery at the time of the report.
Signal Strength (dB)	The power of the signal from the iLM at the time of the report.
GPS Status	The status of the GPS signal at the time of the report.
Ignition On Time (hrs)	The amount of time the ignition is turned on in hours during the selected report period.
Ignition On Time (mins)	The amount of time the ignition is turned on in minutes during the selected report period.
Status	Shows the duration if the mobile device is parked or stopped. The duration (length of time) will be in #D:##H:##M format. Displays the direction and speed of the mobile device when it is moving. Directions are indicated using standard symbols (i.e., N for North, SW for SouthWest).
Distance (M)	Shows the distance the mobile device has traveled in miles during the selected date range.
Location	Shows the closest address, cross street, city, state and ZIP where mobile device was located at the time of last update.
County	County where mobile device was located at the time of update.

The report contains a header with the date range, followed by each mobile device's label, Summary and Detail.

The table displays the following information:

- White rows indicate the driving times of the mobile devices.
- Colored rows indicate the stop duration of the mobile devices.
- Stop duration defaults are:
  - A green highlight indicates 3 - 15 minutes.
  - A yellow highlight indicates a stop duration of 15 - 60 minutes.
  - A red highlight indicates a stop of 60 minutes or longer.

Note:
The color values can be defined in the Administration section.

Activity – Detail Report with Ignition On/Off

The Activity Detail with Ignition On/Off report, shown in Figure 2–3, provides ignition On/Off event timestamps in addition to the vehicle location details of the regular Activity-Detail Report.

Activity Detail with Ignition On/Off

Activity Detail with Ignition On/Off from 5/13/09 12:00 AM to 5/13/09 11:59 PM

*Note: **Date/Time** and **Stop Duration** are rounded off to the nearest minute)*

Mobile Device: FE118190

Summary	
Total Time	0D:23H:59M
Total Travel Time	0D:1H:52M
Total Distance (M)	9.1
Number of Stops	6
Total Stop Time	0D:22H:7M

Stop Color Legend	
Green	stops >= 3 & < 15 min
Yellow	stops >= 15 & < 60 min
Red	stops >= 60 min
Gray	Ignition On or Ignition Off

Detail:

Date	Time	Status	Distance (M)	Location	County
5/13/09	12:00 AM(PDT)	Parked (0D:9H:51M)	0.0	**Landmark:** Novel Maison 39659 Trinity Way, Fremont, CA 94538, US	Alameda
5/13/09	9:51 AM(PDT)	28 MPH/ E	0.1	39655 Trinity Way, Fremont, CA 94538-2067, US	Alameda
5/13/09	9:53 AM(PDT)	36 MPH/ SE	0.7	Fremont Blvd/Margery Dr, Fremont, CA 94538, USA	Alameda
5/13/09	9:55 AM(PDT)	40 MPH/ S	1.4	41063 Grimmer Blvd, Fremont, CA 94538, USA	Alameda
5/13/09	9:57 AM(PDT)	34 MPH/ S	2.2	42557 Grimmer Blvd/Valpey Park Ave, Fremont, CA 94538, USA	Alameda
5/13/09	9:59 AM(PDT)	35 MPH/ SE	3.0	43635 S Grimmer Blvd/Davenport Pl, Fremont, CA 94538, USA	Alameda
5/13/09	10:02 AM(PDT)	42 MPH/ S	4.4	45753 Fremont Blvd, Fremont, CA 94538, USA	Alameda
5/13/09	10:04 AM(PDT)	44 MPH/ S	5.2	46512 Fremont Blvd/Landing Pkwy, Fremont, CA 94538, USA	Alameda
5/13/09	11:31 AM(PDT)	Ignition off	unavailable	Location Not Available	County Not Available
5/13/09	11:31 AM(PDT)	Parked (0D:0H:2M) *(estimated)*	6.0	47051 Bayside Pkwy, Fremont, CA 94538, USA	Alameda
5/13/09	11:33 AM(PDT)	Ignition on	6.0	47051 Bayside Pkwy, Fremont, CA 94538, USA	Alameda
5/13/09	11:33 AM(PDT)	9 MPH/ N	6.0	47043 Bayside Pkwy, Fremont, CA 94538, USA	Alameda
5/13/09	11:35 AM(PDT)	26 MPH/ NE	6.5	46558 Landing Pkwy, Fremont, CA 94538, USA	Alameda
5/13/09	11:37 AM(PDT)	Ignition off	7.1	44917 Fremont Blvd, Fremont, CA 94538-6318, US	Alameda
5/13/09	11:37 AM(PDT)	Parked (0D:0H:2M)	7.1	**Landmark:** Blue building 44917 Fremont Blvd, Fremont, CA 94538-6318, US	Alameda
5/13/09	11:39 AM(PDT)	Ignition on	7.1	**Landmark:** Blue building 44917 Fremont Blvd, Fremont, CA 94538-6318, US	Alameda
5/13/09	11:39 AM(PDT)	11 MPH/ NW	7.1	44917 Fremont Blvd, Fremont, CA 94538-6318, US	Alameda
5/13/09	11:41 AM(PDT)	Ignition off	7.4	46190 Landing Pkwy, Fremont, CA 94538, USA	Alameda
5/13/09	11:41 AM(PDT)	Parked (0D:0H:3M)	7.4	I 880, Fremont, CA 94538, USA	Alameda
5/13/09	11:43 AM(PDT)	Ignition on	7.4	I 880, Fremont, CA 94538, USA	Alameda
5/13/09	11:44 AM(PDT)	22 MPH/ SW	7.5	46523 Fremont Blvd, Fremont, CA 94538, US	Alameda
5/13/09	11:46 AM(PDT)	39 MPH/ SE	8.3	46992 Fremont Blvd, Fremont, CA 94538, USA	Alameda
5/13/09	11:48 AM(PDT)	Ignition off	8.9	47059 Bayside Pkwy/Gateway Blvd, Fremont, CA 94538, USA	Alameda
5/13/09	11:48 AM(PDT)	Parked (0D:0H:2M)	8.9	47049 Bayside Pkwy/Gateway Blvd, Fremont, CA 94538, USA	Alameda
5/13/09	11:50 AM(PDT)	Ignition on	8.9	47049 Bayside Pkwy/Gateway Blvd, Fremont, CA 94538, USA	Alameda
5/13/09	11:50 AM(PDT)	11 MPH/ NW	8.9	47015 Bayside Pkwy, Fremont, CA 94538, USA	Alameda
5/13/09	11:52 AM(PDT)	Ignition off	9.1	47049 Bayside Pkwy, Fremont, CA 94538, USA	Alameda
5/13/09	11:52 AM(PDT)	Parked (0D:12H:7M) *(estimated)*	9.1	47049 Bayside Pkwy, Fremont, CA 94538, USA	Alameda

(Estimated) - Stop duration is estimated if the mobile device continues to be stopped beyond the report generation period or the end of stop is missing. Estimation is done with respect to the time at which the report is generated.

** Precision of data may vary slightly due to GPS offset*

Figure 2–3: Activity Detail with Ignition On/Off

Item	Description
Summary	Shows the activity summary for the selected mobile device.
Total Time	The total amount of time selected for the report.
Total Travel Time	The total amount of time the mobile device was moving.

Item	Description
Total Distance	The total distance the mobile device traveled during the selected time period.
Number of Stops	The number of stops made by the mobile device during the selected time period.
Total Stop Time	The total amount of time accrued during stops.
Date	Date of the update, listed in mm/dd/yy format.
Time	Time of update, listed in hh:mm AM/PM format and time zone indicated (i.e. PST for Pacific Standard Time).
Status	Shows the duration of time the mobile device is parked or stoppedas well as the status of the ignition (on/off) during the reporting period. The duration (length of time) will be in #D:##H:##M format. Displays the direction and speed of the mobile device when it is moving. Directions are indicated using standard symbols (i.e., N for North, SW for SouthWest).
Distance	Shows the distance the mobile device has traveled during the selected date range.
Location	Shows the closest address, cross street, city, state and ZIP where mobile device was located at the time of update.
County	The county where the mobile device was located when the information was transmitted.

The report contains a header with the date range, followed by each mobile device's label, Summary and Detail.

The table displays the following information:

- White rows indicate the driving times of the mobile devices.
- Colored rows indicate the stop duration of the mobile devices.
- Stop duration defaults are:
  - A green highlight indicates 3 - 15 minutes.
  - A yellow highlight indicates a stop duration of 15 - 60 minutes.
  - A red highlight indicates a stop of 60 minutes or longer.

Note:
The color values can be defined in the Administration section.

Activity – Detail Report (LAT/LON)

The **Activity – Detail** report, shown in Figure 2–4, displays the driving activity for a mobile device as far back as 95 days from the current date. Customers who subscribe to Extended Storage can view data for a longer period of time that will vary according to their subscription.

Latitude/Longitude Report

Latitude Longitude Report from 1/22/09 12:00 AM to 1/22/09 11:59 PM

*Note: **Date/Time** and **Stop Duration** are rounded off to the nearest minute)*

Mobile Device: 25

Summary	
Total Time	0D:18H:34M
Total Travel Time	0D:1H:55M
Total Distance(M)	26.7
Number of Stops	12
Total Stop Time	0D:16H:39M

Stop Color Legend	
Green	stops >= 3 & < 15 min
Yellow	stops >= 15 & < 60 min
Red	stops >= 60 min

Detail:

Date	Time	Status	Distance(M)	Latitude	Longitude
1/22/09	12:00 AM (EST)	Parked (0D:0H:13M)	0.0	40.236803	-74.763901
1/22/09	10:13 AM (EST)	8mph/ SE	0.0	40.236063	-74.763633
1/22/09	10:17 AM (EST)	Parked (0D:0H:43M)	0.1	40.237228	-74.764511
1/22/09	11:00 AM (EST)	8mph/ S	0.1	40.237272	-74.765074
1/22/09	11:11 AM (EST)	0mph	1.9	40.222682	-74.764703
1/22/09	11:20 AM (EST)	Parked (0D:0H:18M)	4.0	40.207009	-74.775921
1/22/09	11:38 AM (EST)	8mph/ NE	4.0	40.206715	-74.775611
1/22/09	11:49 AM (EST)	0mph	8.0	40.172093	-74.762907
1/22/09	11:51 AM (EST)	Parked (0D:0H:1M)	8.0	40.172046	-74.762602
1/22/09	11:52 AM (EST)	7mph/ E	8.1	40.172459	-74.761430
1/22/09	11:54 AM (EST)	Parked (0D:0H:1M)	8.1	40.172467	-74.761861
1/22/09	11:55 AM (EST)	7mph/ SW	8.1	40.172310	-74.762137

Figure 2–4 Activity - Detail Latitude/Longitude Report

Item	Description
Summary	Shows the activity summary for the selected mobile device.
Total Time	The total amount of time selected for the report.
Total Travel Time	The total amount of time the mobile device was moving.
Total Distance	The total distance the mobile device traveled during the selected time period.
Number of Stops	The number of stops made by the mobile device during the selected time period.
Total Stop Time	The total amount of time accrued during stops.
Date	Date of the update, listed in mm/dd/yy format.

Item	Description
Time	Time of update, listed in hh:mm AM/PM format and time zone indicated (i.e. PST for Pacific Standard Time).
Status	Shows the duration if the mobile device is parked or stopped. The duration (length of time) will be in #D:##H:##M format. Displays the direction and speed of the mobile device when it is moving. Directions are indicated using standard symbols (i.e., N for North, SW for SouthWest).
Distance	Shows the distance the mobile device has traveled during the selected date range.
Latitude	The specific global latitude of the mobile device when the transmission occurred.
Longitude	The specific global longitude of the mobile device when the transmission occurred.

The report contains a header with the date range, followed by each mobile device's label, Summary and Detail.

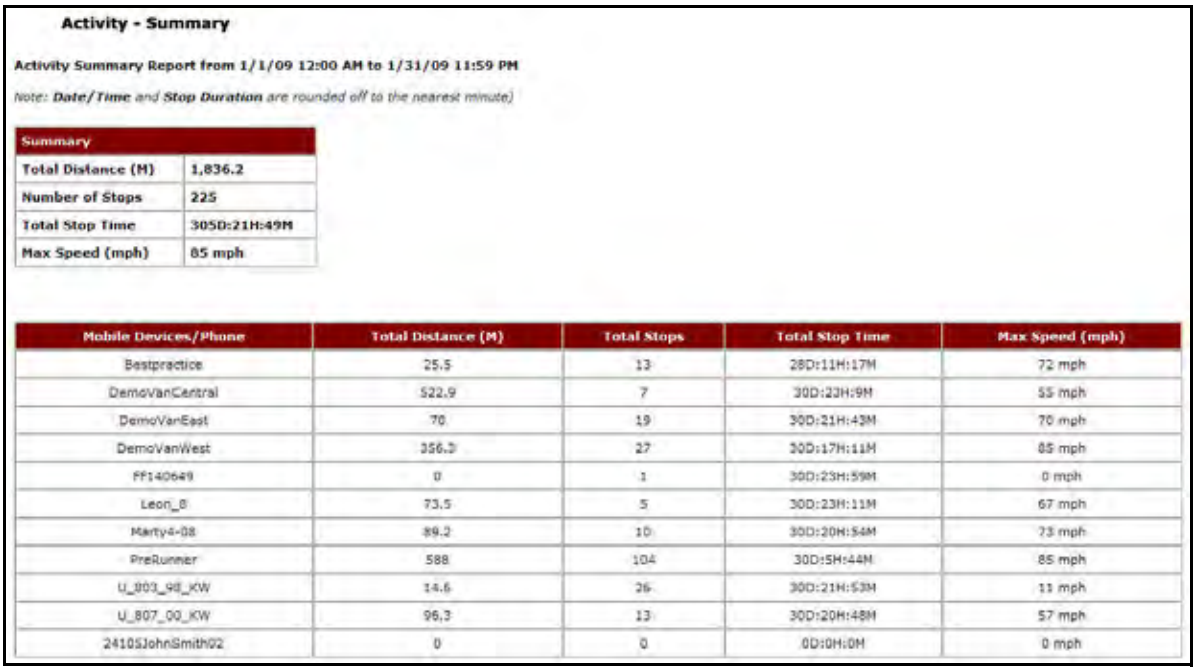
The table displays the following information:

- White rows indicate the driving times of the mobile devices.
- Colored rows indicate the stop duration of the mobile devices.
- Stop duration defaults are:
  - A green highlight indicates 3 - 15 minutes.
  - A yellow highlight indicates a stop duration of 15 - 60 minutes.
  - A red highlight indicates a stop of 60 minutes or longer.

Note:
The color values can be defined in the Administration section.

Activity – Summary (Device Based)

The **Activity – Summary** report, shown in Figure 2–5, displays the totals for distance, stops and stop times for each mobile device. In addition, the report will note the maximum speed for the selected reporting period.



Activity - Summary

Activity Summary Report from 1/1/09 12:00 AM to 1/31/09 11:59 PM

*Note: **Date/Time** and **Stop Duration** are rounded off to the nearest minute)*

Summary	
Total Distance (M)	1,836.2
Number of Stops	225
Total Stop Time	305D:21H:49M
Max Speed (mph)	85 mph

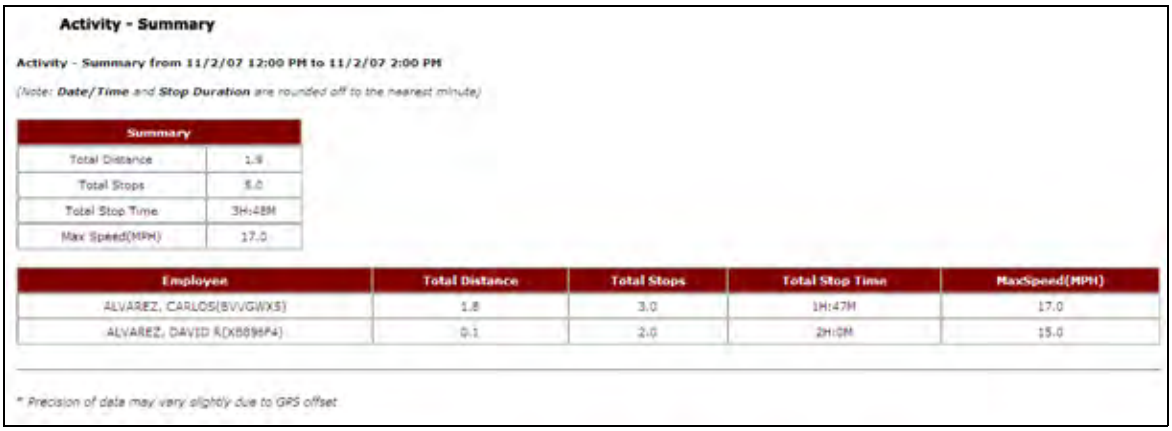
Mobile Devices/Phone	Total Distance (M)	Total Stops	Total Stop Time	Max Speed (mph)
Bestpractice	25.5	13	28D:11H:17M	72 mph
DemoVanCentral	522.9	7	30D:22H:9M	55 mph
DemoVanEast	70	19	30D:21H:43M	70 mph
DemoVanWest	356.3	27	30D:17H:11M	85 mph
FF140649	0	1	30D:23H:59M	0 mph
Leon_8	73.5	5	30D:23H:11M	67 mph
Marty4-08	89.2	10	30D:20H:54M	73 mph
PreRunner	588	104	30D:5H:44M	85 mph
U_803_08_KW	14.6	26	30D:21H:53M	11 mph
U_807_00_KW	96.3	13	30D:20H:48M	57 mph
2410SJohnSmith02	0	0	0D:0H:0M	0 mph

Figure 2–5 Activity - Summary Report

Item	Description
Summary	Shows the activity summary for the selected mobile device.
Total Distance	The total distance all selected mobile devices traveled during the selected time period.
Number of Stops	The number of stops made by all selected mobile device during the selected time period.
Total Stop Time	The total amount of time accrued during stops.
Max Speed	The fastest speed of the mobile device during the selected time frame.
Mobile Device/Phone	The name of the mobile device or phone.
Total Distance	The total distance the mobile device traveled during the selected time period.
Total Stops	The total number of stops made by the mobile device during the selected time period
Total Stop Time	The total amount of time accrued during stops.
Max Speed (MPH)	The fastest speed of the mobile device during the selected time frame.

Activity Summary Report (Employee Based)

The **Activity – Summary (Employee Based)** report, shown in Figure 2–6, displays the driving activity for an employee as far back as 95 days from the current date. Customers who subscribe to Extended Storage can view data for a longer period of time that will vary according to their subscription.



Activity - Summary

Activity - Summary from 11/2/07 12:00 PM to 11/2/07 2:00 PM

*(Note: **Date/Time** and **Stop Duration** are rounded off to the nearest minute)*

Summary	
Total Distance	1.9
Total Stops	5.0
Total Stop Time	3H:48M
Max Speed(MPH)	17.0

Employee	Total Distance	Total Stops	Total Stop Time	MaxSpeed(MPH)
ALVAREZ, CARLOS(BVVGWX5)	1.8	3.0	1H:47M	17.0
ALVAREZ, DAVID R(X8896P4)	0.1	2.0	2H:0M	15.0

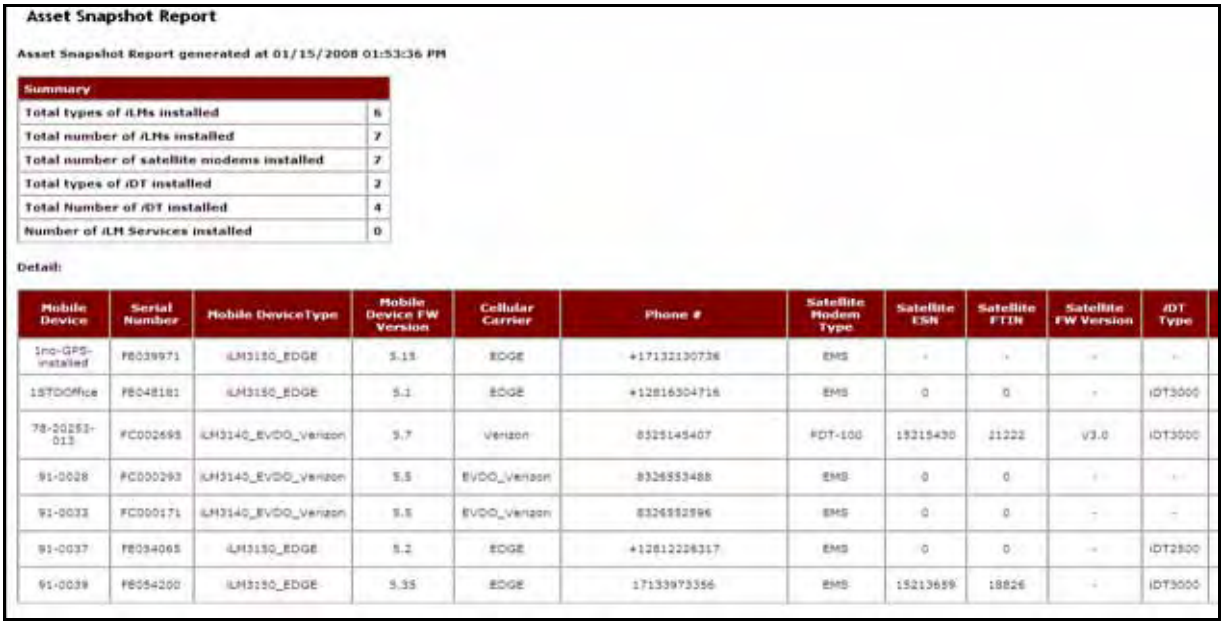
** Precision of data may vary slightly due to GPS offset*

Figure 2–6: Activity Summary (Employee Based) Report Example

Item	Description
Summary	A summary of the employee's activities for the selected time frame.
Total Distance	The total number of miles an employee drove during the selected time frame.
Total Stops	The total number of stops an employee made during the selected time frame.
Total Stop Time	The total amount of time an employee stopped during the selected time frame.
Max Speed (MPH)	The fastest speed of the mobile device during the selected time frame.
Employee Name	The employee's name and employee number.
Total Distance	The total distance the mobile device traveled during the selected time frame.
Total Stops	The number of stops made by the mobile device during the selected time frame.
Total Stop Time	The total amount of time accrued during stops.
Max Speed (MPH)	The fastest speed attained by the mobile device during the selected time frame.

Asset Snapshot Report

The **Asset Snapshot** report, shown in Figure 2–7 and Figure 2–8, displays an inventory of all devices and hardware installed on a customer's account, such as the number and type of *i*LMs installed, the type of peripheral devices connected (*i*DTs, barcode wands, etc.) and the data plan carrier associated with each *i*LM. This helps customers manage and maintain their GeoManager assets after deployment.



Asset Snapshot Report

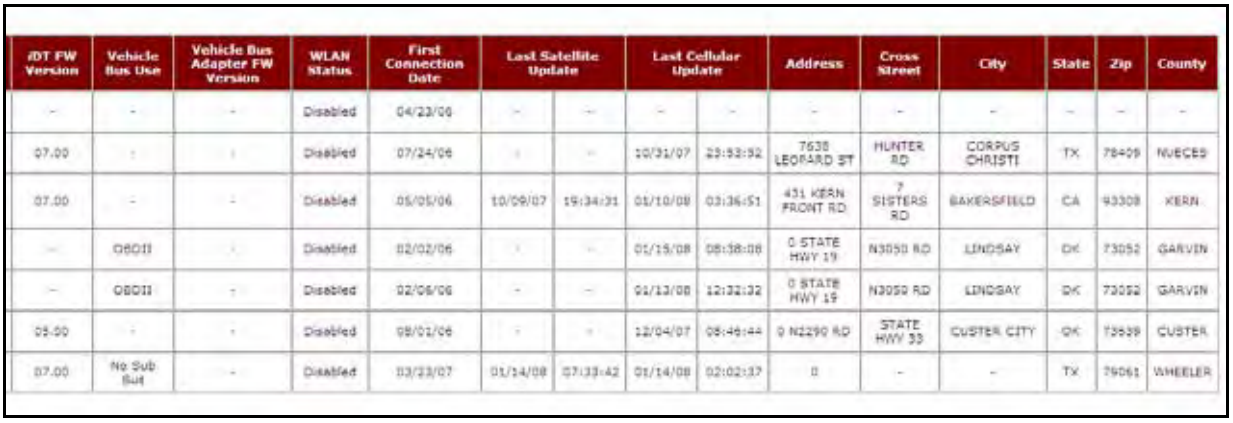
Asset Snapshot Report generated at 01/15/2008 01:53:36 PM

Summary	
Total types of iLMs installed	6
Total number of iLMs installed	7
Total number of satellite modems installed	7
Total types of iDT installed	2
Total Number of iDT installed	4
Number of iLM Services installed	0

Detail:

Mobile Device	Serial Number	Mobile DeviceType	Mobile Device FW Version	Cellular Carrier	Phone #	Satellite Modem Type	Satellite ESN	Satellite FTIN	Satellite FW Version	iDT Type
Ino-GPS-installed	FB039971	iLM3150_EDGE	5.15	EDGE	+17132130736	EMS	-	-	-	-
1STOOffice	FB048181	iLM3150_EDGE	5.1	EDGE	+12816304716	EMS	0	0	-	IDT3000
78-20253-013	FC002695	iLM3140_EVDO_Verizon	5.7	Verizon	8325145407	FDT-100	15215430	21222	V3.0	IDT3000
91-0028	FC000293	iLM3140_EVDO_Verizon	5.5	EVDO_Verizon	8326553488	EMS	0	0	-	-
91-0033	FC000171	iLM3140_EVDO_Verizon	5.5	EVDO_Verizon	8326552596	EMS	0	0	-	-
91-0037	FB034065	iLM3150_EDGE	5.2	EDGE	+12812226317	EMS	0	0	-	IDT2500
91-0039	FB054200	iLM3150_EDGE	5.35	EDGE	17133973356	EMS	15213639	18826	-	IDT3000

Figure 2–7 Asset Snapshot (1 of 2) Report



iDT FW Version	Vehicle Bus Use	Vehicle Bus Adapter FW Version	WLAN Status	First Connection Date	Last Satellite Update		Last Cellular Update		Address	Cross Street	City	State	Zip	County
-	-	-	Disabled	04/23/06	-	-	-	-	-	-	-	-	-	-
07.00	-	-	Disabled	07/24/06	-	-	10/31/07	23:53:32	7638 LEOPARD ST	HUNTER RD	CORPUS CHRISTI	TX	78409	NUECES
07.00	-	-	Disabled	05/05/06	10/09/07	19:34:31	01/10/08	03:36:51	431 KERN FRONT RD	7 SISTERS RD	BAKERSFIELD	CA	93308	KERN
-	OBDII	-	Disabled	02/02/06	-	-	01/15/08	08:38:08	0 STATE HWY 19	N3050 RD	LINDSAY	OK	73052	GARVIN
-	OBDII	-	Disabled	02/06/06	-	-	01/13/08	12:32:32	0 STATE HWY 19	N3050 RD	LINDSAY	OK	73052	GARVIN
05.00	-	-	Disabled	08/01/06	-	-	12/04/07	08:46:44	0 N2290 RD	STATE HWY 33	CUSTER CITY	OK	73639	CUSTER
07.00	No Sub Bus	-	Disabled	03/23/07	01/14/08	07:33:42	01/14/08	02:02:37	0	-	-	TX	79061	WHEELER

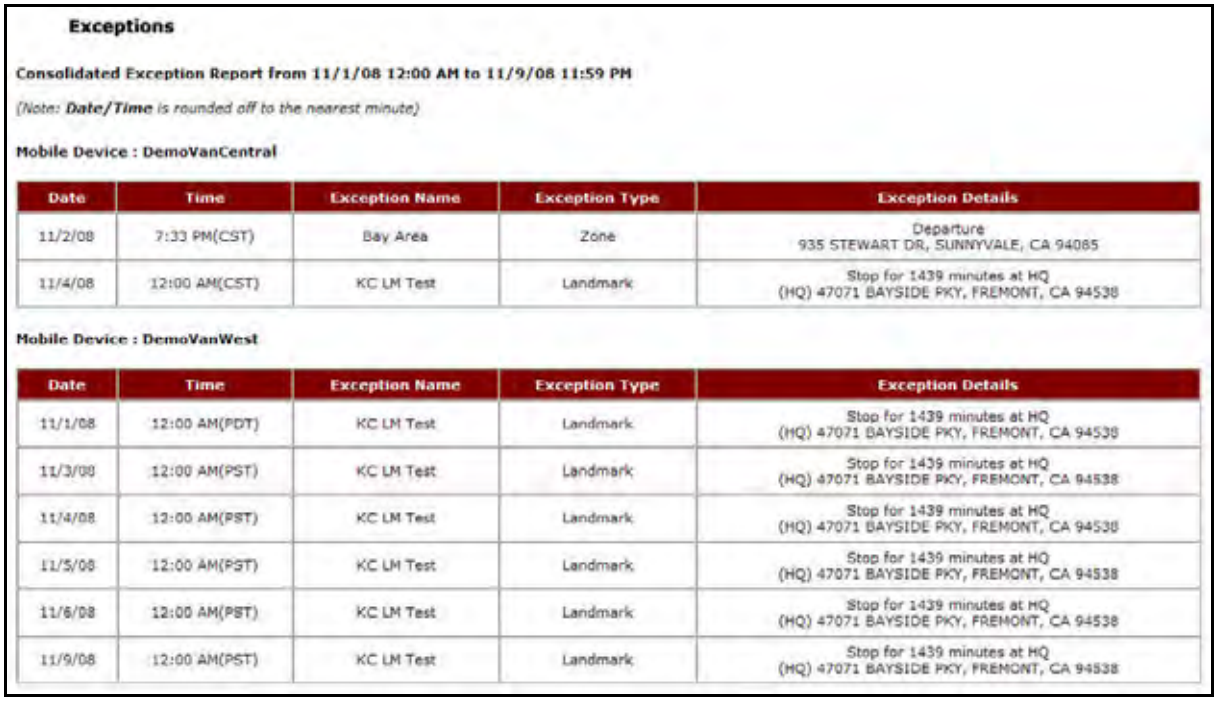
Figure 2–8 Asset Snapshot (2 of 2) Report

Item	Description
Summary	Shows the activity summary for the selected mobile device.
Total types of iLMs installed	The total of all types of iLMs installed for a customer account.
Total number of iLMs installed	The total number of iLMs installed for a customer account.
Total number of satellite modems installed	The total number of satellite modems installed for a customer account.
Total types of iDTs installed	The total of all types of iDTsinstalled for a customer account.
Total Number of iDTs installed	The total number of iDTs installed for a customer account.
Number of iLMs Services installed	The total number of iLM Services installed for a customer account.
Mobile Device	The name of the mobile device or phone.
Serial Number	The serial number of the mobile device or phone.
Mobile Device Type	The type of mobile device or phone.
Mobile Device FW Version	Firmware version for the mobile device.
Cellular Carrier	The name of the cellular carrier the mobile device or phone is associated with.
Phone #	The phone number associated with the mobile device or phone.
Satellite Modem Type	Model (Manufacturer Name, if available) i.e. (EMS).
Satellite ESN	Satellite Electronic Serial Number.
Satellite FTIN	Satellite Frequency Transmitting Identification Number.
Satellite FW Version	The firmware version currently installed for satellite data connections.
iDT Type	The type of in-vehicle data terminal associated with the mobile device.
iDT FW Version	The firmware version currently installed on the in-vehicle data terminal.
Vehicle Bus Use	The type of vehicle bus installed in the vehicle such as J1708 or J1939.
Vehicle Bus Adapter FW Version	The firmware version currently installed for the vehicle bus adapter.

Item	Description
WLAN Status	Status of whether or not WLAN is enabled.
First Connection Date	Date of initial connectivity.
Last Satellite Update	Last time of connection with satellite for data transfer.
Last Cellular Update	Last time of connection with cellular carrier for data transfer.
Address	Street address where the mobile device was located when the information was transmitted.
Cross Street	The closest cross street to the address.
City	The city where the mobile device was located when the information was transmitted.
State	The state where the mobile device was located when the information was transmitted.
Zip	The ZIP where the mobile device was located when the information was transmitted.
County	The county where the mobile device was located when the information was transmitted.

Consolidated Reports (Exception)

The **Consolidated Exceptions** report lists all exceptions triggered during a selected time frame for each vehicle in one combined report.



Exceptions

Consolidated Exception Report from 11/1/08 12:00 AM to 11/9/08 11:59 PM

*(Note: **Date/Time** is rounded off to the nearest minute)*

Mobile Device : DemoVanCentral

Date	Time	Exception Name	Exception Type	Exception Details
11/2/08	7:33 PM(CST)	Bay Area	Zone	Departure 935 STEWART DR, SUNNYVALE, CA 94085
11/4/08	12:00 AM(CST)	KC LM Test	Landmark	Stop for 1439 minutes at HQ (HQ) 47071 BAYSIDE PKY, FREMONT, CA 94538

Mobile Device : DemoVanWest

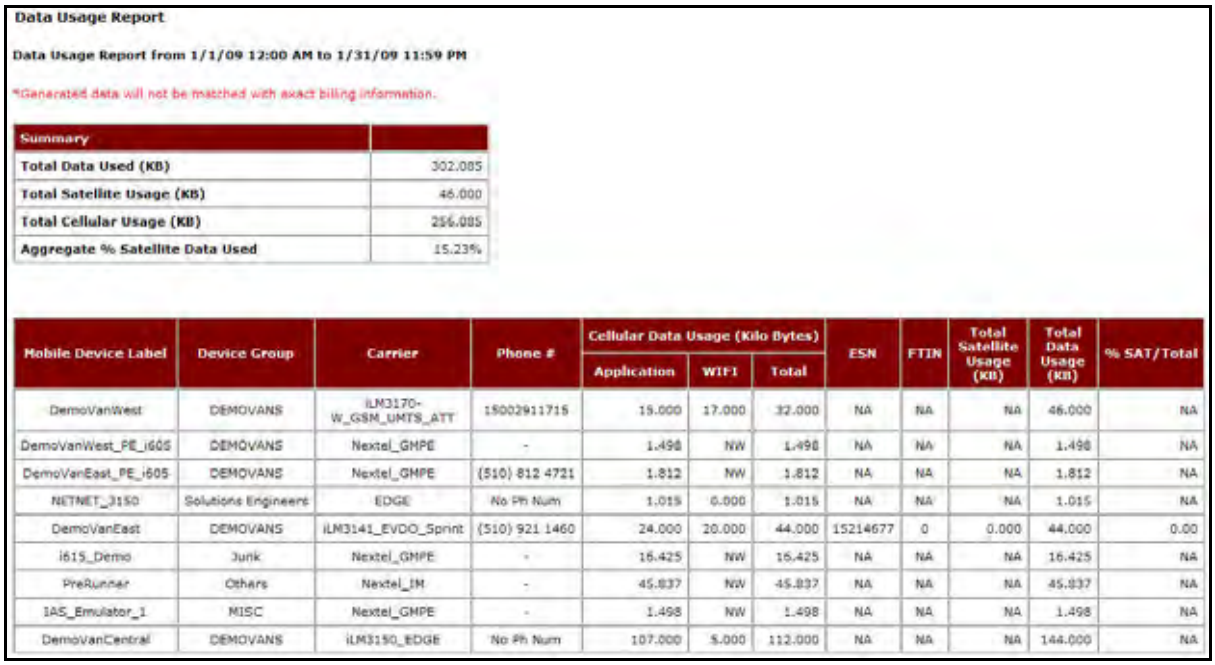
Date	Time	Exception Name	Exception Type	Exception Details
11/1/08	12:00 AM(PDT)	KC LM Test	Landmark	Stop for 1439 minutes at HQ (HQ) 47071 BAYSIDE PKY, FREMONT, CA 94538
11/3/08	12:00 AM(PST)	KC LM Test	Landmark	Stop for 1439 minutes at HQ (HQ) 47071 BAYSIDE PKY, FREMONT, CA 94538
11/4/08	12:00 AM(PST)	KC LM Test	Landmark	Stop for 1439 minutes at HQ (HQ) 47071 BAYSIDE PKY, FREMONT, CA 94538
11/5/08	12:00 AM(PST)	KC LM Test	Landmark	Stop for 1439 minutes at HQ (HQ) 47071 BAYSIDE PKY, FREMONT, CA 94538
11/6/08	12:00 AM(PST)	KC LM Test	Landmark	Stop for 1439 minutes at HQ (HQ) 47071 BAYSIDE PKY, FREMONT, CA 94538
11/9/08	12:00 AM(PST)	KC LM Test	Landmark	Stop for 1439 minutes at HQ (HQ) 47071 BAYSIDE PKY, FREMONT, CA 94538

Figure 2–9 Consolidated Exception Report

Item	Description
Mobile Device	The mobile device that generated the corresponding Exception.
Date	The date on which the exception was received/sent.
Time	The corresponding time stamp for the date.
Exception Name	The name of the Exception.
Exception Type	The type of Exception.
Exception Details	Pertinent details for the Exception that occurred. This can include status, location, duration, speed, and other information.

Data Usage Report

The **Data Usage** report, shown in Figure 2–10, captures cellular and satellite data usage to and from the *i*LM and Trimble server systems. It is useful for trend analysis of total data use and comparing carrier bills. Customers who do not use satellite modems will see blank fields in the satellite information columns.



Data Usage Report

Data Usage Report from 1/1/09 12:00 AM to 1/31/09 11:59 PM

*Generated data will not be matched with exact billing information.

Summary	
Total Data Used (KB)	302.085
Total Satellite Usage (KB)	46.000
Total Cellular Usage (KB)	256.085
Aggregate % Satellite Data Used	15.23%

Mobile Device Label	Device Group	Carrier	Phone #	Cellular Data Usage (Kilo Bytes)			ESN	FTIN	Total Satellite Usage (KB)	Total Data Usage (KB)	% SAT/Total
				Application	WIFI	Total					
DemoVanWest	DEMOVANS	iLM3170-W_GSM_UMTS_ATT	15002911715	15.000	17.000	32.000	NA	NA	NA	46.000	NA
DemoVanWest_PE_i605	DEMOVANS	Nextel_GMPE	-	1.498	NW	1.498	NA	NA	NA	1.498	NA
DemoVanEast_PE_i605	DEMOVANS	Nextel_GMPE	(510) 812 4721	1.812	NW	1.812	NA	NA	NA	1.812	NA
NETNET_3150	Solutions Engineers	EDGE	No Ph Num	1.015	0.000	1.015	NA	NA	NA	1.015	NA
DemoVanEast	DEMOVANS	iLM3141_EVDO_Sprint	(510) 921 1460	24.000	20.000	44.000	15214677	0	0.000	44.000	0.00
i615_Demo	Junk	Nextel_GMPE	-	16.425	NW	16.425	NA	NA	NA	16.425	NA
PreRunner	Others	Nextel_IM	-	45.837	NW	45.837	NA	NA	NA	45.837	NA
IAS_Emulator_1	MISC	Nextel_GMPE	-	1.498	NW	1.498	NA	NA	NA	1.498	NA
DemoVanCentral	DEMOVANS	iLM3150_EDGE	No Ph Num	107.000	5.000	112.000	NA	NA	NA	144.000	NA

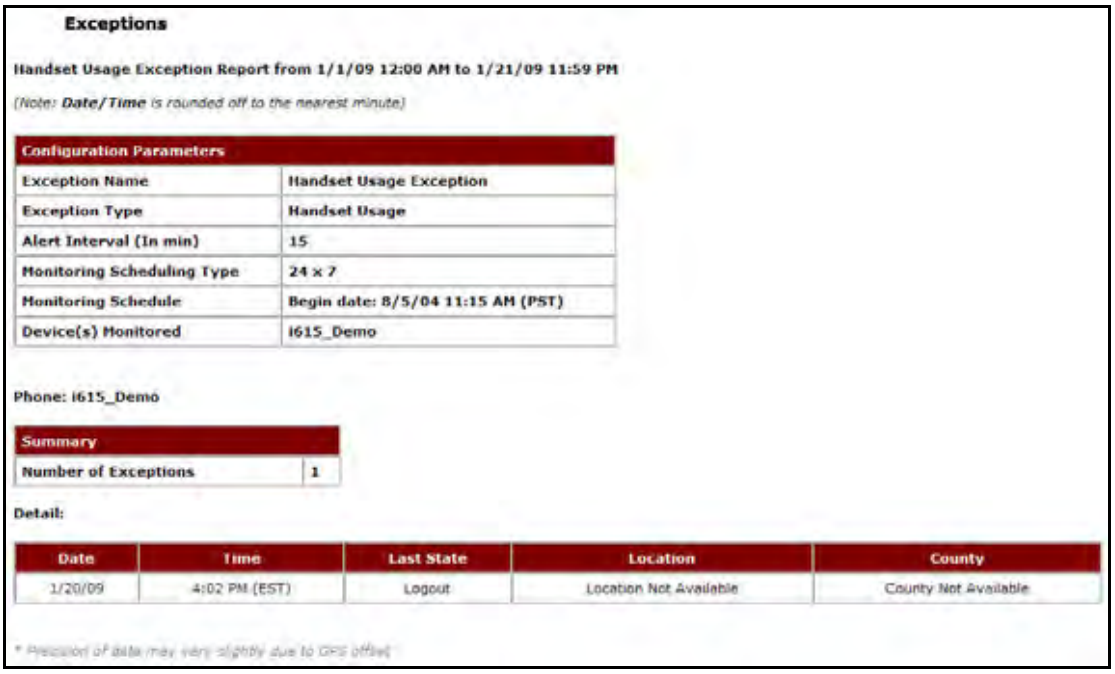
Figure 2–10 Data Usage Report

Item	Description
Summary	Shows the activity summary for the selected mobile device.
Total Data Used (KB)	Total amount of data used in kilobytes for the selected period.
Total Satellite Usage (KB)	Total Satellite Usage for the selected devices for the selected period.
Total Cellular Usage (KB)	Total Cellular Usage for the selected devices for the selected period.
Aggregate % Satellite Data Used	Total Satellite Usage / Total Data Used for aggregate devices for the selected period.
Mobile Device Label	The name assigned to the mobile device.
Device Group	The mobile device serial number.
Carrier	The name of the cellular carrier the mobile device or phone is associated with.

Item	Description
Phone #	The phone number associated with the mobile device or phone.
Cellular Data Usage (Kilo Bytes)	Total cellular data usage (excluding wireless) in kilobytes for the selected mobile device.
Application	Total amount of application cellular and wireless data in kilobytes for the selected mobile device.
WIFI	Total amount of data transferred via wireless network.
Total	Total amount of data transferred.
ESN	Electronic Serial Number or unique identification number embedded in the mobile device.
FTIN	Frequency Transmitting Identification Number.
Total Satellite Usage (KB)	Total satellite usage in kilobytes for the selected date range.
Total Data Usage (KB)	Total cellular and satellite data usage in kilobytes for the selected mobile device.
% SAT/Total	Total Satellite Usage / Total Data Usage

Handset Usage Report (Exception)

Handset Usage Exceptions occur when a mobile device has not accessed your Trimble MRM application by an expected time or if there is activity outside of set work hours. These Exceptions can help a company determine when hand-held devices are being used outside of company time or turned off during work hours.



Exceptions

Handset Usage Exception Report from 1/1/09 12:00 AM to 1/21/09 11:59 PM

*(Note: **Date/Time** is rounded off to the nearest minute)*

Configuration Parameters	
Exception Name	Handset Usage Exception
Exception Type	Handset Usage
Alert Interval (In min)	15
Monitoring Scheduling Type	24 x 7
Monitoring Schedule	Begin date: 8/5/04 11:15 AM (PST)
Device(s) Monitored	i615_Demo

Phone: i615_Demo

Summary	
Number of Exceptions	1

Detail:

Date	Time	Last State	Location	County
1/20/09	4:02 PM (EST)	Logout	Location Not Available	County Not Available

** Precision of data may vary slightly due to GPS offset*

Figure 2–11 Handset Usage Exception Report

Item	Description
Configuration Parameters	The limitations for the selected configuration.
Exception Name	The name of the selected Exception.
Exception Type	The type of Exception.
Alert Interval (In min.)	The maximum amount of time (in minutes) allowed for handset to be logged out or powered off.
Monitoring Scheduling Type	The type of schedule for monitoring the handset. This can be 24X7 or recurring.
Monitoring Schedule	The date and time when 24X7 monitoring became effective. The hours and days recurring monitoring occurs and the date and time it became effective.

Item	Description
Devices Monitored	A list of selected devices that are monitored by this Handset Exception.
Summary	
Number of Exceptions	The total number of exceptions triggered for this device during the reporting period.
Date	The date on which the message was received/sent.
Time	The corresponding time stamp for the date.
Last State	The state of the handset when the exception was triggered.
Location	Shows the closest address, cross street, city, state and ZIP where mobile device was located at the time of last update.
County	County where mobile device was located at the time of update.

Idling Report (Exception)

Idling Exceptions are triggered when a Mobile Device is stopped for more than a specified duration while the vehicle engine is running (as shown through the GeoManager Vehicle Diagnostics option). Use of the Idling Exception helps companies increase productivity and save on fuel and maintenance costs.

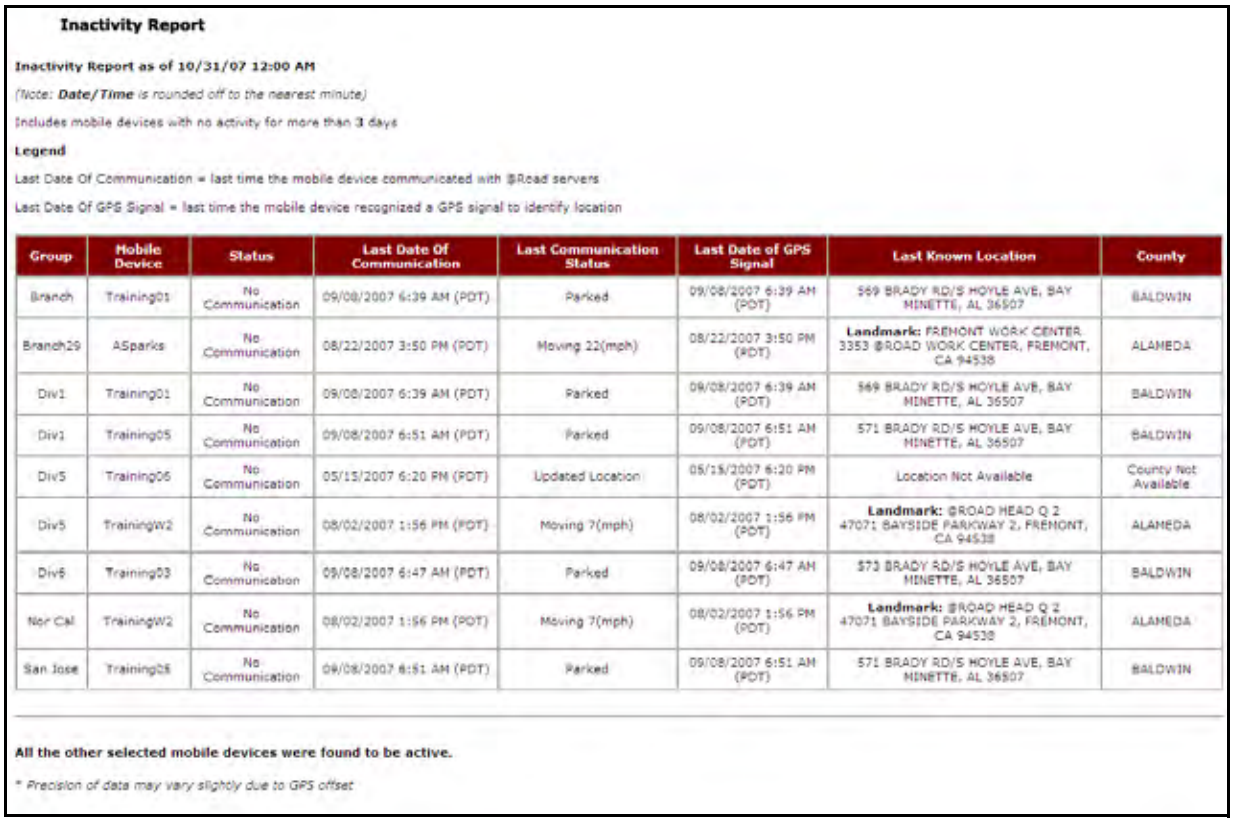
Figure 2–12 Idling Exception Report

Item	Description
Configuration Parameters	The limitations for the selected configuration.
Exception Name	The name of the selected Exception.
Exception Type	The type of Exception.
Duration	The maximum amount of time (in minutes) allowed for vehicle Idling.
Monitoring Scheduling Type	The type of schedule for monitoring the mobile device. This can be 24X7 or recurring.
Monitoring Schedule	The date and time when 24X7 monitoring became effective. The hours and days recurring monitoring occurs and the date and time it became effective.
Devices Monitored	A list of selected devices that are monitored by this Idling Exception.
Mobile Device	The name of the mobile device with Details specific to it following.

Item	Description
Summary	A quick view of how many Exceptions occurred for this Idling period.
Number of Exceptions	The number of Exceptions for Idling that occurred during the selected time frame.
Exception Type	The type of Exception.
Exception Name	The name of the Idling Exception.
Mobile Device	The mobile device that caused the Exception.
Date	The date on which the message was received/sent.
Time	The corresponding time stamp for the date.
Arrival/Departure	Whether the mobile device arrived at or departed from the specified Zone.
Address	Complete address of the location for the messages sent from the driver to the dispatcher.
Cross Street	The closest cross street to the address.
City	The city where the mobile device was located when the information was transmitted.
State	The state where the mobile device was located when the information was transmitted.
ZIP	The ZIP where the mobile device was located when the information was transmitted.
County	The county where the mobile device was located when the information was transmitted.

Inactivity

The **Inactivity** report, shown in Figure 2–13, lists all mobile devices or groups of mobile devices that have not shown any communication within the last number of designated days.



Inactivity Report

Inactivity Report as of 10/31/07 12:00 AM

*(Note: **Date/Time** is rounded off to the nearest minute)*

Includes mobile devices with no activity for more than 3 days

Legend

Last Date Of Communication = last time the mobile device communicated with @Road servers

Last Date Of GPS Signal = last time the mobile device recognized a GPS signal to identify location

Group	Mobile Device	Status	Last Date Of Communication	Last Communication Status	Last Date of GPS Signal	Last Known Location	County
Branch	Training01	No Communication	09/08/2007 6:39 AM (PDT)	Parked	09/08/2007 6:39 AM (PDT)	569 BRADY RD/S HOYLE AVE, BAY MINETTE, AL 36507	BALDWIN
Branch29	ASparks	No Communication	08/22/2007 3:50 PM (PDT)	Moving 22(mph)	08/22/2007 3:50 PM (PDT)	**Landmark:** FREMONT WORK CENTER 3353 @ROAD WORK CENTER, FREMONT, CA 94538	ALAMEDA
Div1	Training01	No Communication	09/08/2007 6:39 AM (PDT)	Parked	09/08/2007 6:39 AM (PDT)	569 BRADY RD/S HOYLE AVE, BAY MINETTE, AL 36507	BALDWIN
Div1	Training05	No Communication	09/08/2007 6:51 AM (PDT)	Parked	09/08/2007 6:51 AM (PDT)	571 BRADY RD/S HOYLE AVE, BAY MINETTE, AL 36507	BALDWIN
Div5	Training06	No Communication	05/15/2007 6:20 PM (PDT)	Updated Location	05/15/2007 6:20 PM (PDT)	Location Not Available	County Not Available
Div5	TrainingW2	No Communication	08/02/2007 1:56 PM (PDT)	Moving 7(mph)	08/02/2007 1:56 PM (PDT)	**Landmark:** @ROAD HEAD Q 2 47071 BAYSIDE PARKWAY 2, FREMONT, CA 94538	ALAMEDA
Div6	Training03	No Communication	09/08/2007 6:47 AM (PDT)	Parked	09/08/2007 6:47 AM (PDT)	573 BRADY RD/S HOYLE AVE, BAY MINETTE, AL 36507	BALDWIN
Nor Cal	TrainingW2	No Communication	08/02/2007 1:56 PM (PDT)	Moving 7(mph)	08/02/2007 1:56 PM (PDT)	**Landmark:** @ROAD HEAD Q 2 47071 BAYSIDE PARKWAY 2, FREMONT, CA 94538	ALAMEDA
San Jose	Training05	No Communication	09/08/2007 6:51 AM (PDT)	Parked	09/08/2007 6:51 AM (PDT)	571 BRADY RD/S HOYLE AVE, BAY MINETTE, AL 36507	BALDWIN

All the other selected mobile devices were found to be active.

** Precision of data may vary slightly due to GPS offset*

Figure 2–13 Inactivity Report

Item	Description
Group	The selected group to which the mobile device belongs. If Account Grouping is enabled on the account, the report sorts in ascending order of groups, and then, within the group, sorts in ascending order of last date/time of communication.
Mobile Device	The name of the selected mobile device. If grouping is disabled, sorts in ascending order of last date/time of communication.
Status	The last known status of the mobile device, either No Communication or No GPS on the report output.
Last Date of Communication	The last known date and time communication was received from the mobile device. The format is MM/DD/YYYY HH:MM AM/PM (Time Zone).

Item	Description
Last Communication Status	The last known status of the mobile device before communication was lost. The various statuses are: • Moving # (MPH) format • Parked • Unavailable • Updated Location • Ignition Off (except Pocket Edition) • Ignition On (except Pocket Edition)
Last Date of GPS Signal	The latest date a GPS signal was received from the mobile device; displayed in the format MM/DD/YYYY HH:MM AM/PM (Time Zone).
Last Known Location	The last known street address, cross street, city, state and ZIP code from which the mobile device transmitted a signal.
County	The last known county from which the mobile device transmitted a signal.

Landmark Exception Report

Landmark Exceptions flag stops at a specific landmark type or address. This is helpful for tracking pickups and deliveries, monitoring unauthorized (e.g. personal) usage of company vehicles either during or after work hours, or flagging unscheduled customer stops.

You can specify up to 20 Landmark Exceptions for monitoring. The Trimble servers monitor Landmark Exceptions and require the vehicle to stop at the Landmark to trigger an Exception.

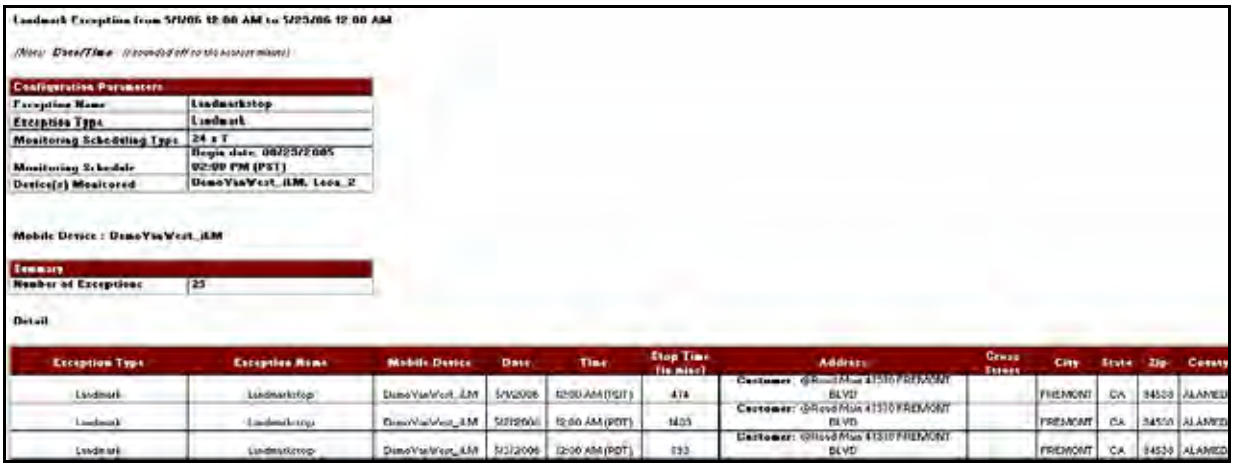


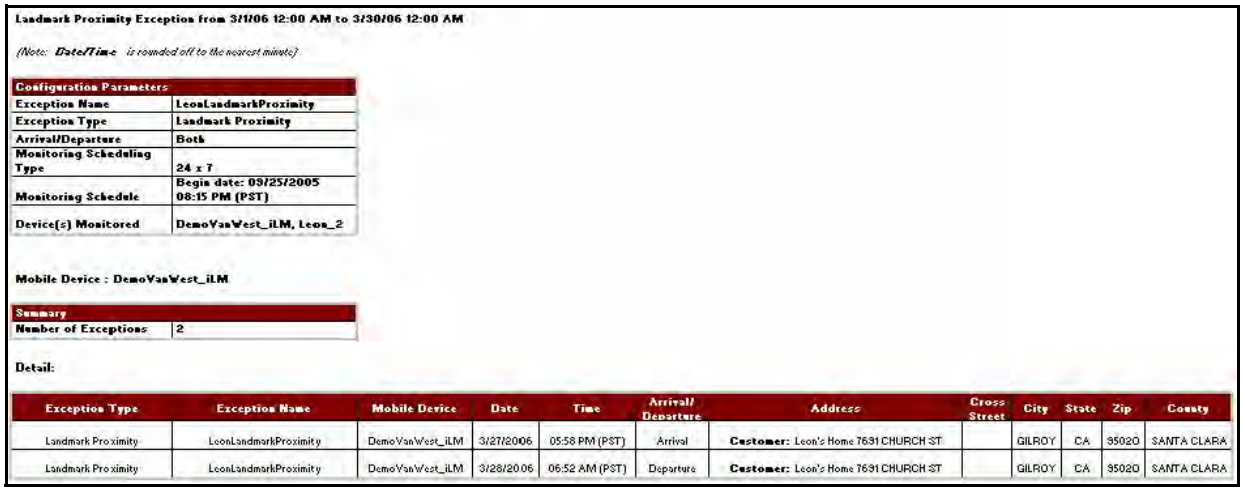
Figure 2–14 Landmark Exception Report

Item	Description
Configuration Parameters	The limitations for the selected configuration.
Exception Name	The name of the selected Exception.
Exception Type	The type of Exception.
Monitoring Schedule Type	The type of schedule for monitoring the mobile device. This can be 24X7 or recurring.
Monitoring Schedule	The date and time when 24X7 monitoring became effective. The hours and days recurring monitoring occurs and the date and time it became effective.
Devices Monitored	A list of selected devices that are monitored by this Idling Exception.
Mobile Device	The name of the mobile device with Details specific to it following.
Summary	A quick view of how many Exceptions occurred for this landmark.
Number of Exceptions	The number of Exceptions that occurred during the selected time frame.
Exception Type	The type of Exception.
Exception Name	The name of the Landmark Exception.
Mobile Device	The mobile device that caused the Exception.
Date	The date on which the message was received/sent.
Time	The corresponding time stamp for the date.
Arrival/Departure	Whether the mobile device arrived at or departed from the specified Landmark.
Address	Complete address of the location for the messages sent from the driver to the dispatcher.
Cross Street	The closest cross street to the address.
City	The city where the mobile device was located when the information was transmitted.
State	The state where the mobile device was located when the information was transmitted.
ZIP	The ZIP where the mobile device was located when the information was transmitted.
County	The county where the mobile device was located when the information was transmitted.

Landmark Proximity Exception Report

Landmark Proximity Exceptions flag arrivals to and departures from a specific landmark type or address. This area is more tightly confined than an area for a Zone Exception, which is covered later in this manual. Landmark Proximity Exceptions are helpful for tracking merchandise pick-up and delivery, monitoring unauthorized (e. g. personal) usage of company vehicles either during or after work hours, or flagging unscheduled customer stops.

You can specify up to 20 Landmark Proximity Exceptions for monitoring. Landmark Proximity Exceptions are monitored in the *i*LM. An Exception is triggered as soon as the vehicle breeches the geofence for at least one minute. Stopping the vehicle is not required to trigger an Exception.



Landmark Proximity Exception from 3/1/06 12:00 AM to 3/30/06 12:00 AM

(Note: DateTime is rounded off to the nearest minute)

Configuration Parameters	
Exception Name	LeonLandmarkProximity
Exception Type	Landmark Proximity
Arrival/Departure	Both
Monitoring Scheduling Type	24 x 7
Monitoring Schedule	Begin date: 09/25/2005 08:15 PM (PST)
Device(s) Monitored	DemoVanWest_iLM, Leon_2

Mobile Device : DemoVanWest_iLM

Summary	
Number of Exceptions	2

Detail:

Exception Type	Exception Name	Mobile Device	Date	Time	Arrival/ Departure	Address	Cross Street	City	State	Zip	County
Landmark Proximity	LeonLandmarkProximity	DemoVanWest_iLM	3/27/2006	05:58 PM (PST)	Arrival	**Customer:** Leon's Home 7631 CHURCH ST		GILROY	CA	95020	SANTA CLARA
Landmark Proximity	LeonLandmarkProximity	DemoVanWest_iLM	3/28/2006	06:52 AM (PST)	Departure	**Customer:** Leon's Home 7631 CHURCH ST		GILROY	CA	95020	SANTA CLARA

Figure 2–15 Landmark Proximity Exception Report

Item	Description
Configuration Parameters	The limitations for the selected configuration.
Exception Name	The name of the selected Exception.
Exception Type	The type of Exception.
Arrival/Departure	If the Exception is set up to monitor the arrival, departure or both of the mobile device to the proximity of this Landmark.
Monitoring Schedule Type	The type of schedule for monitoring the mobile device. This can be 24X7 or recurring.
Monitoring Schedule	The date and time when 24X7 monitoring became effective. The hours and days recurring monitoring occurs and the date and time it became effective.

Item	Description
Devices Monitored	A list of selected devices that are monitored by this Landmark Proximity Exception.
Mobile Device	The name of the mobile device with Details specific to it following.
Summary	A quick view of how many Exceptions occurred for this Landmark Proximity.
Number of Exceptions	The number of Exceptions in this zone that occurred during the selected time frame.
Exception Type	The type of Exception.
Exception Name	The name of the Landmark Exception.
Mobile Device	The mobile device that caused the Exception.
Date	The date on which the message was received/sent.
Time	The corresponding time stamp for the date.
Arrival/Departure	Whether the mobile device arrived at or departed from the specified Landmark.
Address	Complete address of the location for the messages sent from the driver to the dispatcher.
Cross Street	The closest cross street to the address.
City	The city where the mobile device was located when the information was transmitted.
State	The state where the mobile device was located when the information was transmitted.
ZIP	The ZIP where the mobile device was located when the information was transmitted.
County	The county where the mobile device was located when the information was transmitted.

Org Hierarchy Audit Report

The **Org Hierarchy Audit** report, shown in Figure 2–16, shows each instance a user creates or changes org hierarchy.

Org Hierarchy Audit Report

Org Hierarchy Audit Report from 1/1/09 12:00 AM to 1/23/09 11:59 PM

*(Note: **Date/Time** is rounded off to the nearest minute)*

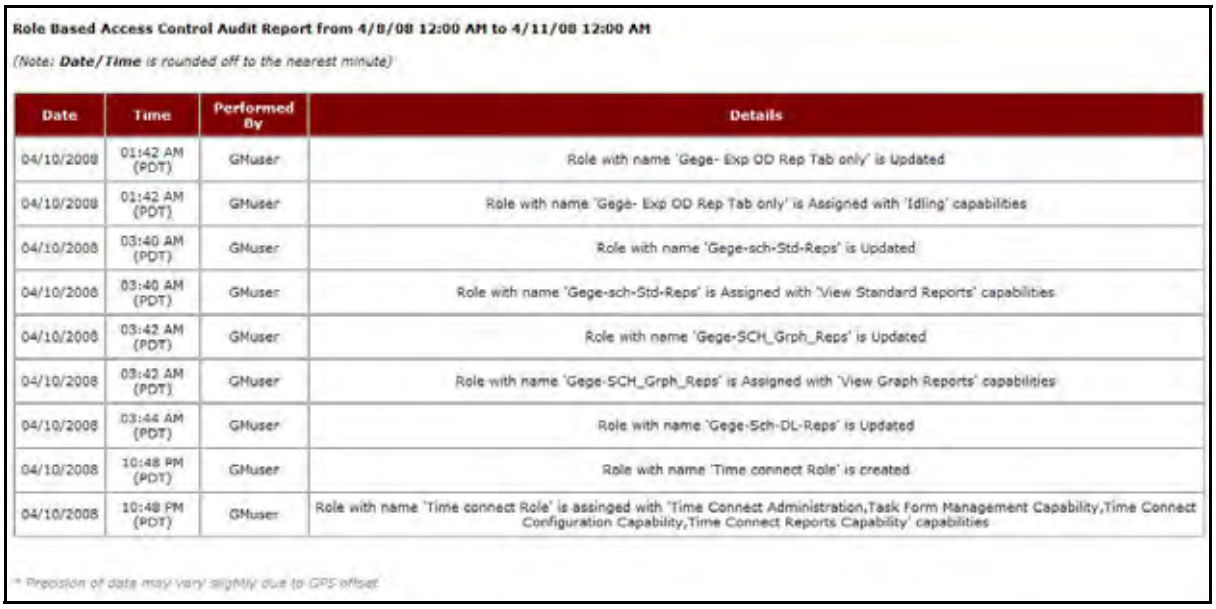
Date	Time	Performed By	Details
1/6/09	3:05 PM (PST)	ma77en	Employee Bares,Mike assigned to org node Technical Services
1/6/09	3:05 PM (PST)	ma77en	Employee bob,rhonda assigned to org node Technical Services
1/6/09	3:05 PM (PST)	ma77en	Employee BROWN,FRED assigned to org node Technical Services
1/6/09	3:05 PM (PST)	ma77en	Employee Counts,John assigned to org node Technical Services
1/6/09	3:05 PM (PST)	ma77en	Employee Cunniff,Kevin assigned to org node Technical Services
1/19/09	8:01 AM (PST)	bestpractice	Device Tom_Kelly unassigned from org node Services
1/19/09	8:01 AM (PST)	bestpractice	Device Tom_Kelly assigned to org node DEMOVANS
1/19/09	9:23 AM (PST)	bestpractice	User bestpractice assigned to org node DEMOVANS
1/19/09	11:57 AM (PST)	bestpractice	Device Bestpractice unassigned from org node DEMOVANS
1/19/09	11:58 AM (PST)	bestpractice	Device Bestpractice assigned to org node Sales and Marketing
1/19/09	12:05 PM (PST)	bestpractice	Employee Kelly,Tom assigned to org node Sales and Marketing

Figure 2–16 Org Hierarchy Audit Report

Item	Description
Date	The date a role or capability was created or changed.
Time	The time a role or capability was created or changed.
Performed By	The user who made a change the org hierarchy.
Details	The details of the org hierarchy change.

Role Based Access Control (RBAC) Audit Trail Report

The **Role Based Access Control (RBAC) Audit Trail** report, shown in Figure 2–17, shows each instance a user creates or changes a role or capability assigned to that role.



Role Based Access Control Audit Report from 4/8/08 12:00 AM to 4/11/08 12:00 AM

*(Note: **Date/Time** is rounded off to the nearest minute)*

Date	Time	Performed By	Details
04/10/2008	01:42 AM (PDT)	GMuser	Role with name 'Gege- Exp OD Rep Tab only' is Updated
04/10/2008	01:42 AM (PDT)	GMuser	Role with name 'Gege- Exp OD Rep Tab only' is Assigned with 'Idling' capabilities
04/10/2008	03:40 AM (PDT)	GMuser	Role with name 'Gege-sch-Std-Reps' is Updated
04/10/2008	03:40 AM (PDT)	GMuser	Role with name 'Gege-sch-Std-Reps' is Assigned with 'View Standard Reports' capabilities
04/10/2008	03:42 AM (PDT)	GMuser	Role with name 'Gege-SCH_Grph_Reps' is Updated
04/10/2008	03:42 AM (PDT)	GMuser	Role with name 'Gege-SCH_Grph_Reps' is Assigned with 'View Graph Reports' capabilities
04/10/2008	03:44 AM (PDT)	GMuser	Role with name 'Gege-Sch-DL-Reps' is Updated
04/10/2008	10:48 PM (PDT)	GMuser	Role with name 'Time connect Role' is created
04/10/2008	10:48 PM (PDT)	GMuser	Role with name 'Time connect Role' is assinged with 'Time Connect Administration,Task Form Management Capability,Time Connect Configuration Capability,Time Connect Reports Capability' capabilities

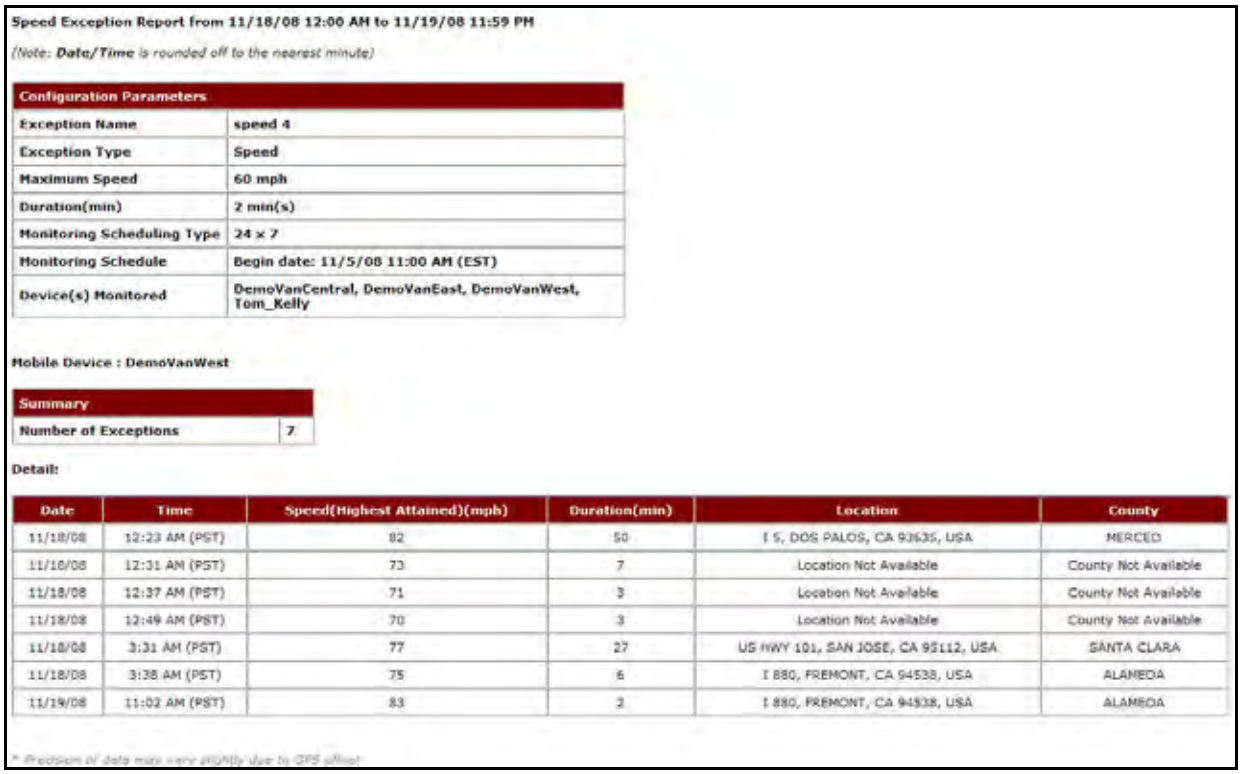
** Precision of data may vary slightly due to GPS offset*

Figure 2–17 RBAC Audit Trail Report

Item	Description
Date	The date a role or capability was created or changed.
Time	The time a role or capability was created or changed.
Performed By	The user who made the role or capability creation or change.
Details	The details of the role or capability creation or change.

Speed Exception Report

The **Speed Exception** report flags vehicles that drive above a maximum speed for a specific block of time. This is helpful in monitoring both fleet safety and cost containment since speeding can be tied to accidents and higher insurance rates.



Speed Exception Report from 11/18/08 12:00 AM to 11/19/08 11:59 PM

*(Note: **Date/Time** is rounded off to the nearest minute)*

Configuration Parameters	
Exception Name	speed 4
Exception Type	Speed
Maximum Speed	60 mph
Duration(min)	2 min(s)
Monitoring Scheduling Type	24 x 7
Monitoring Schedule	Begin date: 11/5/08 11:00 AM (EST)
Device(s) Monitored	DemoVanCentral, DemoVanEast, DemoVanWest, Tom_Kelly

Mobile Device : DemoVanWest

Summary	
Number of Exceptions	7

Detail:

Date	Time	Speed(Highest Attained)(mph)	Duration(min)	Location	County
11/18/08	12:23 AM (PST)	82	50	I 5, DOS PALOS, CA 93635, USA	MERCED
11/18/08	12:31 AM (PST)	73	7	Location Not Available	County Not Available
11/18/08	12:37 AM (PST)	71	3	Location Not Available	County Not Available
11/18/08	12:49 AM (PST)	70	3	Location Not Available	County Not Available
11/18/08	3:31 AM (PST)	77	27	US HWY 101, SAN JOSE, CA 95112, USA	SANTA CLARA
11/18/08	3:38 AM (PST)	75	6	I 880, FREMONT, CA 94538, USA	ALAMEDA
11/19/08	11:02 AM (PST)	83	2	I 880, FREMONT, CA 94538, USA	ALAMEDA

** Precision of data may vary slightly due to GPS signal*

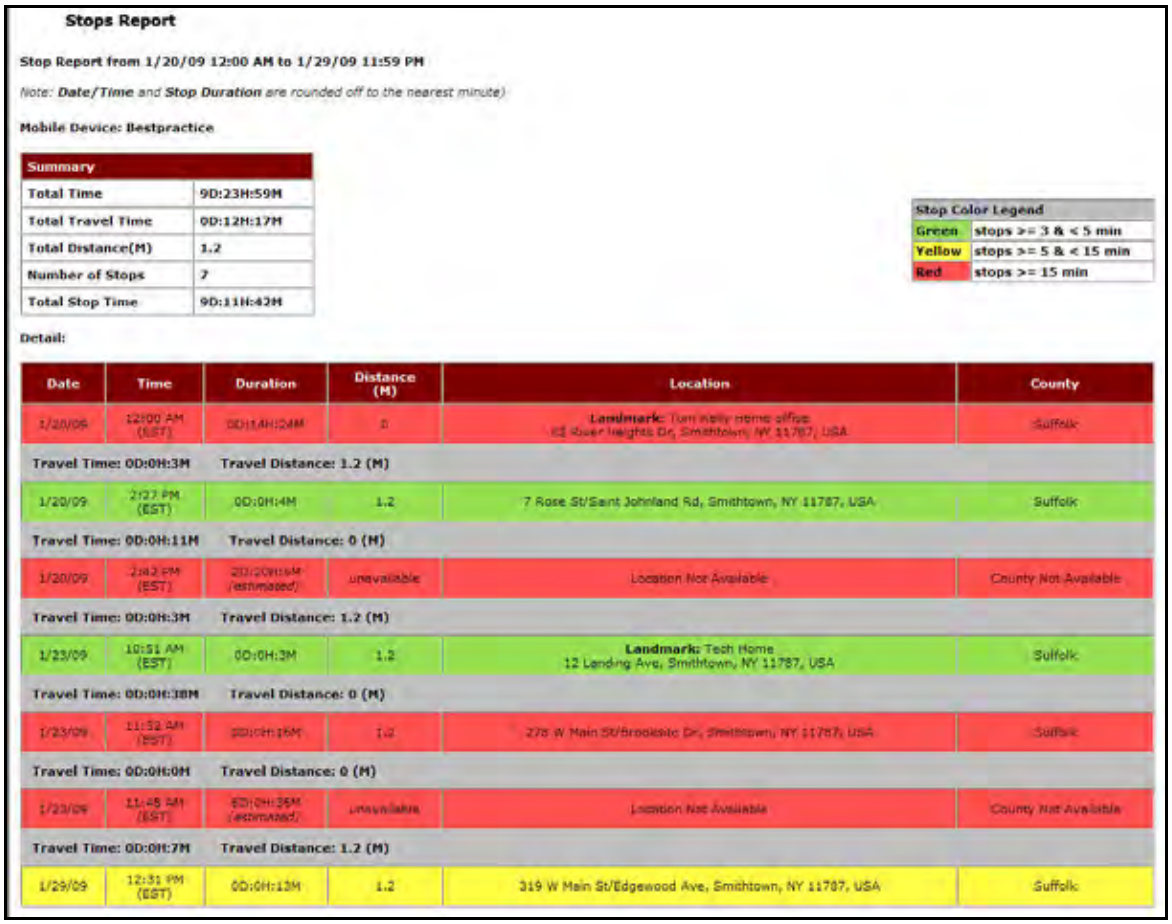
Figure 2–18 Speed Exception Report

Item	Description
Configuration Parameters	The limitations for the selected configuration.
Exception Name	The name of the selected Exception.
Exception Type	The type of Exception.
Monitoring Schedule Type	The type of schedule for monitoring the mobile device. This can be 24X7 or recurring.
Monitoring Schedule	The date and time when 24X7 monitoring became effective. The hours and days recurring monitoring occurs and the date and time it became effective.
Devices Monitored	A list of selected devices that are monitored by this Speed Exception.
Mobile Device	The name of the mobile device with Details specific to it following.
Summary	The number of Exceptions for Speed that occurred during the selected time frame.
Exception Type	The type of Exception.

Item	Description
Exception Name	The name of the Speed Exception.
Mobile Device	The mobile device that caused the Exception.
Date	The date on which the message was received/sent.
Time	The corresponding time stamp for the date.
Speed (Highest Attained) (mph)	The fastest speed recorded during the reporting period.
Duration (min.)	The length of time the speed remained above the maximum permitted speed.
Location	Shows the closest address, cross street, city, state and ZIP where mobile device was located at the time of update.
County	County where mobile device was located at the time of update.

Stop Report

The **Stop** report, shown in Figure 2–19, shows the date range selected, mobile device name, Summary table and all the stops each selected mobile device(s) have made during the report time frame. The **Stop** report also shows a summary of driving times and distances.



Stops Report

Stop Report from 1/20/09 12:00 AM to 1/29/09 11:59 PM

*Note: **Date/Time** and **Stop Duration** are rounded off to the nearest minute)*

Mobile Device: Bestpractice

Summary	
Total Time	9D:23H:59M
Total Travel Time	0D:12H:17M
Total Distance(M)	1.2
Number of Stops	7
Total Stop Time	9D:11H:42M

Stop Color Legend	
Green	stops >= 3 & < 5 min
Yellow	stops >= 5 & < 15 min
Red	stops >= 15 min

Detail:

Date	Time	Duration	Distance (M)	Location	County
1/20/09	12:00 AM (EST)	0D:14H:24M	0	**Landmark:** Tom Kelly Home office 62 River Heights Dr, Smithtown, NY 11787, USA	Suffolk
Travel Time: 0D:0H:3M	**Travel Distance: 1.2 (M)**				
1/20/09	2:27 PM (EST)	0D:0H:4M	1.2	7 Rose St/Saint Johnland Rd, Smithtown, NY 11787, USA	Suffolk
Travel Time: 0D:0H:11M	**Travel Distance: 0 (M)**				
1/20/09	2:42 PM (EST)	2D:20H:6M (estimated)	unavailable	Location Not Available	County Not Available
Travel Time: 0D:0H:3M	**Travel Distance: 1.2 (M)**				
1/23/09	10:51 AM (EST)	0D:0H:3M	1.2	**Landmark:** Tech Home 12 Landing Ave, Smithtown, NY 11787, USA	Suffolk
Travel Time: 0D:0H:38M	**Travel Distance: 0 (M)**				
1/23/09	11:32 AM (EST)	0D:0H:16M	1.2	278 W Main St/Brookside Dr, Smithtown, NY 11787, USA	Suffolk
Travel Time: 0D:0H:0M	**Travel Distance: 0 (M)**				
1/23/09	11:48 AM (EST)	5D:0H:36M (estimated)	unavailable	Location Not Available	County Not Available
Travel Time: 0D:0H:7M	**Travel Distance: 1.2 (M)**				
1/29/09	12:31 PM (EST)	0D:0H:13M	1.2	319 W Main St/Edgewood Ave, Smithtown, NY 11787, USA	Suffolk

Figure 2–19 Stop Report

Item	Description
Summary	Shows the activity summary for the selected mobile device(s).
Total Time	The total amount of time selected for the report.
Total Travel Time	The total amount of time the mobile device was traveling during the selected time frame.
Total Distance (M)	The total number of miles that the mobile device has traveled during the selected time frame.
Number of Stops	The total number of stops made by the selected mobile device(s) during the selected time frame.
Total Stop Time	The total amount of time the mobile device was stopped during the selected time frame.
Date	Date of the update, listed in mm/dd/yy format.
Time	Time of update, listed in hh:mm AM/PM format and time zone indicated (i.e. PST for Pacific Standard Time).

Item	Description
Duration	Shows the duration of the stop. The duration (length of time) will be in #D:##H:##M format.
Distance	Reflects the distance traveled by a mobile device.
Location	Shows the closest address, cross street, city, state and ZIP where mobile device was located at the time of update.
County	County where mobile device was located at the time of update.

The report contains a header with the date range, followed by each mobile device's label, Summary and Detail.

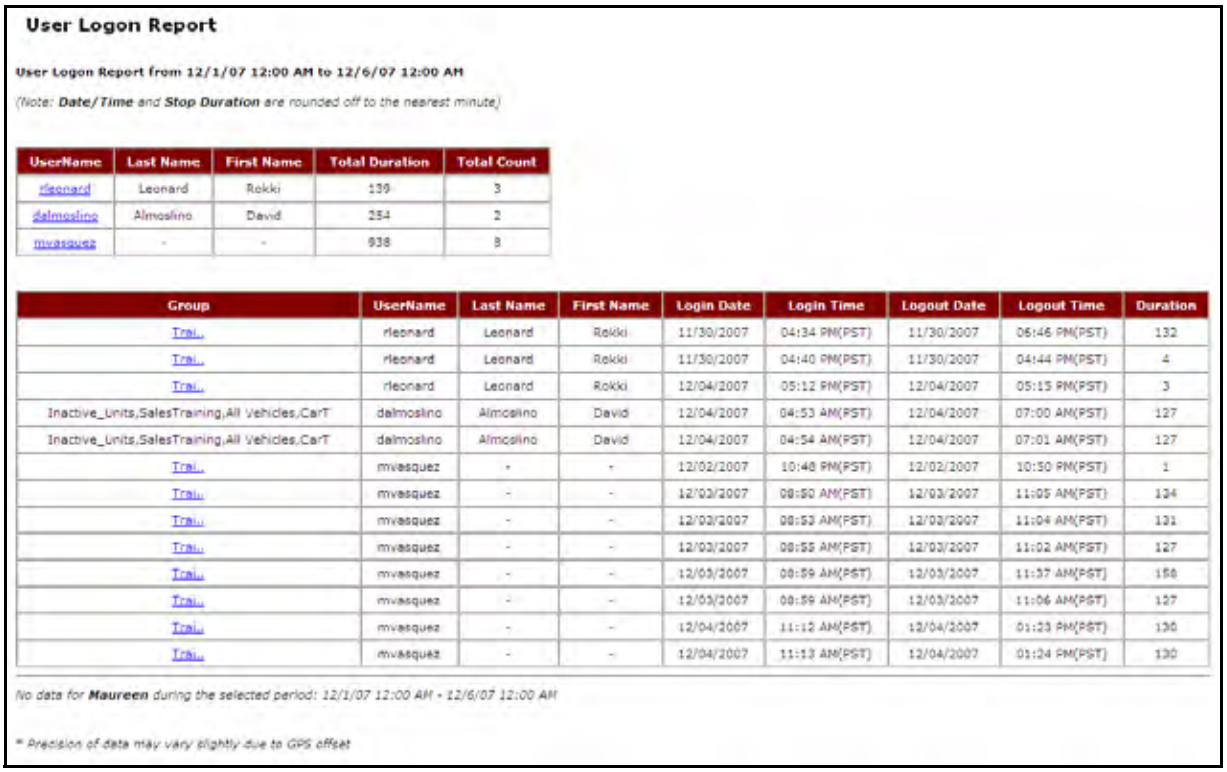
The table displays the following information:

- White rows indicate the driving times of the mobile devices.
- Colored rows indicate the stop duration of the mobile devices.
- Stop duration defaults are:
  - A green highlight indicates 3 - 15 minutes.
  - A yellow highlight indicates a stop duration of 15 - 60 minutes.
  - A red highlight indicates a stop of 60 minutes or longer.

Note:
The color values can be defined in the Administration section of GeoManager.

User Logon Report

The **User Logon** report, shown in Figure 2–20, allows GeoManager administrators to capture logon/logout session time, enabling frequency and duration tracking of the users that are logging into the solution.



User Logon Report

User Logon Report from 12/1/07 12:00 AM to 12/6/07 12:00 AM

*(Note: **Date/Time** and **Stop Duration** are rounded off to the nearest minute)*

UserName	Last Name	First Name	Total Duration	Total Count
rleonard	Leonard	Rokki	139	3
dalmoslino	Almoslino	David	254	2
mvasquez	-	-	938	8

Group	UserName	Last Name	First Name	Login Date	Login Time	Logout Date	Logout Time	Duration
Trai..	rleonard	Leonard	Rokki	11/30/2007	04:34 PM(PST)	11/30/2007	06:46 PM(PST)	132
Trai..	rleonard	Leonard	Rokki	11/30/2007	04:40 PM(PST)	11/30/2007	04:44 PM(PST)	4
Trai..	rleonard	Leonard	Rokki	12/04/2007	05:12 PM(PST)	12/04/2007	05:15 PM(PST)	3
Inactive_Units,SalesTraining,All Vehicles,CarT	dalmoslino	Almoslino	David	12/04/2007	04:53 AM(PST)	12/04/2007	07:00 AM(PST)	127
Inactive_Units,SalesTraining,All Vehicles,CarT	dalmoslino	Almoslino	David	12/04/2007	04:54 AM(PST)	12/04/2007	07:01 AM(PST)	127
Trai..	mvasquez	-	-	12/02/2007	10:48 PM(PST)	12/02/2007	10:50 PM(PST)	1
Trai..	mvasquez	-	-	12/02/2007	08:50 AM(PST)	12/03/2007	11:05 AM(PST)	134
Trai..	mvasquez	-	-	12/02/2007	08:53 AM(PST)	12/03/2007	11:04 AM(PST)	131
Trai..	mvasquez	-	-	12/03/2007	08:55 AM(PST)	12/03/2007	11:02 AM(PST)	127
Trai..	mvasquez	-	-	12/03/2007	08:59 AM(PST)	12/03/2007	11:37 AM(PST)	158
Trai..	mvasquez	-	-	12/03/2007	08:59 AM(PST)	12/03/2007	11:06 AM(PST)	127
Trai..	mvasquez	-	-	12/04/2007	11:12 AM(PST)	12/04/2007	01:23 PM(PST)	130
Trai..	mvasquez	-	-	12/04/2007	11:13 AM(PST)	12/04/2007	01:24 PM(PST)	130

*No data for **Maureen** during the selected period: 12/1/07 12:00 AM - 12/6/07 12:00 AM*

** Precision of data may vary slightly due to GPS offset*

Figure 2–20 User Logon Report

Item	Description
UserName	The username of the user logged into the solution.
Last Name	The last name of the user logged into the solution.
First Name	The first name of the user logged into the solution.
Total Duration	The total amount of time the user was logged into the solution.
Total Count	The total number of times the user logged into the solution for the time specified.
Group	The group to which the user is assigned.
UserName	The username of the user logged into the solution.
Last Name	The last name of the user logged into the solution.
First Name	The first name of the user logged into the solution.
Login Date	The date the user logged into the solution.
Login Time	The time the user logged into the solution.
Logout Date	The date the user logged out of the solution.

Item	Description
Logout Time	The time the user logged out of the solution.
Duration	The amount of time the user was logged into the solution.

WLAN Hourly Usage Report (Wi-Fi)

The **WLAN Hourly Usage** report can help you determine how often the WLAN is being used by your mobile workers.

WLAN Hourly Usage Report

WLAN Hourly Usage from 1/13/09 12:00 AM to 1/14/09 11:59 PM

Mobile Device : DemoVanCentral

Hour	WLAN Usage						GPS Usage			Total
	Stationary Vehicle			Vehicle in motion						
	Tx	Rx	Total	Tx	Rx	Total	Tx	Rx	Total	
1/13/09										
12:06 PM(CST)	0	0	0	0	0	0	0	0	0	0
1:00 PM(CST)	0	0	0	0	0	0	0	0	0	0
2:00 PM(CST)	4	8	12	0	0	0	0	0	0	12
3:00 PM(CST)	1328	6577	7905	1	16	17	0	0	0	7922
4:00 PM(CST)	60	433	493	0	0	0	0	0	0	493
5:00 PM(CST)	0	0	0	0	0	0	0	0	0	0
6:00 PM(CST)	0	0	0	0	0	0	0	0	0	0
7:00 PM(CST)	0	0	0	0	0	0	0	0	0	0
8:00 PM(CST)	0	0	0	0	0	0	0	0	0	0
9:00 PM(CST)	0	0	0	0	0	0	0	0	0	0
10:00 PM(CST)	0	0	0	0	0	0	0	0	0	0
11:00 PM(CST)	0	0	0	0	0	0	0	0	0	0
TOTAL	1392	7018	8410	1	16	17	0	0	0	8427
1/14/09										
12:00 AM(CST)	0	0	0	0	0	0	0	0	0	0
1:00 AM(CST)	0	0	0	0	0	0	0	0	0	0
2:00 AM(CST)	0	0	0	0	0	0	0	0	0	0
3:00 AM(CST)	0	0	0	0	0	0	0	0	0	0
4:00 AM(CST)	0	0	0	0	0	0	0	0	0	0
5:00 AM(CST)	0	0	0	0	0	0	0	0	0	0
1:25 PM(CST)	0	0	0	0	0	0	0	0	0	0
3:34 PM(CST)	0	0	0	0	0	0	0	0	0	0
4:00 PM(CST)	0	0	0	0	0	0	0	0	0	0
5:00 PM(CST)	0	0	0	0	0	0	0	0	0	0
6:00 PM(CST)	0	0	0	0	0	0	0	0	0	0
7:00 PM(CST)	0	0	0	0	0	0	0	0	0	0
8:00 PM(CST)	0	0	0	0	0	0	0	0	0	0
9:00 PM(CST)	0	0	0	0	0	0	0	0	0	0
10:00 PM(CST)	0	0	0	0	0	0	0	0	0	0
11:00 PM(CST)	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL	1392	7018	8410	1	16	17	0	0	0	8427

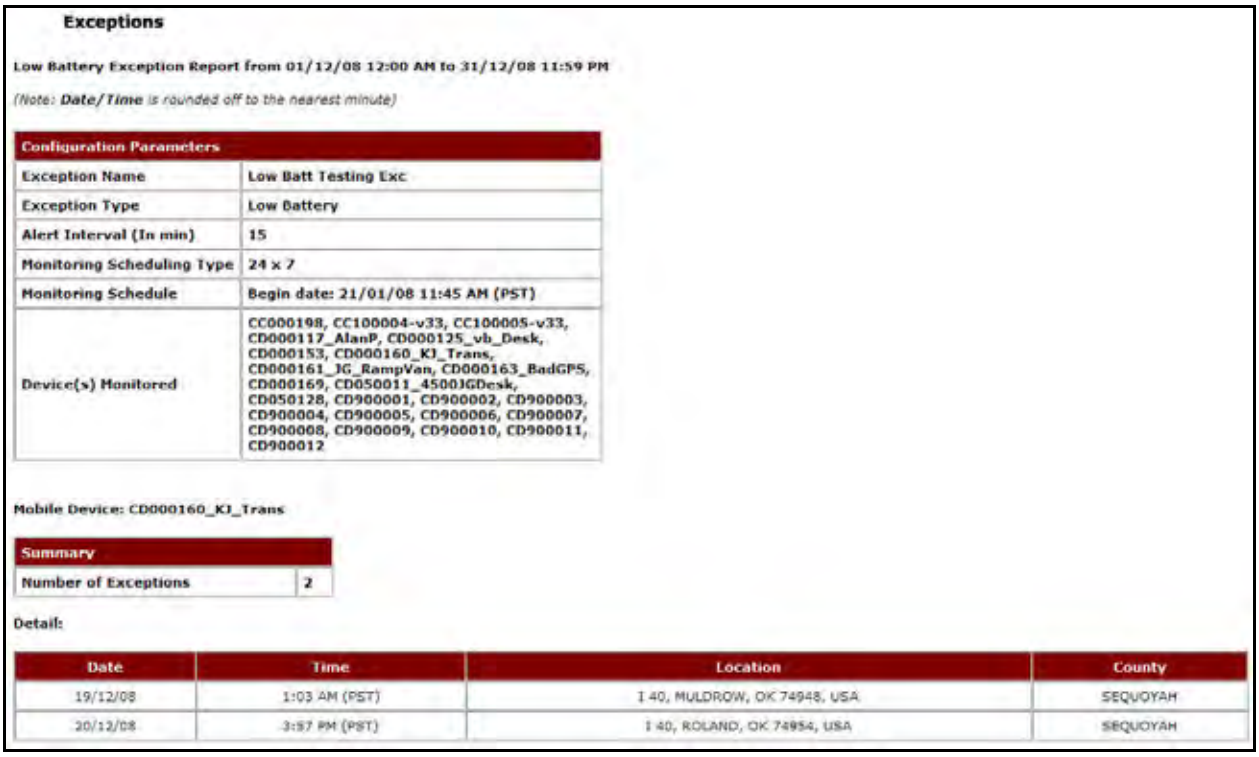
*** Note: All value are in Kilo Bytes. Tx = Transmit, Rx = Receive*

Figure 2–21 User Logon Report

Item	Description
Mobile Device	The assigned name or number for the selected mobile device.
Hour	The time the WLAN use began.
WLAN Usage	The amount of time the WLAN was used during the selected time period.
Stationary Vehicle	The amount of time the WLAN was used while the vehicle was not moving.
Tx	The amount of time the WLAN was transmitting while stationary.
Rx	The amount of time the WLAN was receiving while stationary.
Total	The total amount of time the WLAN was in use while stationary.
Vehicle in Motion	The amount of time the WLAN was used while it was moving.
Tx	The amount of time the WLAN was transmitting while in motion.
Rx	The amount of time the WLAN was receiving while in motion.
Total	The total amount of time the WLAN was in use while in motion.
GPS Usage	The amount of time the GPS was used during the selected time period.
Tx	The amount of time the GPS was transmitting.
Rx	The amount of time the GPS was receiving.
Total	The total amount of time the GPS was in use.
Total	The total amount of time the WLAN/GPS was in use.

Low Battery Exception Report

The **Low Battery** Exception sends warnings when handset or vehicle battery levels fall to a point at which no location data can be transmitted. This Exception helps remind mobile workers remember to charge their equipment.



Exceptions

Low Battery Exception Report from 01/12/08 12:00 AM to 31/12/08 11:59 PM

*(Note: **Date/Time** is rounded off to the nearest minute)*

Configuration Parameters	
Exception Name	Low Batt Testing Exc
Exception Type	Low Battery
Alert Interval (In min)	15
Monitoring Scheduling Type	24 x 7
Monitoring Schedule	Begin date: 21/01/08 11:45 AM (PST)
Device(s) Monitored	CC000198, CC100004-v33, CC100005-v33, CD000117_AlanP, CD000125_vb_Desk, CD000153, CD000160_KJ_Trans, CD000161_JG_RampVan, CD000163_BadGPS, CD000169, CD050011_4500JGDesk, CD050128, CD900001, CD900002, CD900003, CD900004, CD900005, CD900006, CD900007, CD900008, CD900009, CD900010, CD900011, CD900012

Mobile Device: CD000160_KJ_Trans

Summary	
Number of Exceptions	2

Detail:

Date	Time	Location	County
19/12/08	1:03 AM (PST)	I 40, MULDROW, OK 74948, USA	SEQUOYAH
20/12/08	3:57 PM (PST)	I 40, ROLAND, OK 74954, USA	SEQUOYAH

Figure 2–22 Low Battery Exception Report

Item	Description
Configuration Parameters	The limitations for the selected configuration.
Exception Name	The name of the selected Exception.
Exception Type	The type of Exception.
Alert Interval	The amount of time in minutes that must be exceeded for an alert to be generated.
Monitoring Schedule Type	The type of schedule for monitoring the mobile device. This can be 24X7 or recurring.
Monitoring Schedule	The date and time when 24X7 monitoring became effective. The hours and days recurring monitoring occurs and the date and time it became effective.
Devices Monitored	A list of selected devices that are monitored by this Speed Exception.
Mobile Device(s)	The name of the mobile device with Details specific to it following.
Summary	The number of Exceptions for Low Battery that occurred during the selected time frame.

Item	Description
Date	The date on which the message was received/sent.
Time	The corresponding time stamp for the date.
Location	Shows the closest address, cross street, city, state and ZIP where mobile device was located at the time of update.
County	County where mobile device was located at the time of update.

Odometer Report

The **Odometer** report, shown in Figure 2–23, displays the starting and ending odometer readings for the specified reporting period.

Odometer Report

Odometer Report from 1/1/09 12:00 AM to 1/21/09 11:59 PM

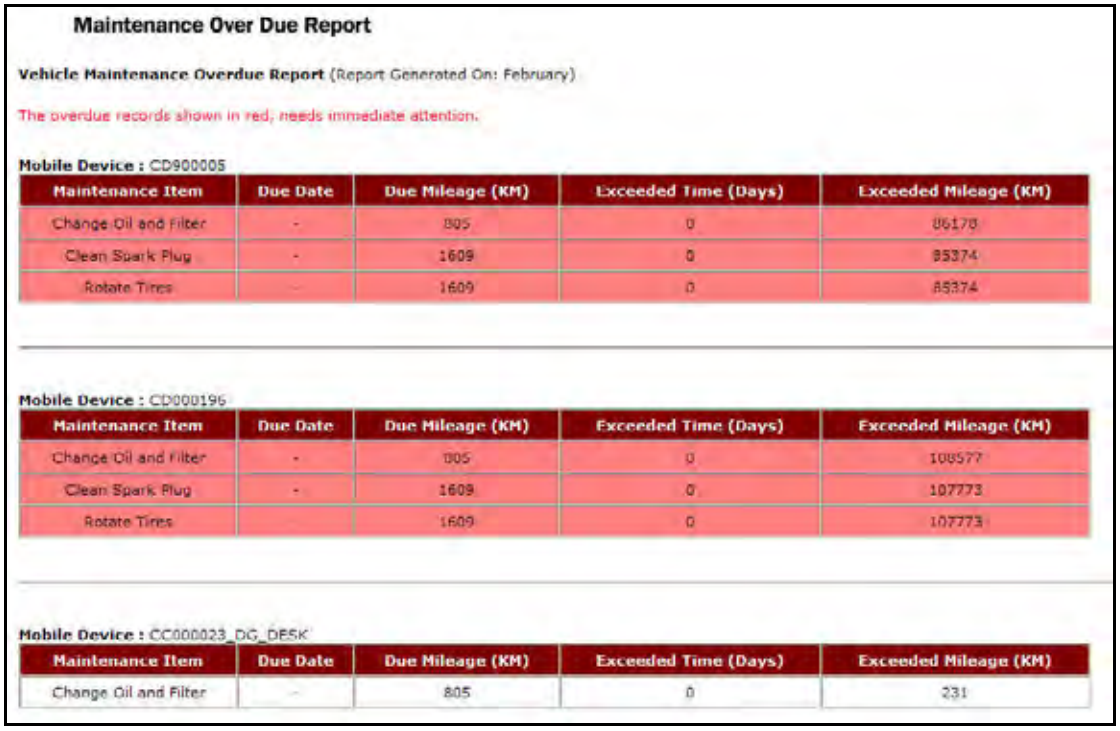
Mobile Device	Group Name	Start Odometer	End Odometer	Miles
24105JohnSmith02	Junk	80.7	80.7	0.0
Bestpractice	Sales and Marketing	335.5	361.0	25.5
DemoVanCentral	DEMOVANS	8,224.2	8,226.9	2.7
DemoVanEast	DEMOVANS	102,107.2	102,121.7	14.5
DemoVanWest	DEMOVANS	4,058.0	4,099.6	41.6
Leon_8	Trimble MRM	7,351.4	7,402.3	50.9
Marty4-08	Solutions Engineers	487.7	496.0	8.3
PreRunner	Others	20,220.3	20,756.8	536.5
U_803_98_KW	4XXX Demo	367,020.2	367,034.8	14.6
U_807_00_KW	4XXX Demo	472,183.8	472,280.2	96.4
Total Miles	-	-	-	790.9

Figure 2–23 Odometer Report

Item	Description
Mobile Device	The name of the selected mobile device.
Group	The selected group to which the mobile device belongs. If Account Grouping is enabled on the account, the report sorts in ascending order of groups, and then, within the group, sorts in ascending order of last date/time of communication.
Start Odometer	The odometer reading at the beginning of the reporting period.
End Odometer	The odometer reading at the end of the reporting period.
Miles	The number of miles traveled during the reporting period

Vehicle Maintenance Overdue

The **Vehicle Maintenance Overdue** report summarizes the items that are overdue for service for the selected vehicle. The customer has the provision to define the maintenance items that are of concern for them and the maintenance schedule is configurable as well.



Maintenance Over Due Report

Vehicle Maintenance Overdue Report (Report Generated On: February)

The overdue records shown in red, needs immediate attention.

Mobile Device : CD900005

Maintenance Item	Due Date	Due Mileage (KM)	Exceeded Time (Days)	Exceeded Mileage (KM)
Change Oil and Filter	-	805	0	86178
Clean Spark Plug	-	1609	0	85374
Rotate Tires	-	1609	0	85374

Mobile Device : CD000196

Maintenance Item	Due Date	Due Mileage (KM)	Exceeded Time (Days)	Exceeded Mileage (KM)
Change Oil and Filter	-	805	0	108577
Clean Spark Plug	-	1609	0	107773
Rotate Tires	-	1609	0	107773

Mobile Device : CC000023_DG_DESK

Maintenance Item	Due Date	Due Mileage (KM)	Exceeded Time (Days)	Exceeded Mileage (KM)
Change Oil and Filter	-	805	0	231

Figure 2–24 Vehicle Maintenance Overdue Report

Item	Description
Mobile Device	The name of the mobile device that has overdue maintenance.
Maintenance Item	The type of service that needs to be performed on the mobile device.
Due Date	The date the service was due.
Due Mileage (M)	The mileage when the service was due.
Exceeded Time (Days)	The number of days the service is past due.
Exceeded Mileage (M)	The number of miles the service is past due.

Vehicle Maintenance History

The **Vehicle Maintenance History** report provides customers with the maintenance items that were addressed in the selected date range. The customer has the provision to define the maintenance items that are of concern for them; the maintenance schedule is configurable as well. The maintenance schedule can be defined in terms of days or miles.

Maintenance History Report

Vehicle Maintenance History Report from 01/01/06 to 05/17/06

Mobile Device : Training3

Maintenance Item	Completed Date	Completed Mileage (M)
Oil and Filter change	01/30/06	350
Rotate Tires	01/30/06	350
Lubricate suspension/steering	01/30/06	350
Repack Front Wheel Bearings	01/30/06	350
Replace Air Filter	01/30/06	350
Replace Auto Trans fluid and filter	01/30/06	350
Change Engine Coolant	01/30/06	350
Replace Spark Plugs	01/30/06	350
Replace FuelFilter	01/30/06	350
Replace manual transmission fluid	01/30/06	350
Replace accessory drive belt(s)	01/30/06	350
Replace rear axle lubricant	01/30/06	350
Smog Check	01/30/06	350
Oil and Filter change	02/01/06	95
Change Engine Coolant	02/01/06	95
Change Engine Coolant	03/13/06	700
Smog Check	03/13/06	700
Oil and Filter change	03/17/06	297
Rotate Tires	03/17/06	297
Lubricate suspension/steering	03/17/06	297
Repack Front Wheel Bearings	03/17/06	297
Replace Air Filter	03/17/06	297

Figure 2–25 Vehicle Maintenance History Report

Item	Description
Mobile Device	The name of the mobile device selected for the report.
Maintenance Item	The type of maintenance being tracked.

Item	Description
Completed Date	The last date the maintenance item was completed.
Completed Mileage	The mileage since the last maintenance item was completed.

3 Mobile Worker Productivity

The Mobile Worker Productivity package provides reports and real-time alerts about stops, trip times, mileage totals, off-hours vehicle use, inactivity and work zones.

Mobile Worker Productivity reports helps deliver the following benefits:

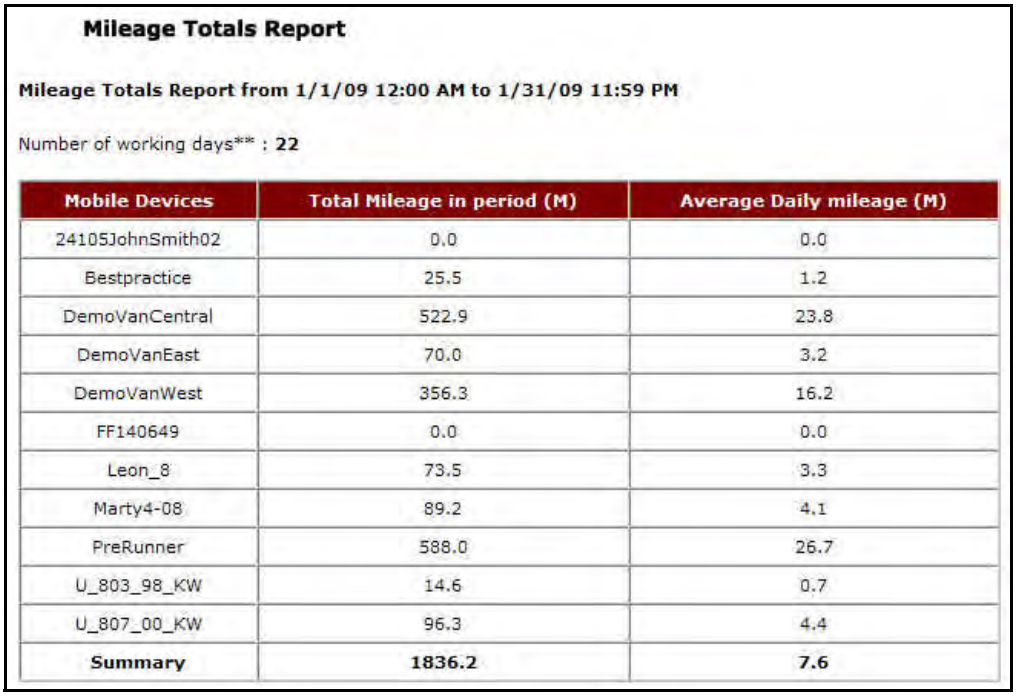
- Increase number of jobs, tasks or deliveries per day
- Meet and exceed service level agreements
- Reduce overtime and other labor costs
- Increase customer satisfaction
- Eliminate off-hours vehicle use
- Eliminate unauthorized stops
- Increase work rule compliance

The various Mobile Worker Productivity reports are:

- Mileage Totals Report
- Mileage Exception Report
- Mobile Device Vicinity Exception Report
- Off Hours Use Exception Report
- Parameterized Stop Report
- Stop Exception Report
- Stop Count Exception Report
- Stop Duration Exception Report
- Stop Summary at Landmark Type by Device Report
- Stop Summary at Landmark Type by Landmark Report
- Trip Summary Report
- Trip Detail Report
- Zone Exception Report

Mileage Totals Report

The **Mileage Totals** report, shown in Figure 3–1, displays the mileage for each mobile device during the selected reporting period.



Mileage Totals Report

Mileage Totals Report from 1/1/09 12:00 AM to 1/31/09 11:59 PM

Number of working days** : **22**

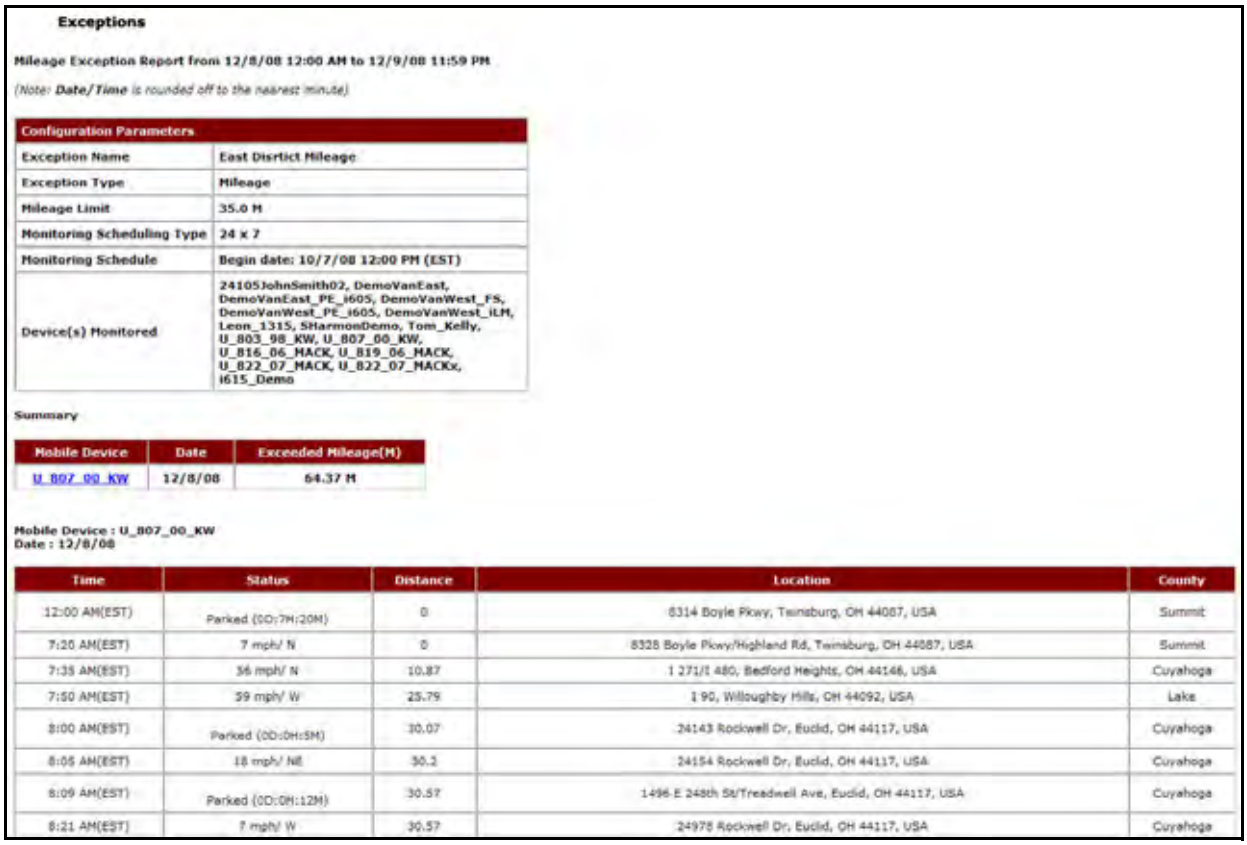
Mobile Devices	Total Mileage in period (M)	Average Daily mileage (M)
24105JohnSmith02	0.0	0.0
Bestpractice	25.5	1.2
DemoVanCentral	522.9	23.8
DemoVanEast	70.0	3.2
DemoVanWest	356.3	16.2
FF140649	0.0	0.0
Leon_8	73.5	3.3
Marty4-08	89.2	4.1
PreRunner	588.0	26.7
U_803_98_KW	14.6	0.7
U_807_00_KW	96.3	4.4
Summary	**1836.2**	**7.6**

Figure 3–1 Mileage Total Report

Item	Description
Mobile Device	The name of the selected mobile device(s).
Total Mileage in period (M)	The total distance traveled (in miles) for the selected time frame.
Average Daily Mileage (M)	The average number of miles the mobile device accrued per day for the selected time frame.

Mileage Exception Report

Mileage Exceptions occur when a mobile device exceeds a predefined number of miles within a specified work day. By monitoring mobile worker mileage, companies can save money by determining which mobile workers consistently exceed mileage parameters and creating more efficient routes.



Exceptions

Mileage Exception Report from 12/8/08 12:00 AM to 12/9/08 11:59 PM

(Note: Date/Time is rounded off to the nearest minute)

Configuration Parameters	
Exception Name	East Disrtict Mileage
Exception Type	Mileage
Mileage Limit	35.0 M
Monitoring Scheduling Type	24 x 7
Monitoring Schedule	Begin date: 10/7/08 12:00 PM (EST)
Device(s) Monitored	24105JohnSmith02, DemoVanEast, DemoVanEast_PE_i605, DemoVanWest_FS, DemoVanWest_PE_i605, DemoVanWest_iLM, Leon_1315, SHarmonDemo, Tom_Kelly, U_803_98_KW, U_807_00_KW, U_816_06_MACK, U_819_06_MACK, U_822_07_MACK, U_822_07_MACKx, i615_Demo

Summary

Mobile Device	Date	Exceeded Mileage(M)
U_807_00_KW	12/8/08	64.37 M

Mobile Device : U_807_00_KW
Date : 12/8/08

Time	Status	Distance	Location	County
12:00 AM(EST)	Parked (0D:7H:20M)	0	8314 Boyle Pkwy, Twinsburg, OH 44087, USA	Summit
7:20 AM(EST)	7 mph/ N	0	8328 Boyle Pkwy/Highland Rd, Twinsburg, OH 44087, USA	Summit
7:35 AM(EST)	36 mph/ N	10.87	I 271/I 480, Bedford Heights, OH 44146, USA	Cuyahoga
7:50 AM(EST)	59 mph/ W	25.79	I 90, Willoughby Hills, OH 44092, USA	Lake
8:00 AM(EST)	Parked (0D:0H:5M)	30.07	24143 Rockwell Dr, Euclid, OH 44117, USA	Cuyahoga
8:05 AM(EST)	18 mph/ NE	30.2	24154 Rockwell Dr, Euclid, OH 44117, USA	Cuyahoga
8:09 AM(EST)	Parked (0D:0H:12M)	30.57	1496 E 248th St/Treadwell Ave, Euclid, OH 44117, USA	Cuyahoga
8:21 AM(EST)	7 mph/ W	30.57	24978 Rockwell Dr, Euclid, OH 44117, USA	Cuyahoga

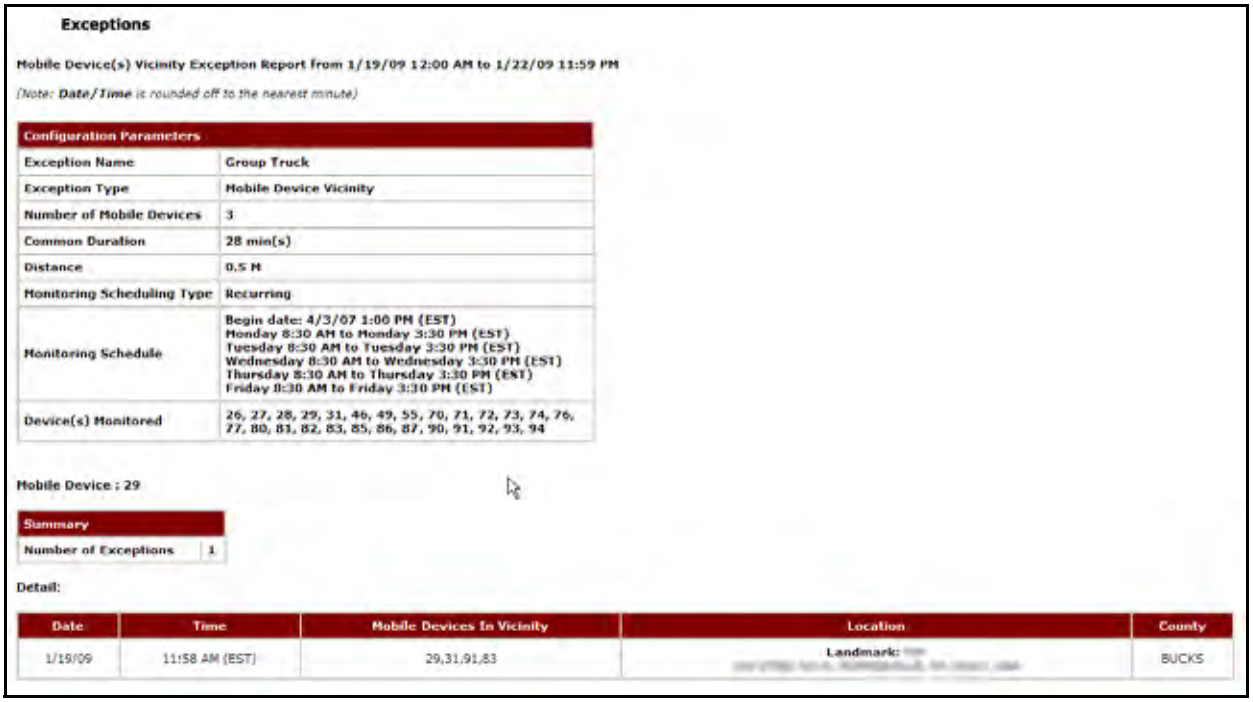
Figure 3–2 Mileage Exceptions Report

Item	Description
Configuration Parameters	The limitations for the selected configuration.
Exception Name	The name of the selected Exception.
Exception Type	The type of Exception.
Monitoring Schedule Type	The type of schedule for monitoring the mobile device. This can be 24X7 or recurring.
Monitoring Schedule	The date and time when 24X7 monitoring became effective. The hours and days recurring monitoring occurs and the date and time it became effective.
Device(s) Monitored	A list of selected devices that are monitored by this Landmark Proximity Exception.
Summary	A quick view of how many Exceptions occurred for this Landmark Proximity.
Mobile Device	The mobile device that caused the Exception.

Item	Description
Date	The date on which the exception was triggered.
Exceeded Mileage (M)	The number of Exceptions in this zone that occurred during the selected time frame.
Time	The corresponding time stamp for the date.
Status	The current status of the mobile device including MPH and direction if moving.
Distance	The number of miles above the daily limit when the exception was triggered.
Location	Complete address of the location for the messages sent from the driver to the dispatcher.
County	The county where the mobile device was located when the information was transmitted.

Mobile Device Vicinity Report

The **Mobile Device Vicinity** Exception monitors the occurrences of multiple mobile devices stopping within a defined distance from each other for a period of time common to both or all. This allows companies to check for route overlap mobile devices are grouped near each other for extended periods of time.



Exceptions

Mobile Device(s) Vicinity Exception Report from 1/19/09 12:00 AM to 1/22/09 11:59 PM

(Note: Date/Time is rounded off to the nearest minute)

Configuration Parameters	
Exception Name	Group Truck
Exception Type	Mobile Device Vicinity
Number of Mobile Devices	3
Common Duration	28 min(s)
Distance	0.5 M
Monitoring Scheduling Type	Recurring
Monitoring Schedule	Begin date: 4/3/07 1:00 PM (EST) Monday 8:30 AM to Monday 3:30 PM (EST) Tuesday 8:30 AM to Tuesday 3:30 PM (EST) Wednesday 8:30 AM to Wednesday 3:30 PM (EST) Thursday 8:30 AM to Thursday 3:30 PM (EST) Friday 8:30 AM to Friday 3:30 PM (EST)
Device(s) Monitored	26, 27, 28, 29, 31, 46, 49, 55, 70, 71, 72, 73, 74, 76, 77, 80, 81, 82, 83, 85, 86, 87, 90, 91, 92, 93, 94

Mobile Device : 29

Summary	
Number of Exceptions	1

Detail:

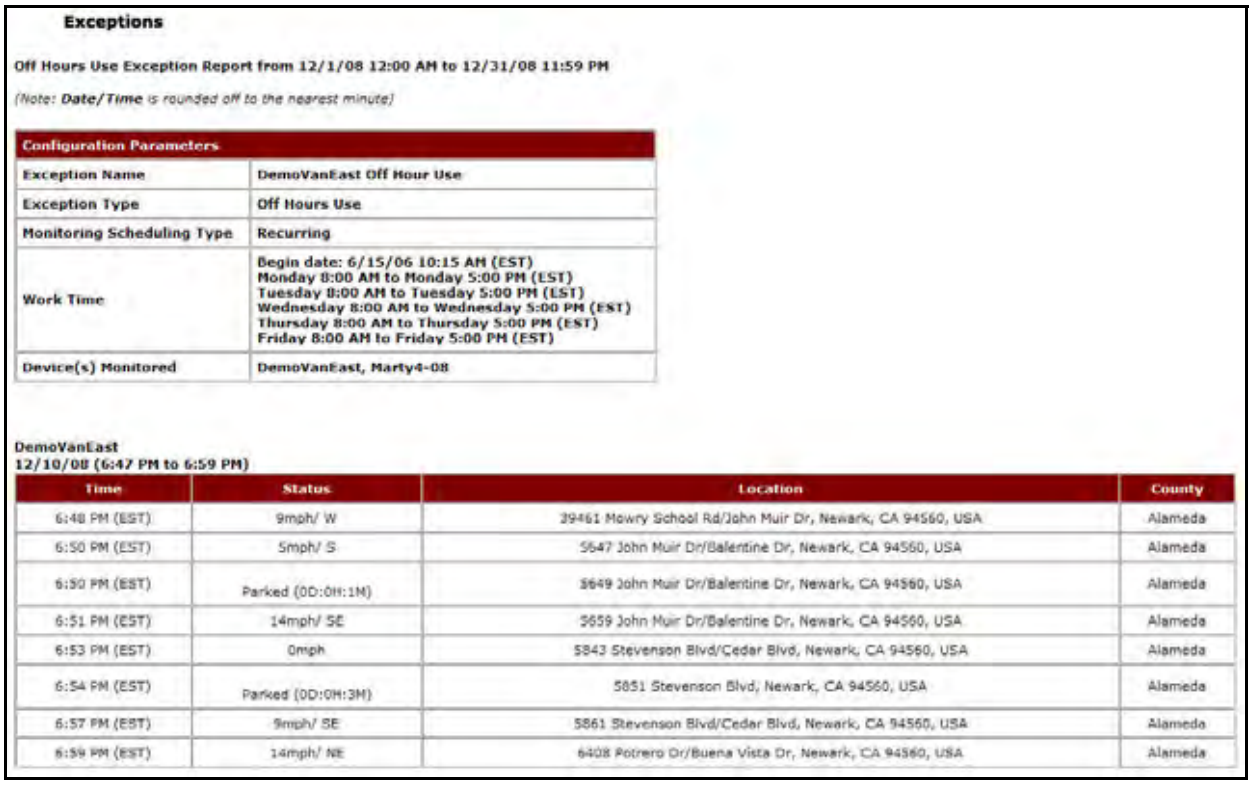
Date	Time	Mobile Devices In Vicinity	Location	County
1/19/09	11:58 AM (EST)	29,31,91,83	Landmark:	BUCKS

Figure 3–3 Mobile Device Vicinity Report

Item	Description
Configuration Parameters	The limitations for the selected configuration.
Exception Name	The name of the selected Exception.
Exception Type	The type of Exception.
Common Duration	The amount of time the mobile devices were in close range.
Distance	The actual distance of the mobile devices to one another.
Monitoring Schedule Type	The type of schedule for monitoring the mobile device. This can be 24X7 or recurring.
Devices Monitored	A list of selected devices that are monitored by this Landmark Proximity Exception.
Summary	
Number of Exceptions	The number of exceptions
Time	Time of update, listed in hh:mm AM/PM format and time zone indicated (i.e. PST for Pacific Standard Time).
Status	The mobile devices detected in close range.
Location	Shows the closest address, cross street, city, state and ZIP where mobile device was located at the time of update.
County	County where mobile device was located at the time of update.

Off Hours Use Exception Report

When a mobile device is used outside of designated work hours, an **Off Hours Use** Exception occurs. This Exception helps a company discover whether company resources are being used when mobile workers are not on shift.



Exceptions

Off Hours Use Exception Report from 12/1/08 12:00 AM to 12/31/08 11:59 PM

*(Note: **Date/Time** is rounded off to the nearest minute)*

Configuration Parameters	
Exception Name	DemoVanEast Off Hour Use
Exception Type	Off Hours Use
Monitoring Scheduling Type	Recurring
Work Time	Begin date: 6/15/06 10:15 AM (EST) Monday 8:00 AM to Monday 5:00 PM (EST) Tuesday 8:00 AM to Tuesday 5:00 PM (EST) Wednesday 8:00 AM to Wednesday 5:00 PM (EST) Thursday 8:00 AM to Thursday 5:00 PM (EST) Friday 8:00 AM to Friday 5:00 PM (EST)
Device(s) Monitored	DemoVanEast, Marty4-08

DemoVanEast
12/10/08 (6:47 PM to 6:59 PM)

Time	Status	Location	County
6:48 PM (EST)	9mph/ W	39461 Mowry School Rd/John Muir Dr, Newark, CA 94560, USA	Alameda
6:50 PM (EST)	5mph/ S	5647 John Muir Dr/Balentine Dr, Newark, CA 94560, USA	Alameda
6:50 PM (EST)	Parked (0D:0H:1M)	5649 John Muir Dr/Balentine Dr, Newark, CA 94560, USA	Alameda
6:51 PM (EST)	14mph/ SE	5659 John Muir Dr/Balentine Dr, Newark, CA 94560, USA	Alameda
6:53 PM (EST)	0mph	5843 Stevenson Blvd/Cedar Blvd, Newark, CA 94560, USA	Alameda
6:54 PM (EST)	Parked (0D:0H:3M)	5851 Stevenson Blvd, Newark, CA 94560, USA	Alameda
6:57 PM (EST)	9mph/ SE	5861 Stevenson Blvd/Cedar Blvd, Newark, CA 94560, USA	Alameda
6:59 PM (EST)	14mph/ NE	6408 Potrero Dr/Buena Vista Dr, Newark, CA 94560, USA	Alameda

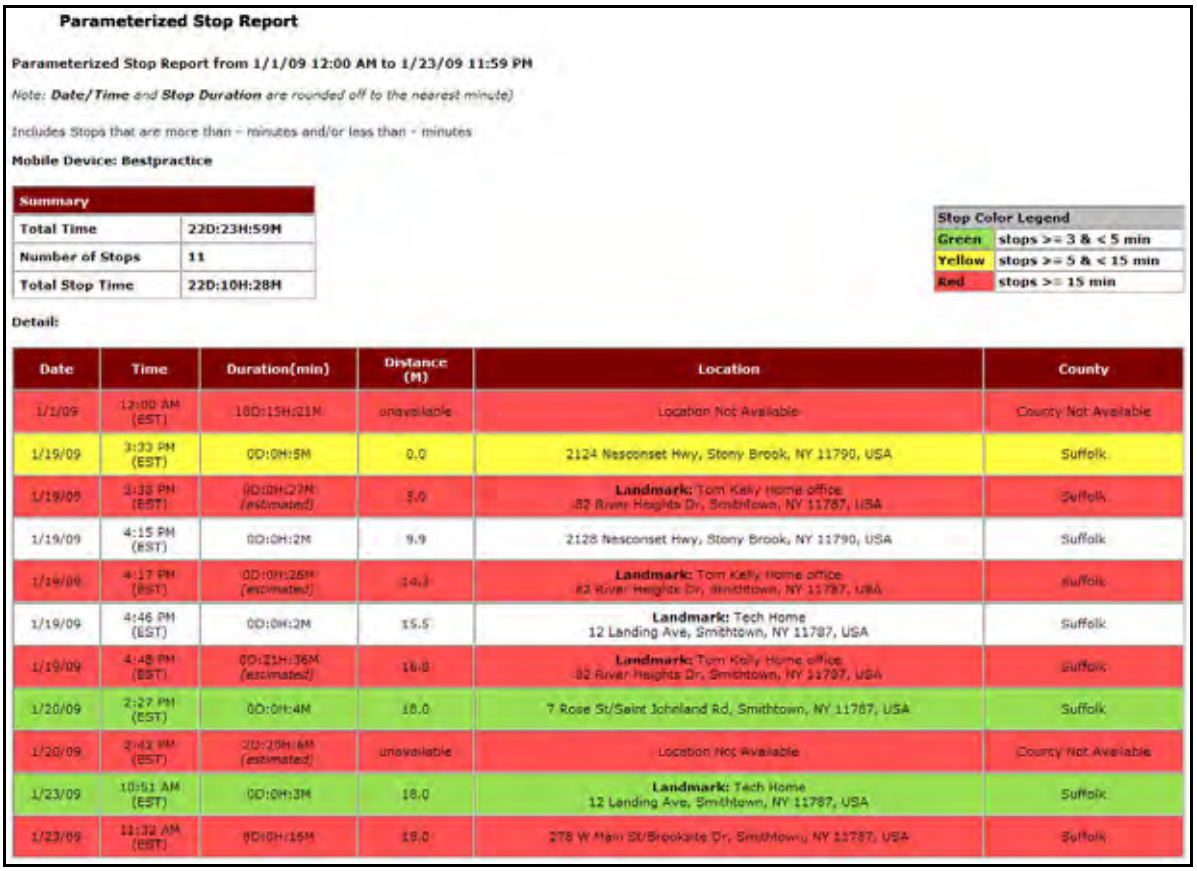
Figure 3–4 Off Hours Use Exception Report

Item	Description
Configuration Parameters	The limitations for the selected configuration.
Exception Name	The name of the selected Exception.
Exception Type	The type of Exception.
Monitoring Schedule Type	The type of schedule for monitoring the mobile device. This can be 24X7 or recurring.
Work Time	The date and time when 24X7 monitoring became effective. The hours and days recurring monitoring occurs and the date and time it became effective.
Devices Monitored	A list of selected devices that are monitored by this Landmark Proximity Exception.
Date	Date of the update, listed in mm/dd/yy format.
Time	Time of update, listed in hh:mm AM/PM format and time zone indicated (i.e. PST for Pacific Standard Time).
Status	The current status of the mobile device including MPH and direction if moving.

Item	Description
Location	Shows the closest address, cross street, city, state and ZIP where mobile device was located at the time of update.
County	County where mobile device was located at the time of update.

Parameterized Stop

The **Parameterized Stop** report, shown in Figure 3–5, vehicle stops for each mobile device during the selected reporting period.



Parameterized Stop Report

Parameterized Stop Report from 1/1/09 12:00 AM to 1/23/09 11:59 PM

*Note: **Date/Time** and **Stop Duration** are rounded off to the nearest minute)*

Includes Stops that are more than - minutes and/or less than - minutes

Mobile Device: Bestpractice

Summary	
Total Time	22D:23H:59M
Number of Stops	11
Total Stop Time	22D:10H:28M

Stop Color Legend	
Green	stops >= 3 & < 5 min
Yellow	stops >= 5 & < 15 min
Red	stops >= 15 min

Detail:

Date	Time	Duration(min)	Distance (M)	Location	County
1/1/09	12:00 AM (EST)	18D:15H:21M	unavailable	Location Not Available	County Not Available
1/19/09	3:33 PM (EST)	0D:0H:5M	0.0	2124 Nesconset Hwy, Stony Brook, NY 11790, USA	Suffolk
1/19/09	3:38 PM (EST)	0D:0H:27M (estimated)	5.0	**Landmark:** Tom Kelly Home office 82 River Heights Dr, Smithtown, NY 11787, USA	Suffolk
1/19/09	4:15 PM (EST)	0D:0H:2M	9.9	2128 Nesconset Hwy, Stony Brook, NY 11790, USA	Suffolk
1/19/09	4:17 PM (EST)	0D:0H:26M (estimated)	14.3	**Landmark:** Tom Kelly Home office 82 River Heights Dr, Smithtown, NY 11787, USA	Suffolk
1/19/09	4:46 PM (EST)	0D:0H:2M	15.5	**Landmark:** Tech Home 12 Landing Ave, Smithtown, NY 11787, USA	Suffolk
1/19/09	4:48 PM (EST)	0D:21H:36M (estimated)	16.8	**Landmark:** Tom Kelly Home office 82 River Heights Dr, Smithtown, NY 11787, USA	Suffolk
1/20/09	2:27 PM (EST)	0D:0H:4M	18.0	7 Rose St/Saint Johnland Rd, Smithtown, NY 11787, USA	Suffolk
1/20/09	2:43 PM (EST)	2D:20H:8M (estimated)	unavailable	Location Not Available	County Not Available
1/23/09	10:51 AM (EST)	0D:0H:3M	18.0	**Landmark:** Tech Home 12 Landing Ave, Smithtown, NY 11787, USA	Suffolk
1/23/09	11:32 AM (EST)	0D:0H:16M	19.0	278 W Main St/Brookite Dr, Smithtown, NY 11787, USA	Suffolk

Figure 3–5 Parameterized Stop Report

Item	Description
Summary	Shows the activity summary for the selected mobile device(s).
Total Time	The total amount of time selected for the report.

Item	Description
Number of Stops	The total number of stops made by the selected mobile device(s) during the selected time frame.
Total Stop Time	The total amount of time the mobile device was stopped during the selected time frame.
Date	The date the transmission occurred within the date range selected for the report.
Time	The time of day when the transmission occurred.
Duration (min.)	The length of time the mobile device is stopped at a single location. Estimated if the mobile device continues to be stopped at a location.
Distance (M)	The accumulated distance traveled during the selected time frame.
Location	Shows the closest address, cross street, city, state and ZIP where mobile device was located at the time of last update.
County	County where mobile device was located at the time of update.

The report contains a header with the date range, followed by each mobile device's label, Summary and Detail.

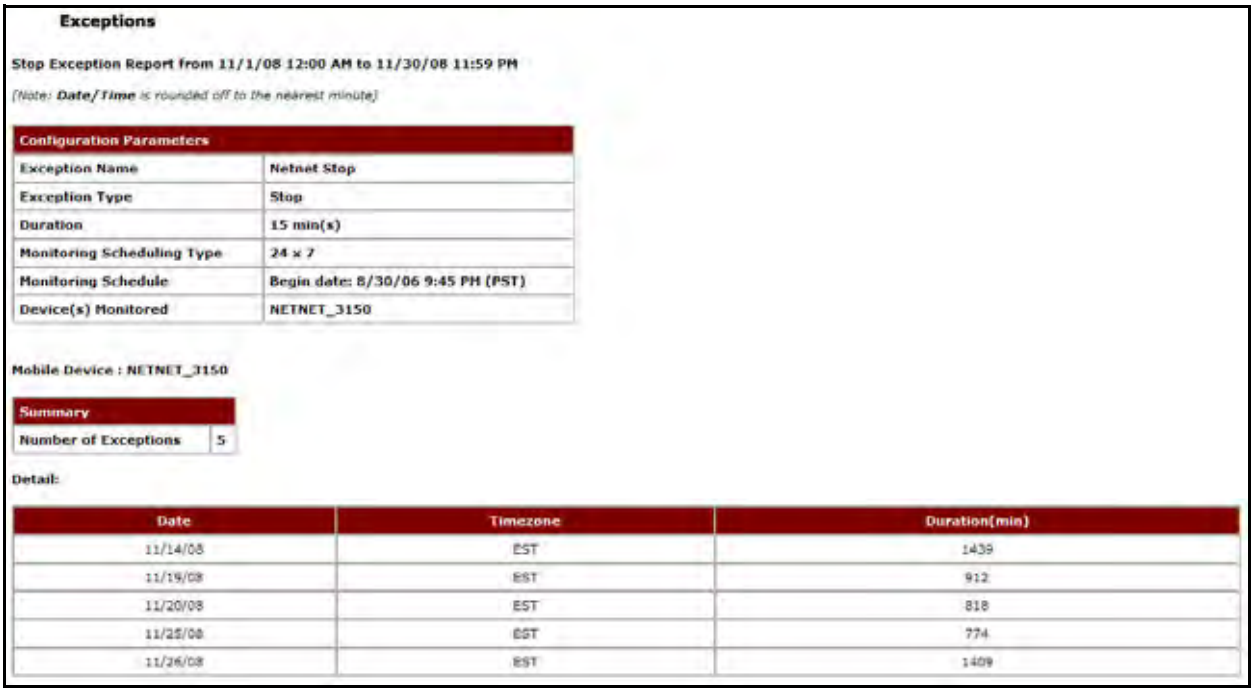
The table displays the following information:

- White rows indicate the driving times of the mobile devices.
- Colored rows indicate the stop duration of the mobile devices.
- Stop duration defaults are:
  - A green highlight indicates 3 - 15 minutes.
  - A yellow highlight indicates a stop duration of 15 - 60 minutes.
  - A red highlight indicates a stop of 60 minutes or longer.

Note:
The color values can be defined in the Administration section of GeoManager.

Stop Exception Report

Stop Exceptions monitor total daily stop time accumulated at specific locations (Landmarks). This is helpful in determining if workers are spending too much time at non-revenue generating facilities such as a home office or base location.



Exceptions

Stop Exception Report from 11/1/08 12:00 AM to 11/30/08 11:59 PM

*(Note: **Date/Time** is rounded off to the nearest minute)*

Configuration Parameters	
Exception Name	Netnet Stop
Exception Type	Stop
Duration	15 min(s)
Monitoring Scheduling Type	24 x 7
Monitoring Schedule	Begin date: 8/30/06 9:45 PM (PST)
Device(s) Monitored	NETNET_3150

Mobile Device : NETNET_3150

Summary	
Number of Exceptions	5

Detail:

Date	Timezone	Duration(min)
11/14/08	EST	1439
11/19/08	EST	912
11/20/08	EST	818
11/25/08	EST	774
11/26/08	EST	1409

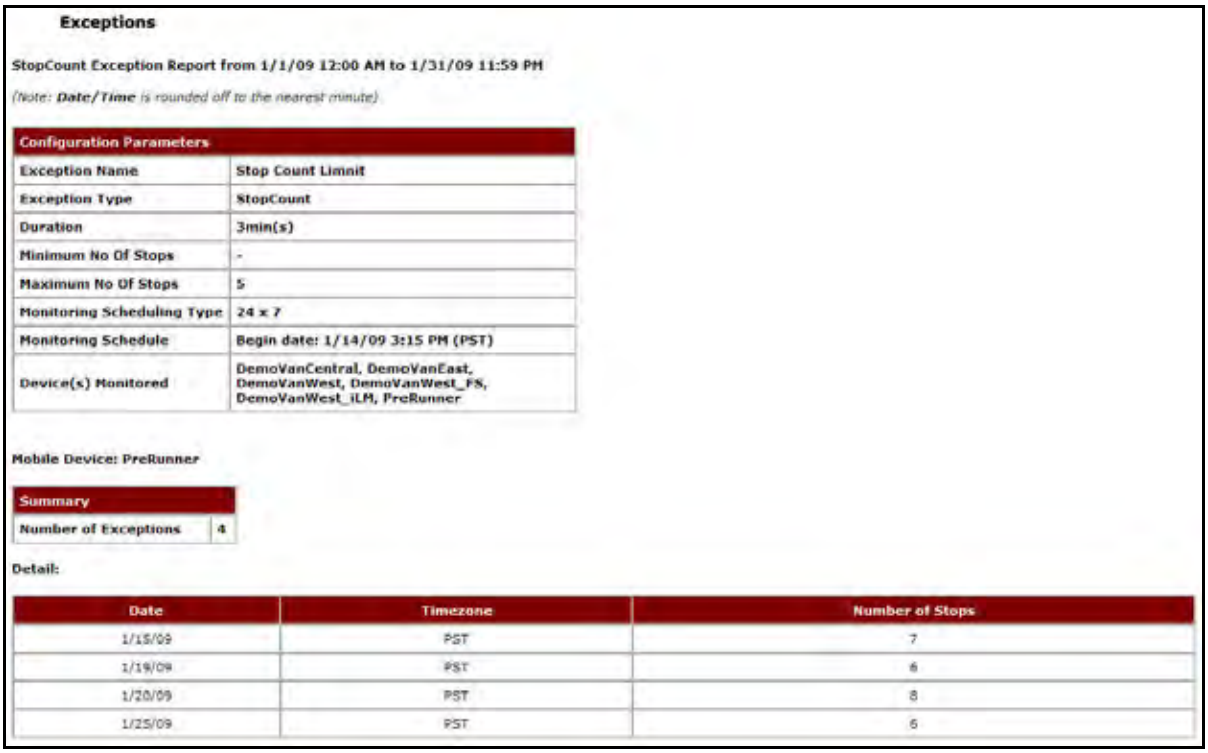
Figure 3–6 Stop Exception Report

Item	Description
Configuration Parameters	The limitations for the selected configuration.
Exception Name	The name of the selected Exception.
Exception Type	The type of Exception.
Duration	The length of time allowed before an Exception occurs.
Monitoring Schedule Type	The type of schedule for monitoring the mobile device. This can be 24X7 or recurring.
Monitoring Schedule	The date and time when 24X7 monitoring became effective. The hours and days recurring monitoring occurs and the date and time it became effective.
Devices Monitored	A list of selected devices that are monitored by this Speed Exception.

Item	Description
Summary	
Number of Exceptions	The total number of Stop Exceptions for the selected time frame.
Date	Date of the update, listed in mm/dd/yy format.
Timezone	Time zone where update occurred (i.e. PST for Pacific Standard Time).
Duration (min.)	Shows the duration of the stop. The duration (length of time) will be in minutes.

Stop Count Exception Report

Stop Count Exceptions monitor the total number of stops a vehicle makes. This can help a company determine which mobile workers are performing too many or too few stops during a shift.



Exceptions

StopCount Exception Report from 1/1/09 12:00 AM to 1/31/09 11:59 PM

*(Note: **Date/Time** is rounded off to the nearest minute)*

Configuration Parameters	
Exception Name	Stop Count Limit
Exception Type	StopCount
Duration	3min(s)
Minimum No Of Stops	-
Maximum No Of Stops	5
Monitoring Scheduling Type	24 x 7
Monitoring Schedule	Begin date: 1/14/09 3:15 PM (PST)
Device(s) Monitored	DemoVanCentral, DemoVanEast, DemoVanWest, DemoVanWest_FS, DemoVanWest_iLM, PreRunner

Mobile Device: PreRunner

Summary	
Number of Exceptions	4

Detail:

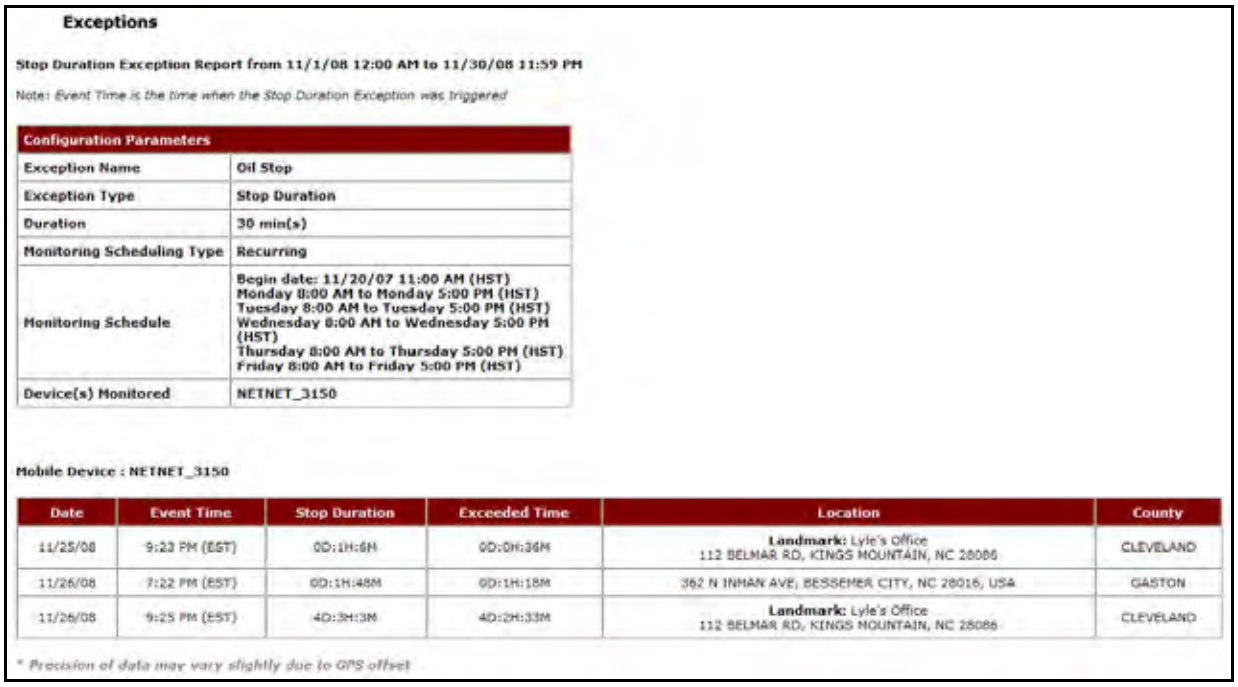
Date	Timezone	Number of Stops
1/15/09	PST	7
1/19/09	PST	6
1/20/09	PST	8
1/25/09	PST	6

Figure 3–7 Stop Count Exception Report

Item	Description
Configuration Parameters	The limitations for the selected configuration.
Exception Name	The name of the selected Exception.
Exception Type	The type of Exception.
Duration	The length of time allowed before an Exception occurs.
Minimum No of Stops	The minimum number of stops before an exception occurs.
Maximum No of Stops	The maximum number of stops before an exception occurs.
Monitoring Schedule Type	The type of schedule for monitoring the mobile device. This can be 24X7 or recurring.
Monitoring Schedule	The date and time when 24X7 monitoring became effective. The hours and days recurring monitoring occurs and the date and time it became effective.
Devices Monitored	A list of selected devices that are monitored by this Stop Exception.
Summary	The number of Exceptions for Low Battery that occurred during the selected time frame.
Date	Date of the update, listed in mm/dd/yy format.
TimeZone	Time zone where update occurred (i.e. PST for Pacific Standard Time).
Number of Stops	The total number of stops for the selected vehicle during the selected time frame.

Stop Duration Exception Report

Stop Duration Exceptions occur when the total amount of time a mobile worker spends at a stop exceeds a set threshold during a defined workday. This helps companies identify workers who spend too much or too little time stopped at any location.



Exceptions

Stop Duration Exception Report from 11/1/08 12:00 AM to 11/30/08 11:59 PM

Note: Event Time is the time when the Stop Duration Exception was triggered

Configuration Parameters	
Exception Name	Oil Stop
Exception Type	Stop Duration
Duration	30 min(s)
Monitoring Scheduling Type	Recurring
Monitoring Schedule	Begin date: 11/20/07 11:00 AM (HST) Monday 8:00 AM to Monday 5:00 PM (HST) Tuesday 8:00 AM to Tuesday 5:00 PM (HST) Wednesday 8:00 AM to Wednesday 5:00 PM (HST) Thursday 8:00 AM to Thursday 5:00 PM (HST) Friday 8:00 AM to Friday 5:00 PM (HST)
Device(s) Monitored	NETNET_3150

Mobile Device : NETNET_3150

Date	Event Time	Stop Duration	Exceeded Time	Location	County
11/25/08	9:23 PM (EST)	0D:1H:6M	0D:0H:36M	**Landmark:** Lyle's Office 112 BELMAR RD, KINGS MOUNTAIN, NC 28086	CLEVELAND
11/26/08	7:22 PM (EST)	0D:1H:48M	0D:1H:18M	362 N INMAN AVE, BESSEMER CITY, NC 28016, USA	GASTON
11/26/08	9:25 PM (EST)	4D:3H:3M	4D:2H:33M	**Landmark:** Lyle's Office 112 BELMAR RD, KINGS MOUNTAIN, NC 28086	CLEVELAND

** Precision of data may vary slightly due to GPS offset*

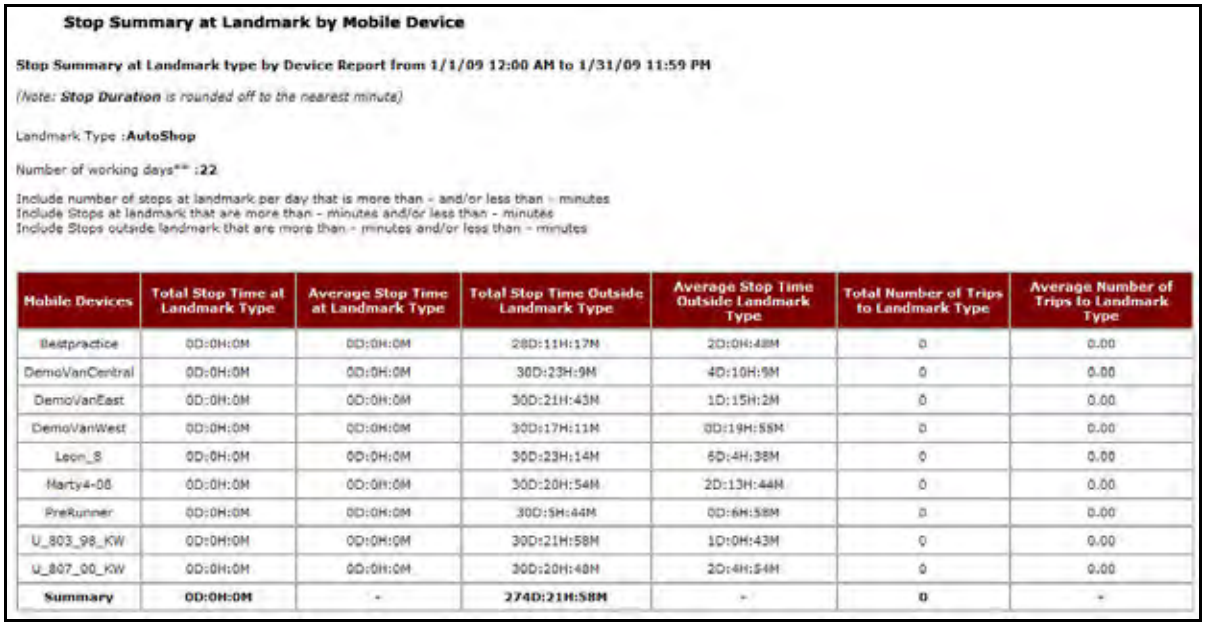
Figure 3–8 Stop Duration Exception Report

Item	Description
Configuration Parameters	The limitations for the selected configuration.
Exception Name	The name of the selected Exception.
Exception Type	The type of Exception.
Duration	The length of time allowed before an Exception occurs.
Monitoring Schedule Type	The type of schedule for monitoring the mobile device. This can be 24X7 or recurring.
Monitoring Schedule	The date and time when 24X7 monitoring became effective. The hours and days recurring monitoring occurs and the date and time it became effective.
Devices Monitored	A list of selected devices that are monitored by this Speed Exception.
Mobile Device	The name of the mobile device with Details specific to it following.
Date	Date of the update, listed in mm/dd/yy format.
Event Time	Time of update, listed in hh:mm AM/PM format and time zone indicated (i.e. PST for Pacific Standard Time).

Item	Description
Stop Duration	Shows the duration of the stop. The duration (length of time) will be in #D:##H:##M format.
Distance	Reflects the distance traveled by a mobile device.
Exceeded Time	The amount of time exceeding the maximum amount of time set for a stop duration. The duration (length of time) will be in #D:##H:##M format.
Location	Shows the closest address, cross street, city, state and ZIP where mobile device was located at the time of update.
County	County where mobile device was located at the time of update.

Stop Summary at Landmark Type by Device

The **Stop Summary at Landmark Type by Device** report, shown in Figure 3–9, shows the number of stops a mobile device made at a particular Landmark. The **Stop Summary at Landmark by Device** report also shows a summary of average and total time spent at the Landmark.



Stop Summary at Landmark by Mobile Device

Stop Summary at Landmark type by Device Report from 1/1/09 12:00 AM to 1/31/09 11:59 PM

*(Note: **Stop Duration** is rounded off to the nearest minute)*

Landmark Type :**AutoShop**

Number of working days** :**22**

Include number of stops at landmark per day that is more than - and/or less than - minutes
Include Stops at landmark that are more than - minutes and/or less than - minutes
Include Stops outside landmark that are more than - minutes and/or less than - minutes

Mobile Devices	Total Stop Time at Landmark Type	Average Stop Time at Landmark Type	Total Stop Time Outside Landmark Type	Average Stop Time Outside Landmark Type	Total Number of Trips to Landmark Type	Average Number of Trips to Landmark Type
Bestpractice	0D:0H:0M	0D:0H:0M	28D:11H:17M	2D:0H:48M	0	0.00
DemoVanCentral	0D:0H:0M	0D:0H:0M	30D:23H:9M	4D:10H:9M	0	0.00
DemoVanEast	0D:0H:0M	0D:0H:0M	30D:21H:43M	1D:15H:2M	0	0.00
DemoVanWest	0D:0H:0M	0D:0H:0M	30D:17H:11M	0D:19H:58M	0	0.00
Leon_S	0D:0H:0M	0D:0H:0M	30D:23H:14M	6D:4H:38M	0	0.00
Marty4-08	0D:0H:0M	0D:0H:0M	30D:20H:54M	2D:13H:44M	0	0.00
PreRunner	0D:0H:0M	0D:0H:0M	30D:5H:44M	0D:6H:58M	0	0.00
U_803_98_KW	0D:0H:0M	0D:0H:0M	30D:21H:58M	1D:0H:43M	0	0.00
U_807_00_KW	0D:0H:0M	0D:0H:0M	30D:20H:48M	2D:4H:54M	0	0.00
Summary	**0D:0H:0M**	-	**274D:21H:58M**	-	**0**	-

Figure 3–9 Stop Summary at Landmark Type by Device Report

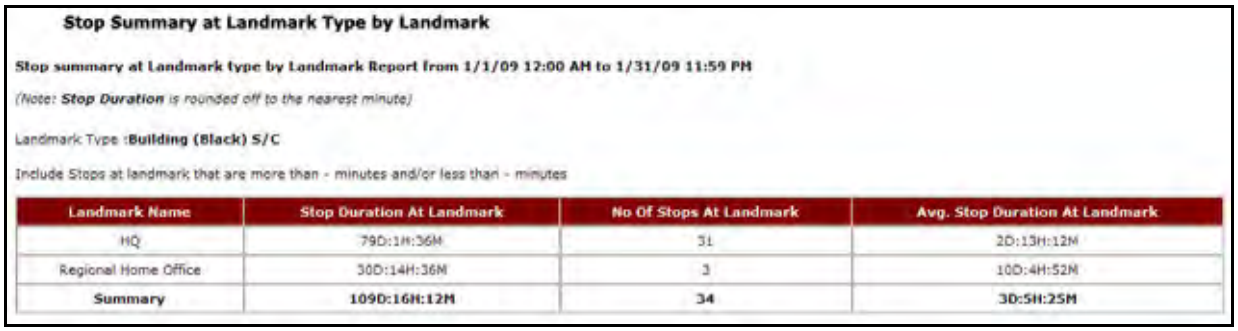
Item	Description
Landmark Type	The selected Landmark type for the report. You may select only one type of Landmark.
Number of Working Days	The number of working days included in the requested time frame for the report. This is the number used to calculate the report averages.
Mobile Device	The name of the selected mobile device(s).
Total Stop Time at Landmark Type	The total amount of stop time the mobile device spent at the selected Landmark Type.
Average Stop Time at Landmark Type	The average amount of time the mobile device spent at the selected Landmark Type during the requested time frame.
Total Stop Time Outside Landmark Type	The total amount of stop time the mobile device spent at places that were not the selected Landmark Type.
Average Stop Time Outside Landmark Type	The average amount of stop time the mobile device spent at places that were not the selected Landmark Type.
Total Number of Trips to Landmark Type	The total number of times the mobile device stopped at the selected Landmark Type for the requested time frame.
Average Number of Trips to Landmark Type	The average number of times the mobile device stopped at the selected Landmark for the requested time frame.

Note:

For the Stop Summary at Landmark by Device report, Stop Durations are rounded off to the nearest minute.

Stop Summary at Landmark Type by Landmark

The **Stop Summary at Landmark Type by Landmark** report, shown in Figure 3–10, shows the summary for all stops made by mobile device(s) at a particular Landmark Type. The **Stop Summary at Landmark by Landmark** report also shows the average stop duration and the number of stops made at the Landmark Type. This is useful when you want to know how much time employees are spending at a particular type of Landmark, such as customer sites or coffee shops.



Stop Summary at Landmark Type by Landmark

Stop summary at Landmark type by Landmark Report from 1/1/09 12:00 AM to 1/31/09 11:59 PM

*(Note: **Stop Duration** is rounded off to the nearest minute)*

Landmark Type :**Building (Black) S/C**

Include Stops at landmark that are more than - minutes and/or less than - minutes

Landmark Name	Stop Duration At Landmark	No Of Stops At Landmark	Avg. Stop Duration At Landmark
HQ	79D:1H:36M	31	2D:13H:12M
Regional Home Office	30D:14H:36M	3	10D:4H:52M
Summary	**109D:16H:12M**	**34**	**3D:5H:25M**

Figure 3–10 Stop Summary at Landmark by Landmark Report

Item	Description
Landmark Type	The selected Landmark type for the report. You may select only one type of Landmark.
Landmark Name	The name(s) of the Landmark(s) included in the Landmark type. This name may be different from the Landmark Type.
Stop Duration at Landmark	The total amount of stop time spent at the Landmark.
No. of Stops at Landmark	The total number of stops made at the Landmark during the selected time frame.
Avg. Stop Duration at Landmark	The average amount of time spent at the Landmark.

Note:

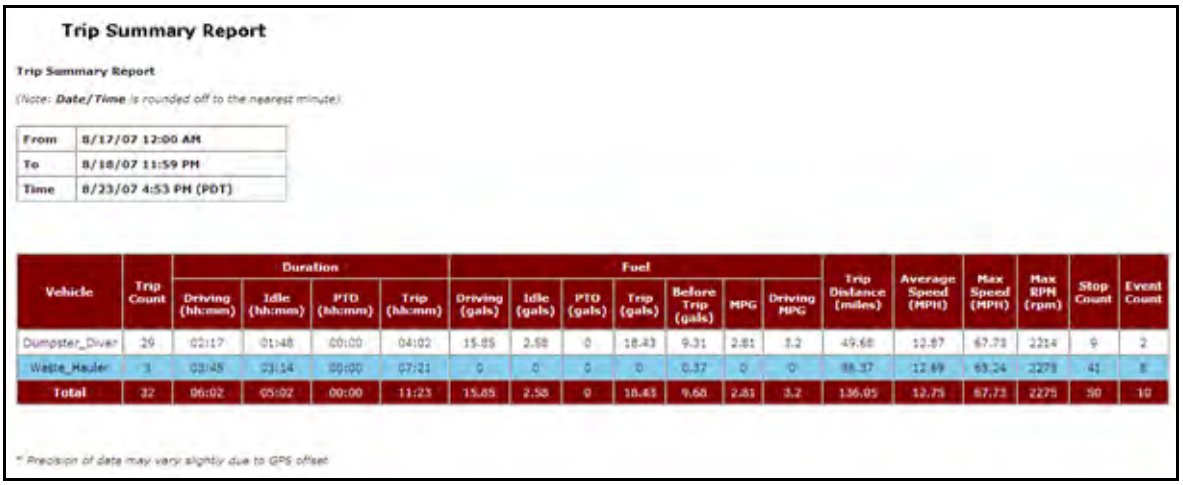
For the Stop Summary at Landmark by Landmark report, Stop Durations are rounded off to the nearest minute.

Trip Report - Summary

The **Trip Report – Summary** helps managers determine the total and average miles that are traveled by mobile workers and compare their work performance.

Note:

A trip is defined as engine on / engine off for the 27XX and 31XX. 45XX customers can create definitions for what constitutes a trip.



Trip Summary Report

Trip Summary Report

(Note: **Date/Time** is rounded off to the nearest minute)

From	8/17/07 12:00 AM
To	8/18/07 11:59 PM
Time	8/23/07 4:53 PM (PDT)

Vehicle	Trip Count	Duration				Fuel							Trip Distance (miles)	Average Speed (MPH)	Max Speed (MPH)	Max RPM (rpm)	Stop Count	Event Count
		Driving (hh:mm)	Idle (hh:mm)	PTO (hh:mm)	Trip (hh:mm)	Driving (gals)	Idle (gals)	PTO (gals)	Trip (gals)	Before Trip (gals)	MPG	Driving MPG						
Dumpster_Diver	29	02:17	01:48	00:00	04:02	15.05	2.58	0	18.43	9.31	2.81	3.2	49.68	12.87	67.73	2214	9	2
Waste_Hauler	3	03:45	03:14	00:00	07:21	0	0	0	0	0.37	0	0	86.37	12.69	63.24	2279	41	8
Total	32	06:02	05:02	00:00	11:23	15.05	2.58	0	18.43	9.68	2.81	3.2	136.05	12.75	67.73	2279	50	10

* Precision of data may vary slightly due to GPS offset

Figure 3–11: Trip Report – Summary

Field	Description
From	The beginning date for the report data.
To	The end date for the report data.
Time	The date and time the report was generated.
Vehicle	The mobile device's label.
Trip Count	The total number of trips for each mobile device included in the report.
Duration	The total amounts of time mobile devices were performing specific activities.
Driving	The total number of hours and minutes the mobile device spent driving. In hh:mm format.
Idle	The total number of minutes the mobile device spent running without moving.
PTO	The total number of minutes the mobile device engaged in power take-offs.
Trip	The total amount of time the mobile device operates within the trip parameters (e.g. engine on/engine off).
Fuel	The total amount of fuel the mobile device used when performing specific activities.
Driving	The total number of gallons of fuel the mobile device used while driving.
Idle	The total number of gallons of fuel the mobile device used while sitting still with the engine running.

Field	Description
PTO	The total number of gallons of fuel used when mobile devices were engaged in power take-offs.
Trip	The total number of gallons of fuel used by a mobile device within the trip parameters (e.g. engine on/engine off).
Before Trips	The total number of gallons of fuel used by a mobile device before first movement.
MPG	The average number of miles per gallon of fuel for each device including idle time and driving time.
Driving MPG	The average number of miles per gallon for each mobile device while the device is in motion.
Trip Distance	The total number of miles for trips.
Average Speed	The average miles per hour for the selected time period.
Max Speed	The fastest speed reached during the selected report period.
Max RPM	The fastest RPM reached during the selected report period.
Stop Count	The number of stops performed during the selected report period.
Event Count	The number of events that occurred during the selected report period.

Trip Report - Detail

The **Trip Report – Detail** allows you to evaluate driver and vehicle performance from one trip to another by comparing speed, RPM, distance, PTO usage, fuel efficiency and idle time.

The complete report is shown in Figure 3–12. When generated as an HTML report for viewing, you must use the horizontal scroll bar to view the entire report. Figure 3–13 and Figure 3–14 show larger, broken out views of the report data for better understanding.

Note:

Not all fields will be populated for the report with 27XX and 31XX with OBDII/J1708 Bus adapter.

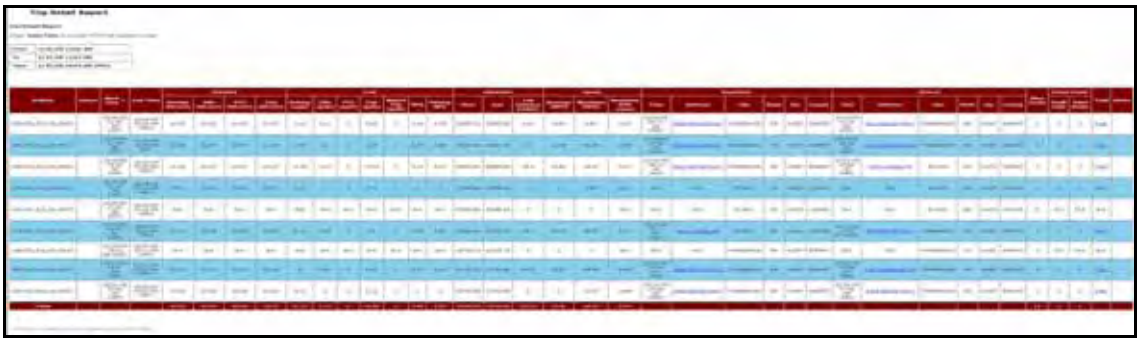


Figure 3–12: Trip Report – Detail

Field	Description
From	The beginning date for the report data.
To	The end date for the report data.
Time	The date and time the report was generated.

Vehicle	Driver	Start Time	End Time	Duration				Fuel							Odometer			
				Driving (hh:mm)	Idle (hh:mm)	PTO (hh:mm)	Trip (hh:mm)	Driving (gals)	Idle (gals)	PTO (gals)	Trip (gals)	Before Trip (gals)	MPG	Driving MPG	Start	End	Trip Distance (miles)	Average (MPH)
UNIVAR_816_08_MACK		02/20/08 01:56 AM (PST)	02/20/08 02:03 AM (PST)	00:02	00:06	00:00	00:07	0.13	0.12	0	0.25	0	2.49	4.79	32838.04	32835.66	0.62	18.64
UNIVAR_816_08_MACK		02/20/08 05:48 AM (PST)	02/20/08 05:06 AM (PST)	00:29	00:54	00:00	01:19	0.87	0.5	0	1.37	0	3.67	4.65	32938.66	32644.26	8.7	22.88
UNIVAR_816_08_MACK		02/20/08 05:09 AM (PST)	02/20/08 07:27 AM (PST)	01:10	01:01	00:00	02:17	10.38	0.37	0	10.75	0	5.14	5.33	32644.26	32899.66	55.3	43.66
UNIVAR_816_08_MACK		02/20/08 07:28 AM (PST)	02/20/08 07:43 AM (PST)	00:11	00:06	00:00	00:17	0.12	0	0	0.12	0	0	0	32899.66	32899.66	0	0
UNIVAR_816_08_MACK		02/20/08 07:43 AM (PST)	02/20/08 07:43 AM (PST)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32899.66	32899.66	0	0
UNIVAR_816_08_MACK		02/20/08 08:48 AM (PST)	02/20/08 12:27 PM (PST)	01:13	02:08	00:00	03:22	11.13	0.87	0	12	0	3.61	3.91	32899.66	32743.13	43.8	19.78
UNIVAR_816_08_MACK		02/20/08 12:11 PM (PST)	02/20/08 12:11 PM (PST)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32743.13	32743.13	0	0
UNIVAR_816_08_MACK		02/21/08 03:57 AM (PST)	02/21/08 07:03 AM (PST)	01:24	01:41	00:00	03:05	8	0.87	0	8.87	0	6.04	5.32	32743.13	32792.84	48.71	38.31
UNIVAR_816_08_MACK		02/21/08 07:08 AM (PST)	02/21/08 07:08 AM (PST)	00:02	00:02	00:00	00:04	0.12	0	0	0.12	0	0	0	32792.84	32792.84	0	0
Total				04:23	05:58	00:00	10:21	32.75	2.73	0	35.48	0	4.48	4.85	32635.04	32792.84	157.83	36.42

Figure 3–13: Trip Report – Detail: Section 1

Field	Description
Vehicle	The name of the mobile device.
Driver	The name of the driver assigned to the mobile device.
Start Time	The start time of the trip according to the trip definition parameters.

Field	Description
End Time	The end time of the trip according to the trip definition parameters.
Driving (hh:mm)	The total number of hours and minutes the mobile device spent driving. In hh:mm format.
Idle (hh:mm)	The time and date the mobile device ended the trip.
PTO (hh:mm)	The total amounts of time mobile devices were performing specific activities.
Duration	The total amount of time the mobile device operates while performing specific activities.
Driving	The total number of hours and minutes the mobile device spent driving. In hh:mm format.
Idle	The total number of minutes the mobile device spent running without moving.
PTO	The total number of minutes the mobile device engaged in power take-offs.
Trip	The total amount of time the mobile device operates within the trip parameters.
Fuel	The total amount of fuel the mobile device used when performing specific activities.
Driving	The total number of gallons of fuel the mobile device used while driving.
Idle	The total number of gallons of fuel the mobile device used while sitting still with the engine running.
PTO	The total number of gallons of fuel used when mobile devices were engaged in power take-offs.
Trip	The total number of gallons of fuel used by a mobile device within the trip parameters (e.g. engine on/engine off).
Before Trips	The total number of gallons of fuel used by a mobile device before first movement.
MPG	The average number of miles per gallon of fuel for each device including idle time and driving time.
Driving MPG	The average number of miles per gallon for each mobile device while the device is in motion.
Odometer	The odometer reading at the start and end of the trip as well as the number of miles the mobile device traveled.
Start	The odometer reading at the start of the trip.
End	The odometer reading at the end of the trip.
Trip Distance (miles)	The total number of miles traveled during a trip.

Figure 3–14: Trip Report – Detail: Section 2

Field	Description
Speed	Speed information about the mobile device.
Average (MPH)	The average mobile device speed during the trip in miles per hour.
Maximum (MPH)	The maximum speed attained during the trip in miles per hour.
Maximum RPM (RPM)	The maximum revolutions per minute attained during the trip.
Departure	Mobile device information when leaving the origin point for the trip.
Time	The time of day when the mobile device left the origin point.
Address	The address from which the mobile device's trip originated.
City	The city where the mobile device's trip originated.
State	The state where the mobile device's trip originated.
Zip	The Zip code where the mobile device's trip originated.
County	The county where the mobile device's trip originated.
Arrival	Mobile device information about the trip destination.
Time	The time of day when the mobile device reached the destination point.

Field	Description
Address	The address that the mobile device's trip terminated.
City	The city where the mobile device's trip terminated.
State	The state where the mobile device's trip terminated.
Zip	The Zip code where the mobile device's trip terminated.
County	The county where the mobile device's trip terminated.
Stop Count	The number of stops performed during the selected trip period.
Event Count	The number of events that occurred during the selected report period.
Fault Code	The fault code for the event.
Hard Brake	The number of times a driver used the brakes to slow down faster than a previously determined amount.
Trail	The route the mobile device traveled during the trip.
Notes	Additional notes relevant to trip detail.

The **Trip Report – Detail** has three links the viewer can use to see even more precise detail about a mobile device.

The **Address** column offers a link to the location of the mobile device when the reported instance occurred so managers can see the actual location of the device (represented by the black push-pin icon) in MapView, as shown in Figure 3–15.

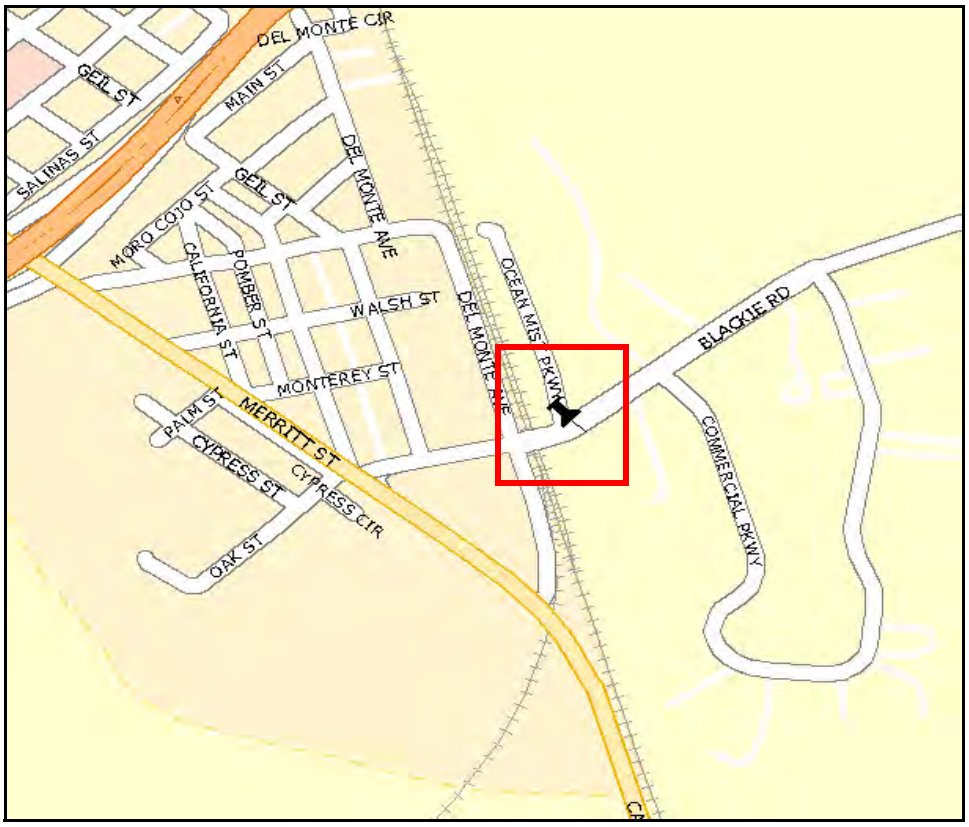


Figure 3–15: Trip Report – Detail Address

Note:
The red square is not shown in GeoManager.

The **Trail** column opens MapView showing the route the mobile device used for the trip, as shown in Figure 3–16.

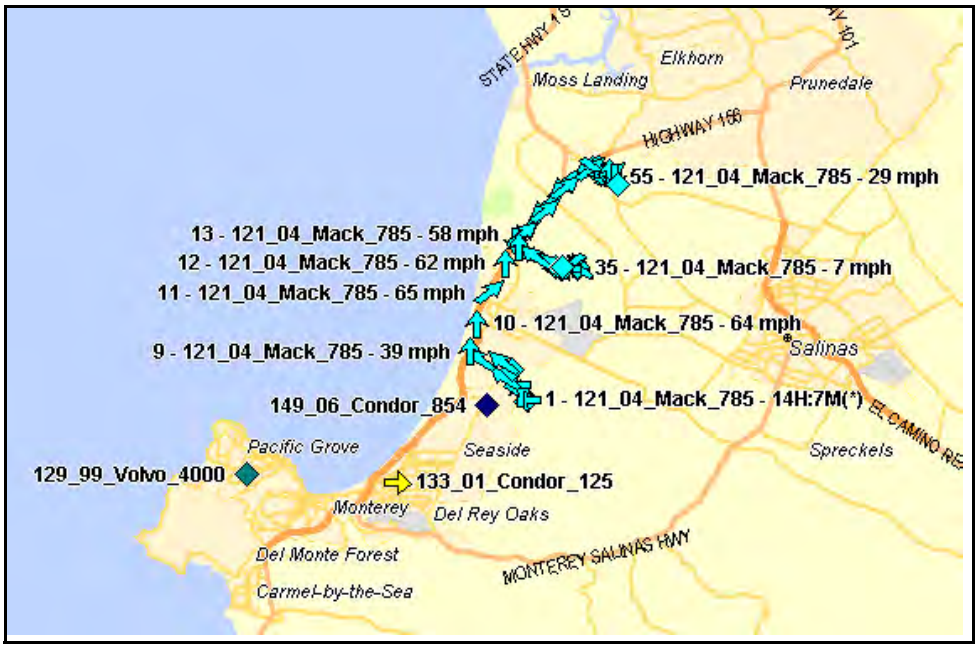


Figure 3–16: Trip Report – Detail Trail

The **Event Count** column allows viewers access to Exception information for the selected mobile device. Clicking the hyperlinked numbers in the Fault Code and Hard Brake columns pulls the Exception report associated with the numbers, as shown in the example screen in Figure 3–17.

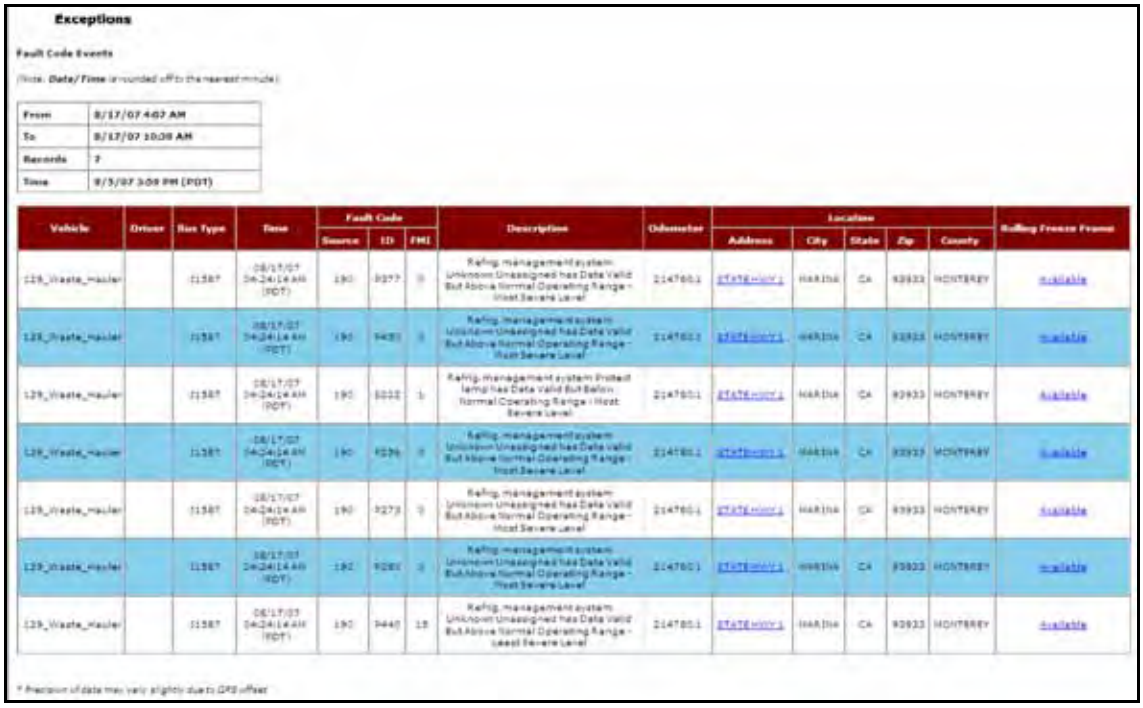
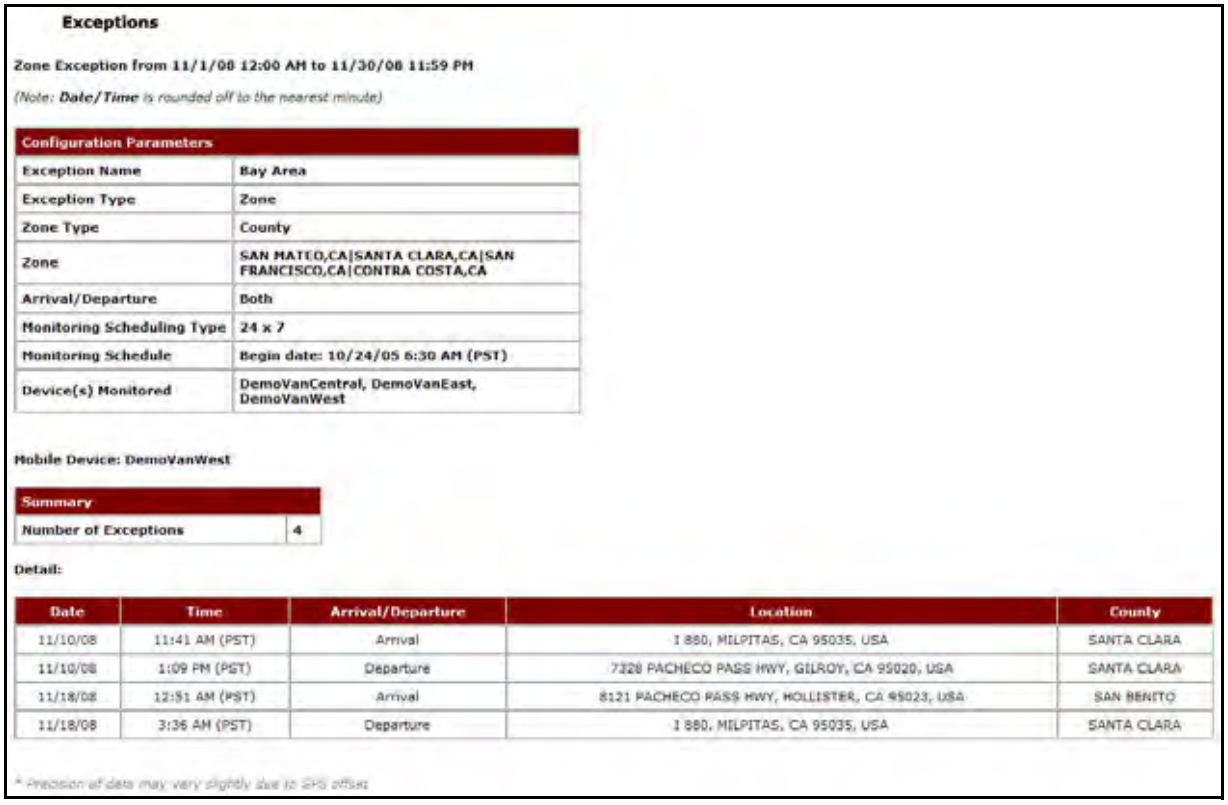


Figure 3–17: Trip Report – Detail Fault Code

Figure 3–18: Trip Report – Detail Hard Brake Code

Zone Exception Report

Zone Exceptions flag arrivals to and/or departures from multiple specified zones defined as Zip Code, City, County, State or Country. This can help monitor unauthorized (e.g. personal) use of company vehicles either during or after work hours, or flag possible security breaches when vehicles were not expected to move from a specific location.



Exceptions

Zone Exception from 11/1/08 12:00 AM to 11/30/08 11:59 PM

*(Note: **Date/Time** is rounded off to the nearest minute)*

Configuration Parameters	
Exception Name	Bay Area
Exception Type	Zone
Zone Type	County
Zone	SAN MATEO,CA|SANTA CLARA,CA|SAN FRANCISCO,CA|CONTRA COSTA,CA
Arrival/Departure	Both
Monitoring Scheduling Type	24 x 7
Monitoring Schedule	Begin date: 10/24/05 6:30 AM (PST)
Device(s) Monitored	DemoVanCentral, DemoVanEast, DemoVanWest

Mobile Device: DemoVanWest

Summary	
Number of Exceptions	4

Detail:

Date	Time	Arrival/Departure	Location	County
11/10/08	11:41 AM (PST)	Arrival	I 880, MILPITAS, CA 95035, USA	SANTA CLARA
11/10/08	1:09 PM (PST)	Departure	7320 PACHECO PASS HWY, GILROY, CA 95020, USA	SANTA CLARA
11/18/08	12:51 AM (PST)	Arrival	8121 PACHECO PASS HWY, HOLLISTER, CA 95023, USA	SAN BENITO
11/18/08	3:36 AM (PST)	Departure	I 880, MILPITAS, CA 95035, USA	SANTA CLARA

** Precision of data may vary slightly due to GPS offset*

Figure 3–19 Zone Exception Report

Item	Description
Configuration Parameters	The limitations for the selected configuration.
Exception Name	The name of the selected Exception.
Exception Type	The type of Exception.
Zone	The counties included in the Zone exception.
Arrival/Departure	Shows if the Zone Exception is set to record the arrival, departure or both of the mobile device.
Monitoring Schedule Type	The type of schedule for monitoring the mobile device. This can be 24X7 or recurring.
Monitoring Schedule	The date and time when 24 X 7 monitoring became effective. The hours and days recurring monitoring occurs and the date and time it became effective.
Devices Monitored	A list of selected devices that are monitored by this Zone Exception.
Mobile Device	The mobile device that caused the Exception.
Summary	A quick view of how many Exceptions occurred for this Zone.
Number of Exceptions	The number of Exceptions for this Zone that occurred during the selected time frame.
Date	The date on which the message was received/sent
Time	The corresponding time stamp for the date
Arrival/Departure	Whether the mobile device arrived at or departed from the specified Zone.
Location	Shows the closest address, cross street, city, state and ZIP where mobile device was located at the time of update.
County	The county where the mobile device was located when the information was transmitted.

4 Workshift Productivity

Workshift Productivity reports helps you improve driver productivity with reports and real-time alerts about stops, trip times, mileage totals, off-hours vehicle use, inactivity and work centers.

Workshift Productivity reports deliver the following benefits:

- Track time in yard or work center to first fix or delivery
- Optimize travel time
- Track miles travel by worker/driver
- Compare and contrast workshift productivity
- Eliminate inefficient business practices
- Improve work rule compliance

The various Workshift Productivity reports are:

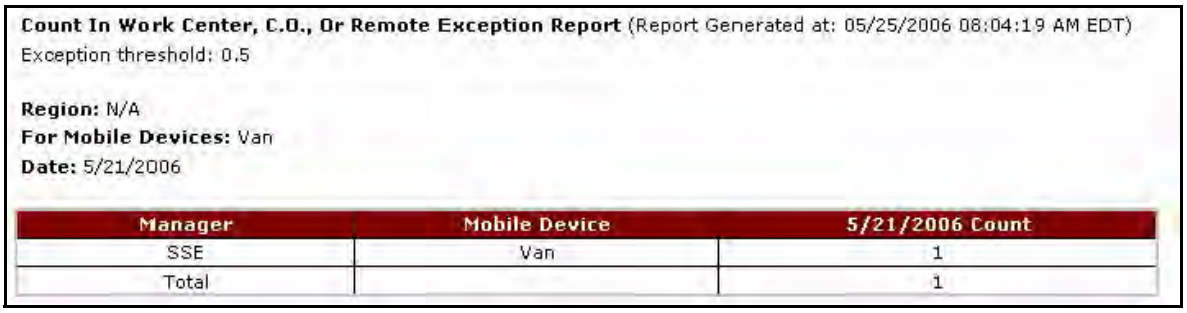
- Count in Work Center, Central Office or Remote Exception Report
- Count and Time at Work Center Report (Detail and Summary)
- Count and Time at Work Center Exception Report
- Early Arrival End of Day Report (Detail and Summary)
- Mileage Report (Detail and Summary)
- Out of Hours Report
- Time at Start Location Before Departure Report (Detail and Summary)
- Time at Start Location Before Departure Exception Report
- Travel Time and Mileage Report (Detail and Summary)
- Travel Time and Mileage Exception Report
- Time Period Evaluation
- Weekly Time Variance

Workshift Productivity Reports

Workshift Productivity reports provides customers information based on employee names or identifiers instead of mobile device, improving the company's ability to manage mobile workers. Workshift Productivity Reports require customers to use Employee Management. Customers who do not have Employee Management may order it at no cost.

Count in Work Center, C.O., or Remote Exception Report

The **Count in Work Center, C.O., or Remote** report shows instances where vehicles made stops at work centers beyond the Exception threshold.



Count In Work Center, C.O., Or Remote Exception Report (Report Generated at: 05/25/2006 08:04:19 AM EDT)
Exception threshold: 0.5

Region: N/A
For Mobile Devices: Van
Date: 5/21/2006

Manager	Mobile Device	5/21/2006 Count
SSE	Van	1
Total		1

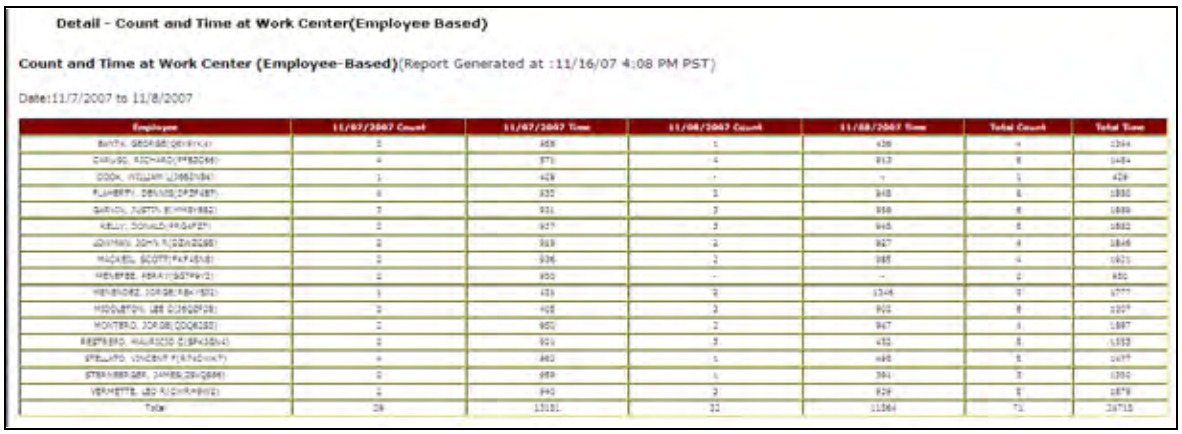
Figure 4–1 Count in Work Center Report

Item	Description
Region	The region where the travel occurred.
For Mobile Devices	The names of the mobile devices included in the report.
Date	The date range for the report.
Manager	The person managing the mobile device.
Mobile Device	The name of the mobile device.
Count	The number of stops at a work center.

Time In Work Center Reports (Employee Based)

The **Time in Work Center** reports capture the total time spent by a mobile worker at work centers, excluding the time before the first departure.

Count and Time at Work Center Detail Report (Employee Based)



Detail - Count and Time at Work Center(Employee Based)

Count and Time at Work Center (Employee-Based)(Report Generated at :11/16/07 4:08 PM PST)

Date:11/7/2007 to 11/8/2007

Employee	11/07/2007 Count	11/07/2007 Time	11/08/2007 Count	11/08/2007 Time	Total Count	Total Time
[redacted]						
[redacted]						
[redacted]						
[redacted]						
[redacted]						
[redacted]						
[redacted]						
[redacted]						
[redacted]						
[redacted]						
[redacted]						
[redacted]						
[redacted]						
[redacted]						
Total						

Figure 4–2: Detail – Count and Time at Work Center (Employee Based) Report Example

Field	Description
Date	The chosen date range for the report data.
Employee	The employee's name and number.
Date and Time	The amount of time all employees spent at a central location during date shown.
Date and Count	The number of times an employee stopped at a central location during the date shown.
Total Count	The total number of times an employee stopped at a central location during the selected time frame.
Total Time	The total number of minutes an employee stopped at a central location during the selected time frame.
Total Work Days	The total number of work days for the selected employees.

Count and Time at Work Center Summary Report (Employee Based)

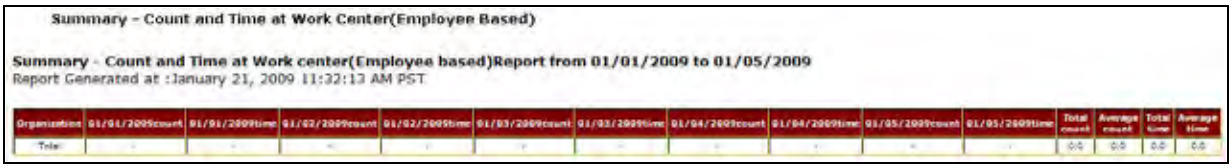


Figure 4–3: Summary – Count and Time at Work Center (Employee Based) Report Example

Field	Description
Date	The chosen date range for the report data.
Organization	The organization.
Date and Count	The number of times an employee stopped at a central location during the date shown.
Date and Time	The amount of time all employees spent at a central location during date shown.
Total Count	The total number of times an employee stopped at a central location during the selected time frame.
Average Count	The average number of times an employee stopped at a central location during the selected time frame.
Total Time	The total number of minutes an employee stopped at a central location during the selected time frame.
Average Time	The average number of minutes an employee stopped at a central location during the selected time frame.

Time at Work Center (Employee Based) Exception Report

The **Time at Work Center Exception** report highlights instances where time spent at the work center is more than the Exception threshold. The threshold is calculated in minutes and is based on the average of the selected vehicles.

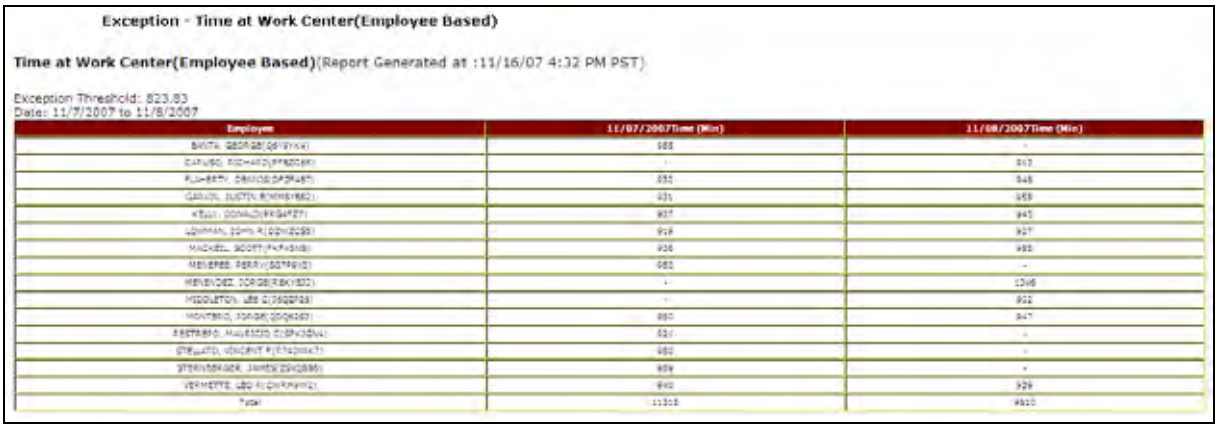


Figure 4–4: Exception – Time at Work Center (Employee Based) Report Example

Field	Description
Exception Threshold	The set number of occurrences or amount of time employees are allowed before an instance is reported.
Date	The chosen date range for the report data.
Employee	The employee's name and number.
Date and Time (Mins.)	The amount of time all employees spent at a central location during date shown.

Count at Work Center Exception Report (Employee Based)

The **Count at Work Center Exception** report shows instances where employees made stops at work centers beyond the Exception threshold.

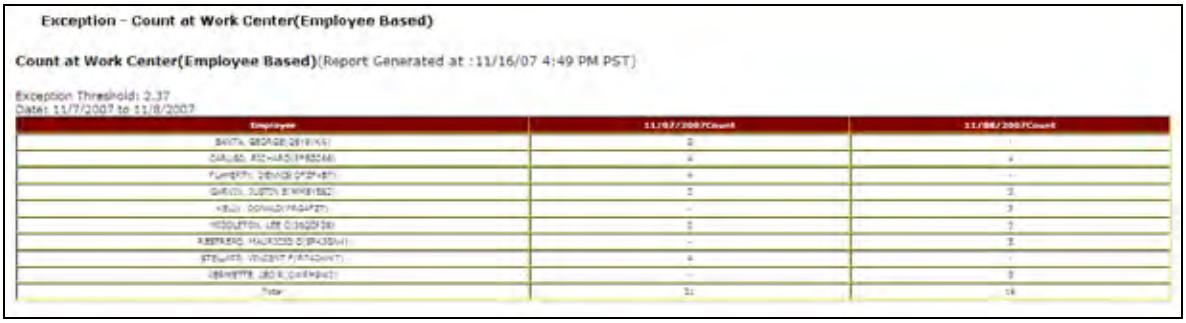


Figure 4–5: Exception – Count at Work Center Report Example

Field	Description
Exception Threshold	The set number of occurrences or amount of time employees are allowed before an instance is reported.
Employee	The employee's name and number.
Date and Count	The number of times all employees stopped at a central location during the date shown.
Total Time	The total number of minutes all employees stopped at a central location during the selected time frame.

Time In Work Center Reports (Device Based)

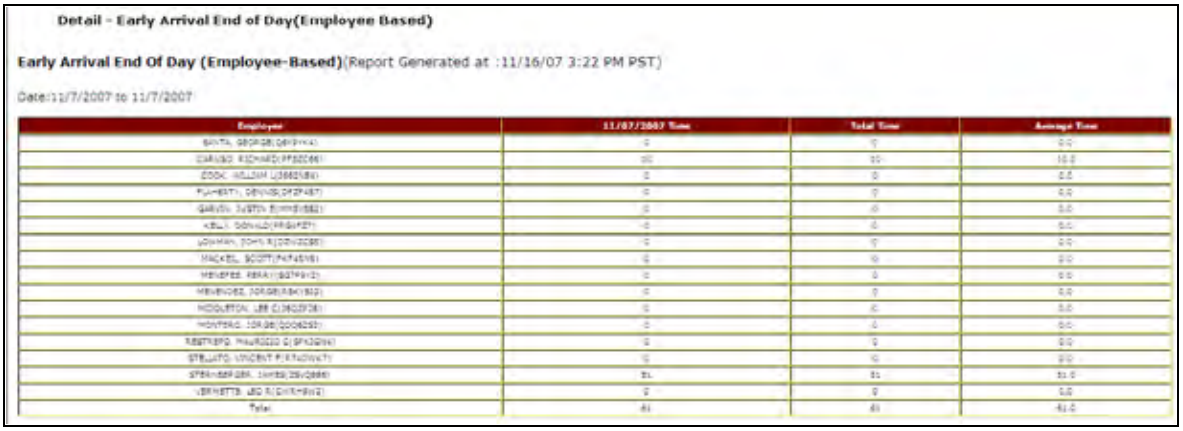
The Time in Work Center reports capture the total time spent by a mobile device at work centers, excluding the time before the first departure.

Time in Yard – End Of Day Reports (Employee Based)

The expanded time line below indicates an opportunity to reduce non-billable time at the end of the day. The goal is for mobile workers to arrive at a yard/work center as close to the shift end-time as possible. The time line and calculation assumes a Shift End at 5 p.m.

The report will display a – (dash) if the vehicle's last stop was not at a landmark. For vehicles that stopped at a landmark after the end shift time, the report will display a 0 (zero).

Early Arrival End of Day Report Detail (Employee Based)


Detail - Early Arrival End of Day(Employee Based)

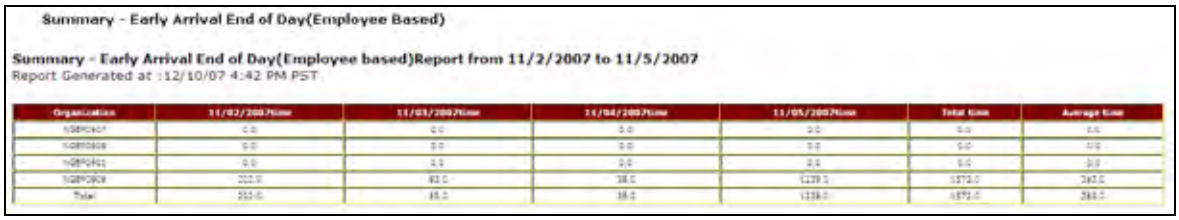
Early Arrival End Of Day (Employee-Based)(Report Generated at :11/16/07 3:22 PM PST)

Date:11/7/2007 to 11/7/2007

Figure 4–6: Detail – Early Arrival End of Day (Employee Based) Report Example

Field	Description
Date	The chosen date range for the report data.
Employee	The employee's name and number.
Date and Time	The amount of time each employee arrived early at a central location during date shown.
Total Time	The total number of minutes all employees arrived early at a central location during the selected time frame.
Average Time	The average number of minutes all employees arrived early at the central location during the selected time frame.

Early Arrival End of Day Report Summary (Employee Based)


Summary - Early Arrival End of Day(Employee Based)

Summary - Early Arrival End of Day(Employee based)Report from 11/2/2007 to 11/5/2007

Report Generated at :12/10/07 4:42 PM PST

Figure 4–7: Summary – Early Arrival End of Day (Employee Based) Report Example

Field	Description
Date	The chosen date range for the report data.
Organization	The organizational units directly below the selected unit.
Date and Time	The amount of time each employee arrived early at a central location during date shown.
Total Time	The total number of minutes all employees arrived early at a central location during the selected time frame.
Average Time	The average number of minutes all employees arrived early at the central location during the selected time frame.

Time in Yard – End Of Day Reports (Device Based)

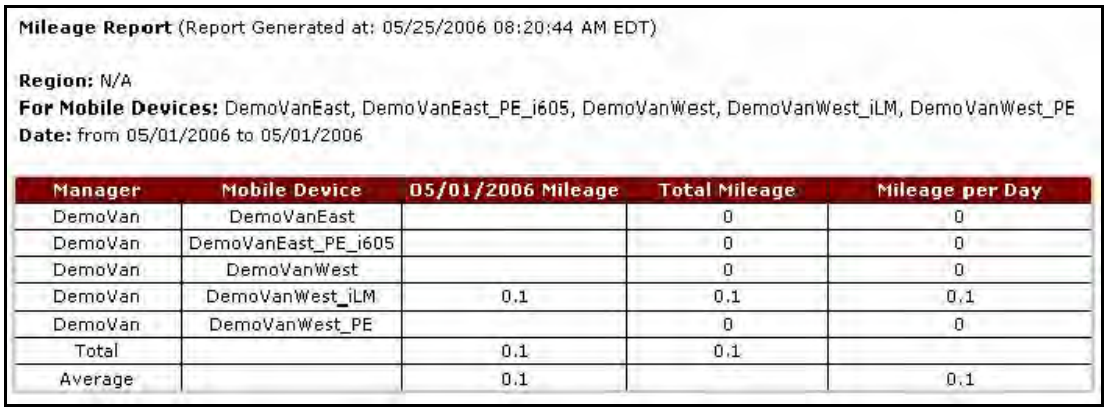
The expanded time line below indicates an opportunity to reduce non-billable time at the end of the day. The goal is for mobile workers to arrive at a yard/work center as close to the shift end-time as possible. The time line and calculation assumes a Shift End at 5 p.m.

The report will display a – (dash) if the vehicle's last stop was not at a landmark. For vehicles that stopped at a landmark after the end shift time, the report will display a 0 (zero).

Mileage Reports

These reports display the total mileage and average mileage per vehicle for the selected period.

Detail – Mileage



Mileage Report (Report Generated at: 05/25/2006 08:20:44 AM EDT)

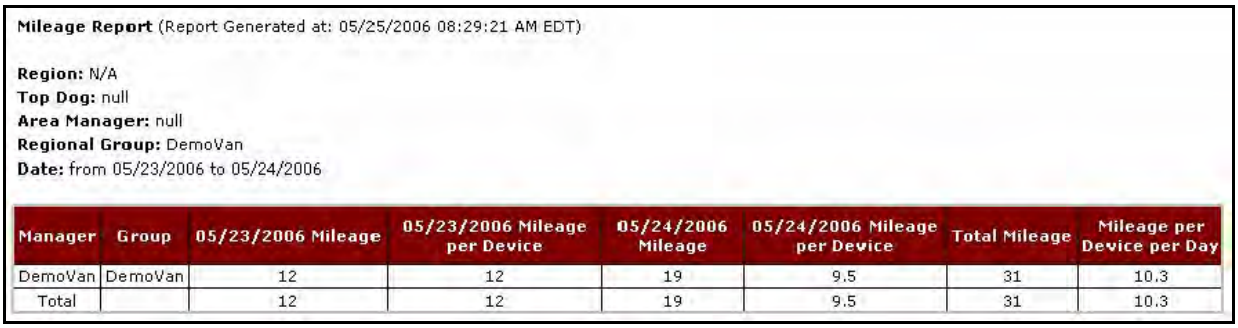
Region: N/A
For Mobile Devices: DemoVanEast, DemoVanEast_PE_i605, DemoVanWest, DemoVanWest_iLM, DemoVanWest_PE
Date: from 05/01/2006 to 05/01/2006

Manager	Mobile Device	05/01/2006 Mileage	Total Mileage	Mileage per Day
DemoVan	DemoVanEast		0	0
DemoVan	DemoVanEast_PE_i605		0	0
DemoVan	DemoVanWest		0	0
DemoVan	DemoVanWest_iLM	0.1	0.1	0.1
DemoVan	DemoVanWest_PE		0	0
Total		0.1	0.1	
Average		0.1		0.1

Figure 4–8 Mileage Report Detail

Item	Description
Region	The region where the travel occurred.
For Mobile Devices	The names of the mobile devices included in the report.
Date	The date range for the report.
Manager	The person managing the mobile device.
Mobile Device	The name of the mobile device.
Mileage	The date of the report and the number of miles driven.
Total Mileage	The total number of miles the mobile device accrued.
Mileage per Day	The total number of miles accrued each 24 hour period.

Summary – Mileage



Mileage Report (Report Generated at: 05/25/2006 08:29:21 AM EDT)

Region: N/A
Top Dog: null
Area Manager: null
Regional Group: DemoVan
Date: from 05/23/2006 to 05/24/2006

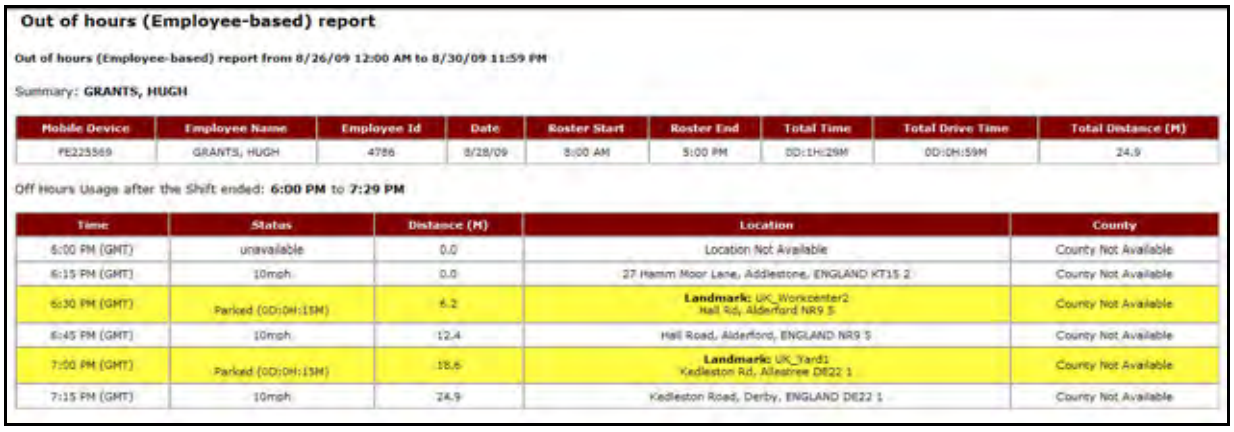
Manager	Group	05/23/2006 Mileage	05/23/2006 Mileage per Device	05/24/2006 Mileage	05/24/2006 Mileage per Device	Total Mileage	Mileage per Device per Day
DemoVan	DemoVan	12	12	19	9.5	31	10.3
Total		12	12	19	9.5	31	10.3

Figure 4–9 Mileage Report Summary

Item	Description
Region	The region where the travel occurred.
Top Dog	The mobile vehicle that covered the most miles during the report time frame.
Area Manager	The manager for the geographic area where the travel occurred.
Regional Group	The group to which the mobile device belongs.
Date	The date range for the report.
Manager	The person managing the mobile device.
Group	The group to which the mobile device belongs.
Mileage	The date of the report and the number of miles the group has driven.
Mileage per Device	The date and average number of miles accrued for a mobile device.
Total Mileage	The total number of miles the mobile device accrued.
Mileage per Device per Day	The total number of miles accrued for each device in the group for each 24 hour period.

Out of Hours Reports

The Out of Hours (Employee Based) report shows mobile device usage beyond work shift hours. The report displays a detailed view of when the vehicle was used in addition to the vehicle location and status.



Out of hours (Employee-based) report

Out of hours (Employee-based) report from 8/26/09 12:00 AM to 8/30/09 11:59 PM

Summary: **GRANTS, HUGH**

Mobile Device	Employee Name	Employee Id	Date	Roster Start	Roster End	Total Time	Total Drive Time	Total Distance (M)
FE225569	GRANTS, HUGH	4786	8/28/09	8:00 AM	5:00 PM	0D:1H:29M	0D:0H:59M	24.9

Off Hours Usage after the Shift ended: **6:00 PM** to **7:29 PM**

Time	Status	Distance (M)	Location	County
6:00 PM (GMT)	unavailable	0.0	Location Not Available	County Not Available
6:15 PM (GMT)	10mph	0.0	27 Hamm Moor Lane, Addlestone, ENGLAND KT15 2	County Not Available
6:30 PM (GMT)	Parked (0D:0H:15M)	6.2	**Landmark:** UK_Workcenter2 Hall Rd, Alderford NR9 5	County Not Available
6:45 PM (GMT)	10mph	12.4	Hall Road, Alderford, ENGLAND NR9 5	County Not Available
7:00 PM (GMT)	Parked (0D:0H:15M)	18.6	**Landmark:** UK_Yard1 Kedleston Rd, Allestree DE22 1	County Not Available
7:15 PM (GMT)	10mph	24.9	Kedleston Road, Derby, ENGLAND DE22 1	County Not Available

Figure 4–10 Out of Hours Report

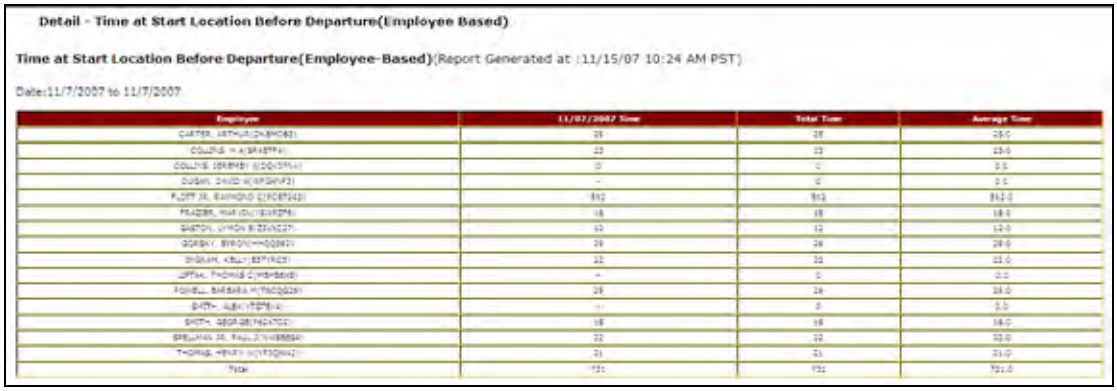
Item	Description
Summary	Shows the activity summary for the selected employee.
Mobile Device	The name or ID of the mobile device.
Employee Name	The name of the employee.
Employee ID	The ID number associated with the employee.
Date	The date range for the report.
Roster Start	The scheduled start time of the employee's shift.
Roster End	The scheduled end time of the employee's shift.
Total Time	The total drive and parked time for the mobile device beyond work shift hours.
Total Drive Time	The total drive time for the mobile device beyond work shift hours.
Total Distance (M)	The total distance the mobile device traveled beyond work shift hours.
Time	Time of update, listed in hh:mm AM/PM format and time zone indicated (i.e. PST for Pacific Standard Time).
Status	Shows the duration if the mobile device is parked or stopped. The duration (length of time) will be in #D:##H:##M format. Displays the direction and speed of the mobile device when it is moving. Directions are indicated using standard symbols (i.e., N for North, SW for SouthWest).
Distance (M)	Shows the distance the mobile device has traveled during the selected date range.

Item	Description
Location	Shows the closest address, cross street, city, state, and ZIP where mobile device was located at the time of last update.
County	County where mobile device was located at the time of update.

Time In Yard Reports (Employee Based)

These reports present data for companies to make decisions on how to reduce non-billable time. It indicates actual vehicle departure time and compares the expected departure time from the work shift information.

Time at Start Location Before Departure Detail Report (Employee Based)


Detail - Time at Start Location Before Departure(Employee Based)

Time at Start Location Before Departure(Employee-Based)(Report Generated at :11/15/07 10:24 AM PST)

Date:11/7/2007 to 11/7/2007

Employee	11/07/2007 Time	Total Time	Average Time
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
Total	[illegible]	[illegible]	[illegible]

Figure 4–11: Detail – Time at Start Location Before Departure (Employee Based) Report Example

Field	Description
Employee	The employee's name and number.
Date and Time	The amount of time spent at the start location (in minutes) before departure during the shown date.
Total Time	The total number of minutes spent by the named employee at the start location during the selected time frame.
Average Time	The average number of minutes spent by the named employee at a start location during the selected time frame.

Time at Start Location Before Departure Summary Report (Employee Based)

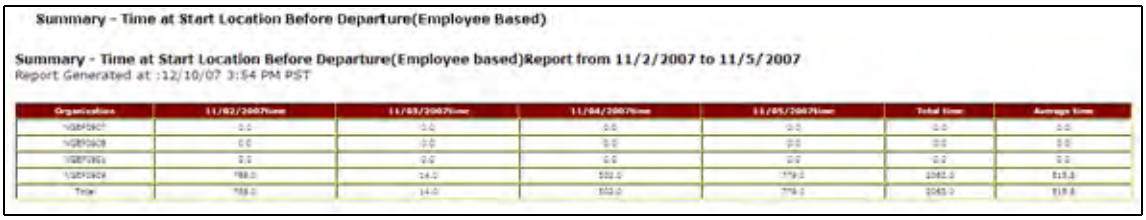


Figure 4–12: Summary – Time at Start Location Before Departure (Employee Based) Report Example

Field	Description
Organization	The organizational units that report to the named unit.
Date and Time	The amount of time spent at the start location (in minutes) before departure during the shown date.
Total Time	The total number of minutes spent by the named employee at the start location during the selected time frame.
Average Time	The average number of minutes spent by the named employee at a start location during the selected time frame.

Time at Start Location Before First Departure Exception Report (Employee Based)

This report shows instances where vehicles are in the start location before the first departure beyond a specified time limit (in minutes).

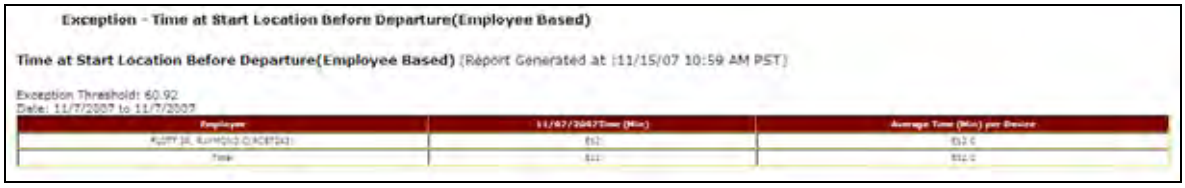


Figure 4–13: Exception – Time at Start Location Before Departure (Employee Based) Report Example

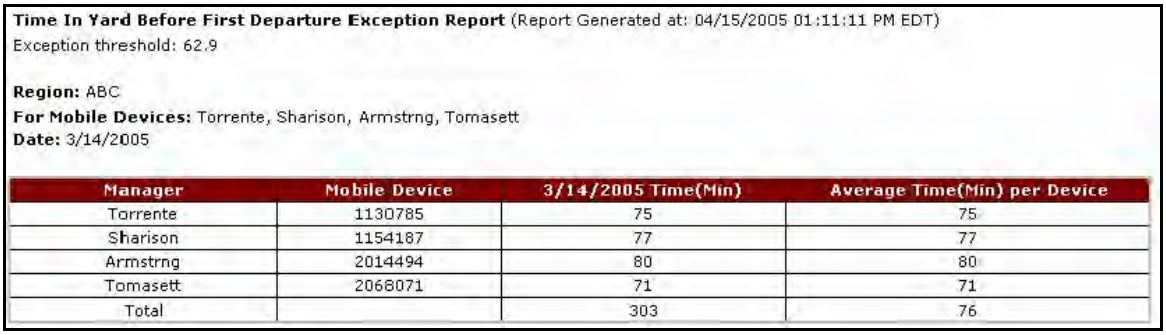
Field	Description
Exception Threshold	The set number of occurrences or amount of time employees are allowed before an instance is reported.
Employee	The employee's name and number.

Field	Description
Date and Time	The amount of time spent at the start location (in minutes) before departure during the shown date.
Total Time	The total number of minutes spent by a combined organizational unit at the start location during the selected time frame.

Time In Yard Reports (Device Based)

These reports present data for companies to make decisions on how to reduce non-billable time. It indicates actual vehicle departure time and compares the expected departure time from the work shift information.

Time In Yard Before First Departure Detail Report



Time In Yard Before First Departure Exception Report (Report Generated at: 04/15/2005 01:11:11 PM EDT)
Exception threshold: 62.9

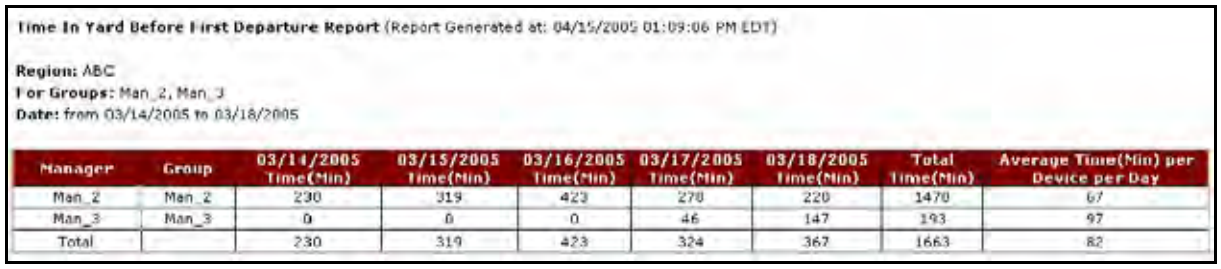
Region: ABC
For Mobile Devices: Torrente, Sharison, Armstrng, Tomasett
Date: 3/14/2005

Manager	Mobile Device	3/14/2005 Time(Min)	Average Time(Min) per Device
Torrente	1130785	75	75
Sharison	1154187	77	77
Armstrng	2014494	80	80
Tomasett	2068071	71	71
Total		303	76

Figure 4–14 Time in Yard Before First Departure Detail Report

Item	Description
Region	The region where the travel occurred.
For Mobile Devices	The names of the mobile devices included in the report.
Date	The date range for the report.
Manager	The person managing the mobile device.
Mobile Device	The name of the mobile device.
Time (Min.)	The date and number of minutes the mobile device was in the work center.
Total Time	The total amount of time the mobile device spent before leaving the yard for the first destination.
Average Time per Day	The average number of minutes the mobile device spent in the yard before leaving for the first destination.

Time In Yard Before First Departure Summary Report



Time In Yard Before First Departure Report (Report Generated at: 04/15/2005 01:09:06 PM EDT)

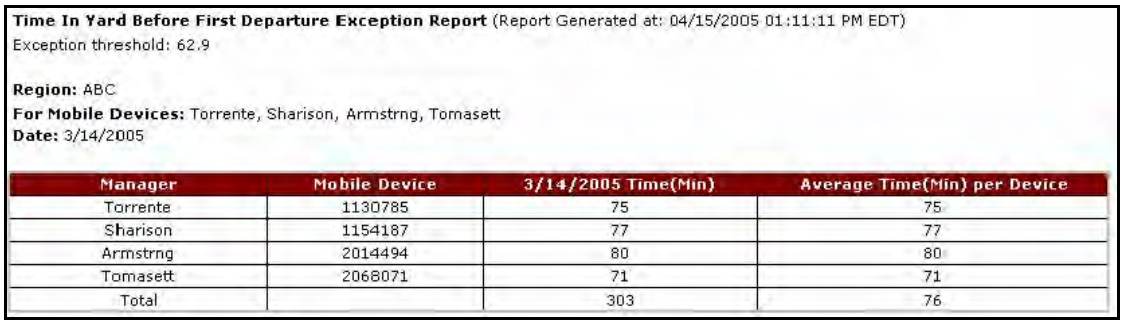
Region: ABC
For Groups: Man_2, Man_3
Date: from 03/14/2005 to 03/18/2005

Manager	Group	03/14/2005 Time(Min)	03/15/2005 Time(Min)	03/16/2005 Time(Min)	03/17/2005 Time(Min)	03/18/2005 Time(Min)	Total Time(Min)	Average Time(Min) per Device per Day
Man_2	Man_2	230	319	423	278	220	1470	67
Man_3	Man_3	0	0	0	46	147	193	97
Total		230	319	423	324	367	1663	82

Figure 4–15 Time in Yard Before First Departure Summary Report

Item	Description
Region	The region where the travel occurred.
For Groups	The names of the groups included in the report.
Date	The date range for the report.
Manager	The person managing the mobile device.
Group	The name of the group.
Time (Min.)	The date and number of minutes the mobile device was in the work center.
Total Time	The total amount of time the mobile device spent before leaving the yard for the first destination.
Average Time per Day	The average number of minutes the mobile device spent in the yard before leaving for the first destination.

Time In Yard Before First Departure Exception Report



Time In Yard Before First Departure Exception Report (Report Generated at: 04/15/2005 01:11:11 PM EDT)
Exception threshold: 62.9

Region: ABC
For Mobile Devices: Torrente, Sharison, Armstrng, Tomasett
Date: 3/14/2005

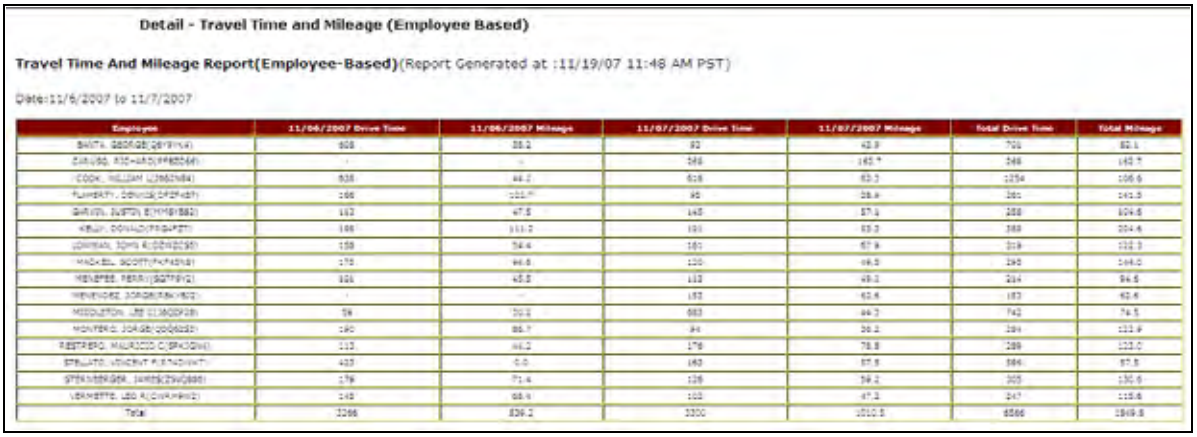
Manager	Mobile Device	3/14/2005 Time(Min)	Average Time(Min) per Device
Torrente	1130785	75	75
Sharison	1154187	77	77
Armstrng	2014494	80	80
Tomasett	2068071	71	71
Total		303	76

Figure 4–16 Time in Yard Before First Departure Exception Report

Item	Description
Region	The region where the travel occurred.
For Mobile Devices	The names of the mobile devices included in the report.
Date	The date range for the report.
Manager	The person managing the mobile device.
Mobile Device	The name of the mobile device.
Time (Min.)	The date and number of minutes the mobile device was in the work center.
Average Time per Day	The average number of minutes the mobile device spent in the yard before leaving for the first destination.

Travel Time and Mileage Report Detail Report (Employee Based)

The **Detail – Travel Time and Mileage (Employee Based)** report shows the amount of time it took each selected employee to travel during the selected time frame.


Detail - Travel Time and Mileage (Employee Based)

Travel Time And Mileage Report(Employee-Based)(Report Generated at :11/19/07 11:48 AM PST)

Date:11/6/2007 to 11/7/2007

Employee	11/06/2007 Drive Time	11/06/2007 Mileage	11/07/2007 Drive Time	11/07/2007 Mileage	Total Drive Time	Total Mileage
SMITH, GEORGE(28YY1X4)	608	38.2	92	43.9	700	82.1
[illegible]	-	-	586	143.7	586	143.7
COOK, WILLIAM L(3662N84)	638	44.2	616	62.3	1254	106.6
FLAHERTY, DENNIS(2F2H4Y)	166	101.7	95	39.4	261	141.3
SHIVEL, JUSTIN E(7MMBY8Z)	163	47.5	145	87.1	308	134.6
KELLY, DONALD(7S4AFXT)	166	111.2	193	93.2	359	204.4
LOWMAN, JOHN K(0RH8Z3P)	159	94.4	180	67.9	339	162.3
MACKEL, SCOTT(7A7A5N8)	175	44.6	120	99.9	295	144.5
MENEFEE, PERRY(3QTTBV2)	321	43.8	113	49.1	434	94.9
MENENDEZ, JORGE(RAYHXC)	-	-	183	62.4	183	62.4
MIDDLETON, JAE ELIAS(DF2B)	59	30.1	683	44.3	742	74.5
MONTERO, JORGE(2DQ6Q3X)	190	86.7	84	36.2	274	122.9
RESTREPO, MAURICIO C(8P4CQW4)	113	44.2	176	78.8	289	123.0
STALLITO, VINCENT P(7ZTAQWT)	423	0.0	163	97.5	586	97.5
STEINBERGER, JAMES(ZWVQ8R)	179	71.4	126	58.2	305	130.6
VERMETTE, LEO A(CHVMHH2)	149	68.9	103	47.2	247	116.6
Total	3266	836.2	3200	1010.5	6566	1846.8

Figure 4–17: Detail – Travel Time and Mileage (Employee Based) Report Example

Field	Description
Date	The chosen date range for the report data.
Employee	The employee's name and number.
Date and Drive Time	The amount of time spent traveling on the shown date.

Field	Description
Date and Mileage	The number of miles mobile devices or an organizational unit traveled during date shown.
Total Drive Time	The total amount of time spent traveling during the selected time frame.
Total Mileage	The total number of miles a mobile device or organizational unit traveled during the selected time frame.

Travel Time and Mileage Report Summary Report (Employee Based)

The **Summary – Travel Time and Mileage (Employee Based)** report shows the amount of time it took each selected employee to travel during the selected time frame.

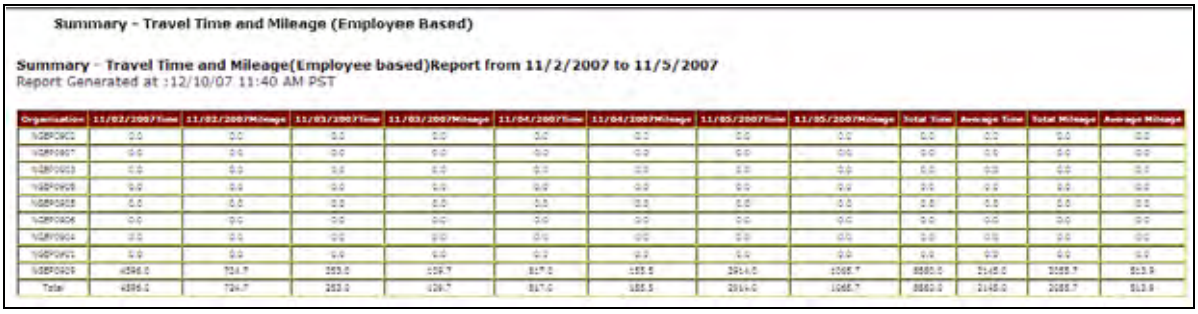


Figure 4–18: Summary – Travel Time and Mileage Report Example

Field	Description
Organization	The organizational units directly below the selected unit.
Date and Time	The total amount of time spent traveling for all mobile devices in the organizational unit on the shown date.
Date and Mileage	The total mileage for all mobile devices in an organizational unit on the shown date.
Total Time	The total amount of time spent traveling for all mobile devices during the selected time frame.
Average Time	The average amount of time for all mobile devices spent traveling during the selected time frame.
Total Mileage	The total number of miles a combined organizational unit traveled during the selected time frame.

Field	Description
Average Mileage	The average number of miles a combined organizational unit traveled during the selected time frame.
Total Mileage	The total number of miles a mobile device or organizational unit traveled during the selected time frame.

Travel Time Report Exception Report (Employee Based)

The **Travel Time Exception** report generates the total travel time (drive time) and total mileage for the specified reporting period. Travel time is defined as time when the vehicle is moving. The mileage is a total for a 24-hour period.

This view shows instances where Daily Travel Times were more than the Exception threshold (in minutes).

Figure 4–19 Travel Time Exception Report

Travel Time and Mileage Detail Report (Device Based)

The **Travel Time and Mileage** Detail report shows the amount of time it took each selected mobile device to travel during the selected time frame.

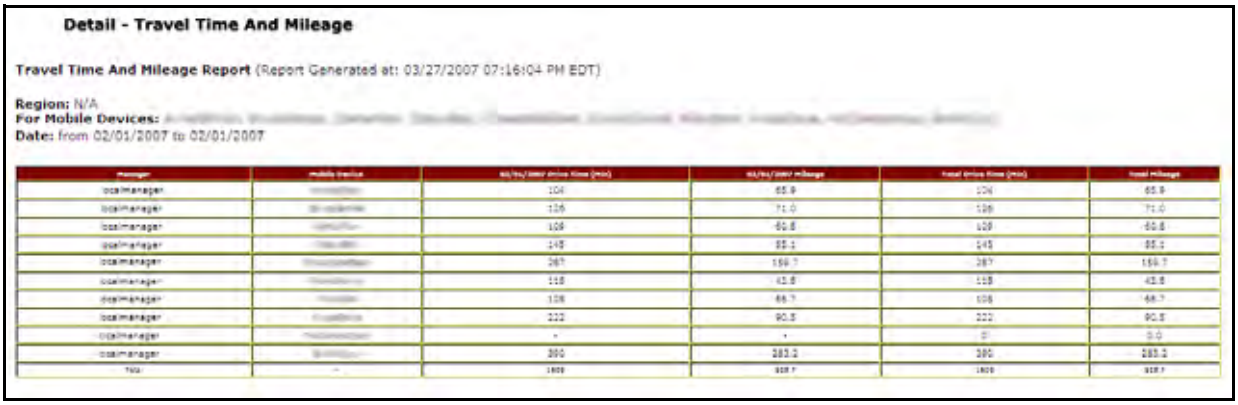


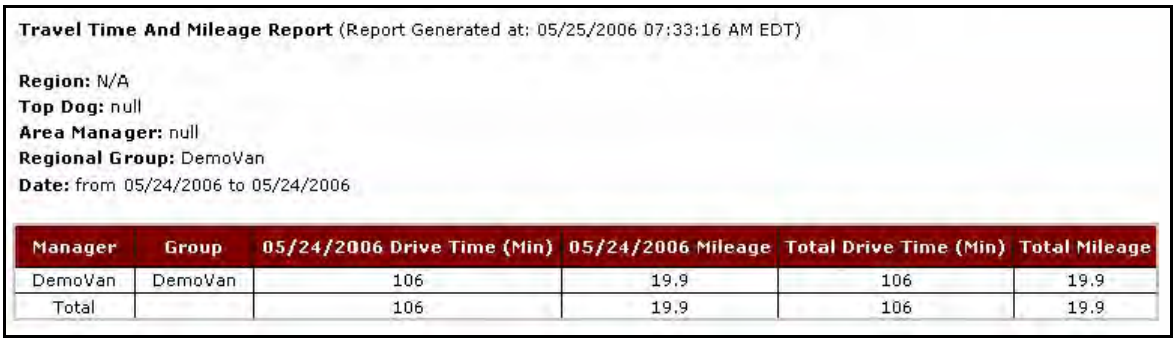
Figure 4–20 Travel Time and Mileage Report

Item	Description
Region	The region where the travel occurred.
For Mobile Devices	The mobile devices that are included in the report.
Date	The date range for the report.
Manager	The person managing the mobile device.
Mobile Device	The name of the mobile device.
Drive Time	The date of the report and the length of the drive in minutes.
Mileage	The date of the report and the number of miles driven.
Total Drive Time (Min.)	The total amount of time the mobile device accrued.
Total Mileage	The total number of miles the mobile device accrued.

Travel Time and Mileage Summary Report (Device Based)

Items displayed include:

- The Region and selected date range
- The Group Manager name(s)
- The Group name(s)
- Drive Time and Mileage for each Group for each of the days in the selected date range
- Total Drive Time and mileage for all Groups for each of the days in the date range
- Total Drive Time and mileage for each Group for the entire date range
- Total Drive Time and mileage for all selected Groups for the entire date range



Travel Time And Mileage Report (Report Generated at: 05/25/2006 07:33:16 AM EDT)

Region: N/A
Top Dog: null
Area Manager: null
Regional Group: DemoVan
Date: from 05/24/2006 to 05/24/2006

Manager	Group	05/24/2006 Drive Time (Min)	05/24/2006 Mileage	Total Drive Time (Min)	Total Mileage
DemoVan	DemoVan	106	19.9	106	19.9
Total		106	19.9	106	19.9

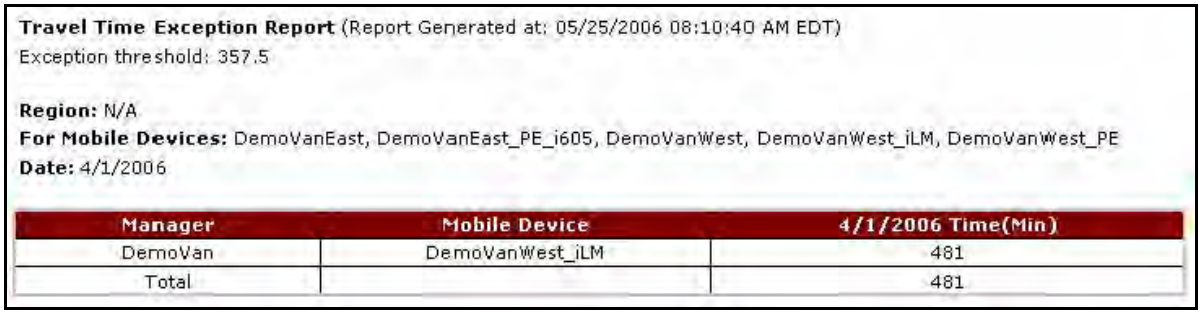
Figure 4–21 Travel Time and Mileage Report

Item	Description
Region	The region where the travel occurred.
Top Dog	The mobile vehicle that covered the most miles during the report time frame.
Area Manager	The manager for the geographic area where the travel occurred.
Regional Group	The group to which the mobile device belongs.
Date	The date range for the report.
Manager	The person managing the mobile device.
Mobile Device	The name of the mobile device.
Drive Time	The date of the report and the length of the drive in minutes.
Mileage	The date of the report and the number of miles driven.
Total Drive Time (Min.)	The total amount of time the mobile device accrued.
Total Mileage	The total number of miles the mobile device accrued.

Travel Time Exception Report

The **Travel Time Exception** report generates the total travel time (drive time) and total mileage for the specified reporting period. Travel time is defined as time when the vehicle is moving. The mileage is a total for a 24-hour period.

This view shows instances where Daily Travel Times were more than the Exception threshold (in minutes).


Travel Time Exception Report (Report Generated at: 05/25/2006 08:10:40 AM EDT)
Exception threshold: 357.5

Region: N/A
For Mobile Devices: DemoVanEast, DemoVanEast_PE_i605, DemoVanWest, DemoVanWest_iLM, DemoVanWest_PE
Date: 4/1/2006

Manager	Mobile Device	4/1/2006 Time(Min)
DemoVan	DemoVanWest_iLM	481
Total		481

Figure 4–22 Travel Time Exception Report

Item	Description
Region	The region where the travel occurred.
For Mobile Devices	The names of the mobile devices included in the report.
Date	The date range for the report.
Manager	The person managing the mobile device.
Mobile Device	The name of the mobile device.
Time	The date of the report and the length of the drive in minutes.

Time Period Evaluation Report

The **Time Period Evaluation** report, shown in Figure 4–23, allows you to compare a baseline time period to the following six days or weeks. This helps you identify mobile device performance and driver behavior patterns.

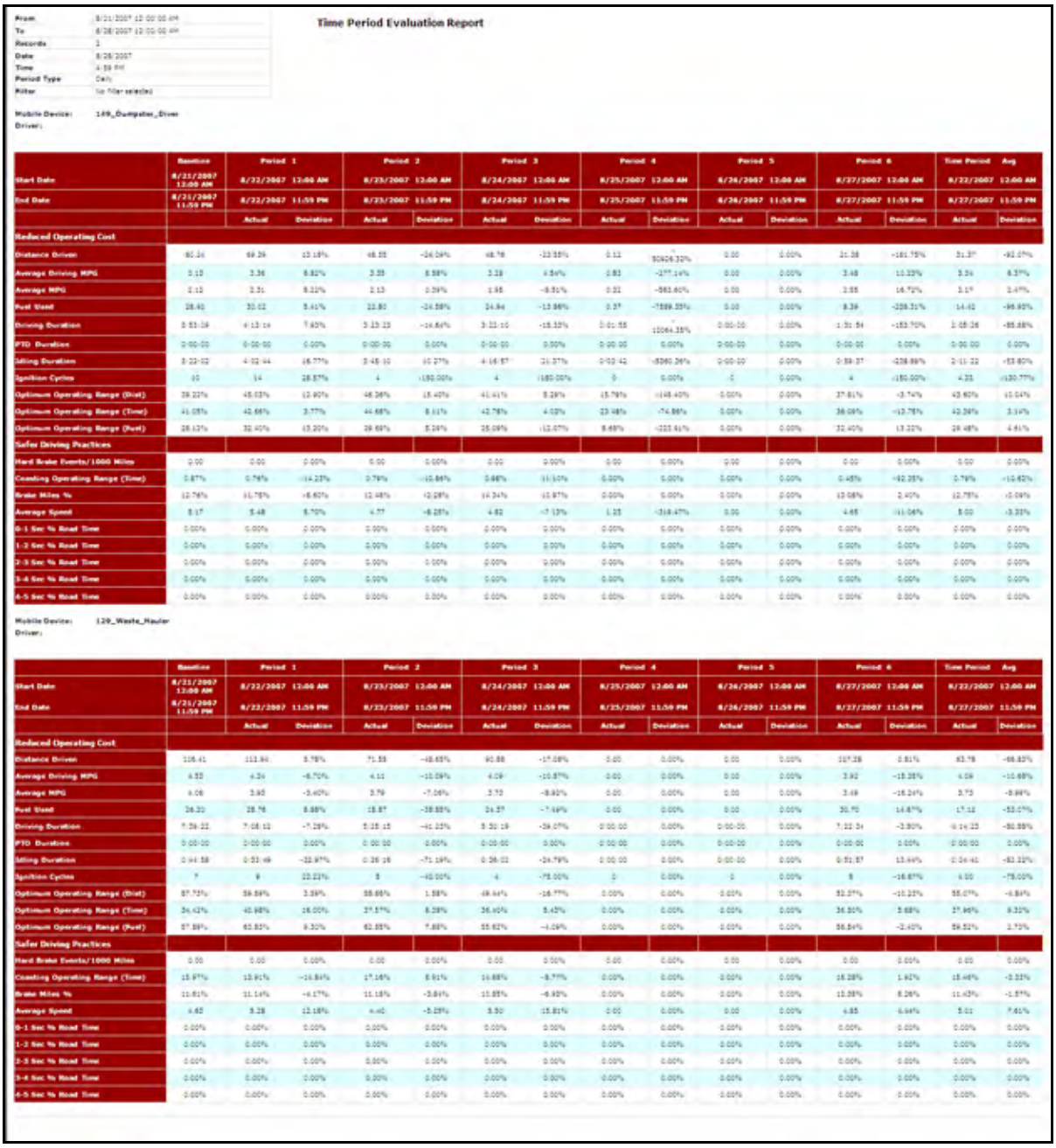


Figure 4–23: Time Period Evaluation Report

Field	Description
From	The starting date for the report.
To	The ending date for the report.
Records	The number of instances recorded during the report period.
Date	The date the report was generated.

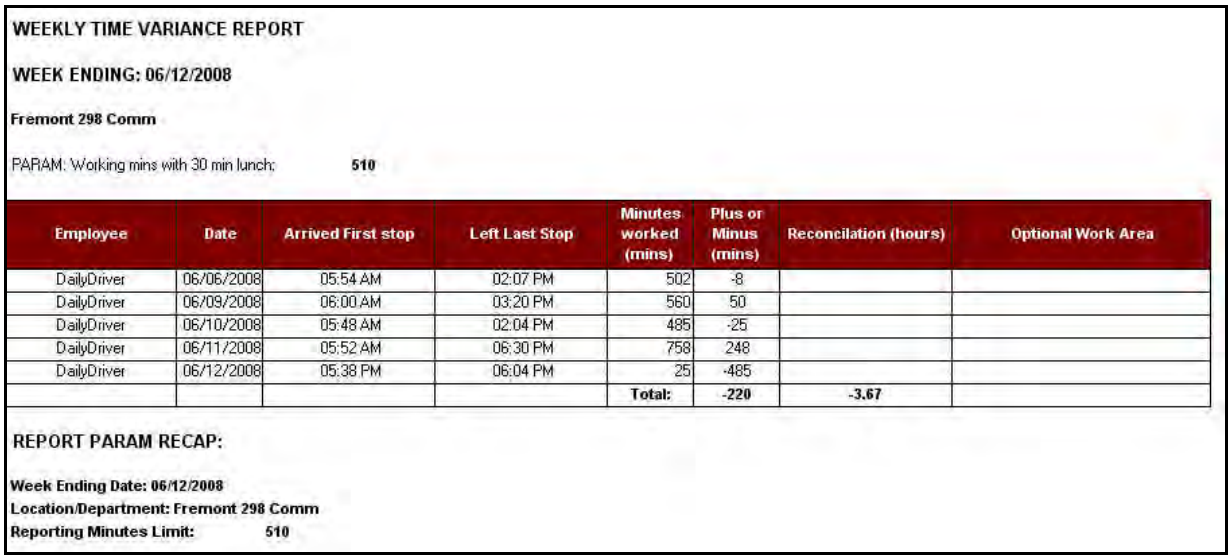
Field	Description
Time	The time the report was generated.
Period Type	The type of time period this report covers. This can be daily or weekly.
Filter	Any rules that might cause the generated report to show strange or incorrect results. This allows you to exclude irrelevant information.
Mobile Device	The name or number assigned to the mobile device.
Driver	The name of the driver assigned to the mobile device.
Time Periods (Across)	
Baseline	The time period that the next six periods are compared. This can be one day or one week.
Period 1 – 6	The following six days or weeks from the baseline. These are shown in sequential order.
Date Information	The to and from dates for the period. These are shown in mm/dd/yyyy format.
Actual	The actual number of occurrences for each event.
Deviation	The amount the number of occurrences for each event deviates from the baseline number.
Time Period Avg	The average amount of time a mobile device spent doing an activity.
Actual	The actual number of occurrences for each event.
Deviation	The amount the number of occurrences for each event deviates from the baseline number.
Comparison Items (Down)	
Start Date	The date the comparison day or week begins.
End Date	The date the comparison day or week ends.
Reduced Operating Costs	The amount and percentages that your business' operating costs were reduced during specified activities.
Distance Driven	The number of miles driven by the mobile device during the evaluation period.
Average Driving MPG	The average miles per gallon of fuel used by the mobile device while moving throughout the evaluation period.
Average MPG	The average miles per gallon of the total amount of fuel used by the mobile device during the evaluation period.
Fuel Used	The total amount of fuel used during the evaluation period.
Driving Duration	The total amount of time the mobile device spent moving.

Field	Description
PTO Duration	The total amount of time the mobile device spent performing PTOs.
Idling Duration	The total amount of time the mobile device spent with the engine running but no movement detected.
Ignition Cycles	The number of times the mobile device was turned both on and off during the evaluation period.
Optimum Operating Range (Dist)	The percentage of miles the mobile device drove while operating in the optimum RPM range.
Optimum Operating Range (Time)	The percentage of time the mobile device spent while operating in the optimum RPM range.
Optimum Operating Range (Fuel)	The percentage of fuel the mobile device used while operating in the optimum RPM range.
Safer Driving Practices	The numbers and percentages that drivers operated mobile devices while using safe driving practices.
Hard Brake Events/1000 Miles	The number of times the driver applied the brakes beyond a specified limit for each 1,000 miles of driving.
Coasting Operating Range (Time)	The amount of time a driver spent at a road speed that was unacceptable compared to the engine speed.
Brake Miles %	The percentage of driving miles that were spent with the brakes applied.
Average Speed	The average speed of the mobile device during the evaluation period.
0–1 sec % Road Time	The percentage of time spent at a 0–1 second following distance while driving.
1–2 sec % Road Time	The percentage of time spent at a 1–2 second following distance while driving.
2–3 sec % Road Time	The percentage of time spent at a 2–3 second following distance while driving.
3–4 sec % Road Time	The percentage of time spent at a 3–4 second following distance while driving.
4–5 sec % Road Time	The percentage of time spent at a 4–5 second following distance while driving.

Note:
Vorad is required to display following distance.

Weekly Time Variance

The **Weekly Time Variance** report, shown in Figure 4–24, shows a summary of a vehicle's work time calculated by first stop and last stop. It lets managers know how many minutes were worked on a daily basis without having to run activity reports. Report can be run per vehicle/ group, as online or Excel format, and can be scheduled.



WEEKLY TIME VARIANCE REPORT

WEEK ENDING: 06/12/2008

Fremont 298 Comm

PARAM: Working mins with 30 min lunch: **510**

Employee	Date	Arrived First stop	Left Last Stop	Minutes worked (mins)	Plus or Minus (mins)	Reconcilation (hours)	Optional Work Area
DailyDriver	06/06/2008	05:54 AM	02:07 PM	502	-8		
DailyDriver	06/09/2008	06:00 AM	03:20 PM	560	50		
DailyDriver	06/10/2008	05:48 AM	02:04 PM	485	-25		
DailyDriver	06/11/2008	05:52 AM	06:30 PM	758	248		
DailyDriver	06/12/2008	05:38 PM	06:04 PM	25	-485		
				Total:	**-220**	**-3.67**	

REPORT PARAM RECAP:

Week Ending Date: 06/12/2008
Location/Department: Fremont 298 Comm
Reporting Minutes Limit: 510

Figure 4–24 Weekly Time Variance Report

Item	Description
Employee	The name of the employee assigned to the mobile device monitored.
Date	The date of the workday being monitored.
Arrived First Stop	The arrival time of the mobile device at the first stop of the day.
Left Last Stop	The departure time of the mobile device from the last stop of the day.
Minutes Worked (mins)	The total number of minutes worked for the workday.
Plus or Minus (mins)	The number of minutes either below or exceeding the 510 minute workday. Note: The number of minutes deviating from the expected 510 minute workday.

Item	Description
Reconciliation (hours)	The total number of hours deviating from the expected work week.
Optional Work Area	Additional authorized work areas the driver may service.

5 Advanced Fuel and Carbon Emission Management

Advanced Fuel and Carbon Emission Management reports help reduce your fuel consumption and emissions by providing reports and features for fuel usage, engine speed, sudden acceleration, PTO, state mileage and carbon emissions.

Advanced Fuel and Carbon Emission Management helps deliver the following benefits:

- Increase customer satisfaction
- Reduce fuel costs
- Increase fuel efficiency
- Reduce carbon emissions and footprint
- Support Green Fleet initiatives
- Track miles traveled by state for automated Fuel Tax Reporting
- Reduce fuel taxes
- Reduce excessive idling
- Increase driver compliance
- Reduce maintenance and repair costs
- Increase driver safety
- Improve quality of the drivers and best practices
- Increase fleet asset utilization

The various Advanced Fuel and Carbon Emission Management reports are:

- Carbon Emission Detail Report
- Carbon Emission Summary Report
- Engine Speed / Road Speed Detail Distance Report
- Engine Speed / Road Speed Detail Duration Report
- Engine Speed/ Road Speed Detail - Fuel Report
- Engine Speed / Road Speed Detail - Fuel Economy Report
- Engine Speed / Road Speed Summary - Duration Report
- Engine Speed / Road Speed Summary - Fuel Report
- Engine Speed / Road Speed Summary - Fuel Economy Report
- Fuel Usage Summary Report

- PTO Fuel Usage Report (Requires Sensor Connect Package)
- State Mileage Report
- Sudden Acceleration Exception Report
- Time Period Evaluation Report (Driver Scorecard)
- Trip Report (Detail and Summary)

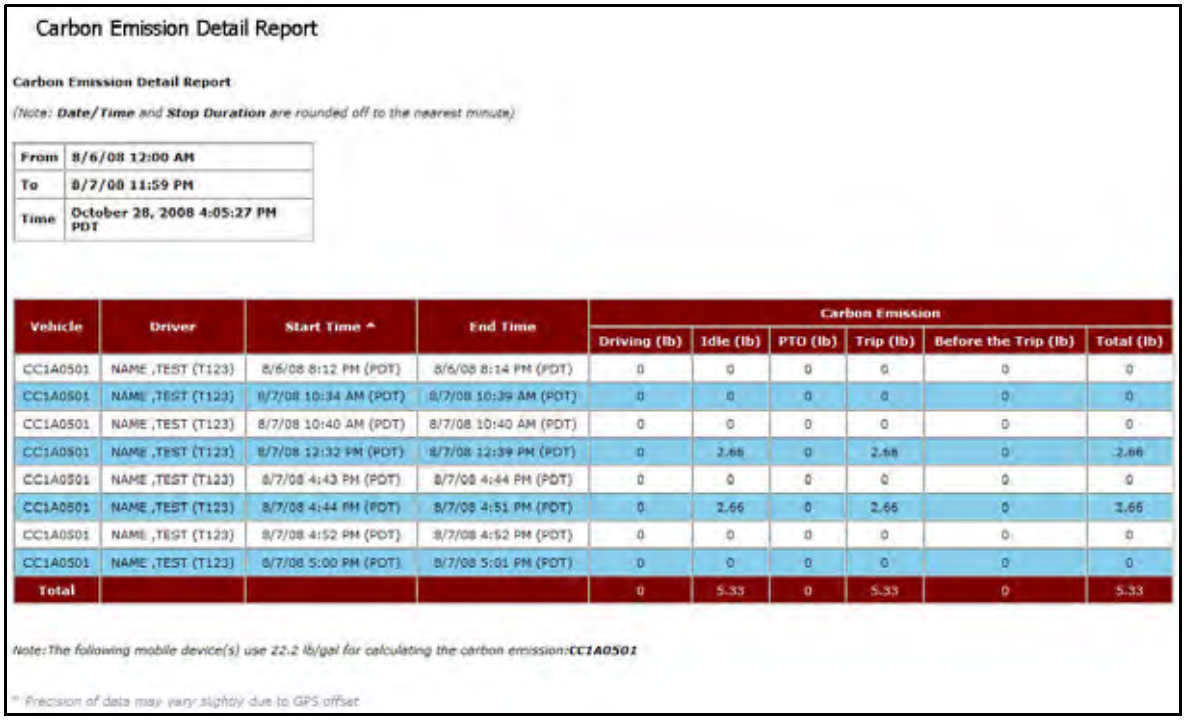
Carbon Emission Detail Report

The **Carbon Emission Detail** report, shown in Figure 5–1, displays the measurement and tracking of carbon emissions to support green initiatives.

The **Carbon Emission Detail** report is available with GeoManager *i*LM and requires Vehicle Diagnostics. This report utilizes the fuel usage information to compute the carbon emission during individual trips.

Note:

Not all *i*LM platforms are capable of reporting fuel usage across all vehicle types. If you do not see Fuel usage reported in Trip Detail report you will be unable to generate the Carbon Emission Detail report.



Carbon Emission Detail Report

Carbon Emission Detail Report

*(Note: **Date/Time** and **Stop Duration** are rounded off to the nearest minute)*

From	8/6/08 12:00 AM
To	8/7/08 11:59 PM
Time	October 28, 2008 4:05:27 PM PDT

Vehicle	Driver	Start Time ^	End Time	Carbon Emission					
				Driving (lb)	Idle (lb)	PTO (lb)	Trip (lb)	Before the Trip (lb)	Total (lb)
CC1A0501	NAME ,TEST (T123)	8/6/08 8:12 PM (PDT)	8/6/08 8:14 PM (PDT)	0	0	0	0	0	0
CC1A0501	NAME ,TEST (T123)	8/7/08 10:34 AM (PDT)	8/7/08 10:39 AM (PDT)	0	0	0	0	0	0
CC1A0501	NAME ,TEST (T123)	8/7/08 10:40 AM (PDT)	8/7/08 10:40 AM (PDT)	0	0	0	0	0	0
CC1A0501	NAME ,TEST (T123)	8/7/08 12:32 PM (PDT)	8/7/08 12:39 PM (PDT)	0	2.66	0	2.66	0	2.66
CC1A0501	NAME ,TEST (T123)	8/7/08 4:43 PM (PDT)	8/7/08 4:44 PM (PDT)	0	0	0	0	0	0
CC1A0501	NAME ,TEST (T123)	8/7/08 4:44 PM (PDT)	8/7/08 4:51 PM (PDT)	0	2.66	0	2.66	0	2.66
CC1A0501	NAME ,TEST (T123)	8/7/08 4:52 PM (PDT)	8/7/08 4:52 PM (PDT)	0	0	0	0	0	0
CC1A0501	NAME ,TEST (T123)	8/7/08 5:00 PM (PDT)	8/7/08 5:01 PM (PDT)	0	0	0	0	0	0
Total				0	5.33	0	5.33	0	5.33

Note: The following mobile device(s) use 22.2 lb/gal for calculating the carbon emission: ***CC1A0501***

** Precision of data may vary slightly due to GPS offset*

Figure 5–1 Carbon Emission Detail Report

Item	Description
From	The start of the reporting period during which carbon emissions were measured for the selected mobile device(s).
To	The end of the reporting period during which carbon emissions were measured for the selected mobile device(s).
Time	The date and time the report was requested.
Vehicle	The name or ID of the selected mobile device.
Driver	The name of the driver assigned to the mobile device.
Start Time	The start time of the monitored event.
End Time	The end time of the monitored event.
Carbon Emission	Shows the emission summary for the selected mobile device.
Driving (lb)	The total amount of emissions measured while driving for the reporting period.
Idle (lb)	The total amount of emissions measured while idling for the reporting period.
PTO (lb)	The total amount of emissions measured during Power Take Off (PTO) for the reporting period.
Trip (lb)	The total amount of emissions measured during all trips for the reporting period.
Before the Trip (lb)	The total amount of emissions measured between trips for the reporting period. Note: This applies if the trip is defined as something other than ignition on to ignition off.
Total (lb)	The total amount of emissions measured during the reporting period.

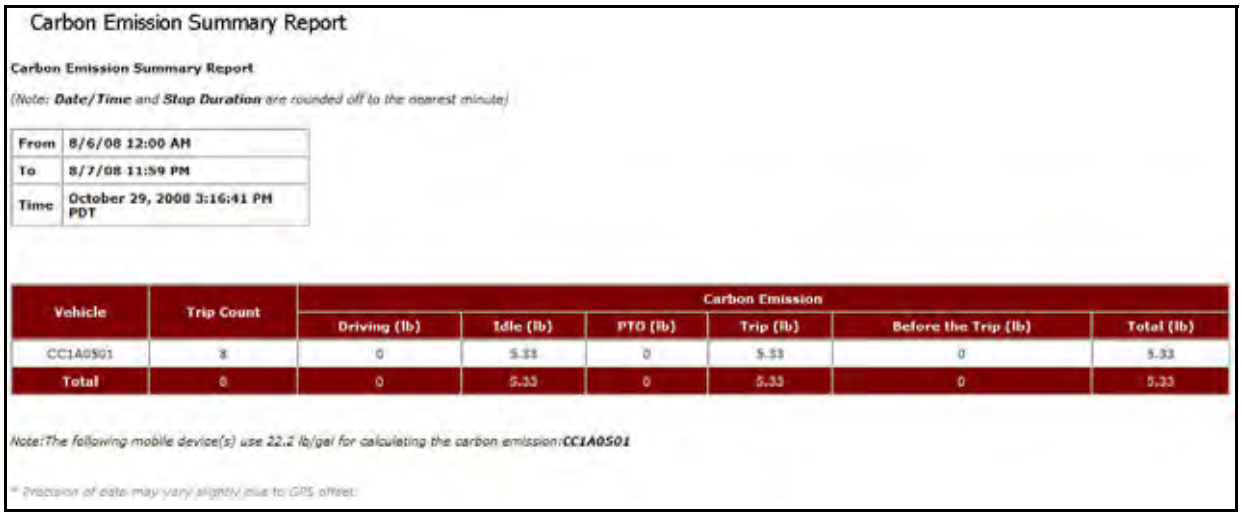
Carbon Emission Summary Report

The **Carbon Emission Summary** report, shown in Figure 5–2, displays the measurement and tracking of carbon emissions to support green initiatives.

The **Carbon Emission Summary** report is available with GeoManager *i*LM and requires Vehicle Diagnostics. This report utilizes the fuel usage information to compute the carbon emission during the specified time period.

Note:

Not all *i*LM platforms are capable of reporting fuel usage across all vehicle types. If you do not see fuel usage reported in the Trip Summary report you will be unable to generate the Carbon Emission Summary report.



Carbon Emission Summary Report

Carbon Emission Summary Report

*(Note: **Date/Time** and **Stop Duration** are rounded off to the nearest minute)*

From	8/6/08 12:00 AM
To	8/7/08 11:59 PM
Time	October 29, 2008 3:16:41 PM PDT

Vehicle	Trip Count	Carbon Emission					
		Driving (lb)	Idle (lb)	PTO (lb)	Trip (lb)	Before the Trip (lb)	Total (lb)
CC1A0501	8	0	5.33	0	5.33	0	5.33
Total	0	0	5.33	0	5.33	0	5.33

*Note:The following mobile device(s) use 22.2 lb/gal for calculating the carbon emission:**CC1A0501***

** Precision of data may vary slightly due to GPS offset.*

Figure 5–2 Carbon Emission Summary Report

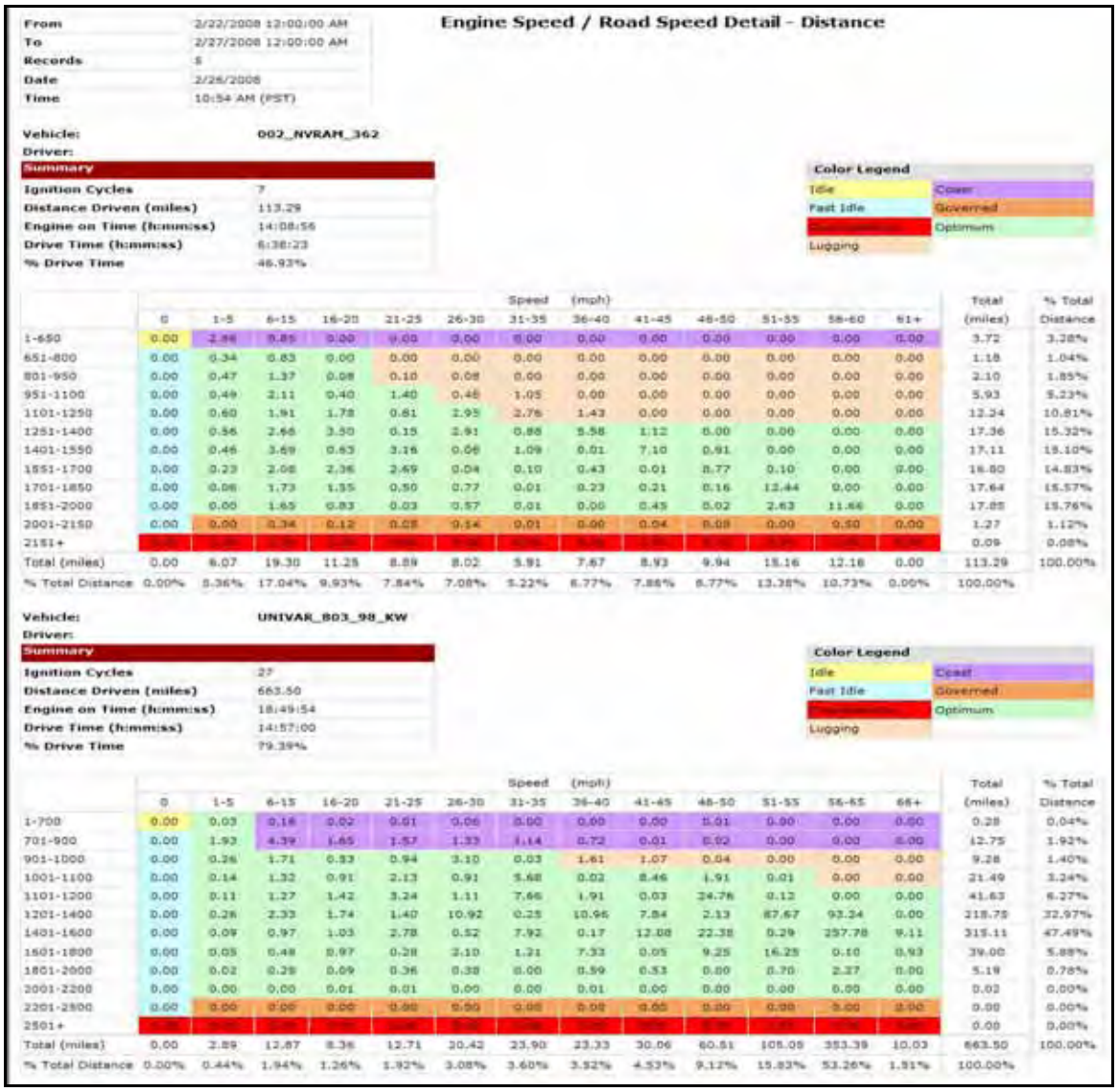
Item	Description
From	The start of the reporting period during which carbon emissions were measured for the selected mobile device(s).
To	The end of the reporting period during which carbon emissions were measured for the selected mobile device(s).
Time	The date and time the report was requested.
Vehicle	The name or ID of the selected mobile device.
Carbon Emission	Shows the emission summary for the selected mobile device.

Item	Description
Driving (lb)	The total amount of emissions measured while driving for the reporting period.
Idle (lb)	The total amount of emissions measured while idling for the reporting period.
PTO (lb)	The total amount of emissions measured during Power Take Off (PTO) for the reporting period.
Trip (lb)	The total amount of emissions measured during all trips for the reporting period.
Before the Trip (lb)	The total amount of emissions measured between trips for the reporting period. Note: This applies if the trip is defined as something other than ignition on to ignition off.
Total (lb)	The total amount of emissions measured during the reporting period.

Engine Speed / Road Speed Detail - Distance

The **Engine Speed/Road Speed Detail - Distance** report logs engine duty cycle information regarding distance. This allows you to evaluate how a driver is using a vehicle and if the vehicle is appropriate for its application.

The Color Legend gives you a quick visual of mobile device performance.



Engine Speed / Road Speed Detail - Distance

From	2/22/2008 12:00:00 AM
To	2/27/2008 12:00:00 AM
Records	5
Date	2/26/2008
Time	10:54 AM (PST)

Vehicle: 002_NVRAM_362
Driver:

Summary

Ignition Cycles	7
Distance Driven (miles)	113.29
Engine on Time (h:mm:ss)	14:08:56
Drive Time (h:mm:ss)	6:38:23
% Drive Time	46.93%

Color Legend: Idle, Coast, Fast Idle, Governed, Optimum, Lugging

Speed (mph)

	0	1-5	6-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61+	Total (miles)	% Total Distance
1-650	0.00	2.88	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.72	3.28%
651-800	0.00	0.34	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.18	1.04%
801-950	0.00	0.47	1.37	0.08	0.10	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.10	1.85%
951-1100	0.00	0.49	2.11	0.40	1.40	0.48	1.05	0.00	0.00	0.00	0.00	0.00	0.00	5.93	5.23%
1101-1250	0.00	0.60	1.91	1.78	0.81	2.95	2.76	1.43	0.00	0.00	0.00	0.00	0.00	12.24	10.81%
1251-1400	0.00	0.56	2.66	3.50	0.15	2.91	0.88	5.58	1.12	0.00	0.00	0.00	0.00	17.36	15.32%
1401-1550	0.00	0.46	3.69	0.63	3.16	0.06	1.09	0.01	7.10	0.91	0.00	0.00	0.00	17.11	15.10%
1551-1700	0.00	0.23	2.08	2.36	2.69	0.04	0.10	0.43	0.01	8.77	0.10	0.00	0.00	16.80	14.83%
1701-1850	0.00	0.08	1.73	1.55	0.50	0.77	0.01	0.23	0.21	0.16	12.44	0.00	0.00	17.64	15.57%
1851-2000	0.00	0.00	1.65	0.83	0.03	0.57	0.01	0.00	0.45	0.02	2.63	11.66	0.00	17.85	15.76%
2001-2150	0.00	0.00	0.34	0.12	0.05	0.14	0.01	0.00	0.04	0.08	0.00	0.50	0.00	1.27	1.12%
2151+	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.08%
Total (miles)	0.00	6.07	19.30	11.25	8.89	8.02	5.91	7.67	8.93	9.94	15.16	12.16	0.00	113.29	100.00%
% Total Distance	0.00%	5.36%	17.04%	9.93%	7.84%	7.08%	5.22%	6.77%	7.88%	8.77%	13.38%	10.73%	0.00%	100.00%	

Vehicle: UNIVAR_803_98_KW
Driver:

Summary

Ignition Cycles	27
Distance Driven (miles)	663.50
Engine on Time (h:mm:ss)	18:49:54
Drive Time (h:mm:ss)	14:57:00
% Drive Time	79.39%

Color Legend: Idle, Coast, Fast Idle, Governed, Optimum, Lugging

Speed (mph)

	0	1-5	6-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-65	66+	Total (miles)	% Total Distance
1-700	0.00	0.03	0.16	0.02	0.01	0.06	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.28	0.04%
701-900	0.00	1.93	4.39	1.65	1.57	1.33	1.14	0.72	0.01	0.02	0.00	0.00	0.00	12.75	1.92%
901-1000	0.00	0.26	1.71	0.33	0.94	3.10	0.03	1.61	1.07	0.04	0.00	0.00	0.00	9.28	1.40%
1001-1100	0.00	0.14	1.32	0.91	2.13	0.91	5.68	0.02	8.46	1.91	0.01	0.00	0.00	21.49	3.24%
1101-1200	0.00	0.11	1.27	1.42	3.24	1.11	7.66	1.91	0.03	24.76	0.12	0.00	0.00	41.63	6.27%
1201-1400	0.00	0.26	2.33	1.74	1.40	10.92	0.25	10.96	7.84	2.13	87.67	93.24	0.00	218.75	32.97%
1401-1600	0.00	0.09	0.97	1.03	2.78	0.52	7.92	0.17	12.08	22.38	0.29	257.78	9.11	315.11	47.49%
1601-1800	0.00	0.05	0.48	0.97	0.28	2.10	1.21	7.33	0.05	9.25	16.25	0.10	0.93	39.00	5.88%
1801-2000	0.00	0.02	0.25	0.09	0.36	0.38	0.00	0.59	0.53	0.00	0.70	2.37	0.00	5.19	0.78%
2001-2200	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.02	0.00%
2201-2500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%
2501+	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%
Total (miles)	0.00	2.89	12.87	8.36	12.71	20.42	23.90	23.33	30.06	60.51	105.05	353.39	10.03	663.50	100.00%
% Total Distance	0.00%	0.44%	1.94%	1.26%	1.92%	3.08%	3.60%	3.52%	4.53%	9.12%	15.83%	53.26%	1.51%	100.00%	

Figure 5–3: Engine Speed/Road Speed Distance Detail Report

Field	Description
From	The starting date for the report.
To	The ending date for the report.
Records	The number of instances recorded during the report period.
Date	The date the report was generated.
Time	The time the report was generated.
Vehicle	The mobile device label.
Mobile Device	The name or number of the mobile device.
Driver	The driver ID who is assigned to that device.

Field	Description
Summary	
Number of Trips	The number of trips completed during the report period.
Miles Driven	The number of miles driven during the report period.
Engine on Time	The total amount of time the engine was running.
Road Time	The total amount of time the mobile device was on the road.
% Road Time	The percentage of total time the mobile device was on the road.
Graph	
RPM (Down)	The revolutions per minute of the motor. These are broken up into 12 increments. These increments depend upon the type of vehicle.
Total	The total number of miles driven for each speed range.
% Total Miles	The percentage of the total miles the mobile device spent in the speed range.
Speed (Across)	The miles per hour the mobile device was traveling. This is broken up into 12 increments. These increments depend upon the type of vehicle.
Total	The total number of miles driven for each RPM range.
% Total Miles	The percentage of the total miles the mobile device spent in the RPM range.

Engine Speed / Road Speed Detail - Duration

The **Engine Speed/Road Speed Detail - Duration** report logs engine duty cycle information regarding time lapsed. This allows you to evaluate how a driver is using a vehicle and if the vehicle is appropriate for its application.

The Color Legend gives you a quick visual of mobile device performance.

Figure 5–4 Engine Speed/Road Speed Detail Duration Report

Field	Description
From	The starting date for the report.
To	The ending date for the report.

Field	Description
Records	The number of instances recorded during the report period.
Date	The date the report was generated.
Time	The time the report was generated.
Vehicle	The mobile device label.
Driver	The driver ID who is assigned to that device.
Summary	
Ignition Cycles	The number of times the ignition was turned on and off during the report period.
Distance Driven	The distance (in miles) driven during the report period.
Engine on Time	The total amount of time the engine was running.
Drive Time	The total amount of time the mobile device was moving.
% Drive Time	The percentage of total time the mobile device was moving.
Graph	
RPM (Down)	The revolutions per minute of the motor. These are broken up into 12 increments. These increments depend upon the type of vehicle.
Total	The total number of miles driven for each speed range.
% Road Time	The percentage of the total miles the mobile device was moving while in the speed range.
Speed (Across)	The miles per hour the mobile device was traveling. This is broken up into 12 increments. These increments depend upon the type of vehicle.
Total	The total number of miles driven for each RPM range.
% Engine On Time	The percentage of the total time the mobile device spent in the RPM range.

Engine Speed / Road Speed Detail - Fuel

The **Engine Speed Road Speed Detail - Fuel** report logs engine duty cycle information regarding fuel use. This allows you to evaluate how a driver is using a vehicle and if the vehicle is appropriate for its application.

The Color Legend gives you a quick visual of mobile device performance.

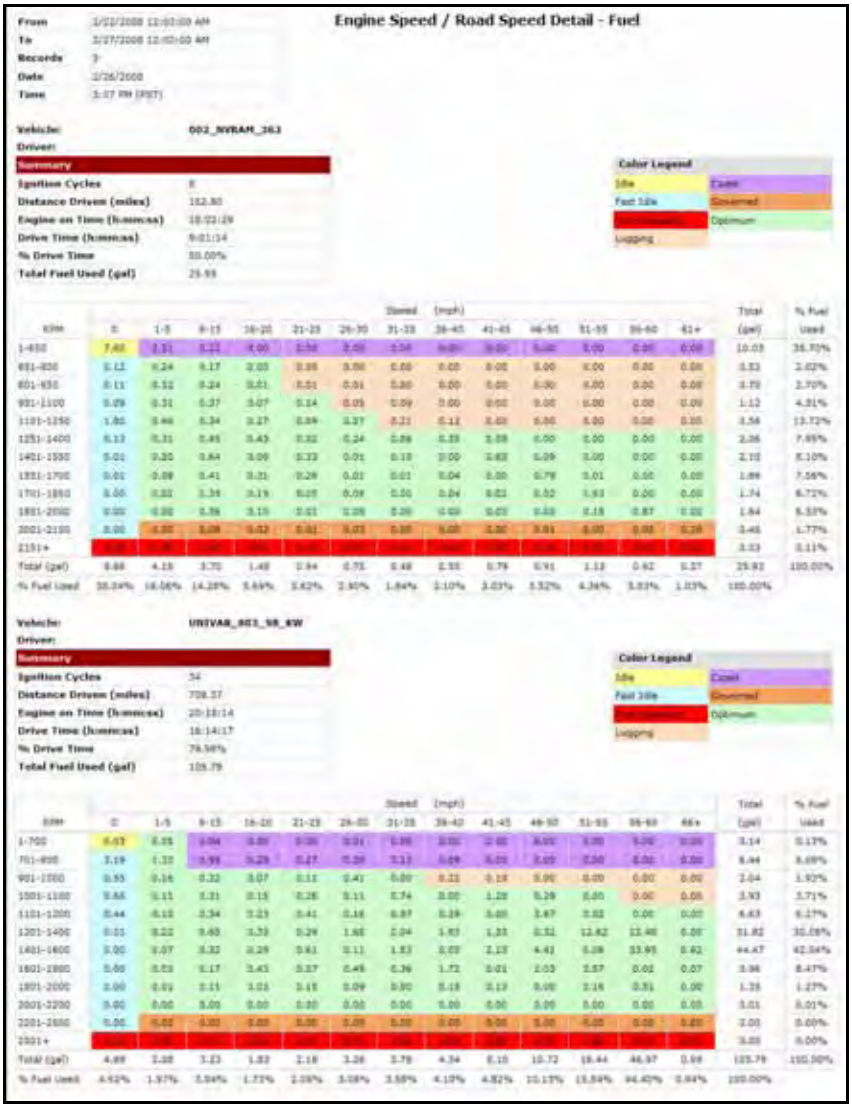


Figure 5–5: RPM–MPH Detail - Fuel Report

Field	Description
From	The starting date for the report.
To	The ending date for the report.

Field	Description
Records	The number of instances recorded during the report period.
Date	The date the report was generated.
Time	The time the report was generated.
Vehicle	The mobile device label.
Mobile Device	The name or number of the mobile device.
Driver	The driver ID who is assigned to that device.
Summary	
Ignition Cycles	The number of times the ignition was turned on and off during the report period.
Distance Driven (Miles)	The distance (in miles) driven during the report period.
Engine on Time	The total amount of time the engine was running.
Drive Time	The total amount of time the mobile device was moving.
% Drive Time	The percentage of total time the mobile device was moving.
Total Fuel Used (Gal)	The total amount of fuel used during the report period.
Graph	
RPM (Down)	The revolutions per minute of the motor. These are broken up into 12 increments. These increments depend upon the type of vehicle.
Total	The total number of gallons of fuel used for each speed range.
% Fuel Used	The percentage of the total amount of fuel used for the speed range.
Speed (Across)	The miles per hour the mobile device was traveling. This is broken up into 12 increments. These increments depend upon the type of vehicle.
Total (Gal)	The total number of fuel used for each RPM range.
% Total Miles	The percentage of the total miles the mobile device spent in the RPM range.

Engine Speed / Road Speed Detail - Fuel Economy

The **Engine Speed / Road Speed Detail - Fuel Economy** report logs engine duty cycle information regarding fuel economy. This allows you to evaluate how a driver is using a vehicle and if the vehicle is appropriate for its application.

The Color Legend gives you a quick visual of mobile device performance.

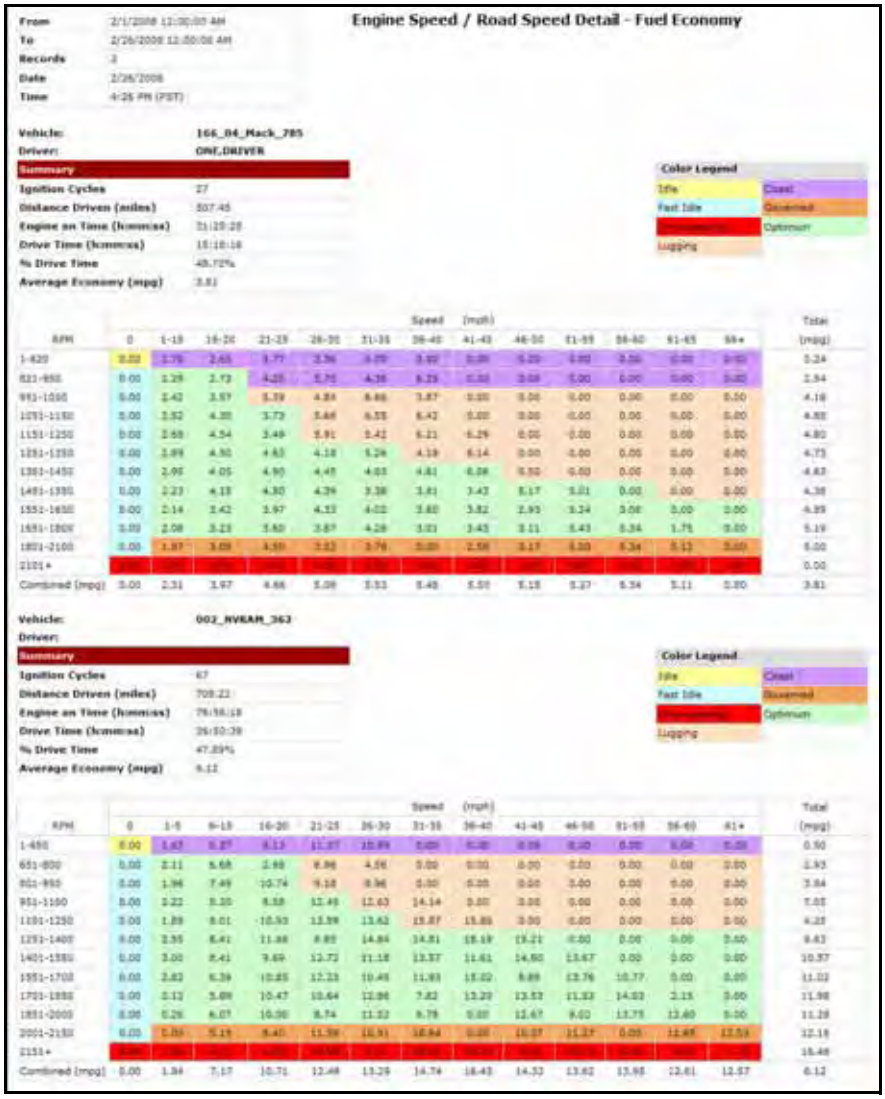


Figure 5–6: RPM–MPH MPG Detail - Fuel Economy Report

Field	Description
From	The starting date for the report.
To	The ending date for the report.

Field	Description
Records	The number of instances recorded during the report period.
Date	The date the report was generated.
Time	The time the report was generated.
Vehicle	The mobile device label.
Driver	The driver ID who is assigned to that device.
Summary	
Ignition Cycles	The number of times the ignition was turned on and off during the report period.
Distance Driven (Miles)	The distance (in miles) driven during the report period.
Engine on Time	The total amount of time the engine was running.
Drive Time	The total amount of time the mobile device was moving.
% Drive Time	The percentage of total time the mobile device was moving.
MPG	The average miles per gallon achieved during the report period.
Graph	
RPM (Down)	The revolutions per minute of the motor. These are broken up into 12 increments. These increments depend upon the type of vehicle.
Total	The total number of gallons of fuel used for each speed range.
% Fuel Used	The percentage of the total amount of fuel used for the speed range.
Combined MPG	The combined miles per gallon average for all mobile devices for each speed range.
Speed (Across)	The miles per hour the mobile device was traveling. This is broken up into 12 increments. These increments depend upon the type of vehicle.
Total MPG	The total miles per gallon used for each RPM range.

Engine Speed / Road Speed Summary - Duration

The **Engine Speed / Road Speed Summary - Duration** report, shown in Figure 5–7, allows you to evaluate mobile devices and drivers based on time lapsed information in customized RPM-MPH ranges.

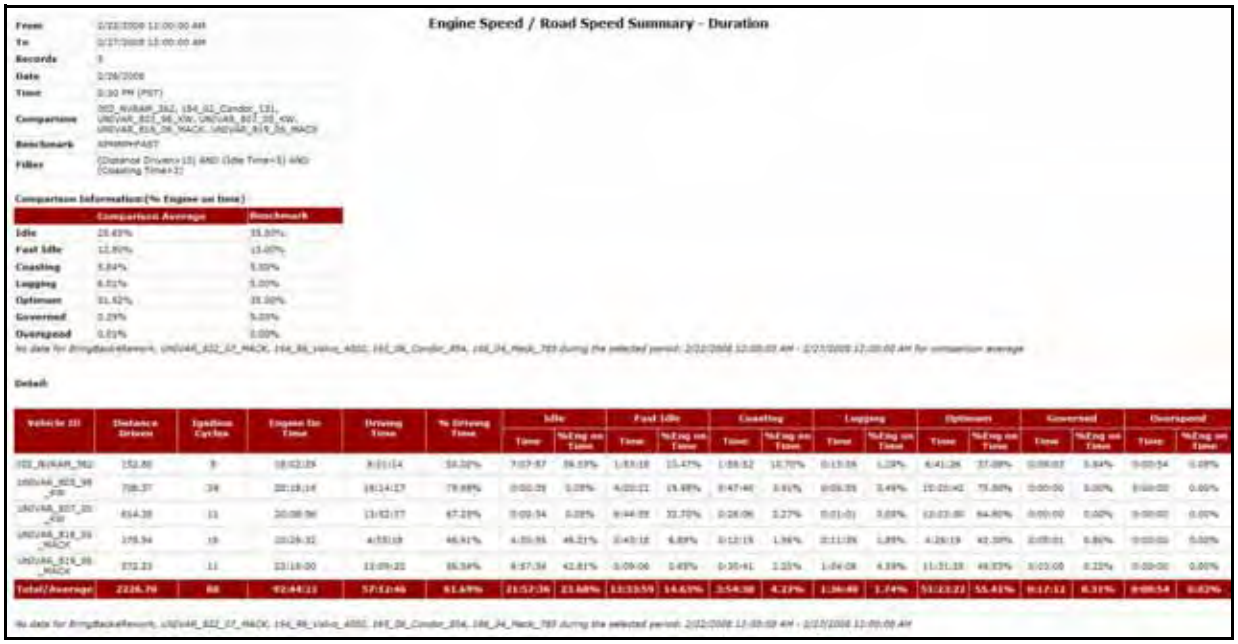


Figure 5–7: Engine Speed / Road Speed Summary Duration Report

Field	Description
From	The starting date for the report.
To	The ending date for the report.
Records	The number of instances recorded during the report period.
Date	The date the report was generated.
Time	The time the report was generated.
Comparison Avg	The name of the mobile device(s) used for comparison. This can be a top, average or low performer, depending on what you are trying to measure.
Benchmark	The point of reference that the mobile device performance is measured against.
Filter	Any rules that might cause the generated report to show strange or incorrect results. This allows you to exclude irrelevant information.
Comparison Information (% Engine on Time)	

Field	Description
Engine State	The state of the engine according to RPM compared to mobile device's speed.
Idle	Percentage of time the engine is on but no speed is detected.
Fast Idle	Percentage of time the engine is running at an elevated level but no speed is detected.
Coasting	Percentage of time the mobile device is moving at an unacceptable speed compared to engine speed.
Lugging	Percentage of time the RPM is low for the speed at which the mobile device is moving.
Optimum	Percentage of time the engine is operating at the most favorable RPM compared to the mobile device's speed.
Governed	Percentage of time the engine is restricted regardless of accelerator position.
Overspeed	Percentage of time the engine is above governed speed regardless of mobile device's speed.
Comparison Average	The average percentage the mobile device selected for comparison performed.
Benchmark	The percentage entered by the administrator as a perfect world scenario against which the mobile devices are measured.
Detail	
Vehicle ID	The identification name or number for the mobile device.
Distance Driven	The number of miles the mobile device drove during the report period.
Ignition Cycles	The number of times the ignition is turned both on and off during the report period.
Engine On Time	The total amount of time the engine was running during the selected report period.
Driving Time	The total amount of time the mobile device was moving during the selected report period.
% Driving Time	The percentage of total time the mobile device was moving during the report period.
Idle	Information regarding the mobile device engine running but no speed detected.
Time	The amount of time the mobile device's engine spent in this state.

Field	Description
% Engine On Time	The percentage of time the mobile device's engine spent in this state.
Fast Idle	Information regarding the mobile device's engine running at an elevated rate but no speed detected.
Time	The amount of time the mobile device's engine spent in this state.
% Engine On Time	The percentage of time the mobile device's engine spent in this state.
Coasting	Information regarding the mobile device's engine moving at an unacceptable speed compared to engine speed.
Time	The amount of time the mobile device's engine spent in this state.
% Engine On Time	The percentage of time the mobile device's engine spent in this state.
Lugging	Information regarding the low RPM for the speed at which the mobile device is moving
Time	The amount of time the mobile device's engine spent in this state.
% Engine On Time	The percentage of time the mobile device's engine spent in this state.
Optimum	Information regarding the engine operating at the most favorable RPM compared to the mobile device's speed.
Time	The amount of time the mobile device's engine spent in this state.
% Engine On Time	The percentage of time the mobile device's engine spent in this state.
Governed	Information regarding the engine being governance regard-less of mobile device's speed.
Time	The amount of time the mobile device's engine spent in this state.
% Engine On Time	The percentage of time the mobile device's engine spent in this state.
Overspeed	Information regarding the engine being above governed speed regardless of mobile device's speed.
Time	The amount of time the mobile device's engine spent in this state.

Field	Description
% Engine On Time	The percentage of time the mobile device's engine spent in this state.
Total/Average	The total or average for all selected devices during the report period. The results for total are in columns which convey totals. Results for averages are in columns which convey an average.

Engine Speed / Road Speed Summary - Fuel

The **Engine Speed / Road Speed Summary - Fuel** report, shown in Figure 5–8, allows you to evaluate mobile devices and drivers based on fuel information in customized RPM-MPH ranges.

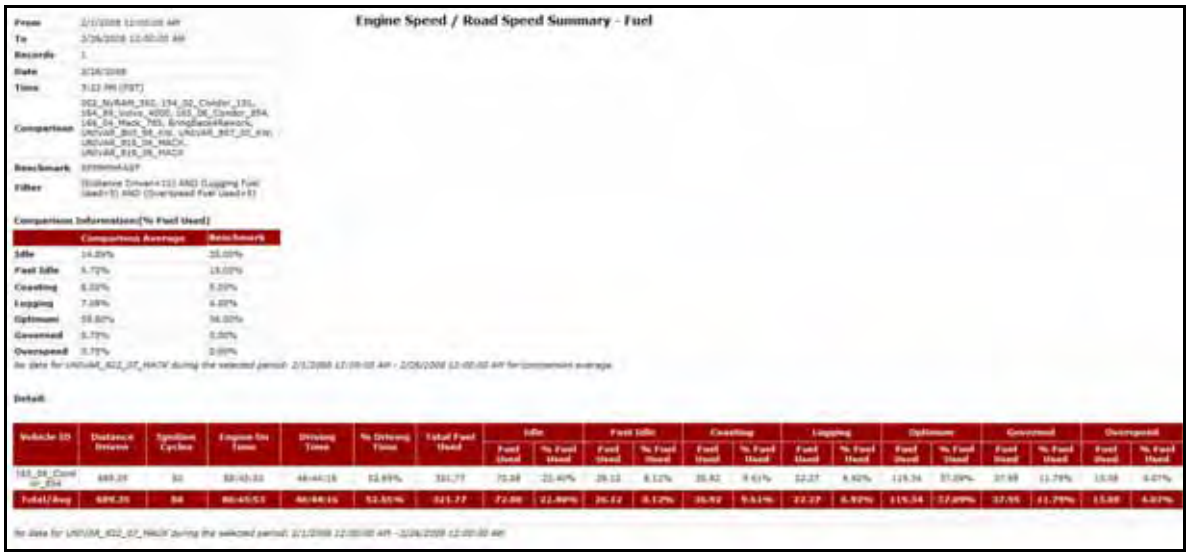


Figure 5–8: RPM–MPH Fuel Summary Report

Field	Description
From	The starting date for the report.
To	The ending date for the report.
Records	The number of instances recorded during the report period.
Date	The date the report was generated.
Time	The time the report was generated.
Comparison Avg	The name of the mobile device(s) used for comparison. This can be a top, average or low performer, depending on what you are trying to measure.

Field	Description
Benchmark	The point of reference that the mobile device performance is measured against.
Filter	Any rules that might cause the generated report to show strange or incorrect results. This allows you to exclude irrelevant information.
Comparison Information (% Engine on Time)	
Engine State	The state of the engine according to RPM compared to mobile device's speed.
Idle	Percentage of time the engine is on but no speed is detected.
Fast Idle	Percentage of time the engine is running at an elevated level but no speed is detected.
Coasting	Percentage of time the mobile device is moving at an unacceptable speed compared to engine speed.
Lugging	Percentage of time the RPM is low for the speed at which the mobile device is moving.
Optimum	Percentage of time the engine is operating at the most favorable RPM compared to the mobile device's speed.
Governed	Percentage of time the engine is governed regardless of mobile device's speed.
Overspeed	Percentage of time the engine is above governed speed regardless of mobile device's speed.
Comparison Average	The average percentage the mobile device selected for comparison performed.
Benchmark	The percentage entered by the administrator as a perfect world scenario against which the mobile devices are measured.
Detail	
Vehicle ID	The identification name or number for the mobile device.
Dist Driven	The number of miles the mobile device drove during the report period.
Ignition Cycles	The number of times the ignition is turned both on and off during the report period.
Engine On Time	The total amount of time the engine was running during the selected report period.
Driving Time	The total amount of time the mobile device was moving during the selected report period.

Field	Description
% Driving Time	The percentage of time the mobile device had the engine running and was moving.
Total Fuel Used	The total amount of fuel used during the report period.
Idle	Information regarding the mobile device engine running but no speed detected.
Fuel Used	The amount of fuel used by the mobile device in this state.
% Fuel Used	The percentage of fuel used by the mobile device in this state.
Fast Idle	Information regarding the mobile device's engine running at an elevated rate but no speed detected.
Fuel Used	The amount of fuel used by the mobile device in this state.
% Fuel Used	The percentage of fuel used by the mobile device in this state.
Coasting	Information regarding the mobile device's engine moving at an unacceptable speed compared to engine speed.
Fuel Used	The amount of fuel used by the mobile device in this state.
% Fuel Used	The percentage of fuel used by the mobile device in this state.
Lugging	Information regarding the low RPM for the speed at which the mobile device is moving
Fuel Used	The amount of fuel used by the mobile device in this state.
% Fuel Used	The percentage of fuel used by the mobile device in this state.
Optimum	Information regarding the engine operating at the most favorable RPM compared to the mobile device's speed.
Fuel Used	The amount of fuel used by the mobile device in this state.
% Fuel Used	The percentage of fuel used by the mobile device in this state.
Governed	Information regarding the engine being governed regardless of mobile device's speed.
Fuel Used	The amount of fuel used by the mobile device in this state.
% Fuel Used	The percentage of fuel used by the mobile device in this state.
Overspeed	Information regarding the engine being above governed speed regardless of mobile device's speed.
Fuel Used	The amount of fuel used by the mobile device in this state.

Field	Description
% Fuel Used	The percentage of fuel used by the mobile device in this state.
Total/Average	The total or average for all selected devices during the report period. The results for total are in columns which convey totals. Results for averages are in columns which convey an average.

Engine Speed / Road Speed Summary - Fuel Economy

The **Engine Speed / Road Speed Summary - Fuel Economy** report, shown in Figure 5–9, allows you to evaluate mobile devices and drivers based on fuel economy information in customized RPM-MPH ranges.

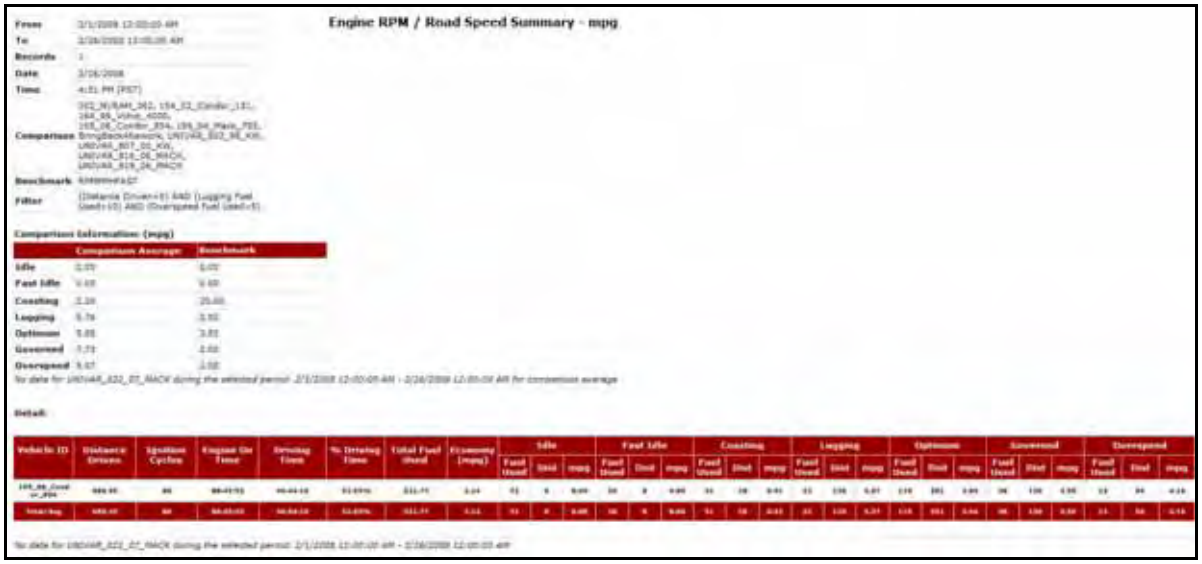


Figure 5–9: RPM–MPH MPG Summary Report

Field	Description
From	The starting date for the report.
To	The ending date for the report.
Records	The number of instances recorded during the report period.
Date	The date the report was generated.
Time	The time the report was generated.

Field	Description
Comparison Avg	The name of the mobile device(s) used for comparison. This can be a top, average or low performer, depending on what you are trying to measure.
Benchmark	The point of reference that the mobile device performance is measured against.
Filter	Any rules that might cause the generated report to show strange or incorrect results. This allows you to exclude irrelevant information.
Comparison Information (% Engine on Time)	
Engine State	The state of the engine according to RPM compared to mobile device's speed.
Idle	Percentage of time the engine is on but no speed is detected.
Fast Idle	Percentage of time the engine is running at an elevated level but no speed is detected.
Coasting	Percentage of time the mobile device is moving at an unacceptable speed compared to engine speed.
Lugging	Percentage of time the RPM is low for the speed at which the mobile device is moving.
Optimum	Percentage of time the engine is operating at the most favorable RPM compared to the mobile device's speed.
Governed	Percentage of time the engine is governed regardless of mobile device's speed.
Overspeed	Percentage of time the engine is above governed speed regardless of mobile device's speed.
Comparison Average	The average percentage the mobile device selected for comparison performed.
Benchmark	The percentage entered by the administrator as a perfect world scenario against which the mobile devices are measured.
Detail	
Vehicle ID	The identification name or number for the mobile device.
Distance Driven	The number of miles the mobile device drove during the report period.
Ignition Cycles	The number of times the ignition is turned both on and off during the report period.
Engine On Time	The total amount of time the engine was running during the selected report period.

Field	Description
Driving Time	The total amount of time the mobile device was moving during the selected report period.
% Driving Time	The percentage of time the mobile device had the engine running and was moving.
Total Fuel Used	The total amount of fuel used during the report period.
MPG	The average miles per gallon of fuel used by the mobile device for the report period.
Idle	Information regarding the mobile device engine running but no speed detected.
Fuel Used	The amount of fuel used by the mobile device in this state.
% Fuel Used	The percentage of fuel used by the mobile device in this state.
MPG	The miles per gallon for the mobile device while in this state.
Fast Idle	Information regarding the mobile device's engine running at an elevated rate but no speed detected.
Fuel Used	The amount of fuel used by the mobile device in this state.
% Fuel Used	The percentage of fuel used by the mobile device in this state.
MPG	The miles per gallon for the mobile device while in this state.
Coasting	Information regarding the mobile device's engine moving at an unacceptable speed compared to engine speed.
Fuel Used	The amount of fuel used by the mobile device in this state.
% Fuel Used	The percentage of fuel used by the mobile device in this state.
MPG	The miles per gallon for the mobile device while in this state.
Lugging	Information regarding the low RPM for the speed at which the mobile device is moving
Fuel Used	The amount of fuel used by the mobile device in this state.
% Fuel Used	The percentage of fuel used by the mobile device in this state.
MPG	The miles per gallon for the mobile device while in this state.
Optimum	Information regarding the engine operating at the most favorable RPM compared to the mobile device's speed.
Fuel Used	The amount of fuel used by the mobile device in this state.
% Fuel Used	The percentage of fuel used by the mobile device in this state.

Field	Description
MPG	The miles per gallon for the mobile device while in this state.
Governed	Information regarding the engine being governed regardless of mobile device's speed.
Fuel Used	The amount of fuel used by the mobile device in this state.
% Fuel Used	The percentage of fuel used by the mobile device in this state.
MPG	The miles per gallon for the mobile device while in this state.
Overspeed	Information regarding the engine being above governed speed regardless of mobile device's speed.
Fuel Used	The amount of fuel used by the mobile device in this state.
% Fuel Used	The percentage of fuel used by the mobile device in this state.
MPG	The miles per gallon for the mobile device while in this state.

Fuel Usage Summary

The **Fuel Usage Summary** report, shown in Figure 5–10, allows you to evaluate mobile devices' fuel use and compare driver behaviors.

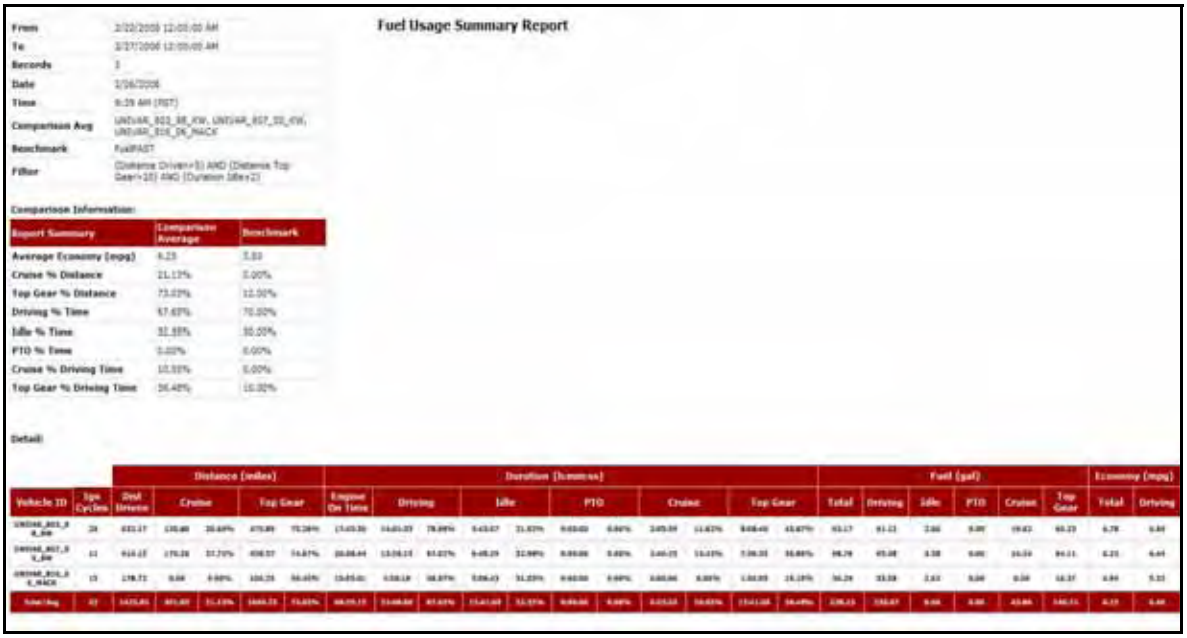


Figure 5–10: Fuel Usage Summary Report

Field	Description
From	The starting date for the report.
To	The ending date for the report.
Records	The number of instances recorded during the report period.
Date	The date the report was generated.
Time	The time the report was generated.
Comparison Avg	The name of the mobile device(s) that was used as a comparison standard. This can be a top, average or low performer, depending on what you are trying to measure.
Benchmark	The point of reference that the mobile device performance is measured against.
Filter	Any rules that might cause the generated report to show strange or incorrect results. This allows you to exclude irrelevant information.
Comparison Information	
Report Summary	Gives a quick visual of the information in the report.
Total MPG	The total amount of miles per gallon that were accumulated during the report period, including driving time, idle time and PTO.
Cruise % Distance	The number of miles covered in cruise control during the report period.
Top Gear % Distance	The number of miles the mobile device covered in top gear during the report period.
Driving % Time	The percentage of time the mobile device was moving during the report period.
Idle % Time	The percentage of time the mobile device was idle during the report period.
PTO % Time	The percentage of time the mobile device engaged the PTO during the trip.
Cruise % Driving Time	The percentage of time the mobile device used cruise control during the report period.
Top Gear % Driving Time	The percentage of time the mobile device spent in top gear during the report period.
Detail	
Vehicle ID	The identification name or number for the mobile device.

Field	Description
Ign Cycles	The number of ignition cycles that occurred during the report period.
Distance	Distance information in miles for each mobile device. Shown in miles per gallon.
Dist Driven	The number of miles the mobile device drove during the report period.
Cruise	The number of miles the mobile device drove while using cruise control during the report period.
Top Gear	The number of miles the mobile device drove in top gear during the report period.
Duration	The amount of time each mobile device spent performing the following activities. Shown in HH:MM format.
Engine on Time	The total amount of time the engine was running.
Driving	The total amount of time the mobile device was moving.
Idle	The total amount of time the mobile device was idling.
PTO	The total amount of time the mobile device performed PTOs.
Cruise	The total amount of time the mobile device drove using cruise control.
Top Gear	The total amount of time the mobile device drove in its top gear.
Fuel	Fuel information for each mobile device. Shown in gallons.
Total	The total amount of fuel used during the report period.
Driving	The total amount of fuel used while the mobile device was moving.
Idle	The total amount of fuel used while the mobile device sat still with the engine running.
PTO	The total amount of fuel used during PTOs.
Cruise	The total amount of fuel used while driving in cruise control.
Top Gear	The total amount of fuel used while driving in top gear.
MPG	The miles per gallon of fuel each mobile device used.
Total	The total number of miles each mobile device used per gallon of fuel.
Driving	The total number of miles each mobile device actually moved per gallon of fuel.

PTO Fuel Usage Report

The PTO Fuel Usage report monitors one PTO event per truck.

Note:
Requires vehicle Bus adapter and switch sensor.

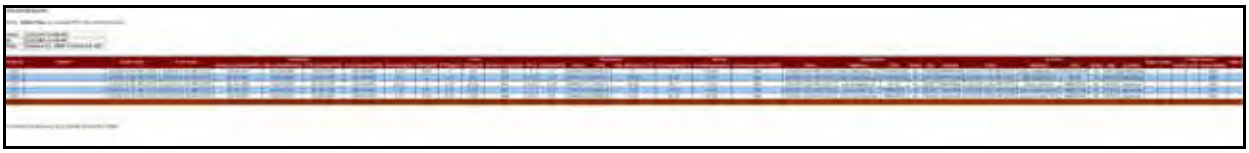
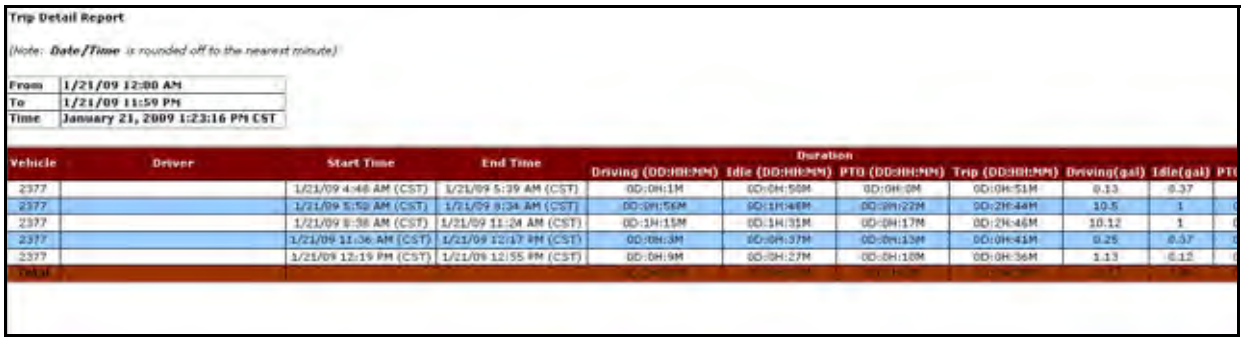


Figure 5–11: PTO Fuel Usage (1 of 4) Report



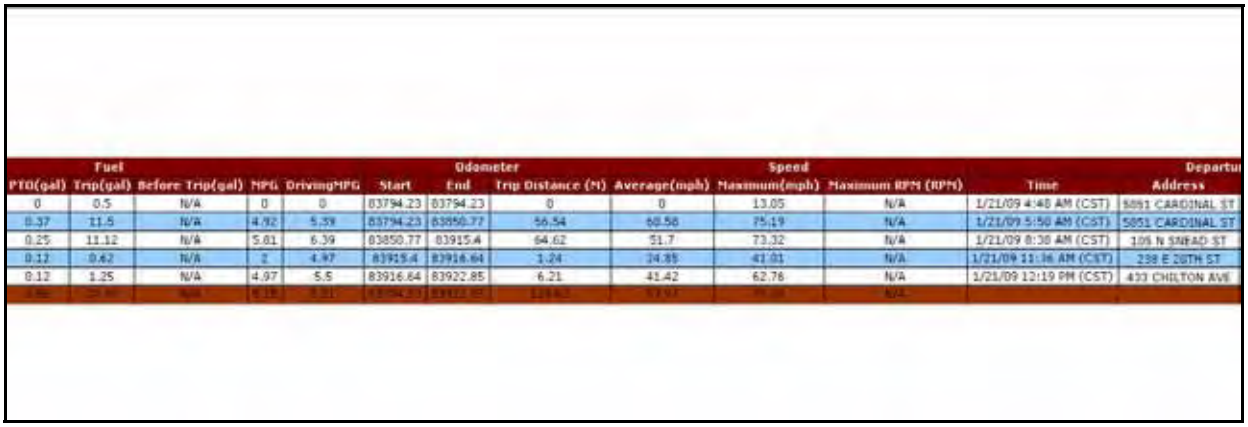
Trip Detail Report

(Note: *Date/Time* is rounded off to the nearest minute)

From	1/21/09 12:00 AM
To	1/21/09 11:59 PM
Time	January 21, 2009 1:23:16 PM CST

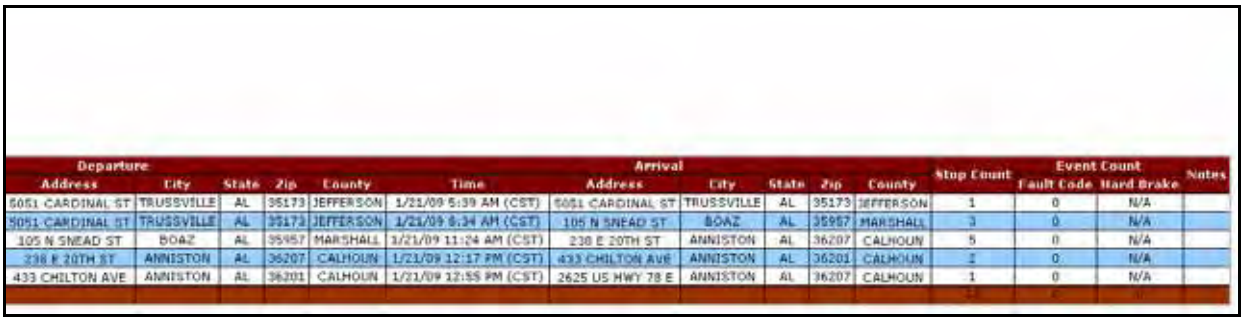
Vehicle	Driver	Start Time	End Time	Duration						
				Driving (DD:HH:MM)	Idle (DD:HH:MM)	PTO (DD:HH:MM)	Trip (DD:HH:MM)	Driving(gal)	Idle(gal)	PTO
2377		1/21/09 4:48 AM (CST)	1/21/09 5:39 AM (CST)	0D:0H:1M	0D:0H:50M	0D:0H:0M	0D:0H:51M	0.13	0.37	
2377		1/21/09 5:50 AM (CST)	1/21/09 8:34 AM (CST)	0D:0H:56M	0D:1H:46M	0D:0H:22M	0D:2H:44M	10.5	1	
2377		1/21/09 8:38 AM (CST)	1/21/09 11:24 AM (CST)	0D:1H:15M	0D:1H:31M	0D:0H:17M	0D:2H:46M	10.12	1	
2377		1/21/09 11:36 AM (CST)	1/21/09 12:17 PM (CST)	0D:0H:3M	0D:0H:37M	0D:0H:13M	0D:0H:41M	0.25	0.37	
2377		1/21/09 12:19 PM (CST)	1/21/09 12:55 PM (CST)	0D:0H:9M	0D:0H:27M	0D:0H:10M	0D:0H:36M	1.13	0.12	
Total										

Figure 5–12 PTO Fuel Usage (2 of 4) Report



Fuel					Odometer			Speed				Departu
PTO(gal)	Trip(gal)	Before Trip(gal)	MPG	DrivingMPG	Start	End	Trip Distance (M)	Average(mph)	Maximum(mph)	Maximum RPM (RPM)	Time	Address
0	0.5	N/A	0	0	83794.23	83794.23	0	0	13.05	N/A	1/21/09 4:48 AM (CST)	5091 CARDINAL ST
0.37	11.5	N/A	4.92	5.59	83794.23	83850.77	56.54	60.56	75.19	N/A	1/21/09 5:50 AM (CST)	5851 CARDINAL ST
0.25	11.12	N/A	5.81	6.39	83850.77	83915.4	64.62	51.7	73.32	N/A	1/21/09 8:38 AM (CST)	105 N SNEAD ST
0.12	0.62	N/A	2	4.97	83915.4	83916.64	1.24	24.85	41.01	N/A	1/21/09 11:36 AM (CST)	238 E 28TH ST
0.12	1.25	N/A	4.97	5.5	83916.64	83922.85	6.21	41.42	62.76	N/A	1/21/09 12:19 PM (CST)	433 CHILTON AVE
Total												

Figure 5–13 PTO Fuel Usage (3 of 4) Report



Departure						Arrival					Stop Count	Event Count		Notes
Address	City	State	Zip	County	Time	Address	City	State	Zip	County		Fault Code	Hard Brake	
5051 CARDINAL ST	TRUSSVILLE	AL	35173	JEFFERSON	1/21/09 5:39 AM (CST)	5051 CARDINAL ST	TRUSSVILLE	AL	35173	JEFFERSON	1	0	N/A	
5051 CARDINAL ST	TRUSSVILLE	AL	35173	JEFFERSON	1/21/09 8:34 AM (CST)	105 N SNEAD ST	BOAZ	AL	35957	MARSHALL	3	0	N/A	
105 N SNEAD ST	BOAZ	AL	35957	MARSHALL	1/21/09 11:24 AM (CST)	238 E 20TH ST	ANNISTON	AL	36207	CALHOUN	5	0	N/A	
238 E 20TH ST	ANNISTON	AL	36207	CALHOUN	1/21/09 12:17 PM (CST)	433 CHILTON AVE	ANNISTON	AL	36201	CALHOUN	1	0	N/A	
433 CHILTON AVE	ANNISTON	AL	36201	CALHOUN	1/21/09 12:55 PM (CST)	2625 US HWY 78 E	ANNISTON	AL	36207	CALHOUN	1	0	N/A	
											11	0	0	

Figure 5–14 PTO Fuel Usage (4 of 4) Report

Field	Description
From	The starting date for the report.
To	The ending date for the report.
Time	The time the report was generated.
Vehicle	The mobile device's label.
Driver	The name of the driver.
Start Time	The start time of the monitored event.
End Time	The end time of the monitored event.
Duration	The amount of time each mobile device spent performing the following activities. Shown in HH:MM format.
Driving (DD:HH:MM)	The amount of time the mobile device was moving.
Idling (DD:HH:MM)	The amount of time the mobile device was idling.
PTO (DD:HH:MM)	The amount of time the mobile device performed PTOs.
Trip (DD:HH:MM)	The total amount of time of the trip.
Fuel	Fuel information for each mobile device. Shown in gallons.
Driving (gal)	The total amount of fuel used while the mobile device was moving.
Idle (gal)	The total amount of fuel used while the mobile device sat still with the engine running.
PTO (gal)	The total amount of fuel used during PTOs.
Trip (gal)	The total amount of fuel used during the trip.
Before Trip (gal)	The total amount of fuel available prior to the trip.
MPG (gal)	The average miles per gallon measured for the mobile device for the trip.
Driving MPG (gal)	The average miles per gallon measured for the mobile device while driving.

Field	Description
Odometer	The odometer reading at the start and end of the trip as well as the number of miles the mobile device traveled.
Start	The odometer reading at the start of the trip.
End	The odometer reading at the end of the trip.
Trip Distance	The total number of miles traveled during a trip.
Speed	Speed information about the mobile device.
Average (mph)	The average mobile device speed during the trip in miles per hour.
Maximum (mph)	The maximum speed attained during the trip in miles per hour.
Maximum RPM (RPM)	The maximum revolutions per minute attained during the trip.
Departure	Mobile device information when leaving the origin point for the trip.
Time	The time of day when the mobile device left the origin point.
Address	The address from which the mobile device's trip originated.
City	The city where the mobile device's trip originated.
State	The state where the mobile device's trip originated.
Zip	The zip code where the mobile device's trip originated.
County	The county where the mobile device's trip originated.
Arrival	Mobile device information about the trip destination.
Time	The time of day when the mobile device reached the destination point.
Address	The address that the mobile device's trip terminated.
City	The city where the mobile device's trip terminated.
State	The state where the mobile device's trip terminated.
Zip	The zip code where the mobile device's trip terminated.
County	The county where the mobile device's trip terminated.
Stop Count	The number of stops performed during the selected trip period.
Event Count	The number of events that occurred during the selected report period.
Fault Code	The fault code for the event.

Field	Description
Hard Brake	The number of times a driver used the brakes to slow down faster than a previously determined amount.
Notes	Additional notes relevant to trip detail.

State Mileage

The **State Mileage** report, shown in Figure 5–15, displays the mileage for each mobile device by state during the selected reporting period. This is helpful for customers who file quarterly tax reports.

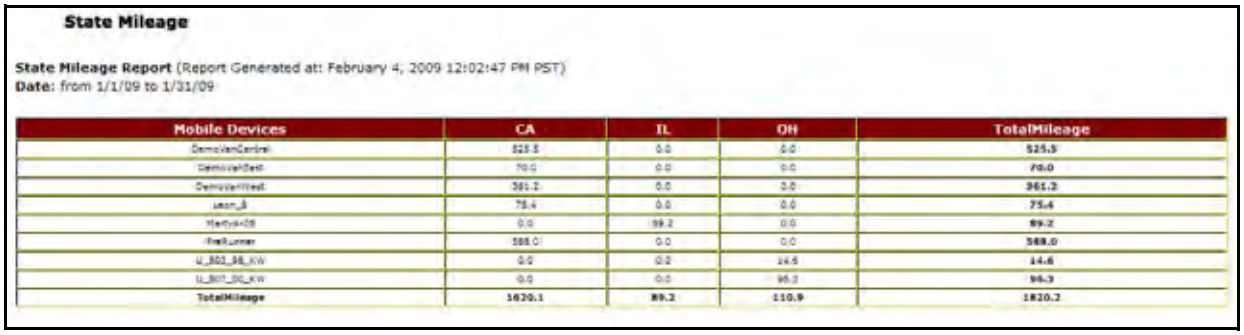
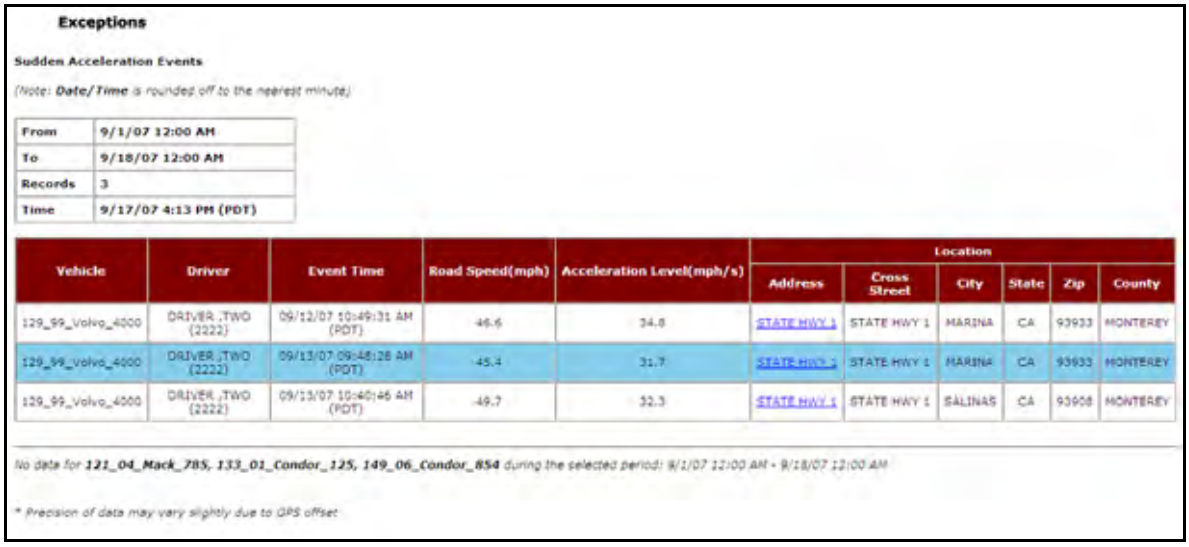


Figure 5–15 State Mileage Report

Item	Description
Date	The selected date range contained within the report.
Mobile Device	The name(s) of the mobile device(s) selected for the report.
State Abbreviation	The abbreviation for the state where the mobile device(s) accrued mileage.Columns show the miles each mobile device accrued for each state. Columns only appear when mileage has been accrued for the state.
Total Mileage	The total mileage each device has accrued for the selected time frame, as well as the total mileage for each state and all devices.

Sudden Acceleration Exception

The **Sudden Acceleration** Exception report occurs when a speed increase at a higher than acceptable rate is detected in the mobile device.



Exceptions

Sudden Acceleration Events

*(Note: **Date/Time** is rounded off to the nearest minute)*

From	9/1/07 12:00 AM
To	9/18/07 12:00 AM
Records	3
Time	9/17/07 4:13 PM (PDT)

Vehicle	Driver	Event Time	Road Speed(mph)	Acceleration Level(mph/s)	Location					
					Address	Cross Street	City	State	Zip	County
129_99_Volvo_4000	DRIVER ,TWO (2222)	09/12/07 10:49:31 AM (PDT)	46.6	34.8	STATE HWY 1	STATE HWY 1	MARINA	CA	93933	MONTEREY
129_99_Volvo_4000	DRIVER ,TWO (2222)	09/13/07 09:46:28 AM (PDT)	45.4	31.7	STATE HWY 1	STATE HWY 1	MARINA	CA	93933	MONTEREY
129_99_Volvo_4000	DRIVER ,TWO (2222)	09/13/07 10:40:46 AM (PDT)	49.7	32.3	STATE HWY 1	STATE HWY 1	SALINAS	CA	93908	MONTEREY

*No data for **121_04_Mack_785, 133_01_Condor_125, 149_06_Condor_854** during the selected period: 9/1/07 12:00 AM - 9/18/07 12:00 AM*

** Precision of data may vary slightly due to GPS offset*

Figure 5–16: Sudden Acceleration Exception Report

Field	Description
From	Starting date and time for the Exception report period.
To	Ending date and time for the Exception report period.
Records	Number of occurrences of the Exception.
Time	The time the Exception report was generated.
Vehicle	The name of the mobile device.
Driver	The employee assigned to drive the mobile device.
Event Time	The time and date the event occurred.
Road Speed (mph)	The miles per hour the mobile device was traveling during the event and the 30 seconds before and 10 seconds after it occurred.
Acceleration Level (mph/s)	The increase of miles per hour per second of the event.
Location	The physical location of the mobile device when the hard brake event occurred.
Address	The street address of the mobile device when the Exception occurred. The link in this field opens a MapView window showing the location of the event, shown in Figure 5–17.

Field	Description
City	The city where the mobile device was when the Exception occurred.
State	The state where the mobile device was when the Exception occurred.
Zip	The zip code where the mobile device was when the Exception occurred.
County	The county where the mobile device was when the Exception occurred.

Figure 5–17: Sudden Acceleration Address Detail

Time Period Evaluation Report

The **Time Period Evaluation** report allows you to compare a baseline time period to the following six days or weeks. This helps you identify mobile device performance and driver behavior patterns. For more detailed information see “Time Period Evaluation Report” on page 97.

Trip Report - Detail

The **Trip Report – Detail** allows you to evaluate driver and vehicle performance from one trip to another by comparing speed, RPM, distance, PTO usage, fuel efficiency and idle time.

The complete report is generated as an HTML report for viewing, you must use the horizontal scroll bar to view the entire report. For more detailed information see “Trip Report - Detail” on page 68.

Trip Report - Summary

The **Trip Report – Summary** helps managers determine the total and average miles that are traveled by mobile workers and compare their work performance. For more detailed information see “Trip Report - Summary” on page 66.

6 Advanced Engine Diagnostics Reports

Advanced Engine Diagnostics reports help improve your vehicle maintenance, service scheduling, and uptime by providing you with fault codes and alerts about engine difficulties before they become a major problem.

Advanced Engine Diagnostics reports help deliver the following benefits:

- Improve service scheduling
- Lower maintenance and repair costs
- Enhance preventive maintenance programs
- Monitor vehicle performance in real-time
- Increase vehicle uptime
- Increase driver compliance
- Prevent breakdowns on the road
- Reduce recovery towing costs
- Increase customer satisfaction

The various Advanced Engine Diagnostics reports and features are:

- Trip Report - Detail
- Trip Report - Summary
- Diagnostic Fault Exception Report
- Diagnostic Fault Exception Report w/Rolling Freeze Frame
- Live Diagnostics

Trip Report - Detail

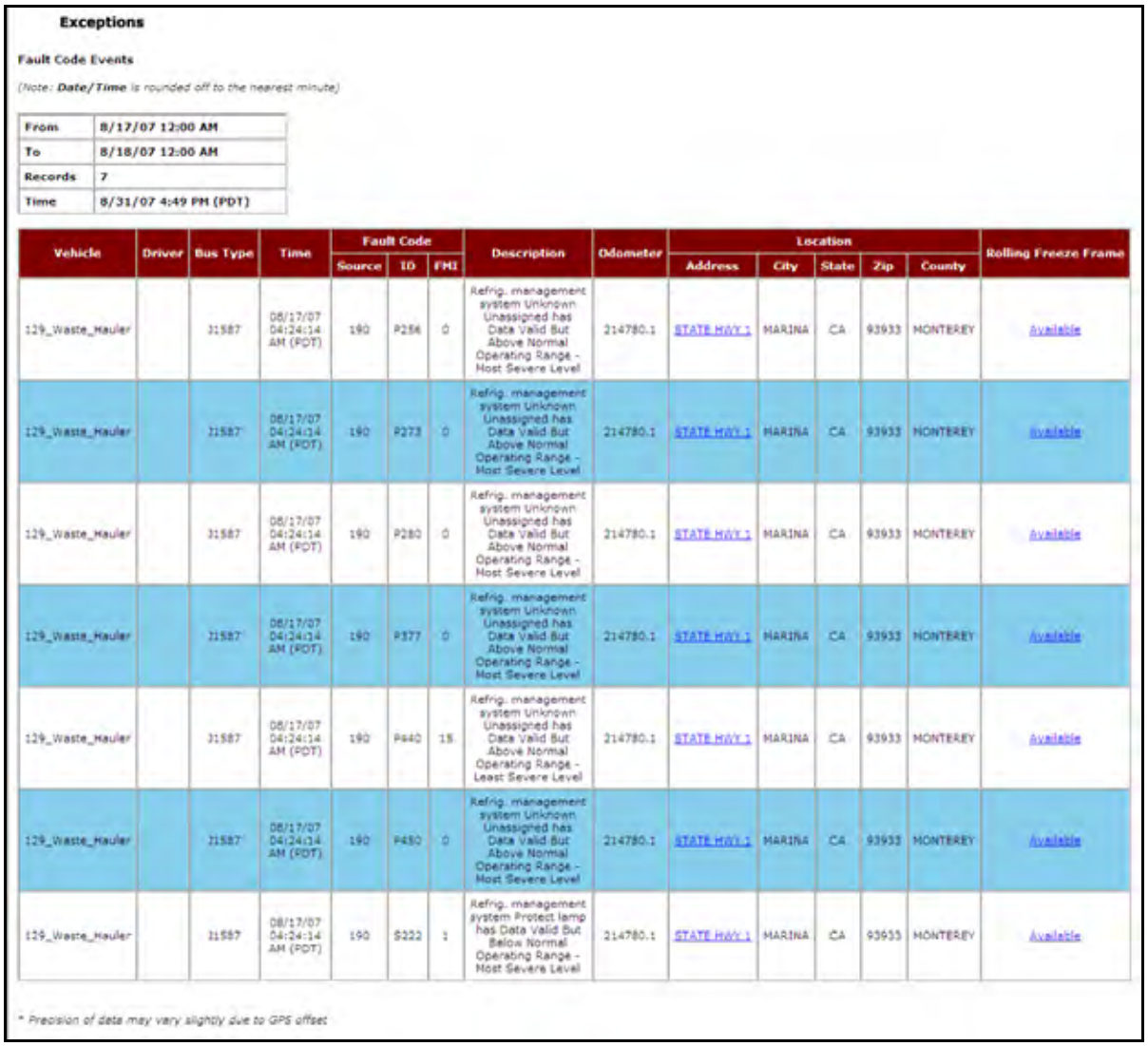
The **Trip Report – Detail** allows you to evaluate driver and vehicle performance from one trip to another by comparing speed, RPM, distance, PTO usage, fuel efficiency and idle time. For more detailed information see “Trip Report - Detail” on page 68.

Trip Report - Summary

The **Trip Report – Summary** helps managers determine the total and average miles that are traveled by mobile workers and compare their work performance. For more detailed information see “Trip Report - Summary” on page 66.

Diagnostic Fault Exception

Diagnostics Fault Exception reports provide real-time alerts when a fault code is present in heavy duty vehicles.



Exceptions

Fault Code Events

*(Note: **Date/Time** is rounded off to the nearest minute)*

From	8/17/07 12:00 AM
To	8/18/07 12:00 AM
Records	7
Time	8/31/07 4:49 PM (PDT)

Vehicle	Driver	Bus Type	Time	Fault Code			Description	Odometer	Location					Rolling Freeze Frame
				Source	ID	FMI			Address	City	State	Zip	County	
129_Waste_Hauler		J1587	08/17/07 04:24:14 AM (PDT)	190	P256	0	Refrig. management system Unknown Unassigned has Data Valid But Above Normal Operating Range - Most Severe Level	214780.1	STATE HWY 1	MARINA	CA	93933	MONTEREY	Available
129_Waste_Hauler		J1587	08/17/07 04:24:14 AM (PDT)	190	P273	0	Refrig. management system Unknown Unassigned has Data Valid But Above Normal Operating Range - Most Severe Level	214780.1	STATE HWY 1	MARINA	CA	93933	MONTEREY	Available
129_Waste_Hauler		J1587	08/17/07 04:24:14 AM (PDT)	190	P280	0	Refrig. management system Unknown Unassigned has Data Valid But Above Normal Operating Range - Most Severe Level	214780.1	STATE HWY 1	MARINA	CA	93933	MONTEREY	Available
129_Waste_Hauler		J1587	08/17/07 04:24:14 AM (PDT)	190	P377	0	Refrig. management system Unknown Unassigned has Data Valid But Above Normal Operating Range - Most Severe Level	214780.1	STATE HWY 1	MARINA	CA	93933	MONTEREY	Available
129_Waste_Hauler		J1587	08/17/07 04:24:14 AM (PDT)	190	P440	15	Refrig. management system Unknown Unassigned has Data Valid But Above Normal Operating Range - Least Severe Level	214780.1	STATE HWY 1	MARINA	CA	93933	MONTEREY	Available
129_Waste_Hauler		J1587	08/17/07 04:24:14 AM (PDT)	190	P480	0	Refrig. management system Unknown Unassigned has Data Valid But Above Normal Operating Range - Most Severe Level	214780.1	STATE HWY 1	MARINA	CA	93933	MONTEREY	Available
129_Waste_Hauler		J1587	08/17/07 04:24:14 AM (PDT)	190	0322	1	Refrig. management system Protect lamp has Data Valid But Below Normal Operating Range - Most Severe Level	214780.1	STATE HWY 1	MARINA	CA	93933	MONTEREY	Available

** Precision of data may vary slightly due to GPS offset*

Figure 6–1: Fault Code Exception Report

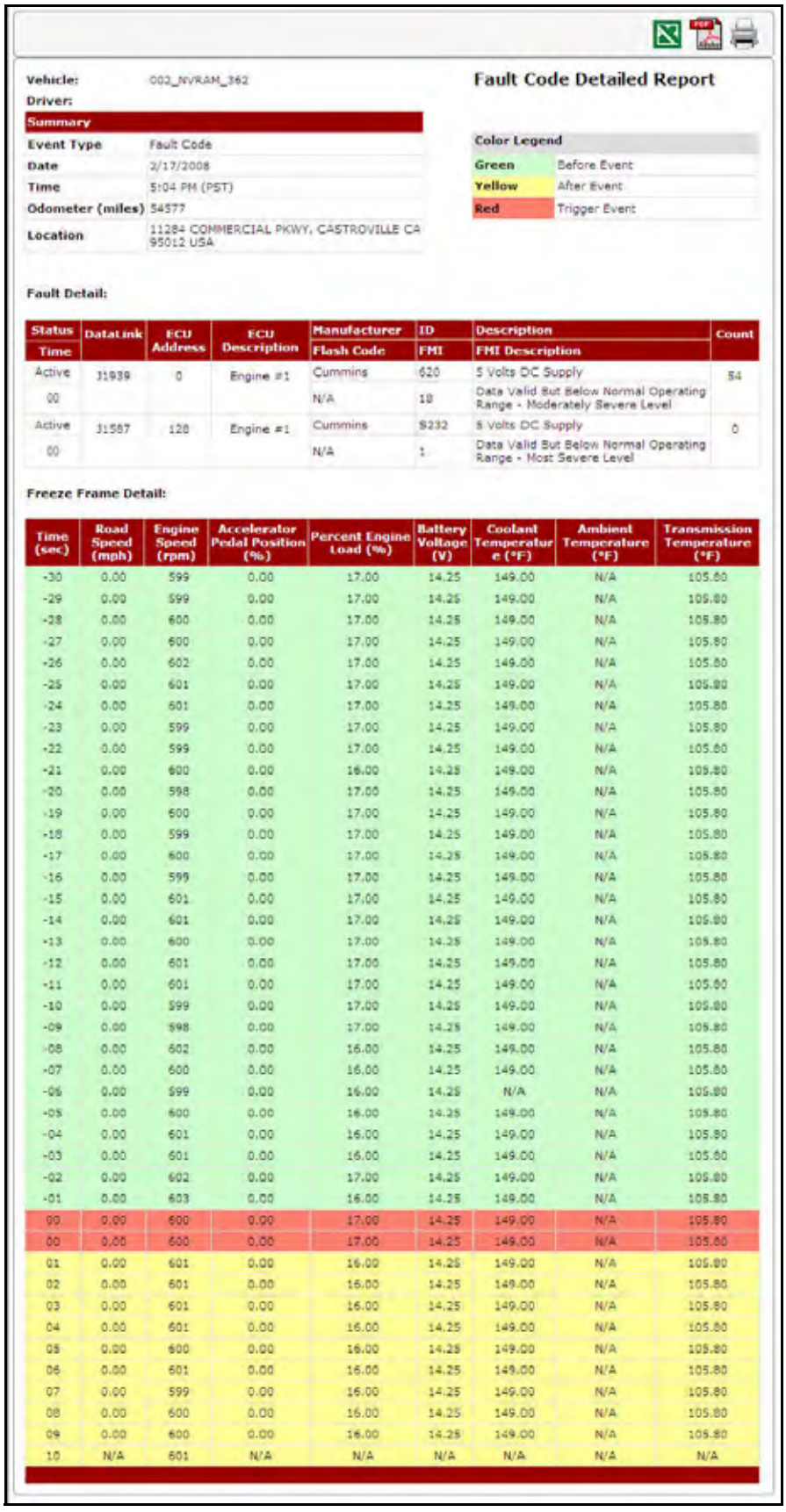
Field	Description
From	The starting date for the report.
To	The ending date for the report.
Records	The number of instances recorded during the report period.
Time	The date and time the report was generated.
Vehicle	The name or number for the mobile device.
Driver	The name of the driver assigned to the mobile device.
Bus Type	The type of bus data used by the firmware to detect Fault Codes. This can be J1708, J1939, OBDII, etc.
Time	The date and time the event occurred.

Field	Description
Fault Code	The description of the fault code.
Source	The code that identifies the fault's source.
ID	The code that identifies the fault's ID.
FMI	The code that identifies the fault's FMI.
Description	The description for the mobile device's fault event.
Odometer	The odometer reading when the event occurred.
Location	The physical location of the mobile device when the hard brake event occurred.
Address	The street address of the mobile device when the Exception occurred. The link in this field opens a MapView window showing the location of the event, shown in Figure 6–2.
City	The city where the mobile device was when the Exception occurred.
State	The state where the mobile device was when the Exception occurred.
Zip	The zip code where the mobile device was when the Exception occurred.
County	The county where the mobile device was when the Exception occurred.
Rolling Freeze Frame	A link that opens a detailed account of the event in a new window, as shown in Figure 6–3.

Figure 6–2: Fault Code Address Detail

Diagnostic Fault Exception Report and (Rolling Freeze Frame)

If you click the link under **Rolling Freeze Frame** in the **Fault Code Detail Exceptions** report a detailed account of the 30 seconds before the fault code event and the following 10 seconds after the event.



Vehicle: 002_NVRAM_362
Driver:

Fault Code Detailed Report

Summary	
Event Type	Fault Code
Date	2/17/2008
Time	5:04 PM (PST)
Odometer (miles)	54577
Location	11284 COMMERCIAL PKWY, CASTROVILLE CA 95012 USA

Color Legend	
Green	Before Event
Yellow	After Event
Red	Trigger Event

Fault Detail:

Status / Time	DataLink	ECU Address	ECU Description	Manufacturer / Flash Code	ID / FMI	Description / FMI Description	Count
Active	J1939	0	Engine #1	Cummins	620	5 Volts DC Supply	54
00				N/A	18	Data Valid But Below Normal Operating Range - Moderately Severe Level	
Active	J1587	128	Engine #1	Cummins	8232	5 Volts DC Supply	0
00				N/A	1	Data Valid But Below Normal Operating Range - Most Severe Level	

Freeze Frame Detail:

Time (sec)	Road Speed (mph)	Engine Speed (rpm)	Accelerator Pedal Position (%)	Percent Engine Load (%)	Battery Voltage (V)	Coolant Temperature (°F)	Ambient Temperature (°F)	Transmission Temperature (°F)
-30	0.00	599	0.00	17.00	14.25	149.00	N/A	105.80
-29	0.00	599	0.00	17.00	14.25	149.00	N/A	105.80
-28	0.00	600	0.00	17.00	14.25	149.00	N/A	105.80
-27	0.00	600	0.00	17.00	14.25	149.00	N/A	105.80
-26	0.00	602	0.00	17.00	14.25	149.00	N/A	105.80
-25	0.00	601	0.00	17.00	14.25	149.00	N/A	105.80
-24	0.00	601	0.00	17.00	14.25	149.00	N/A	105.80
-23	0.00	599	0.00	17.00	14.25	149.00	N/A	105.80
-22	0.00	599	0.00	17.00	14.25	149.00	N/A	105.80
-21	0.00	600	0.00	16.00	14.25	149.00	N/A	105.80
-20	0.00	598	0.00	17.00	14.25	149.00	N/A	105.80
-19	0.00	600	0.00	17.00	14.25	149.00	N/A	105.80
-18	0.00	599	0.00	17.00	14.25	149.00	N/A	105.80
-17	0.00	600	0.00	17.00	14.25	149.00	N/A	105.80
-16	0.00	599	0.00	17.00	14.25	149.00	N/A	105.80
-15	0.00	601	0.00	17.00	14.25	149.00	N/A	105.80
-14	0.00	601	0.00	17.00	14.25	149.00	N/A	105.80
-13	0.00	600	0.00	17.00	14.25	149.00	N/A	105.80
-12	0.00	601	0.00	17.00	14.25	149.00	N/A	105.80
-11	0.00	601	0.00	17.00	14.25	149.00	N/A	105.80
-10	0.00	599	0.00	17.00	14.25	149.00	N/A	105.80
-09	0.00	598	0.00	17.00	14.25	149.00	N/A	105.80
-08	0.00	602	0.00	16.00	14.25	149.00	N/A	105.80
-07	0.00	600	0.00	16.00	14.25	149.00	N/A	105.80
-06	0.00	599	0.00	16.00	14.25	N/A	N/A	105.80
-05	0.00	600	0.00	16.00	14.25	149.00	N/A	105.80
-04	0.00	601	0.00	16.00	14.25	149.00	N/A	105.80
-03	0.00	601	0.00	16.00	14.25	149.00	N/A	105.80
-02	0.00	602	0.00	17.00	14.25	149.00	N/A	105.80
-01	0.00	603	0.00	16.00	14.25	149.00	N/A	105.80
00	0.00	600	0.00	17.00	14.25	149.00	N/A	105.80
00	0.00	600	0.00	17.00	14.25	149.00	N/A	105.80
01	0.00	601	0.00	16.00	14.25	149.00	N/A	105.80
02	0.00	601	0.00	16.00	14.25	149.00	N/A	105.80
03	0.00	601	0.00	16.00	14.25	149.00	N/A	105.80
04	0.00	601	0.00	16.00	14.25	149.00	N/A	105.80
05	0.00	600	0.00	16.00	14.25	149.00	N/A	105.80
06	0.00	601	0.00	16.00	14.25	149.00	N/A	105.80
07	0.00	599	0.00	16.00	14.25	149.00	N/A	105.80
08	0.00	600	0.00	16.00	14.25	149.00	N/A	105.80
09	0.00	600	0.00	16.00	14.25	149.00	N/A	105.80
10	N/A	601	N/A	N/A	N/A	N/A	N/A	N/A

Figure 6–3: Fault Code Detail Report (Freeze Frame)

Field	Description
Vehicle	The name of the vehicle with the mobile device.
Driver	The employee assigned to drive the vehicle with the mobile device.
Summary	
Event Type	The type of Exception event.
Date	The date the event occurred.
Time	The time the event occurred.
Odometer	The odometer reading when the event occurred.
Location	The location of the mobile device when the event occurred.
Fault Detail	
Status/Time	The status and time of the mobile device when the fault occurred.
Datalink	The type of bus installed. This can be J1708, J1939, OBDII, etc.
ECU Address	The electronic controller unit's address in the computer.
ECU Description	The electronic controller unit's description.
Manufacturer/Flash Code	The company that created the unit and the code they use for the state of the unit.
ID/FMI	The identification of the unit and the FMI code.
Description/FMI Description	The description for the mobile device's issue and a description of how it is outside the set parameters.
Count	The number of times this fault has occurred during the report period.
Freeze Frame Detail	
Time (sec)	The number of seconds before, during and after the event occurred. This shows 30 seconds before, the second of and 10 seconds after the event occurs.
Road Speed (mph)	The miles per hour the mobile device was traveling during the event and the 30 seconds before and 10 seconds after it occurred.
Engine Speed (rpm)	The RPM of the mobile device's engine during the event and the 30 seconds before and 10 seconds after it occurred.
Accelerator Pedal Position (%)	The percentage the accelerator pedal was pressed at the time of the fault.

Field	Description
Percent Engine Load (%)	The percentage of load on the engine at the time of the fault. The higher the load, the more stress to the system.
Battery Voltage (V)	The volt reading from the battery at the time of the fault.
Coolant Temperature	The temperature of the engine coolant at the time of the fault.
Ambient Temperature	The temperature of the air coming into the intake manifold at the time of the fault.
Transmission Temperature	The temperature of the transmission at the time of the fault.

Live Diagnostics (Vehicle Diagnostics Summary)

Vehicle Diagnostics Summary provides a summary of all fault codes triggered by the monitored device.

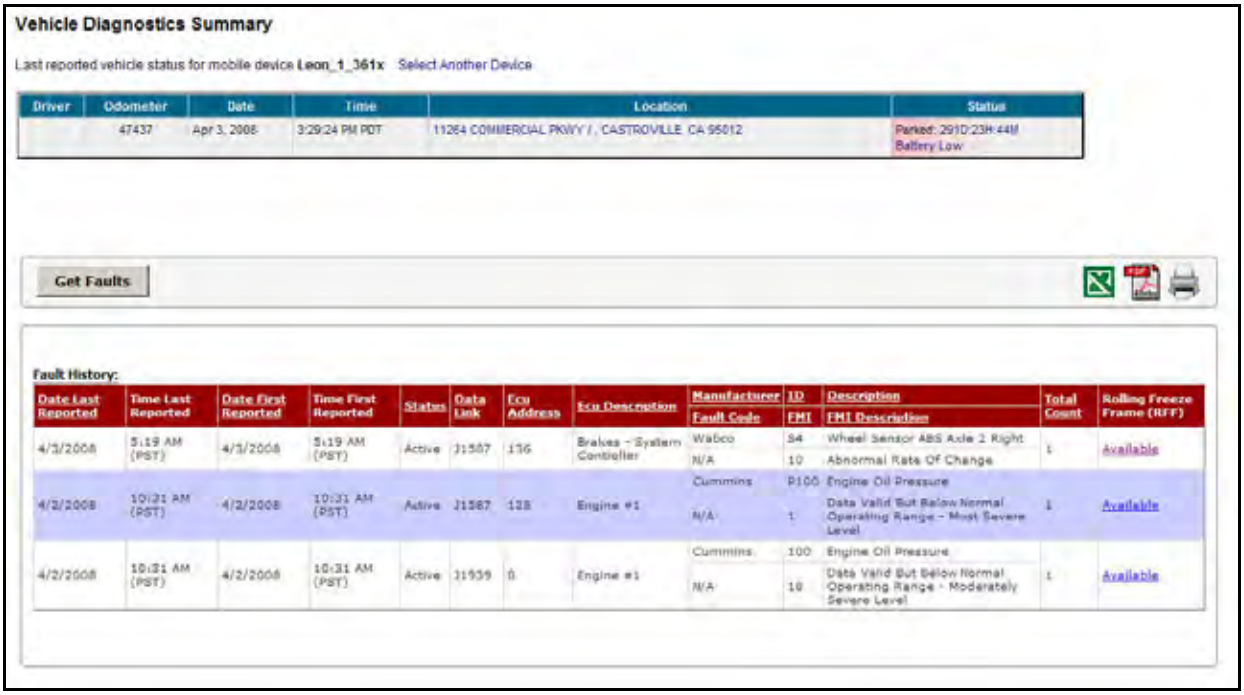


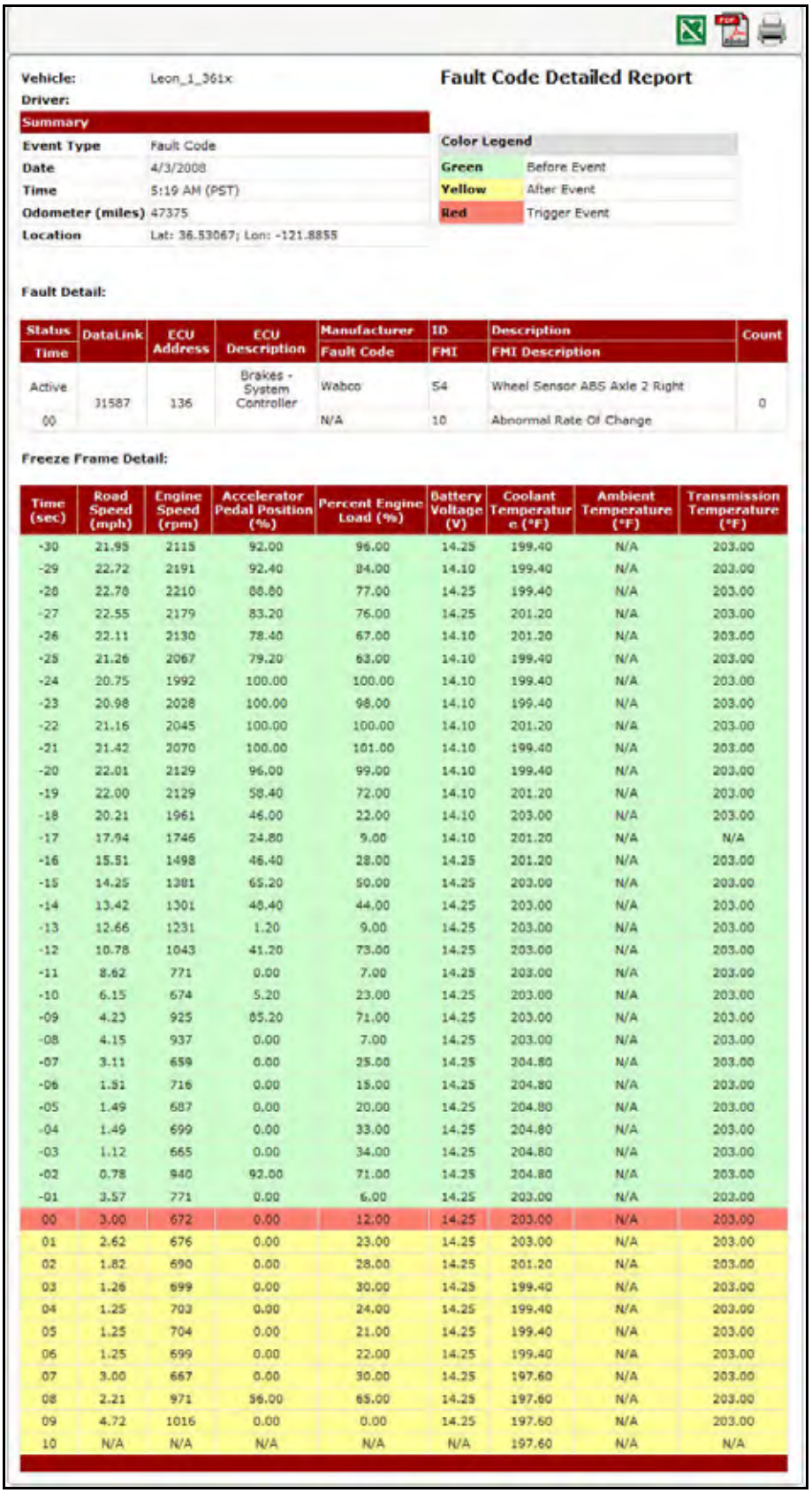
Figure 6–4: Fault Code Detail Report (Freeze Frame)

Field	Description
Summary	
Driver	The employee assigned to drive the mobile device.

Field	Description
Odometer	The odometer reading when the event occurred.
Date	The date the event occurred.
Time	The time the event occurred.
Location	The location of the mobile device when the event occurred.
Status	The status of the vehicle when the event occurred.
Fault History	
Date Last Reported	The date the fault was last reported.
Time Last Reported	The time the fault was last reported.
Date First Reported	The time the fault was first reported.
Time First Reported	The time the fault was first reported.
Status/Time	The status and time of the mobile device when the fault occurred.
Datalink	The type of bus installed. This can be J1708, J1939, OBDII, etc.
ECU Address	The electronic controller unit's address in the computer.
ECU Description	The electronic controller unit's description.
Manufacturer/Fault Code	The company that created the unit and the code they use for the state of the unit.
ID/FMI	The identification of the unit and the FMI code.
Description/FMI Description	The description for the mobile device's issue and a description of how it is outside the set parameters.
Total Count	The total number of times this fault has occurred during the report period.
Rolling Freeze Frame	A link that opens a detailed account of the hard brake event in a new window, as shown in Figure 6–3.

Live Diagnostics and (Rolling Freeze Frame)

If you click the link under **Rolling Freeze Frame** in **Vehicle Diagnostics Summary** a detailed account of the 30 seconds before the fault code event and the following 10 seconds after the event.



Vehicle: Leon_1_361x
Driver:

Fault Code Detailed Report

Summary	
Event Type	Fault Code
Date	4/3/2008
Time	5:19 AM (PST)
Odometer (miles)	47375
Location	Lat: 36.53067; Lon: -121.8855

Color Legend	
Green	Before Event
Yellow	After Event
Red	Trigger Event

Fault Detail:

Status / Time	DataLink	ECU Address	ECU Description	Manufacturer / Fault Code	ID / FMI	Description / FMI Description	Count
Active / 00	J1587	136	Brakes - System Controller	Wabco / N/A	S4 / 10	Wheel Sensor ABS Axle 2 Right / Abnormal Rate Of Change	0

Freeze Frame Detail:

Time (sec)	Road Speed (mph)	Engine Speed (rpm)	Accelerator Pedal Position (%)	Percent Engine Load (%)	Battery Voltage (V)	Coolant Temperature (°F)	Ambient Temperature (°F)	Transmission Temperature (°F)
-30	21.95	2115	92.00	96.00	14.25	199.40	N/A	203.00
-29	22.72	2191	92.40	84.00	14.10	199.40	N/A	203.00
-28	22.78	2210	88.80	77.00	14.25	199.40	N/A	203.00
-27	22.55	2179	83.20	76.00	14.25	201.20	N/A	203.00
-26	22.11	2130	78.40	67.00	14.10	201.20	N/A	203.00
-25	21.26	2067	79.20	63.00	14.10	199.40	N/A	203.00
-24	20.75	1992	100.00	100.00	14.10	199.40	N/A	203.00
-23	20.98	2028	100.00	98.00	14.10	199.40	N/A	203.00
-22	21.16	2045	100.00	100.00	14.10	201.20	N/A	203.00
-21	21.42	2070	100.00	101.00	14.10	199.40	N/A	203.00
-20	22.01	2129	96.00	99.00	14.10	199.40	N/A	203.00
-19	22.00	2129	58.40	72.00	14.10	201.20	N/A	203.00
-18	20.21	1961	46.00	22.00	14.10	203.00	N/A	203.00
-17	17.94	1746	24.80	9.00	14.10	201.20	N/A	N/A
-16	15.51	1498	46.40	28.00	14.25	201.20	N/A	203.00
-15	14.25	1381	65.20	50.00	14.25	203.00	N/A	203.00
-14	13.42	1301	48.40	44.00	14.25	203.00	N/A	203.00
-13	12.66	1231	1.20	9.00	14.25	203.00	N/A	203.00
-12	10.78	1043	41.20	73.00	14.25	203.00	N/A	203.00
-11	8.62	771	0.00	7.00	14.25	203.00	N/A	203.00
-10	6.15	674	5.20	23.00	14.25	203.00	N/A	203.00
-09	4.23	925	85.20	71.00	14.25	203.00	N/A	203.00
-08	4.15	937	0.00	7.00	14.25	203.00	N/A	203.00
-07	3.11	659	0.00	25.00	14.25	204.80	N/A	203.00
-06	1.51	716	0.00	15.00	14.25	204.80	N/A	203.00
-05	1.49	687	0.00	20.00	14.25	204.80	N/A	203.00
-04	1.49	699	0.00	33.00	14.25	204.80	N/A	203.00
-03	1.12	665	0.00	34.00	14.25	204.80	N/A	203.00
-02	0.78	940	92.00	71.00	14.25	204.80	N/A	203.00
-01	3.57	771	0.00	6.00	14.25	203.00	N/A	203.00
00	3.00	672	0.00	12.00	14.25	203.00	N/A	203.00
01	2.62	676	0.00	23.00	14.25	203.00	N/A	203.00
02	1.82	690	0.00	28.00	14.25	201.20	N/A	203.00
03	1.26	699	0.00	30.00	14.25	199.40	N/A	203.00
04	1.25	703	0.00	24.00	14.25	199.40	N/A	203.00
05	1.25	704	0.00	21.00	14.25	199.40	N/A	203.00
06	1.25	699	0.00	22.00	14.25	199.40	N/A	203.00
07	3.00	667	0.00	30.00	14.25	197.60	N/A	203.00
08	2.21	971	96.00	65.00	14.25	197.60	N/A	203.00
09	4.72	1016	0.00	0.00	14.25	197.60	N/A	203.00
10	N/A	N/A	N/A	N/A	N/A	197.60	N/A	N/A

Figure 6–5: Fault Code Detail Report (Freeze Frame)

Field	Description
Vehicle	The name of the mobile device.
Driver	The employee assigned to drive the mobile device.
Summary	
Event Type	The type of Exception event. For this report it will always be hard brake.
Date	The date the event occurred.
Time	The time the event occurred.
Odometer	The odometer reading when the event occurred.
Location	The location of the mobile device when the event occurred.
Fault Detail	
Status/Time	The status and time of the mobile device when the fault occurred.
Datalink	The type of bus installed. This can be J1708, J1939, OBDII, etc.
ECU Address	The electronic controller unit's address in the computer.
ECU Description	The electronic controller unit's description.
Manufacturer/Flash Code	The company that created the unit and the code they use for the state of the unit.
ID/FMI	The identification of the unit and the FMI code.
Description/FMI Description	The description for the mobile device's issue and a description of how it is outside the set parameters.
Count	The number of times this fault has occurred during the report period.
Freeze Frame Detail	
Time (sec)	The number of seconds before, during and after the event occurred. This shows 30 seconds before, the second of and 10 seconds after the event occurs.
Road Speed (mph)	The miles per hour the mobile device was traveling during the event and the 30 seconds before and 10 seconds after it occurred.
Engine Speed (rpm)	The RPM of the mobile device's engine during the event and the 30 seconds before and 10 seconds after it occurred.
Accelerator Pedal Position (%)	The percentage the accelerator pedal was pressed at the time of the fault.

Field	Description
Percent Engine Load (%)	The percentage of load on the engine at the time of the fault. The higher the load, the more stress to the system.
Battery Voltage (V)	The volt reading from the battery at the time of the fault.
Coolant Temperature	The temperature of the engine coolant at the time of the fault.
Ambient Temperature	The temperature of the air coming into the intake manifold at the time of the fault.
Transmission Temperature	The temperature of the transmission at the time of the fault.

7 Advanced Safety Management (Available with 45XX Only)

Advanced Safety Management improves your drivers' safety and compliance with reports and features that monitor brake use, following distances, sudden acceleration and Freeze Frame, which is a report showing specific vehicle engine information for 40 seconds around an event.

GeoManager Advanced Safety Management helps deliver the following benefits:

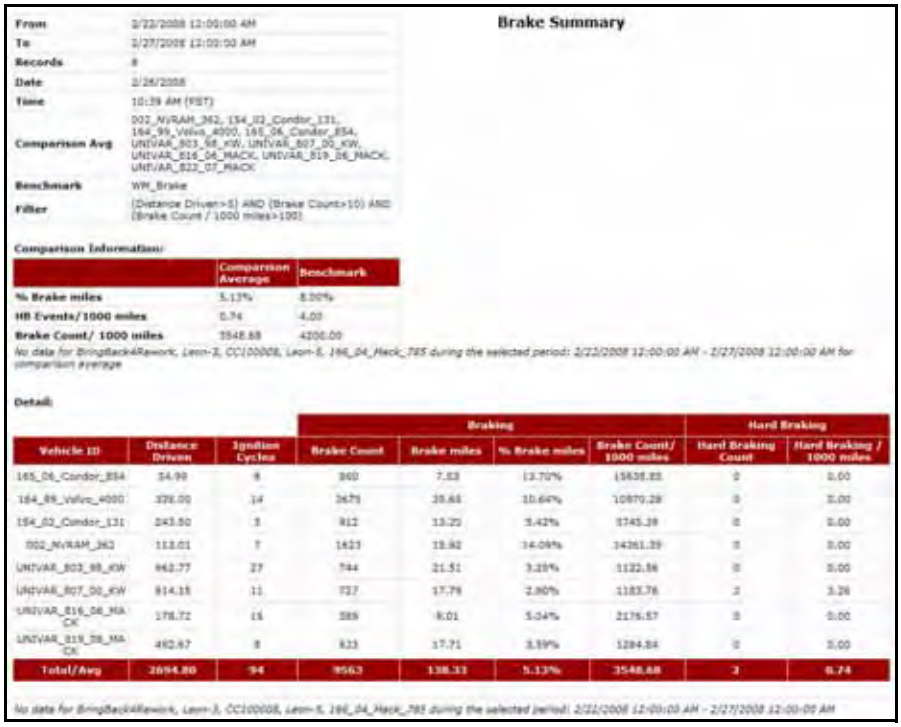
- Reduce accidents
- Lower insurance costs
- Lower maintenance and repair costs
- Improve driver safety, training and compliance
- Reduce down time
- Increase customer satisfaction

The various Advanced Safety Management reports are:

- Braking Summary Report
- Hard Braking Exception Report w/Rolling Freeze Frame
- Following Distance Detail (with Eaton VORAD)
- Following Distance Trend (with Eaton VORAD)
- Time Period Evaluation (Driver Scorecard)

Brake Summary Report

The **Brake Summary** report allows managers to identify individual driver behavior as well as compare drivers to benchmark information and one another.



Brake Summary

From	2/22/2008 12:00:00 AM
To	2/27/2008 12:00:00 AM
Records	8
Date	2/26/2008
Time	10:39 AM (EST)
Comparison Avg	002_NVRAM_362, 154_02_Condor_131, 164_99_Volvo_4000, 165_06_Condor_854, UNIVAR_803_88_KW, UNIVAR_807_00_KW, UNIVAR_816_06_MACK, UNIVAR_819_06_MACK, UNIVAR_822_07_MACK
Benchmark	WM_Brake
Filter	(Distance Driven>5) AND (Brake Count>10) AND (Brake Count / 1000 miles>100)

Comparison Information:

	Comparison Average	Benchmark
% Brake miles	5.13%	8.00%
HB Events/1000 miles	0.74	4.00
Brake Count/ 1000 miles	3548.68	4200.00

No data for BringBack4Rework, Leon-3, CC100008, Leon-5, 196_04_Mack_785 during the selected period: 2/22/2008 12:00:00 AM - 2/27/2008 12:00:00 AM for comparison average

Detail:

			Braking				Hard Braking	
Vehicle ID	Distance Driven	Ignition Cycles	Brake Count	Brake miles	% Brake miles	Brake Count/ 1000 miles	Hard Braking Count	Hard Braking / 1000 miles
165_06_Condor_854	54.99	8	360	7.53	13.70%	15638.85	0	0.00
164_99_Volvo_4000	328.00	14	3675	35.68	10.64%	10870.28	0	0.00
154_02_Condor_131	243.50	5	912	13.25	5.42%	3745.29	0	0.00
002_NVRAM_362	113.01	7	1623	15.92	14.09%	14361.39	0	0.00
UNIVAR_803_88_KW	962.77	27	744	21.51	3.25%	1122.56	0	0.00
UNIVAR_807_00_KW	814.15	11	727	17.79	2.80%	1183.76	2	3.26
UNIVAR_816_06_MACK	178.72	15	389	9.01	5.04%	2176.57	0	0.00
UNIVAR_819_06_MACK	462.67	8	823	17.71	3.59%	1284.84	0	0.00
Total/Avg	2694.80	94	9563	138.33	5.13%	3548.68	2	0.74

No data for BringBack4Rework, Leon-3, CC100008, Leon-5, 196_04_Mack_785 during the selected period: 2/22/2008 12:00:00 AM - 2/27/2008 12:00:00 AM

Figure 7–1: Brake Summary Report

Field	Description
From	The starting date for the report.
To	The ending date for the report.
Records	The number of instances recorded during the report period.
Date	The date the report was generated.
Time	The time the report was generated.
Comparison Avg	The name of the mobile device(s) that was used as a comparison standard. This can be a top, average or low performer, depending on what you are trying to measure.
Benchmark	The point of reference against which the mobile device performance is measured.
Filter	Any rules that might cause the generated report to show strange or incorrect results. This allows you to exclude irrelevant information.

Field	Description
Comparison Information	
% Brake Miles	The total percentage of miles the brakes were applied.
HB Events / 1000 Miles	The number of hard braking events that occurred for each thousand miles during the report period.
Brake Count / 1000 Miles	The number of times the brakes were applied for each thousand miles during the report period.
Detail	
Vehicle ID	The identification name or number for the mobile device.
Dist Driven	The number of miles the mobile device drove during the report period.
Trip Count	The number of trips completed during the report period.
Braking	Braking information for each mobile device during the report period.
Brake Count	The number of times the brakes were applied during the report period.
Brake Miles	The distance the mobile device traveled while the brakes were applied.
% Brake Miles	The percentage of miles driven that the brakes were applied.
Brake Count / 1000 Miles	The average number of times the brakes were applied per 1000 miles.
Hard Braking	Hard braking information for each mobile device during the report period.
Hard Braking Count	The number of hard braking events that occurred during the report period.
Hard Braking / 1000 Miles	The average number of hard braking events that occurred during the report period.

Hard Brake Report (Exception)

The **Hard Brake Exception** report, shown in Figure 7–2, alerts you when the mobile device experiences a rapid change in speed based on the parameters you set up.

Exceptions

Hard Brake Events

(Note: Date/Time is rounded off to the nearest minute)

From	12/1/08 12:00 AM
To	12/5/08 11:59 PM
Records	8
Time	February 4, 2009 3:40:01 PM PST

Vehicle	Driver	Event Time	Road Speed(mph)	Hard Brake Level(mph/s)	Odometer	Location					Rolling Freeze Frame
						Address	City	State	Zip	County	
U_818_06_MACH		12/1/08 11:04 AM (EST)	26.7	8.7	62158.7	5178 HARVARD AVE	NEWBURGH HEIGHTS	OH	44105	CUYAHOGA	Available
U_818_06_MACH		12/4/08 7:17 AM (EST)	19.9	6.8	62426.6	592 HIGHLAND RD E	MACEDONIA	OH	44056	SUMMIT	Available
U_819_06_MACH	THREE ,EMPLOYEE (33333)	12/1/08 7:37 AM (EST)	27.3	8.7	63844.5	8108 RAVENNA RD	TWINSBURG	OH	44087	SUMMIT	Available
U_819_06_MACH	THREE ,EMPLOYEE (33333)	12/1/08 7:52 AM (EST)	37.3	8.8	63853.2	2184 STATE ROUTE 82	MANTUA	OH	44255	PORTAGE	Available
U_819_06_MACH	THREE ,EMPLOYEE (33333)	12/1/08 12:18 PM (EST)	21.7	6.8	63937.1	13140 GREENSBURG ST NE	ALLIANCE	OH	44601	STARK	Available
U_819_06_MACH	THREE ,EMPLOYEE (33333)	12/3/08 9:34 AM (EST)	24.8	6.8	64126.1	994 BOSWELL RD	PAINESVILLE	OH	44077	LAKE	Available
U_819_06_MACH	THREE ,EMPLOYEE (33333)	12/3/08 3:05 PM (EST)	24.9	6.8	64196.8	8878 DARROW RD	TWINSBURG	OH	44087	SUMMIT	Available
U_819_06_MACH	THREE ,EMPLOYEE (33333)	12/5/08 12:13 PM (EST)	20.8	8.8	64362.7	4476 BROADWAY AVE	CLEVELAND	OH	44127	CUYAHOGA	Available

Figure 7–2: Hard Brake Exception Report

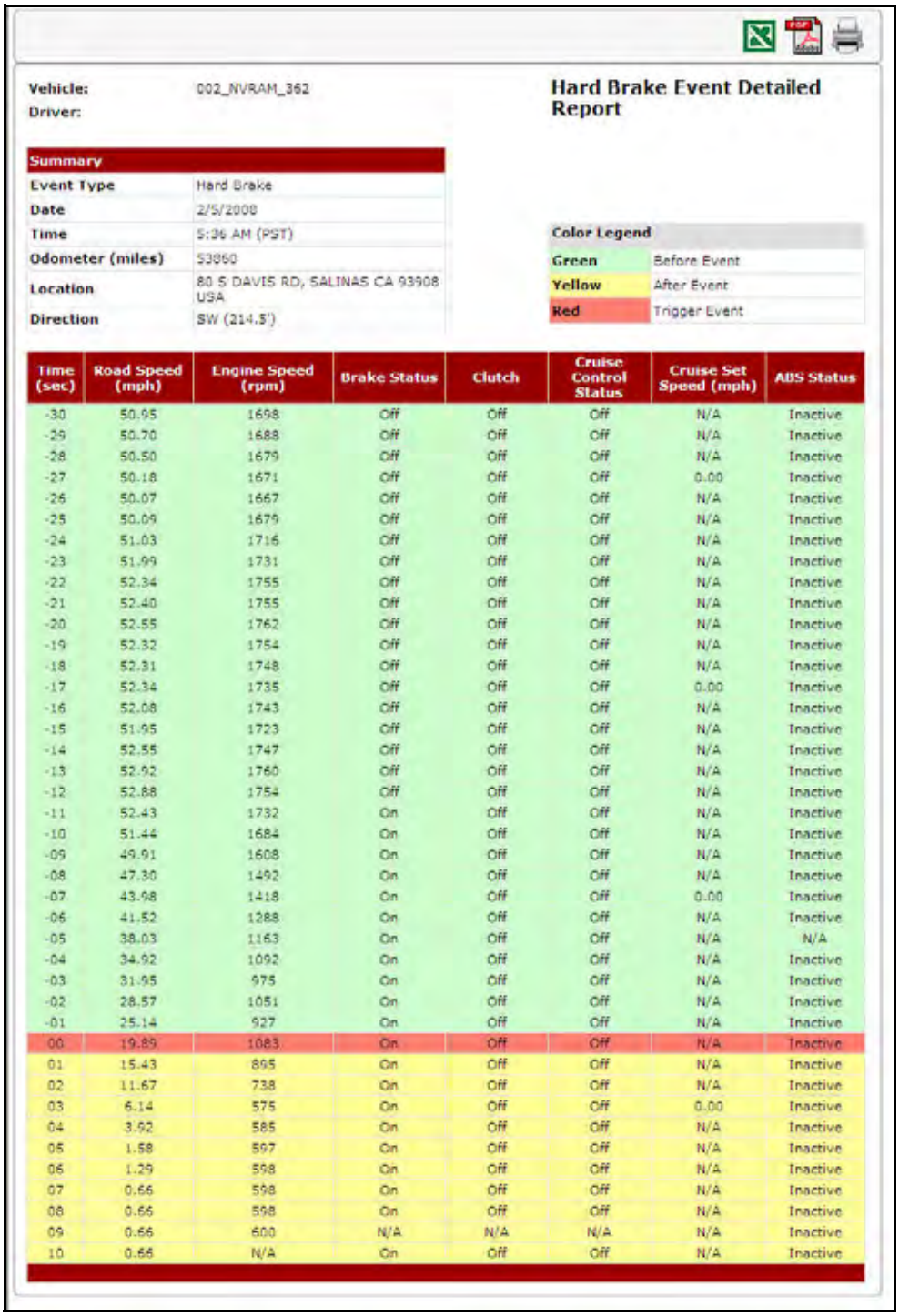
Field	Description
From	The starting date for the report.
To	The ending date for the report.
Records	The number of instances recorded during the report period.
Time	The date and time the report was generated.
Vehicle	The name or number for the mobile device.
Driver	The name of the driver assigned to the mobile device.
Event Time	The time the hard brake event occurred.
Road Speed	The speed the mobile device was traveling when the hard break event occurred.
Hard Brake Level (mph/s)	The number of miles per hour that were lowered per second of the hard brake event.
Odometer	The odometer reading when the Exception was triggered.

Field	Description
Location	The physical location of the mobile device when the hard brake event occurred.
Address	The street address of the mobile device when the Exception occurred. The link in this field opens a MapView window showing the location of the event, shown in Figure 7–3.
City	The city where the mobile device was when the Exception occurred.
State	The state where the mobile device was when the Exception occurred.
Zip	The zip code where the mobile device was when the Exception occurred.
County	The county where the mobile device was when the Exception occurred.
Rolling Freeze Frame	A link that opens a detailed account of the hard brake event in a new window, as shown in Figure 7–4.

Figure 7–3: Hard Brake Address Detail

Hard Brake Detail (Freeze Frame)

If you click the link under **Rolling Freeze Frame** in the online **Hard Brake Exceptions** report a detailed account of the 30 seconds before the hard brake event and the following 10 seconds after the event. This can help determine the behavior that led to the event.



Vehicle: 002_NVRAM_362
Driver:

Hard Brake Event Detailed Report

Summary	
Event Type	Hard Brake
Date	2/5/2008
Time	5:36 AM (PST)
Odometer (miles)	53860
Location	80 S DAVIS RD, SALINAS CA 93908 USA
Direction	SW (214.5')

Color Legend	
Green	Before Event
Yellow	After Event
Red	Trigger Event

Time (sec)	Road Speed (mph)	Engine Speed (rpm)	Brake Status	Clutch	Cruise Control Status	Cruise Set Speed (mph)	ABS Status
-30	50.95	1698	Off	Off	Off	N/A	Inactive
-29	50.70	1688	Off	Off	Off	N/A	Inactive
-28	50.50	1679	Off	Off	Off	N/A	Inactive
-27	50.18	1671	Off	Off	Off	0.00	Inactive
-26	50.07	1667	Off	Off	Off	N/A	Inactive
-25	50.09	1679	Off	Off	Off	N/A	Inactive
-24	51.03	1716	Off	Off	Off	N/A	Inactive
-23	51.99	1731	Off	Off	Off	N/A	Inactive
-22	52.34	1755	Off	Off	Off	N/A	Inactive
-21	52.40	1755	Off	Off	Off	N/A	Inactive
-20	52.55	1762	Off	Off	Off	N/A	Inactive
-19	52.32	1754	Off	Off	Off	N/A	Inactive
-18	52.31	1748	Off	Off	Off	N/A	Inactive
-17	52.34	1735	Off	Off	Off	0.00	Inactive
-16	52.08	1743	Off	Off	Off	N/A	Inactive
-15	51.95	1723	Off	Off	Off	N/A	Inactive
-14	52.55	1747	Off	Off	Off	N/A	Inactive
-13	52.92	1760	Off	Off	Off	N/A	Inactive
-12	52.88	1754	Off	Off	Off	N/A	Inactive
-11	52.43	1732	On	Off	Off	N/A	Inactive
-10	51.44	1684	On	Off	Off	N/A	Inactive
-09	49.91	1608	On	Off	Off	N/A	Inactive
-08	47.30	1492	On	Off	Off	N/A	Inactive
-07	43.98	1418	On	Off	Off	0.00	Inactive
-06	41.52	1288	On	Off	Off	N/A	Inactive
-05	38.03	1163	On	Off	Off	N/A	N/A
-04	34.92	1092	On	Off	Off	N/A	Inactive
-03	31.95	975	On	Off	Off	N/A	Inactive
-02	28.57	1051	On	Off	Off	N/A	Inactive
-01	25.14	927	On	Off	Off	N/A	Inactive
00	19.89	1083	On	Off	Off	N/A	Inactive
01	15.43	895	On	Off	Off	N/A	Inactive
02	11.67	738	On	Off	Off	N/A	Inactive
03	6.14	575	On	Off	Off	0.00	Inactive
04	3.92	585	On	Off	Off	N/A	Inactive
05	1.58	597	On	Off	Off	N/A	Inactive
06	1.29	598	On	Off	Off	N/A	Inactive
07	0.66	598	On	Off	Off	N/A	Inactive
08	0.66	598	On	Off	Off	N/A	Inactive
09	0.66	600	N/A	N/A	N/A	N/A	Inactive
10	0.66	N/A	On	Off	Off	N/A	Inactive

Figure 7–4: Hard Brake Event Detailed Report (Freeze Frame)

Field	Description
Vehicle	The name of the vehicle with the mobile device.
Driver	The employee assigned to drive the vehicle with the mobile device.
Summary	
Event Type	The type of Exception event. For this report it will always be hard brake.
Date	The date the event occurred.
Time	The time the event occurred.
Odometer	The odometer reading when the event occurred.
Location	The location of the mobile device when the event occurred.
Direction	The direction the mobile device was moving when the event occurred.
Detail	
Time (sec)	The number of seconds before, during and after the event occurred. This shows 30 seconds before, the second of and 10 seconds after the event occurs.
Road Speed (mph)	The miles per hour the mobile device was traveling during the event and the 30 seconds before and 10 seconds after it occurred.
Engine Speed	The RPM of the mobile device's engine during the event and the 30 seconds before and 10 seconds after it occurred.
Brake Status	If the brakes were in use or not during the event and the 30 seconds before and 10 seconds after it occurred.
Clutch	If the clutch was engaged or not during the event and the 30 seconds before and 10 seconds after it occurred.
Cruise Control Status	If cruise control was used during the event and the 30 seconds before and 10 seconds after it occurred.
Cruise Set Speed (mph)	If cruise control was used, the speed at which it was set during the event and the 30 seconds before and 10 seconds after it occurred.
ABS Status	The anti-lock brake status of the mobile device during the event and the 30 seconds before and 10 seconds after it occurred.

Following Distance - Detail Report (Requires VORAD)

The **Following Distance Detail** report allows you to view the following and merging distances of the vehicle in relation to other vehicles on the road.

The complete report is shown in Figure 7–5. When generated as an HTML report for viewing, you must use the horizontal scroll bar to view the entire report.

Figure 7–5 Following Distance Detail Report

Field	Description
From	The starting date for the report.
To	The ending date for the report.
Records	The number of instances recorded during the report period.
Date	The date the report was generated.
Time	The time the report was generated.
Comparison Avg	The name of the mobile device(s) that was used as a comparison standard. This can be a top, average or low performer, depending on what you are trying to measure.
Benchmark	The point of reference that the mobile device performance is measured against.
Filter	Any rules that might cause the generated report to show strange or incorrect results. This allows you to exclude irrelevant information.
Comparison Information	

Field	Description
Comparison Average	The average percentage the mobile device selected for comparison performed.
Approaching Time % of Driving Time	The percentage of time the host vehicle spent in close following of an object out of the total driving time.
Following Distance Distribution	The total percentage of time spent at a specific following distance.
Benchmark	The percentage entered by the administrator as pre-established values against which the mobile devices are measured.
Detail	
Vehicle ID	The identification name or number for the mobile device.
Distance Driven	The number of miles the mobile device drove during the report period.
Ignition Cycles	The number of ignition cycles that occurred during the report period.
Driving Time	The amount of time the mobile device drove during the report period.
Approaching Time (h:mm:ss)	The amount of time the host vehicle spent in close following at specific intervals (less the Opening time).
0–1 sec % Road Time	The percentage of time spent at a 0–1 second following distance while driving.
Time	The amount of time spent at a 0–1 second following distance while driving.
%Drv	The percentage of driving spent at a 0–1 second following distance while driving.
1–2 sec % Road Time	The percentage of time spent at a 1–2 second following distance while driving.
Time	The amount of time spent at a 1–2 second following distance while driving.
%Drv	The percentage of driving spent at a 1–2 second following distance while driving.
2–3 sec % Road Time	The percentage of time spent at a 2–3 second following distance while driving.
Time	The amount of time spent at a 2–3 second following distance while driving.
%Drv	The percentage of driving spent at a 2–3 second following distance while driving.

Field	Description
3–4 sec % Road Time	The percentage of time spent at a 3–4 second following distance while driving.
Time	The amount of time spent at a 3–4 second following distance while driving.
%Drv	The percentage of driving spent at a 3–4 second following distance while driving.
4–5 Sec % Road Time	The percentage of time spent at a 4–5 second following distance while driving.
Time	The amount of time spent at a 4–5 second following distance while driving.
%Drv	The percentage of driving spent at a 4–5 second following distance while driving.
0–2 Sec % Road Time	The percentage of time spent at a 0–2 second following distance while driving.
Time	The amount of time spent at a 0–2 second following distance while driving.
%Drv	The percentage of driving spent at a 0–2 second following distance while driving.
2–5 Sec % Road Time	The percentage of time spent at a 2–5 second following distance while driving.
Time	The amount of time spent at a 2–5 second following distance while driving.
%Drv	The percentage of driving spent at a 2–5 second following distance while driving.
Opening Time (h:mm:ss)	The amount of time spent following an object (ex., a vehicle) that enters the front radar's range from the side and is always pulling away or opening from the host vehicle.
0–1 Sec % Road Time	The percentage of time spent at a 0 –1 second following distance due to opening while driving.
Time	The amount of time spent at a 0–1 second following distance while driving.
%Drv	The percentage of driving spent at a 0 –1 second following distance due to opening while driving.
1–2 Sec % Road Time	The percentage of time spent at a 1–2 second following distance due to opening while driving.
Time	The amount of time spent at a 1–2 second following distance due to opening while driving.
%Drv	The percentage of driving spent at a 1–2 second following distance due to opening while driving.

Field	Description
2–3 Sec % Road Time	The percentage of time spent at a 2–3 second following distance due to opening while driving.
Time	The amount of time spent at a 2–3 second following distance due to opening while driving.
%Drv	The percentage of driving spent at a 2–3 second following distance due to opening while driving.
3–4 Sec % Road Time	The percentage of time spent at a 3–4 second following distance due to opening while driving.
Time	The amount of time spent at a 3–4 second following distance due to opening while driving.
%Drv	The percentage of driving spent at a 3–4 second following distance due to opening while driving.
4–5 Sec % Road Time	The percentage of time spent at a 4–5 second following distance due to opening while driving.
Time	The amount of time spent at a 4–5 second following distance due to opening while driving.
%Drv	The percentage of driving spent at a 4–5 second following distance due to opening while driving.
0–2 Sec % Road Time	The percentage of time spent at a 0–2 second following distance due to opening while driving.
Time	The amount of time spent at a 0–2 second following distance due to opening while driving.
%Drv	The percentage of driving spent at a 0–2 second following distance due to opening while driving.
2–5 Sec % Road Time	The percentage of time spent at a 2–5 second following distance due to opening while driving.
Time	The amount of time spent at a 2–5 second following distance due to opening while driving.
%Drv	The percentage of driving spent at a 2–5 second following distance due to opening while driving.

Following Distance Trend Report

The **Following Distance Trend** report shows the average following distance percentage of a driver or vehicle a specified period of time (e.g. 12 weeks).

The complete report is shown in Figure 7–6. When generated as an HTML report for viewing, you must use the horizontal scroll bar to view the entire report.

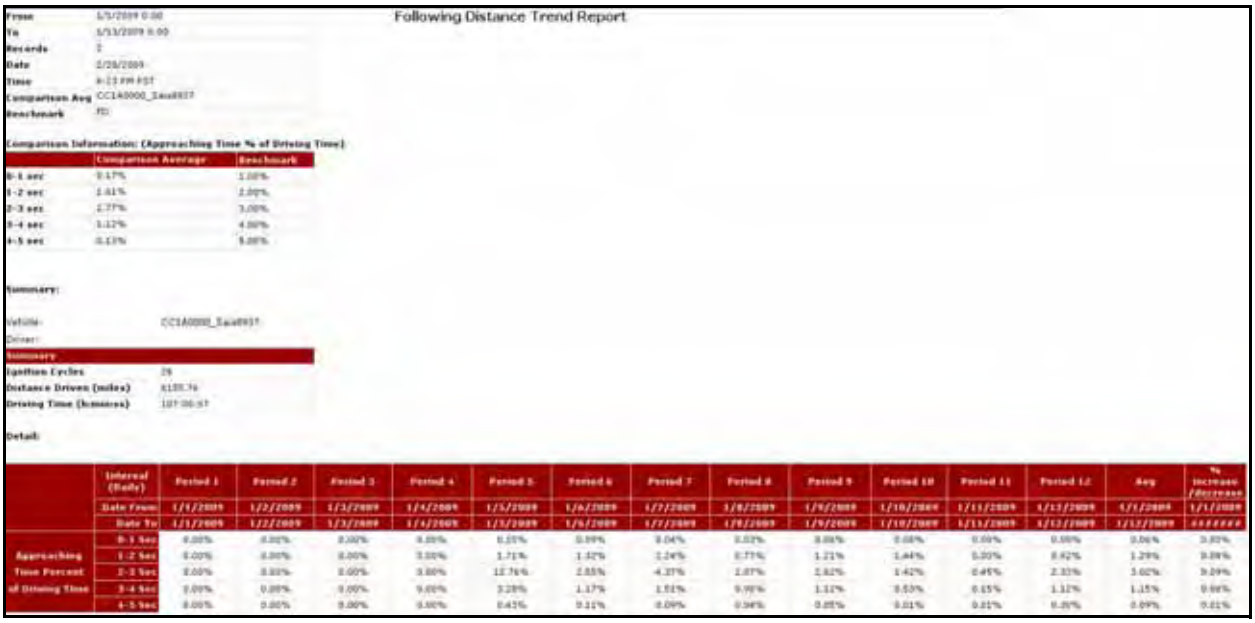


Figure 7–6 Following Distance Trend Report

Field	Description
From	The starting date for the report.
To	The ending date for the report.
Records	The number of instances recorded during the report period.
Date	The date the report was generated.
Time	The time the report was generated.
Comparison Avg	The name of the mobile device(s) that was used as a comparison standard. This can be a top, average or low performer, depending on what you are trying to measure.
Benchmark	The point of reference that the mobile device performance is measured against.
Comparison Information (Approaching Time % of Driving Time)	
0–1 Sec	The percentage of time spent at a 0–1 second following distance while driving.
1–2 Sec	The percentage of driving spent at a 1–2 second following distance while driving.
2–3 Sec	The percentage of driving spent at a 2–3 second following distance while driving.
3–4 Sec	The percentage of driving spent at a 3–4 second following distance while driving.

Field	Description
4–5 Sec	The percentage of driving spent at a 4–5 second following distance while driving.
Comparison Average	The average percentage the mobile device selected for comparison performed.
Benchmark	The percentage entered by the administrator as a perfect world scenario against which the mobile devices are measured.
Summary	
Ignition Cycles	The number of ignition cycles that occurred during the report period.
Distance Driven (miles)	The number of miles the mobile device drove during the report period.
Driving Time (h:mm:ss)	The amount of time the mobile device drove during the report period.
Detail Time Periods (Across)	
Interval (Weekly)	The amount of time in the specified period e.g. (daily/ weekly).
Period 1 - 12	The following 12 weeks or intervals. These are shown in sequential order.
Date From	The start date of the period.
Date To	The end date of the period.
Avg	The average approaching time for the 12 week period.
% increase / decrease	The percentage increase or decrease of the net following time over the 12 week period.
Detail Comparison Items (Down)	
Approaching Time Percent of Driving Time	The amount of time the host vehicle spent closely following an object (e.g. another vehicle).
0–1 Sec	The percentage of driving spent at a 0–1 second following distance while driving for the specified period.
1–2 Sec	The percentage of driving spent at a 1–2 second following distance while driving for the specified period.
2–3 Sec	The percentage of driving spent at a 2–3 second following distance while driving for the specified period.
3–4 Sec	The percentage of driving spent at a 3–4 second following distance while driving for the specified period.
4–5 Sec	The percentage of driving spent at a 4–5 second following distance while driving for the specified period.

Time Period Evaluation Report

The **Time Period Evaluation** report allows you to compare a baseline time period to the following six days or weeks. This helps you identify mobile device performance and driver behavior patterns. For more detailed information see “Time Period Evaluation Report” on page 97.

8 Sensor Connect

Sensor Connect reports provide valuable insight into the status of your mobile assets and inventory with switch and temperature sensors.

Sensor Connect reports help deliver the following benefits:

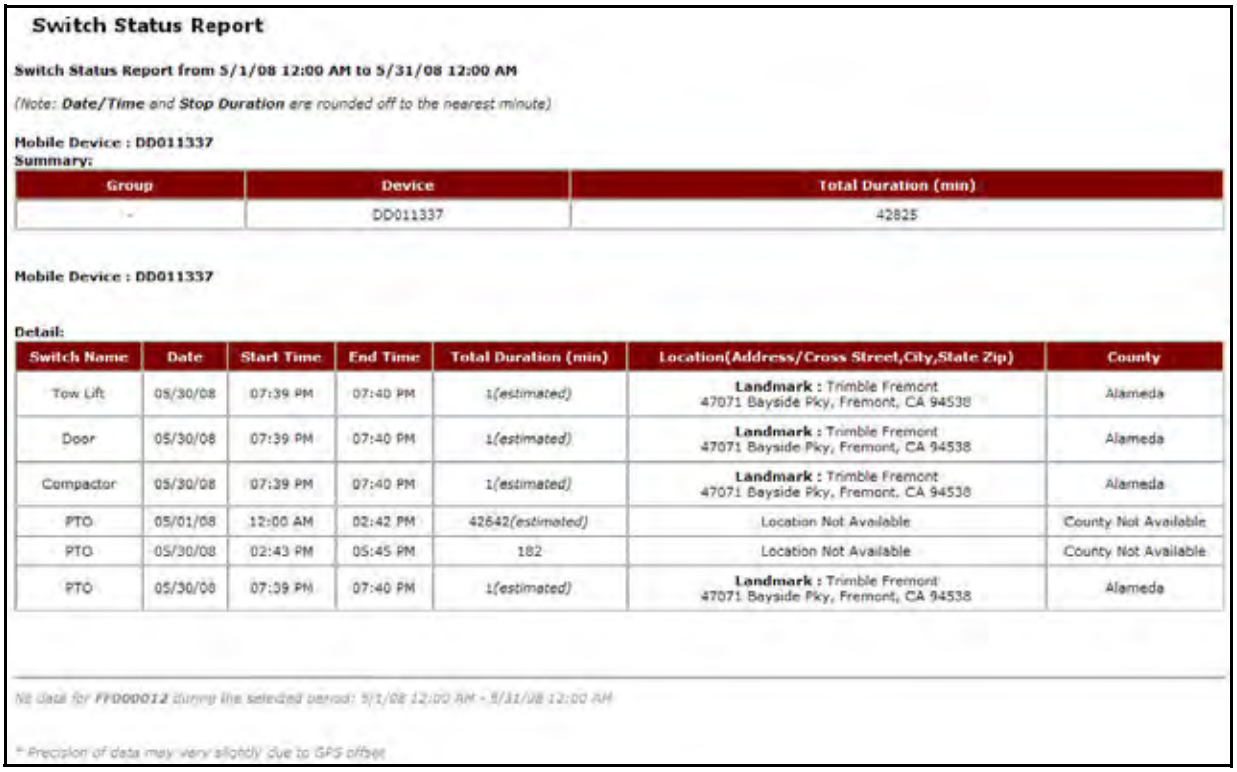
- Remotely monitor the use of specialized equipment like waste truck lift arms, street sweeper brooms and tow truck lifts
- Track deliveries and protect cargo by monitoring trailer door opening and closing times and locations
- Protect temperature-sensitive loads with automatic monitoring of compartment temperatures
- Receive immediate notifications for temperatures or sensor events that fall outside defined parameters

The various Sensor Connect reports are:

- Switch Status Report (4 switches max per vehicle)
- Switch Status Monitoring (Enhanced Activity Detail Report)
- Switch Status Exception Report
- Temperature Monitoring (Enhanced Activity Detail Report)
- Temperature Exception Report

Switch Status Report

The **Switch Status** report, shown in Figure 8–1, displays a summary of transition events inside the mobile device such as on/off events, door open/closed or trunk open/closed etc. Up to four independent contact-based events can be monitored with this option.



Switch Status Report

Switch Status Report from 5/1/08 12:00 AM to 5/31/08 12:00 AM

*(Note: **Date/Time** and **Stop Duration** are rounded off to the nearest minute)*

Mobile Device : DD011337
Summary:

Group	Device	Total Duration (min)
-	DD011337	42825

Mobile Device : DD011337

Detail:

Switch Name	Date	Start Time	End Time	Total Duration (min)	Location(Address/Cross Street,City,State Zip)	County
Tow Lift	05/30/08	07:39 PM	07:40 PM	1*(estimated)*	**Landmark :** Trimble Fremont 47071 Bayside Pky, Fremont, CA 94538	Alameda
Door	05/30/08	07:39 PM	07:40 PM	1*(estimated)*	**Landmark :** Trimble Fremont 47071 Bayside Pky, Fremont, CA 94538	Alameda
Compactor	05/30/08	07:39 PM	07:40 PM	1*(estimated)*	**Landmark :** Trimble Fremont 47071 Bayside Pky, Fremont, CA 94538	Alameda
PTO	05/01/08	12:00 AM	02:42 PM	42642*(estimated)*	Location Not Available	County Not Available
PTO	05/30/08	02:43 PM	05:45 PM	182	Location Not Available	County Not Available
PTO	05/30/08	07:39 PM	07:40 PM	1*(estimated)*	**Landmark :** Trimble Fremont 47071 Bayside Pky, Fremont, CA 94538	Alameda

*Nil Data for **FFD00012** during the selected period: 5/1/08 12:00 AM - 5/31/08 12:00 AM*

** Precision of data may vary slightly due to GPS offset*

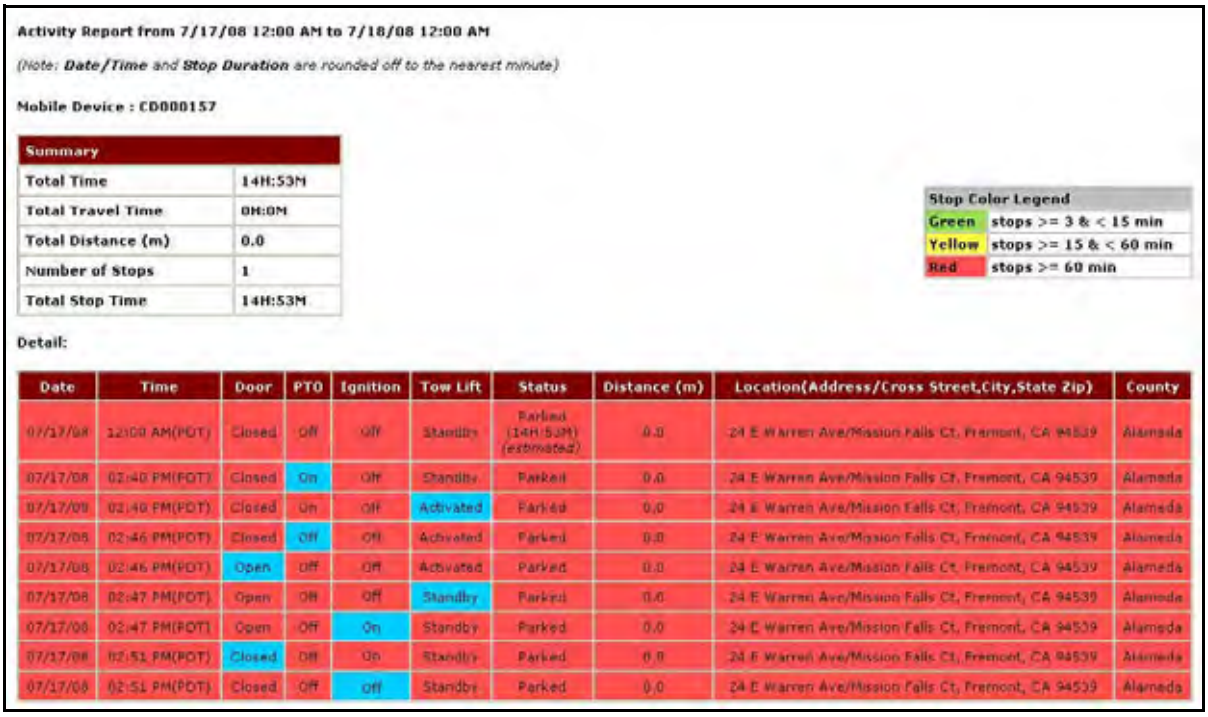
Figure 8–1 Switch Status Report

Item	Description
Summary	Shows the activity summary for the selected mobile device.
Group	The group to which the mobile device belongs.
Device	The device ID.
Total Duration	The total stop time for the monitored mobile device.
Switch Name	The device monitored.
Date	The date on which the message was received/sent.
Start Time	The start time of the monitored event.
End Time	The end time of the monitored event.
Total Duration (min.)	The total length of time of the monitored event.

Item	Description
Total Duration	The length of time spent at each stop.
Location (Address/Cross Street City, State Zip)	The location of the mobile device when the information was transmitted including street address, cross street, city, state and zip.
County	The county where the mobile device was located when the information was transmitted.

Switch Status Monitoring (Enhanced Activity Detail Report with Switch Status)

Switch Status (Enhanced Activity Detail Report) displays transition events that are monitored by switch sensors inside mobile assets, such as door open/closed or tow lift activated/standby.



Activity Report from 7/17/08 12:00 AM to 7/18/08 12:00 AM

(Note: **Date/Time** and **Stop Duration** are rounded off to the nearest minute)

Mobile Device : CD000157

Summary	
Total Time	14H:53M
Total Travel Time	0H:0M
Total Distance (m)	0.0
Number of Stops	1
Total Stop Time	14H:53M

Stop Color Legend	
Green	stops >= 3 & < 15 min
Yellow	stops >= 15 & < 60 min
Red	stops >= 60 min

Detail:

Date	Time	Door	PTO	Ignition	Tow Lift	Status	Distance (m)	Location(Address/Cross Street,City,State Zip)	County
07/17/08	12:00 AM(PDT)	Closed	Off	Off	Standby	Parked (14H:53M) (estimated)	0.0	24 E Warren Ave/Mission Falls Ct, Fremont, CA 94539	Alameda
07/17/08	02:40 PM(PDT)	Closed	On	Off	Standby	Parked	0.0	24 E Warren Ave/Mission Falls Ct, Fremont, CA 94539	Alameda
07/17/08	02:40 PM(PDT)	Closed	On	Off	Activated	Parked	0.0	24 E Warren Ave/Mission Falls Ct, Fremont, CA 94539	Alameda
07/17/08	02:46 PM(PDT)	Closed	Off	Off	Activated	Parked	0.0	24 E Warren Ave/Mission Falls Ct, Fremont, CA 94539	Alameda
07/17/08	02:46 PM(PDT)	Open	Off	Off	Activated	Parked	0.0	24 E Warren Ave/Mission Falls Ct, Fremont, CA 94539	Alameda
07/17/08	02:47 PM(PDT)	Open	Off	Off	Standby	Parked	0.0	24 E Warren Ave/Mission Falls Ct, Fremont, CA 94539	Alameda
07/17/08	02:47 PM(PDT)	Open	Off	On	Standby	Parked	0.0	24 E Warren Ave/Mission Falls Ct, Fremont, CA 94539	Alameda
07/17/08	02:51 PM(PDT)	Closed	Off	On	Standby	Parked	0.0	24 E Warren Ave/Mission Falls Ct, Fremont, CA 94539	Alameda
07/17/08	02:51 PM(PDT)	Closed	Off	Off	Standby	Parked	0.0	24 E Warren Ave/Mission Falls Ct, Fremont, CA 94539	Alameda

Figure 8–2 Activity Detail with Switch Status Report

Item	Description
Summary	Shows the activity summary for the selected mobile device.
Total Time	The total amount of time selected for the report.

Item	Description
Total Travel Time	The total amount of time the mobile device was moving.
Total Distance	The total distance the mobile device traveled during the selected time period.
Number of Stops	The number of stops made by the mobile device during the selected time period.
Total Stop Time	The total amount of time accrued during stops.
Date	Date of the update, listed in mm/dd/yy format.
Time	Time of update, listed in hh:mm AM/PM format and time zone indicated (i.e. PST for Pacific Standard Time).
Door	The status of the door (open/closed) during the reporting period.
PTO	The PTO status (on/off) during the reporting period.
Ignition	The status of the ignition (on/off) during the reporting period.
Tow Lift	The status of the tow lift (activated/standby) during the reporting period.
Status	Shows the duration if the mobile device is parked or stopped. The duration (length of time) will be in #D:##H:##M format. Displays the direction and speed of the mobile device when it is moving. Directions are indicated using standard symbols (i.e., N for North, SW for SouthWest).
Distance	Shows the distance the mobile device has traveled during the selected date range.
Location	Shows the closest address, cross street, city, state, and zip where mobile device was located at the time of last update.
County	County where mobile device was located at the time of update.

Switch Status Exception Report

Switch Status Exceptions keep track of transition events such as door open/closed or trunk open/closed. This is used to identify irregularities such as unauthorized deliveries (door open/closed), unauthorized tows (tow lift activated/standby), or unauthorized passenger pick-ups (passenger door open/ closed). Switch Status Exceptions can also be tied to pre-defined Landmarks to identify stops at non-customer sites.

Exceptions

Switch Status Exception from 1/1/09 12:00 AM to 1/29/09 11:59 PM

*(Note: **Date/Time** is rounded off to the nearest minute)*

Configuration Parameters	
Exception Name	Power Take Off Usage
Exception Type	Switch Status
Switch Status	PTO : Both
Monitoring Scheduling Type	24 x 7
Monitoring Schedule	Begin date: 1/23/09 5:45 PM (PST)
Device(s) Monitored	DD100007, FE125969, FF099999, FF144444

Mobile Device : FE125969

Summary	
Number of Exceptions	2

Detail:

Date	Time	Switch Status	Location	County
1/22/09	6:08 PM (PST)	PTO:Activated	**Landmark:** QA DESK 47045 BAYSIDE PKWY, FREMONT, CA 94538, USA	ALAMEDA
1/23/09	6:09 PM (PST)	PTO:Standby	**Landmark:** QA DESK 47045 BAYSIDE PKWY, FREMONT, CA 94538, USA	ALAMEDA

Figure 8–3 Switch Status Exception Report

Item	Description
Configuration Parameters	The limitations for the selected configuration.
Exception Type	The type of Exception.
Exception Name	The name of the selected Exception.
Switch Status	The change in switch status required to trigger an exception.
Monitoring Schedule Type	The type of schedule for monitoring the mobile device. This can be 24X7 or recurring.
Monitoring Schedule	The date and time when 24X7 monitoring became effective. The hours and days recurring monitoring occurs and the date and time it became effective.
Device(s) Monitored	A list of selected devices that are monitored by this Exception.
Mobile Device	The name of the mobile device with details specific to it following.
Summary	Shows the activity summary for the selected mobile device.
Number of Exceptions	The number of exceptions triggered.
Date	The date on which the message was received/sent.
Time	The corresponding time stamp for the date.

Item	Description
Switch Status	The switch status that triggered the exception
Location	Shows the closest address, cross street, city, state and zip where mobile device was located at the time of update.

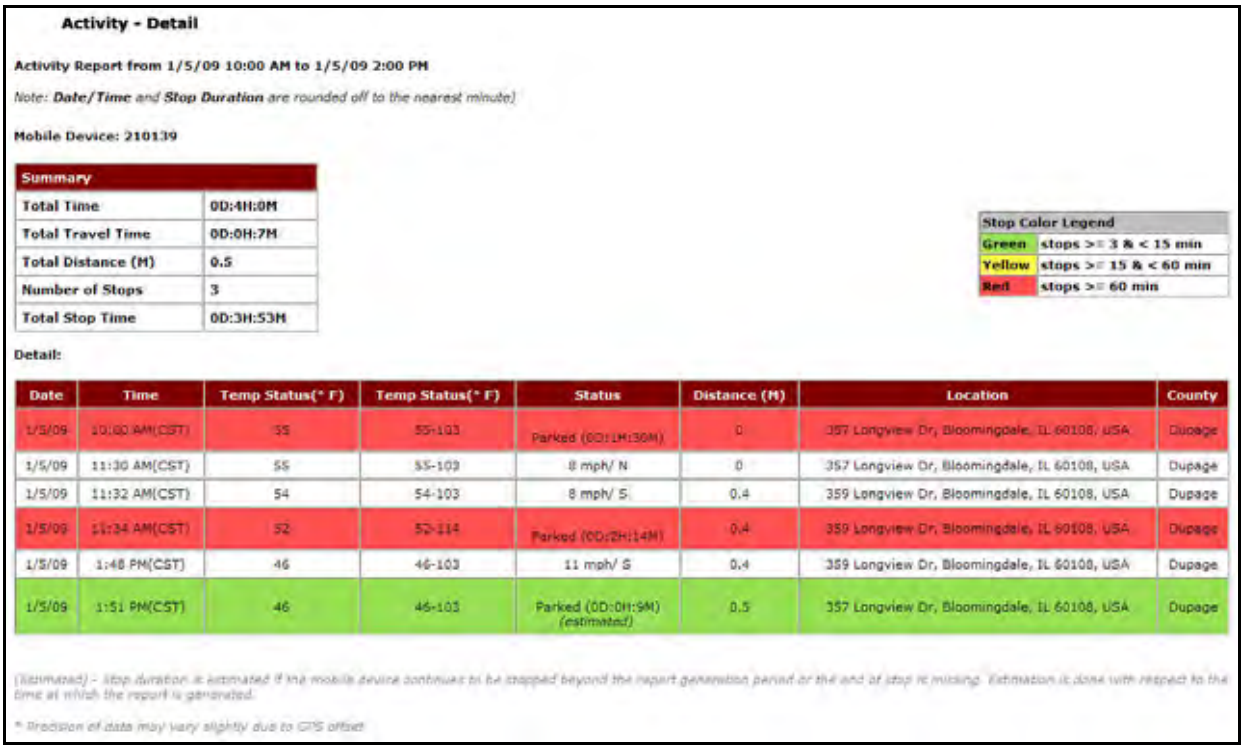
The report contains a header with the date range, followed by each mobile device's label, Summary and Detail.

The table displays the following information:

- White rows indicate the driving times of the mobile devices.
- Colored rows indicate the stop duration of the mobile devices.
- Stop duration defaults are:
  - A red highlight indicates 3 - 15 minutes
  - A green highlight indicates a stop duration of 15 - 45 minutes
  - A yellow highlight indicates a stop of 45 minutes or longer

Temperature Monitoring (Enhanced Activity Detail Report with Temp Status)

The **Activity Detail with Temperature Monitoring** report displays the temperature inside mobile assets. This report displays temperatures and allowable temperature ranges for defined periods of time.



Activity - Detail

Activity Report from 1/5/09 10:00 AM to 1/5/09 2:00 PM

*Note: **Date/Time** and **Stop Duration** are rounded off to the nearest minute)*

Mobile Device: 210139

Summary	
Total Time	0D:4H:0M
Total Travel Time	0D:0H:7M
Total Distance (M)	0.5
Number of Stops	3
Total Stop Time	0D:3H:53M

Stop Color Legend	
Green	stops >= 3 & < 15 min
Yellow	stops >= 15 & < 60 min
Red	stops >= 60 min

Detail:

Date	Time	Temp Status(° F)	Temp Status(° F)	Status	Distance (M)	Location	County
1/5/09	10:00 AM(CST)	55	55-103	Parked (0D:1H:30M)	0	357 Longview Dr, Bloomingdale, IL 60108, USA	Dupage
1/5/09	11:30 AM(CST)	55	55-103	8 mph/ N	0	357 Longview Dr, Bloomingdale, IL 60108, USA	Dupage
1/5/09	11:32 AM(CST)	54	54-103	8 mph/ S	0.4	359 Longview Dr, Bloomingdale, IL 60108, USA	Dupage
1/5/09	11:34 AM(CST)	52	52-114	Parked (0D:2H:14M)	0.4	359 Longview Dr, Bloomingdale, IL 60108, USA	Dupage
1/5/09	1:48 PM(CST)	46	46-103	11 mph/ S	0.4	359 Longview Dr, Bloomingdale, IL 60108, USA	Dupage
1/5/09	1:51 PM(CST)	46	46-103	Parked (0D:0H:9M) *(estimated)*	0.5	357 Longview Dr, Bloomingdale, IL 60108, USA	Dupage

(Estimated) - Stop duration is estimated if the mobile device continues to be stopped beyond the report generation period or the end of stop is missing. Estimation is done with respect to the time at which the report is generated.

** Precision of data may vary slightly due to GPS offset*

Figure 8–4 Activity Detail with Temp Status Report

Item	Description
Summary	Shows the activity summary for the selected mobile device.
Total Time	The total amount of time selected for the report.
Total Travel Time	The total amount of time the mobile device was moving.
Total Distance	The total distance the mobile device traveled during the selected time period.
Number of Stops	The number of stops made by the mobile device during the selected time period.
Total Stop Time	The total amount of time accrued during stops.
Date	Date of the update, listed in mm/dd/yy format.
Time	Time of update, listed in hh:mm AM/PM format and time zone indicated (i.e. PST for Pacific Standard Time).
Temp Status (°F)	The temperature measured at the time of the alert.
Temp Status (°F)	The temperature range measured during the time of recording period.
Distance	Shows the distance the mobile device has traveled during the selected date range.

Item	Description
Location	Shows the closest address, cross street, city, state, and ZIP where mobile device was located at the time of last update.
County	County where mobile device was located at the time of update.

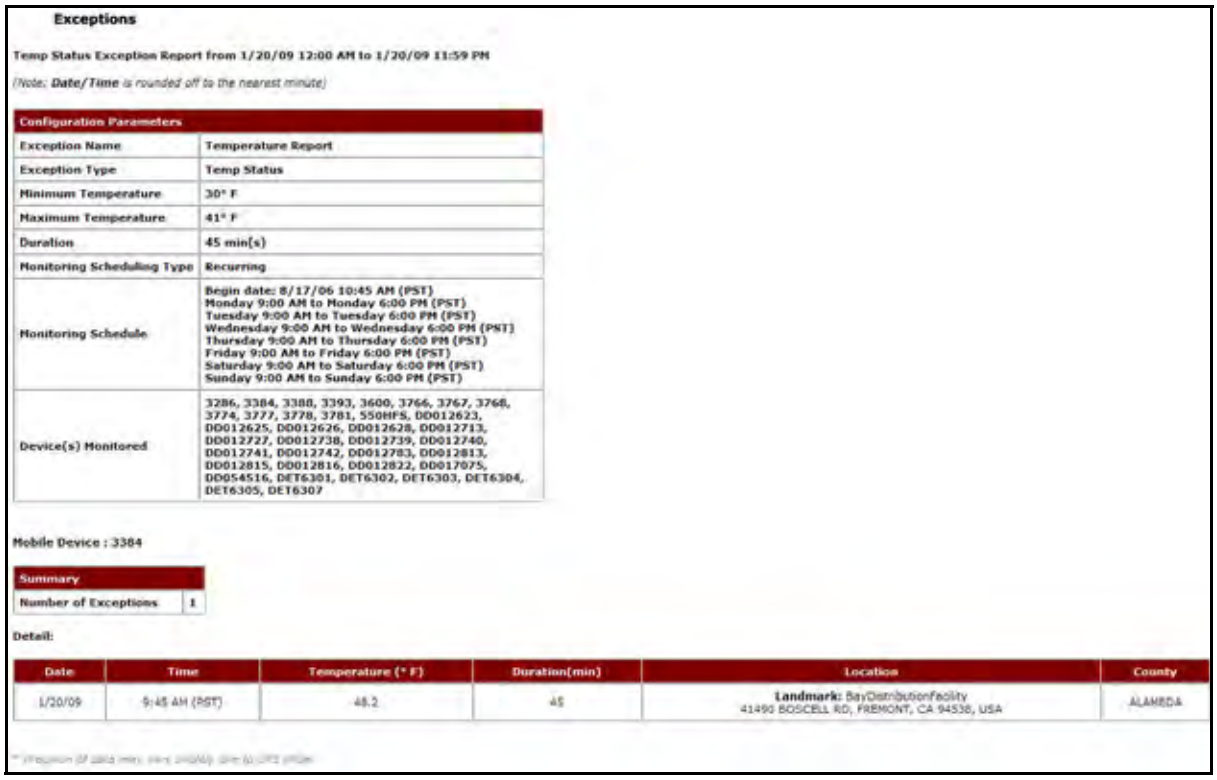
The report contains a header with the date range, followed by each mobile device's label, Summary and Detail.

The table displays the following information:

- White rows indicate the driving times of the mobile devices.
- Colored rows indicate the stop duration of the mobile devices.
- Stop duration defaults are:
  - A red highlight indicates 3 - 15 minutes
  - A green highlight indicates a stop duration of 15 - 45 minutes
  - A yellow highlight indicates a stop of 45 minutes or longer

Temperature Status Report (Exception)

The **Temperature Status Exception** monitors the temperature inside mobile assets. This report flags deviance in temperature for defined periods of time. For example, if the temperature inside a refrigerated truck climbs 5 degrees above normal and stays there for more than 10 minutes, an Exception is triggered. Dispatch can then notify the driver that there is a potential problem with the refrigeration unit. The parameters for monitoring low/high temperature and duration are customizable.



Exceptions

Temp Status Exception Report from 1/20/09 12:00 AM to 1/20/09 11:59 PM

*(Note: **Date/Time** is rounded off to the nearest minute)*

Configuration Parameters	
Exception Name	Temperature Report
Exception Type	Temp Status
Minimum Temperature	30° F
Maximum Temperature	41° F
Duration	45 min(s)
Monitoring Scheduling Type	Recurring
Monitoring Schedule	Begin date: 8/17/06 10:45 AM (PST) Monday 9:00 AM to Monday 6:00 PM (PST) Tuesday 9:00 AM to Tuesday 6:00 PM (PST) Wednesday 9:00 AM to Wednesday 6:00 PM (PST) Thursday 9:00 AM to Thursday 6:00 PM (PST) Friday 9:00 AM to Friday 6:00 PM (PST) Saturday 9:00 AM to Saturday 6:00 PM (PST) Sunday 9:00 AM to Sunday 6:00 PM (PST)
Device(s) Monitored	3286, 3384, 3388, 3393, 3600, 3766, 3767, 3768, 3774, 3777, 3778, 3781, 550HFS, DD012623, DD012625, DD012626, DD012628, DD012713, DD012727, DD012738, DD012739, DD012740, DD012741, DD012742, DD012783, DD012813, DD012815, DD012816, DD012822, DD017075, DD054516, DET6301, DET6302, DET6303, DET6304, DET6305, DET6307

Mobile Device : 3384

Summary	
Number of Exceptions	1

Detail:

Date	Time	Temperature (° F)	Duration(min)	Location	County
1/20/09	9:45 AM (PST)	48.2	45	**Landmark:** BayDistributionFacility 41490 BOSCELL RD, FREMONT, CA 94538, USA	ALAMEDA

Figure 8–5 Temperature Status Exception Report

Item	Description
Configuration Parameters	The limitations for the selected configuration.
Exception Type	The type of Exception.
Exception Name	The name of the selected Exception.
Minimum Temperature	The minimum temperature that must not be exceeded.
Maximum Temperature	The maximum temperature that must not be exceeded.
Duration	The length of time allowed before an Exception occurs.
Monitoring Schedule Type	The type of schedule for monitoring the mobile device. This can be 24X7 or recurring.
Monitoring Schedule	The date and time when 24X7 monitoring became effective. The hours and days recurring monitoring occurs and the date and time it became effective.
Device(s) Monitored	A list of selected devices that are monitored by this Exception.

Item	Description
Mobile Device	The name of the mobile device with details specific to it following.
Summary	
Number of Exceptions	The number of exceptions triggered.
Date	The date on which the message was received/sent.
Time	The corresponding time stamp for the date.
Temperature (° F)	The temperature that triggered the exception.
Duration (min.)	The amount of time the temperature exceeded the minimum or maximum requirement.
Location	Shows the closest address, cross street, city, state and ZIP where mobile device was located at the time of update.

9 Timecard Reporting

The Timecard Reporting Package, used with the Trimble GeoManager PE hand-held solution, provides detail, summary and history reports of workers' time.

GeoManager Timecard reporting helps deliver the following benefits:

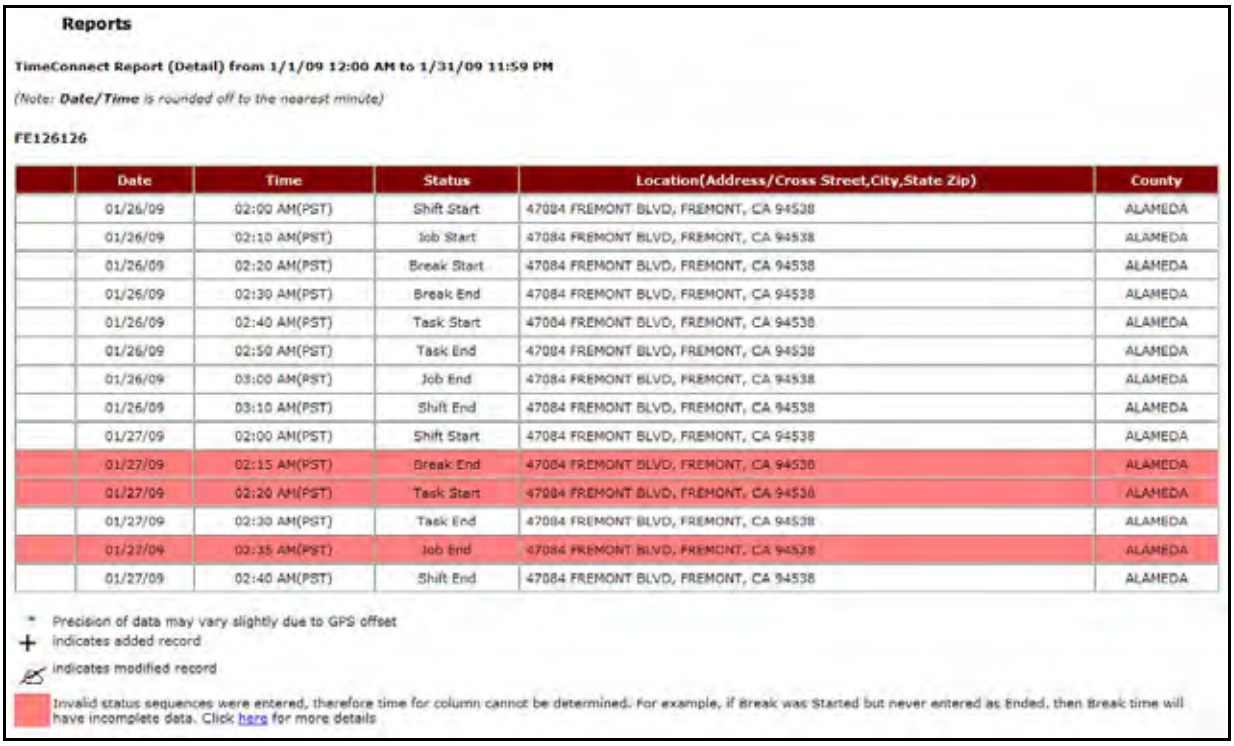
- Enable time and task reporting with the push of a button
- Save administrative and employee time in preparing timecard reports
- Instantly see which workers are on the job and available for assignments
- Improve payroll accuracy

The various Timecard Reporting reports are:

- TimeConnect Detail Report
- TimeConnect Edit History Report
- TimeConnect Summary Report

TimeConnect Detail Report

The **TimeConnect Detail** report automates the recording of mobile workers' daily activities and provides companies with a complete snapshot of daily workforce activities. Customers can verify routes, stops and work schedules such as field service, telecom, transportation and distribution, construction and more.



Reports

TimeConnect Report (Detail) from 1/1/09 12:00 AM to 1/31/09 11:59 PM

*(Note: **Date/Time** is rounded off to the nearest minute)*

FE126126

	Date	Time	Status	Location(Address/Cross Street,City,State Zip)	County
	01/26/09	02:00 AM(PST)	Shift Start	47084 FREMONT BLVD, FREMONT, CA 94538	ALAMEDA
	01/26/09	02:10 AM(PST)	Job Start	47084 FREMONT BLVD, FREMONT, CA 94538	ALAMEDA
	01/26/09	02:20 AM(PST)	Break Start	47084 FREMONT BLVD, FREMONT, CA 94538	ALAMEDA
	01/26/09	02:30 AM(PST)	Break End	47084 FREMONT BLVD, FREMONT, CA 94538	ALAMEDA
	01/26/09	02:40 AM(PST)	Task Start	47084 FREMONT BLVD, FREMONT, CA 94538	ALAMEDA
	01/26/09	02:50 AM(PST)	Task End	47084 FREMONT BLVD, FREMONT, CA 94538	ALAMEDA
	01/26/09	03:00 AM(PST)	Job End	47084 FREMONT BLVD, FREMONT, CA 94538	ALAMEDA
	01/26/09	03:10 AM(PST)	Shift End	47084 FREMONT BLVD, FREMONT, CA 94538	ALAMEDA
	01/27/09	02:00 AM(PST)	Shift Start	47084 FREMONT BLVD, FREMONT, CA 94538	ALAMEDA
	01/27/09	02:15 AM(PST)	Break End	47084 FREMONT BLVD, FREMONT, CA 94538	ALAMEDA
	01/27/09	02:20 AM(PST)	Task Start	47084 FREMONT BLVD, FREMONT, CA 94538	ALAMEDA
	01/27/09	02:30 AM(PST)	Task End	47084 FREMONT BLVD, FREMONT, CA 94538	ALAMEDA
	01/27/09	02:35 AM(PST)	Job End	47084 FREMONT BLVD, FREMONT, CA 94538	ALAMEDA
	01/27/09	02:40 AM(PST)	Shift End	47084 FREMONT BLVD, FREMONT, CA 94538	ALAMEDA

* Precision of data may vary slightly due to GPS offset

\+ indicates added record

indicates modified record

Invalid status sequences were entered, therefore time for column cannot be determined. For example, if Break was Started but never entered as Ended, then Break time will have incomplete data. Click here for more details

Figure 9–1 Time Connect Report

Item	Description
Date	Date of the update, listed in mm/dd/yy format.
Time	Time of update, listed in hh:mm AM/PM format and time zone indicated (i.e. PST for Pacific Standard Time).
Status	The status of the mobile worker at the date and time of the recording period (e.g.Shift Start, Shift End, etc.).
Location	Shows the closest address, cross street, city, state, and zip where mobile device was located at the time of last update.
County	County where mobile device was located at the time of update.

The report contains a legend with record modifiers:

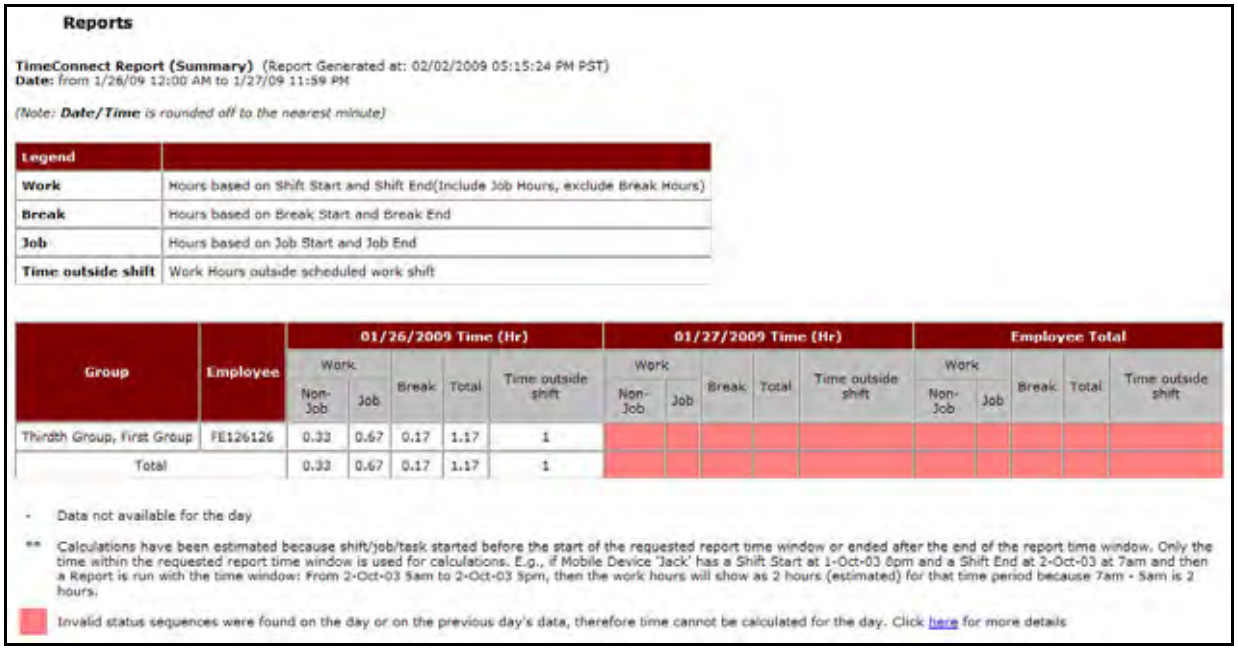
- A plus sign indicates a newly added record.
- A hand icon holding a pen indicates a modified record.
- A red highlight indicates an invalid status sequence.

TimeConnect Edit History Report

The **TimeConnect Edit History** report allows the administrative user to manually make corrections or changes as necessary.

TimeConnect Summary Report

The **TimeConnect Summary** report provides a summary of mobile workers' daily activities and provides companies with a complete snapshot of daily workforce activities.



Reports

TimeConnect Report (Summary) (Report Generated at: 02/02/2009 05:15:24 PM PST)
Date: from 1/26/09 12:00 AM to 1/27/09 11:59 PM

*(Note: **Date/Time** is rounded off to the nearest minute)*

Legend	
Work	Hours based on Shift Start and Shift End(Include Job Hours, exclude Break Hours)
Break	Hours based on Break Start and Break End
Job	Hours based on Job Start and Job End
Time outside shift	Work Hours outside scheduled work shift

Group	Employee	01/26/2009 Time (Hr)					01/27/2009 Time (Hr)					Employee Total				
		Work		Break	Total	Time outside shift	Work		Break	Total	Time outside shift	Work		Break	Total	Time outside shift
		Non-Job	Job				Non-Job	Job				Non-Job	Job			
Thirdth Group, First Group	FE126126	0.33	0.67	0.17	1.17	1										
Total		0.33	0.67	0.17	1.17	1										

- Data not available for the day

** Calculations have been estimated because shift/job/task started before the start of the requested report time window or ended after the end of the report time window. Only the time within the requested report time window is used for calculations. E.g., if Mobile Device 'Jack' has a Shift Start at 1-Oct-03 8pm and a Shift End at 2-Oct-03 at 7am and then a Report is run with the time window: From 2-Oct-03 5am to 2-Oct-03 5pm, then the work hours will show as 2 hours (estimated) for that time period because 7am - 5am is 2 hours.

Invalid status sequences were found on the day or on the previous day's data, therefore time cannot be calculated for the day. Click here for more details

Figure 9–2 Time Connect Report

Item	Description
Legend	The explanation of the following terms.
Work	The number of hours based upon shift start and shift end excluding break time.
Break	The number of hours based upon break start and break end.
Job	The number of hours based upon job start and job end.
Time outside shift	The number of hours worked outside scheduled hours.
Group	The group to which the employee belongs.
Employee	The employee number.
Total	The total number of hours for each shift type.
Date/Time (Hr)	The date listed in mm/dd/yy format and time in hours.
Work	The number hours worked.
Non-Job	The number of hours worked for non-job activities.
Job	The number of hours worked for job related activities.
Break	The number of hours worked on break.
Total	The total number of hours.
Time outside shift	The total number of hours worked outside the work shift.
Employee Total	The hourly totals for the recording period.
Work	The total number hours worked for the recording period.
Non-Job	The total number of hours worked for non-job activities for the recording period.
Job	The total number of hours worked for job related activities for the recording period.
Break	The total number of hours worked on break for the recording period.
Total	The total number of hours for the recording period.
Time outside shift	The total number of hours worked outside the work shift for the recording period.

The report contains a legend with record modifiers:

- A plus sign indicates a newly added record.
- A hand icon holding a pen indicates a modified record.
- A red highlight indicates an invalid status sequence.

10 Messaging and Communications

Messaging and Communications reports help improve customer service and driver productivity with two-way messaging, workflow status and messaging reports.

GeoManager Messaging and Communications help deliver the following benefits:

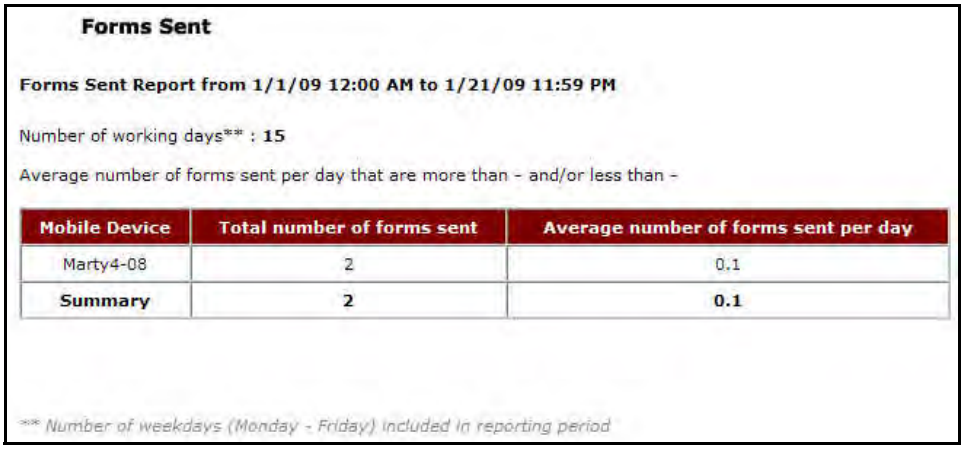
- Improve communication between dispatchers and field workers with two-way messaging
- Streamline work flow and job status reporting
- Reduce paperwork with mobile forms
- Save drivers' time and improve safety by providing pre-defined messages that are quick and easy to send

The various Messaging and Communications reports are:

- Forms Sent Report
- Form Report
- Forms Exception Report
- Messaging Exception Report
- Message Report

Forms Sent Report

The **Forms Sent** report, shown in Figure 10–1, displays the forms sent from the mobile device during the selected reporting period.



Forms Sent

Forms Sent Report from 1/1/09 12:00 AM to 1/21/09 11:59 PM

Number of working days** : **15**

Average number of forms sent per day that are more than - and/or less than -

Mobile Device	Total number of forms sent	Average number of forms sent per day
Marty4-08	2	0.1
Summary	**2**	**0.1**

** Number of weekdays (Monday - Friday) included in reporting period

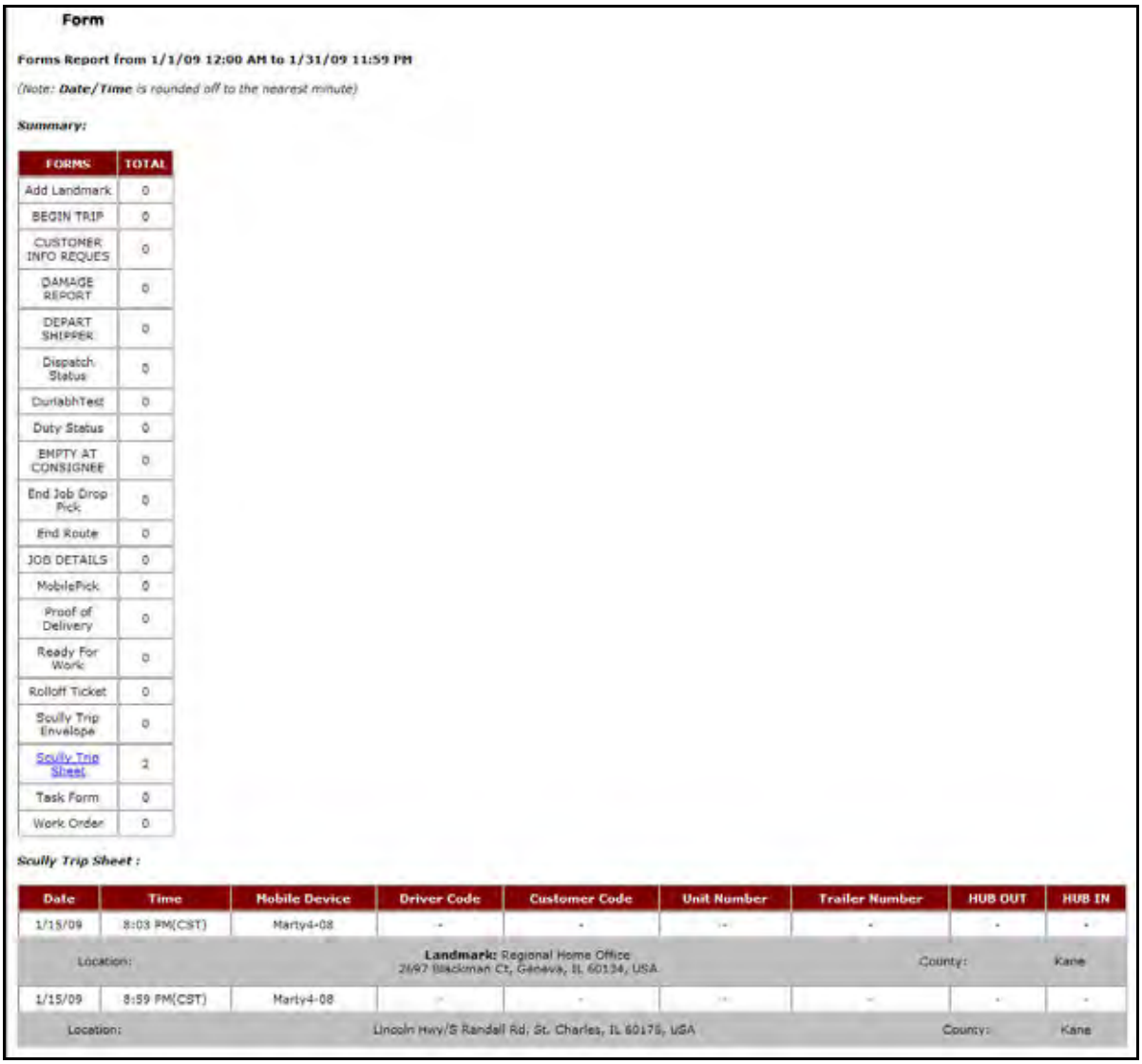
Figure 10–1 Forms Sent Report

Item	Description
Mobile Device	The name of the mobile device.
Total Number of Forms Sent	The total number of forms sent for the reporting period.
Average Number of Forms Sent Per Day	The average number of forms sent for the reporting period.

Form Report

The **Form** report, shown in Figure 10–2, displays a summary of all forms used during the selected reporting period.

All fields in the **Form** report are designated by the customer, so they will be different for each company. The example report shown in Figure 10–2 shows the fields used by a delivery company. The default **Form** report displays all available forms and a count of all forms submitted and stored in the database.



Form

Forms Report from 1/1/09 12:00 AM to 1/31/09 11:59 PM

(Note: **Date/Time** is rounded off to the nearest minute)

Summary:

FORMS	TOTAL
Add Landmark	0
BEGIN TRIP	0
CUSTOMER INFO REQUES	0
DAMAGE REPORT	0
DEPART SHIPPER	0
Dispatch Status	0
DurlabhTest	0
Duty Status	0
EMPTY AT CONSIGNEE	0
End Job Drop Pick	0
End Route	0
JOB DETAILS	0
MobilePick	0
Proof of Delivery	0
Ready For Work	0
Rolloff Ticket	0
Scully Trip Envelope	0
Scully Trip Sheet	2
Task Form	0
Work Order	0

Scully Trip Sheet :

Date	Time	Mobile Device	Driver Code	Customer Code	Unit Number	Trailer Number	HUB OUT	HUB IN
1/15/09	8:03 PM(CST)	Marty4-08	-	-	-	-	-	-
Location:			**Landmark:** Regional Home Office 2697 Blackman Ct, Geneva, IL 60134, USA				County:	Kane
1/15/09	8:59 PM(CST)	Marty4-08	-	-	-	-	-	-
Location:			Lincoln Hwy/S Randall Rd, St. Charles, IL 60175, USA				County:	Kane

Figure 10–2 Forms Report

Item	Description
Summary	Shows the forms summary for the selected mobile device.
Forms	Lists the names of customer-defined forms.
Total	The total number of each form for the reporting period.
Trip Sheet	The specific trip information for the reporting period.
Date	The date the delivery was made.
Time	The time the delivery was made.
Mobile Device	The mobile device that made the delivery.

Item	Description
Driver Code	The driver's code number.
Customer Code	The customer's code number.
Unit Number	The unit number.
Trailer Number	The trailer number.
HUB OUT	The time the mobile device departed the HUB.
HUB IN	The time the mobile device arrived at the HUB.

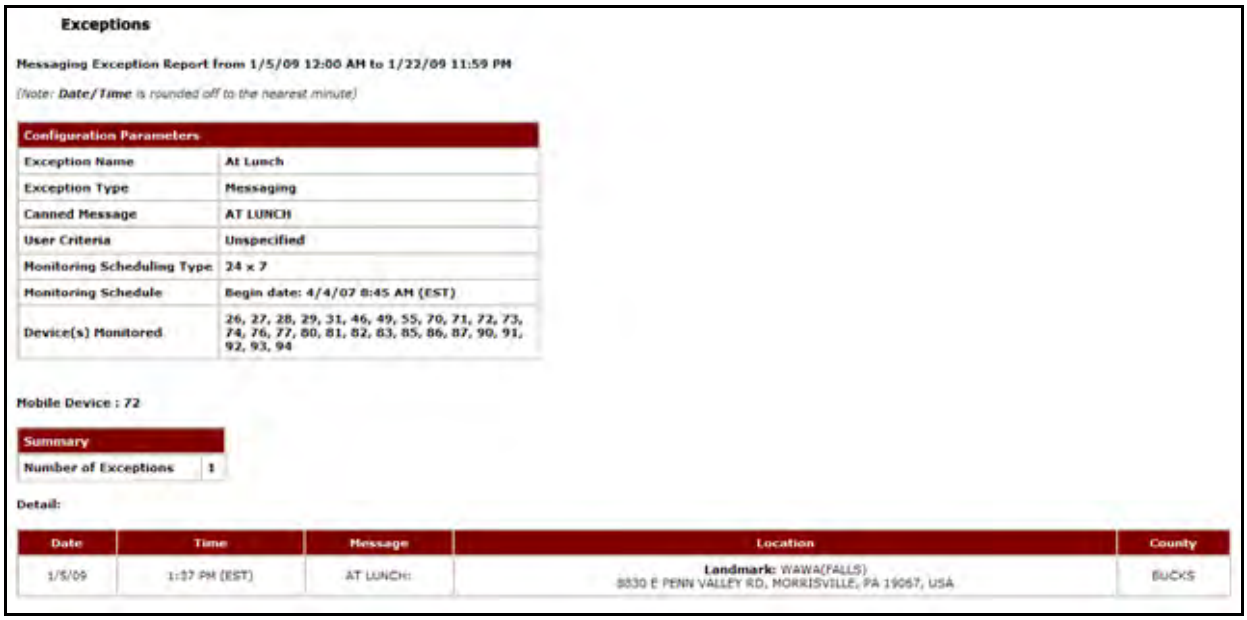
Note:
The fields for the **Form** report are designated by the customer and will be different for each company.

Forms Reports (Exception)

The **Forms Exception** report notifies you when a particular parameter in a customer-created form occurs.

Messaging Exception Report and Alert

The **Messaging Exception** report, shown in Figure 10–3, displays the messages sent from the mobile device during the selected reporting period.



Exceptions

Messaging Exception Report from 1/5/09 12:00 AM to 1/22/09 11:59 PM

*(Note: **Date/Time** is rounded off to the nearest minute)*

Configuration Parameters	
Exception Name	At Lunch
Exception Type	Messaging
Canned Message	AT LUNCH
User Criteria	Unspecified
Monitoring Scheduling Type	24 x 7
Monitoring Schedule	Begin date: 4/4/07 8:45 AM (EST)
Device(s) Monitored	26, 27, 28, 29, 31, 46, 49, 55, 70, 71, 72, 73, 74, 76, 77, 80, 81, 82, 83, 85, 86, 87, 90, 91, 92, 93, 94

Mobile Device : 72

Summary	
Number of Exceptions	1

Detail:

Date	Time	Message	Location	County
1/5/09	1:37 PM (EST)	AT LUNCH:	**Landmark:** WAWA(FALLS) 8830 E PENN VALLEY RD, MORRISVILLE, PA 19067, USA	BUCKS

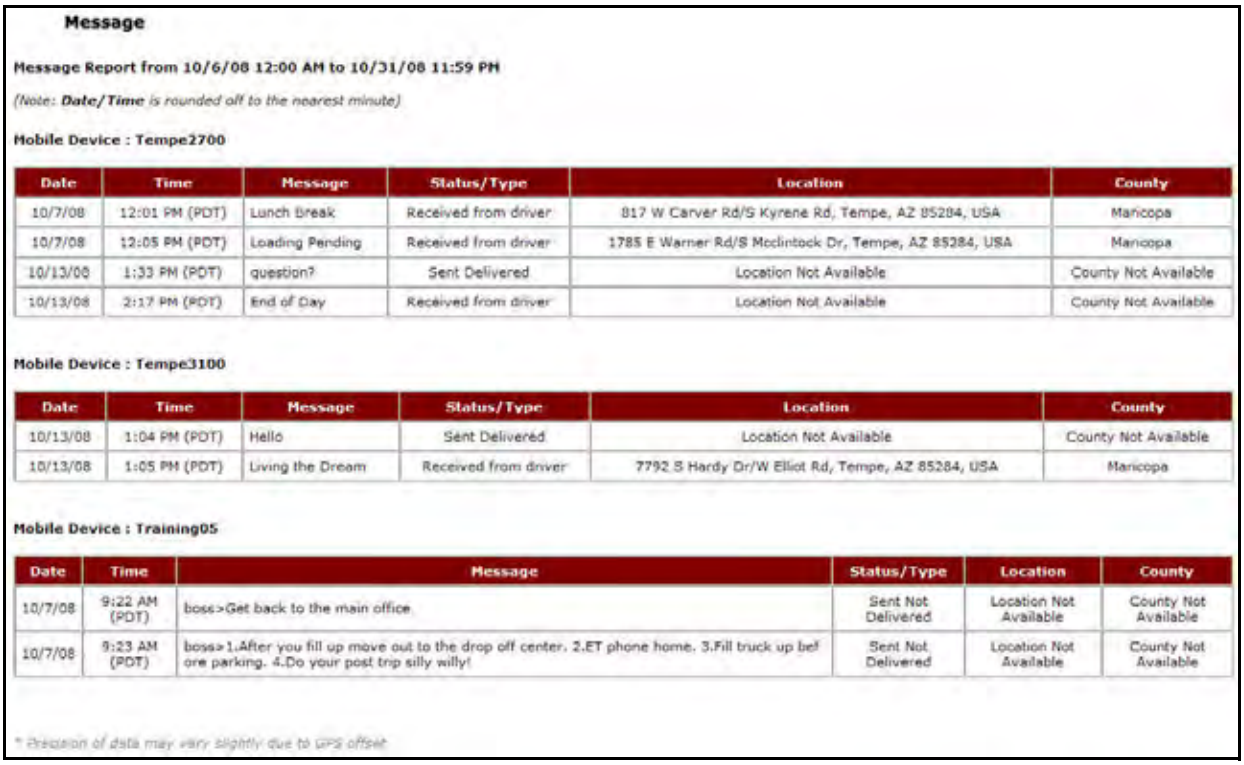
Figure 10–3 Messaging Exception Report

Item	Description
Configuration Parameters	The limitations for the selected configuration.
Exception Name	The name of the selected Exception.
Exception Type	The type of Exception.
Canned Message	The canned message required to trigger an exception.
User Criteria	The user criteria.
Monitoring Schedule Type	The type of schedule for monitoring the mobile device. This can be 24X7 or recurring.
Monitoring Schedule	The date and time when 24X7 monitoring became effective. The hours and days recurring monitoring occurs and the date and time it became effective.
Device(s) Monitored	A list of selected devices that are monitored by this Exception.
Mobile Device	The name of the mobile device with details specific to it following.
Summary	Shows the activity summary for the selected mobile device.
Number of Exceptions	The number of exceptions triggered.
Date	The date on which the message was received/sent.
Time	The corresponding time stamp for the date.

Item	Description
Message	The message that triggered the Exception.
Location	Shows the closest address, cross street, city, state and zip where mobile device was located at the time of exception.
County	County where mobile device was located at the time of exception.

Message Report

The **Message** report, shown in Figure 10–4, displays the messages sent to and received from the mobile device during the selected reporting period.



Message

Message Report from 10/6/08 12:00 AM to 10/31/08 11:59 PM

*(Note: **Date/Time** is rounded off to the nearest minute)*

Mobile Device : Tempe2700

Date	Time	Message	Status/Type	Location	County
10/7/08	12:01 PM (PDT)	Lunch Break	Received from driver	817 W Carver Rd/S Kyrene Rd, Tempe, AZ 85284, USA	Maricopa
10/7/08	12:05 PM (PDT)	Loading Pending	Received from driver	1785 E Warner Rd/S Mcclintock Dr, Tempe, AZ 85284, USA	Maricopa
10/13/08	1:33 PM (PDT)	question?	Sent Delivered	Location Not Available	County Not Available
10/13/08	2:17 PM (PDT)	End of Day	Received from driver	Location Not Available	County Not Available

Mobile Device : Tempe3100

Date	Time	Message	Status/Type	Location	County
10/13/08	1:04 PM (PDT)	Hello	Sent Delivered	Location Not Available	County Not Available
10/13/08	1:05 PM (PDT)	Living the Dream	Received from driver	7792 S Hardy Dr/W Elliot Rd, Tempe, AZ 85284, USA	Maricopa

Mobile Device : Training05

Date	Time	Message	Status/Type	Location	County
10/7/08	9:22 AM (PDT)	boss>Get back to the main office	Sent Not Delivered	Location Not Available	County Not Available
10/7/08	9:23 AM (PDT)	boss>1.After you fill up move out to the drop off center. 2.ET phone home. 3.Fill truck up bef ore parking. 4.Do your post trip silly willy!	Sent Not Delivered	Location Not Available	County Not Available

** Precision of data may vary slightly due to GPS offset*

Figure 10–4 Message Report

Item	Description
Date	Date of the update, listed in mm/dd/yy format.
Time	Time of update, listed in hh:mm AM/PM format and time zone indicated (i.e. PST for Pacific Standard Time).

Item	Description
Message	Shows the pre-defined message sent to or received from the mobile device.
Status/Type	Shows the type of message, whether it was sent to or received from the mobile device.
Location	Shows the closest address, cross street, city, state, and zip where mobile device was located at the time of last update.
County	County where mobile device was located at the time of update.

11 Workflow Status (Includes Messaging)

The Workflow Status package enables drivers to communicate work status changes using pre-defined work status definitions on a Trimble in-vehicle display terminal. It provides managers with an overview of the status of their entire fleet.

GeoManager Workflow Status helps deliver the following benefits:

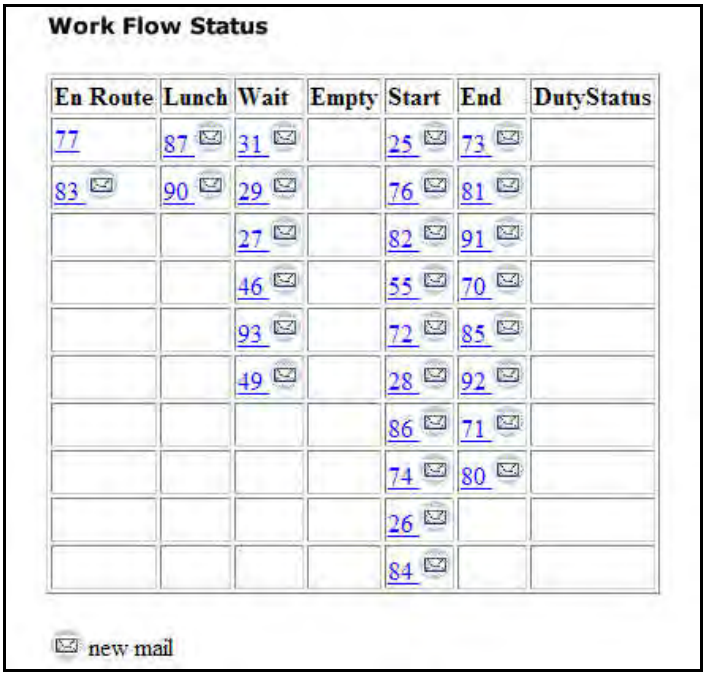
- Save driver time by enabling easy communication of work status changes like “en route,” “at customer,” or “available”
- Optimize work allocation with at-a-glance views of your entire fleet’s availability

The two Workflow Status reports that are provided are:

- Workflow Status Real Time View
- Workflow Status Report

Workflow Status Real Time View

The **Workflow Status Real Time View**, shown in Figure 11–1, shows the transition of workers' statuses throughout the day. Statuses can include awaiting next job, driving, on break, etc.



Work Flow Status

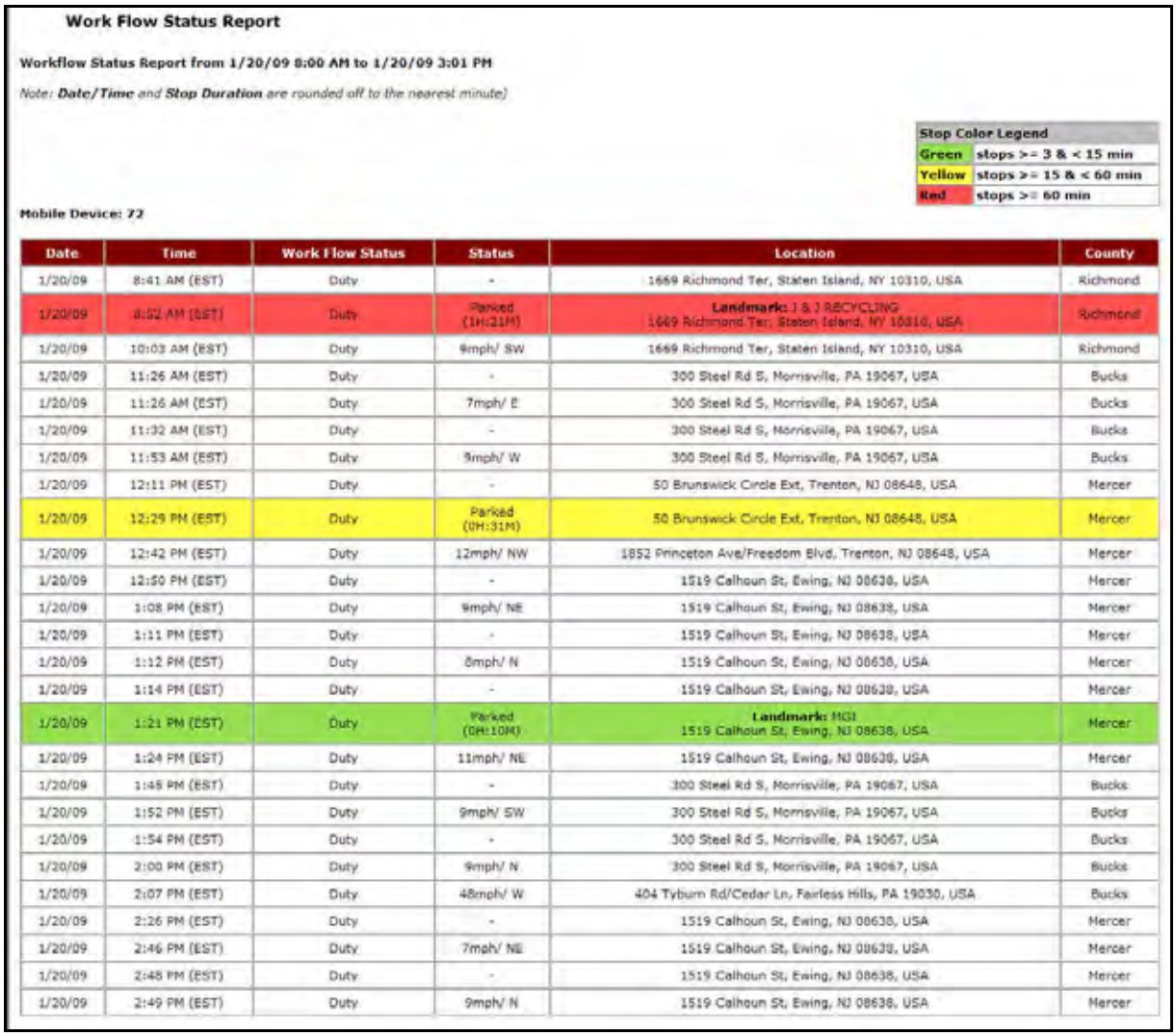
En Route	Lunch	Wait	Empty	Start	End	DutyStatus
77	87	31		25	73	
83	90	29		76	81	
		27		82	91	
		46		55	70	
		93		72	85	
		49		28	92	
				86	71	
				74	80	
				26		
				84		

new mail

Figure 11–1 Workflow Status Report

Workflow Status

The **Workflow Status** report, shown in Figure 11–2, shows any overdue maintenance for each selected vehicle, either chronologically or by maintenance type.



Work Flow Status Report

Workflow Status Report from 1/20/09 8:00 AM to 1/20/09 3:01 PM

*Note: **Date/Time** and **Stop Duration** are rounded off to the nearest minute)*

Stop Color Legend	
Green	stops >= 3 & < 15 min
Yellow	stops >= 15 & < 60 min
Red	stops >= 60 min

Mobile Device: 72

Date	Time	Work Flow Status	Status	Location	County
1/20/09	8:41 AM (EST)	Duty	-	1669 Richmond Ter, Staten Island, NY 10310, USA	Richmond
1/20/09	8:52 AM (EST)	Duty	Parked (1H:21M)	**Landmark:** J & J RECYCLING 1669 Richmond Ter, Staten Island, NY 10310, USA	Richmond
1/20/09	10:03 AM (EST)	Duty	9mph/ SW	1669 Richmond Ter, Staten Island, NY 10310, USA	Richmond
1/20/09	11:26 AM (EST)	Duty	-	300 Steel Rd S, Morrisville, PA 19067, USA	Bucks
1/20/09	11:26 AM (EST)	Duty	7mph/ E	300 Steel Rd S, Morrisville, PA 19067, USA	Bucks
1/20/09	11:32 AM (EST)	Duty	-	300 Steel Rd S, Morrisville, PA 19067, USA	Bucks
1/20/09	11:53 AM (EST)	Duty	9mph/ W	300 Steel Rd S, Morrisville, PA 19067, USA	Bucks
1/20/09	12:11 PM (EST)	Duty	-	50 Brunswick Circle Ext, Trenton, NJ 08648, USA	Mercer
1/20/09	12:29 PM (EST)	Duty	Parked (0H:31M)	50 Brunswick Circle Ext, Trenton, NJ 08648, USA	Mercer
1/20/09	12:42 PM (EST)	Duty	12mph/ NW	1852 Princeton Ave/Freedom Blvd, Trenton, NJ 08648, USA	Mercer
1/20/09	12:50 PM (EST)	Duty	-	1519 Calhoun St, Ewing, NJ 08638, USA	Mercer
1/20/09	1:08 PM (EST)	Duty	9mph/ NE	1519 Calhoun St, Ewing, NJ 08638, USA	Mercer
1/20/09	1:11 PM (EST)	Duty	-	1519 Calhoun St, Ewing, NJ 08638, USA	Mercer
1/20/09	1:12 PM (EST)	Duty	8mph/ N	1519 Calhoun St, Ewing, NJ 08638, USA	Mercer
1/20/09	1:14 PM (EST)	Duty	-	1519 Calhoun St, Ewing, NJ 08638, USA	Mercer
1/20/09	1:21 PM (EST)	Duty	Parked (0H:10M)	**Landmark:** MCI 1519 Calhoun St, Ewing, NJ 08638, USA	Mercer
1/20/09	1:24 PM (EST)	Duty	11mph/ NE	1519 Calhoun St, Ewing, NJ 08638, USA	Mercer
1/20/09	1:45 PM (EST)	Duty	-	300 Steel Rd S, Morrisville, PA 19067, USA	Bucks
1/20/09	1:52 PM (EST)	Duty	9mph/ SW	300 Steel Rd S, Morrisville, PA 19067, USA	Bucks
1/20/09	1:54 PM (EST)	Duty	-	300 Steel Rd S, Morrisville, PA 19067, USA	Bucks
1/20/09	2:00 PM (EST)	Duty	9mph/ N	300 Steel Rd S, Morrisville, PA 19067, USA	Bucks
1/20/09	2:07 PM (EST)	Duty	48mph/ W	404 Tyburn Rd/Cedar Ln, Fairless Hills, PA 19030, USA	Bucks
1/20/09	2:26 PM (EST)	Duty	-	1519 Calhoun St, Ewing, NJ 08638, USA	Mercer
1/20/09	2:46 PM (EST)	Duty	7mph/ NE	1519 Calhoun St, Ewing, NJ 08638, USA	Mercer
1/20/09	2:48 PM (EST)	Duty	-	1519 Calhoun St, Ewing, NJ 08638, USA	Mercer
1/20/09	2:49 PM (EST)	Duty	9mph/ N	1519 Calhoun St, Ewing, NJ 08638, USA	Mercer

Figure 11–2 Workflow Status Report

Item	Description
Date	The date of the work flow status.
Time	The time the status was reported.
Work Flow Status	The availability of the mobile worker (available, working, off duty, etc.).
Status	The mobile device status (parked, moving, etc.).
Location	Shows the closest address, cross street, city, state and zip where mobile device was located at the time of update.
County	County where mobile device was located at the time of update.

The table displays the following information:

- White rows indicate the driving times of the mobile devices.
- Colored rows indicate the stop duration of the mobile devices.
- Stop duration defaults are:
  - A green highlight indicates 3 - 15 minutes.
  - A yellow highlight indicates a stop duration of 15 - 60 minutes.
  - A red highlight indicates a stop of 60 minutes or longer.

Note:
The color values can be defined in the Administration section.

12 Hours of Service & Driver Log Compliance (Includes Messaging)

Hours of Service & Driver Log Compliance reports are used with a Trimble driver messaging terminal to provide automated Driver Log Reports and easy HOS compliance.

Hours of Service & Driver Log Compliance helps deliver the following benefits:

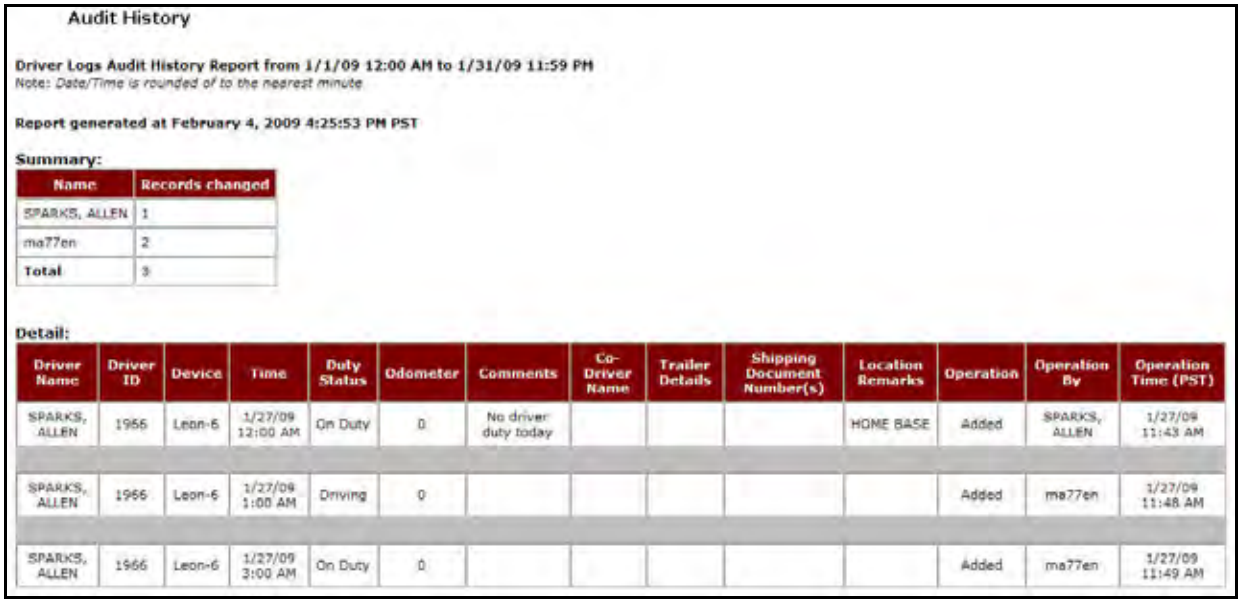
- Significantly reduce the time it takes to generate state and federal required driver logs
- Reduce paperwork and improve accuracy of logs
- Help improve compliance and avoid fines by warning drivers of potential violations
- Provide information for roadside inspections or completion of State Mileage Reports

The various Hours of Service & Driver Log Compliance reports are:

- Audit History Report
- Combined Report
- Daily Log Report as PDF with Grid Graph
- Daily Log Report Un-edited as PDF
- Hours Worked and Available Report
- Log Hours Detail
- Log Hours Summary
- Missing Logs Summary
- Rule Exception Report (Detail and Summary)

Audit History

The **Audit History** report allows users to see what changes were made to the Driver Logs and by whom.



Audit History

Driver Logs Audit History Report from 1/1/09 12:00 AM to 1/31/09 11:59 PM
Note: Date/Time is rounded of to the nearest minute

Report generated at February 4, 2009 4:25:53 PM PST

Summary:

Name	Records changed
SPARKS, ALLEN	1
ma77en	2
Total	3

Detail:

Driver Name	Driver ID	Device	Time	Duty Status	Odometer	Comments	Co-Driver Name	Trailer Details	Shipping Document Number(s)	Location Remarks	Operation	Operation By	Operation Time (PST)
SPARKS, ALLEN	1966	Leon-6	1/27/09 12:00 AM	On Duty	0	No driver duty today				HOME BASE	Added	SPARKS, ALLEN	1/27/09 11:43 AM
SPARKS, ALLEN	1966	Leon-6	1/27/09 1:00 AM	Driving	0						Added	ma77en	1/27/09 11:48 AM
SPARKS, ALLEN	1966	Leon-6	1/27/09 3:00 AM	On Duty	0						Added	ma77en	1/27/09 11:49 AM

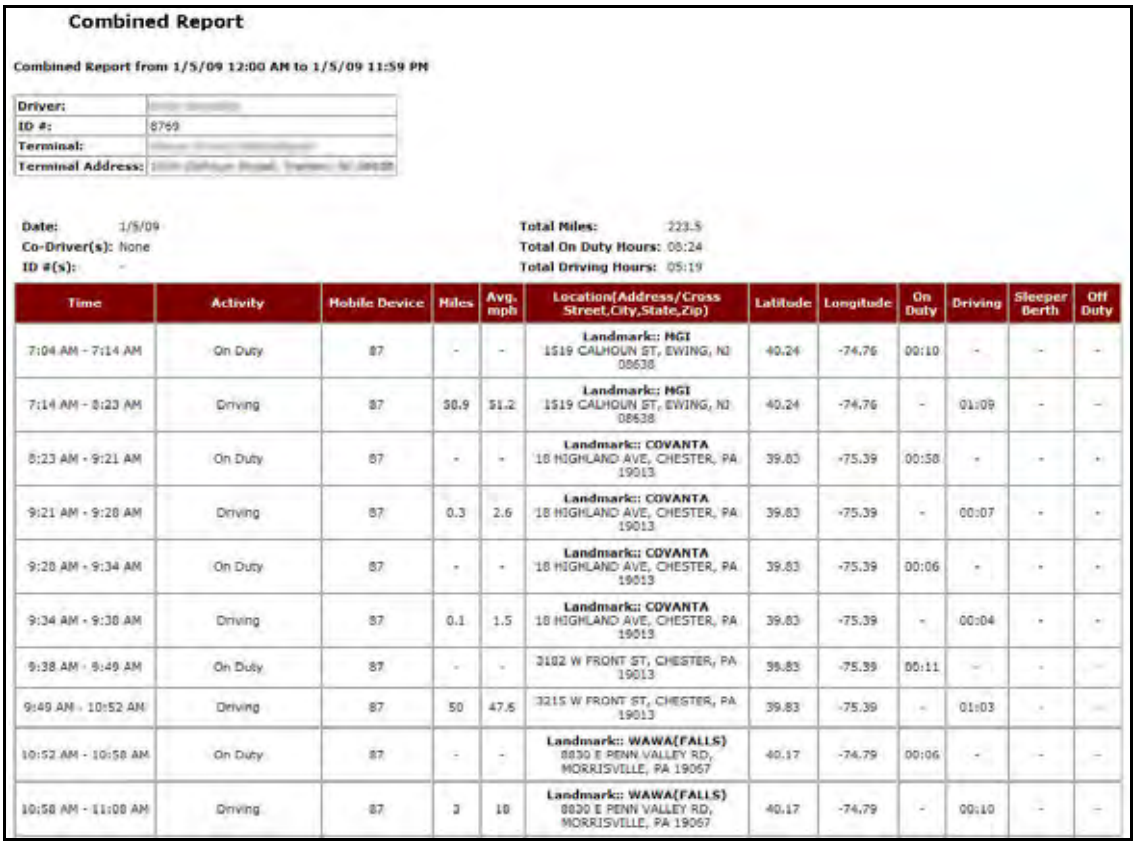
Figure 12–1 Audit History Report

Item	Description
Driver Name	The name of the driver(s).
Driver ID	The ID assigned to the driver(s).
Device	The number of the mobile device the driver was using.
Duty Status	The type of Duty Status entered (On-Duty, Driving, Sleeper Berth, Off-Duty).
Odometer	The odometer reading at the time of the Duty Log entry.
Comments	Any additional information about the Duty Log entry.
Co-Driver Name	The name of the co-driver, if any, for long hauls.
Trailer Details	Any pertinent details about the trailer.
Shipping Document Numbers	Any shipping document numbers associated with the shipment or service.
Location Remarks	Any pertinent information about the location for the shipment or service.

Item	Description
Operation	The type of operation performed on the Driver Logs (Added or Edited).
Operation By	The person who performed the operation.
Operation Time	The time when the operation was performed.

Combined Report

The **Combined Report** provides summarized information for a reporting period.



Combined Report

Combined Report from 1/5/09 12:00 AM to 1/5/09 11:59 PM

Driver:	[redacted]
ID #:	8769
Terminal:	[redacted]
Terminal Address:	[redacted]

Date: 1/5/09
Co-Driver(s): None
ID #(s): -

Total Miles: 223.5
Total On Duty Hours: 08:24
Total Driving Hours: 05:19

Time	Activity	Mobile Device	Miles	Avg. mph	Location(Address/Cross Street,City,State,Zip)	Latitude	Longitude	On Duty	Driving	Sleeper Berth	Off Duty
7:04 AM - 7:14 AM	On Duty	87	-	-	**Landmark:: MGI** 1519 CALHOUN ST, EWING, NJ 08638	40.24	-74.76	00:10	-	-	-
7:14 AM - 8:23 AM	Driving	87	30.9	51.2	**Landmark:: MGI** 1519 CALHOUN ST, EWING, NJ 08638	40.24	-74.76	-	01:09	-	-
8:23 AM - 9:21 AM	On Duty	87	-	-	**Landmark:: COVANTA** 18 HIGHLAND AVE, CHESTER, PA 19013	39.83	-75.39	00:58	-	-	-
9:21 AM - 9:28 AM	Driving	87	0.3	2.6	**Landmark:: COVANTA** 18 HIGHLAND AVE, CHESTER, PA 19013	39.83	-75.39	-	00:07	-	-
9:28 AM - 9:34 AM	On Duty	87	-	-	**Landmark:: COVANTA** 18 HIGHLAND AVE, CHESTER, PA 19013	39.83	-75.39	00:06	-	-	-
9:34 AM - 9:38 AM	Driving	87	0.1	1.5	**Landmark:: COVANTA** 18 HIGHLAND AVE, CHESTER, PA 19013	39.83	-75.39	-	00:04	-	-
9:38 AM - 9:49 AM	On Duty	87	-	-	3102 W FRONT ST, CHESTER, PA 19013	39.83	-75.39	00:11	-	-	-
9:49 AM - 10:52 AM	Driving	87	50	47.6	3215 W FRONT ST, CHESTER, PA 19013	39.83	-75.39	-	01:03	-	-
10:52 AM - 10:58 AM	On Duty	87	-	-	**Landmark:: WAWA(FALLS)** 8830 E PENN VALLEY RD, MORRISVILLE, PA 19067	40.17	-74.79	00:06	-	-	-
10:58 AM - 11:08 AM	Driving	87	3	18	**Landmark:: WAWA(FALLS)** 8830 E PENN VALLEY RD, MORRISVILLE, PA 19067	40.17	-74.79	-	00:10	-	-

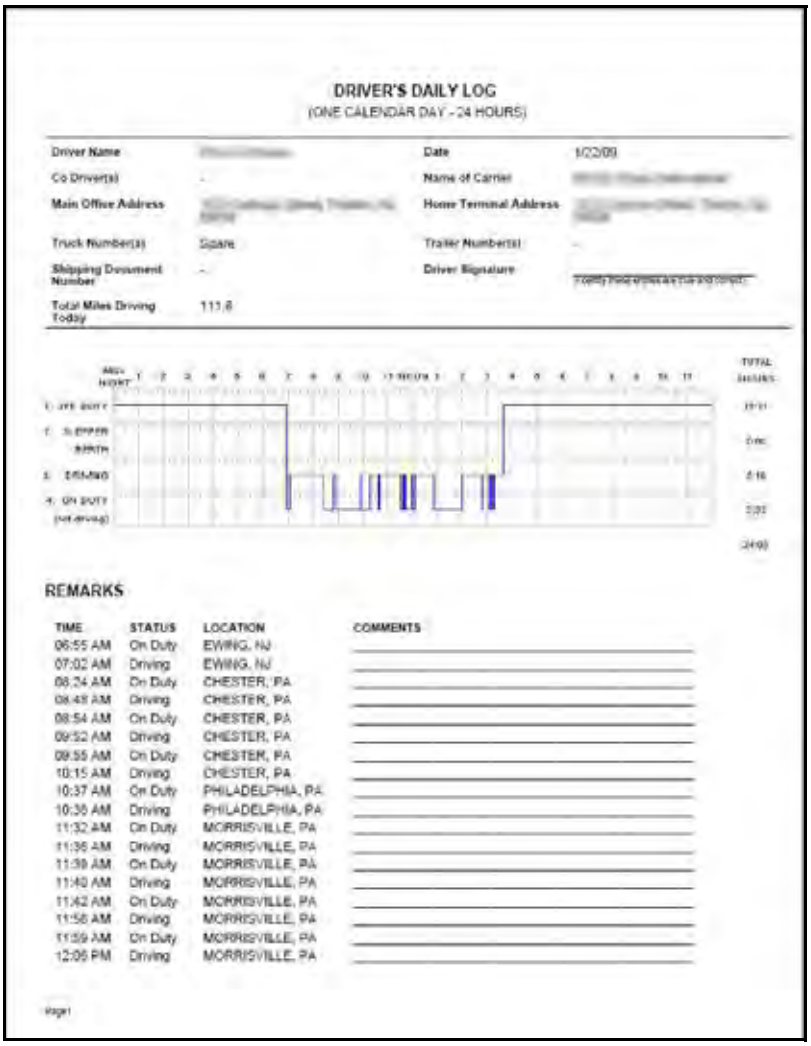
Figure 12–1 Combined Report

Item	Description
Time	States the time range.
Activity	Driving/On Duty/Off Duty.
Mobile Device	Device number.

Item	Description
Miles	Miles traveled.
Avg. MPH	The average speed miles/hr of the vehicle.
Address	The exact location of the device.
Latitude	Latitude information of the vehicle.
Longitude	Longitude information of the vehicle.
On-Duty	Total On-Duty Hours – DD:HH:MM.
Sleeper Berth	Total Sleeper Berth Hours – DD:HH:MM.
Off-Duty	Total Off-Duty Hours – DD:HH:MM.

Daily Log Report as PDF with Grid Graph

The **Driver's Daily Log** provides a visual grid/graph representation of driver daily log data for all the Short Haul or Long Haul information contained within a Driver Log.



DRIVER'S DAILY LOG

(ONE CALENDAR DAY - 24 HOURS)

Driver Name	[redacted]	Date	1/22/09
Co Driver(s)	-	Name of Carrier	[redacted]
Main Office Address	[redacted]	Home Terminal Address	[redacted]
Truck Number(s)	Spare	Trailer Number(s)	-
Shipping Document Number	-	Driver Signature	[redacted]
Total Miles Driving Today	111.6		

MIDNIGHT 1 2 3 4 5 6 7 8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 MIDNIGHT — TOTAL HOURS

1. OFF DUTY
2. SLEEPER BERTH
3. DRIVING
4. ON DUTY (not driving)

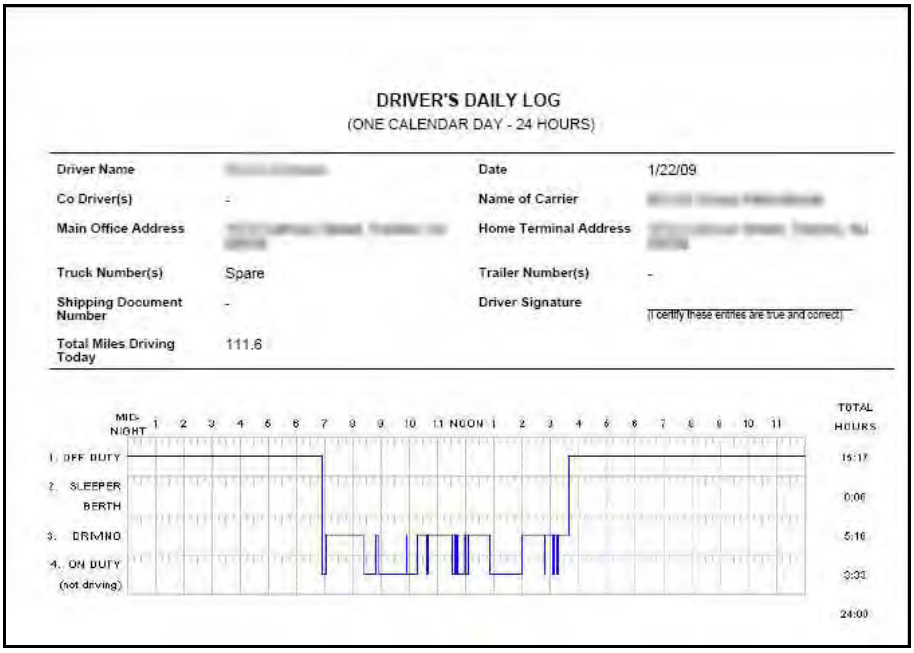
REMARKS

TIME	STATUS	LOCATION	COMMENTS
06:55 AM	On Duty	EWING, NJ	
07:02 AM	Driving	EWING, NJ	
08:24 AM	On Duty	CHESTER, PA	
08:48 AM	Driving	CHESTER, PA	
08:54 AM	On Duty	CHESTER, PA	
09:52 AM	Driving	CHESTER, PA	
09:55 AM	On Duty	CHESTER, PA	
10:15 AM	Driving	CHESTER, PA	
10:37 AM	On Duty	PHILADELPHIA, PA	
10:38 AM	Driving	PHILADELPHIA, PA	
11:32 AM	On Duty	MORRISVILLE, PA	
11:36 AM	Driving	MORRISVILLE, PA	
11:39 AM	On Duty	MORRISVILLE, PA	
11:40 AM	Driving	MORRISVILLE, PA	
11:42 AM	On Duty	MORRISVILLE, PA	
11:56 AM	Driving	MORRISVILLE, PA	
11:59 AM	On Duty	MORRISVILLE, PA	
12:06 PM	Driving	MORRISVILLE, PA	

Page 1

Figure 12–2: Driver's Daily Log

Daily Log Report Un-edited as PDF



DRIVER'S DAILY LOG
(ONE CALENDAR DAY - 24 HOURS)

Driver Name	[redacted]	Date	1/22/09
Co Driver(s)	-	Name of Carrier	[redacted]
Main Office Address	[redacted]	Home Terminal Address	[redacted]
Truck Number(s)	Spare	Trailer Number(s)	-
Shipping Document Number	-	Driver Signature	(I certify these entries are true and correct)
Total Miles Driving Today	111.6		

MID-NIGHT 1 2 3 4 5 6 7 8 9 10 11 NOON 1 2 3 4 5 6 7 8 9 10 11 — TOTAL HOURS

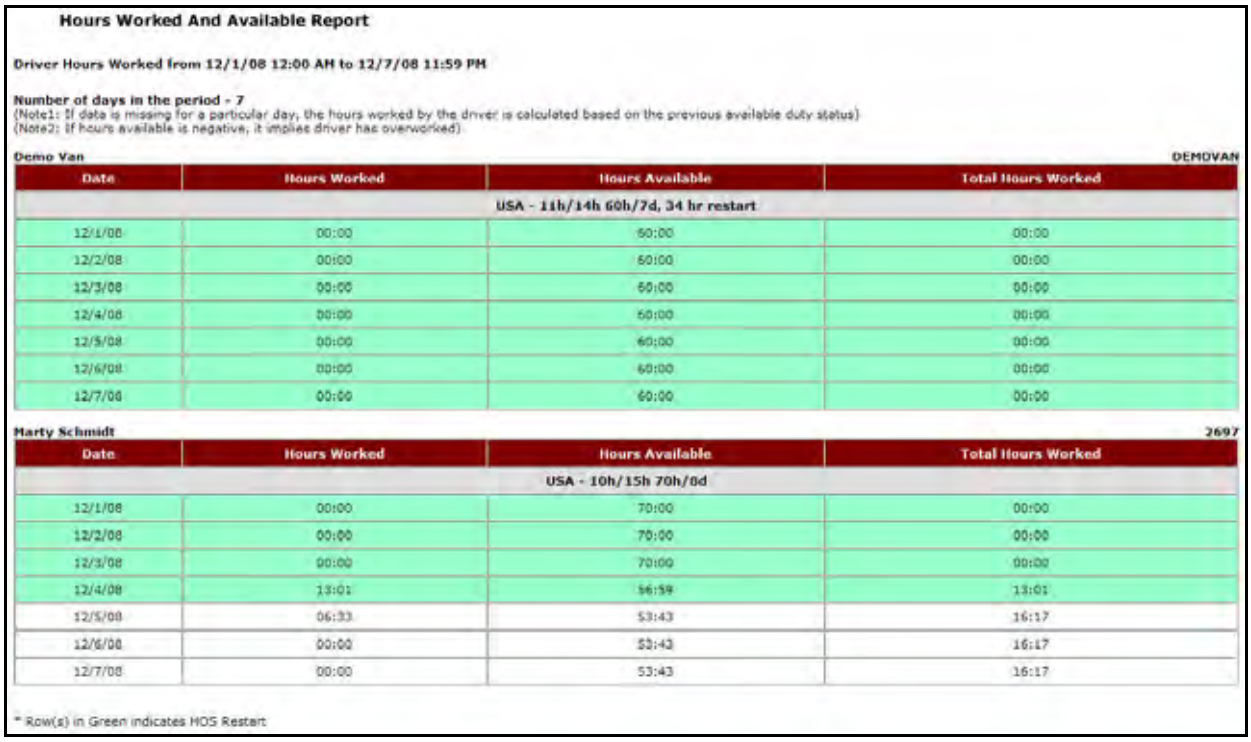
1. OFF DUTY — 15:17
2. SLEEPER BERTH — 0:00
3. DRIVING — 5:16
4. ON DUTY (not driving) — 3:33

24:00

Figure 12–3: Driver's Daily Log

Hours Worked and Available

The Hours Worked and Available Report provides information about the hours available during the reporting period.



Hours Worked And Available Report

Driver Hours Worked from 12/1/08 12:00 AM to 12/7/08 11:59 PM

Number of days in the period - 7
(Note1: If data is missing for a particular day, the hours worked by the driver is calculated based on the previous available duty status)
(Note2: If hours available is negative, it implies driver has overworked)

Demo Van — **DEMOVAN**

Date	Hours Worked	Hours Available	Total Hours Worked
		USA - 11h/14h 60h/7d, 34 hr restart	
12/1/08	00:00	60:00	00:00
12/2/08	00:00	60:00	00:00
12/3/08	00:00	60:00	00:00
12/4/08	00:00	60:00	00:00
12/5/08	00:00	60:00	00:00
12/6/08	00:00	60:00	00:00
12/7/08	00:00	60:00	00:00

Marty Schmidt — **2697**

Date	Hours Worked	Hours Available	Total Hours Worked
		USA - 10h/15h 70h/8d	
12/1/08	00:00	70:00	00:00
12/2/08	00:00	70:00	00:00
12/3/08	00:00	70:00	00:00
12/4/08	13:01	56:59	13:01
12/5/08	06:33	53:43	16:17
12/6/08	00:00	53:43	16:17
12/7/08	00:00	53:43	16:17

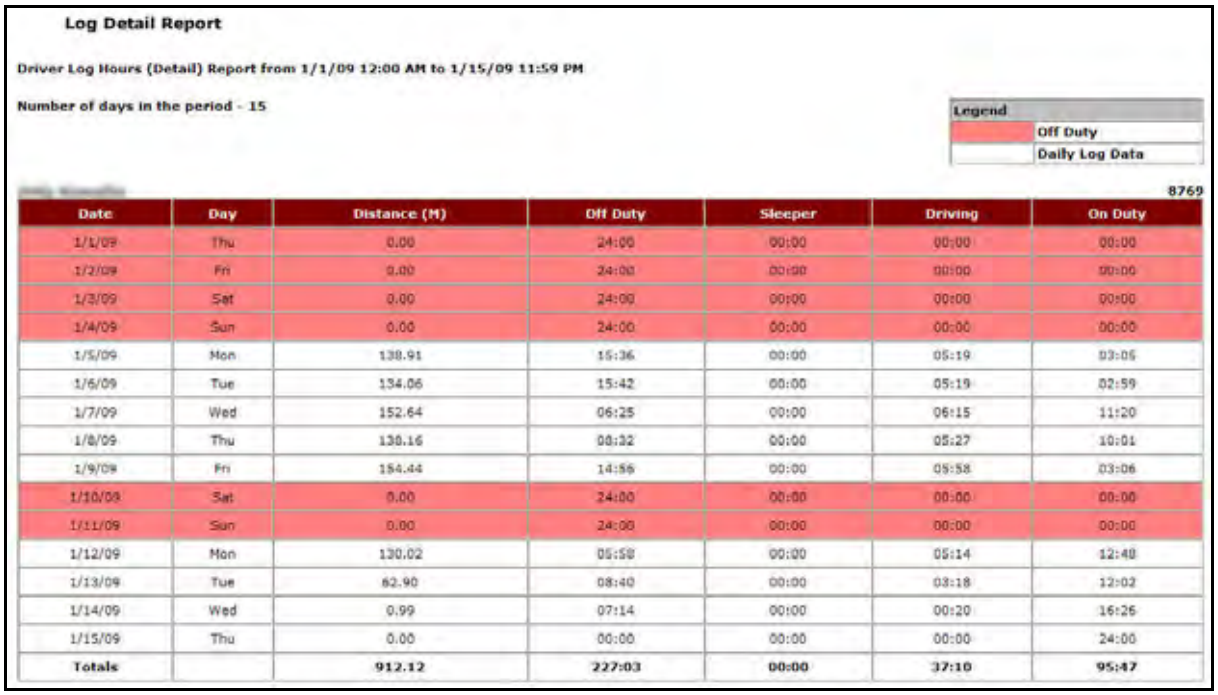
* Row(s) in Green indicates HOS Restart

Figure 12–4 Hours Worked and Available Report

Item	Description
Date	Date on which the violation occurred.
Hours Worked	Total hours worked in a day.
Hours Available	Remaining work hours in a day (as per the HOS rule).
Total Hours Worked	Cumulative hours worked.

Log Hours Detail Report

The **Log Hours Detail** report provides detailed log information for a reporting period.



Log Detail Report

Driver Log Hours (Detail) Report from 1/1/09 12:00 AM to 1/15/09 11:59 PM

Number of days in the period - 15

Legend: Off Duty; Daily Log Data

8769

Date	Day	Distance (M)	Off Duty	Sleeper	Driving	On Duty
1/1/09	Thu	0.00	24:00	00:00	00:00	00:00
1/2/09	Fri	0.00	24:00	00:00	00:00	00:00
1/3/09	Sat	0.00	24:00	00:00	00:00	00:00
1/4/09	Sun	0.00	24:00	00:00	00:00	00:00
1/5/09	Mon	138.91	15:36	00:00	05:19	03:06
1/6/09	Tue	134.06	15:42	00:00	05:19	02:59
1/7/09	Wed	152.64	06:25	00:00	06:15	11:20
1/8/09	Thu	138.16	08:32	00:00	05:27	10:01
1/9/09	Fri	154.44	14:56	00:00	05:58	03:06
1/10/09	Sat	0.00	24:00	00:00	00:00	00:00
1/11/09	Sun	0.00	24:00	00:00	00:00	00:00
1/12/09	Mon	130.02	05:58	00:00	05:14	12:48
1/13/09	Tue	62.90	08:40	00:00	03:18	12:02
1/14/09	Wed	0.99	07:14	00:00	00:20	16:26
1/15/09	Thu	0.00	00:00	00:00	00:00	24:00
Totals		**912.12**	**227:03**	**00:00**	**37:10**	**95:47**

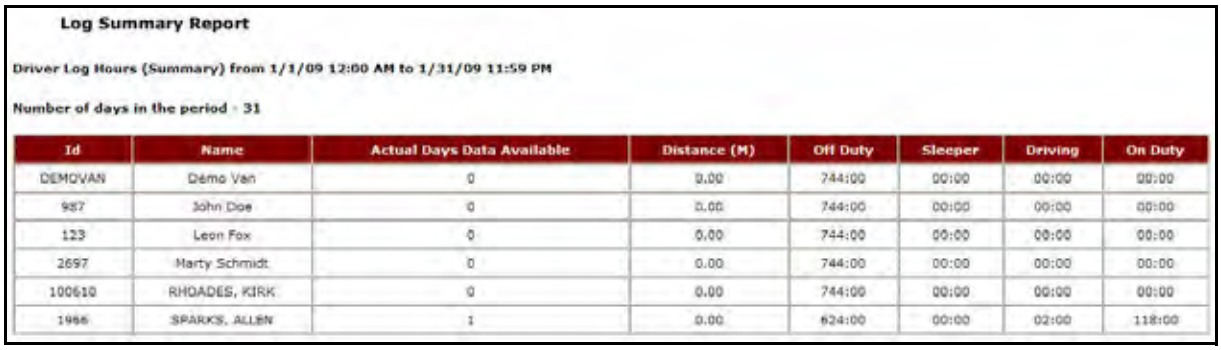
Figure 12–5 Log Hours (Details) Report

Item	Description
Driver name	Name of the driver.
Driver ID	ID of the driver.
Date	Date of each day in the reporting period.
Day	Days included in the reporting period.
Distance (M)	Distance traveled in miles in a day.
Off Duty	Total Off-Duty hours in a day – DD:HH:MM.
Sleeper	Total sleeper berth hours in a day – DD:HH:MM.
Driving	Total driving hours in a day – DD:HH:MM.
On Duty	Total On-Duty hours in a day – DD:HH:MM.
Avg. Speed (MPH)	The average speed (miles) of the vehicle per day.
Log Avg. days	Calculates, on an average, the distance traveled in miles, the number of days that the driver was on OF/SB/DR/ON and his average speed during this period.

Item	Description
On Duty days	Calculates, on an average, the distance traveled in miles, the number of actual days that the driver was On-Duty and his average speed during this period.
Totals	Calculates the total distance traveled in miles and the total number of days that the driver was on OF/SB/DR/ON during this period.

Log Hours Summary Report

The **Log Hours Summary** report provides summarized log information for a reporting period.



Log Summary Report

Driver Log Hours (Summary) from 1/1/09 12:00 AM to 1/31/09 11:59 PM

Number of days in the period - 31

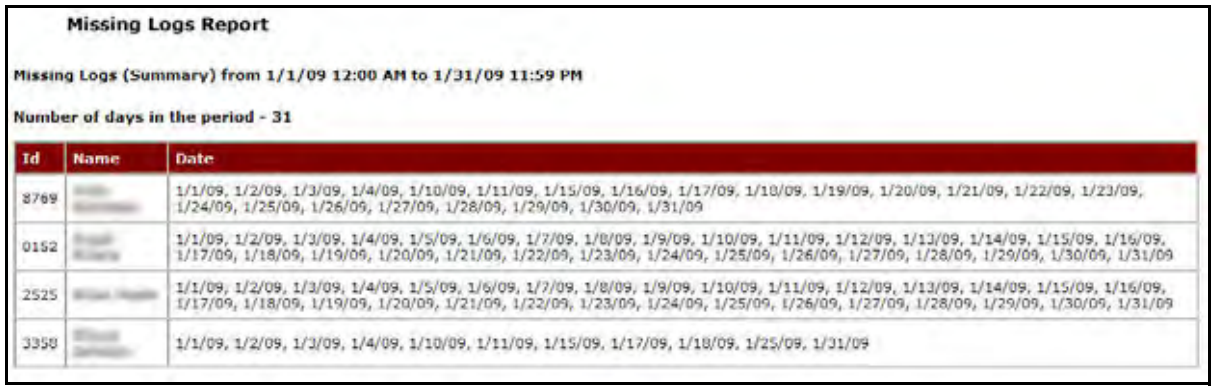
Id	Name	Actual Days Data Available	Distance (M)	Off Duty	Sleeper	Driving	On Duty
DEMOVAN	Demo Van	0	0.00	744:00	00:00	00:00	00:00
987	John Doe	0	0.00	744:00	00:00	00:00	00:00
123	Leon Fox	0	0.00	744:00	00:00	00:00	00:00
2697	Marty Schmidt	0	0.00	744:00	00:00	00:00	00:00
100610	RHOADES, KIRK	0	0.00	744:00	00:00	00:00	00:00
1986	SPARKS, ALLEN	1	0.00	624:00	00:00	02:00	118:00

Figure 12–6 Log Hours (Details) Report

Item	Description
ID	Driver ID.
Name	Driver Name.
Actual Days Data Available	The actual number of days for which data is available.
Distance (M)	Total distance traveled in miles.
Off Duty Total	Off-Duty hours – DD:HH:MM.
Sleeper	Total sleeper berth hours – DD:HH:MM.
Driving	Total driving hours – DD:HH:MM.
On Duty	Total On-Duty hours – DD:HH:MM.
Avg. Speed (MPH)	The average speed (miles per hour) of the vehicle.

Missing Logs Summary Report

The **Missing Logs Summary** report provides summarized missing log information for the reporting period.



Missing Logs Report

Missing Logs (Summary) from 1/1/09 12:00 AM to 1/31/09 11:59 PM

Number of days in the period - 31

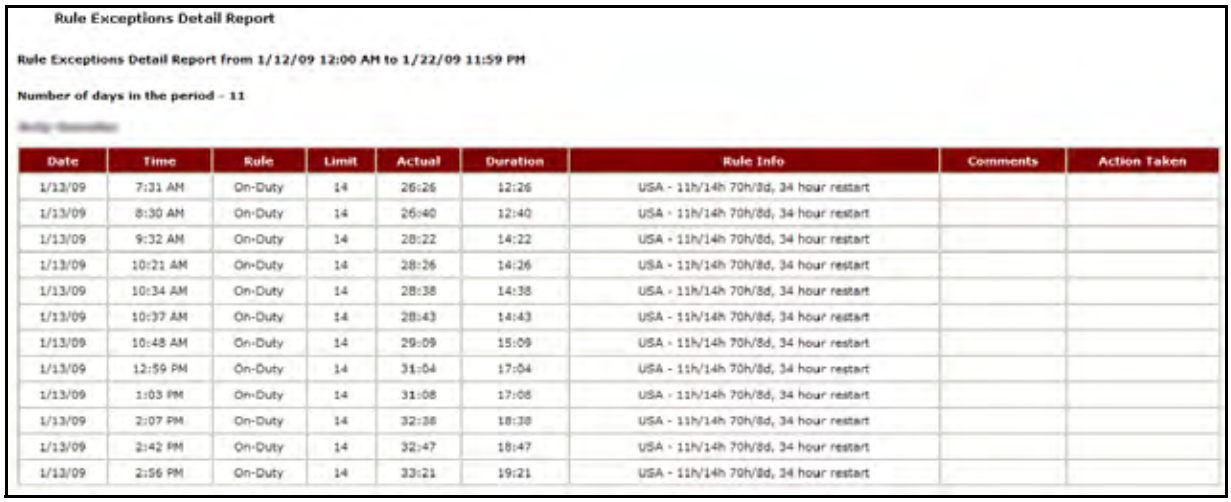
Id	Name	Date
8769	[redacted]	1/1/09, 1/2/09, 1/3/09, 1/4/09, 1/10/09, 1/11/09, 1/15/09, 1/16/09, 1/17/09, 1/18/09, 1/19/09, 1/20/09, 1/21/09, 1/22/09, 1/23/09, 1/24/09, 1/25/09, 1/26/09, 1/27/09, 1/28/09, 1/29/09, 1/30/09, 1/31/09
0152	[redacted]	1/1/09, 1/2/09, 1/3/09, 1/4/09, 1/5/09, 1/6/09, 1/7/09, 1/8/09, 1/9/09, 1/10/09, 1/11/09, 1/12/09, 1/13/09, 1/14/09, 1/15/09, 1/16/09, 1/17/09, 1/18/09, 1/19/09, 1/20/09, 1/21/09, 1/22/09, 1/23/09, 1/24/09, 1/25/09, 1/26/09, 1/27/09, 1/28/09, 1/29/09, 1/30/09, 1/31/09
2525	[redacted]	1/1/09, 1/2/09, 1/3/09, 1/4/09, 1/5/09, 1/6/09, 1/7/09, 1/8/09, 1/9/09, 1/10/09, 1/11/09, 1/12/09, 1/13/09, 1/14/09, 1/15/09, 1/16/09, 1/17/09, 1/18/09, 1/19/09, 1/20/09, 1/21/09, 1/22/09, 1/23/09, 1/24/09, 1/25/09, 1/26/09, 1/27/09, 1/28/09, 1/29/09, 1/30/09, 1/31/09
3350	[redacted]	1/1/09, 1/2/09, 1/3/09, 1/4/09, 1/10/09, 1/11/09, 1/15/09, 1/17/09, 1/18/09, 1/25/09, 1/31/09

Figure 12–7 Missing Logs (Summary) Report

Item	Description
ID	Driver ID.
Name	Driver Name.
Date	Missing log dates.

Rule Exception Detail Report

The **Rule Exception Detail** report provides detailed driver violation information for a reporting period.



Rule Exceptions Detail Report

Rule Exceptions Detail Report from 1/12/09 12:00 AM to 1/22/09 11:59 PM

Number of days in the period - 11

[redacted]

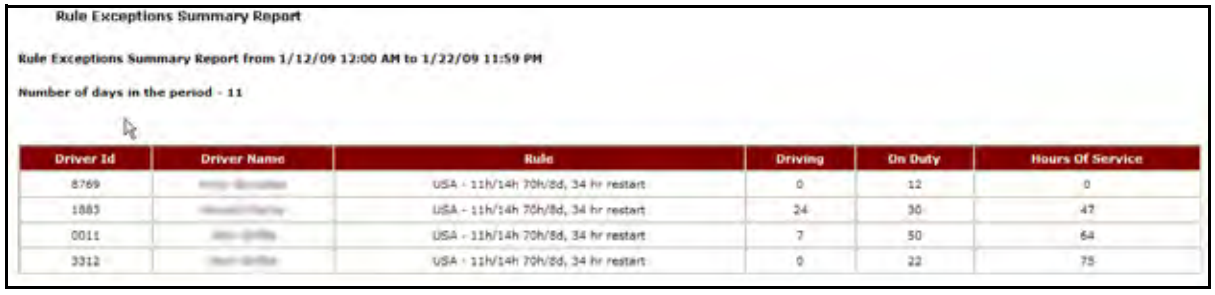
Date	Time	Rule	Limit	Actual	Duration	Rule Info	Comments	Action Taken
1/13/09	7:31 AM	On-Duty	14	26:26	12:26	USA - 11h/14h 70h/8d, 34 hour restart		
1/13/09	8:30 AM	On-Duty	14	26:40	12:40	USA - 11h/14h 70h/8d, 34 hour restart		
1/13/09	9:32 AM	On-Duty	14	28:22	14:22	USA - 11h/14h 70h/8d, 34 hour restart		
1/13/09	10:21 AM	On-Duty	14	28:26	14:26	USA - 11h/14h 70h/8d, 34 hour restart		
1/13/09	10:34 AM	On-Duty	14	28:38	14:38	USA - 11h/14h 70h/8d, 34 hour restart		
1/13/09	10:37 AM	On-Duty	14	28:43	14:43	USA - 11h/14h 70h/8d, 34 hour restart		
1/13/09	10:48 AM	On-Duty	14	29:09	15:09	USA - 11h/14h 70h/8d, 34 hour restart		
1/13/09	12:59 PM	On-Duty	14	31:04	17:04	USA - 11h/14h 70h/8d, 34 hour restart		
1/13/09	1:03 PM	On-Duty	14	31:08	17:08	USA - 11h/14h 70h/8d, 34 hour restart		
1/13/09	2:07 PM	On-Duty	14	32:38	18:38	USA - 11h/14h 70h/8d, 34 hour restart		
1/13/09	2:42 PM	On-Duty	14	32:47	18:47	USA - 11h/14h 70h/8d, 34 hour restart		
1/13/09	2:56 PM	On-Duty	14	33:21	19:21	USA - 11h/14h 70h/8d, 34 hour restart		

Figure 12–8 Rule Exception (Details) Report

Item	Description
Date	Date on which the violation occurred.
Time	Time at which the violation occurred.
Rule	Type of rule violated.
Limit	Maximum limit allowable by the specified rule.
Actual	Actual number recorded.
Duration	Duration of the violation.
Rule Info	Specifics of the above rule.
Comments	Dispatcher/DOT officer's comments.
Action Taken	Details of the corrective action taken.

Rule Exception Summary Report

The **Rule Exception Summary** report provides summarized driver violation information for the reporting period.


Rule Exceptions Summary Report

Rule Exceptions Summary Report from 1/12/09 12:00 AM to 1/22/09 11:59 PM

Number of days in the period - 11

Driver Id	Driver Name	Rule	Driving	On Duty	Hours Of Service
8769		USA - 11h/14h 70h/8d, 34 hr restart	0	12	0
1883		USA - 11h/14h 70h/8d, 34 hr restart	24	30	47
0011		USA - 11h/14h 70h/8d, 34 hr restart	7	50	64
3312		USA - 11h/14h 70h/8d, 34 hr restart	0	22	75

Figure 12–9 Rule Exception (Details) Report

Item	Description
Driver ID	The ID of the driver.
Driver Name	The name of the driver.
Rule	HOS rule associated with the driver. It is assumed that the driver's HOS rule has not changed during the reporting period.
Driving	Hours of driving after the driving violation was triggered.

Item	Description
On Duty	On-Duty after the On-Duty violation was triggered.
Hours of Service	Hours On-Duty (including driving) after the HOS violation was triggered.

Appendix A

Report Generation

Before using GeoManager Reports, you must log into the GeoManager web site:

1. Open a web browser.
2. Enter the address http://www.trimble.com/mobile_resource_management in the Universal Resource Locator (URL) The Trimble home page, shown in Figure 13–1, appears.

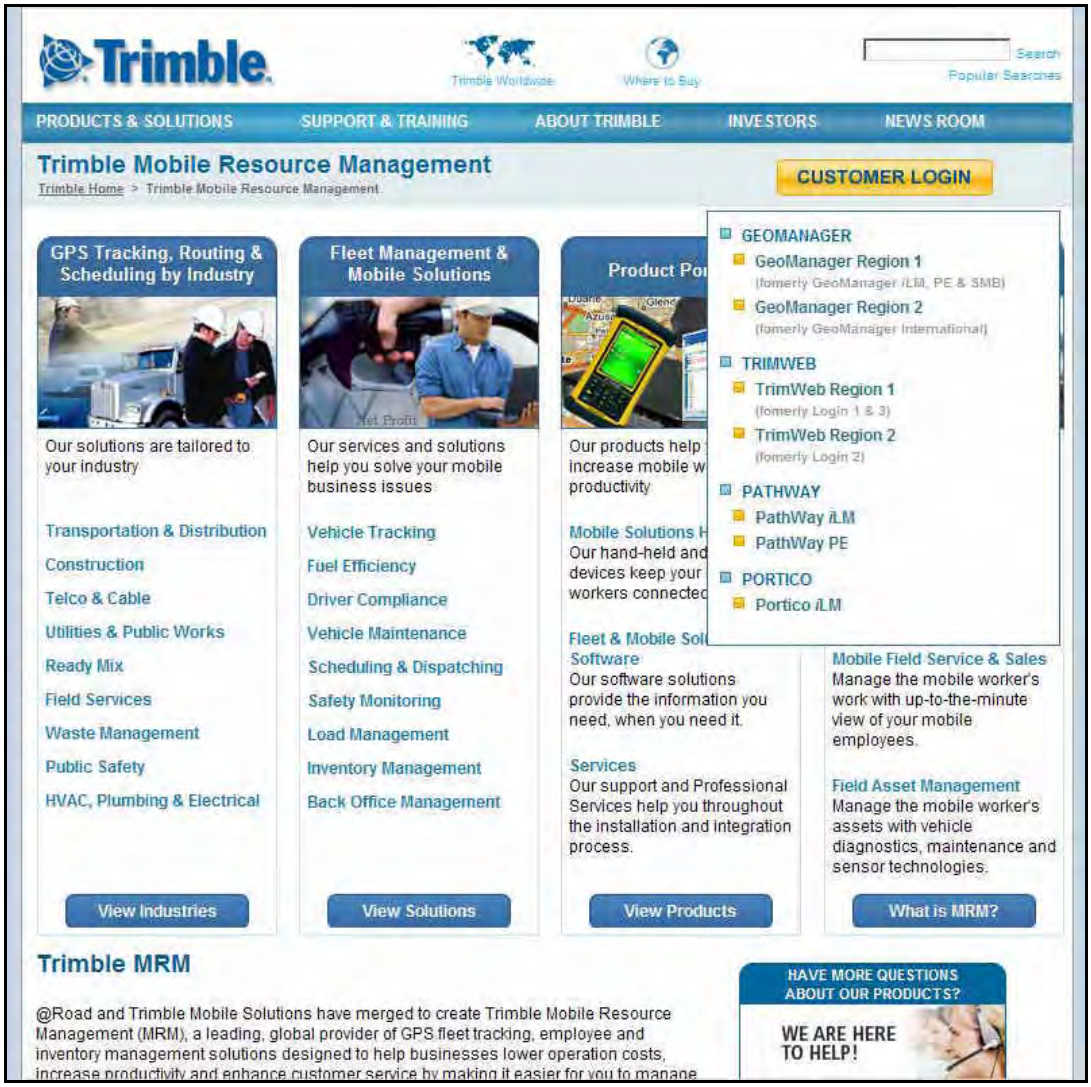


Figure 13–1 Trimble Home Page

3. Select **GeoManager Region 1** from the **Customer Login** drop-down menu. The **GeoManager Login** screen, shown in Figure 13–2, appears.

Figure 13–2: The Trimble GeoManager Login Screen

4. At the prompt, enter the **Username** and **Password,** sent with your equipment.

   Username and **Password** are case sensitive. If you did not receive a **Username** or **Password,** please contact the Trimble MRM Administrator or send an email to Trimble Customer Service at mrmsupport@trimble.com.

5. Click the **Login Here** button or press **Enter**. The **GeoManager** home page, shown in Figure 13–3, appears.

   You can select the **Remember: Application and Username on this computer** checkbox if you want the computer to automatically store your username. This is not recommended if more than one person uses a computer.

Note:

GeoManager does not store password information. Please keep your password in a secure location for reference.

Figure 13–3: GeoManager Home Page

6. Click the Reports link in the Control Panel. The Reports screen, shown in Figure 13–4, appears.

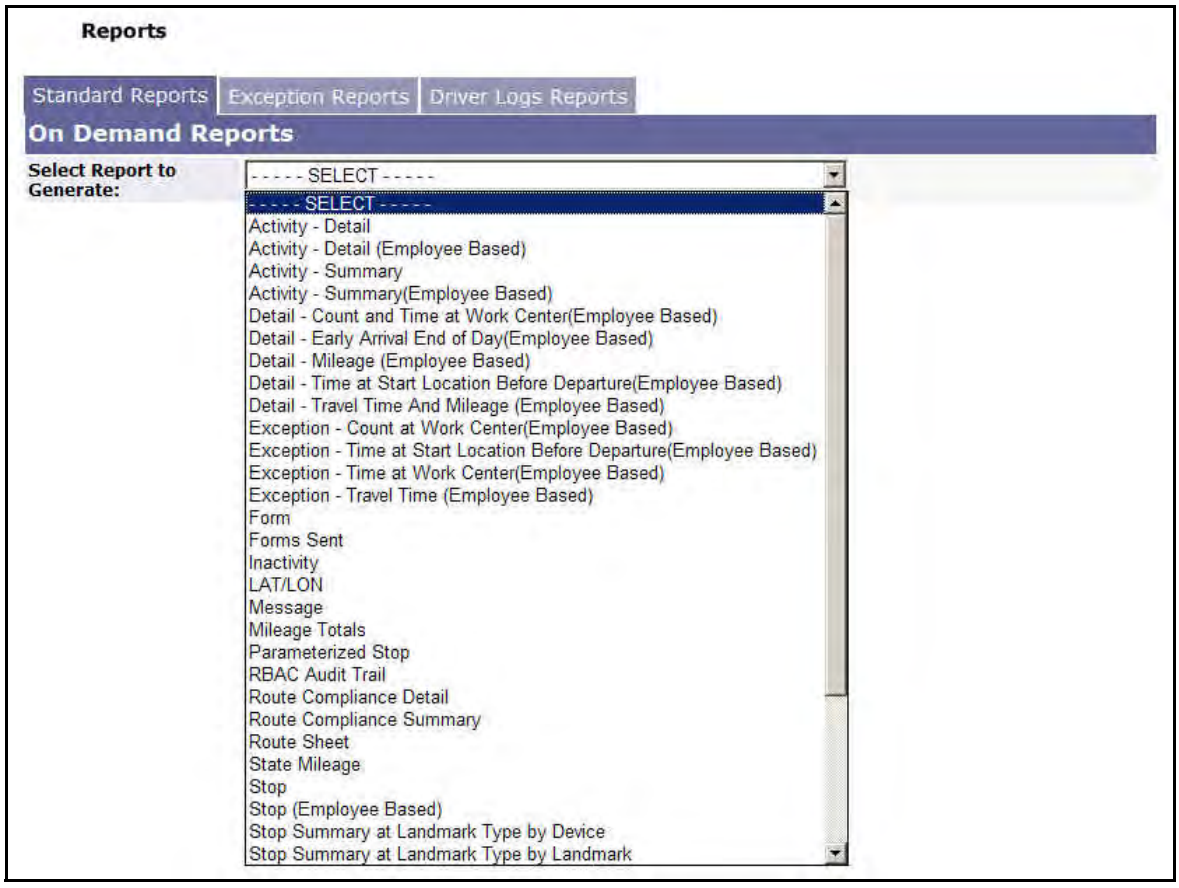


Figure 13–4: Standard Reports Tab

The GeoManager Reports screen has three tabbed areas for different types of reports:

- Standard Reports
- Exception Reports
- Driver Logs Reports (only subscribing customers will see this tab)

7. Select the **name** of the report from the drop-down menu; **Activity-Detail**, for example.
8. The input fields, shown in Figure 13–5, appear.

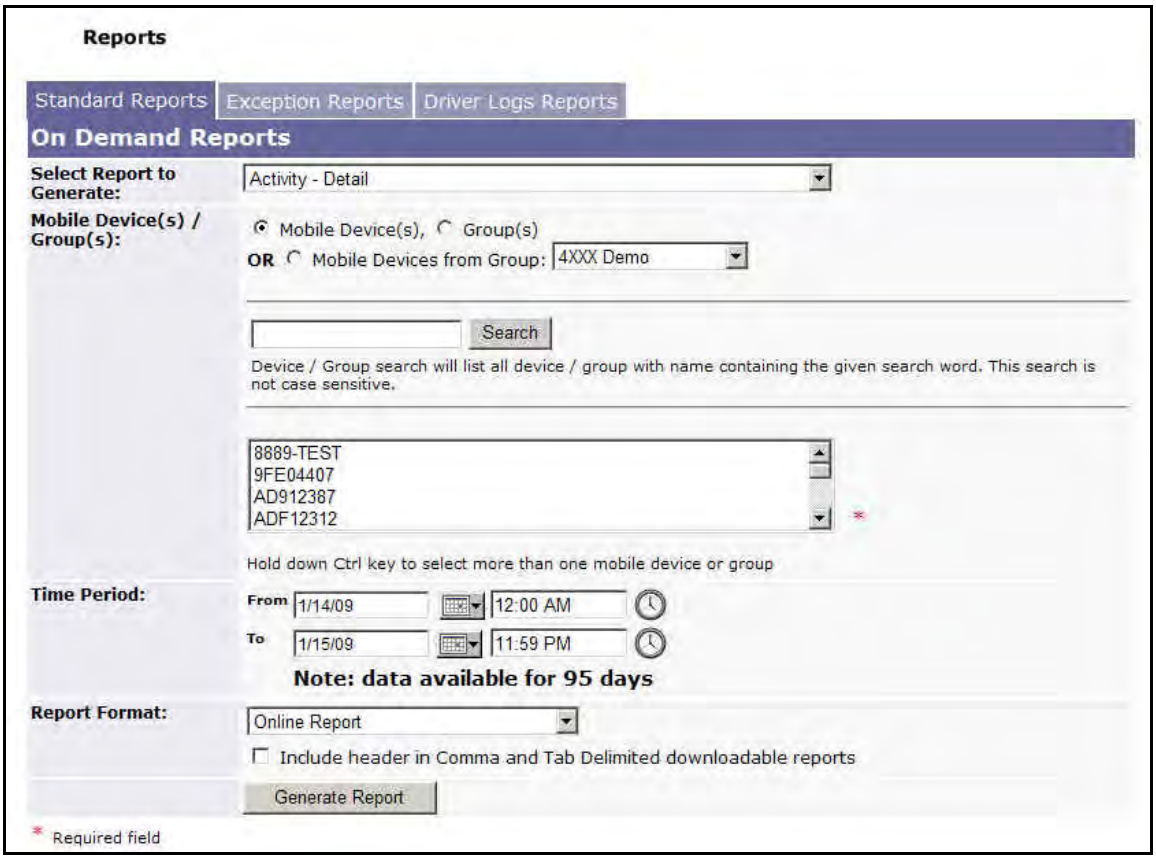


Figure 13–5: Activity – Detail Input Fields

9. Select the Mobile Device(s) / Group(s) you want included on the report:

    a. Select the radio button for mobile devices, Groups or mobile devices from Group.

    If you select **mobile devices from Group**, select the Group from the drop-menu.

    b. Select the mobile devices for the report from the text box. Hold down [Ctrl] key to select more than one mobile device or group.

10. Select the **Time Period** from the **Calendar** and **Clock** drop-menus.

11. Select the **Report Format** from the drop-menu.

    If you choose to download the Exception Assignment Report select the checkbox to **Include header in Comma and Tab Delimited downloadable reports** if you want headers included in the report.

12. Click **Generate Report**. The **Activity – Detail** report, shown in Figure 13–6, appears.

Activity - Detail

Activity Report from 12/11/08 12:00 AM to 12/11/08 11:59 PM

*Note: **Date/Time** and **Stop Duration** are rounded off to the nearest minute)*

Mobile Device: Tempe2700

Summary	
Total Time	0D:23H:59M
Total Travel Time	0D:0H:52M
Total Distance (M)	2.3
Number of Stops	15
Total Stop Time	0D:23H:7M

Stop Color Legend	
Green	stops >= 3 & < 15 min
Yellow	stops >= 15 & < 60 min
Red	stops >= 60 min

Detail:

Date	Time	Status	Distance (M)	Location	County
12/11/08	12:00 AM(PST)	Parked (0D:0H:1M)	0	7929 S Hardy Dr, Tempe, AZ 85284, USA	Maricopa
12/11/08	12:01 AM(PST)	12 mph/ N	0	8107 S Hardy Dr, Tempe, AZ 85284, USA	Maricopa
12/11/08	12:03 AM(PST)	Parked (0D:4H:8M)	0.3	972 W Carver Rd, Tempe, AZ 85284, USA	Maricopa
12/11/08	4:11 AM(PST)	21 mph/ N	0.7	7782 S Hardy Dr, Tempe, AZ 85284	Maricopa
12/11/08	4:16 AM(PST)	unavailable	unavailable	Location Not Available	County Not Available
12/11/08	4:21 AM(PST)	unavailable	unavailable	Location Not Available	County Not Available
12/11/08	4:24 AM(PST)	Parked (0D:0H:2M)	0.7	7854 S Hardy Dr, Tempe, AZ 85284, USA	Maricopa
12/11/08	4:26 AM(PST)	10 mph/ N	0.7	1310 W Auto Dr, Tempe, AZ 85284, USA	Maricopa
12/11/08	4:28 AM(PST)	Parked (0D:0H:2M)	1	**Landmark:** Tempe Office 7782 S Hardy Dr, Tempe, AZ 85284	Maricopa
12/11/08	4:30 AM(PST)	11 mph/ N	1	7782 S Hardy Dr, Tempe, AZ 85284	Maricopa
12/11/08	4:33 AM(PST)	Parked (0D:0H:6M)	1.1	**Landmark:** Tempe Office 7782 S Hardy Dr, Tempe, AZ 85284	Maricopa
12/11/08	4:39 AM(PST)	28 mph/ NE	1.1	1312 W Drivers Way/W Auto Dr, Tempe, AZ 85284, USA	Maricopa
12/11/08	4:44 AM(PST)	unavailable	unavailable	Location Not Available	County Not Available
12/11/08	4:48 AM(PST)	Parked (0D:0H:6M)	1.4	7804 S Hardy Dr, Tempe, AZ 85284, USA	Maricopa
12/11/08	4:54 AM(PST)	12 mph/ S	1.4	7918 S Hardy Dr, Tempe, AZ 85284, USA	Maricopa
12/11/08	4:56 AM(PST)	Parked (0D:0H:17M)	1.6	7902 S Hardy Dr/W Auto Dr, Tempe, AZ 85284, USA	Maricopa
12/11/08	5:14 AM(PST)	19 mph/ NE	1.6	7700 S Hardy Dr, Tempe, AZ 85284, USA	Maricopa
12/11/08	5:16 AM(PST)	Parked (0D:0H:5M)	1.9	**Landmark:** Tempe Office 7782 S Hardy Dr, Tempe, AZ 85284	Maricopa
12/11/08	5:21 AM(PST)	7 mph/ NE	1.9	7782 S Hardy Dr, Tempe, AZ 85284	Maricopa
12/11/08	5:23 AM(PST)	Parked (0D:0H:10M)	1.9	**Landmark:** Tempe Office 7782 S Hardy Dr, Tempe, AZ 85284	Maricopa
12/11/08	5:33 AM(PST)	7 mph/ N	1.9	7782 S Hardy Dr, Tempe, AZ 85284	Maricopa
12/11/08	5:36 AM(PST)	Parked (0D:0H:39M)	1.9	**Landmark:** Tempe Office 7782 S Hardy Dr, Tempe, AZ 85284	Maricopa
12/11/08	6:15 AM(PST)	10 mph/ N	1.9	7730 S Hardy Dr, Tempe, AZ 85284, USA	Maricopa
12/11/08	6:18 AM(PST)	Parked (0D:0H:8M)	2.2	**Landmark:** Tempe Office 7782 S Hardy Dr, Tempe, AZ 85284	Maricopa
12/11/08	6:26 AM(PST)	7 mph/ SW	2.2	7782 S Hardy Dr, Tempe, AZ 85284	Maricopa
12/11/08	6:29 AM(PST)	Parked (0D:0H:6M)	2.3	**Landmark:** Tempe Office 7782 S Hardy Dr, Tempe, AZ 85284	Maricopa
12/11/08	6:35 AM(PST)	9 mph/ NE	2.3	7780 S Hardy Dr, Tempe, AZ 85284, USA	Maricopa
12/11/08	6:37 AM(PST)	Parked (0D:1H:4M)	2.3	**Landmark:** Tempe Office 7782 S Hardy Dr, Tempe, AZ 85284	Maricopa
12/11/08	7:41 AM(PST)	7 mph/ S	2.3	7782 S Hardy Dr, Tempe, AZ 85284	Maricopa
12/11/08	7:44 AM(PST)	Parked (0D:0H:21M)	2.3	**Landmark:** Tempe Office 7782 S Hardy Dr, Tempe, AZ 85284	Maricopa
12/11/08	8:05 AM(PST)	7 mph/ N	2.3	7782 S Hardy Dr, Tempe, AZ 85284	Maricopa
12/11/08	8:07 AM(PST)	Parked (0D:13H:52M) (estimated)	2.3	**Landmark:** Tempe Office 7782 S Hardy Dr, Tempe, AZ 85284	Maricopa

(Estimated) - Stop duration is estimated if the mobile device continues to be stopped beyond the report generation period or the end of day is missing. Estimation is done with respect to the time at which the report is generated.

** Precision of data may vary slightly due to GPS drift*

Figure 13–6: Activity – Detail Report

Please email mrmsupport@trimble.com or call toll-free 1-877-728-7623 for more assistance.