

Ward Fuel View 4.5 User Manual

Release 4.5.2.21



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1. Welcome to Fuel View

Fuel View 4.5 Features

Fuel View's many features automate and simplify management of fueling of fleet resources.

Ease of Use

- Centralized, configurable reports covering one or more specific departments, one or more business units, or the entire customer fleet.
- Online, context appropriate help, down to the field level.
- Dashboard view of overall system health to easily identify issues.

Security

- Secure logins and configurable access to system.
- Role-based access manages what data can be viewed and what data can be updated by each user.
- Enhanced audit trail features allows Fuel View to track data changes.

Fuel Tank Level Sensing

- Automated inventory management of liquid fuels through the interface with TLS equipment, or manually with dipstick.
- Site Status Reporting includes fuel reorder points and potential problems through visual status grid.

Fuel System Overview

Fuel View and Ward fueling components can be combined in different configurations to suit each customers' specific requirements and goals. The following is a description of a typical site set up.

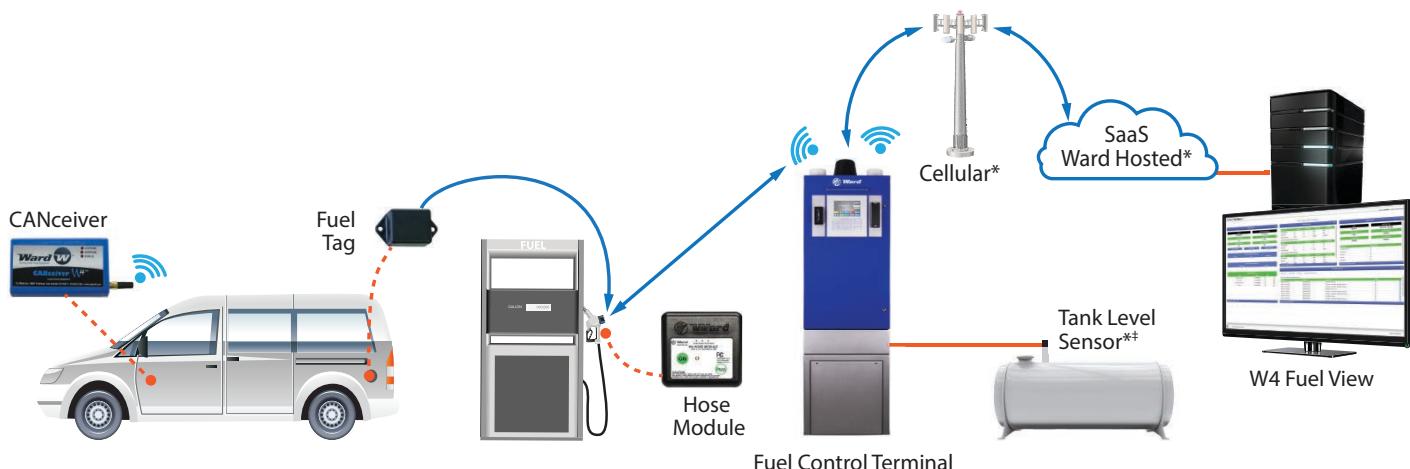


Figure 1. Typical Fuel System Communication with SaaS Overview

Typical Fueling System Components Definitions

At the Fueling Site

Ward Fuel Control Terminal

The FCT controls the pumps through the use of customer fuel scripts. An FCT can also be used to control car washes, gate openings and transit bays for any combination of vehicle fluids and lubricants.

On the Fuel Pump

Ward Hose Module

Notifies the FCT when the Hose Module is in close proximity to a valid Fuel Tag or when the fuel nozzle is removed from the dispenser cradle.

On Fuel Storage Tanks

TLS Interface

Connectivity to a third party tank level monitoring system for above and below ground tanks.

On the Vehicle

Ward CANceiver™

Attached to the OBD II port and communicates wirelessly with the FCT for vehicle validation and provides OBD II data for analysis.

Ward Fuel Tag

Validates the vehicle and communicates wirelessly with the Hose Module to activate fueling.

Data Communications Network Servers

Communication Server

Responsible for communicating with FCTs.

Ward Fuel View Software

Responsible for administering the system and for reporting.

Ward Fuel View Database

Contains all data tables.

Fuel Scripts

All fueling transactions that are initiated at the FCT are controlled by an associated fuel script. Fuel scripts determine how users interact with the FCT when fueling assets. Based on the business rules and system parameters established within Fuel View, there are multiple types of interactions possible:

- Determine the order of the fueling process.
- Define validations that are performed, such as employee identification, vehicle identification, and odometer entry.
- Display messages to the user through the FCT.

Fueling Card Access Definitions

Employee The Employee card is coded with an employee number and used exclusively by that employee and may have vehicle ID prompts.

Vehicle The Vehicle card is coded with a vehicle number and used exclusively for that vehicle and may have employee ID prompts.

Site The Site card is enabled for an entire site and is generally held by the site supervisor, and is not limited to fuel type. Depending on company policy, any vehicle may be fueled or employee use the card, and be prompted for employee and or vehicle numbers. The card may be limited to either one site or to unlimited sites.

Administrative The Administrative card is enabled for an entire site and programmed with all fueling privileges, as well as other functions such as disabling an FCT. The card may be limited to either one site or to unlimited sites.

Data Relationship Overview



- It is important to understand the components of the fuel system to be able to effectively navigate the menus, grids and reporting in Fuel View.
- A company typically has multiple fueling sites – each site having one or more FCT, pumps and tanks. Typically, a single FCT manages up to ten hoses with versatile configuration possibilities. (i.e. ten single pumps or five dual pumps). Each pump nozzle is assigned a hose module.
- Each tank has an associated fuel type. Fuel can be received from tankers and transferred between tanks. Alerts can be programmed to manage tank levels.

Anatomy Of A Site

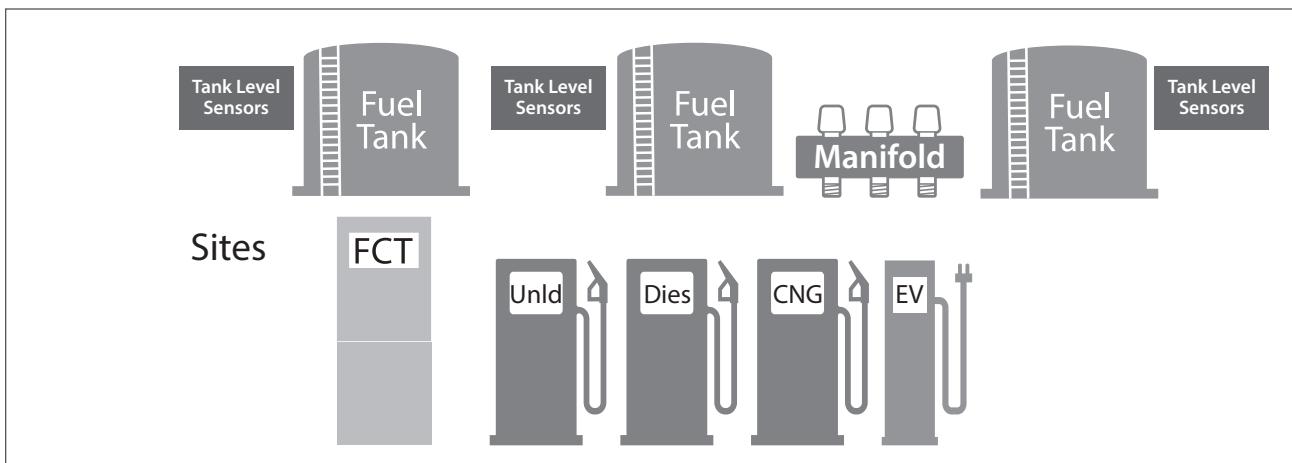


Figure 2. Sites

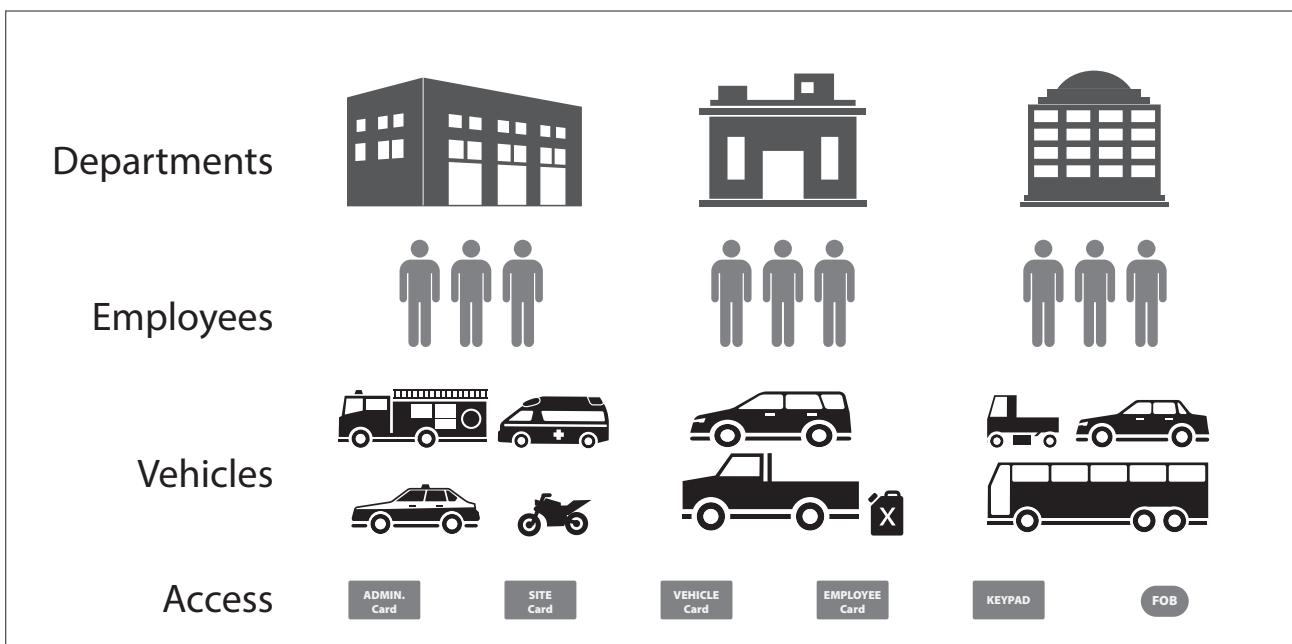


Figure 3. Assets

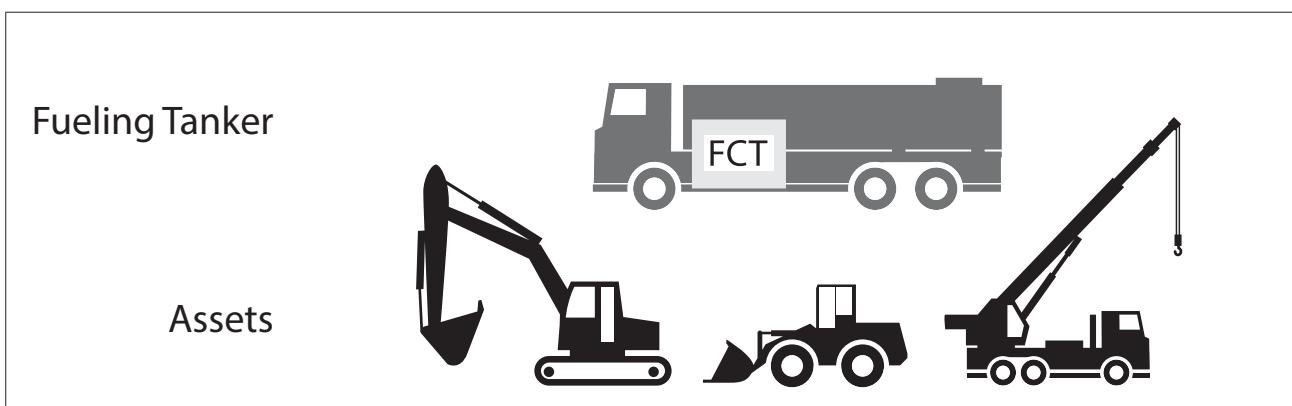


Figure 4. Mobile Fueling

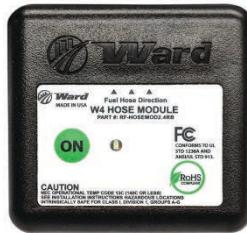
2. Requirements

Hardware And Software Components



Ward Fuel Tag

Installed on the vehicle's fuel filler neck and communicates with the Hose Module.



Ward Hose Module

Allows authorization and data transfer to and from the FCT and transaction data from fuel islands and CANreceivers.



Ward CANceiver

Captures vehicle and passive GPS data and driver behavior through advanced OBD II interface and WiFi communication with the FCT.



FOB, Swipe Card, or Key

Fuel access and authorization methods include HID badges, data keys, fobs, magnetic stripe cards, keypad entry, or various combinations.



Ward Fuel Control Terminal

On-site interface with dispensing systems for gasoline, diesel, CNG, LNG, propane, and other fuel or fluid solutions, as well as gate and car wash access.



Ward Fuel View Software

Web-based application to setup, monitor, manage, and report activity, status, and statistics for sites, tanks, pumps, fleet vehicles, departments, employees and drivers.



NOTE: Specific hardware and software components utilized are on a client-by-client basis.

System Requirements

Ward strongly recommends the use of a dedicated server for Fuel View hosting. If a customer chooses to run the application on a non-dedicated server, it is the customer's responsibility to verify the server has the proper resources for satisfactory performance.

 **NOTE: Consult with Ward's Technical Support Team as early as possible if you intend to have multiple applications sharing the Fuel View host computer.**

- Protect your Fuel View server through a non-interruptible power supply (UPS) with built-in surge suppression that is capable of sustaining the operation of the server for a minimum of 10 minutes of power failure.
- Incorporate the Fuel View host into your company's Disaster Recovery Plan and organization-wide backup schedule.
- Incorporate your Fuel View database into a maintenance plan that can check the status of database objects and repair as needed.

 **IMPORTANT: Perform regular backups to protect system and database against data loss due to electrical, environmental, or mechanical failures.**

The following are minimum requirements for running the Fuel View application:

- Windows Server 2008 R2 or newer
- .Net framework 3.5, 4, 4.5 are installed/configured
- Remote or VPN access
- Static IP addresses, subnet mask and gateway for the system
- Local Administrator level access
- Minimum screen resolution of 1280x768

 **NOTE: Other applicable requirements are dependent on system size and configuration.**

TCP Ports

TCP Ports are required to be open on the server so the Fuel View and communication programs are available to users and field data collection devices across the network. The following ports must be available and open for Fuel View to function properly:

- 5000 – 5015: Web site ports
- 3001: Connect Communications program
- 4001: Online Listener Communications program
- 4003: Online Listener Communications program
- 13000: CANceiver Listener Communications program
- 22: Telnet access
- 80: MOXA 3121 communication

 **NOTE: Product Installation of Fuel View software and updates are performed by Ward technicians and may include custom configuration.**

Browser Support

The Fuel View user interface allows users to access the application through a Web browser.

The browser must support HTML5. The following browsers support HTML5:

- Internet Explorer 10 or higher (Version 11 is recommended)
- Mozilla Firefox (Latest version)
- Chrome (Latest version)

 **IMPORTANT: Running IE (Internet Explorer) in compatibility mode will cause user interface errors. Ensure compatibility mode is turned OFF, and all check-boxes in the Compatibility Mode window are unchecked. Contact your Help Desk if you do not have Administrator rights to your PC.**

Disable IE Compatibility Mode

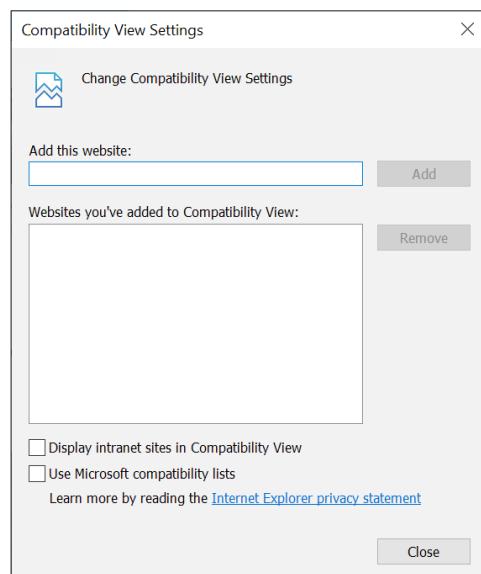
Running IE (Internet Explorer) in compatibility mode may cause user interface errors in Fuel View. Ensure the compatibility mode is turned off, and check-boxes in the Compatibility Mode window are unchecked.

To turn off compatibility mode:

1. Open your browser.
2. Open Tools in menu bar.
 - In IE (versions 10/11), select the **Tools** icon in upper right corner of screen.



3. Select **Compatibility View Settings**.



At the bottom of the screen:

4. Uncheck the **Display intranet sites in Compatibility View** check-box.
5. Uncheck the **Use Microsoft compatibility lists** check-box.
6. Click **Close**.

To undo compatibility for other applications (Google Chrome, Mozilla etc.):

Enable IE Compatibility View For Specific URLs

1. Open your browser.
2. Select the **Tools** icon.
3. Select **Compatibility View Settings**.
4. In the **Add this website** field, enter the website url.
5. Check the **Display Internet sites in Compatibility View** check-box.
6. Click **Add**.

3. Getting Started

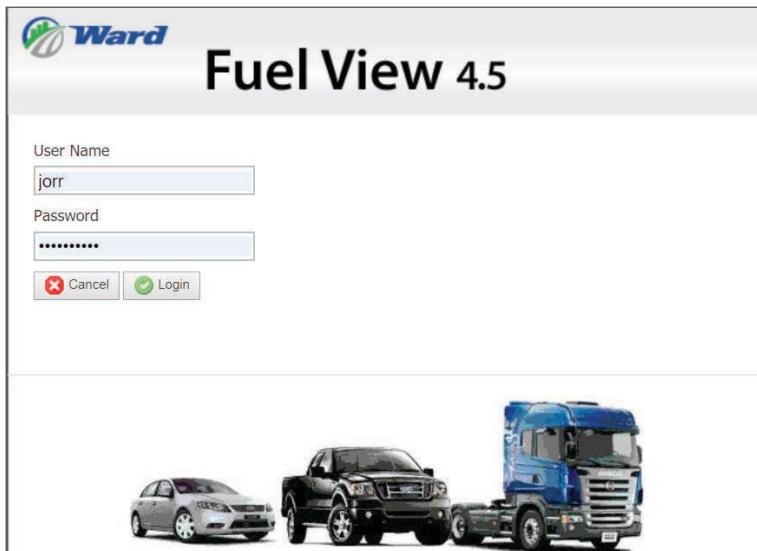
Create A Fuel View Desktop Shortcut

Ward supports Internet Explorer 11. For other versions, follow IE instructions as available. To create a shortcut on the desktop in IE 11:

1. Press **Alt** to unhide the menu bar below the URL address.
2. Click **File**.
3. Hover over **Send**.
4. Click **Shortcut To Desktop**.

Once the shortcut has been established:

5. Click the Shortcut to launch the Fuel View application and bring up the Login screen.



6. Enter your User Name and Password to launch Fuel View.

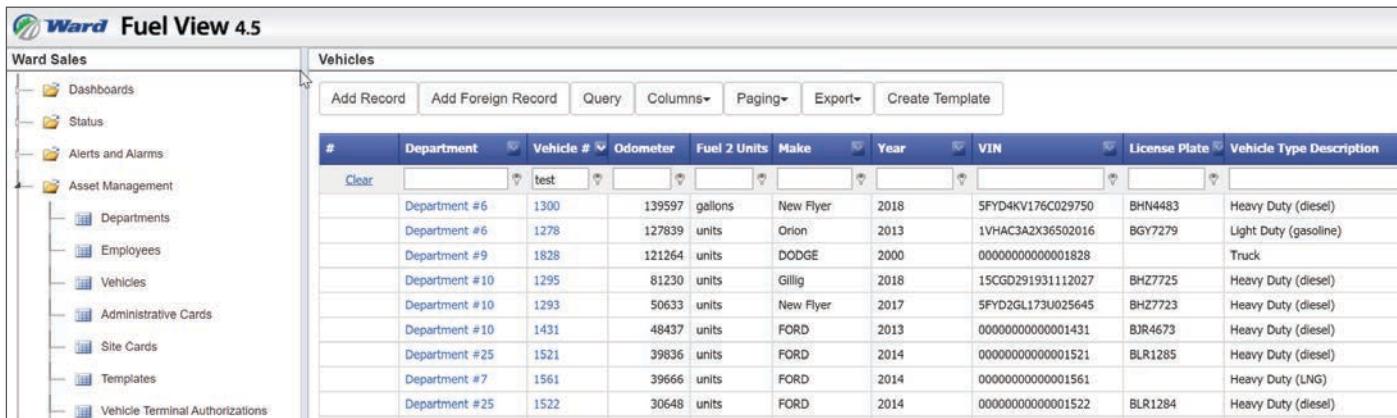
The screenshot displays the Fuel View At-A-Glance dashboard. It includes several key sections:

- System Overview:** Shows Version 4.52 Build 010, Active Employees (152), Active Vehicles (29), Transactions Today (1), and Vehicles Entered Today (1).
- Transaction History:** Displays Diesel transactions for Today, Yesterday, Last 7 Days, and Last 30 Days.
- Database Status:** Shows Server (SQL Server), Recovery Model (FULL), and various backup logs.
- Communication Services:** Lists services like WardConnect, Online Listener, CMOnline Listener, Event Parser, and Scheduled Task Service, each with status indicators (Up/Down).
- Alerts, Alarms & Errors:** A table showing System Alerts, Service Alerts, TLS Alarms, and Transaction Processing Errors.

 The dashboard also features a sidebar with links to various Ward modules like Sales, Assets and Alarms, Asset Management, Site Management, etc., and a footer with copyright information and version details.

Screen Layout Overview

Fuel View screen layout is divided into several sections.



#	Department	Vehicle #	Odometer	Fuel 2 Units	Make	Year	VIN	License Plate	Vehicle Type Description
Clear		test							
Department #6	1300	139597	gallons	New Flyer	2018	5FYD4KV176C029750	BHN4483	Heavy Duty (diesel)	
Department #6	1278	127839	units	Orion	2013	1VHAC3A2X36502016	BGY7279	Light Duty (gasoline)	
Department #9	1828	121264	units	DODGE	2000	00000000000001828		Truck	
Department #10	1295	81230	units	Gillig	2018	15CGD291931112027	BHZ7725	Heavy Duty (diesel)	
Department #10	1293	50633	units	New Flyer	2017	5FYD2GL173U025645	BHZ7723	Heavy Duty (diesel)	
Department #10	1431	48437	units	FORD	2013	00000000000001431	BJR4673	Heavy Duty (diesel)	
Department #25	1521	39836	units	FORD	2014	00000000000001521	BLR1285	Heavy Duty (diesel)	
Department #7	1561	39666	units	FORD	2014	00000000000001561		Heavy Duty (LNG)	
Department #25	1522	30648	units	FORD	2014	00000000000001522	BLR1284	Heavy Duty (diesel)	

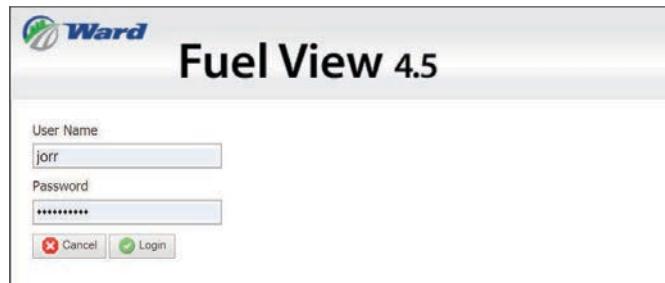
Screen Sections

1. Site Name
2. Directory
3. Screen Name
4. Tool Bar
5. Access Control Center
6. Main Body
7. Message Center
8. Fuel View Version

The top section of the window provides the user with information about where they are in the application. The Site Name indicates the customer. The directory on the left provides navigation to the different sections in Fuel View. The main body contains the grids and the update and data entry sections for entering data into the Fuel View database. The message center provides status messages to the user from background tasks.

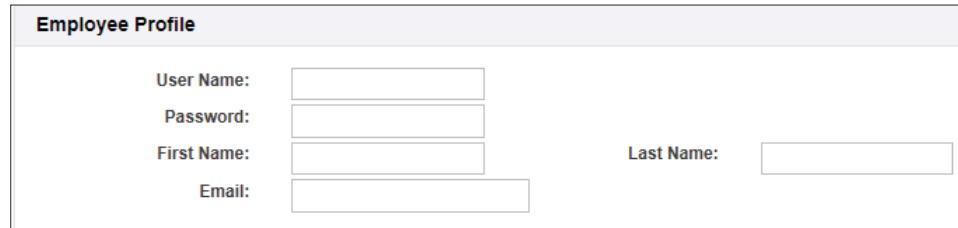
Request A User Account

If Fuel View is configured with an Administrator email address you will see a Register button on the login screen. The Register button allows a potential user request access to the Fuel View system.



Request A User Account

1. Click **Register** to open the Employee Profile form.



Employee Profile	
User Name:	<input type="text"/>
Password:	<input type="password"/>
First Name:	<input type="text"/>
Email:	<input type="text"/>
Last Name:	<input type="text"/>

2. Fill out the required fields:

User Name The user name must be unique

Password The password must conform to the password standards.

First Name

Last Name

Email The address to receive notifications from Fuel View

3. Click **Save Profile** to submit a request to the Fuel View Administrator to add your account.

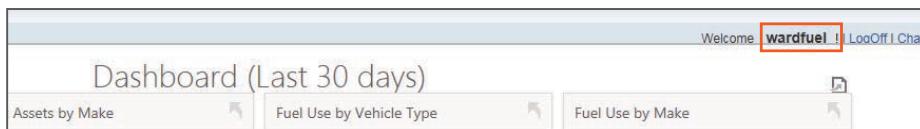
- You will be emailed a confirmation to the email address specified with a link to verify that the email address is correct.

The Fuel View Administrator will receive an email with your request for Fuel View access. The administrator will access Fuel View and complete your account profile by assigning a specific role and access permissions. Once these have been updated you will be able to login to Fuel View using your User Name and Password.

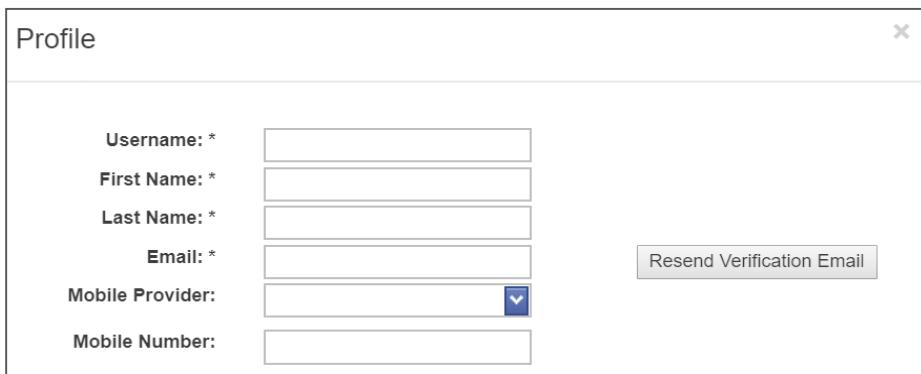
Modify Profile Data

1. Log into Fuel View

2. Click **your name** in the title bar next to Welcome to access the User Profile dialog.



- This allows you to change your user profile. If your email address is not verified you will see a button to resend the confirmation email.



Field	Type	Value
Username:	Text	[Redacted]
First Name:	Text	[Redacted]
Last Name:	Text	[Redacted]
Email:	Text	[Redacted]
Mobile Provider:	Text	[Redacted]
Mobile Number:	Text	[Redacted]

- If a mobile or text number is not verified there will be a button to resend the mobile number confirmation

Password Complexity

Fuel View has a minimum requirement for password complexity that can be controlled by your organization. If you attempt to use a password that does not meet complexity standards, you will receive a Password Expiration Reminder message.

Along with the complexity requirements, there is an automatic password expiration that will force you to change your password after a **set number of days**. If the current date is within 20% of the expiration date, a reminder will display allowing you to change your password.

Fuel View retains the previous five passwords that cannot be reused. Requests to change password requirements can be made to Ward Technical support.



For quick access to Fuel View, save the Login page as a home or favorite page.

Postpone Password Change

1. Click **Cancel** to postpone changing the password until the expiration date is reached.

Forgot Password

If a password is entered incorrectly, a **Forgot Password** option will appear on the login screen. If a new password is required, click the link and a new screen will prompt for the User Name and the assigned email address. When these are entered and the Retrieve Password button is clicked, if the User Name and assigned email match in Fuel View, an email containing a temporary password and a link to Fuel View will be sent. Follow the instructions in the email and update the password with a permanent password.

 **NOTE: Anytime you change your email address Fuel View requires confirmation.**

Log Off

Fuel View may be exited from the LogOff link in the upper right corner of the Title bar.

1. Click **LogOff**.
2. Close Fuel View.

Directory Navigation

Fuel View's directory navigation is located on the left side of the screen. Menu selections may differ based on customized customer preference and user access level.

Directory

1. Click a folder icon to open or close the subdirectory of grids.



2. Click a grid icon to expand a data grid.
 - Grids screens remain open until another grid is selected.
3. Adjust the directory panel size by dragging the blue border panel on the right with the mouse. The border turns green when it is activated.

 **Keyboard Shortcut: Press F5 to refresh or clear a screen.**

 **NOTE: Fuel View menu selections differ based on user Security Access Level.**

Common Screen Features

- All screens have a tool bar at the top of the screen.
- Screens and their contents are accessible based on user role and filters such as district or department.
- Entered and accumulated data is viewed in grids.

- In grids, Add Record or Query are selected from the tool bar, and a Profile screen for data entry or a detail query is displayed; query screen fields vary per grid.
- Required fields are marked with an asterisk (*).
- The default state of every grid is Active Data. To view inactive data, run a query for Inactive Data Perform A Basic Query, page 26.
- If you change the default state of a screen or move columns, Fuel View maintains the changes after the session is terminated.
- Profile screens are closed by clicking the **X** button located in the top right corner of the screen.
- Filter screens have a **Clear** function to clear the filter fields and leave the grid data unchanged.

Grids

The Fuel View interface is an extensive grid system that presents data for in-depth review and queries. Columns can be adjusted by pulling the header row borders to increase or decrease width and can be dragged by the header to change the order. Fuel View remembers the grid settings for each user.



The screenshot shows the Fuel View interface. On the left, there is a navigation tree titled "Ward Sales" with the following structure:

- Dashboards
- Status
- Alerts and Alarms
- Asset Management** (selected)
 - Departments
 - Employees
 - Vehicles** (selected)
 - Administrative Cards
 - Site Cards
 - Templates

On the right, there is a grid titled "Vehicles" with the following columns:

#	Department	Vehicle #	Odometer	Fuel 2 Units	Make	Year	VIN	License
Department #6	1300	139597	gallons	New Flyer	2018	5FYD4KV176C029750	BHN448	
Department #6	1278	127839	units	Orion	2013	1VHAC3A2X36502016	BGY7275	
Department #9	1828	121264	units	DODGE	2000	000000000000001828		
Department #10	1295	81230	units	Gillig	2018	15CGD291931112027	BHZ7725	
Department #10	1293	50633	units	New Flyer	2017	5FYD2GL173U025645	BHZ7721	
Department #10	1431	48437	units	FORD	2013	000000000000001431	BJR4673	
Department #25	1521	39836	units	FORD	2014	000000000000001521	BLR1285	
Department #7	1561	39866	units	FORD	2014	000000000000001561		

Grids List

Administrative Cards by Department	Home CANceiver Config	Transactions by Site
CANceiver Events	Product Summary by Dept	Transactions by Site and Product
Car Washes	Product Summary by Site	Transactions by Site and Transaction Type
Employees	Product Summary by Terminal	Transactions by Site Card
Employees by Department	Product Summary by Vehicle	Transactions by Terminal
Fleet Data by Department and Vehicle	Site and Tank Summary by Site	Transactions Extended
Fleet Data by Vehicle	Site Pumps	Transactions Extended By Dept
Fleet Utilization Details	Site Tanks	Transactions Extended By Dept with Mileage
Fuel Adjustments	Tank Level Summary	Vehicle Cards by Department
Fuel Receipts by Date/Time and Product	Tanks Test	Vehicle Diagnostic Trouble Codes (W3 CANceivers)
Fuel Receipts by Date/Time and Site	Terminal Tanks	Vehicle Diagnostic Trouble Codes (W4 CANceivers)
Fuel Usage by Department	TLS Tank Level Inventory	Vehicles by Repair Location
GPIO Events	Transactions by Administrative Card	Vehicles Not Fueled
GreenHouse Details	Transactions by Date and Time	Vehicles with Cards by Department
Greenhouse Report	Transactions by Department	
	Transactions by Employee	
	Transactions by MPG	

 **NOTE:** Fleet information can be exported in common file formats from grids (see Export Grid Data, page 23).

 **TIP:** Hover over a field for pop-up screen hints and field descriptions.

Customize Grids

The Columns tool allows users to create a customized view of data to display on a grid.

Column Tool Definitions

Choose Columns List of columns available to be added to the current grid

Show All Columns Adds all available columns to the grid

Clear Columns Removes all columns from the grid

Reset Columns Returns grid to default state

Adjust A Column Width

Column widths can be adjusted by hovering over a header's border and dragging when the two-way arrow appears.

Move A Column

The order of columns can be changed by dragging the column's header to the desired location and releasing it when the white arrows appear.

#	Vehicle #	Make	VIN
BobK	Ford	2013	

Add A Column To The Grid

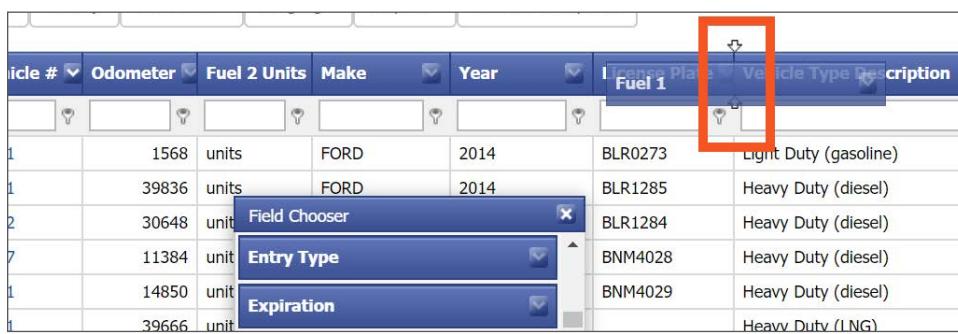
1. Click the **Columns** tool to display drop-down list of options.

Add Record	Add Foreign Record	Query	Columns▼	Paging▼	Export▼	Create Template
#	Department	Vehicle #	Od	Make	Year	VIN
Department #6	1300		New Flyer	2018	5FYD4KV176C029750	
Department #6	1278		2013		1VHAC3A2X36502016	
Department #9	1828	121264	DODGE	2000	000000000000001828	

2. Click **Choose Columns** to display the list of hidden categories.

#	Department	Vehicle #	Odometer	Fuel 2 Units	Make	Year	VIN
Department #6	1300	139597	gallons	New Flyer	2018	5FYD4KV176C029750	
Department #6	1278	127839	units			1VHAC3A2X36502016	
Department #9	1828	121264	units			000000000000001828	
Department #10	1295	81230	units			0291931112027	
Department #10	1293	50633	units			GL173U025645	
Department #10	1431	48437	units			0000000001431	
Department #25	1521	39836	units			0000000001521	
Department #7	1561	39666	units			0000000001561	
Department #25	1522	30648	units			0000000001522	
Department #5	1541	14850	units	FORD	2015	000000000000001541	

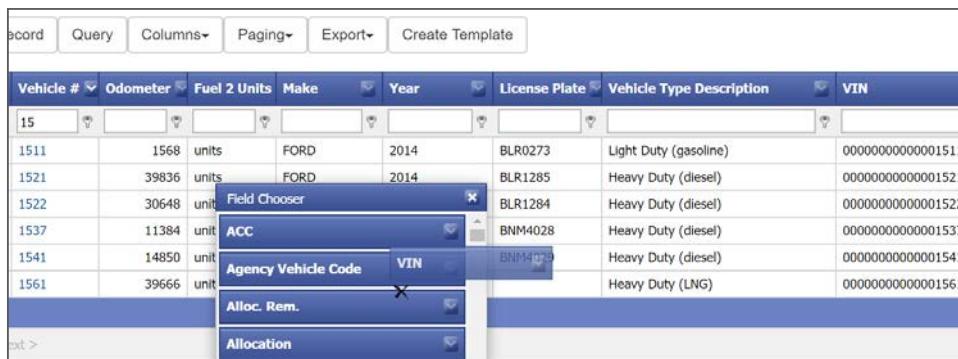
3. Drag a blue column to the desired location in the grid's header area.
4. Drop the column when white arrows appear above and below desired location.



Vehicle #	Odometer	Fuel 2 Units	Make	Year	License Plate	Vehicle Type Description
		Fuel 1				
1	1568	units	FORD	2014	BLR0273	Light Duty (gasoline)
1	39836	units	FORD	2014	BLR1285	Heavy Duty (diesel)
2	30648	unit	Field Chooser		BLR1284	Heavy Duty (diesel)
7	11384	unit	Entry Type		BNM4028	Heavy Duty (diesel)
1	14850	unit	Expiration		BNM4029	Heavy Duty (diesel)
1	39666	unit				Heavy Duty (LNG)

Remove A Column From The Grid

1. Click the **Columns** tool to display drop-down list of options.
2. Click **Choose Columns**.
3. Drag a column from the grid to cover the Choose Columns list.
4. Release the column when the black **X** appears.

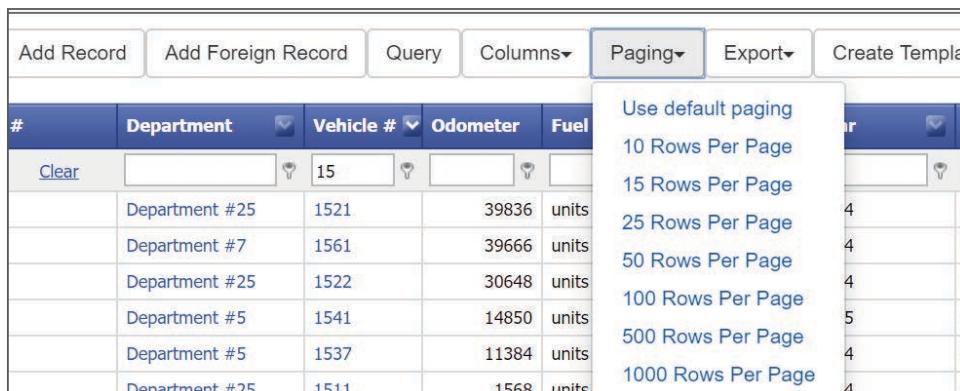


Record	Query	Columns		Paging	Export	Create Template	
Vehicle #	Odometer	Fuel 2 Units	Make	Year	License Plate	Vehicle Type Description	VIN
15							
1511	1568	units	FORD	2014	BLR0273	Light Duty (gasoline)	000000000000001511
1521	39836	units	FORD	2014	BLR1285	Heavy Duty (diesel)	000000000000001521
1522	30648	unit	Field Chooser		BLR1284	Heavy Duty (diesel)	000000000000001522
1537	11384	unit	ACC		BNM4028	Heavy Duty (diesel)	000000000000001537
1541	14850	unit	Agency Vehicle Code	VIN	BNM4029	Heavy Duty (diesel)	000000000000001541
1561	39666	unit				Heavy Duty (LNG)	000000000000001561
			Alloc. Rem.				
			Allocation				
>							

- The column is removed from the grid.

Set The Number Of Rows Per Page

1. Click the **Paging** tool to open the list of Rows Per Page.
2. Select the number of rows to display.



Add Record	Add Foreign Record	Query	Columns	Paging	Export	Create Template
#	Department	Vehicle #	Odometer	Fuel		
Clear		15				
	Department #25	1521	39836	units		
	Department #7	1561	39666	units		
	Department #25	1522	30648	units		
	Department #5	1541	14850	units		
	Department #5	1537	11384	units		
	Department #25	1511	1568	units		

Use default paging
 10 Rows Per Page
 15 Rows Per Page
 25 Rows Per Page
 50 Rows Per Page
 100 Rows Per Page
 500 Rows Per Page
 1000 Rows Per Page

Export Grid Data

Exported data is dependent upon active data in the grid. Grid column combinations may be exported for use outside of Fuel View in programs such as Excel, Power point, and Word.

Export File Types List

Adobe Acrobat (pdf)
 Comma Separated File (csv)
 Microsoft Excel (xls)
 Microsoft Excel (xlsx)
 Rich Text Format (rtf)

1. Click the **Export** tool for a drop-down list of file format options:
2. Select a **Format**.
3. Open the file from your Downloads folder.
4. Click **Save As** and give the file a unique name.
5. Select a location to save the file.
6. Click **Save**.



NOTE: All saved files will export to the default download directory in your browser.

Tool Bar

At the top of every grid, the Tool Bar enables users to customize and control screen layouts, and automate tasks for simplified viewing, filtering, sorting, and exporting. All tools may not show on a particular screen, depending upon rights as established by your company and Tool Bars will vary between grids.



Tool Bar Function Definitions

Add Records Add Record screens are particular to each grid.

Add Foreign Record Available in Asset grids, Add Foreign Record provides two separate Ward customers Cross Fueling ability, allowing them to fuel from each other's sites when set up as Hosts and Guests through a department, employee, or vehicle.

Query Opens the criteria menu to allow filtering records within the grid.

Columns Drop-down list for placing and removing columns to view in grid. Options include: Choose Columns, Show All Columns, Clear Columns, and Reset Columns.

Refresh Restores column default widths, and updates the grid with the latest data.

Paging Drop-down list for selecting the number of grid rows visible on a screen page. Values are from 10 to 1000 rows.

Export Drop-down list of file formats for saving data. Export options include pdf, csv, xls, xlsx, and rtf formats.

Create Template In Asset Management for Employees and Vehicles, users can create templates for creating records with repetitive fields or standard information

Save Saves reports, grids and pivot grids.

Sort

Sorting data is an integral part of data analysis. You can arrange a list of names in alphabetical order, compile a list of cars from oldest to newest, by make or vehicle number. Sorting data helps you quickly visualize and understand your data better, organize and find the data that you want, and ultimately make more effective decisions.

Sort Data By A Grid Column

1. Expand a folder and open a grid.
2. Click in the blue column heading and data will toggle in descending and ascending orders.
 - An up or down arrow appears indicating in which column and in what order the data is sorted.

Add Record	Add Foreign Record	Query	Columns▼	Paging▼	Export▼	Create Template
#	Employee Name	Department	Dept. Code	Employee #	Date Issued	
	Ward, Employee 98	Department #6	6	98	9/2/2015 10:16:29 AM	

3. To add additional columns to the sort, hold down the Shift key while clicking on the blue column heading for the subsequent columns.

Query

A Fuel View query is a powerful method of compiling detailed fleet data for analysis and reporting into refined custom views that meet your fleet requirements.

Query Forms Available Through Grids List

Alerts and Alarms

- Service Alert
- Alert History
- Watchdogs
- Alert Settings
- Service Alert History

Asset Management

- Departments Employees
- Vehicles Vehicle Types
- Administrative Cards
- Site Cards
- Templates
- Vehicle Terminal Authorizations

Site Management

- Sites
- Terminals
- Tanks Pumps
- Manifolds
- Terminal Alerts

Districts

- Districts

CANceiver Management

- CANceiver configs
- CANceiver logs
- CANceiver Events
- GPIO Configurations
- GPIO Vehicle Maps

TLS Management

- TLS
- TLS Probes
- TLS Alarms
- TLS Schedules
- TLS Leak Test Results
- TLS BIR History
- TLS Liquid Sensor Status
- TLS Liquid Sensor Alarms

Security

- Users
- Roles
- Audit Trail

Transaction Management

- Transactions
- Remote car washes
- Remote gate openings
- Ext. retail transaction errors

Fuel Management

- Fuels
- Fuel Transfers
- Fuel Receipts
- Fuel Adjustments
- Pump Totalizers
- Inventory

Message Management

- Messages
- Messages by Vehicles

Vehicle Maintenance

- Maintenance Plan
- Maintenance Due

Status Filters

Queries contain fields that are unique to each grid but include three predefined Status filters:

- Active Only (default)
- Inactive Only
- All

Field criteria can be customized with the following drop-down criteria selections:

Query Filters List

Alpha Fields

Contains (default)
Starts With
Ends With
Equals

Numeric Fields

Equals =
Not Equals <>
Greater Than >
Less Than <
Greater Than or Equal >=
Less Than or Equal <=

 **Note: Deactivated or inactive data can only be viewed through a query.**

Perform A Basic Query

It is possible to control which records are displayed in a grid by filtering using the Query. To perform a simple query on active Employees

1. Expand the Asset Management folder and open the Employees grid.
2. Click the **Query** tool to open the query screen.

Query: Employees

Enter the following filter options:

Status:	<input type="text" value="Active"/>
Last Name	
Options:	Search For:
<input type="text" value="Contains"/>	<input type="text"/>
First Name	
Options:	Search For:
<input type="text" value="Contains"/>	<input type="text"/>
Employee Number	
Options:	Search For:
<input type="text" value="Contains"/>	<input type="text"/>
Employee Code	
Options:	Search For:
<input type="text" value="Contains"/>	<input type="text"/>
Card Number	
Options:	Search For:
<input type="text" value="Equals ="/>	<input type="text"/>
Custom User Field 1	
Options:	Search For:
<input type="text" value="Contains"/>	<input type="text"/>
User Field 2	

3. In the **Status** drop-down, choose Inactive.

Query: Employees

Enter the following filter options:

Status:

Active

4. Click **Refresh** to update the grid and close the Query screen.

Perform A Multi-Criteria Query

To see all active Employees with an employee number beginning with *E* in the Emergency Management Dept:

1. In the Employee grid click the **Query** tool.
2. Enter 'E' in the **Search For** field for the Employee Number.
3. Select Starts With in the **Options** drop-down list for the Employee Number.
4. Check the **Emergency Management Department** check-box in the Department scroll box.
5. Click **Refresh** to update the grid and close the Query screen.

 **NOTE: The Query filter can include columns not visible in the grid.**

A criterion line appears at the bottom left corner of the screen in blue text to indicate the complete filter.

6. A checked box indicates an active filter; to view unfiltered data, uncheck the **Active Filter** check-box.

 **NOTE: The X only appears when Fuel View is opened in IE browser.**

Clear A Query

A query retains its criteria until cleared. Clear the query in the Employee grid:

1. Click the **Query** tool.
2. Click the **Clear** button to clear the fields.
3. Click **Refresh** to update the grid and close the Query screen.

Filters

A filter is a desired criteria to limit the rows returned in a grid. All main grids have the ability to create a filter. Filters may include dates, ranges of dates, number of records or entries, and other values required for reporting. Field level filters offer the user the ability to quickly filter the data displayed on the grid in three ways:

- Query
- Predefined Filter
- Header Filter Button

When the drop-down arrow is clicked, it lists all of the unique values contained in the column.

Predefined Filters

The Predefined Filter icon located next to the column name allows user to filter data in the column from a drop-down list selection. Choosing a predefined filter will bring up all data that fits the criteria. Active filters are indicated with a darker icon.



The screenshot shows a Fuel View application window. At the top, there's a toolbar with buttons for 'Add Record', 'Add Foreign Record', 'Query', 'Columns▼', 'Paging▼', 'Export▼', and 'Create Template'. Below the toolbar is a grid header row with columns labeled '#', 'Employee Name', 'Department', 'Dept. Code', 'Employee #', and 'Date Issued'. The 'Department' column header has a dropdown arrow icon with a red box around it, indicating it's a filterable column. The first data row shows the values: Ward, Employee 98, Department #6, 6, 98, and 9/2/2015 10:16:29 AM.

Filter Definitions

- All** Default setting
- Blanks** Display blank data fields to ensure all required information is complete
- Non Blanks** Display records with data fields completed
- Value** Display records that contain the specified value

User-Defined Filters

User defined filter fields are located below each column category and work with any combination of column criteria information. Active filters are indicated with a darker icon.

1. Click the **pin** icon next to a data entry field to display drop-down list selections for user defined criteria filters.

Add Record	Add Foreign Record	Query	Columns▼	Paging▼	Export▼	Create Template
#	Employee Name ▼	Department	Dept. Code	Employee #	Date Issued	
	<input type="text"/> 					
	Ward, Employee 98	Department #6	6	98	9/2/2015 10:16:29 AM	

Alphabetic And Date Category User-Defined Filters List

- Begins with
- Contains
- Does not contain
- Ends with
- Equals
- Does not equal
- (Like %, _)

Numerical Category User-Defined Filters List

- Equals
- Does not equal
- Is less than
- Is less than or equal to
- Is greater than
- Is greater than or equal to

2. Select the filter criteria and enter the value to include or not include in the results.

Filter A Column

Find all Ford vehicles:

1. Open the Vehicles grid.
2. Type 'f' in the **Make** field.
 - Entering a first letter only will filter in all vehicle makes that begin with the letter f, for, or ford can also be used to bring up all Fords.
3. Click the **Filter** icon in the Make column.

4. Select **Begins With** from the drop-down list.
- Only Ford manufactured vehicles populate the grid.

Vehicles								
#	Department	Vehicle #	Odometer	Fuel 2 Units	Make	Year	VIN	License Plate
	Department #6	1300	139597	gallons	New Flyer	2018	5FYD4KV176C029750	BHN4483
	Department #6	1278	127839	units	Orion	2013	1VHAC3A2X36502016	BGY7279
	Department #9	1828	121264	units	DODGE	2000	000000000000001828	Truck
	Department #10	1295	81230	units	Gillig	2018	15CGD291931112027	BHZ7725
	Department #10	1293	50633	units	New Flyer	2017	5FYD2GL173U025645	BHZ7723
	Department #10	1431	48437	units	FORD	2013	000000000000001431	BJR4673

 **TIP:** Filters are not case sensitive and the whole word need not be typed. For systems with an Oracle database the filters are case sensitive.

Filter Multiple Columns

Combinations of filters will quickly display very specific information. Find all Ford vehicles manufactured before the year 2000 in the County Counsel:

- Type 'f' in the **Make** field.
- Select **Begins With** in the predefined drop-down list.
- Type '19' in the **Year** field and select **Begins With** in the predefined drop-down list.
- Type 'cou' in the **Department** field and select **Contains** from the predefined drop-down list.

Vehicle #	Make	Year	Department	VIN	Lic
<input type="text" value="PO417"/>	<input type="text" value="FORD"/>	<input type="text" value="19"/>	<input type="text" value="COUNTY COUNSEL"/>	<input type="text" value="24"/>	<input type="checkbox"/> Begins with <input type="checkbox"/> Contains

All makes beginning with 'f', manufactured in years beginning with '19', and assigned to Departments containing 'cou' populate the grid.

Toggle Filtered Criteria

- Click the check-box next to the criteria list at the bottom of the screen to temporarily clear and restore filter combinations.

#	Tank Number	Terminal Number	Pump Number	Fuel	Pump Active	Status	Units	Current Price
Clear	<input type="text" value="10"/>	<input type="text" value="2"/>	<input type="text" value="2"/>	<input type="text" value="2"/>	<input type="text" value="Unleaded"/>	<input type="text" value="True"/>	<input type="text" value="False"/>	<input type="text" value="liters"/>
	<input type="text" value="4"/>	<input type="text" value="2"/>	<input type="text" value="4"/>	<input type="text" value="Diesel"/>	<input type="text" value="True"/>	<input type="text" value="True"/>	<input type="text" value="liters"/>	<input type="text" value="7.0000"/>
		<input type="text" value="2"/>	<input type="text" value="1"/>		<input type="text" value="True"/>	<input type="text" value="True"/>		<input type="text" value="7.0000"/>
<input checked="" type="checkbox"/> [Terminal Number] Equals '2'								Clear

Clear Filter Criteria

To remove individual filters:

- Manually delete filter criteria in each field.

To remove all filters at once:

- Click the **Clear** tool that appears in top row of the left column.

#	Date/Time	Type	Field	Old Value	New Value	Host Name	Username	Editing User	Table
Clear									Employees
	12/16/2015 9:30:59 AM	I	Totalizer		0	WARDDEVWEB	EjwDBAdmin	wardfuel	Pumps
	12/16/2015 9:30:59 AM	I	Current_Price		6.00	WARDDEVWEB	EjwDBAdmin	wardfuel	Pumps
	12/16/2015 9:30:59 AM	I	Units_Pumped		0	WARDDEVWEB	EjwDBAdmin	wardfuel	Pumps

4. Dashboards

The Dashboard is designed for a high level analysis of fleet data in pie chart and bar graph formats. Charts can be exported and the underlying records can be viewed. The Dashboards display the last 30 days of fuel dispensed, and estimated fleet emissions if the emissions tables are set up. There are two dashboards available:

Fleet Dashboard - charts of the fleet assets and fuel usage.

Fleet Emissions Summary - estimated fleet emissions for the past 30 days.

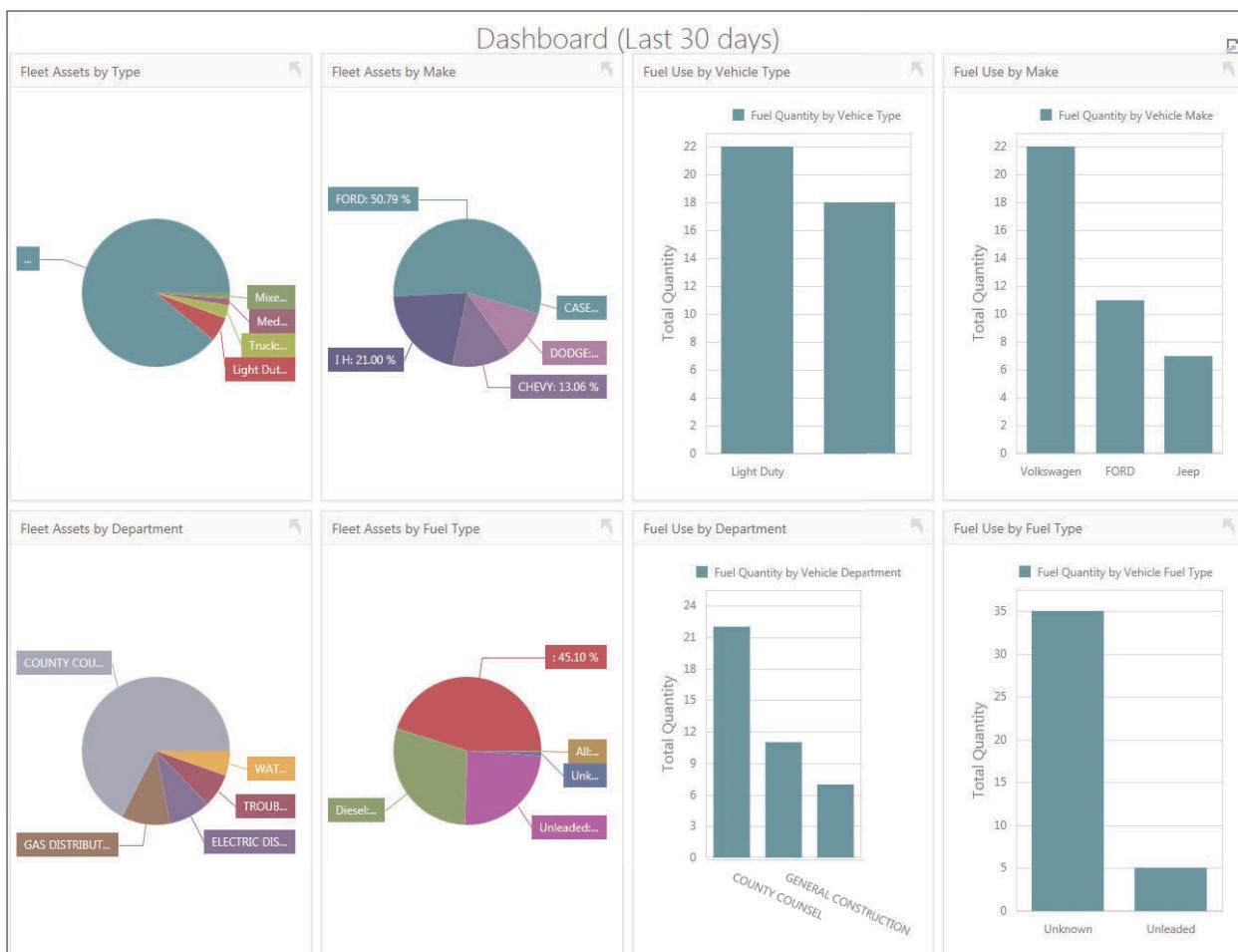
View The Fleet Dashboard

To open the Fleet Dashboard and review your fleet's data:

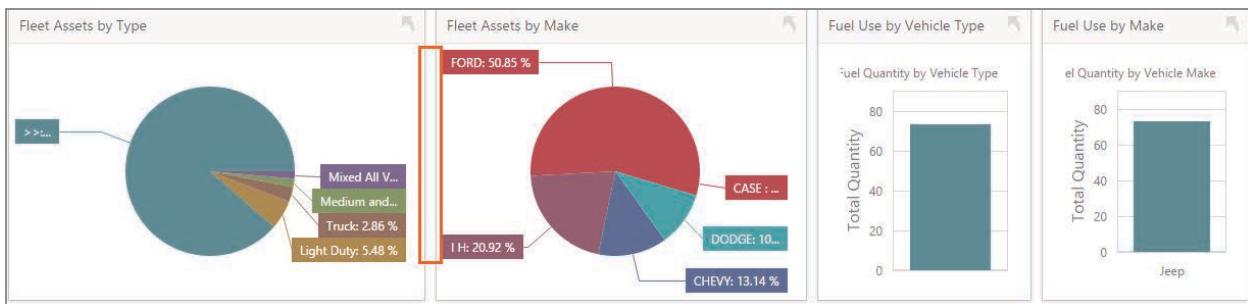
1. Expand the Dashboards folder, and open the Dashboards grid.

#	Name	Category	Remarks
	Fleet Dashboard	Equipment	
	Fleet Emissions Summary	Equipment	

2. Click the **Fleet Dashboard** link to open the main Dashboard.

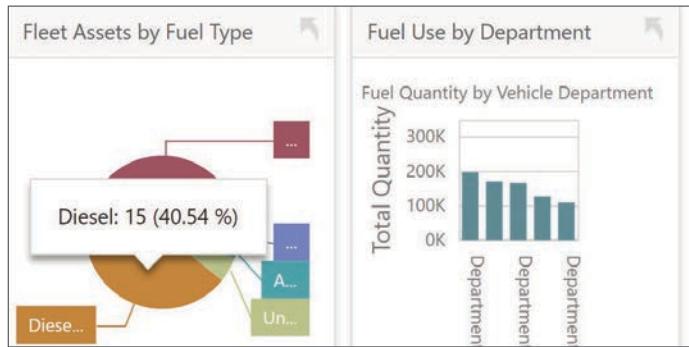


3. Resize chart sections by clicking over a frame and dragging to the desired width.



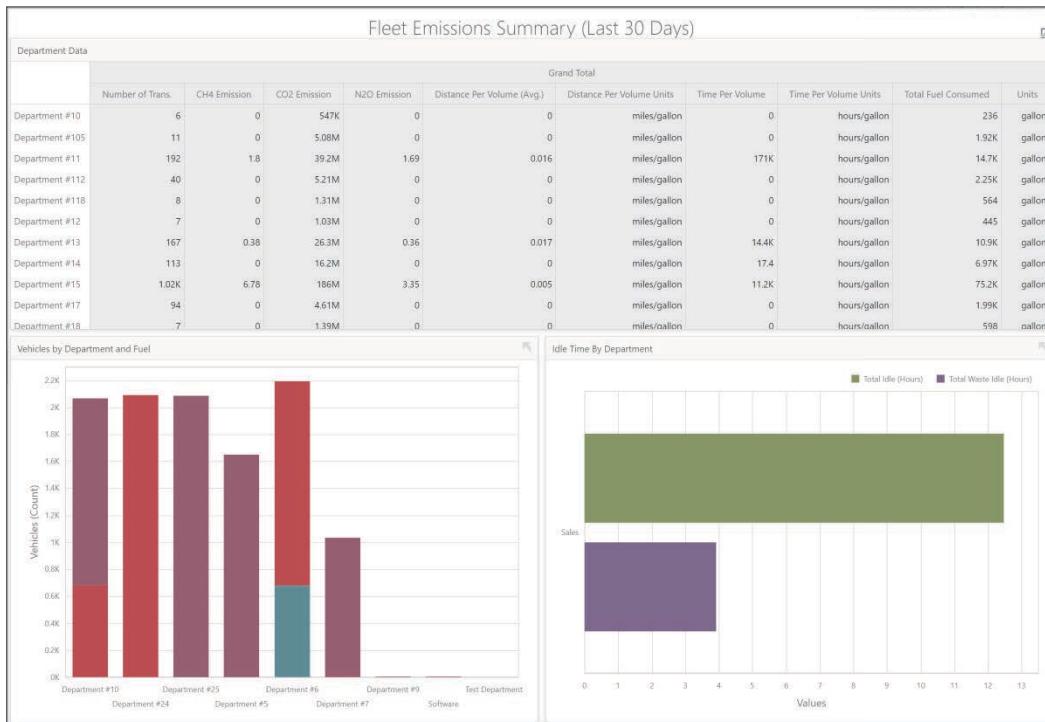
View Chart Details

1. Hover over the pie chart slices and bar graphs to view the underlying summary for that section.



View The Fleet Emissions Dashboard

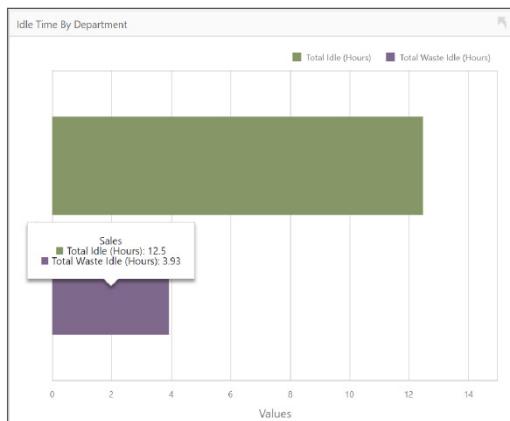
1. Expand the Dashboard folder and open the Dashboards grid.
 2. Click the **Fleet Emissions Summary** link to open the dashboard.



View Chart Summary

This is similar to the section that was under the Dashboard.

1. Hover over a bar graph to view the summary data for that bar.



2. Click a any stacked bar to convert bar into a standard bar graph.
 - Click the arrow in the upper right corner of the graph title bar to revert to stacked bar.



3. Click on the standard bar to display a table of the underlying data.

Underlying data		
Fuel	Department	Vehicle
Unleaded	Department #25	1511
Unleaded	Department #25	1511

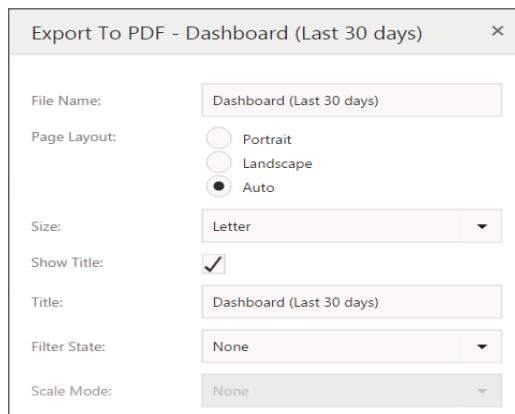
Export The Dashboard

The Dashboard charts can be exported to PDF and image formats for reports and presentations. Clicking the **Export** icon in upper right corner of dashboard screen will display drop-down choices.



Export The Dashboard To A PDF

1. Click **Export**.
2. Choose **Export to PDF**.

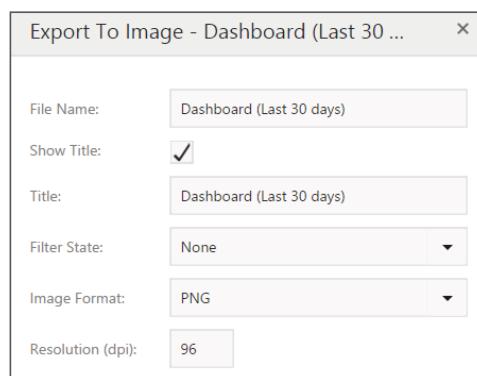


File Name:	Dashboard (Last 30 days)
Page Layout:	<input type="radio"/> Portrait <input type="radio"/> Landscape <input checked="" type="radio"/> Auto
Size:	Letter
Show Title:	<input checked="" type="checkbox"/>
Title:	Dashboard (Last 30 days)
Filter State:	None
Scale Mode:	None

3. Optional: In the **File Name** field, enter a new name.
 - Keeping the default file name will create numbered versions.
4. For best results, leave the Page Layout setting at Auto (landscape).
5. In the **Size** drop-down list, select a page size.
6. If no title is desired, uncheck the **Show Title** check-box.
7. Optional: In the **Title** field, enter a new title.
8. Leave the **Filter State** set at None.
9. Click **Export** to export the PDF to your Downloads folder.

Export The Dashboard To An Image

1. Click Export.
2. Choose **Export to Image**.



3. Optional: In the **File Name** field, enter a new name.
 - Keeping the default file name will create numbered versions.
4. If no title is desired, uncheck the **Show Title** check-box.
5. Optional: In the **Title** field, enter a new title.
6. Leave the **Filter State** set at None.
7. Choose an **Image Format** from the drop-down list:
png
gif
jpg
8. Leave **Resolution** set at 96, or lower to 72.
 - Any other resolution settings will produce an Error file.



TIP: 96 dpi is optimal for PowerPoint presentations.

5. Status

A number of high level Status screens are available to quickly identify the health of the fueling environment.

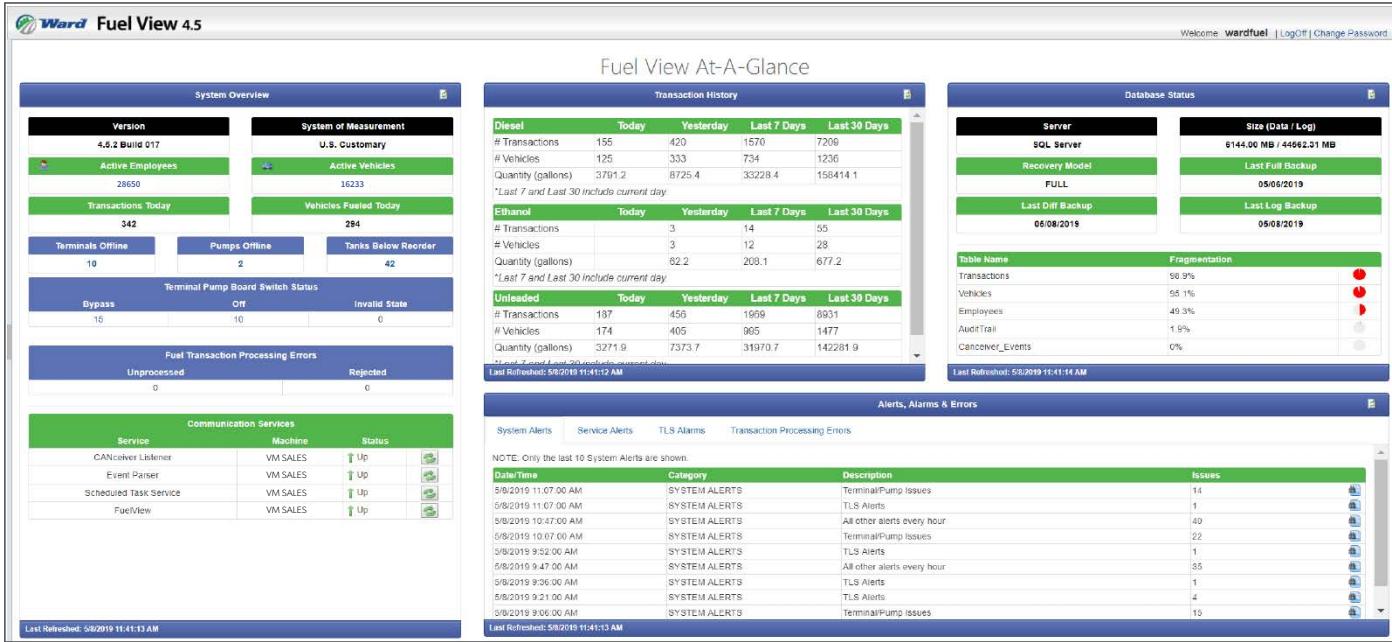
Status Screens List

Fuel View At-A-Glance	Overall system status
Vehicle At-A-Glance	Status for a single vehicle
Department At-A-Glance	Status for all vehicles for a department
Terminal Status	Displays the status of all FCTs
Tank Status	Displays the status of all the tanks

Fuel View At-A-Glance

The default landing page for Fuel View is the Fuel View At-A-Glance screen. The At-A-Glance displays the overall health of the fueling environment highlighting areas of potential concern and is helpful for Fuel View administrators and Ward support teams when troubleshooting problems. To view the At-A-Glance screen:

1. Expand the Status folder and click the **At-A-Glance** icon [LINK](#).



Fuel View At-A-Glance

This screenshot shows the Fuel View At-A-Glance dashboard with four main sections: System Overview, Transaction History, Database Status, and Alerts, Alarms & Errors.

- System Overview:** Displays system statistics such as Version (4.5.2 Build 017), Active Employees (28650), Transactions Today (342), Terminals Offline (10), Pumps Offline (2), and Tanks Below Reorder (42).
- Transaction History:** Breaks down transactions by fuel type (Diesel, Ethanol) across Today, Yesterday, Last 7 Days, and Last 30 Days. It also includes a note about including current day.
- Database Status:** Monitors SQL Server, Recovery Model (set to FULL), and various backup logs (Last Full Backup, Last Diff Backup, Last Log Backup).
- Alerts, Alarms & Errors:** Shows a list of system alerts categorized by date/time, category (e.g., SYSTEM ALERTS, TLS Alerts), description, and issues count. A note indicates only the last 10 system alerts are shown.

Overall, the dashboard provides a comprehensive overview of the fueling environment's performance and potential issues.

At-A-Glance Screen Definitions

Version	Fuel View version and release number.
System of Measurement	Fuel View measurement unit (U.S. Customary or metric).
Active Employees	Number of active employees in Fuel View.
Active Vehicles	Number of active vehicles in Fuel View.
Transactions Today	Number of transactions for the current day.
Vehicles Fueled Today	Number of vehicles fueled for the current day.
Terminals Off-line	Number of active FCTs not communicating with Fuel View.
Pumps Off-line	Number of active pumps not communicating with Fuel View.
Tanks Below Reorder Level	Number of tanks where the current level is below the reorder level.
Terminal Pump Switch	Number of pumps in each status (bypass, off, not reporting) within the FCT.
Board Status	
Fuel Transaction Processing Errors	For W3 and W4 FCTs only: Unprocessed Have not yet been processed in Fuel View. Unprocessed should be zero. A non-zero number indicates that Ward Process Transaction may not be running or is running slowly. Rejected A problem was detected and transaction could not be fully processed. Indication is the processing of transactions may have stopped or have a problem. <i>This should be investigated.</i>
Communication Services	Displays all the services running inside Fuel View, and whether communication is active or down. Services will vary per customer.
Transaction History	Displays a fuel type summary of the number of transactions and vehicles that have been fueled, and the total quantity of fuel dispensed today, yesterday, the past seven days, and 30 days
Alerts, Alarms, and Errors	System Alerts Are notices to the running and health of Fuel View created through the Alerts and Alarms function. Service Alerts Are notices to Services running within Fuel View TLS Alarms Tank Level Sensor Alarms Transaction Processing Errors Identified during processing of transactions from a W3 or W4 FCT.
Database Status	Database details including date of last backups, database size, and an indication of the table fragmentation.



NOTE: Fuel Transaction Processing Errors should be investigated.



NOTE: Rejected transactions are not included in summarization calculations.

Database Status Definitions

Server	Displays the server type (SQL or Oracle).
Size (Data/Log)	Displays the physical size of the data and log files in the database.
Recovery Model	Displays the current recovery model of the database.
Last Full Backup	Displays when the last full backup was run on the database.
Last Diff Backup	Displays when the last differential backup was run on the database. A differential backup is a cumulative backup of all changes made since the last full backup, i.e., the differences

since the last full backup. The advantage to this is quicker recovery time, requiring only a full backup and the last differential backup to restore the entire data repository.

Last Log Backup Displays when the last log backup was run on the database.

Fragmentation Displays the fragmentation of the tables inside the database. When these numbers get too high or show red in the pie chart, it is good practice to recreate the indexes in that table.

Alerts, Alarms & Errors Displays errors from the alerts system, Ward Services, TLS, and any errors for processing transactions in Fuel View.

To open a grid page from the System Overview:

2. For active Employees or Vehicles click the **blue** link below the green header to open the Employees or Vehicles screen.

System Overview	
Version	System of Measurement
4.5.2.21	U.S. Customary
 Active Employees	 Active Vehicles
156	37
Transactions View Active Vehicles Today	
Terminals	Pumps Offline
Tanks Below	

3. To view recent System Alerts, Service Alerts, TLS Alarms, or Transaction Processing Errors, click the appropriate tab.

Alerts, Alarms & Errors				
System Alerts	Service Alerts	TLS Alarms	Transaction Processing Errors	
NOTE: Only the last 10 System Alerts are shown.				
Date/Time	Category	Description	Issues	
6/13/2018 10:09:00 AM	SYSTEM ALERTS	Tank Levels	2	
6/13/2018 9:09:00 AM	SYSTEM ALERTS	Tank Levels	2	
6/13/2018 8:05:00 AM	SYSTEM ALERTS	Tank Levels	2	

Communication Services

The Communications Services section located on the lower left corner of the At-A-Glance screen monitors all communications functions that operate the entire Ward fueling system.

Communication Services			
Service	Machine	Status	
WardComm	VM-SALES	 Monitoring	
Ward Process Transaction	VM-SALES	 Monitoring	
Online Listener	VM-SALES	 Monitoring	
CANceiver Listener	VM-SALES	 Unmonitored	

If a connection is down Status will indicate display a red warning arrow. To reestablish communication:

1. In the Status folder, open the At-A-Glance screen.
2. In the Communications Services section, click the green **Restart** icon to reboot the service.

Communication Services			
Service	Machine	Status	
WardComm	VM-SALES	 Monitoring	
Ward Process Transaction	VM-SALES	 Monitoring	

3. To set up alerts for Communication Services, see Service Alerts (page 50).

Vehicle At-A-Glance

To view the overall status of any given vehicle in your fleet, the Vehicle At-A-Glance screen gives the current status and detailed history.

Review Vehicle Status

1. In the Status folder, click the **Vehicle At-A-Glance** icon to access the list of vehicles.

 Ward Fuel View 4.5

2. Select a **Vehicle** from the drop-down list.

Vehicle:

Vehicle Number	Year	Make	Model
B1677	2000	FORD	CROWN VICTOR
B1678	2000	FORD	CROWN VICTOR
B1697	2000	FORD	CROWN VICTOR
B1699	2000	FORD	CROWN VICTOR
B1713	2000	CHRYSLER	CIRRUS

i TIP: The Vehicle drop-down list operates with filters. Type in a Year, Make or Model to narrow the choices, and scroll to a specific vehicle or type a vehicle number to bring up a known vehicle.

Vehicle: 20 20

Vehicle Number	Year	Make	Model
1002	2013	Jeep	Cherokee
1004	2007	Jeep	Cherokee

Vehicle At-A-Glance

The Vehicle At-A-Glance screen displays the complete vehicle profile:

Vehicle Overview		Vehicle At-A-Glance					
Vehicle Number	VIN	Last Reported Location					
W2457	1FTEW1EF2FFA91172						
Make	Model	Year					
FORD	F150	2014					
Vehicle Type	Fuel						
Light Duty (gasoline)	Unleaded						
Odometer	Max. Quantity						
24000	136 liters						
Has CANceiver?	CANceiver #	GPS Installed?					
Yes	1412050304000000018	No					
Distance Driven	Fuel Pumped	kilometers/liter					
20915.0 kilometers	1776.9 liters	11.77					
Last Fueled	Quantity Pumped						
2/20/2016 9:01:00 AM	92.4 liters						
Fueling Analysis							
Avg. Fuel Per Transaction	Avg. Fuel Used Per Day	Avg. Days Between Fueling					
74.0 liters	28.7 liters	73 days	3.0 days				
Fuel Usage Projections							
Next 60 Days	Next 90 Days	Next 180 Days	Next 365 Days				
1722.0 liters	2583.0 liters	5166.0 liters	10475.5 liters				
Last Refreshed: 4/5/2016 11:16:13 AM							
Vehicle Emissions							
Type	Last 7 Days	Last 30 Days	Last 90 Days	All Time			
CO2	0.0 kg	0.0 kg	2770.3 kg	4121.4 kg			
N2O	0.0 g	0.0 g	114.1 g	138.0 g			
CH4	0.0 g	0.0 g	281.8 g	340.9 g			
Last Refreshed: 4/5/2016 11:16:15 AM							
Vehicle Idle Summary							
Waste Idle	Waste Events	Total Idle	Total Events	Waste Idle %			
175.0 hours	3462	312.4 hours	1275	51.11%			
Last Refreshed: 4/5/2016 11:16:15 AM							
Transactions History							
Transactions Count		Fuel Pumped	Distance Driven				
24		1776.9 liters	20915.0 kilometers				
Date/Time	Site	Terminal	Pump	Fuel	Volume	Distance Driven	kilometers/liter
2/20/2016 9:01:00 AM	Main Central Yard	21	3	Unleaded	92.4 liters	1100.0 kilometers	11.9 kilometers/liter
2/17/2016 8:39:00 AM	Main Central Yard	21	3	Unleaded	99.4 liters	678.0 kilometers	6.8 kilometers/liter
2/12/2016 9:16:00 PM	Main Central Yard	21	3	Unleaded	59.6 liters	820.0 kilometers	13.9 kilometers/liter
2/11/2016 11:19:00 AM	Davies	30	3	Unleaded	109.0 liters	0.0 kilometers	0.0 kilometers/liter
2/8/2016 10:20:00 AM	Davies	32	3	Unleaded	50.3 liters	10316.0 kilometers	205.1 kilometers/liter
2/7/2016 2:52:00 PM	Davies	30	3	Unleaded	104.2 liters	0.0 kilometers	0.0 kilometers/liter
2/4/2016 8:07:00 AM	Davies	31	3	Unleaded	33.4 liters	221.0 kilometers	6.6 kilometers/liter
2/3/2016 8:21:00 AM	Main Central Yard	21	3	Unleaded	95.5 liters	682.0 kilometers	7.1 kilometers/liter
1/29/2016 8:15:00 PM	Davies	32	3	Unleaded	105.5 liters	78.0 kilometers	0.7 kilometers/liter
1/28/2016 7:48:00 PM	Main Central Yard	22	3	Unleaded	3.9 liters	550.0 kilometers	141.0 kilometers/liter
1/25/2016 6:41:00 PM	West Engineers	75	4	Unleaded	103.9 liters	529.0 kilometers	5.1 kilometers/liter
1/18/2016 9:23:00 PM	Main Central Yard	21	3	Unleaded	75.0 liters	422.0 kilometers	5.6 kilometers/liter
Last Refreshed: 4/5/2016 11:16:14 AM							

Vehicle Overview Definitions

- Vehicle Details** Make, model, year, number, type fuel, odometer, fuel capacity, and last recorded location.
The vehicle must be have a CANceiver and GPS antenna installed to have a last reported location.
- Transaction History** Total transactions, fuel pumped, mileage driven details: date/time, site, FCT, pump, fuel type, volume dispensed, distance driven since previous fueling transaction, and estimated fuel economy (distance since last fueling divided by volume fueled).
- GPS Status** Last reported location. The GPS Status function requires Internet connectivity for the map to display GPS locations. The Last Reported Location requires a CANceiver with GPS antenna be installed in the vehicle.
- Vehicle Emissions** CO₂, N₂O, and CH₄ emissions displayed in total volumes for previous 7, 30, 90 days and total emissions. It is important to have the Vehicle Types properly set up and the vehicle records correctly assigned for the Vehicle Emissions data to be properly calculated.
- Vehicle Idle** Total waste hours, number of events and percentage. The vehicle must have a CANceiver installed and be collecting idle information for this data to be displayed.
- Fueling Analysis** Average fuel volume per transaction.
Average fuel used per day.
Sum of days operated from first fueling.
Average days between fueling.

Fueling Projections For fuel usage for 60, 90, 180 and 365 days.

 **NOTE:** Recordable vehicle information is always make and model dependent.

Department At-A-Glance

The Department At-A-Glance screen displays summarized information for all the vehicles within a department and a summary of transactions, idle and emissions for each of the vehicles.

1. In the Status folder, click the **Department At-A-Glance** icon.
2. In the **Department** drop-down list, select a department.

Department At-A-Glance

Department:	<input type="text"/>	Date Filter:	<input type="text"/>
-------------	----------------------	--------------	----------------------

 **NOTE:** Department level information is not activated on all versions of Fuel View.

Department Overview Definitions

Department Overview

Includes basic department information, number of vehicles, employees and sites, number of transactions and volume pumped, fueling analysis of department vehicles, breakdown of vehicles by fuel type, and departmental fuel usage projections.

Department Details

Contains tabs for Vehicle Location map with the last reported locations of all the department's vehicles.

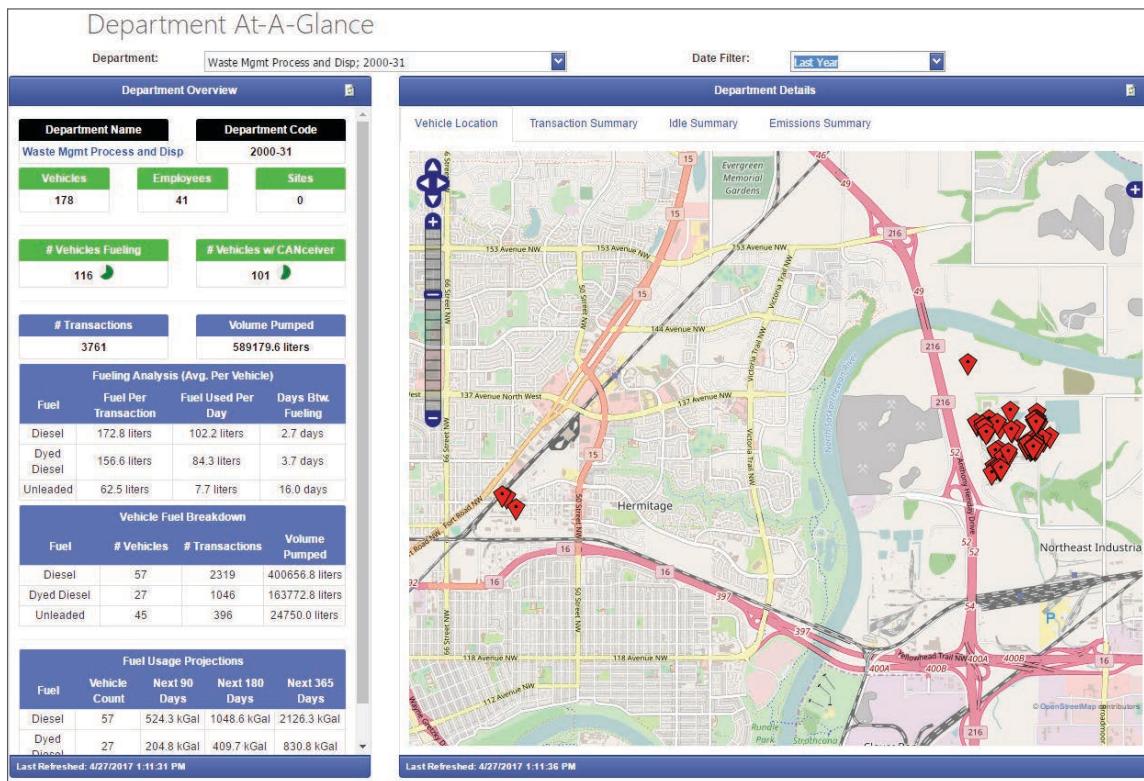
Transaction Summary for each department vehicle.

Idle Summary for each department vehicle. Note that idle time requires the installation of a CANceiver and the collection of idle time data.

Emissions Summary The emissions summary requires the vehicle.

Types to be set up and the vehicles correctly assigned.

3. In the **Date Filter** drop-down list, select a date range to filter the data analyzed.



Department At-A-Glance

Department Overview

Department Name	Department Code
Waste Mgmt Process and Disp.	2000-31

Vehicles	Employees	Sites
178	41	0

# Vehicles Fueling	# Vehicles w/ CANceiver
116	101

# Transactions	Volume Pumped
3761	589179.6 liters

Fueling Analysis (Avg. Per Vehicle)

Fuel	Fuel Per Transaction	Fuel Used Per Day	Days Btw. Fueling
Diesel	172.8 liters	102.2 liters	2.7 days
Dyed	156.6 liters	84.3 liters	3.7 days
Unleaded	62.5 liters	7.7 liters	16.0 days

Vehicle Fuel Breakdown

Fuel	# Vehicles	# Transactions	Volume Pumped
Diesel	57	2319	400656.8 liters
Dyed Diesel	27	1046	163772.8 liters
Unleaded	45	396	24750.0 liters

Fuel Usage Projections

Fuel	Vehicle Count	Next 90 Days	Next 180 Days	Next 365 Days
Diesel	57	524.3 kGal	1048.6 kGal	2126.3 kGal
Dyed	27	204.8 kGal	409.7 kGal	830.8 kGal

Last Refreshed: 4/27/2017 1:11:31 PM

Last Refreshed: 4/27/2017 1:11:36 PM

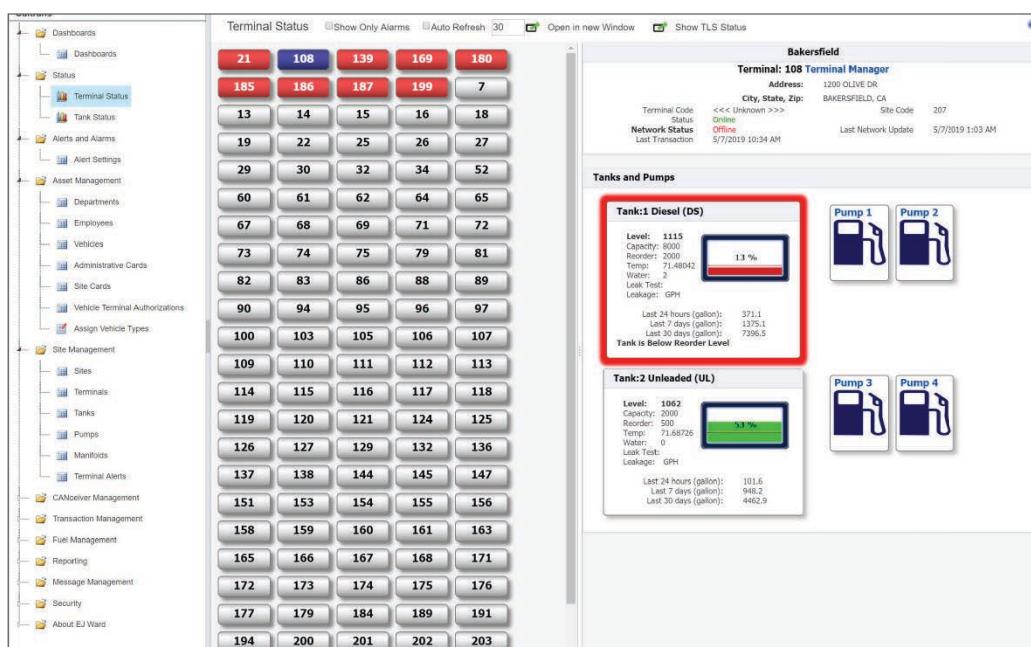
 **NOTE:** Department level information is not activated in all versions of Fuel View. Contact Ward Customer Support for assistance.

Terminal Status

The Terminal Status option in the directory displays the status and recent history of every site's FCT, tank, and pump.

 **NOTE:** Different versions of the FCT may display different information.

1. In the Status folder, click the **Terminal Status** icon.



Terminal Status

21	108	139	169	180
185	186	187	199	7
13	14	15	16	18
19	22	25	26	27
29	30	32	34	52
60	61	62	64	65
67	68	69	71	72
73	74	75	79	81
82	83	86	88	89
90	94	95	96	97
100	103	105	106	107
109	110	111	112	113
114	115	116	117	118
119	120	121	124	125
126	127	129	132	136
137	138	144	145	147
151	153	154	155	156
158	159	160	161	163
165	166	167	168	171
172	173	174	175	176
177	179	184	189	191
194	200	201	202	203

Bakersfield

Terminal: 108 Terminal Manager

Address: 1200 OLIVE DR
City, State, Zip: BAKERSFIELD, CA
Site Code: 207

Terminal Code: 108
Status: Offline
Network Status: Last Transaction: 5/7/2019 10:34 AM
Last Network Update: 5/7/2019 1:03 AM

Tanks and Pumps

Tank:1 Diesel (DS)

Level: 1115	Capacity: 8000	Reorder: 2000
Temp: 71.48042	Water: 0	Leak Test: GPH
13 %		
Last 24 hours (gallon): 371.1	Last 7 days (gallon): 1375.1	Last 30 days (gallon): 7396.5

Tank:2 Unleaded (UL)

Level: 1062	Capacity: 2000	Reorder: 500
Temp: 68.8726	Water: 0	Leak Test: GPH
53 %		
Last 24 hours (gallon): 101.6	Last 7 days (gallon): 948.2	Last 30 days (gallon): 4462.9

Pump 1, Pump 2, Pump 3, Pump 4

Terminal Status Screen Definitions

Terminal Icons

- Red icon – FCT reporting a status alarm.
- Blue icon – FCT, tanks, and pumps detail displayed in the Alert Detail screen.
- Gray icon – Status is normal.

FCT Alert Detail

Titled using the *Site* and *FCT* number, this section details the highlighted FCT's status and history, and contains a blue link to call the FCT.

Tanks and Pumps

Tank Level Sensors (TLS), if present, detail tank usage, current level and reorder status. Pump icons link to its data entry page.

Terminal Detail

Displays the FCT communication status and history.

For viewing screen display options:

Show Only Alarms

Uncheck to display all sites for rotation view.

Auto Refresh

Uncheck Auto Refresh to stay on the open site.

Auto Refresh Time

Choose how many seconds to stay on a site page.

Open in New Window

Open Terminal Status in a pop out screen.

Show TLS Status

Show Tank Level Status in a pop out screen. The TLS screen contains the same default options as the Terminal Status screen.

 The drag the dividing bar to adjust display area for Terminal and detail screens.

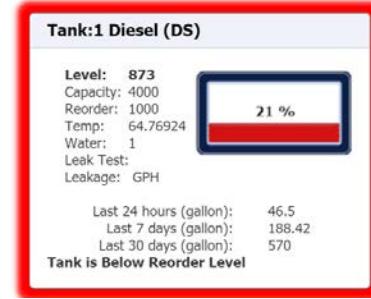
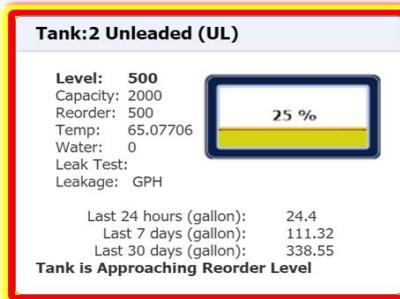
 Hover over a Terminal icon for an Alert Status Overview.

Review Fuel Terminal Status Screen

1. Click through the red FCT Alert icons to view alarms for each FCT.
2. Check the **Auto Refresh** check-box to refresh the screen and cycle through the FCTs.

Tank Activity

The Tank Detail screen provides communication details and color coded tank level status. The tank detail summarizes how much fuel was dispensed within the previous 24 hours, 7 days, and 30 days for each tank.



Tank is above reorder level

Tank is approaching reorder level

Tank is below reorder level

View An Alarm

1. Hover over a red tab in Terminal Status to provide a pop-up summary of warning details.
2. Click the red Alarm tab to open the Detail Alert screen for that FCT.

Request A W3 Terminal Call

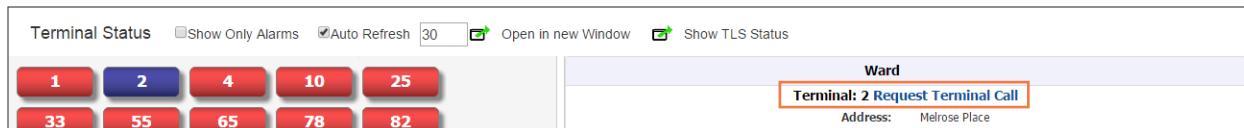
Request Terminal Call is used predominately for W3 FCTs as the only way for them to communicate is through Connect or Request a Terminal Call. Initiating a Terminal Call *sends* the configuration information to the FCT.

Reasons for requesting a Terminal Call can include:

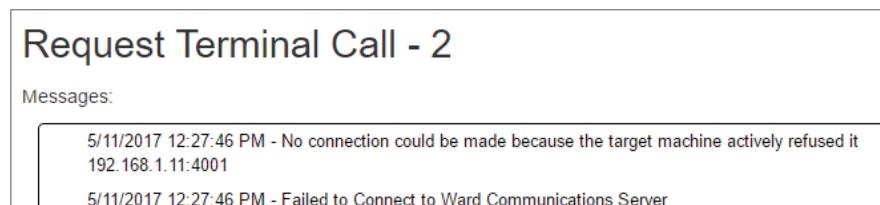
- Refresh the FCT's local database (adds newly created Vehicles, Employees, Pumps, etc.)
- Turn a pump on or off-line
- Gather the latest transactions
- Network troubleshooting (for W3 and W4 FCTs)
- Gather latest data from a tank level sensor

To request a Terminal Call:

1. Click the blue **Request Terminal Call** link at next to the FCT name or number.



Fuel View will force a call to the FCT and display the results, cause, date and time stamp.



 **NOTE: If Fuel View fails to connect to the FCT, check the *FCT Trouble Shooting Guide* to determine and resolve the cause. Contact Ward Technical Support if you are unable to resolve the issue, or if the guide instructs you to.**

Tank Status

The Tank Status screen displays the status for all tanks associated with each Site.

The Site buttons are color coded to indicate the current status:

Site Icon Status Definitions

Gray Status is normal.

Red FCT reporting a status alarm.

Blue FCT, tanks, and pumps detail displayed in the Tanks detail screen.

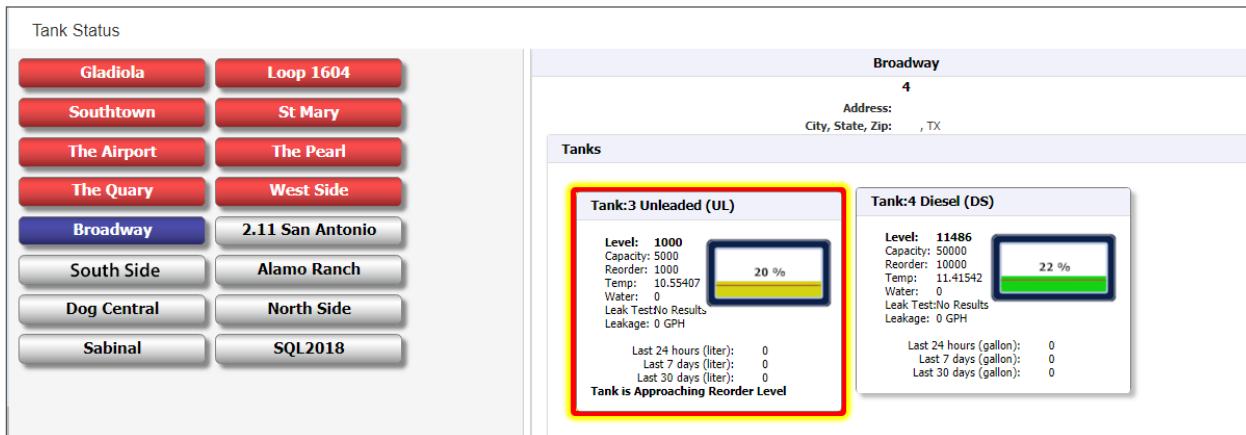
The Tank screen section includes regular fueling tanks as well as continuous feed items. Continuous feed are categories that do not use tanks (i.e.: car wash and electric vehicle charging stations).

Issues can include tanks below reorder limit, missed communication or TLS time, or a network issue. An issue summary can be viewed with the cursor hovering over the Site button. Selecting a Site displays detailed information on all of the Tanks associated with the Site in the right side panel.

To view a Tank detail from its Site:

1. In the Status folder, click the **Tank Status** icon.

2. Click a **Site** icon to view that site's tank status and details.



The Tank Status displays data last retrieved from the tank.

Tank Status Fields List

Level

Capacity

Reorder Level

Temperature

Water Level

Results of the recent leak and leakage tests (if there is a TLS and the tests have been run)

Usage over the last 24 hours, 7 days and 30 days

A graphical representation of the tank displays its level, percentage of capacity and the reorder level, and details as to its status. Borders around Tanks are also color status coded:

Green Current tank level is above over 10% of the reorder level.

Yellow Current tank level is within 10% of the reorder level.

Red Current tank level is below the reorder level.

6. Alerts and Alarms

WatchDogs

Ward WatchDog monitors services supporting Fuel View and ensures communication is functional. When a problem is detected, WatchDog will automatically attempt to restart any service that has ceased to run. Alerts and messages from Fuel View are sent to WatchDog for centralized logging.

Changing What Is Monitored By The Watchdog

1. Open the WatchDogs grid
2. Click the Machine Name link to view and edit the WatchDog settings.
 - The Machine Name and Alert Listener Port are read only fields and displayed for information.

Watchdog Service Definitions

Maximum Service Resets	The number of times the WatchDog will attempt to restart the service before it stops trying.
Service Reset Time Limit	The period of time the WatchDog will attempt the maximum number of restarts for a service before stopping.

Service Monitors Definitions

The list of the Fuel View services and whether the WatchDog will monitor the service include.

WardComm	Communication with W3 and W4 FCTS
Ward Process Transaction	Validates transactions from W3 and W4 FCT
Online Listener	Receives transactions from W4 FCT
CANceiver Listener	Receives events and alerts from CANceivers
Event Parser	Validates and processes CANceiver events and alerts
Scheduled Task Service	Responsible for running all scheduled jobs in the Fuel View environment
Fuel View	Fuel View web service
WARDAPI	The application programming interface for Fuel View business services
TLS Service	Monitors the tank level sensors

The **Active?** check-box is set if the WatchDog service is to include the service in its monitoring.

The **Installed?** check-box is a readonly field and will be set if Fuel View identifies the service as being installed.

The button next to the Installed? check-box instructs the WatchDog service to attempt to restart the service.

Alert Settings

Fuel View monitors the status of every FCT, tank, and pump for activity, warnings, and communication failures, and sends alerts for specific monitored conditions. When an alarm occurs, Fuel View sends notifications to a specified email list and/or a text to a specified phone. Alerts related to Hour meter and Odometer are two separate alerts as they use different parameters (hours and mileage). Fuel View's alert system is dynamic and new alerts can be added to notify customers of conditions specific to their needs.

 **TIP:** User information for an alert can be edited on the Alert Settings page.

 **NOTE:** Contact Ward's Technical Support group for specific alerts.

 **NOTE:** Alerts can be configured by users with the proper rights.

Alert Definitions

- Alert Settings** Allows configuration of alerts.
- Alert History** Displays a historical Listing of Fuel View alerts.
- Service Alerts** Allows configuration of service alerts.
- Service Alert History** Displays a historical Listing of service alerts.

Create An Alert Setting

The Alert Settings configure system-wide alerts. Before configuring alerts, you will need the following information:

- List of Fuel View users or user's email addresses to send alerts to.
- List of Fuel View users to send text messages to (note that text numbers must be set up and validated).
- The alert to configure and specific options for each alert.
- Frequency to check for alerts.

1. Open the Alert Settings grid.

#	Name	Created On	Last Checked	Frequency in Minutes
Delete	Software Alerts	10/10/2017 2:58:05 PM	10/11/2017 1:17:55 PM	15
Delete	Tank Levels	2/16/2018 10:04:54 AM	6/13/2018 10:09:16 AM	60
Delete	test	9/17/2018 7:59:34 AM	5/8/2019 11:27:07 AM	15

The Alert Settings grid displays the last time the Ward Scheduled Service checked for the alerts and how frequently the alerts are checked.

2. Click the **Add Record** tool to open the Settings Profile.

Settings Profile	
Settings Name: *	<input type="text"/>
Last Error Checked:	<input type="text"/>
Frequency (Minutes):	<input type="text" value="15"/> 
<input checked="" type="checkbox"/> Active?	

3. In the **Settings Name** field, create a name for the configuration.
4. In the **Frequency** field, enter a number of minutes between polls.
 - There are 1440 minutes in a day.
5. Ensure the **Active** check-box is checked to activate the Alert.
6. Click **Save**.
7. Click **OK**.
 - The Alert Settings screen opens.

Add Emails To Receive Alert Notices

In the Notifications section:

Notifications						
First Name	Last Name	Email	Phone	Email Notification	Text Notification	Options

8. Click the **Add User** button to select Fuel View users from the drop-down list to receive notifications.
 - If no name is added to receive alerts, a warning will display, but does not prevent the alert from being saved
 - For each user select whether they are to receive email notification and/or text notifications. Text messaging is only available for Fuel View users who have a validated phone number and provider in their user profile.

9. Click **OK** and repeat as necessary for additional recipients.
10. Optional: In the **Additional Emails** field, manually enter an email address that is not in the database.
 - Add multiple emails with in a comma separated list. These emails will only appear in this field and not be added to the user database.

 **NOTE:** If an alert is created without a user to receive the alert notifications, a warning message will indicate that no one will receive the alert notifications. This does not prevent the alert from being saved.

Remove An Email From Notices

1. Click the **Delete** button after an email.
2. Click **OK**.

Change Notification Settings

1. Click the **Edit** tool and make appropriate changes.
2. Click **Save**.

Activate Alert Options

Alerts Configuration List

Fuel View has the following default alerts.

 **NOTE:** Some alerts are applicable to specific hardware such an FCT model.

Terminal Alerts Definitions

Terminal alerts provide notification of issues associated with an FCT. When one of the following is selected, the user will periodically receive a list of the FCTs that have identified the alert condition.

Intrusion	Identifies FCTs that have had the door opened.
AC Power Restore	Identifies when power has been restored to a FCT following a power loss or the FCT turned off.
Auto Restart	Identifies when the FCT has been restarted.
Pump Went Offline	Lists the pumps that the FCT took offline due to consecutive zero gallon transactions.
Pump Switch Change	Lists the pumps that have had the switch changed in the FCT.
Terminals Without Transactions Hours	Lists the FCTs that have not issued a fueling transactions for a given period of time.
Power Loss Detected	Identifies when a FCT loses power. The FCT attempts to send notification to the server prior to the shutdown sequence but there is no guarantee that this message is always successfully sent.
Issue with OS Config File Updates	List of FCTs with issues encountered with transmitting configuration files to W4 FCT through the automatic FCT updater (ATU).
RTC Error	Identifies an issue with the Real Time Clock. This is typically indicative that the battery on the circuit board is no longer holding a charge.
Unusual Pulse Count	Identifies that the FCT has received unusually large pulse counts from the pumps which could create an issue measuring fuel transactions.

Tank Alerts Definitions

Tank alerts are related to storage tank conditions.

Approaching Reorder Lists the tanks that are within 10% of their reorder threshold.

Below Reorder Lists the tanks that are below their reorder threshold.

Pump Alerts

Pump alerts are related to pump conditions

Pump In Bypass Lists the pumps in bypass mode.

Pump Off Lists the pumps that are switched off at the FCT.

Pump Offline Lists the pumps that are offline in Fuel View.

Transaction Time Difference for PumpMinutes Lists all pumps that have transactions within a specified number of minutes with another transaction at that pump.

Communication Alerts Definitions

Missed Comm. Time Lists W3 and W4 FCT that did not communicate with the polling service indicating there may be network issues or the FCT is off.

Terminals Offline Lists the FCT that are marked as offline in Fuel View either by a user or by the FCT itself.

Network Comm. Offline List of FCT that the server has not received a heartbeat from.

TLS Alerts Definitions

Missed TLS Comm. Time Lists the TLS that have missed the communication poll and may have possibly lost network connection or be turned off.

TLS Units That Have Reported Alarms Lists TLS that have reported alarms.

TLS Units Not CommunicatedHours Lists the TLS units that have not communicated in a specified number of hours

Transaction Alerts

Transaction Time Difference For VehicleMinutes

List of transactions that occurred less than a specified number of minutes from a second transaction for the same vehicle

Transaction Time Difference For EmployeeMinutes

List of transactions that occurred less than a specified number of minutes from a second transaction for the same employee

Transaction With Volumes Greater Than Tank Size List of transactions where the amount pumped exceeded the vehicle tank size

Highest Volume TransactionsTop Count Lists a specified number of transactions with the highest volume of fuel dispensed.

Transaction With Volumes Greater ThanQuantity List of transactions that dispensed more fuel than a specified volume.

Transaction With Volumes Less ThanQuantity List of transactions that dispensed less fuel than a specified volume.

Employees That Haven't FueledNight List of employees who have not fueled for a specified number of days.

Unprocessed Raw TransactionsDays, Terminal List of transactions by FCT that have not been processed or validated by Ward process Transaction for a given number of days. This could indicate that Ward Process Transaction has stopped.

Transaction Processing Errors - Days, Terminal

Lists of transaction errors that have not been handled for a specified number of days.

Vehicle Alerts Definitions

Vehicle Alerts are for vehicles that meet certain conditions.

Odometer/Hourmeter Changes By Vehicle

List of transactions where the difference in odometer or hourmeter between the start and end readings is invalid or exceeds that allowed by the vehicle.

Distance Driven Between Transactions

List of vehicles that have traveled further than a specified distance between fueling.

Vehicles Not Fueled Days

List of vehicles that have not fueled in a given number of days,

Time Driven Between Transactions Hours

List of vehicles that have been driven longer than a specified time in hours between fuelings.

Terminal OS Alerts List

The Terminal OS Alerts are problems identified during the transmission of configuration files to the W4 FCT through the automated terminal updater (ATU). These are assigned by Ward Customer Support.

- Unable to run unzip test command for corruption
- Configuration zip file corrupted
- Unable to run unzip command
- Unable to open unzip directory
- No valid configuration files found in unzip directory
- Unable to parse configuration file
- Unable to update internal database
- Unable to open configuration file
- Unable to read configuration file
- Missing configuration files
- Extra configuration files

When new alerts are created, all Alert Configuration option default settings are set to Off.

1. To activate an alert, click its check-box.

Some alert options come with the parameters that are populated with default values. Modify or add values as required.

2. Click the text-box field for an option label and edit the value.

Alerts Configuration	
Terminal Alerts	
<input type="checkbox"/> Intrusion	<input type="checkbox"/> AC Power Restore
<input type="checkbox"/> Auto Restart	<input type="checkbox"/> Pump Went Offline
<input type="checkbox"/> Pump Switch Change	<input type="checkbox"/> Terminals without transactions <input type="text" value="12"/> Hours
<input type="checkbox"/> Power Loss Detected	<input type="checkbox"/> Issue with OS Config File Updates
<input type="checkbox"/> RTC Error	<input type="checkbox"/> Unusual Pulse Count
Tank Alerts	
<input checked="" type="checkbox"/> Approaching Reorder	<input checked="" type="checkbox"/> Below Reorder
Pump Alerts	
<input type="checkbox"/> Pump In Bypass	<input type="checkbox"/> Pump Off
<input type="checkbox"/> Pump Offline	<input type="checkbox"/> Transaction Time Difference for Pump <input type="text" value="2"/> Minutes
<input type="checkbox"/> Ebore <input type="text" value="1"/>	
Communication Alerts	
<input type="checkbox"/> Missed Comm. Time	<input type="checkbox"/> Terminals Offline
<input type="checkbox"/> Network Comm. Offline	
TLS Alerts	
<input type="checkbox"/> Missed TLS Comm. Time	<input type="checkbox"/> TLS units not communicated <input type="text" value="12"/> Hours
<input type="checkbox"/> TLS Units That Have Reported Alarms	
Transaction Alerts	
<input type="checkbox"/> Transaction Time Difference for Vehicle <input type="text" value="2"/> Minutes	<input type="checkbox"/> Transaction Time Difference for Employee <input type="text" value="2"/> Minutes
<input type="checkbox"/> Transaction volumes greater than tank size	<input type="checkbox"/> Highest volume transactions <input type="text" value="50"/> Top count
<input type="checkbox"/> Transactions with volumes greater than <input type="text" value="50"/> Quantity	<input type="checkbox"/> Transactions with volumes less than <input type="text" value="5"/> Quantity
<input type="checkbox"/> Employees that haven't fueled <input type="text" value="7"/> Night	<input type="checkbox"/> Unprocessed Raw Transactions <input type="text" value="30"/> Days, Terminal
<input type="checkbox"/> Transaction Processing Errors <input type="text" value="30"/> Days, Terminal	
Vehicle Alerts	
<input type="checkbox"/> Odometer/Hourmeter changes by Vehicle	<input type="checkbox"/> Distance Driven between Transactions <input type="text" value="500"/> Distance
<input type="checkbox"/> Vehicles not fueled <input type="text" value="7"/> Days	<input type="checkbox"/> Time Driven between Transactions <input type="text" value="500"/> Hours
Terminal OS Alerts	
<input type="checkbox"/> Unable to run unzip test command for corruption	<input type="checkbox"/> Configuration zip file corrupted
<input type="checkbox"/> Unable to run unzip command	<input type="checkbox"/> Unable to open unzip directory
<input type="checkbox"/> No valid configuration files found in unzip directory	<input type="checkbox"/> Unable to parse configuration file
<input type="checkbox"/> Unable to update internal database	<input type="checkbox"/> Unable to open configuration file
<input type="checkbox"/> Unable to read configuration file	<input type="checkbox"/> Missing configuration files
<input type="checkbox"/> Extra configuration files	



NOTE: All Alert Option parameters are numeric.

3. Click **Save** when all required alerts have been activated and options updated to the required value.

Fuel View will begin monitoring the programmed Alert Settings configurations.

 **Ward recommends setting up different alert configurations and check frequency based on your fleet's requirements.**

Examples: Daily Alert: Transaction-related reports, or TLS alerts if TLS polling is done once per day.

Fifteen Minutes Alerts: Checking for issues with FCT's or pumps.

Alert History

View Alert History

1. Open the Alert History grid.
 - The grid displays all recorded alerts.

Service Alerts

Service Alerts notify designated users of any loss of connection or functionality with Fuel View services.

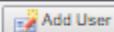
Service Alert List

- CANceiver Listener
- Event Parser
- Fuel View
- Online Listener
- Scheduled Task Service
- Ward Process Transaction
- WardAPI
- WardComm

Set Up A Service Alert Notification

To set up a Service Alert email notification:

1. In the Alerts And Alarms folder, open the Service Alerts grid.
2. Click the blue hyper-link in the Name column to open the Service Alerts screen.
3. In the Service Alerts section header, click the **Add User** button.

Service Alert Users	 Add User
---------------------	--

4. In the **Select a User to Notify** drop-down list, select a Fuel View user and indicate whether they will receive an email and/or a text message.

Select a User	X
Select a User to notify:	
<input type="text"/>	 Send Email:  Send Text Message:

5. Click **OK**.

 **NOTE: When deleting or adding users, it is not necessary to click Save in the Service Alerts screen.**

Service Alert History

View Service Alert History

The Service Alert History grid will display each alert generated with its date and a message indicating the alert.

1. Click the Service Alert History icon in the Alerts and Alarms folder.

Service Alert History					
#	Monitored Service	Watchdog Machine	Log Level	Time	Message
	FuelView	VM-SALES	Critical	2/14/2018 3:26:04 AM	Exceeded the service reset limit and will not be monitored.
	FuelView	VM-SALES	Critical	2/28/2018 3:35:32 AM	Exceeded the service reset limit and will not be monitored.
	FuelView	VM-SALES	Critical	4/20/2018 11:57:17 AM	Exceeded the service reset limit and will not be monitored.
	Ward Process Transaction	VM-SALES	Critical	4/20/2018 11:57:30 AM	Exceeded the service reset limit and will not be monitored.

Status Message Window

If a change is made to any site or asset that is to be sent to some or all of the W4 or W4 IoT FCTs, Fuel View automatically handles the communication with the FCT and displays information in the Status Message window to the lower left of the Fuel View screen.



7. Asset Management

Assets consist of sites, tanks, FCTs (often referred to as terminals), pumps, departments, employees, and vehicles (see Fuel System Overview, page 10). Fuel View provides the tools needed to control and manage assets and their associated statuses and reporting with pre-designed reports.

Notes Associated With Assets

Fuel View supports the ability to attach Notes to assets such as vehicles, terminals, pumps, tanks and employees. Notes are assigned to categories to facilitate grouping, searching and reporting.

Example: Categories in Vehicle Notes can be used to identify Notes about CANceiver installations, maintenance, and accidents.

Categories are unique to each item type - the categories for vehicles are different to the categories for pumps.

Categories can be managed through the Message Management - Notes Management screen and also through the Notes page for each asset. If an item supports Notes, there is a sub-menu item labeled **Notes**. The sub-menu displays a grid of Notes associated with this item and includes the Note details, who created it, and who has modified it.

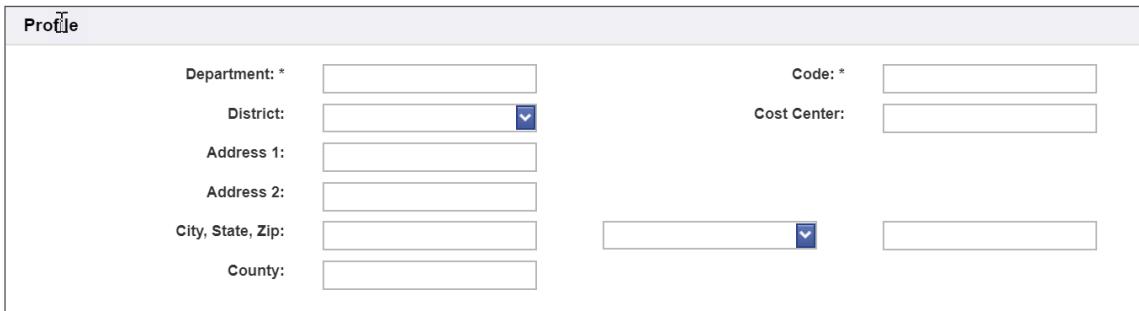
Notes are added through the Add Record tool and when deactivated are hidden from the main grid. Notes for an asset are controlled through the Notes Management screen under the Message Management menu. This screen allows Notes support for an asset to be turned on or off and provides the ability to manage the Note's categories for this asset.

Departments

A Department is a business organizational unit that vehicles and employees are assigned to. Visibility of the department assets can be restricted based on membership to the department, and the department can be active or inactive. Departments can be hierarchical.

Create A Department

1. Expand the Assets folder, and open the Departments page.
2. Click the **Add Record** tool to open the Department New Record Data Entry screen.



Profile	
Department: *	<input type="text"/>
District:	<input type="text"/> <input type="button" value="▼"/>
Address 1:	<input type="text"/>
Address 2:	<input type="text"/>
City, State, Zip:	<input type="text"/> <input type="button" value="▼"/>
County:	<input type="text"/>
Code: *	<input type="text"/>
Cost Center:	<input type="text"/>

In the Profile section:

3. In the **Department** field, enter a unique name of the new department.
 - The Department field accepts up to 60 alpha-numeric characters.
4. In the **Code** field, enter a code that uniquely identifies the new department.
 - The Code field accepts up to 20 alpha-numeric characters.
5. Optional: In the **District** field, select the District designation for the Department.
6. Optional: In the **Cost Center** field, enter the cost center associated with this department.
7. Optional: Enter the department **Address, City, State, Zip Code** and **County**.

In the Contact Information section:

Contact Information			
Department Manager:	<input type="text"/>	Phone:	<input type="text"/>
		Fax:	<input type="text"/>
		Department Email:	<input type="text"/>

8. Optional: Select a **Department Manager** from the drop-down list and enter the Manager's **Phone**, **Fax**, and **Department Email**.
 - The Department Manager must be set up as a Fuel View employee.

In the Parent Department Information section:

Parent Department Information	
Parent Department:	<input type="text"/>

9. Optional: In the **Parent Department** drop-down select a parent if there is a department hierarchy.
 - The parent Department must already have been created.
 - The Department Status check-box should default to active (checked).

 **NOTE: The Date Deactivated is automatically populated when the Department Status is changed to inactive.**

10. Optional: In the **Comments** field enter any information relevant to the department.

11. Click **Save**.

Display Or Edit A Department

Department attributes can be modified, the department can be deactivated or activated, and records related to this department can be viewed.

In the Departments grid:

1. Click the blue Department Name link to bring up the Departments edit window.
2. Edit fields as necessary.
3. Click **Save**.

Department Sub-Menu Definitions

Data Entry	The section to edit the department's attributes.
Transactions	The transactions recorded for this department (defaults to the past week of transactions for vehicles assigned to the department, change the query to expand the date range or to filter to specific records).
Employees	List of employees assigned to this department.
Vehicles	List of vehicles assigned to this department.
Sub-Department	List of departments that report hierarchically to this department.
Audit Trail	Changes made to the department record.

Deactivate Or Activate A Department

To deactivate a Department:

In the Departments grid:

1. Click either the **Department Code** or the **Department Name** to bring up the Department's edit window.

2. Uncheck the **Active** check-box.
 - The Date Deactivated will be populated with the current date and time.

To re-activate a Department:

1. Check the **Active** check-box.
 - The Date Deactivated will be automatically cleared.



NOTE: The Department record is not deleted when it is deactivated.

Employees

Employees are optional in Fuel View and allow fueling authorization at an employee level.

Create An Employee Record

In the Employees grid:

1. Click the **Add Record** tool to open the Employee New Record data entry screen.

In the Employee Profile section:

Employee Profile					
Employee Number: *	<input type="text"/>	Employee Code:	<input type="text"/>		
Fueling Status:	<input checked="" type="checkbox"/>				
First, Middle, Last Name: *	<input type="text"/>	<input type="text"/>	<input type="text"/>		
Email:	<input type="text"/>				
Department: *	<input type="text"/>	District:	<input type="text"/>		
Employee Status					
Active:	<input checked="" type="checkbox"/>				
Date Deactivated:	<input type="text"/>				

2. In the **Employee Number** field, enter a unique number for the employee.
 - This Employee Number is used throughout the Fuel View system to identify the employee and can be the badge number or the employee number assigned by your HR department.
 - The Employee Number field accepts up to 10 alpha-numeric characters.
3. Optional: In the **Employee Code** field, enter a unique employee code
 - The Employee Code allows an optional secondary way to uniquely identify a customer.
4. Optional: Check the **Fueling Status** check-box to allow Administrative and Site Cards to use the Employee Number for validation.
 - For if the FCT is set to prompt for an employee number while authorizing fueling transactions.
5. In the **First, Middle and Last Name** fields, enter employee's first name, middle name, and last name.
6. Optional: In the **Email** field, enter the employee email address if this employee will need to receive email notices from Fuel View.
7. In the **Department** drop-down list, select employee's department.
8. Optional: In the **District** drop-down list, select the employee's district.

In the Employee Status section:

9. Ensure the **Active** check-box is checked.
 - The Date Deactivated is automatically set when the Active check-box is unchecked.

In the Card Information section:

Card Information	
Facility Code:	<input type="text" value="0"/>
Card Enabled:	<input checked="" type="checkbox"/>
Card Last Used:	<input type="text"/>
Card Issued:	<input type="text" value="08/05/2019 10:24 AM"/>
<input type="button" value="Assign New Card"/>	

 **NOTE: The Card Information section is used to set up the information for cards for fueling authorization.**

10. Optional: In the **Facility Code** drop-down list, select a facility location.
 - The facility code only applies to fobs. The values in the Facility Code are set up by the Ward implementation or support teams.
11. In the **Card Number** field, enter the card number, or use the Assign New Card button option.
12. Optional: The Driver Prompt ID field is used to enter the employee PIN for Fuel View systems that support entry of an employee password or PIN that is not encoded on an employee card.
 - This field is only visible for customers using the Driver Prompt ID field.

 **NOTE: The default Facility code is EJ Ward. If proxy badges are being utilized for fueling transactions, a client-defined Facility code must be selected for each employee.**

13. Optional: Click the **Assign New Card** tool to let Fuel View generate a new card number.
 - The next available employee card number will be assigned to the employee record.
 - The Employee Card Number field accepts up to 19 digits.

The Card Last Used and the Card Issued Date fields are automatically populated by Fuel View.

In the Fuel section:

Fuel	
Fuel 1 (Primary):	<input type="text" value="Unknown; UK; 0"/>
Fuel 2 (Secondary):	<input type="text" value="Unknown; UK; 0"/>

 **NOTE: The Fuel Information section is used to restrict the fuel types employees are able to access.**

14. Optional: In the **Fuel 1** drop-down list, select the Fuel Type the employee card is authorized to dispense.
15. Optional: In the **Fuel 2** drop-down list, select a second Fuel Type the employee card is authorized to dispense.

In the Comments section:

Comments	
Custom User Field 1:	<input type="text"/>
User Field 2:	<input type="text"/>
User Field 3:	<input type="text"/>

16. Optional: In the **Comments** field, add additional information required for the employee.
 - These custom fields are provided for any purpose required by the user to track additional information or attributes associated with an employee.

 **TIP: User Field labels can be modified to indicate the content of these fields. Contact Customer Support for guidance.**

17. Click **Save**.

Display/Edit An Employee

In the Employees grid, click on either the Employee # or the Employee Name to bring up the Employees edit window. From this edit window, the employee attributes can be modified, the employee can be deactivated or activated, cards can be disabled, new card numbers can be assigned and records related to this employee can be viewed.

In the Employee grid:

1. Click either the **Employee Number** or **Employee Name** link to bring up the Employee screen.
2. Edit fields as necessary.
3. Click **Save**.

Deactivate Or Activate An Employee

To deactivate an Employee:

In the Employees grid, click on either the Employee Number or the Employee Name to bring up the Employee's screen. In the Employee Status section:

Employee Status	
Active:	<input checked="" type="checkbox"/>
Date Deactivated:	<input type="text"/>

1. Uncheck the **Active** check-box.
 - The Date Deactivated field will be automatically populated with the current date and time.

To activate an Employee:

2. Check the **Active** check-box.
 - The Date Deactivated field will be automatically cleared.

 **NOTE: The Employee record is not deleted when it is deactivated.**

Assign A New Card To An Employee

In the Employees grid, click on either the Employee Number or the Employee Name to bring up the Employees edit window.

In the Card Information section:

1. Click the Assign New Card button.

The new card number assigned is displayed in the Card Number field and the Card Issued field is set to the current date and time.

Activate or Deactivate An Employee Card

Card Enabled indicates if the card assigned to the employee is authorized to dispense consumable products at the terminals.

1. Open an employee record by clicking the blue Employee number link in the Employees grid.

In the Card Information section:

2. Uncheck the **Card Enabled** check-box to deactivate an Employee Card

To activate an Employee card:

1. Check the **Card Enabled** check-box to activate an Employee Card.



NOTE: The Employee Card record is not deleted when it is deactivated.

When enabled the Employee number and Card number can be used to create fueling access through the FCT. Use the Ward Encoder program for printing your company's chosen method of fob or card. Refer to the *Encoder Operation Instructions* guide.

Employee Fueling Access Using An Administrative Card Or Site Card

When Fueling Status is checked, Fuel View will allow Administrative Cards and Site Cards to use this employee number for validation if the FCT prompts for employee number while authorizing a fueling transaction.

To allow Administrative or Site Card validation:

1. Open an employee record by clicking on the blue Employee number In the Employees grid.

In the Employee Profile section:

Employee Profile					
Employee Number: *	<input type="text"/>	Employee Code:	<input type="text"/>		
Fueling Status:	<input checked="" type="checkbox"/>				
First, Middle, Last Name: *	<input type="text"/>	<input type="text"/>	<input type="text"/>		
Email:	<input type="text"/>				
Department: *	<input type="text"/>	<input type="button" value="▼"/>	District:	<input type="text"/>	<input type="button" value="▼"/>

2. Check the **Fueling Status** box.

3. Click **Save**.

To prohibit Administrative or Site Card validation:

1. Uncheck the **Fueling Status** box.
2. Click **Save**.

Employee Sub-Menu Definitions

Data Entry The section to edit the employee attributes.

Managed Departments A list of departments this employee is assigned as the manager.

Managed Sites A list of sites this employee is assigned as the manager.

Transactions The transactions listed for this employee for the past week.

Notes Generic notes that can be stored about an employee.

Audit Trail Changes made to this employee record.

Vehicles

A vehicle in Fuel View is any asset that can be fueled, such as a car, truck, or bus, but can also include small engine assets such as lawn mowers or gas cans. Each fueling asset in Fuel View needs to be identified through a unique Vehicle Number.

Create A Vehicle Record

- In the Vehicles grid, click Record to open the Vehicle New Record data entry screen.

In the Identification section:

Vehicle Template	
Template:	<input type="text"/>
<input type="button" value="Apply Template"/>	
Identification	
Vehicle Number: *	<input type="text"/>
Year:	<input type="text"/>
Make:	<input type="text"/>
Model:	<input type="text"/>
Vehicle Type:	<input type="text"/>
Department: *	<input type="text"/>
Agency Vehicle Code:	<input type="text"/>
VIN:	<input type="text"/>
Fueling Status:	<input checked="" type="checkbox"/>
License Plate:	<input type="text"/>
District:	<input type="text"/>

- In the **Vehicle Number** field, assign a unique number to the vehicle.
 - The Vehicle Number field accepts up to 10 digits.
- Optional: Fill In the **Year, Make, and Model** fields.
 - These fields are useful in vehicle transaction reports.
- Optional: In the **Vehicle Type** drop-down list, select a vehicle.
 - The Vehicle Type is used for classifying similar vehicles and the default types are used in the Fleet Emissions calculations.
- Optional: In the **License Plate** fields, enter the license plate.
- Optional: In the **VIN** field, enter the vehicle's 17-digit VIN.

 **NOTE: VINs must be 17 characters long. In the event that there are not 17 characters – as with heavy duty equipment, fill in with leading zeros.**

- Check the **Fueling Status** check-box to allow fueling;
 - Uncheck the box to not allow fueling.
 - Fueling Status indicates whether a vehicle can be fueled using an Administrative or a site card for authorization.
- In the **Department** drop-down list, assign the vehicle to a department.
- Optional: Fill In the **Agency Vehicle Code** field.
 - The Agency Vehicle Code is a unique alphanumeric vehicle identifier from your company to help in identifying the vehicle. It is not used internally in Fuel View.
- Optional: In the **District** drop-down list, assign the vehicle to a district.

Skip the Vehicle Status section; when creating a new vehicle record, the default value is active.

In the Restrictions and Readings section:

Restrictions and Readings	
Off Road: *	<input type="text"/>
Max Visits: *	<input type="text"/>
Remaining Visits:	<input type="text"/>
Odometer: *	<input type="text"/>
Odometer Offset:	<input type="text"/>
Require Hour Meter:	<input checked="" type="checkbox"/>
Max Distance: *	<input type="text"/>
Hour Meter: *	<input type="text"/>
Hour Meter Offset:	<input type="text"/>
Verify Odometer: *	<input type="text"/>

11. In the **Off Road** field, enter percentage of use the vehicle will be used off-road.
12. In the **Max Visits** field, enter the authorized number of times per day the card is allowed access to fuel.
 - A zero entry will allow unlimited fueling transactions.
 - *W3 FCTs* - the maximum visits per FCT.
 - *W4 and W4 IoT FCTs* - the maximum visits across the entire fueling system for FCTs with active network connections.
13. In the **Odometer** field, enter the current odometer reading of the vehicle.
 - A blank entry will start the odometer at zero.
14. Optional: If the ECM odometer and the displayed odometer do not match:
In the **Odometer Offset** field, enter the difference.
15. In the **Max Distance** field, enter the distance a vehicle must travel before being allowed to refuel.
 - The distance traveled is determined by the current odometer reading and the odometer reading at the last fueling. This only applies if the vehicle is set up with Verify Odometer set to Strict.
 - A zero entry indicates that the distance traveled between fueling will not be calculated to determine if fueling is allowed.
16. Check the **Require Hour Meter** check-box if hours are required for vehicle engine tracking instead of odometer.
17. In the **Hour Meter** field, enter the current metered hours of the vehicle or device.
 - A zero entry will start the hours at zero.
 - The Hour Meter indicator must be used in conjunction with Card Verification Results (CVR) number options to operate properly.
18. If the ECM hour meter and the displayed hour meter do not match: In the **Hour Meter Offset** field, enter the difference.

 **NOTE: If changing a vehicle from Odometer to Hour Meter Input or vice versa, resend the Main Configuration to the vehicle (see Assign A CANceiver Config, page 99).**

19. Select the **Verify Odometer** behavior that the FCT should enforce for the vehicle.

Odometer Prompt Definitions

No Prompt

The FCT will not prompt for a meter reading when the vehicle attempts to authorize a fueling transaction.

Prompt

Instructs the FCT to prompt for the vehicle odometer (or hour meter, depending on the primary meter setting), but does not validate the operator entry.

Prompt and Validate

Instructs the FCT to prompt for the vehicle odometer (or hour meter) and displays a warning message if the odometer is out of range. The odometer reading is considered out of range if the odometer value entered is greater than the last odometer reading in Fuel View for that particular vehicle by more than the vehicle's Maximum Travel Distance setting, and prompts for an odometer reading again. If the operator re-enters an out of range odometer, if the values match, the FCT will accept the new odometer reading and authorize fueling.

Validate Strictly

Instructs the FCT to prompt for vehicle odometer (or hour meter) and will not authorize fueling if the entered reading is out of range. This setting only applies to systems that store a vehicle database in the FCTs; otherwise programming of the vehicle's card determines the FCT odometer prompting behavior.

In the CANceiver or VIT, Class, and Repair section:

CANceiver or VIT, Class, and Repair			
<input checked="" type="checkbox"/> Has CANceiver: Custom User Field 1 : <input type="text"/> Comment #2 : <input type="text"/>		CANceiver ID : <input type="text"/> <input checked="" type="checkbox"/> Has GPS Installed : <input checked="" type="checkbox"/> Ignore Loss Of Signal : <input checked="" type="checkbox"/> Allow Ignition On Fueling :	

20. Check the **Has CANceiver** check-box if the vehicle is equipped with a CANceiver or Ward OBD (previously known as a VIT).



NOTE: The CANceiver or VIT option is used by Fuel View for report purposes only.

21. If using a *W3 CANceiver*, enter the CANceiver ID In the **CANceiver ID** field.
 - W4 CANceiver will auto-fill this field.
22. Optional: In the **Custom User Field 1** field, enter variable information.
 - This field can be used to store miscellaneous information about the vehicle and accepts up to 27 characters.
 - The label for the field can be changed to a meaningful label if this field is used.
23. Optional: In the **Comment 2** field, enter variable information of the vehicle.
 - This field can be used to store miscellaneous information about the vehicle and accepts up to 27 characters.
 - The label for the field can be changed to a meaningful label if this field is used.
24. If the vehicle is equipped with a Ward GPS antenna, check the **Has GPS Installed** check-box.
 - A nightly process can be set up to ensure this check box is checked for vehicles with events that include GPS location data.
25. To allow fueling with without a signal, the check the **Ignore loss of Signal** check-box.
 - The loss of signal check box allows a pump with a Ward Hose Module to continue to fuel after being disconnected from the Ward Fuel Tag. This is typically used for vehicles with multiple tanks or saddle tanks but only one Fuel Tag, or if the design of the vehicle causes issues with the range between the Hose Module and the Fuel Tag.
 - For CANceiver / Fuel Tag Type 1.
26. If the vehicle is allowed to fuel with the engine running, check the **Allow Ignition on Fueling** check-box.

If your fleet uses *WEX* or *Voyager* fleet fueling cards, In the Credit Card Information section:

Credit Card Information	
Card Format:	<input type="button" value="▼"/>
Account Number:	<input type="text"/>
Expiration Date (YYMM):	<input type="text"/>
Vehicle Credit Card Number:	<input type="text"/>

27. In the **Card Format** drop-down list, select the card format and prefix number.
28. In the **Account Number** field, enter the card account number.
29. In the **Expiration Date** field, enter the card's expiration date using YYMM format.

Example: YY= 2-digit year, MM= 2-digit month: 2205 for an expiration date of May 2022.

-
30. In the **Vehicle Credit Card Number** field, enter the card number.

In the Allocation Section:

An allocation limits the amount of fuel a vehicle can pump over a period of time.

- A background task resets the fuel remaining at the start of each period.

The maximum amount of fuel allowed is set In the Allocation Section of the Vehicle screen. The time limit for allocations is set outside of Fuel View.

Allocation	
Max Fueling:	<input type="button" value="0"/>
Fueling Remaining:	<input type="button" value="0"/>

31. Optional: In the **Max Fueling** field, enter the maximum amount of fuel the vehicle is allowed per allocation period.
 - The read only, Fueling Remaining field will display the remaining amount of fuel allowed for the week or period of time the allocation is for.

Each Vehicle Card is associated with a specific vehicle and is used to authorize fueling for that vehicle through the FCT.

In the Card Information section:

Card Information	
OGS Card Number:	<input type="text"/>
Card Number: *	<input type="text"/>
Card Status:	<input checked="" type="checkbox"/>
Card Last Used:	<input type="text"/>
Date Issued:	<input type="text"/>
<input type="button" value="Assign New Card"/>	

32. In the **Card Number** field, assign the Card Number or click the **Assign New Card** button to allow Fuel View to generate the Card Number.

 **NOTE:** Depending on which cards are used, the Card Information section may have additional fields.

 **NOTE:** All vehicle records must be assigned a card number. Card numbers may relate to a magnetic strip or HID proxy card. Other card numbers may be a CANceiver or Ward non OBD II, fob, or a keypad entered number. For some customers, the card number is internally generated. The card number issued by the FCT to identify the vehicle.

 **NOTE:** The Card can be deactivated by unchecking the Card Status check box.

The Card Last Used date is set when a transaction is received that was initiated by the card. The Date Issued field is populated when a new card is assigned.

33. In the Fuel Information section:

Fuel Information			
Fuel 1:	<input type="text"/> Unknown; units	Max Quantity:*	<input type="text"/> 0
Fuel 2:	<input type="text"/> Unknown; units	Max Quantity 2:*	<input type="text"/> 0

34. Optional: In the **Fuel 1** drop-down list, select a Fuel Type the vehicle card is authorized to dispense.
 35. Optional: In the **Fuel 2** drop-down list, select a second Fuel Type the vehicle card is authorized to dispense.
 36. In the **Max Quantity** fields, enter the fuel tank's capacity or maximum fuel allowable per transaction for each fuel type.
- A zero entry will allow unlimited fuel.

The Comments and Compare section are user defined fields and can be filled in at the end-user's discretion to store information about a vehicle. Several of these can have their labels changed through the settings table. There are three text fields that will accept one line of characters, and three check-box fields.

Comments/Compare	
Comment #3:	<input type="text"/>
Compare:	<input type="text"/>
Billing Number:	<input type="text"/>

In the User Fields section:

User Fields	
Has GPS :	<input type="checkbox"/>
Veh User Bool 2 :	<input type="checkbox"/>
Veh User Bool 3 :	<input type="checkbox"/>

- There are three user defined Yes/No check-boxes.
37. Click **Save**.

The Card details will populate the Card Information upon saving, and the Configurations section will become available at the bottom of the screen. The Configurations section is for assigning a main configuration and network configuration to the CANceiver installed in the vehicle.

In the Configurations section:

Configurations	
Main Configuration	Basic Main Config w GPS; S 
Network Configurations	<input checked="" type="checkbox"/> SA Test Config <input type="checkbox"/> Software <input type="checkbox"/> Training Home <input type="checkbox"/> Downtown Config
Assigned Immediate Configurations	Immediate_Realtime_WIFI 1 6/12/2018 3:26:05 PM

38. In the **Main Configuration** drop-down list, select a configuration to assign to the vehicle.

Main Configurations Definitions

Basic Main Config w GPS Sales Demo with real time Wi-Fi

Basic Configuration No GPS

Software Configuration Software Configuration

Training Config For Training

39. Check the **Network Configurations** check-boxes to be sent to the CANceiver.

- The configurations will be sent to the CANceiver when the vehicle reports in to an access point.

The **Assigned Immediate Configurations** field lists the immediate configurations that have been assigned to this vehicle's CANceiver.

- Immediate configurations are assigned through CANceiver Management -> Assign Immediate Configuration.

The Vehicle number and Card number can now be used to create access to the FCT. Use the **Ward Encoder** program for printing your company's chosen method of fob or access card.

 **NOTE: To assign a different card number to a vehicle, use the Assign Card section to retrieve the next available vehicle card number in Fuel View.**

Vehicles Sub-Menu Definitions

Data Entry The section to edit vehicle attributes.

Transactions The transactions recorded for this vehicle for the past week.

CANceiver Events The events logged for this vehicle for today. The date range can be altered in the Query screen.

CANceiver Log Communications record with the CANceiver and outstanding updates to be sent to the CANceiver.

Emissions A graph of weekly and monthly emissions for this vehicle. Vehicle types must be set up for these graphs to be fully populated.

Cost vs Quantity A bar chart of cost and quantity of fuel by week of year for this vehicle.

Idle Time A graph of idle time by week and by month. A CANceiver must be installed and reporting idle time for the graph to be plotted.

Maintenance Due Maintenance plan due dates or odometer readings for this vehicle.

Vehicle Messages Messages to be displayed by the FCT for this vehicle.

Notes Generic notes that can be stored about a vehicle.

Audit Trail Lists the changes made to this vehicle record.

Vehicles Sub-Menu Definitions

Data Entry Section to edit the vehicle attributes.

Transactions The transactions listed for this vehicle for the past week.

CANceiver Events The events logged for this vehicle for today. The date range can be altered in the Query screen.

CANceiver Log A log of communications with the CANceiver and the outstanding updates to be sent to the CANceiver.

Emissions A graph of weekly and monthly emissions for the vehicle. The vehicle types must be set up for these graphs to be fully populated.

Cost vs Quantity A bar chart of cost and quantity of fuel by week of year for the vehicle.

Idle Time A graph of idle time by week of year and by month. A CANceiver must be installed and reporting idle time for the graph to be plotted.

Maintenance Due The maintenance plan due dates or odometer readings for this vehicle.

Vehicle Messages The messages to be displayed to the FCT for the vehicle.

Notes Generic notes that can be stored about a vehicle.

Audit Trail A list of changes made to this vehicle record.

Copy A Vehicle Record

There are two methods to simplify the creation of vehicle new records:

Copy an existing vehicle and change the fields that are different

Create and save a vehicle Template and create vehicles from this template (see Create A Vehicle Template, page 64)

To copy a Vehicle Record:

1. In the Vehicles grid, click a blue Vehicle number link to open its detail page.
 - Ensure you have the details needed to include in the record.
2. Scroll to the bottom of the record and click the **Copy** button to open the new Vehicle screen.
3. In the **Vehicle #** field, enter a unique vehicle number.
4. Change other details necessary.
5. Click **Save**.



NOTE: Assigned Immediate Configurations is read-only.

Vehicle Fueling Using Administrative or Site Cards

A fueling transaction can be authorized by an Administrative or Site card for all vehicles with the Fueling Status box checked.

1. Open a vehicle record by clicking on the blue Vehicle Number in the Vehicles grid.

In the Identification section:

To allow the vehicle to fuel with Administrative or Site Card validation:

2. Check the **Fueling Status** box.
3. Click **Save**.

To prohibit the vehicle to fuel with Administrative or Site Card validation:

1. Uncheck the **Fueling Status** box.
2. Click **Save**.

Templates

Templates save time and eliminate data entry errors for repetitive data by creating master files in Employee and Vehicle records.

Example: Templates can be created for Employees In the same Department with the same fueling type and status; and for Vehicles with standard attributes such as same year, make, model, and fuel type).

 **TIP:** Multiple templates can be created, so use descriptive names when creating to identify them.

Create An Employee Template

1. In the Employee grid, click the Create Template button at the end of the Tool bar.



In the Employee Profile section:

Employee Profile	
Template Name:	<input type="text"/>
Fueling Status:	<input checked="" type="checkbox"/>
Department:	<input type="text"/>
District:	<input type="text"/>

2. Create a template a name In the **Template Name** field.
3. Fill In the **repetitive data fields** to be included In the created employee records in all sections.
4. Click **Save Template**.

Apply An Employee Template

1. In the Employee grid, click Add Record.
2. Select a **Template** from the drop-down list.

Employee Template	
Template:	<input type="text"/>
<input type="button" value="Apply Template"/>	

3. Click the **Apply Template** tool.
4. Fill out all remaining required data fields for the employee.
5. Click **Save**.

Create A Vehicle Template

1. In the Vehicles grid, click the Create Template tool at the end of the Tool bar.



In the Identification section:

2. Create a template a name In the **Template Name** field.

Identification	
Template Name:	<input type="text"/>
Year:	<input type="text"/>
Make:	<input type="text"/>
Model:	<input type="text"/>
Vehicle Type:	<input type="text"/>
Department:	<input type="text"/>
Agency Vehicle Code:	<input type="text"/>
VIN:	<input type="text"/>
Fueling Status:	<input checked="" type="checkbox"/>
License Plate:	<input type="text"/>
District:	<input type="text"/>

3. Fill In the **repetitive data** fields in all sections.

Vehicle Status			
Vehicle Active:	<input checked="" type="checkbox"/>		
Date Deactivated:	<input type="text"/>		
Restrictions and Readings			
Off Road:	<input type="text"/> 0	Max Distance:	<input type="text"/> 0
Max Visits:	<input type="text"/> 0	Max Hours:	<input type="text"/>
Remaining Visits:	<input type="text"/>	Hour Meter:	<input type="text"/> 0
Odometer:	<input type="text"/>	Hour Meter Offset:	<input type="text"/>
Odometer Offset:	<input type="text"/>	Verify Odometer:	<input type="text"/> No Prompt
Require Hour Meter:	<input type="checkbox"/>	Verify Hour Meter:	<input type="checkbox"/>

4. Click **Save Template**.

Apply A Vehicle Template

1. Click the **Add Record** tool In the Vehicle grid.
2. Select a **Template** from the drop-down list at the top of the screen.

Vehicle Template	
Template:	<input type="text"/>
	<input type="button" value="Apply Template"/>

3. Click the **Apply Template** button.
4. Fill out all remaining required data fields.
5. Click **Save**.

Administrative Cards

Administrative Cards allow special functions to be performed at the FCT. Fuel View is preloaded with 1024 Administrative Card numbers, and an Administrative Card must be activated before it can be used. For Administrative Card and other access categories see Fueling Card Access Definitions, page 11.

Set Up An Administrative Card

Setting up an Administrative Card requires Administrator status.

In the Asset Management folder:

1. Click the **Administrative Cards** icon to open the Administrative Cards grid.
2. Open an inactive card by clicking the blue **Card number** link.
3. In the Profile section:

Profile	
Site:	<input type="text"/> 0
Card Number:	<input type="text"/> 9
Card Status:	<input type="checkbox"/>
Maximum Quantity:	<input type="text"/> 0
Card Last Used:	<input type="text"/>

4. In the **Site** drop-down list, select the site where the card will be used.
5. Check the **Card Status** box to activate the card.
6. In the **Maximum Quantity** field create a limit per transaction by entering a volume.
 - An entry of zero will allow unlimited fueling volume.

In the Employee section:

Employee
Employee: <input type="text" value="0"/>
Fuel
Fuel 1: <input type="text" value="All; AL; 9"/>
Fuel 2: <input type="text" value="Unknown; UK; 0"/>

7. In the **Employee** drop-down list, select an employee who will be in possession of the Administrative Card.

In the Fuel section:

8. Select a Fuel Type for drop-down lists **Fuel 1** and **Fuel 2**.
 - This will control what type of fuel the card will be allowed to access.
9. Click **Save**.

Site Cards

Site Cards allow managers the ability to override Fuel View's fueling script and should only be used in an emergency or when a vehicle is unable to fuel. Fuel View is preloaded with 1024 Site Cards. Each Site Card must be activated before it can be used. For the Site card and other access categories see Fueling Card Access Definitions, page 11.

Set Up A Site Card

1. In the Asset Management folder, click the Site Card icon to open the grid.
2. Open an inactive card by clicking on the blue Card Number link.

Site Cards				
<input type="button" value="Columns"/> <input type="button" value="Paging"/> <input type="button" value="Export"/>				
#	Card Number	Employee Name	▲	Site Name
	3			
	5			
	6			

- An inactive card will have False In the Card status field.

In the Profile section:

Profile	
Site:	8
Card Number:	3
Card Last Used:	09/27/2016 09:15 AM
Maximum Quantity:	10
Card Status: <input checked="" type="checkbox"/>	

3. In the **Site** drop-down list, select the Site where card will be used.
4. Check the **Card Status** box to activate the card.
5. To create a fuel limit per transaction, enter a volume In the **Maximum Quantity** field.

In the Employee section:

Employee	
Employee:	0

Fuel	
Fuel 1:	All; AL; 9
Fuel 2:	Unknown; UK; 0

6. In the **Employee** drop-down select the employee who will be in possession of the Site Card.

In the Fuel section:

7. In the **Fuel 1, Fuel 2** drop-down lists select fuels for the card.
 - This will restrict what fuels the card will be allowed to access.
 - This can include security gate and car wash access.
8. Click **Save**.

Templates

As described in the Employee and Vehicle sections, templates facilitate the rapid creation of similar vehicle or employee records. The Templates section of the Asset Management allows display of the different templates.

View And Edit A Template

1. Click the **Templates** tool to open up the template grid.
2. Click a Template Name link to open the template page.
 - The fields in the template match the Vehicle or Employee record.
3. If changes are needed to a template, make the changes to the required fields.
4. Click **Save**.

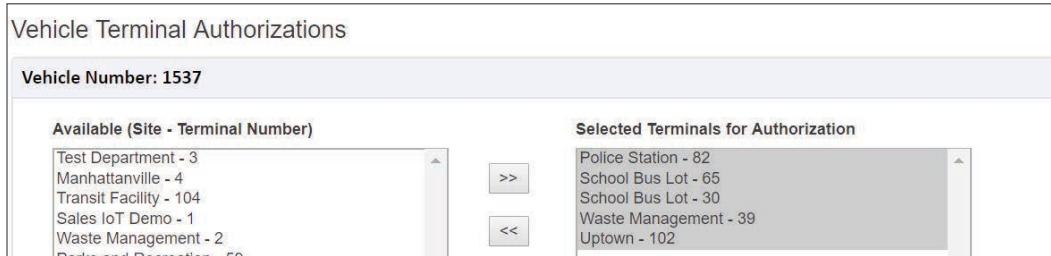
Vehicle Terminal Authorization

Typically, all vehicles are allowed to fuel at any site. However, through Vehicle Terminal Authorization, Fuel View provides a restriction to allow vehicles to fuel only at specified FCTs. If one or more FCT is selected for an individual vehicle, the vehicle can only fuel from these FCTs.

Set A Vehicle Terminal Authorization

1. Open the Vehicle Terminal Authorizations grid.

2. Select a **Vehicle #** from the Vehicle Terminal Authorizations grid.
 - Grid filters can be used to more easily find the vehicle.
3. To restrict a vehicle to a specific FCT, select the site in the **Available Sites** box (left) and using the **>>** button, move the site/terminal number to the Allowed terminals box on the right
 - Use the **<<** button to remove an FCT from the list.



Vehicle Terminal Authorizations

Vehicle Number: 1537

Available (Site - Terminal Number)		Selected Terminals for Authorization	
Test Department - 3	>>	Police Station - 82	
Manhattanville - 4		School Bus Lot - 65	
Transit Facility - 104	<<	School Bus Lot - 30	
Sales IoT Demo - 1		Waste Management - 39	
Waste Management - 2		Uptown - 102	

 **Multiple sites can be selected and moved together using the Shift key**

 **NOTE: If no sites are selected, the vehicle will be authorized to fuel on all sites listed on left panel.**

4. Click **Save**.

Vehicle Types

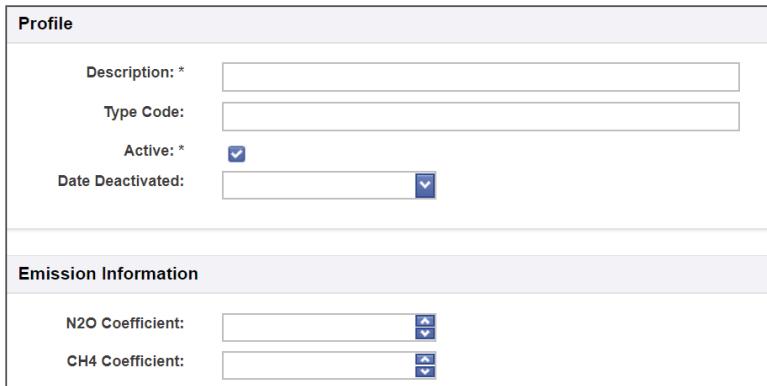
Fuel View contains pre-loaded Vehicle Types and the user may add extra Vehicle Types, or change the existing Vehicle Types to classify vehicles or motorized equipment for reporting purposes. Emission coefficients from the EPA are included in the pre-loaded Vehicle Types and can be used to calculate the emission footprint for N₂O and CH₄ in the Emissions Report and Dashboard.

 **NOTE: Vehicle Type is used to enter the emission footprint in Emissions Report and Dashboard.**

Set Up A Vehicle Type

1. Open the Vehicle Types page to display all of the existing vehicle types.
2. Click the **Add Record** tool to open new Vehicle Type record data entry screen.

In the Profile section:



Profile	
Description: *	<input type="text"/>
Type Code:	<input type="text"/>
Active: *	<input checked="" type="checkbox"/>
Date Deactivated:	<input type="text"/>
Emission Information	
N2O Coefficient:	<input type="text"/>
CH4 Coefficient:	<input type="text"/>

3. In the **Description** field enter the Vehicle Type name.
4. In the **Type Code** field, enter a Vehicle code description.
 - This is a 20-character alphanumeric field.
 - Vehicle Type Code supports the Vehicle Classes table in older versions of Fuel View (4.5.1 and older).

In the Emissions Information section for greenhouse gas emission calculation:

5. Optional: Enter the **N₂O Coefficient**.
 - This will be used in calculating the N₂O (Nitrous Oxide) emission for each vehicle assigned this vehicle type.
6. Optional: Enter the **CH₄ Coefficient**.
 - This will be used in calculating the CH₄ (Methane) emission for each vehicle assigned this vehicle type.

 **TIP: Check with the vehicle's manufacturer for emissions information.**

7. Click **Save**.
 - The new Vehicle Type will be added to the Vehicle Types grid.

Assign Vehicle Types

To facilitate updating of large numbers of vehicles, the Assign Vehicle Types screen is available. Individual vehicles can be selected to be updated or whole departments can be updated at once. A single vehicle can be assigned a Vehicle Type through the Vehicles screen.

1. Open the Assign Vehicle Types grid.
2. Check the **Update Method** to bring up list of departments or vehicles to be updated

Assign Vehicle Type	
Select an Update Method:	
<input checked="" type="radio"/> By Department? <input type="radio"/> By Vehicle?	

By Department

- Select a **Department** from the drop-down list.

Assign Vehicle Type		Assign a Vehicle Type to one or more Vehicles
Select an Update Method:		
<input checked="" type="radio"/> By Department? <input type="radio"/> By Vehicle?		
Select Department(s): * <div style="border: 1px solid #ccc; padding: 5px; width: 100%;"></div>		
Select a Vehicle Type: * <div style="border: 1px solid #ccc; padding: 5px; width: 100%;"></div>		

By Vehicle

- Select a **Vehicle** from the drop-down list.

Assign Vehicle Type		Assign a Vehicle Type to one or more Vehicles
Select an Update Method:		
<input checked="" type="radio"/> By Department? <input type="radio"/> By Vehicle?		
Select Vehicle(s): * <div style="border: 1px solid #ccc; padding: 5px; width: 100%;"></div>		
Select a Vehicle Type: * <div style="border: 1px solid #ccc; padding: 5px; width: 100%;"></div>		

- Check the box on the left to select multiple vehicles.
 - To close the list, click anywhere outside the list or click the blue expand arrow.
3. Select a **Vehicle Type** from the drop-down list.

Sample Vehicle Types List

Buses (CNG)	Light Duty (CNG)	Mixed All Vehicles
Buses (electric)	Light Duty (diesel)	Mixed Light Duty
Buses (ethanol)	Light Duty (ethanol)	Motorcycles (gasoline)
Heavy Duty (CNG)	Light Duty (gasoline)	Passenger Cars (diesel)
Heavy Duty (diesel)	Light Duty (LPG)	Passenger Cars (electric)
Heavy Duty (ethanol)	Medium and Heavy Duty (gasoline)	Passenger Cars (gasoline)
Heavy Duty (LNG)	Miscellaneous	
Heavy Duty (LPG)	Miscellaneous (MO)	

4. Click **Update**.

- All of the matching vehicle records will be updated with the specified Vehicle Type.

Vehicle Classification

Fuel View has the ability to classify vehicles by an internal classification or a nationally approved scheme (ie: American Public Works Association).

Hidden by default on the **Vehicles** screen, Vehicle Classifications can be user selected or read only. After activation, view the Vehicle Classification column, use the Field Chooser. The title of the Vehicle Classification code and description fields may be customized for the vehicle's screen, grids and reports.



NOTE: Contact Ward to have Vehicle Classification activated.

Import Data From Excel

Company and site information can be imported from Excel spreadsheets into Fuel View's database, saving hours of data entry time. Spreadsheets can be imported for:

- Departments
- Employees
- Pumps
- Sites
- Tanks
- Terminals (FCTs)
- TLS (tank level sensors)
- Vehicles

The import process adds new records into the system. It does not modify the content of existing records. If the identifier (ex: Vehicle Number) already exists in Fuel View the record will be rejected

Prepare The Excel File

Due to the process of importing Excel spreadsheets it is important that the spreadsheet be created properly and the columns contain the data of the correct type.



TIP: To prepare for the Excel spreadsheet upload, ensure the field requirements are met in each category prior to beginning.

Ensure the spreadsheet contains the required information for each vehicle, employee, or asset, etc.

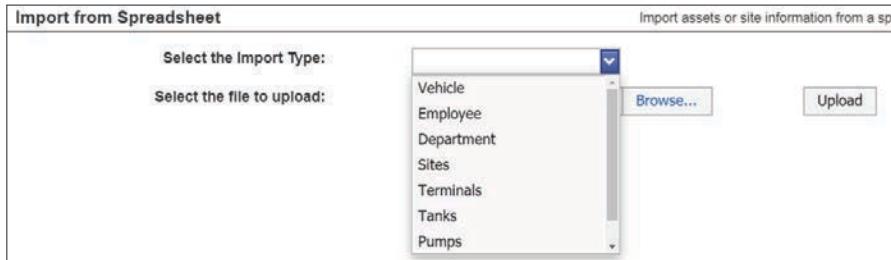
- Excel column headers need not match Fuel View headers, they will be paired in the import process.

The identifier field for each record is marked as Unique. This cannot already exist in the system. When an associated asset is to be identified, for instance the FCT a TLS is assigned to, the FCT can be identified by the record ID, the Terminal Number or the Terminal Code. Any one of those fields is required to identify the FCT; all three do not need to be present.

Import the Data from Excel File

 **NOTE:** For a full list of import field requirements, see Appendix I – Import Fields Requirements Table.

1. In the Asset Management folder, click the **Import from Spreadsheet** icon.
2. Select the **Import Type** from the drop-down list, for the data type you will be uploading.

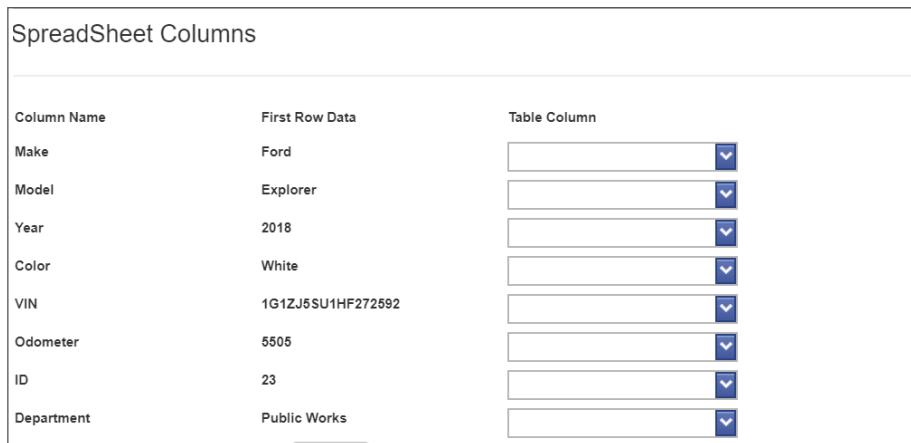


3. Click the **Browse** tool to select the Excel file from your computer's file folders.
4. Click the **Upload** tool to transfer the Excel file to the server.

5. When *File Uploaded Successfully* appears, click the **Load File** button.



- Fuel View will open the file and analyze the data.



Column Name	First Row Data	Table Column
Make	Ford	
Model	Explorer	
Year	2018	
Color	White	
VIN	1G1ZJ5SU1HF272592	
Odometer	5505	
ID	23	
Department	Public Works	

The Spreadsheet Columns match-up form will appear. This is where the assignment of the columns in the spreadsheet to the fields in the Fuel View table is specified.

6. In each **Table Column** drop-down list, match the spreadsheet **Column Name** to the **Fuel View** column.
7. For data fields that have no matching category, select one of the user defined User_Fields (if available) for that category.
 - Fuel View provides up to three user defined fields.
8. Click **Save**.
 - The data will be uploaded into the appropriate table unless errors were detected.



NOTE: An Exception Report will be generated for missing or unmatched fields in every record.

Cross Fueling

Cross Fueling refers to the ability of one Ward customer (the Host) to allow a second customer (the Guest) to fuel from their sites. The Guest (typically also a Ward customer) use their own vehicle numbers, employee numbers, and their own authorization media, assuming the FCT software supports it. Currently Fuel View will support up to five Guests.

 **NOTE:** Cross Fueling is currently available for customers with W4 IoT FCTs and some W3 FCTs. Updates to standard W4 FCTs are currently in development to allow full Cross Fueling in a mixed environment.

Cross Fueling Constraints

- The employee and the vehicle must both be part of the same system, either Host or Guest. It is not permissible to have a *Host employee* fuel a *Guest vehicle*.
- A Host system can control which Guest System can fuel at which sites and has the ability to turn off cross fueling of a Guest at any time.
- Either all vehicles can fuel or no vehicles can fuel within a given System.

Create a Guest Department

A Department can be assigned to the Host system or the Guest system.

Each Guest system must have at least one department.

1. Expand the Assets folder, and open the Department's screen.
2. Click the Add Foreign Record button to open the Department New Record Data Entry screen for a Guest Department.

In the Profile section:

Profile			
Department: *	<input type="text"/>	Code: *	<input type="text"/>
Address 1:	<input type="text"/>	Cost Center:	<input type="text"/>
Address 2:	<input type="text"/>	System: *	<input type="dropdown"/>
City, State, Zip:	<input type="text"/>		<input type="text"/>
County:	<input type="text"/>		

3. In the **Department** field, enter the Guest's Department.
 - The Department field accepts up to 60 alpha-numeric characters.
4. In the **Code** field, Enter the Guest's Code.
 - The Code field accepts up to 20 alpha-numeric characters.

 **IMPORTANT: There can be duplicate Department Names and Department Codes amongst the different Fuel View systems (Host and Guests); however, duplicates are not allowed within the same System.**

5. In the **System** drop-down list, select a Guest System.
 - Once a System has been saved for the Department it cannot be changed.
 - Guest Department Records do not have the option to assign Districts.

In the Contact Information section:

Contact Information			
Department Manager:	<input type="text"/>	Phone:	<input type="text"/>
		Fax:	<input type="text"/>
		Department Email:	<input type="text"/>

6. Optional: Select a **Department Manager** from the drop-down list.
7. Optional: Enter the Manager's **Phone**, **Fax**, and **Department Email**.
 - The Department Manager must be set up as a Fuel View employee from the same System as the Guest Department.

In the Parent Department Information section:

Parent Department Information	
Parent Department:	<input type="text"/>

8. Optional: In the **Parent Department** drop-down select a parent if there is a department hierarchy.
 - The parent Department must already have been created from the same System (Host or Guest) as the current department.
9. Ensure the Department Status check-box is active (checked).
10. Click **Save**.

Create a Guest Employee

An employee can be assigned to a Host or a Guest system.

1. Expand the Assets folder, and open the Employees screen.
2. Click the Add Foreign Record button to open the Employee New Record Data Entry for a Guest employee.

In the Employee Profile section:

Employee Profile			
Employee Number: *	<input type="text"/>	Employee Code:	<input type="text"/>
Fueling Status:	<input checked="" type="checkbox"/>	System: *	<input type="text"/>
First, Middle, Last Name: *	<input type="text"/>		<input type="text"/>
Email:	<input type="text"/>		<input type="text"/>
Department: *	<input type="text"/>		

3. In the **Employee Number** field, enter an employee number.
 - The Employee Number field accepts up to 10 alpha-numeric characters.
4. Optional: In the **Employee Code** field, enter an Employee Code.

 **IMPORTANT: There can be duplicate Employee Numbers and Employee Codes amongst the different Systems (Host and Guest); duplicates are not allowed within the same System.**

5. In the **First, Middle, Name, Last Name** field, enter an employee name.
6. In the **Department** drop-down list, select a department.
 - The Department must be set up as a Fuel View department from the same System (Host or Guest) as the current employee.
7. In the **System** drop-down list, select a Guest System.
 - The System field is used to select the Guest system that the Guest employee is being created under.
 - Guest Employee Records do not have the option to assign Districts.

In the Card Information section:

Card Information			
Facility Code:	<input type="text" value="0"/>	Card Number:	<input type="text"/>
Card Enabled:	<input checked="" type="checkbox"/>	Card Issued:	<input type="text"/>
Card Last Used:	<input type="text"/>		

8. Optional: In the **Facility Code** drop-down list, select a facility code for the card.
 - The facility code only applies to HID Fobs. The values in the Facility Code are set up by the Ward Implementation or Support teams.
 - An employee can only have a facility code matched to the same System (Host or Guest).
9. Optional: In the **Card Number** field, enter an HID card number.

 **IMPORTANT: There can be duplicate Card Numbers amongst the different Systems; duplicates are not allowed within the same System.**

10. Click **Save**.

Create a Guest Vehicle

A vehicle can be assigned to a Host or Guest system.

 **NOTE: Guest Vehicle Records do not have the option to set Off Road Usage, Max Visits, Remaining Visits, Odometer Offset, Max Distance, Hour Meter, Hour Meter Offset, Verify Odometer, or Require Hour Meter.**

1. Expand the Assets folder, and open the Vehicles screen.
2. Click the **Add Foreign Record** tool to open the Vehicle New Record Data Entry for a Guest vehicle.

In the Identification section:

Identification			
Vehicle Number: *	<input type="text"/>	Agency Vehicle Code:	<input type="text"/>
Year:	<input type="text"/>	VIN:	<input type="text"/>
Make:	<input type="text"/>	Fueling Status:	<input checked="" type="checkbox"/>
Model:	<input type="text"/>	System: *	<input type="text"/>
Department: *	<input type="text"/>	License Plate:	<input type="text"/>

3. In the **Vehicle Number** field, enter a vehicle number.
 - The Vehicle Number field accepts up to 10 digits.
 4. In the **Department** drop-down list, select a department.
 - The Department must be set up as a Fuel View department from the same System as the current vehicle.
 5. In the **System** drop-down list, select a System.
 - The System drop-down selects the Guest System that the Guest vehicle is being created under.
 - Guest Vehicle Records do not have the option to assign Districts.
 - Guest Vehicle Records do not have the option to assign a Vehicle Type
-  **IMPORTANT: There can be duplicate Vehicle Numbers and Agency Vehicle Codes amongst the different Systems (Host and Guest); duplicates are not allowed within the same System.**

In the Restrictions and Readings section:

Restrictions and Readings
Odometer: * <input type="text" value="0"/> 

6. In the **Odometer** field, enter the current odometer reading of the vehicle.

- A blank entry will start the odometer at zero.

In the Card Information section:

Card Information
Facility Code: <input type="text"/>
Card Number: * <input type="text"/>
Card Status: <input checked="" type="checkbox"/>
Card Last Used: <input type="text"/>
Date Issued: <input type="text"/>

7. Optional: In the **Facility Code** drop-down list, select a facility.

- The facility code only applies to HID Fobs. The values in the Facility Code are set up by the Ward Implementation or Support teams.
- A vehicle can only have a Facility Code matched to the same System (Host or Guest).

8. In the **Card Number** field, enter a card number.

 **IMPORTANT: There can be duplicate Card Numbers amongst the different Systems (Host or Guest); duplicates are not allowed within the same System.**

9. Click **Save**.

8. Site Management

A Site is the physical location of your fueling island(s). Asterisks indicate required fields; however, there are many data fields in each menu that if completed, help provide more detailed information that will allow for custom reporting.

Systems must be set up in the following order:

Sites

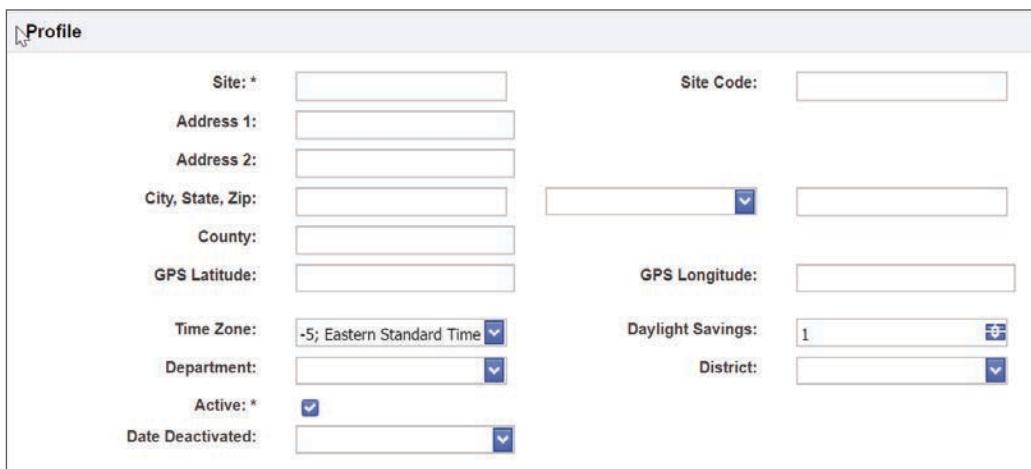
- Terminals – All terminals must be associated with a Site.
- Tanks – All tanks must be associated with a Terminal.
- Pumps – All pumps must be associated with a Tank.

Sites

Create a Site

1. Expand the Site Management menu and open the Sites page.
2. Click the **Add Record** tool to open the data entry window.

In the Profile section:



The screenshot shows a 'Profile' data entry window with the following fields:

Site: *	<input type="text"/>	Site Code:	<input type="text"/>
Address 1:	<input type="text"/>		
Address 2:	<input type="text"/>		
City, State, Zip:	<input type="text"/>	<input type="button" value=""/>	<input type="text"/>
County:	<input type="text"/>		
GPS Latitude:	<input type="text"/>	GPS Longitude:	<input type="text"/>
Time Zone:	-5; Eastern Standard Time <input type="button" value=""/>	Daylight Savings:	1 <input type="button" value=""/>
Department:	<input type="button" value=""/>	District:	<input type="button" value=""/>
Active: *	<input checked="" type="checkbox"/>		
Date Deactivated:	<input type="text"/>		

3. In the **Site** field, enter a site name.
 - This name will be displayed in the Site column and should be easily recognizable by any user.

Example: 'Airport' or 'Cedar Creek Maintenance Station' instead of 'Site 1' or 'Site 2'.

4. In the **Site Code** field, enter a unique Site Code.
 - This is an optional field and is simply a short form descriptor for the site name, and is typically used for reporting purposes.
5. Select a **Department** from the drop-down list.
 - Departments are configured under the Asset Management folder and must be active to be displayed on this list.
6. Select a **District** from the drop-down list.
7. In the **Address, City, State, and Zip** fields, enter data as needed.
8. Select a **Time Zone** from the drop-down list.
9. Ensure the **Active check-box** is checked.

In the Contact Information section:

Contact Information	
Manager:	<input type="text"/>
Phone:	<input type="text"/>
Fax:	<input type="text"/>

10. In the **Manager** field, enter the name of the site manager.
11. In the **Phone, and Fax** fields, enter data as needed.
12. Click **Save**.

Deactivate Or Activate A Site

 **IMPORTANT: A Site cannot be deactivated while there are active terminals, tanks or pumps still associated with the site record.**

To deactivate a Site:

1. Open the Sites page.
2. Select a site to be deactivated by clicking the blue hyper-link in the **Site** column.
 - This will open the data entry screen.
3. In the Data Entry screen, uncheck the **Active** check-box.
4. Click **Save**.
 - Wait for the confirmation message.

To activate a Site:

 **The default query is for Active Sites. To modify the page to view inactive records, use the query tool and expand the Status drop-down menu. To view all sites, both active and inactive, select All. To view only sites that were marked as inactive, select Inactive.**

Query: Sites	
Enter the following filter options:	
Status:	<input type="text" value="Active"/> <input checked="" type="text" value="Active"/> <input type="text" value="Inactive"/> <input type="text" value="All"/> <input type="text" value="Contains"/>
Site Code	<input type="text" value="Options: Contains"/> <input type="text" value="Search For: _____"/>
Site Department Code	<input type="text" value="Options: Contains"/> <input type="text" value="Search For: _____"/>

1. In the Sites grid, click the blue link in the Site column.
2. In the Data Entry screen, check the **Active** check-box.
3. Click **Save**.
 - Wait for the confirmation message.

Terminals

Ward Fuel Control Terminals (FCT) control access for up to ten (10) total fueling points, to include liquid fuels, EV charging stations, secondary fluids (oils and additives etc), access gates or car washes and have various communication and access methods. Creating a Terminal record sets up an FCT and its communication parameters.

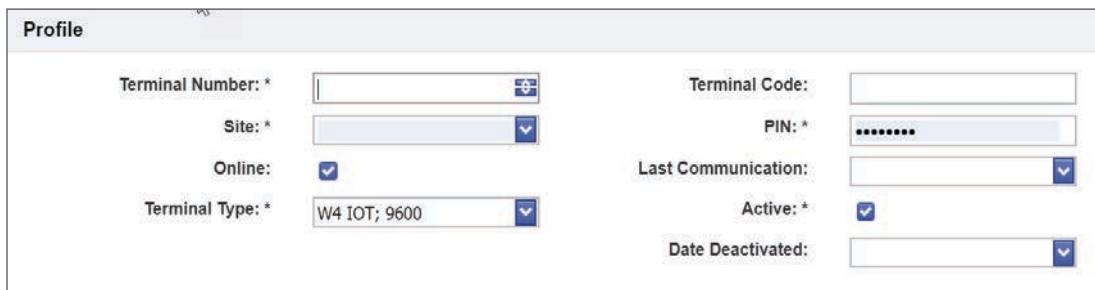
Fuel View Supported FCTs List

- IoT FCT** Internet of Things Fuel Control Terminal
- W4 FCT** W4 Fuel Control Terminal
- W3 FCT** W3 Fuel Control Terminal

Set Up an IoT FCT

1. Open the Terminals page.
2. Click the **Add Record** tool to open Terminal New Record data entry screen.

In the Profile section:



Profile	
Terminal Number: *	
Site: *	
Online: <input checked="" type="checkbox"/>	
Terminal Type: *	W4 IOT; 9600
Terminal Code:	
PIN: *
Last Communication:	
Active: *	<input checked="" type="checkbox"/>
Date Deactivated:	

3. In the **Terminal Number** field, enter a unique number for the FCT.

 **NOTE:** The terminal number must be between 1 and 255. If the site requires terminal numbers higher than 255 the number may be four digits, but the last three digits must be between 001 and 255.

Four-digit format:

1 through 9	0 through 254
-------------------	---------------------

4. Select a **Site** from the drop-down list.
5. Ensure the **Online check-box** is checked.
6. In the **Terminal Type** drop-down list, select W4 IoT.
 - Terminal Type should be selected first to update the screen for the IoT specific fields.
7. Optional: In the **Terminal Code** field, enter a code for the FCT.
 - This may also be used as a password for your Automatic Tank Gauging systems.
8. In the **PIN** field, enter a nine-digit PIN code.
 - PIN must be upper case letters or numbers only.
9. Ensure the **Active check-box** is checked

In the Communications section:



Communications	
Host Name (IP Address):	0.0.0.0
MAC Address: *	

10. In the **Host Name** field, enter the IP Address.
 - This is not a requirement for the IoT FCT.
 - This is a requirement for the W4 and W3 FCT.
11. In the **MAC Address** field, enter the MAC address for the FCT.
 - This is a requirement for the IoT FCT.
 - The MAC Address field accepts only numbers and uppercase letters (A-F) without separation and must be 12 characters long

In the Administrative Functionality section:

Administrative Functionality			
Allow Tank Level Reading: <input type="checkbox"/>	Allow Totalizer Reading: <input type="checkbox"/>	Allow Tank Fuel Delivery Reading: <input type="checkbox"/>	Allow Fuel Transfer: <input type="checkbox"/>

12. Optional: Check the **Allow Tank Level Reading** check-box to allow tank level readings.
13. Optional: Check the **Allow Totalizer Reading** check-box to allow totalizer readings.
14. Optional: Check the **Allow Tank Fuel Delivery Reading** check-box to allow tank fuel delivery readings.
15. Optional: Check the **Allow Fuel Transfer** check-box to allow fuel transfers.



NOTE: Administrative Functionality only works with administrative cards or fobs.

16. Click **Save**.

Online FCT Setting

The Online function allows a user to temporarily take an FCT off-line and still view all related data in Fuel View. While an FCT is off-line, users cannot access any associated fuel pumps, secondary products, EV charging stations, gates, or car washes unless the pump switch inside the FCT is placed in bypass mode.

To determine if an FCT is off line:

1. Check the **Status** column in the Terminal page for that FCT,
 - True equals Online; False equals off-line
- or
1. In the Status folder, open the Terminal Status page.
 2. Click the **Terminal Number** button for an FCT.
 - The Site section in the upper left corner of the screen will display the status of the FCT.

Terminal: 3 Request Terminal Call							
Address:		8801 Tradeway		City, State, Zip:		San Antonio, TX 78216	
Terminal Code	TestDepartment	Site Code	TD	TD	Last Status Update	NO UPDATE	NO UPDATE
Status	Online	City	Online	City	Last Network Update	NO UPDATE	NO UPDATE
Network Status	Offline	Zip	Zip	Zip	Last TLS Comm	9/5/2018 12:00 AM	9/5/2018 12:00 AM
Last Comm	NO COMM	Next Expected Comm	9/6/2018 12:00 AM	Next Expected Comm	9/6/2018 12:00 AM	9/6/2018 12:00 AM	9/6/2018 12:00 AM
Last Transaction	8/5/2019 12:00 AM						
Next Expected Comm	NO COMM						
Missed Communication Time							
Terminal Network Communications offline							
Pump DSL 1 TD Control Board is Not Reporting							
Pump 111 Control Board is Not Reporting							
Missed TLS Communication Time							

Manually Place An FCT In Off-Line Status

3. In the Terminals grid click the Terminal Number link to open the Terminals data entry window.

In the Profile section:

4. Click the **Online** check-box to remove the check mark.

5. Click **Save**.

Return An Off-Line FCT To An Online Status

1. Open the Terminal page.

In the Profile section:

2. Click the **On-line** check-box to populate the check mark.

3. Click **Save**.

Set Up A W4 FCT

Creating a Terminal record sets up an FCT and its communication parameters.

1. Open the Terminals page.

2. Click the **Add Record** tool to open Terminal New Record data entry screen.

In the Profile section:

Profile	
Terminal Number: *	<input type="text"/>
Site: *	<input type="button" value="▼"/>
Firmware Version:	<input type="text"/>
Online:	<input checked="" type="checkbox"/>
Terminal Type: *	<input type="button" value="▼"/> W4FCT; 9600
Terminal Code:	<input type="text"/>
Boot ROM Version:	<input type="text"/>
Last Communication:	<input type="button" value="▼"/>
Active: *	<input checked="" type="checkbox"/>
Date Deactivated:	<input type="button" value="▼"/>

3. In the **Terminal Number** field, enter a unique terminal number.

- The Terminal Number must be between 1 and 255. If the site requires terminal numbers higher than 255 the number may be four digits, but the last three digits must be between 001 and 255.

Four-digit format:

1	0
through	through
9	254

4. Optional: In the **Terminal Code** field, enter a code for the FCT.
 - This may also be used as a password for your Automatic Tank Gauging systems.
5. Select a **Site** from the drop-down list.
6. Ensure the **Active** box is checked to authorize dispensing products.
7. In the **Terminal Type** drop-down list, select W4FCT.

In the Communications section:

Communications	
Host Name (IP Address):	<input type="text" value="0.0.0.0"/>
Use TCP/IP Socket:	<input checked="" type="checkbox"/>
Call During Polling:	<input checked="" type="checkbox"/>
Poll Attempts:	<input type="button" value="▼"/>
Controller:	<input type="button" value="▼"/> 0

8. In the **Host Name** field, enter the IP Address.
9. Click the **Use TCP/IP Socket** check-box if the host computer communicates with the FCT over a network (TCP/IP) connection.
10. Click the **Call During Polling** check-box to enable the FCT to be polled during automatic communications.

11. Optional: In the **Poll Attempts** field, enter a number of unsuccessful poll attempts to make to the FCT.

In the Timings section:

Timings	
Call In Interval: *	<input type="text" value="120"/>
Call Time Limit:	<input type="text" value="0"/>
Poll Interval:	<input type="text" value="1440"/>
Poll Time:	<input type="text"/>

12. Optional: In the **Call Time Limit** field enter the maximum number of minutes that communication sessions are allowed to last.
13. Optional: In the **Poll Interval** field, enter the number of minutes between polling.

In the Limits, Timeouts, and Prompts section:

Limits, Timeouts, and Prompts	
Enable Timeout: *	<input type="text" value="60"/>
Interpulse Timeout: *	<input type="text" value="60"/>
Decay Timeout: *	<input type="text" value="5"/>
CANceiver EE Prompt:	<input checked="" type="checkbox"/>
Strict Odometer:	<input checked="" type="checkbox"/>
Intelligent Backup:	<input type="text" value="0"/>
Shutdown Limit:	<input type="text" value="950"/>
Gallon Limit:	<input type="text" value="0"/>
KeyPad Entry Type:	<input type="text" value="0"/>
Survive CANceiver Signal Loss:	<input checked="" type="checkbox"/>
Allow Outside Fueling:	<input checked="" type="checkbox"/>
Auxillary Authorization:	<input checked="" type="checkbox"/>

14. In the **Enable Timeout** field, enter number of seconds the operator has to start fueling after a pump has been enabled.
15. In the **Interpulse Timeout** field, enter the number of seconds that the operator is allowed to pause fueling before FCT closes the transaction.
- The default setting is 60 seconds.
16. In the **Decay Timeout** field, enter number of seconds after pump has been turned off that terminal allows for fuel in hose to flow through.
- The default setting is five seconds.
17. Optional: Click the **Strict Odometer** check-box if you require manual odometer entries via the terminal keypad.
- This setting will force users to enter a valid odometer reading before allowing product to be dispensed.
 - If checked, users will not be able to fuel unless they enter a valid odometer during the authorization process.
 - This setting only applies to systems that utilize vehicle card(s) or vehicle fob(s) for fueling validation.
 - Odometer value required will be based on the current odometer reading stored in the system for each vehicle, and the maximum travel distance stored in the system for each vehicle.

Example: Vehicle A has a current odometer of 1000 miles, and has a maximum distance of 300 miles. The user must manually enter an odometer value of 1001 to 1300 during the next fueling or be denied access to fuel.

18. Optional: In the **Key Pad Entry Type** field, enter the number provided by a Ward TSG agent or technician.
- Required only if using keypad entry for access to fueling.

 **CAUTION: The Keypad Entry Type should only be entered as instructed by Ward TSG.**

19. Optional: Click the **Survive CANceiver Signal Loss** check-box.
- This keeps transactions authorized by CANceiver or VIT active when there is a temporary loss of signal between the hose module and vehicle tag/antenna.
 - Ward recommends leaving this setting turned off.
20. Optional: Click the **Allow Outside Fueling** check-box to allow cards, keys,

or VITs from other Ward systems to authorize fueling.

- This option is available if Fuel View is programmed for multiple Ward customers sharing an FCT.

In the TLS Information section (if tank level sensors are installed):



TLS Information	
TLS Type: *	1; Unknown
TLS Unit Number:	<input type="text"/>
Dial TLS:	<input checked="" type="checkbox"/>
TLS Poll Time:	<input type="text"/>
TLS Phone:	555-5555

21. In the **TLS Type** drop-down list, select the tank level sensor unit which Fuel View will interface

Tank Level Sensors List

Caldwell
 Incon TS-1001
 OMNTEC Proteus
 TLS 250
 TLS 350
 TLS 350 R

22. Optional: In the **TLS Unit Number** field, enter a unique identification tank level sensor number.
23. Optional: In the **TLS Poll Time** field enter the number of minutes between polls for tank level sensors.
24. Optional: In the **TLS Phone** field, enter the TLS phone number.
25. Optional: Click the **Dial TLS** check-box to enable the FCT to call the TLS.
26. Click **Save**.

Deactivate An FCT

 **CAUTION: An FCT cannot be deactivated until all associated tanks and pumps are deactivated.**

1. Open the Terminals page.
2. Click the **Terminal Number** link for the FCT to be deactivated.

In the Profile section:

3. Uncheck the **Active** check-box.
4. Click **Save**.
 - Wait for the confirmation message.
5. Click **Close**.

IoT FCT Terminal Manager Screen

The Internet of Things FCT operates in a Windows platform with REST based API and provides real-time communication, pump status, and advanced security.

The Terminal Manager Screen provides the following information for the FCT:

IOT FCT Status Definitions

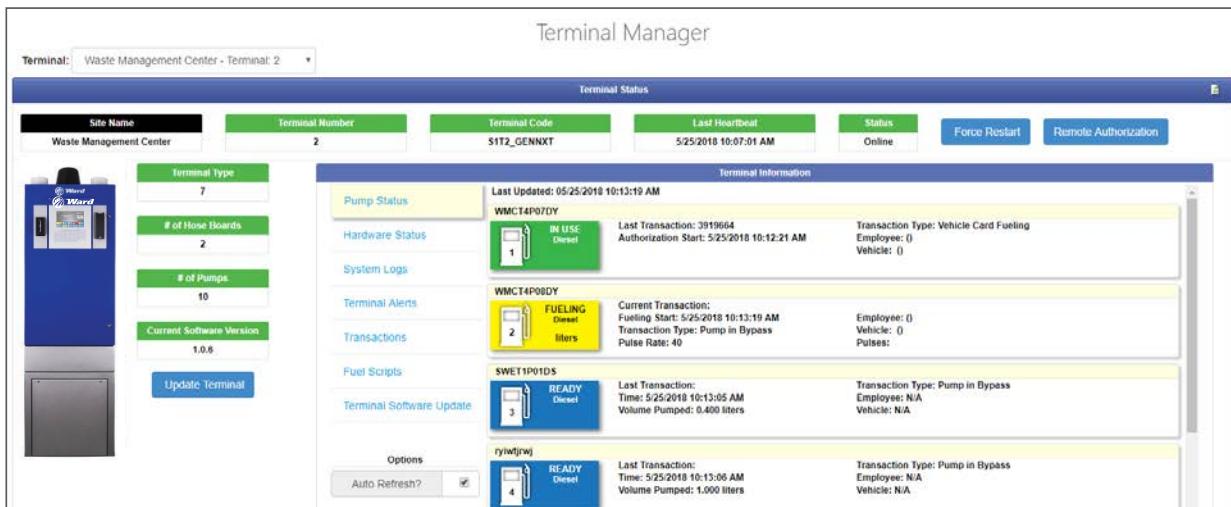
Site Name	Location of the FCT
Terminal Number	Unique number given to the FCT
Terminal Code	Unique name given to the FCT
Status	On-line or off-line
Terminal Type	IoT W4

Number of Hose Boards	Number of boards within the FCT that are connected to pumps.
Number of Pumps	Number of pumps the FCT controls Current Software Version The latest software release number Information Definitions.
Pump Status	Real-time status of a pump's state of activity.
Hardware Status	View the FCT's hardware settings.
System Logs	View the last 7 days of Fuel View logs for the FCT.
Terminal Alerts	Log of the last 20 alerts for the FCT.
Transactions	Log of the last 50 transactions the FCT has enabled.
Fuel Scripts	View rules that must be met before fueling can begin.
Update Terminal Software	Send new software version to the FCT.
Run Terminal Configuration	Send new configuration files to the FCT.
Auto Refresh	Refreshes the pump status and FCT hardware settings views every 10 seconds.

Force Restart An IOT FCT

In the event that an IoT FCT needs to be rebooted:

Open the IoT Terminal Manager screen:



1. Select an FCT from the **Terminal** drop-down list.
2. Click the **Force Restart** tool.
3. In the confirmation screen, click **OK**.

Remote Authorization

A user at the fuel pump can be given authorization direct from Fuel View in real-time.

1. Click the **Remote Authorization** tool in the Terminal Manager screen.
2. In the **Pump Number** drop-down list, select a pump.
3. In the **Vehicle** field, enter a vehicle number.
4. In the **Employee** field, enter an employee number.
5. In the **Odometer** field, enter the odometer or hour meter reading.
6. In the **Maximum Quantity** field, enter the maximum quantity of fuel this transaction allows.
7. Click **Authorize**.

Update Terminal Software

 **WARNING:** Updating terminal software only be done by the Ward Technical Service Group (TSG) or Ward Technicians.

Tanks

Add A Tank

1. In the Site Management folder open the Tanks page.
2. Click the **Add Record** tool to open the Tank New Record data entry screen.

In the Profile section:

Profile	
Site: *	<input type="text"/>
Active: *	<input checked="" type="checkbox"/>
Date Deactivated:	<input type="text"/>

3. In the **Site** drop-down list, select a site.

In the Fuel section:

Fuel	
Tank Number: *	<input type="text"/>
Tank Code:	<input type="text"/>
Fuel: *	<input type="text"/>
Fuel Code:	<input type="text"/>
Continuous Feed:	<input type="checkbox"/>
Capacity: *	<input type="text"/>
Reorder Level: *	<input type="text"/>
Current Level:	<input type="text"/>

4. In the **Tank Number** field, enter unique tank/terminal number.
5. Optional: Fill in the **Tank Code** field.
6. In the **Fuel** drop-down list, select the tank's fuel type.
 - Fuel also contains non-fuel/lubricant products as well as two functions:
Gate Opener
Car Wash
7. Optional: In the **Fuel Code** field, enter a fuel code.
 - The Fuel Code is used for exports.
8. Check the **Continuous Feed** check-box if the tank has a continuous supply of product.
9. In the **Capacity** field, enter the tank's maximum capacity.
10. In the **Reorder Level** field, enter the minimum capacity the tank is allowed to reach to activate a reorder alarm.

11. Optional: In the **Current Level** field, enter the current volume of fuel in the tank.

 **NOTE: Once the record is saved, the Current Tank Level cannot be edited and is adjusted based on fuel receipts, fueling transactions, fuel transfers and the TLS process.**

In the TLS Information section:

TLS Information	
TLS Probe Number:	<input type="text"/>
Terminal:	<input type="text"/>

12. Optional: In the **TLS Probe Number** field, enter a probe number associated with the tank. 13. Select a Terminal from the number drop-down list.

- The terminal is the FCT to which the tank is connected.

13. Click **Save**.

Edit A Tank

- Open the Tanks page.
- Click the blue hyper-link in the **Tank Number** field for a tank number.
- Edit the fields in the sections as required.
- To disconnect an FCT from a tank, hover over the **Terminal** field until a gray delete icon with an X appears.
- Click the **Delete** icon.
 - A new FCT can be connected at any time.

Deactivate A Tank

 **CAUTION: Deactivating a tank will also deactivate its pumps.**

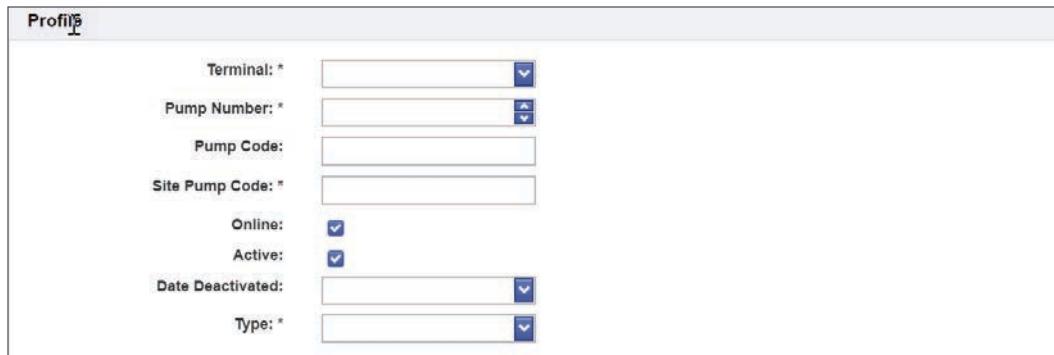
- Open the Tanks page.
- Click the blue hyper-link in the **Tank Number** field, for a tank number.
 - If you have multiple sites, ensure the tank is in the correct site.
- In the Data Entry screen, uncheck the **Active** check-box.
- Click **Save**.
 - Wait for the confirmation message.
- Click **OK**.

Pumps

Add A Pump

- Open the Pumps grid.
- Click the **Add Record** tool to open the Pump data entry screen.

In the Profile section:



Profile	
Terminal: *	<input type="text"/>
Pump Number: *	<input type="text"/>
Pump Code:	<input type="text"/>
Site Pump Code: *	<input type="text"/>
Online:	<input checked="" type="checkbox"/>
Active:	<input checked="" type="checkbox"/>
Date Deactivated:	<input type="text"/>
Type: *	<input type="text"/>

3. In the **Terminal** drop-down list, select the FCT connected to the pump.
4. In the **Pump Number** field, assign a number to the pump.
5. In the **Pump Code** field, enter a unique alphanumeric code.

Example: Pump #1 for FCT #33 can have a pump code of T33P1.

6. Conditional - Site Pump Code: This setting allows customers to maintain current pump numbering schemes for sites with multiple islands and FCTs. Terminals can only be wired to fueling points one (1) through ten (10), but with this setting a customer can number those hoses as 21 through 30.
 - *This setting must be activated by the Ward TSG.*
7. Check the On-line box to allow the FCT to authorize dispensing of product through the pump.
8. In the **Type** drop-down list, select a fuel type.

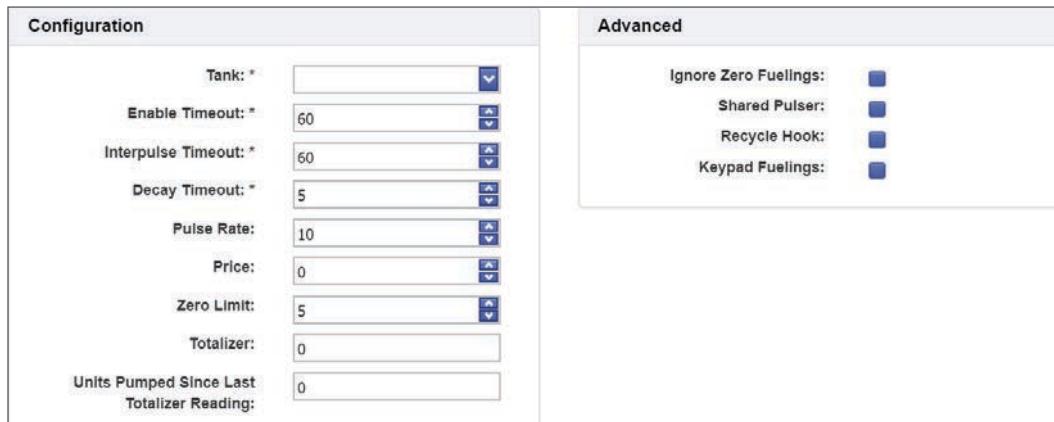
Pump Types List

- Car Wash
- CNG
- Electric
- Fuel
- Gate Opener
- Propane



NOTE: A Tank will be automatically created and selected if the Pump Type is not Fuel.

In the Configuration section:



Configuration		Advanced	
Tank: *	<input type="text"/>	Ignore Zero Fuelings:	<input type="checkbox"/>
Enable Timeout: *	<input type="text"/> 60	Shared Pulser:	<input type="checkbox"/>
Interpulse Timeout: *	<input type="text"/> 60	Recycle Hook:	<input type="checkbox"/>
Decay Timeout: *	<input type="text"/> 5	Keypad Fuelings:	<input type="checkbox"/>
Pulse Rate:	<input type="text"/> 10		
Price:	<input type="text"/> 0		
Zero Limit:	<input type="text"/> 5		
Totalizer:	<input type="text"/> 0		
Units Pumped Since Last Totalizer Reading:	<input type="text"/> 0		

9. In the **Tank** drop-down list, select a tank for the pump.
10. In the **Enable Timeout** field, enter the number of seconds in which the operator must begin fueling.

11. In the **Interpulse Timeout** field, enter the number of seconds the operator has for pausing during fueling.
 12. In the **Decay Timeout** field, enter the number of seconds the pump will continue to monitor product flow after the transaction has ended.
 13. In the **Pulse Rate** field, enter the pulse rate for which the pump is set.
 14. In the **Price** field, enter the fuel price per unit.
 15. In the **Zero Limit** field, enter the number of allowable consecutive zero quantity fuelings before the pump is automatically taken off-line.
 16. In the **Totalizer** field, enter the pump's current totalizer reading.
 17. In the **Units Pumped Since Last Totalizer Reading** field, enter the units pumped since last totalizer reading.
- In the Advanced section:
18. Check the **Ignore Zero Fuelings** check-box to flag Fuel View to not track zero quantity fuelings for the pump

 **CAUTION: Ignore Zero Fueling is not recommended because tracking zero quantity fuelings is how Fuel View detects faulty dispenser equipment or a failed pulser.**

19. Check the **Shared Pulser** check-box if the pump is part of a hardware configuration that utilizes two or more pumps to simultaneously push high volumes of fuel through a common pulser.
20. Check the **Recycle Hook** check-box if the pump does not have a physical reset handle.
21. Check the **Keypad Fuelings** check-box to activate the FCT by pressing the Enter key If the pump allows keypad fueling.
22. Check the **Ignore Off Hook** check-box if the pump does not utilize a hook switch.
23. Check the **Ignore On Hook** check-box if the pump does not utilize a hook switch.
24. Click **Save**.

Pump Chaining

Designed for transit lanes and inside garage bays, Pump Chaining is a Fuel View function that connects pumps within the same FCT. Following FCT access and primary pump activation by the user, chaining allows a second pump to be activated without initiating a new transaction at the FCT.

 **NOTE: Fuel View allows up to four pumps to be chained per FCT.**

Example: In a transit lane, a diesel pump may be chained to an oil pump. Once the diesel pump is enabled, Fuel View automatically enables the oil pump – eliminating the need to return to the FCT to enable the oil pump.

1. In the Pumps page, click the blue link in the **Pump Number** column to open the Pumps screen.
- In the Pump Chaining section:
2. Check the Pump Number, or numbers, to be activated with the primary pump.
 3. Click **Save**.

 **NOTE: Pump Chaining screens will vary by customer and site.**

Sample Pump Chaining Screens

No pumps chained.

Pump Chaining				
Chain To Pump #	1	2	3	4
Site Pump Code	[5]	[6]	[7]	[8]
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Pumps 1 and 3 chained.

Pump Chaining				
Chain To Pump #	1	2	3	4
Site Pump Code	[5]	[6]	[7]	[8]
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Deactivate A Pump

1. Open the Pumps page.
2. Click the blue **Pump** link to be deactivated.
3. On the Data Entry screen, uncheck the **Active** check-box.
4. Click **Save**.
 - Wait for the confirmation message.
5. Click **Close**.

Manifolds

A manifold connects multiple tanks to allow fuel in each tank to be used evenly. If the site contains manifolded tanks, Fuel View has the ability to monitor fuel levels in each tank.

Manifold Rules List

A manifold must contain two or more tanks. The tanks must be at the same site.

The tanks must contain the same fuel type.

The same tank cannot be used in more than one manifold.

Example: If a site has eight tanks named 1 through 8, manifolded in two sets, and tanks 1-4 are manifolded, tank 4 cannot be manifolded in the second set; the second set can only manifold tanks 5-8.

Set Up A Manifold

Fuel View allows up to eight tanks to be connected with one manifold.

1. In the Site Management folder, open the Manifolds page.
2. Click the **Add Record** tool to open the Manifold data entry screen.

In the Profile section:

Profile	
Site:	<input type="text"/>
Description:	<input type="text"/>
Date Activated:	<input type="text"/>
Active:	<input checked="" type="checkbox"/>
Date Deactivated:	<input type="text"/>

3. In the **Site** drop-down list, select the site where the manifold tanks are located.
4. In the **Description** field, enter a unique description to identify the manifold.
5. In the **Date Activated** field, select the date and time the manifold becomes active.

In the Tanks section:



Tanks	
Tank 1: *	<input type="button" value="Clear"/>
Tank 2:	<input type="button" value="Clear"/>
Tank 3:	<input type="button" value="Clear"/>
Tank 4:	<input type="button" value="Clear"/>
Tank 5:	<input type="button" value="Clear"/>
Tank 6:	<input type="button" value="Clear"/>
Tank 7:	<input type="button" value="Clear"/>
Tank 8:	<input type="button" value="Clear"/>

6. From the Tanks drop-down list, select the connected tanks.
7. Click **Save**.

Deactivate A Manifold

1. In the Manifolds grid **Description** column, click the link of a manifold.
2. Click the **Clear** tool next to each tank to remove from the remove.
3. Click **Save**.

Terminal Alerts

Terminal alerts are hardware problems or anomalies that an FCT recognizes and creates an alert record in Fuel View. Alert details are stored in the Terminal Alerts grid.

To open the Terminal Alerts page:

1. Click the Terminal Alerts icon in the Site Management folder.
 - The user can search the Terminal Alerts grid but Alert records cannot be edited or deleted.

Terminal Alerts List

Terminal Alerts

AC Power Restore
Auto Restart
Intrusion
Pump Switch Change
Pump Went Off-line
Terminals Without Transactions (hours)

Terminal OS Alerts

Configuration Zip File Corrupted
Extra Configuration Files
Mega Option
Missing Configuration Files
No Valid Configuration Files Found in Unzip Directory
Power Loss - On Backup Battery
Power Restored
Unable to Open Configuration File
Unable to Open Unzip Directory
Unable to Parse Configuration File
Unable to Read Configuration File
Unable to Run Unzip Command
Unable to Run Unzip Rest Command for Corruption
Unable to Update Internal Database

Tank Alerts

Approaching Reorder
Below Reorder

TLS Alerts

Missed TLS Comm Time
TLS Units Not Communicated (hours)
TLS Units That Have Reported Alarms

Vehicle Alerts

MPG/KPL (greater than)
MPG/KPL (less than)
Odometer/Hour Meter Changes (distance/hours)
Odometer/Hour Meter Changes by Vehicle
Transaction Time Difference for Employee (minutes)
Vehicles Not Fueled (days)

Pump Alerts

Pump In Bypass
Pump Off
Pump Off-line
Transaction Time Difference for Pump (minutes)

Transaction Alerts

Employees That Haven't Fueled (nights)
Highest Volume Transactions (top count)
Transaction Processing Errors, Terminal (days)
Transaction Time Difference for Vehicle (minutes)
Transaction Volumes (greater than)
Transaction Volumes (less than)
Transaction Volumes Greater Than Tank Size
Transactions with Volumes Greater Than (quantity)
Transactions with Volumes Less Than (quantity)
Unprocessed Raw Transactions, Terminal (days)

Communication Alerts

Missed Comm Time
Network Comm Off-line
Terminals Off-line

Site Photos

Fuel View can store photographs of FCTs, fuel dispensers, and layouts associated with sites.
The correct file structure and permissions must be enabled for photo storage.

To upload a photo:

1. From a Site's grid, click the **Site Photos** icon on the side navigation menu.
2. In the Site Photos screen, click the **Browse** button.
3. From your hard drive folders, select a photo.
4. Click **Upload**.
 - Photos will display in the field below.

Delete A Site Photo

Currently there is no function to delete a site photo. Contact Ward.

9. CANceiver Management

Set Up A CANceiver

Setting up the CANceiver creates the commands to monitor vehicle status, vehicle health, and driver behavior for reporting within Fuel View.

CANceiver Terms Definitions

Event Map The settings for a particular CANceiver configuration.

PID Process Identifier - The events that take place in the vehicle for measurement, monitoring and reporting.

Polling Frequency How often a PID is updated from the on-board diagnostics (OBD) device. Some PID codes do not require a polling frequency (such as hard braking).

Measurement Type Defines how or when a CANceiver Event is recorded.

CANceiver Events All of the activity data that was collected from the vehicle ECM. Events may be exported for printing and reporting.

 For list, of CANceiver Event Map examples, see Appendix A – CANceiver Event Map Examples.

Create a CANceiver Configuration (Main Configuration)

1. Expand the CANceiver Management directory, and open the CANceiver Configs page.

Vehicles												
#	Vehicle #	License Plate	CANceiver ID	VIN	Odometer	Make	Model	Year	Department	Card #	Card Status	
Clear	test	duc										
1293	BHZ7723	00000000000000001293	5FYD2GL173U025645		50633	New Flyer	SR904	2017	Department #10	1293	Active	
1295	BHZ7725	00000000000000001295	15CGD291931112027		81230	Gillig	C29D102N4	2018	Department #10	1295	Active	
1300	BHN4483	00000000000000001300	5FYD4KV176C029750		139597	New Flyer	SR1081	2018	Department #6	4	Active	
1431	BJR4673	00000000000000001431	00000000000000001431		46437	FORD	F550	2013	Department #10	1431	Active	

 The CANceiver Conifg page tool bar **Show Inactive** button, double functions to Hide Inactive. Click once to Show Inactive configurations, click again to Hide Inactive configurations.

2. Click the **Add Record** tool to open the CANceiver Configuration.

In the Configuration section:

Configuration		
Configuration Name: *	backup config	Note: Hard Acceleration and Hard Braking DO NOT have a Polling Frequency
Description:		Logging Interval CANNOT BE LESS than Polling Frequency
Version:	2	For INTERVALS, the parameter is in SECONDS (i.e. 10, 50, 100)
Active?	<input checked="" type="checkbox"/>	For THRESHOLDS, the parameter is a VALUE (i.e. 50, 1000, 25000)
Deactivated Date:		For IGNITION, there is NO parameter

3. In the **Configuration Name** field, enter a unique name.
 - This name will be displayed under the Event Config Code column on the CANceiver Configs page.
4. Optional: In the **Description** field, enter a short description.

Examples: Configuration Name: Emergency Vehicles w/ GPS
 Description: Odometer / Ignition on Fueling
 Configuration Name: Department of Transportation
 Description: Hour Meter Fueling

5. Optional: In the **Version** field, enter a number increment to assign version numbers to edits of the configuration.

 **NOTE: The version number is not tracked at the vehicle level, meaning the CANceiver will never track or report which version of the configuration it is currently running. The user must keep track of changes made to the configuration in Fuel View only.**

In the Card Options section:

Card Options			
<input checked="" type="checkbox"/> Pin Required	<input checked="" type="checkbox"/> Ignore LOS	<input type="checkbox"/> Allow Fueling with Ignition On	<input type="checkbox"/> Fuel using Hour Meter

6. Select the required Card Options.
 - Card Options are permissions or pre-set conditions that must be met to authorize a fueling transaction.

CANceiver Card Option Definitions

PIN Required Requires the user to have a secondary method of validation. IE: Employee number

Ignore LOS Ignoring loss of signal will not stop the fueling transaction if the connection between the Hose Module and Fuel Tag is lost. The transaction will rely on the interpulse and enable timeouts from the Pumps screen.

 **NOTE: For IoT Terminals this setting is controlled through the Fuel Script editor.**

Allow Fueling With Ignition On Allows the vehicle to be fueled with its engine running.

Fuel Using an Hour Meter Authorize fueling with hour meter input instead of an odometer.

7. Click **Save**.
8. Click **OK**.
 - The Event Configuration section will automatically open below the Card Options section.

Create An Event Map

An Event Map tells the CANceiver what data to record, and when to record it. You can have multiple unique Event Maps in any CANceiver Config. As Event Maps are added to Configurations, they will accumulate within the Event Configuration section.

1. Click the blue **Add Event Map** hyper-link on the right side of the Event Configuration section's title bar.

Event Configuration	Add Event Map

- An Event Map section will open.



NOTE: Do not create duplicate Event Maps under the same CANceiver Config.

In the Event Map section:

Event Configuration		Add Event Map
Event Map <div style="text-align: right;">Delete</div>		
PID Type:	<input type="button" value="▼"/>	
Polling Frequency (in Seconds):	0	<input type="button" value="▼"/>
Measurement Parameter:	<input type="button" value="▼"/>	
Measurement Type:	<input type="button" value="▼"/>	
<input type="checkbox"/> Include GPS?		<input type="checkbox"/> Include GPS Extended?
		<input type="checkbox"/> Drive Cycle?

2. In the **PID Type** drop-down list, select an event for the CANceiver to record.

 **For a full list, of CANceiver PID Types see Appendix B – PID CANceiver Events List.**

 **NOTE: Light Duty and Heavy Duty vehicles have GPIO supported functions and are described on page 96.**

3. Optional: In the **Polling Frequency** drop-down list, change the frequency.
 - The Polling Frequency field will populate with recommended default frequency values that are dependent upon the PID Type. This is how often the CANceiver will poll or 'Sample' the data selected (PID) from the vehicle ECM.

IMPORTANT: Do not set a Polling Frequency below two seconds.

Depending upon PID Measurement Type selected, the *Measurement Parameter Logging Interval* field will disappear, or be change to *Logging Interval*, or *Measurement Parameter*. This tells the CANceiver when to record the data. The recorded data is referred to as a *CANceiver Event*.

4. Optional: In the **Logging Interval** field, change the default value.
 - The parameter value is seconds.
 - The Logging Interval cannot be less than or equal to the Polling Frequency.

The Logging Interval field is available for the following Measurement Types.

Measurement Types Definitions

Interval Current Record the *current* value of the PID, when the logging interval is met.

Interval Min Record the *minimum* value of the PID, when the logging interval is met.

Interval Avg Record the *average* value of the PID, when the logging interval is met.

Example: If the polling frequency is set for 15 seconds, the logging interval is set for 60 seconds, and the selected measurement type is Interval Avg, then the CANceiver will sample the data four times. Once every 15 seconds, for a total of 60 seconds. At the 60 second mark, the CANceiver will average those four values, and create one CANceiver event.

5. Optional: In the **Measurement Parameter** field, select a measurement type.
6. Optional: In the **Measurement Type** drop-down list, select the proper Measurement Parameter.
 - For some PID Types, the Measurement Type field will auto populate.

 **For Measurement Type definitions and examples see Appendix C – Measurement Types.**

Optional: Check the **Include GPS** check-box.

- Records latitude, longitude, altitude.
7. Optional: Check the **Include GPS Extended** check-box.
 - Records the GPS plus advanced information for signal strength and level of perceived accuracy.
 8. Check the **Drive Cycle** check-box.
 - Measures the entire duration of the trip from ignition on to ignition off.

 **NOTE:** The CANceiver must have a passive GPS antenna installed to record GPS data.

 For examples of Hard Acceleration, Hard Braking and Idle Time settings see Appendix D – Accelerating, Breaking, and Idle Time.

9. Click **Save**.

Edit An Event Configuration

1. In the CANceiver Config page, click the blue hyper-link in the **Event Config Code** column.
2. Edit fields as required.
3. Click **Save**.

 **NOTE:** When you edit an existing CANceiver Configuration, it is not automatically sent to all devices running the previous or original versions. The edited configuration must be sent to all devices you wish to run with the new parameters. Refer to the *Assign a CANceiver Config* section for instructions on sending configurations.

Deactivate An Event Configuration

An Event Configuration is a permanent record that can be deactivated, but not deleted. To deactivate an Event Configuration:

1. Open the CANceiver Configs page.
2. Click the blue hyper-link in the **Event Config Code** column.
3. In the Configuration section, uncheck the **Active** check-box.
4. Click **Save**.

Re-activate An Event Configuration

1. Open the CANceiver Configs page.
2. Click the **Show Inactive** button.

CANceiver Config		
Add Record	Columns ▾	Paging ▾
#	Event Config Code	Description
	Basic Main Config	Basic configuration for vehicles
	Basic Main Config with GPS	Basic configuration for vehicles
	Config- No Gather PIDs	Does not gather telematics data

3. Click the blue hyper-link in the **Event Config Code** column.
4. Check the **Active** check-box.
5. Click **Save**.

Delete An Event Map

 **IMPORTANT: Clicking Delete is an immediate deletion of the Event Map. The delete cannot be reversed and is not preceded by a confirmation screen. If an accidental delete occurs, the Event Map must be recreated.**

1. Open the CANceiver Configs page.
2. Click the blue hyper-link in the **Event Config Code** column.

In the Event Configuration section:

Event Configuration		Add Event Map
Event Map <div style="text-align: right;">Delete</div>		
PID Type: <input type="button" value="▼"/>		
Polling Frequency (in Seconds): <input type="button" value="0"/>		
Measurement Parameter: <input type="button" value="0"/>		
Measurement Type: <input type="button" value="▼"/>		
<input type="checkbox"/> Include GPS?		<input type="checkbox"/> Include GPS Extended?
		<input type="checkbox"/> Drive Cycle?

3. Click **Delete** in the bar of the Event Map to be deleted.

CANceiver Logs

CANceiver Logs are communication records between the CANceiver and Fuel View. The Logs tell the user what the CANceiver data was at the specific date and time of the last connection. This record is updated each time a CANceiver communicates with the server, so only one record will be displayed per vehicle.

 **NOTE:** Only vehicles that have been configured to receive a Main Configuration will display on this screen. If most of the fields are blank, that means the CANceiver has not connected.

CANceiver Logs						
 Columns		 Paging		 Export		
#	CANceiver ID	Last Connection	Main Configuration	OBD VIN	Received Main Config	
1804170080300005040	10/12/2018 11:35:05 AM			1VHAC3A2X36502016		
150913008030000462	5/16/2019 1:13:25 PM	Basic Main Config w GPS	1G1ZE5SX0JF117763	2/27/2019 11:17:25 AM		
150913008030000451	7/20/2019 10:59:49 PM	Basic Main Config w GPS	1G1ZJ5SU1HF272592	5/13/2019 4:21:15 PM		

General Purpose Input / Output

General Purpose Input / Output (GPIO) is used on utility equipment such as snow plows. The GPIO grid provides options for additional input other than the ECM/PCM (vehicle computer).

Sample GPIO Functions

Bucket Trucks If the bucket is active the event will be recorded.

Snow Plows If the snow plow is in the down position the event will be recorded.

Lights If the light is on the event will be recorded.

Sirens If the siren is on the event will be recorded.

Create A GPIO Definition

1. Open the GPIO Definitions page.
2. Click **Add Record** to open the GPIO Definitions screen.

GPIO Definition

GPIO Definition: *	<input type="text"/>
GPIO Active: *	<input type="text"/>
GPIO Inactive: *	<input type="text"/>
Active:	<input checked="" type="checkbox"/>
Date Deactivated:	<input type="text"/>

3. In the **GPIO Definition** field, enter an easily identifiable name.

Example: Snow plow, mower blade, etc.

4. In the **GPIO Active Status** field, enter a description for the vehicle while it is in an active state.

Example: If the vehicle is a snow plow, the snow plow is active when the plow is down; so the Active Status description could be Plow Down.

5. In the **GPIO InActive Status** field, enter a description to display when the definition is in an inactive state.

Example: For the snow plow, it is inactive when the plow is up.

6. Click **Save**.

Deactivate A GPIO Definition

1. To deactivate a GPIO, uncheck the **Active** box.
2. Click **Save**.

Add A GPIO Configuration

1. Open the GPIO Configurations page.
2. Click **Add Record** to open GPIO Configurations screen.
3. In the Configuration Profile section:
4. In the **Configuration Name** field, enter an easily identifiable name.

Configuration Profile	
Configuration Name: *	<input type="text"/>
Active:	<input checked="" type="checkbox"/>
Date Deactivated:	<input type="text"/>
Input Pins	
 Pin 1: <input type="text"/> Pin 3: <input type="text"/> Pin 5: <input type="text"/> Pin 2: <input type="text"/> Pin 4: <input type="text"/> Pin 6: <input type="text"/>	

In the Input Pins section:

5. In the **Pin #** drop-down lists, select a definition to assign to each Pin.

 **NOTE: The PIN number, is directly related to the Digital Input number for the W4 CANceiver I/O cable. Meaning in 1 in the software, is Digital Input 1 on the wiring harness.**

In the Output Pins section:

Output Pins	
Setting 1 Input:	<input type="text"/>
Setting 2 Input:	<input type="text"/>
Connected to Output:	<input type="text"/>
Connected to Output:	<input type="text"/>

6. Select which **Setting # Input** activates which **Connected to Output** Pin.

Example: For “Setting 1 Input” set to Pin 1. For “Connected to Output” set to output 1. Therefore, when Pin 1 is in an active state, Output 1 will produce an output.

7. Click **Save**.

 **NOTE: Refer to the W4 CANceiver Installation Guide for specific instructions on installing and wiring a CANceiver with the I/O cable.**

Add GPIO Vehicle Maps

1. Open the GPIO Vehicle Maps page.
2. Click **Add Record**.

GPIO Vehicle Map

Vehicle: *	<input type="text"/>
GPIO Definition: *	<input type="text"/>
Input Pin: *	<input type="text"/>
Active:	<input checked="" type="checkbox"/>
Date Deactivated:	<input type="text"/>

3. Select a **Vehicle** from the drop-down list.
4. Select a **GPIO Definition** from the drop-down list.
5. In the **Input Pin** field enter the I/O cable Number that the input is connected to on the CANceiver harness.
6. Click **Save**.

Set Up A Network Configuration

Setting up the Network Configuration creates the communication hyper-link between the CANceiver and host computer for collecting data with Fuel View.

Open the Network Configurations page.

1. Click **Add Record**.

Network Configuration

Configuration Name: *	<input type="text"/>
SSID: *	<input type="text"/>
IP Address: *	<input type="text"/>
Security: *	0 <input type="radio"/> OPEN (DEFAULT) <input checked="" type="radio"/>
System ID	<input type="text"/>
Network Configuration
Password:	<input type="password"/>
Active:	<input checked="" type="checkbox"/>
Date Deactivated:	<input type="text"/>

2. In the **Configuration Name** field, enter a unique network configuration name.

Example: Garage A Wi-Fi.

3. In the **SSID** field, enter the Wi-Fi identification name assigned by your IT department.

 **NOTE: An SSID is the name of a wireless local area network (WLAN).**

4. In the **IP Address** field, enter IP address of the Communications Server.

Example: If the communications server IP address is 192.168.72.1 then 192 is entered in the first box, 168 is entered in the second box, 72 the third box, and 1 the fourth box.

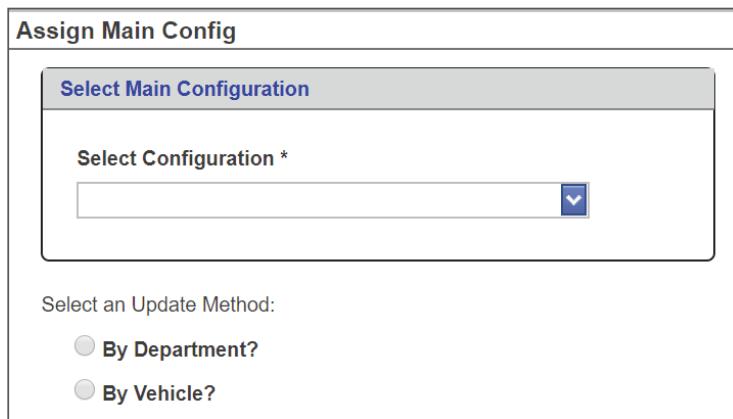
5. In the **Security** drop-down list, select a Security Source.
 - This is assigned by your IT Department; WPA2-PSK is the most commonly used.
6. In the **System ID** field, enter your System ID assigned by Ward.
7. In the **Network Configuration Password** field, enter the password assigned by your IT Department.
8. Click **Save**.

Assign A CANceiver Config

This is where the CANceiver configuration set-up in the previous steps, is assigned to a vehicle, or multiple vehicles. This is done during the initial installation and setup process, and also when needing to send an updated main configuration.

 **NOTE: Access to the Configuration directory and the ability to perform updates is limited by User's Security Access Level.**

In the CANceiver Management folder open Assign Main Config screen.



The screenshot shows the 'Assign Main Config' interface. At the top, there is a dropdown menu labeled 'Select Main Configuration' containing three options: 'Basic Main Config', 'Basic Main Config wth GPS', and 'Config - No Gather PIDs'. Below this, there is a section titled 'Select an Update Method:' with two radio buttons: 'By Department?' and 'By Vehicle?'. The 'By Department?' radio button is selected, indicated by a checked checkbox.

1. In the **Select Configuration** drop-down list, click either the **By Department** or **By Vehicle** radio button:
2. Select required Main Configuration.
 Basic Main Config
 Basic Main Config wth GPS
 Config - No Gather PIDs
3. Click the **By Department** or **By Vehicle** radio button.

Update Method Definitions

By Department Select every vehicle assigned to a certain department.

By Vehicle Select individual, or multiple vehicles based on vehicle number.

By Departments

Assign Main Config

Select Main Configuration

Select Configuration *

Select an Update Method:

By Department?

By Vehicle?

Select a Department:

*May select one or more Departments

Update All Departments?

1. In the **Department** drop-down list, chose one or more Departments.
2. If required, check the **Update All Departments** check-box.
3. Click **Save**.

By Vehicles

Assign Main Config

Select Main Configuration

Select Configuration *

Select an Update Method:

By Department?

By Vehicle?

Select Vehicles:

*May select one or more Vehicles

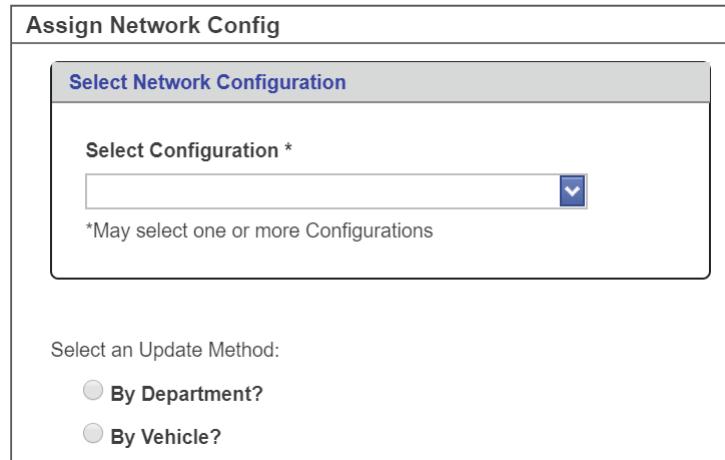
Update All Vehicles?

1. In the **Select Vehicles** drop-down list, chose one or more Vehicles.
2. If required, check the **Update All Vehicles** check-box.
3. Click **Save**.

Assign A Network Config

Assign Network Config is where the Network Configuration(s) from the previous steps are assigned to the vehicles.

1. Open the Assign Network Config screen.



The screenshot shows the 'Assign Network Config' screen. In the 'Select Network Configuration' section, there is a dropdown menu labeled 'Select Configuration *' with a note below it stating '*May select one or more Configurations'. Below this, under 'Select an Update Method:', there are two radio button options: 'By Department?' and 'By Vehicle?'.

2. In the **Select Configuration** drop-down list, select the proper Network Configuration or Configurations.
3. Click the radio button for **By Department** or **By Vehicle**.

By Department

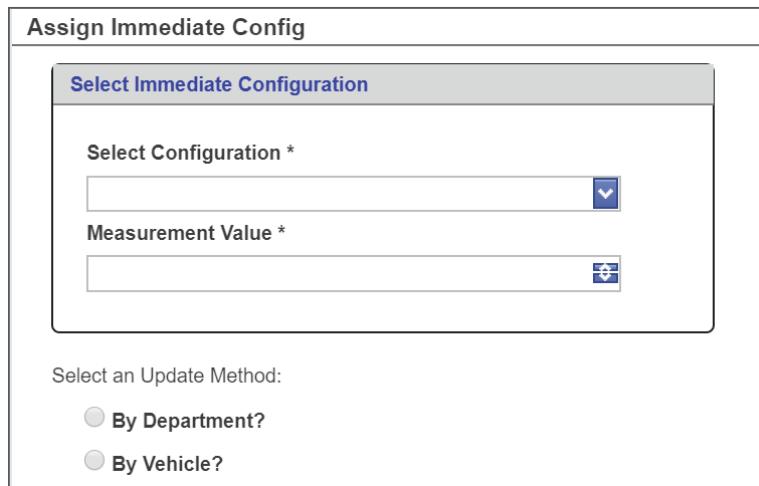
1. In the **Select Departments** drop-down list, select one or more Departments.
2. Click **Save**.

By Vehicle

1. In the **Select Vehicles** drop-down list, chose one or more Vehicles.
2. Click **Save**.

Assign An Immediate Config

1. Open the Assign Immediate Config screen.



The screenshot shows the 'Assign Immediate Config' screen. In the 'Select Immediate Configuration' section, there are two dropdown menus: 'Select Configuration *' and 'Measurement Value *'. Below this, under 'Select an Update Method:', there are two radio button options: 'By Department?' and 'By Vehicle?'.

In the Select Immediate Configuration section:

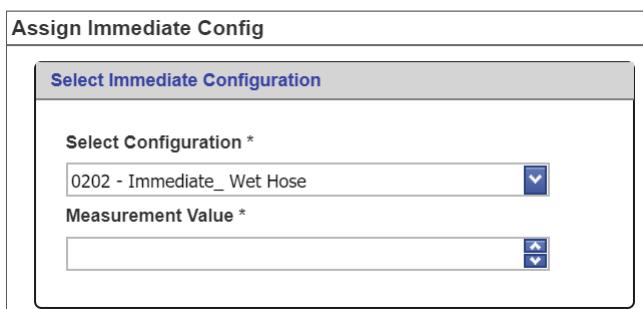
2. In the **Select Configuration** drop-down list, select the appropriate Configuration mode:

Assign Immediate Config Definitions

- Immediate Wet Hose** Allows vehicles to be fueled by a mobile fuel truck. The CANceiver enters sleep mode after 15 minutes of inactivity. This feature allows the CANceiver to wake up periodically, transmit validation data, and return to sleep mode.
- Immediate Real Time Wi-Fi** Allows vehicles to communicate to an onboard Wi-Fi access point for near real time vehicle and GPS data (if installed). The measurement value assigned controls the frequency that the CANceiver will connect to the access point.
- Immediate VIT Mode** VIT mode is non OBD and used when a vehicle is not equipped with an Engine Control Module (ECM). Often referred to as non-OBD mode, VIT mode allows limited data collection functionality and every non-OBD CANceiver kit comes with a GPS antenna. The CANceiver uses this GPS antenna and data for certain data collection parameters like odometer, and speed.

Immediate Wet Hose

- In the **Select Configuration** drop-down list, select Immediate_Wet Hose.



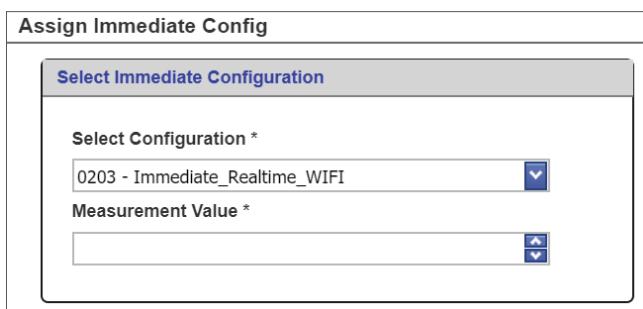
The screenshot shows a software interface titled 'Assign Immediate Config'. A sub-section titled 'Select Immediate Configuration' contains a dropdown menu labeled 'Select Configuration *'. The dropdown is currently set to '0202 - Immediate_Wet Hose'. Below the dropdown is a field labeled 'Measurement Value *' with an up/down arrow control.

- Set Measurement Value to 1 (on).
 - A measurement value of zero (off) disables Wet Hose mode.

 **NOTE:** Most customers do not have blanketed Wi-Fi coverage. Therefore, the Real Time Wi-Fi feature is not typically used.

Immediate Real-Time Wi-Fi

- In the **Select Configuration** drop-down list, select Real-time WiFi.



The screenshot shows the same software interface as the previous one. The 'Select Configuration *' dropdown is now set to '0203 - Immediate_Realtime_WIFI'. The 'Measurement Value *' field and its up/down arrow control remain visible below the dropdown.

- In the **Measurement Value** field, enter a value.
 - A measurement value of zero (off) disables Real-time WiFi mode.
 - The measurement value controls the frequency that the CANceiver will connect to the Wi-Fi access point. The measurement value has a factor of 10 seconds.

Example: Using a measurement value of 2, the CANceiver will attempt to connect to the Wi-Fi access point every 20 seconds.

Using a measurement value of 6, the CANceiver will attempt to connect to the Wi-Fi access point every 60 seconds.

3. In the **Select an Update Method** field, click the radio button for By Department or By Vehicle.

By Department

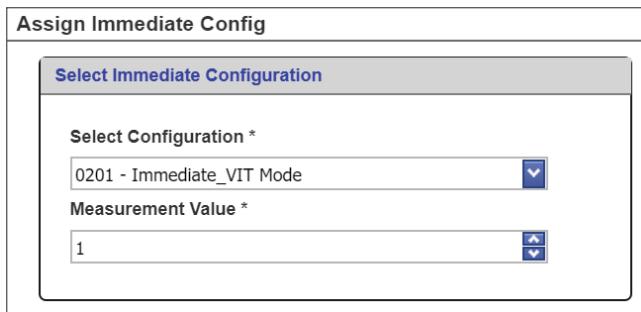
1. In the **Select Departments** drop-down list, select one or more Departments.
2. Click **Save**.

By Vehicle

1. In the **Select Vehicles** drop-down list, chose one or more Vehicles.
2. Click **Save**.

Immediate VIT

1. In the **Select Configuration** drop-down list, select Immediate_VIT Mode.



2. Set the **Measurement Value** to 1 (on).
 - A measurement value of zero (off) disables VIT mode.

⚠ WARNING: CANreceivers are defaulted to look for data from the OBD wiring harness. Sending the VIT mode configuration instructs a CANceiver to ignore the OBD data and gather data using the I/O cable. NEVER use the *Update all Vehicles* option when sending this configuration.

1. In the Select an Update Method field, click the radio button for By Department or By Vehicle.

By Department

1. In the **Select Departments** drop-down list, select one or more Departments.
2. Click **Save**.

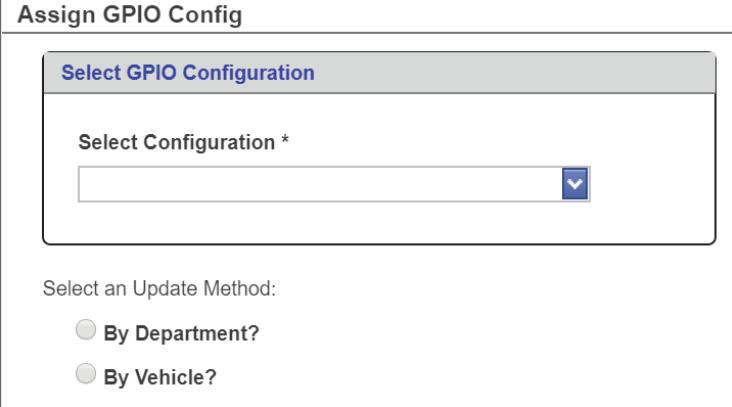
By Vehicle

1. In the **Select Vehicles** drop-down list, chose one or more Vehicles.
2. Click **Save**.

Assign A GPIO Config

General Purpose Input/Output (GPIO) is used on utility vehicles such as snow plows. The GPIO grid provides options for additional input other than the ECM.

1. Open the Assign GPIO Config screen.



Select GPIO Configuration

Select Configuration *

Select an Update Method:

By Department?

By Vehicle?

2. In the **Select GPIO Config** drop-down list, select the required GPIO Configuration.
3. Click the radio button for **By Department** or **By Vehicle**.

By Department

1. In the **Select Departments** drop-down list, select one or more Departments.
2. Click **Save**.

By Vehicle

1. In the **Select Vehicles** drop-down list, chose one or more Vehicles.
2. Click **Save**.

10. TLS Management

Tank level sensors (TLS) are third party hardware that monitor the levels of fuel and any alerts that come from a fuel tank. Ward works with TLS manufacturers Omntec and Veeder Root, but Fuel View can gather data from other TLS manufacturers.

There are two levels of support for TLS Systems within Fuel View: TLS Connect and the Ward TLS Service.

TLS Support Level Definitions

TLS Connect

TLS Connect is the default TLS communication system and uses the functionality built into the Connect application to communicate and retrieve information from TLS systems. The Connect application has the ability to communicate with a TLS unit and retrieve certain information about the unit. Retrievable information includes current level, recent deliveries, and active alarms.

TLS Connect calls the TLS based on a schedule defined by a Windows Task Scheduler entry and coincides with a call to the Ward FCTs.

Ward TLS Service

The **Ward TLS Service** is an optional, more advanced TLS monitoring system that communicates, monitors, and retrieves data from the TLS system and can be configured to run several different schedules and retrieve different information at different times. For instance, the service can be configured to retrieve the current level every hour and deliver the data once a day. The Ward TLS Service is designed to add additional commands as needed easily.

Ward TLS Service Information and Commands List

Inventory	Sensor Status
Bulk Inventory Report (history or daily)	General Sensors
Deliveries	Liquid Sensors
Leak Test	Vapor Sensors
Perform and Stop Leak Tests on Demand	Groundwater Sensors
Status and Alarms	Type A 2-wire Sensors
Sensor Categories	Type B 3-wire Sensors
	Universal Sensors

To provide quicker detection of problems and notification of affected parties, Ward has worked with Omntec to receive alerts from the TLS as they happen as opposed to relying on polling the TLS for alerts at scheduled times.

Set Up A Tank Level Sensor

Each tank will have a single probe and can have multiple sensors.

Sensor/Probe Definitions

Sensor Detects leakage and moisture between tank walls.

Probe Measures the levels of product and water in a tank. The probe is typically made up of a rod positioned vertically in the center of the tank with two floats, one measuring the total fluid in the tank, the second measuring the level of water in the tank.

1. Expand the TLS Management folder and open the TLS page.
 - The TLS grid contains all of the tank level sensors in Fuel View.

TLS					
Add Record Query Columns Paging Export					
#	TLS Number	TLS Type	Poll Time	Last Connection	Site Name
10	Unknown		9/18/2015 10:29:12 AM	9/18/2015 10:29:12 AM	WardTestCarwash
11	Caldwell				Japan
456456	TLS 350 R				Nickstabsite

2. Click the **Add Record** tool to open the TLS data entry screen.

Site	
Site: *	<input type="text"/>
Terminal: *	<input type="text"/>
Active: *	<input checked="" type="checkbox"/>
Date Deactivated:	<input type="text"/>

In the Site section:

3. Select a **Site** from the drop-down list.
4. In the **Terminal** drop-down list, select the terminal that is associated with the TLS for the site selected in Step 3.

 **NOTE: This association is connected in the Terminal screen while defining the TLS for the site.**

In the Configuration section:

Configuration	
TLS Unit Number: *	<input type="text"/>
TLS Type: *	<input type="text"/>
On Radio Modem?:	<input checked="" type="checkbox"/>
Host Name:	<input type="text"/> 0.0.0.0
MAC Address:	<input type="text"/>
TLS Poll Time:	<input type="text"/>
Last Connection:	<input type="text"/>
Last Message:	<input type="text"/>
TLS Code:	<input type="text"/>
Baud Rate:	<input type="text"/>
Call TLS?:	<input checked="" type="checkbox"/>
Port:	<input type="text"/>
TLS Phone:	<input type="text"/>
Password:	<input type="text"/>

5. In the **TLS Unit Number** field, enter the same terminal that was selected in Step 4.
6. Select the **TLS Type** from the drop-down list.
 - Check the Terminal screen's **TLS Information** section to confirm the TLS type.
7. In the **Baud Rate** field, enter the modem's baud rate.
8. Check the **On Radio Modem** check-box if the TLS is using a SkyComm to communicate.
9. Check the **Call TLS** check-box to activate the polling option.
10. In the **Host Name** field, enter the IP Network of the TLS.
11. In the **Port** field, enter the port number.
12. If the sensor is an **Omntec**: In the **MAC Address** field, enter the MAC address.
13. In the **TLS Phone** field, enter the phone number or network IP address assigned to the TLS.
14. Optional: In the **Password** field, enter the password that will be used to communicate with the TLS.
 - Passwords are required by some sensors.
15. Click **Save**.

In the Probes section:

Probes					
<input style="float: right;" type="button" value="Add"/>					
Edit	Probe	Tank	Tank Code	Fuel	Delete
No Probes Assigned.					

To create or assign a TLS Probe:

1. Click the **Add** button.
 - The Add button will have appeared when the TLS has been saved successfully in the Configuration section.

- In the probe number drop-down, select a number for the probe.

Enter Probe Information

Probe Number: *	<input type="text" value="1"/> <input type="button" value="▼"/>
Tank: *	<input type="button" value="▼"/>

- The probe number is automatically selected but the user can manually change the number if desired.

- In the **Tank** drop-down, select the Tank.
- Click **OK**.

 **NOTE:** A tank can only be monitored by one TLS. If you run out of sensors for that Site's tanks, an error message in red will be displayed in the Add Probe pop-up.

Create Or Assign A Tank Level Sensor

In the Sensors section:

Sensors

<input type="button" value="Edit"/>	<input type="button" value="Sensor"/>	<input type="button" value="Type"/>	<input type="button" value="Tank"/>	<input type="button" value="Tank Code"/>	<input type="button" value="Fuel"/>	<input type="button" value="Delete"/>	<input type="button" value="Add"/>
No Sensors Assigned.							

- Click the **Add** button.
 - The Add button will have appeared when the TLS has been saved successfully in the Configuration section.
- In the **Sensor Number** drop-down, select a number for the sensor.

Enter Sensor Information

Sensor Number:*	<input type="text" value="1"/> <input type="button" value="▼"/>
Sensor Type:*	<input type="button" value="ANNULAR SPACE"/> <input type="button" value="▼"/>
Tank: *	<input type="button" value="▼"/>

- The sensor number is automatically selected but the user can manually change the number if desired.
- In the **Sensor Type** drop-down, select a type for the sensor.
 - In the **Tank** drop-down, select a Tank.

 **NOTE:** Tanks can have multiple sensors but each sensor must have a unique number. There is a maximum of 32 sensors.

TLS Alarms

Fuel View records each alarm received from a TLS. These are viewed in the TLS Alarms grid. The following table indicates what is included in the TLS Alarms grid.

TLS Alarms Grids List

Leak Test Results

BIR (balance inventory report) History Liquid Sensor Status

Liquid Sensor Alarms

Tank Alarms

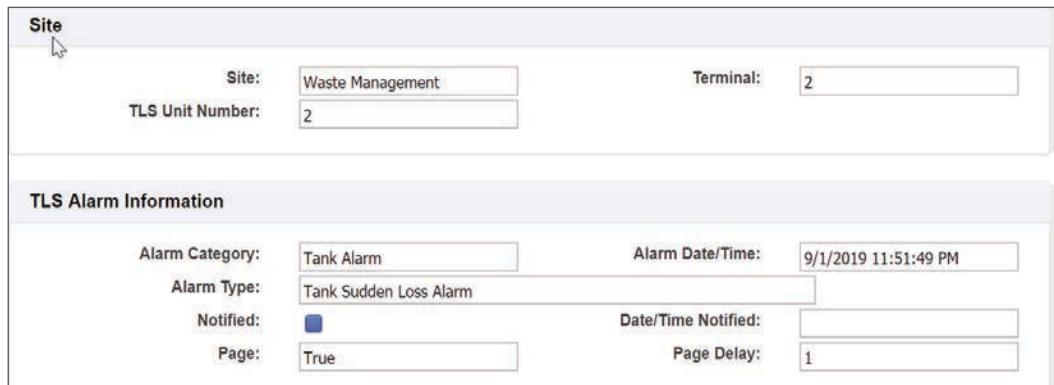
View A TLS Alarm Record

1. In the TLS Management folder, open the TLS Alarms screen.

TLS Alarms									
#	Alarm History	Category	Category Description	Alarm Type	Type Description	Probe Num	Time		Alarm Message
	Details	6	Volumetric Line Leak Alarm	1	VLLD Setup Data Warning	1	7/30/2019 1:08:08 PM		159
	Details	2	Tank Alarm	6	Tank Sudden Loss Alarm	1	9/1/2019 11:59:51 PM		120
	Details	2	Tank Alarm	6	Tank Sudden Loss Alarm	1	9/1/2019 11:57:51 PM		120

- The Query tool can be used to filter down the alarms listed.
2. Click a blue **Details** link to open the detail page for that alarm.

The TLS Alarm page shows Site, TLS Alarm information, TLS Configuration and optional Paging for alarms. Alarm details are read-only.



Site

Site: Waste Management Terminal: 2
TLS Unit Number: 2

TLS Alarm Information

Alarm Category: Tank Alarm Alarm Date/Time: 9/1/2019 11:51:49 PM
Alarm Type: Tank Sudden Loss Alarm
Notified: Date/Time Notified: _____
Page: True Page Delay: 1

TLS Schedules

TLS Schedules are a list of tank level events to monitor on a user determined schedule. TLS Schedules are for the Ward TLS Service only.

Set-up A TLS Schedule

1. Open the TLS Schedules page.
 - The existing TLS schedules are included in the grid. Clicking the Schedule Name will open the schedule.
2. Click the **Add Record** tool.

In the Schedule Details section:



Schedule Details

Schedule Name: * _____ Next Run Date: * _____
Active: * Max Failed Attempts: * 1
Date Deactivated: _____

3. In the **Schedule Name** field, enter a unique, descriptive name.
4. Ensure the Active check-box is checked to activate the schedule.
5. In the **Next Run Date** field, enter a start date.
6. In the **Max Failed Attempts** field, enter the number of allowable failed attempts for the report to run.
 - The minimum number is one.

In the TLS section:

TLS *	
TLS 364 - Airport - OMNTEC Proteus	<input type="checkbox"/>
TLS 76 - Midtown Central - TLS 350 R	<input type="checkbox"/>
TLS 82 - Police Station - TLS 350 R	<input type="checkbox"/>
TLS 65 - School Bus Lot - TLS 350 R	<input type="checkbox"/>
TLS 3 - Test Department - OMNTEC Proteus	<input type="checkbox"/>
TLS 22 - Downtown - TLS 350 R	<input type="checkbox"/>
TLS 56 - Parks and Recreation - TLS 350 R	<input type="checkbox"/>
TLS 3 - Sales IoT Demo - TLS 350	<input type="checkbox"/>
TLS 1 - Software - TLS 350 R	<input type="checkbox"/>
TLS 102 - Uptown - TLS 350 R	<input type="checkbox"/>

7. Check the **Tanks/TLSs** to be monitored.

In the Commands section:

Commands *	
BIR	<input type="checkbox"/>
ClearDelivery	<input type="checkbox"/>
Delivery	<input type="checkbox"/>
GroundwaterSensorStatus	<input type="checkbox"/>
Inventory	<input type="checkbox"/>
BIRDaily	<input type="checkbox"/>
CSLDResult	<input type="checkbox"/>
GroundwaterSensorAlarmHistory	<input type="checkbox"/>
InTankLeakTest	<input type="checkbox"/>
LeakTest	<input type="checkbox"/>

8. Check the **Event Alarms** for Fuel View to monitor.

- Below are listed all of the TLS commands that can be sent to the TLS unit.

TLS Commands for Alarms Report List

BIR (business inventory reconciliation)	Sensor Category
BIR Daily	Sensor Status
Clear Delivery	Start Pressure Leak Test
CSLD Result	Start WPLLD Leak Test
Delivery	Status
Groundwater Sensor Alarm History	Stop Pressure Leak Test
Groundwater Sensor Status	Stop WPLLD Leak Test
In Tank Leak Test	Type A2 Wire CL Sensor Alarm History
Inventory	Type A2 Wire CL Sensor Status
Leak Test History	Type B3 Wire C Sensor Alarm History
Liquid Sensor	Type B3 Wire CL Sensor Status
Liquid Sensor Alarm	Universal Sensor Alarm History
Pressure Line Leak Test	Universal Sensor Status

 **NOTE: not all TLS units support all of the commands. Only select those commands that need to be monitored.**

In the Occurrences section:

9. In the **Frequency** drop-down list, select how often the report should run.

Occurrences	
Frequency:*	<input type="button" value="Daily"/>
Run Time: *	<input type="button"/>
Monday	<input type="checkbox"/>
Wednesday	<input type="checkbox"/>
Tuesday	<input type="checkbox"/>
Thursday	<input type="checkbox"/>

- Constant, Daily, Weekly, or Monthly

10. In the **Run time** field, select the time of day for the status check.

11. If daily, monthly, or weekly is selected, check a day or days for the status check.
 - At least one day must be checked, and all may be checked.
12. Click **Save**.
 - This will schedule the monitoring of the selected TLS with the selected TLS commands.

TLS Leak Test Results

The TLS Leak Test grid displays the results from the leak tests performed by the TLS.

TLS Leak Test Results										
<input type="button" value="Columns"/> <input type="button" value="Paging"/> <input type="button" value="Export"/>										
#	Site	Tank Numbr	Result Created	Test Start Time	Report Type	Test Type	Test Duratio	Test Volume	History Num	
Software	1	4/5/2017 3:53:23 PM	1/1/2017 1:58:00 AM	Periodic	0.20 gal/hr		114	1204.000000	1	
Software	1	4/5/2017 3:53:23 PM	5/1/2016 1:01:00 AM	Periodic	0.20 gal/hr		110	1077.000000	5	
Software	1	4/5/2017 3:53:23 PM	8/1/2016 2:48:00 AM	Periodic	0.20 gal/hr		105	1398.000000	8	

TLS BIR History

The TLS BIR History grid displays the results from the BIR requests sent to the TLS.

TLS BIR History					
<input type="button" value="Columns"/> <input type="button" value="Paging"/> <input type="button" value="Export"/>					
#	Site	Tank Number	Opening Date	Deliveries	Calculated Volume
Software		1	8/26/2016 2:00:00 AM	555	871
Software		1	8/3/2016 2:00:00 AM	547	894
Software		1	8/31/2016 2:00:00 AM		732

TLS Liquid Sensor Status

The TLS Liquid Sensor Status grid displays the status of the liquid sensors.

TLS Liquid Sensor Status						
<input type="button" value="Columns"/> <input type="button" value="Paging"/> <input type="button" value="Export"/>						
#	Status Time	TLS Number	Site	Sensor Number	Sensor Status	Sensor Name
	10/17/2016 2:47:21 PM	2	Waste Management	4	NORMAL	Piping
	10/17/2016 2:47:21 PM	2	Waste Management	3	NORMAL	Piping
	10/17/2016 2:47:21 PM	2	Waste Management	2	NORMAL	Piping

TLS Liquid Sensor Alarms

The TLS Liquid Sensor Alarms grid displays the sensor alarms reported by the TLS.

TLS Liquid Sensor Alarms				
<input type="button" value="Columns"/> <input type="button" value="Paging"/> <input type="button" value="Export"/>				
#	Alarm Time	Alarm Type	TLS Number	Site
	5/15/2014 2:27:00 PM	0001	1	Software
	5/15/2014 2:27:00 PM	0001	1	Software
	5/15/2014 2:27:00 PM	0001	1	Software

11. Transaction Management

Fueling transactions are associated with vehicles in Fuel View but may also include other fuel consuming equipment, such as generators, lawn mowers, boats, airplanes, and even gas cans. Fuel View is *National Type Evaluation Program Certified*, therefore, transactions cannot be deleted once entered in Fuel View.

 **NOTE: Transactions cannot be deleted once entered in Fuel View; however, if error is found in a transaction, the record may be edited.**

Transactions

For every fueling activity, Fuel View creates a transaction record. Typically, fueling transactions are associated with a vehicle through a vehicle card or credit card, as well as an employee. The transaction record contains the location and the quantity of the fueling. If necessary, Fuel View has the option to enter transaction records manually. Fuel View additionally can import external retail transactions for fueling done outside of the Ward fueling environment using fuel cards such as WEX and Voyager. Fuel View transactions can also track gate openings and car washes.

Enter A Transaction

To expedite the manual entry of transactions, Fuel View uses a slightly different paradigm. Instead of opening the Transaction grid and waiting for existing transactions to populate, Add Transactions is a separate function. Manual Transactions does not affect the automated transaction function.

1. Expand the Transaction Management folder and open the Transactions page.



Transaction Number	Site Name	Date/Time
No data to display		

2. Click the **Add Record** tool to open the Data Entry screen.

- Asterisks indicate required fields.



Transaction Detail	
Transaction Number:	0
Date: *	(dropdown)
Site:	(dropdown)
Terminal:	(dropdown)
Pump: *	(dropdown)
Tank: *	(dropdown)
Fuel: *	(dropdown)
Quantity: *	(dropdown)

In the Transaction Detail section:

The Transaction Number will be automatically assigned when the transaction record has been saved.

3. Select the **Date** from the drop-down calendar.
4. Select a **Transaction Code** from the drop-down list.
 - The Transaction Code defines how the transaction was carried out.

*Example: Access to the fuel pump is through a credit card.
Access to the fuel pump is through a Ward CANceiver.*

5. Optional: Select a **Site** from the drop-down list.
6. Optional: In the **Terminal** drop-down list.
7. Select a **Pump** from the drop-down list.
8. Select a **Fuel** from the drop-down list.
9. In the **Quantity** field, enter the volume dispensed.

 **NOTE:** When a pump is selected, the tank and the fuel will automatically be selected. If fuel is selected first, only the pumps with that fuel type will be available in the Pump drop-down list.

In the Equipment section:

Equipment	
Vehicle Card: *	<input type="text"/>
Department: *	<input type="text"/>
Employee Card:	<input type="text"/>
Current Odometer:	<input type="text"/>
Current Hour Meter	<input type="text"/>

10. Select the **Vehicle Card** from the drop-down list.
11. Optional: In the **Current Odometer** field, enter the vehicle's odometer at the time of the transaction.
12. Select the **Department** from the drop-down list.
 - This will have been pre-populated if the vehicle is assigned to a department.
13. Optional: In the **Current Hour Meter** field, enter the vehicle's hour meter at the time of the transaction.
14. Optional: In the **Employee Card** drop-down list, select the employee that fueled, or drove the vehicle.
 - Employee card entry is company dependent.

 **NOTE:** Transactions are recorded in the Authorizations section when a Site Card or Administrative Card has been used.

15. Click **Save**.
 - Click **Save and New** to continue adding manual transactions and open a blank transaction record. Save and New eliminates the step to close the window and click Add Record from the grid.

Edit A Transaction

1. Open the Transactions page.
2. If necessary, use the Query window to find the transaction to be modified.
3. Open a Transaction Detail by clicking a blue hyper-link, in the **Transaction Number** column.
4. Edit data in the Transaction Detail screen as required.

Editable Fields:

Quantity
 Current Odometer
 Current Hour Meter
 Effective Date
 End Date

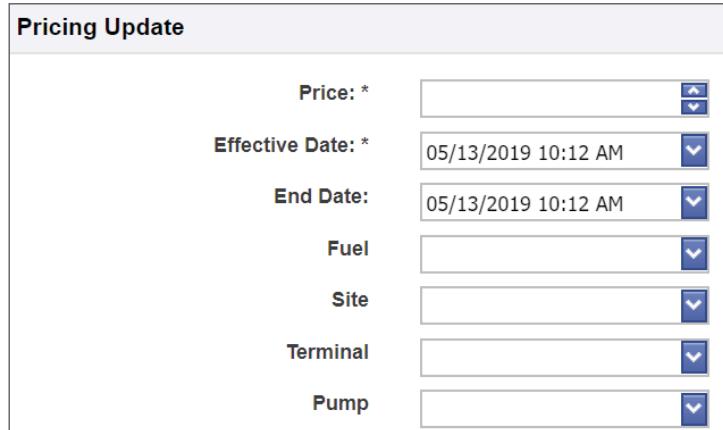
 **NOTE:** Edits made to existing records originating from an FCT will automatically change the Transaction Type to manual.

5. Click **Save**.
 - If there is an error, follow Fuel View's instructions and **Save**.
6. Wait for confirmation.
7. Click **Close**.

Pricing Updates

Use the Pricing Update screen to update historical transaction prices. If the End Date value is the actual current date/time, the system will also update the current pump prices in the Pumps screen for all affected pumps. Prices can be updated for all or individual fuel types, sites, FCTs and pumps.

1. Open the Pricing Updates grid and click **Add Record**.



Pricing Update	
Price: *	<input type="text"/>
Effective Date: *	<input type="text" value="05/13/2019 10:12 AM"/>
End Date:	<input type="text" value="05/13/2019 10:12 AM"/>
Fuel	<input type="text"/>
Site	<input type="text"/>
Terminal	<input type="text"/>
Pump	<input type="text"/>

2. In the **Price** field, enter a price.
3. In the **Effective Date** field, choose a date for the pricing period change to start.
4. Optional: In the **End Date** field, select a date for the pricing period change to end.
 - If End Date is left blank, all transaction records from the Effective Date will be changed.
5. Optional: Select a **Fuel** from the drop-down list.
 - If a fuel type is not selected transaction records with any fuel type will be changed.
6. Optional: Select a **District** from the drop-down list.
 - If a district is not selected transaction records with any district will be changed.
7. Optional: Select a **Site** from the drop-down list.
 - If a site is not selected transaction records with any site will be changed.
8. Optional: Select a **Terminal** from the drop-down list. If a terminal is not selected transaction records with any terminal will be changed.
9. Optional: Select a **Pump** from the drop-down list.
 - If a pump is not selected transaction records with any pump will be changed.
10. Click **Save**.
 - Fuel View will identify all transaction records that meet the designated criteria and update the price of the transaction.
11. Click **OK**.

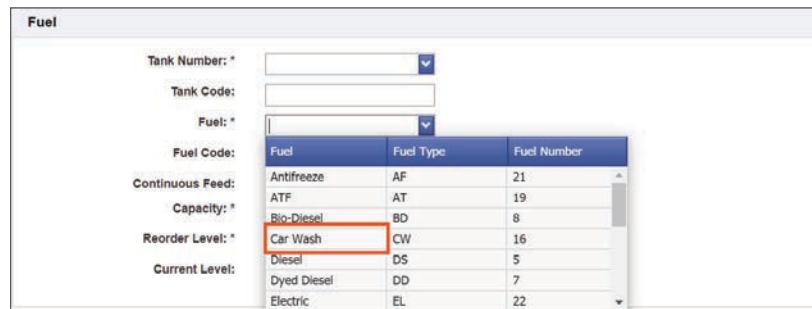
Remote Car Washes

An FCT can control the operation of a car wash.

Create A Car Wash

To create a car wash, open the Site Management folder.

1. Create a Terminal
 - Follow the directions in the **Set Up A Terminal** section for setting up a W4 FCT (see Set Up A W4 FCT, page 80).
2. Optional: In the **Terminal Code** field, give the FCT a Code Name to distinguish it as a Car Wash access.
3. Create a Tank
 - Follow the directions in the **Tank** section (see Add A Tank, page 84).
4. In the **Fuel Code** drop-down list, select Car Wash.

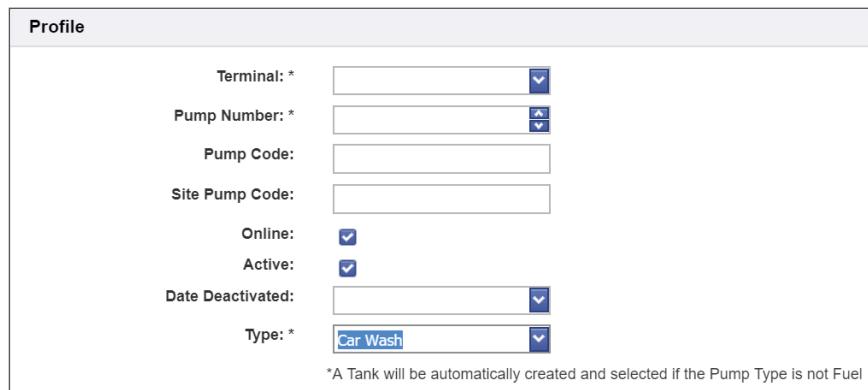


The screenshot shows the 'Fuel' creation screen. It includes fields for 'Tank Number', 'Tank Code', 'Fuel', 'Fuel Code', 'Continuous Feed', 'Capacity', 'Reorder Level', and 'Current Level'. Below these is a table listing various fuel types with their fuel numbers. The 'Car Wash' entry is highlighted with a red box.

Fuel	Fuel Type	Fuel Number
Antifreeze	AF	21
ATF	AT	19
Bio-Diesel	BD	8
Car Wash	CW	16
Diesel	DS	5
Dyed Diesel	DD	7
Electric	EL	22

5. Create a Pump

In the Profile Section:



The screenshot shows the 'Profile' creation screen. It includes fields for 'Terminal', 'Pump Number', 'Pump Code', 'Site Pump Code', 'Online' (checkbox checked), 'Active' (checkbox checked), 'Date Deactivated', and 'Type'. The 'Type' dropdown is set to 'Car Wash'. A note at the bottom states: '*A Tank will be automatically created and selected if the Pump Type is not Fuel'.

6. In the **Terminal** field, enter the FCT the car wash is connected to.
7. In the **Pump Number** field, enter a unique identifier for the car wash.
8. In the **Site Pump Code** field, enter a unique identifier for the car wash for this site.
9. In the **Type** drop-down list, select Car Wash.
10. Click **Save**.

Create A Manual Car Wash Record

1. Open the Remote Car Washes page.
2. Click the **Add Record** tool.

In the Time section:

3. In the **Date and Time** fields, enter the car wash date and time.

In the Car Wash Information section:

Car Wash Information		
Transaction Type:	*	<input type="text"/>
Vehicle Number:	*	<input type="text"/>
Department:	*	<input type="text"/>
Employee Number:		<input type="text"/>
Pump Number:		<input type="text"/>
Administrative Card:		<input type="text"/>
Site Card:		<input type="text"/>

4. In the **Transaction Type** drop-down list, select the transaction type.
 - The transaction type will be a manual entry car wash or an external retail car wash.
5. Select a **Department** from the drop-down list.
6. Optional: Select an **Employee Number** from the drop-down list.
7. Optional: Select a **Pump Number** from the drop-down list.
8. Optional: Select a **Administrative Card Number** from the drop-down list.
9. Optional: Select the **Site Card Number** from the drop-down list.
10. Click **Save**.
11. Correct any errors and click **OK**.

The car wash transaction will be added to the car wash grid.

View Car Wash Details

1. Open the Remote Car Washes page.

CAR WASH ID	Time	Site Name	Department	Trans Code	Trans Description
4184	1/13/2019 1:31:00 AM	Parks and Recreation	Department #31	36	Car Wash
4185	1/13/2019 5:31:00 AM	Waste Management	Sales	36	Car Wash
4186	1/13/2019 5:50:00 AM	Parks and Recreation	Sales	36	Car Wash

- Click a **Time** link to view details for that wash.

Time

Date/Time: *	04/03/2019 01:31 AM	<input type="button" value="▼"/>
Car Wash Information		
Transaction Type: *	Car Wash	
Vehicle Number: *	1572	
Department: *	31; Department #31	
Employee Number:	Ward, Employee 864 (864)	
Pump Number:	Parks and Recreation; 1; K	
Administrative Card:		
Site Card:		
<input type="button" value="Save"/>		
Transaction Type will change to manual type if Save button is clicked.		

 **NOTE: Imported transactions will convert to manual if changes are made and saved.**

Remote Gate Openings

An FCT can control the opening and closing of gates. To add a gate control:

Create A Remote Gate Access

To create a gate access, open the Site Management folder.

- If the FCT does not exist create an FCT.
 - Follow the directions in the **Set Up A Terminal** section for setting up a W4 FCT (see Set Up A W4 FCT, page 80)
 - Optional: In the **Terminal Code** field, give the FCT a Code Name to distinguish it as a Security Gate.
 - Create a Tank
 - Follow the directions in the **Add A Tank** section (see Add A Tank, page 84).
 - In the Fuel Code drop-down list, select Gate Opener.
 - Create a Pump
- In the Profile Section:
- In the **Terminal** field, enter the FCT the remote gate is connected to.
 - In the **Pump Number** field, enter a unique identifier for the gate.
 - In the **Site Pump Code** field, enter a unique identifier for the gate for this site.
 - In the **Type** drop-down list, select Gate Opener.
 - Click **Save**.

View Gate Opening Details

1. Open the Remote Gate Openings page.

Remote Gate Openings						
#	Time	Quantity	Vehicle Number	Department	Employee Number	
	9/17/2015 3:16:39 PM	1	X0987-98	Rogue One	Tst9956	

2. Click the blue **Date/Time** or **Transaction Number** link to view details.

Time	
Date/Time:	9/28/2016 11:29:00 AM
Gate Opening Information	
Quantity:	0
Vehicle Number:	0
Employee Number:	
Pump Number:	Voyager; 1; ; 123; u
Administrative Card:	
Site Card:	
Department:	

 **NOTE:** Remote Gate Access records are read only and cannot be edited.

External Retail Receipt Errors

External Retail Transactions

An external retail transaction is a fueling transaction that was made at a retail fueling station using the WEX or Voyager fueling card. Retail fueling locations are not owned by the customer and not controlled through Fuel View.

Fuel View supports the following imported external retail transactions:

External Retail Transactions List

- Add fuel to a vehicle's gas tank
- Run a vehicle through a car wash
- Add fuel to a mobile fueling tank

All other transactions or purchases received in the external retail import file are discarded.

Importing external retail transactions into Fuel View allows a fleet manager to get a full picture of the fueling by the fleet, both from their own and retail fueling locations. Current implementations include receipt of a flat file from the card broker containing all relevant transactions. Transaction details are validated to ensure they conform to the expected format and all required fields are present. Fuel View produces a summary report listing the successful and unsuccessful processing of imported transactions. Valid transactions are added to

the Transactions Table, Car Wash Table or Fuel Receipts Table. All detected errors are handled through the Error Transaction Table (transactions and car washes) and the Error Fuel Receipt Table (fuel receipts).

External Retail Transaction Definitions

Label	Action	Valid Transaction Location	Invalid Transaction Location
Fueling transactions	Add fuel to a vehicle's gas tank	Posted to the Transactions table	Error Transaction table
Car washes	Run a vehicle through a car wash	Posted to the Car Wash table	Error Transaction table
Fuel receipts	Add fuel to a mobile tank	Posted to the Fuel Receipt table	Error Fuel Receipt table

 **NOTE:** External Retail Fueling transactions imported through the WEX or Voyager file are assigned Transaction Code 35. It is possible to manually add a transaction into Fuel View and indicate it is an external retail transaction. These transactions are assigned a Transaction Code of 535.

 **NOTE:** External Car Wash transactions imported through the WEX or Voyager file are assigned Transaction Code 37. It is possible to manually add a transaction into Fuel View and indicate it is an external retail transaction. These transactions are assigned a Transaction Code of 337.

 **NOTE:** Retail transactions are not typically assigned to a site, FCT, or pump since they do not occur at fleet owned locations.

A user can view *fueling and car wash transaction errors* in the External Retail Trans Errors grid.

A user can view *mobile tank fuel receipt errors* in the External Retail Fuel Receipt Errors grid.

The Query screen allows errors to be displayed in the grid by status (*Fixed (or corrected), Not Fixed (still incorrect), All (both corrected and incorrect)*) by date range, and text within the import file name.

The following table lists the required data for a fuel transaction.

Expected Data For Fuel Transactions Definitions

Vehicle number	Must match a vehicle number in Fuel View
Product code	Type of product purchased
Units	Gallons
Volume	Number of gallons pumped
Unit and net price	Gallons/liters and dollars
Operator	User must match the user in Fuel View
Odometer	Updates the odometer field for the vehicle record
Time stamp	Date and time of the transaction

Edit External Retail Transaction Errors

It is possible for a Fuel View user to view and correct any errors found during the import of an external retail transaction. There may be some errors that cannot be fixed without the help of Ward and/or WEX or Voyager support.

1. In the Transaction Management folder, open the Ext. Retail Trans Errors page.
2. Click the blue **Edit** link to display the error screen for the selected transaction.

The error screen displays a summary of the error or errors identified. It also includes information about the transaction (type, date, quantity, fuel), the equipment (vehicle card, department, odometer), and information about the retailer.

Transaction Detail	
Error:	WEX Transaction # 2550 : * WEX Vehicle # is invalid. There is no match in the database. * Department is missing. * Driver # is invalid.
Transaction Number:	0
Date:	12/15/2018 12:29 PM
Quantity:	3.145
Fuel:	UL; Unleaded
Equipment	
Vehicle Card:	5640
Department:	
Employee Card:	
Retail	
Account Number:	
Processor Transaction ID:	
Brand Name:	
Site Address:	
Site State:	
Account Name:	
Net Dollars:	7.25
Site Name:	
Site City:	
Site Zip:	

3. Refer to the **Error Message** field to correct defective data.
4. Delete a transaction if the transaction cannot be corrected without contacting Ward or WEX/Voyager.
5. Click **Save**.

After a record has been corrected and saved, the Save button is replaced with a link to the Transaction record. This maintains a permanent record between the error external retail transaction and the transaction record in Fuel View. The grid stores the fixed transaction number in the Fixed Trans # column.

The table below lists the key data in an external transaction record.

Transaction Record Details Definitions

Error	Description of the error(s) identified during import.
Transaction Detail	Fuel View transaction number (when corrected), the transaction code, transaction date, quantity fueled and the fuel type.
Equipment	Information about the vehicle being fueled and the person fueling. Includes vehicle card/ vehicle number, department code, employee, and the vehicle odometer and hour meter. If the vehicle selected is assigned to a department, the department code will be filled in.
Retail Details	Account Number, Account Name, Processor Transaction ID, Net Dollars, Brand Name, Site Name, Site Address, Site City, Site State, and Site Zip.

Expected Data For Fuel Receipts Definitions

Vehicle number	Maps to the tank based on Fuel View settings
Time	When the transaction was conducted
Quantity	Volume dispensed
Cost	Price per gallon or unit
Optionally	Invoice number and retail site name

Delete External Retail Transaction Errors

In the External Retail Transaction Errors grid:

1. Click the **Delete** tool on the transaction line.
2. Click **OK**.

12. Fuel Management

Fuel View manages the different fuels used by the various vehicles. Different fuel types have different properties. For instance, fuels such as diesel and unleaded are typically stored in a tank; however, CNG and electricity are typically continuous feeds. Each vehicle can be restricted to the fuels it is allowed.

It is important to understand the full life-cycle of fuel. Fuel View allows full support of the life cycle allowing a Fuel Manager complete visibility into the fueling of a vehicle.

- Fuel typically enters the Fuel View system by being received into a tank from a tanker. Fuel receipts track incoming fuel and updates the tanks with the new level.
- Fuel is consumed by vehicles or containers and is tracked through fuel transactions. A transaction records the amount of fuel taken out of a tank, the date and time, and the vehicle or fueling asset the fuel was assigned to.
- Fuel can be taken from a tank and transferred into a mobile tank or fuel truck. Typically, this fuel is then assigned to a vehicle remote to the fuel sites. Fuel moved into a mobile tank is recorded through a fuel transfer. Fuel transfers can be recorded manually in Fuel View. The system can be configured to automatically record fuel transfers when they occur at the FCT.
- FCT in a fuel truck can record which vehicles the fuel is dispensed to. This is recorded in a fueling transaction in Fuel View.
- Vehicles can fuel outside of the Ward fueling environment. If these are tracked using Fuel Cards such as WEX or Voyager, Fuel View can import these external retail transactions from WEX or Voyager and allocate the fueling to the assigned vehicles.
- A fuel truck can get fuel from outside the Ward fueling environment. Since this is for fuel to be dispersed to other vehicles, this is considered to be an external fuel receipt. If this fuel is purchased using the WEX or Voyager card, these external fuel receipts can be added into Fuel View.

Fuel View provides a 360° view of the fueling for a vehicle. The amount of fuel in a tank can be manually updated or automatically monitored with an ATG and the TLS service. This can provide a full accounting of the fuel used by the system and identify abnormalities or issues.

Fuels

 **NOTE:** From Fuel View's perspective, Car Washes and Gate Openers are considered a fuel type as they are associated with transactions with a vehicle. However, there are obvious differences between these and true fuels.

 **NOTE:** Only Ward Customer Support Representatives may add, change, or delete fuel types.

View Available Fuel Products

1. Expand the Fuel Management folder, and open the Fuels page.

Transfer Fuel Between Tanks

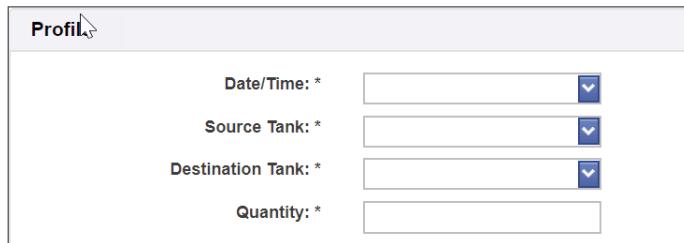
A fuel transfer is the movement of fuel between two sites, typically an island tank and a fuel truck or mobile tank. The fuel truck is not the consumer of the fuel. This is similar to moving money between one's own bank accounts as opposed to spending it.

There are a number of ways that a fuel transfer can be recorded in Fuel View, each resulting in the creation of a fuel transfer record. These include:

- Manual entry in Fuel View
- Automated fuel transfer based on Vehicle record settings using access media such as a dedicated FOB, Card or Fuel Tag
- Using an Administrator Card at the FCT with the fuel transfer option.

Manual Fuel Transfer Entry Between Tanks

1. Open the Transfers page.
2. Click the **Add Record** tool to open the New Record data entry screen.



Profile	
Date/Time: *	<input type="text"/>
Source Tank: *	<input type="text"/>
Destination Tank: *	<input type="text"/>
Quantity: *	<input type="text"/>

3. Enter the **Date and Time** of the fuel transfer.
4. Select the **Source Tank** from the drop-down list.
5. Select the **Destination Tank** from the drop-down list.
 - If a source tank was selected, only destination tanks of the same fuel type will be displayed.

 **NOTE: if the Destination Tank was selected first, the Source Tank drop-down would be filtered.**

6. Enter the **Quantity** of transfer fuel in only *whole* positive or negative amounts.

Fuel View validates the fuel quantity being transferred between tanks and will not accept transfer quantities greater than the capacity of the destination tank or allow a tank to record fuel level below zero.

 **Saved Fuel Transfers cannot be removed; however, negative quantities may be used to correct or reverse fuel transfers.**

7. Click **Save**.
8. Wait for the confirmation message.
9. Click **Close**.

Automated Fuel Transfers

In order to transfer fuel from a static fuel tank to a mobile fueling truck's tank, the driver must use a vehicle fuel card, fob, or Fuel Tag that has been configured in Fuel View to identify the destination tank in the fuel transfer. Once the transaction has been approved, the driver may begin fueling the truck's tank.

The fueling will be recorded as a Fuel Transfer. Once the data is transmitted from the FCT to the Fuel View database, the fuel transfer record can be viewed in the Transfers screen under Fuel Management or reported in the Fuel Transfer reports.

The image below illustrates the separation between the fueling of the *vehicle* (left) and the *fueling tank* (right). In Fuel View there are two separate vehicle records:

The Vehicle

The Fueling Tank

The vehicle and fueling tank each require their own access media (card, fob, Fuel Tag etc).

 **NOTE: To activate the Fuel Transfer settings in the Ward Database, contact Ward Customer Service. The Add Fuel Transfer setting must be active to transfer fuel.**

The transaction is recorded as a Fuel Transfer. Once the data is transmitted from the FCT to Fuel View's database, the record can be viewed in the Managing Transfers screen or any Fuel Transfer report.

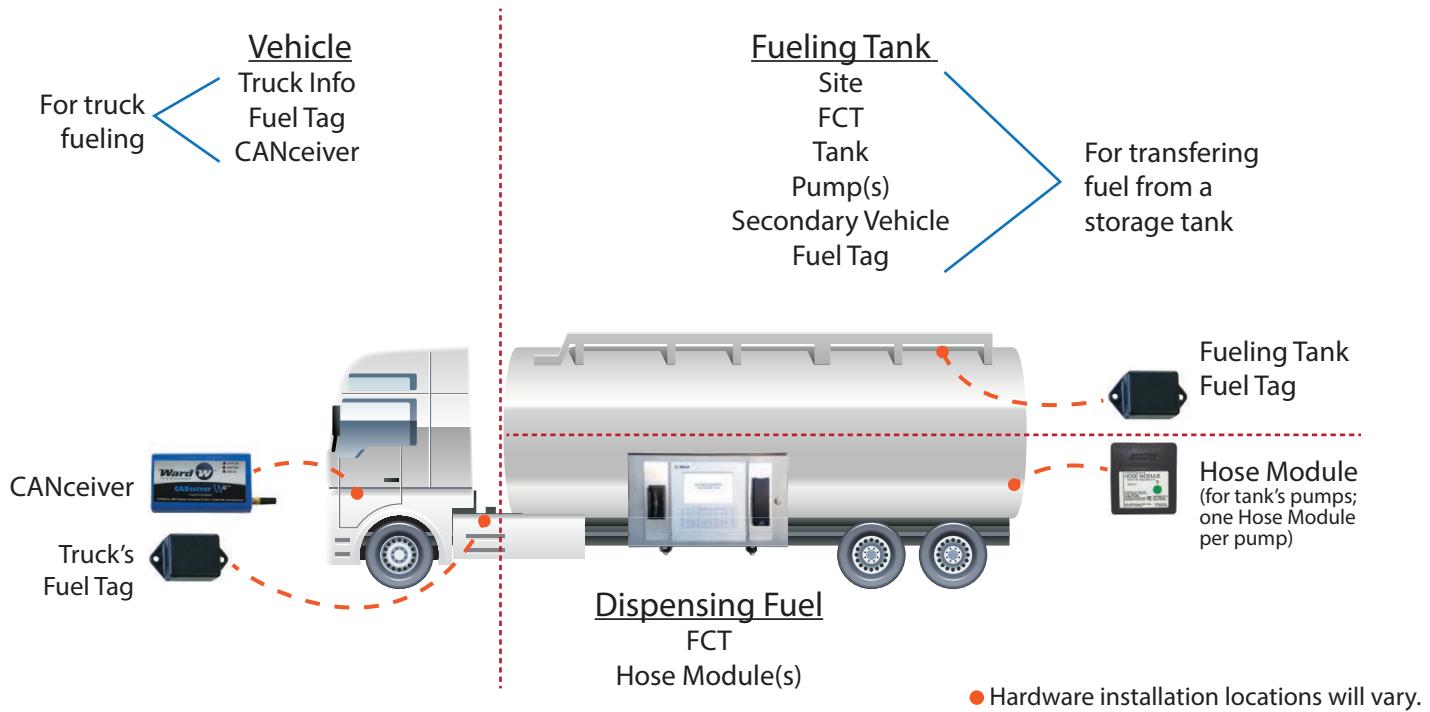


Figure 5. Anatomy of a Mobile Fueling Truck Setup

Automated Fuel Transfer Setup

To allow fuel transfers to fueling tanks, set up the following within Fuel View:

1. Set up each mobile fueling truck as a **Site** (see Create a Site, page 76).
 - Each mobile fueling truck is its own site.

Within the mobile site:

2. Set up a **Tank** within the mobile fueling truck's site (refer to Add A Tank, page 84).
 - One tank must be set up for each mobile fueling truck, or each truck's fueling tank if it contains more than one tank.
3. Set the **Tank Code** which will be used to match up with the vehicle record (See below).
 - Ward recommends setting this to the original vehicle number with "-T" as a suffix.
4. Create a new **Vehicle** record to represent the fueling tank (refer to Create A Vehicle Record, page 58).
 - This vehicle record is for recording the fuel transfers to the tank.
 - Ensure the **Vehicle Number** used in this step is the same as the Tank Code for the tank created in Step 2.
 - Ensure the **Make** field in this Vehicle record is **Fuel Transfer**.
 - Set the **Fuel Type** in the vehicle record to the same fuel type of the tank.
 - This is the Vehicle record for which the access media (card, fob etc) must be created
5. If there is an FCT on the truck, set up the **FCT** within the site that was created in Step 1 above (refer to Set Up an IoT FCT, page 78).
 - Each mobile fueling truck is its own site.
6. Set up the **Pumps** for this FCT (refer to Add A Pump, page 85).

 **NOTE: When creating the tank record for the mobile fueling tank, the Tank Code field must contain the corresponding vehicle number from the secondary vehicle.**

 **TIP: To help manage mobile fueling tanks, for the secondary vehicle use the name from the primary vehicle with a suffix of: -T.**

7. Create a Vehicle Card (or fob or Fuel Tag) for each transfer tank.
 - When used for fueling this will create the fuel transfer.

Fuel Transfer Access Media

The vehicle and the fueling tank have individual access cards, fobs, or tags

Receipts

Fuel added to a site tank is tracked using receipts. These can be manually added in through Fuel View or can be automatically added in conjunction with the TLS service. All fuel receipts are tracked in the Receipts grid.

The following information is recorded for a receipt.

Receipt's Recorded Information

Site Site fuel received

Tank Number Tank that received fuel

Time Date and time fuel received

Receipt Type Type of delivery Manual or TLS Delivery

Fuel Type of fuel received

Quantity Amount of fuel received

Units Units the fuel is measured in

Begin Level Level of the tank before receipt

End Level Level of tank after receipt

Begin and End Pressure

Begin and End Temperature

Invoice Number

Vendor Name

Total Cost

Add A Fuel Delivery

1. Open the Receipts page.
2. Click the **Add Record** tool to open the New Record data entry screen.

In the Profile section:

Profile	
Date/Time: *	<input type="text"/>
Tank: *	<input type="text"/>
Quantity: *	<input type="text"/>
Fuel Receipt Type: *	<input type="text"/>

3. In the **Delivery Date/Time** field, enter the delivery date and time.
4. Select the **Tank** from the drop-down list which received the fuel.
5. Select the **Receipt Type** from the drop-down list.

In the Invoice section:

Invoice	
Vendor Name:	<input type="text"/>
Invoice Number:	<input type="text"/>
Total Cost:	<input type="text"/>
Comments:	<input type="text"/>

6. Optional: In the **Vendor** field, enter the vendor name.
7. Optional: In the **Invoice Number** field, enter the invoice number.
8. Optional: In the **Total Cost** field, enter the total cost.
9. Click **Save**.

Modify A Delivery Receipt

1. Open the Fuel Receipts page.
2. Click the blue **Edit** link in the Receipt ID column to open the Fuel Receipts screen.
3. Edit the appropriate fields.
4. Click **Save**.
5. Wait for the confirmation message.
 - If an error occurs, correct the error.
6. Click **Save**.

Adjustments

Change A Tank Volume

To reflect the same tank level reported by the client's records, Fuel View allows for manual updates of tank level to adjust the inventory for each tank. This includes tank contaminations, transfer, and receipt errors. The Adjustments grid displays all manual adjustments that have been made for each fuel tank.

1. Open the Adjustments page.
2. Click the **Add Record** tool to open the Fuel Adjustments data entry screen.

Profile	
Tank: *	<input type="text"/>
Date/Time: *	<input type="text"/>
Old Level:	<input type="text"/>
New Level: *	<input type="text"/>
Adjustment Type: *	<input type="text"/>

3. In the **Tank** drop-down list, select a tank to adjust.
4. Optional: In the **Old Level** field, enter the current level of the tank.
5. In the **New Level** field, enter the new tank level.

6. In the **Adjustment Type** drop-down list, select an adjustment type:
 Fuel Transfer
 Manual Entry Error
 Manual Entry User Entry
 Other Corrections
7. Click **Save**.

Pump Totalizers

The Pump Totalizer is a reconciliation tool that compares the actual volume dispensed from a pump with Fuel View records. The Pump Totalizers grid displays all of the totalizer records added to Fuel View.

Activate The Pump Totalizer

1. Take a manual reading from the fuel pump's totalizer dial.
2. Record the date and time.

In the Fuel Management directory open the Pump Totalizers page.

3. Click the **Add Record** tool to open the New Record screen.

Profile	
Pump: *	<input type="button" value="▼"/>
Date/Time: *	<input type="button" value="▼"/>
Previous Totalizer:	<input type="button" value="▲"/> <input type="button" value="▼"/>
Units Pumped:	<input type="button" value="▲"/> <input type="button" value="▼"/>
New Totalizer: *	<input type="button" value="▲"/> <input type="button" value="▼"/>

4. In the **Pump** drop-down list, select the pump that the reading was taken from.
5. In the **Date/Time** field, select or enter the date and time for which the pump's Totalizer was recorded.
 - The units since Last Totalizer field will populate the field. If there has been a Previous Pump Totalizer function update, the Previous Totalizer field will populate with the previous volume.



NOTE: The Pump Totalizer does not permit records with future dates.

6. Optional: In the **Units Pumped** field, enter the quantity of units pumped.
7. In the **New Totalizer** field, enter the recorded Totalizer volume.
8. Click **Save**.

Inventory

Fuel View can record the current data for a tank through manual entry or the automated TLS service. Each inventory reading can contain:

Inventory Reading Items List

Site Name

Tank Number

Fuel Type

Time – date and time of inventory reading

Fuel Level – total fuel level at the reading time (includes water level)

Temperature – temperature at the reading time

Water Level – amount of water in the tank at the reading time

Status

Reading Type – TLS Inventory or Manual Inventory

Fuel Pressure – at the time of reading

Temp Compensated Fuel Level – at time of reading

Height – height of liquid in tank at time of reading

Ullage – amount by which the tank is short of being full

90% Ullage – Ullage minus 10% of tank capacity – level at which overfill should not be triggered

Water Height – height of water in tank at time of reading

Values may or may not be present through automation depending on the ATG installed.

View Tank Inventory

The Inventory grid shows automatic TLS readings and manual dipstick readings.

1. Open the Inventory page.

Inventory										List of TLS Inventory Reading
#	Tank Number	Site Name	Fuel Type	Time	Fuel Level	Temperature	Water Level	Status		
	3	Manhattanville	Bio-Diesel	8/27/2019 12:00:00 AM	3.00					Delivery
	3	Midtown Central	Diesel	4/3/2019 12:26:00 AM	51888.57	10.10	0.00	Normal		
	4	Midtown Central	Diesel	4/3/2019 12:26:00 AM	52687.20	10.97	0.00	Normal		
	5	Midtown Central	Unleaded	4/3/2019 12:26:00 AM	41903.73	12.21	0.00	Normal		

2. Click a blue **Tank Number** link to open tank details.

In the Fuel section, the Current Level field displays the tank's volume.

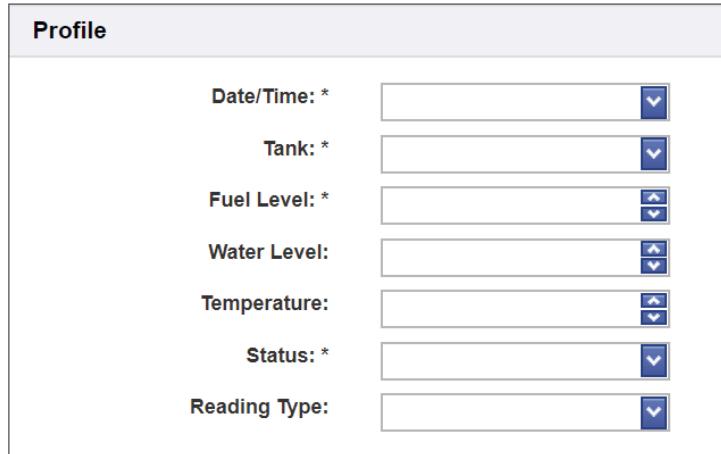
Fuel	
Tank Number: *	4
Tank Code:	T2-4B
Fuel: *	Diesel; DS; 5
Fuel Code:	
Continuous Feed:	<input checked="" type="checkbox"/>
Capacity: *	80000
Reorder Level: *	20000
Current Level:	52235.39

Enter A Manual Inventory Reading

A new inventory reading may be added to Fuel View due to:

- Manual sticking the tank
- Taking the reading off of a non-networked TLS

1. Open the Inventory page.
2. Click the **Add Record** tool to open the Inventory data entry screen.



Profile	
Date/Time: *	<input type="text"/>
Tank: *	<input type="text"/>
Fuel Level: *	<input type="text"/>
Water Level:	<input type="text"/>
Temperature:	<input type="text"/>
Status: *	<input type="text"/>
Reading Type:	<input type="text"/>

3. In the **Date and Time** field, enter the date and time.
4. In the **Tank** drop-down list, select a Tank.
5. In the **Fuel Level** field, enter the fuel level.
6. Optional: Enter the **Water Level**.
7. Optional: Enter the **Temperature**.
8. In the **Status** drop-down list, select the tank's status at the time of the reading:
Both
Delivery
Normal
Pumping
9. In the **Reading Type** drop-down list, select a Reading Type.
 - Automatic TLS Readings polled from Fuel View will automatically be entered here.

Tank Level Reading Type Definitions

Manual Reading Used for dipstick readings.

TLS Reading Used for a printout or screen reading from the TLS.

10. Click **Save**.

External Retail Receipt Errors

If a customer is set up to receive external retail transactions and receipts from a fuel card such as WEX or Voyager, the import process automatically reads the file and assigns the transaction or receipt to the appropriate vehicles or tanks. In the case of an error (the vehicle cannot be identified), the transactions and receipts are flagged as an error and a Fuel View user can manually correct the record and save it to the system.

View And Correct External Retail Receipt Errors

1. To view all external retail receipt errors open the Ext. Retail Receipt Errors page.

This will open the errors grid listing all of the errors from the import runs that have not yet been fixed.

External Retail Fuel Receipt Errors										List of External Retail Fuel Receipts with Errors in the system			
#	Edit	Processor	Error	Record Create Date	Import File Name	Fixed	Date Fixed	Fixed By					
													No data to display

The Query tool allows filtering errors to a date range, searching for a specific file name or including the fixed records.

The Error column indicates the issue identified during the import processing. Some errors can be fixed by the Fuel View users. Some errors will require interaction between Ward and the fuel card provider.

2. Click the blue **Edit** link to open the window with the external retail receipt details.
3. Make appropriate corrections to the data.
4. Click **Save**.
 - The corrected record will be removed from the grid.

13. Reporting

Fuel View comes with a number of preprogrammed reports. You can create new reports and customize and modify existing reports with filters. There are three distinct types of reporting in Fuel View:

- | | |
|--------------------|--|
| Reports | Standard page-style reports similar to those in Crystal Reports with headers, footers, grouping of data, and summaries of counts and sums. |
| Grids | Similar to the grids used throughout Fuel View, displaying data in a grid with columns that can be sorted and filtered. |
| Pivot Grids | Similar to pivot tables in Microsoft Excel and allow columns and rows to be defined. |



Create A New Report, Grid, Or Pivot Grid

All three types of reports are created through a single process and the style of report depends on how the report definition is saved.

1. Expand the Reporting folder and open the Create page.

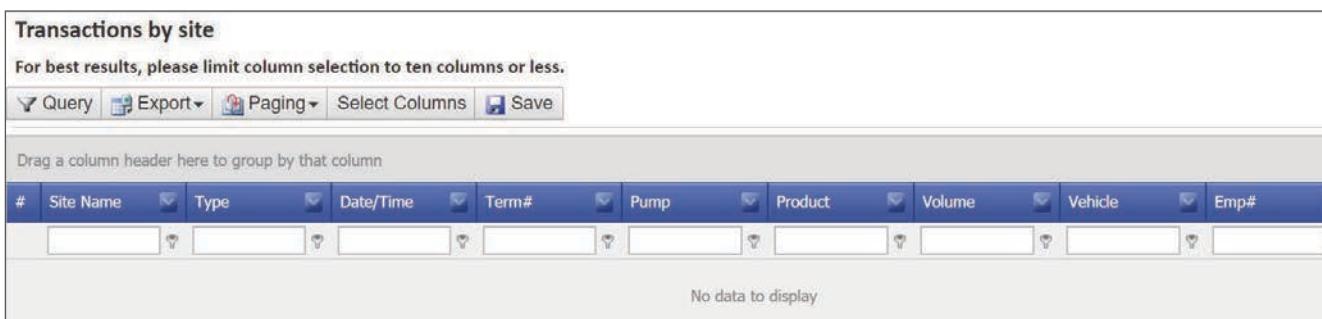
This opens a list of templates containing the fields that can be used to create the report. For instance the Transactions template exposes all the fields related to transactions in Fuel View that can be used on a report.

Report Grids List

CANceiver Events	Transactions
Car Washes	Transactions - OffRoad Vehicle Summary
Credit Card Transactions	Transactions by W3 CANceiver / VIT
Employees	Transactions Extended
Fleet Data by Department and Vehicle	Transactions Summation
Fuel Adjustments	Transactions PTO Vehicle Summary
Fuel Receipts	Vehicle Daily Analysis
Fuel Transfers	Vehicle Transactions
Tanks	Vehicles
TLS Alarm History	Vehicles Not Fueled
TLS Tank Level Inventory	

The Query grid allows you to limit the data presented on the report.

2. Click the blue hyper-link in the **Name** column to open the query grid.
3. Click **Close Form**.
 - A blank query grid with default columns will display.

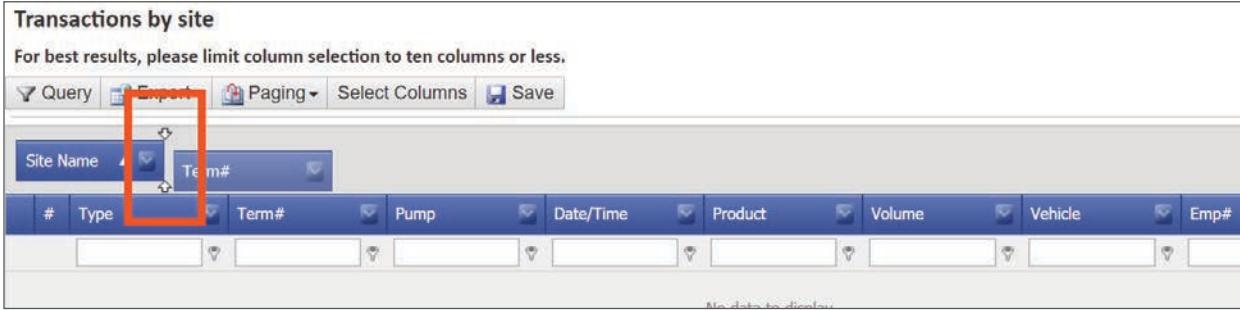



NOTE: Each Query Form is unique, containing data pertinent to that category.

4. Click the **Select Columns** tool to add or remove data fields to the report.

Create A Group

1. Click the **Select Columns** tool to add data fields to the report.
2. Drag the field from the Field Chooser list to the Report grid.
3. Order the fields to satisfy your reporting requirements.
4. To group data results, click and drag columns to the Group field at the top of the grid until the white arrows appear.



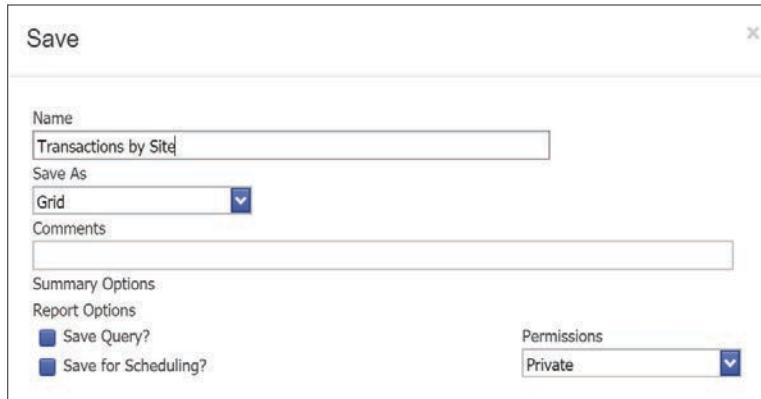
The screenshot shows the 'Transactions by site' report builder. At the top, there's a toolbar with 'Query', 'Export', 'Paging', 'Select Columns', and 'Save'. Below the toolbar is a header row with columns: Site Name, Team#, #, Type, Term#, Pump, Date/Time, Product, Volume, Vehicle, and Emp#. The 'Group' column header is located at the top of the data grid, above the first data row. A red box highlights this 'Group' column header.

5. Remove a group by dragging the tab off the group level and back to the columns header.
6. Close the Field Chooser.

 Data may be grouped and ungrouped directly from the grid.

 To control the amount of data returned, enter a date or date range if there is a date filter.

7. Click **Save**.



The screenshot shows the 'Save' dialog box. It has fields for 'Name' (Transactions by Site), 'Save As' (Grid), 'Comments', 'Summary Options', 'Report Options' (checkboxes for 'Save Query?' and 'Save for Scheduling?'), and 'Permissions' (dropdown set to Private).

In the Save screen:

8. In the **Name** field, create a unique name for the report.
9. In the **Save As** drop-down list, select a report type.
 - Grid, Report, or Pivot Grid.

In the Report Options section:

10. Check the **Save Query** check-box if you want the original selections in the Query Window saved and to be populated each time the report is run. Note that these can be changed when running the report.
11. Check the **Save for Scheduling** check-box if you wish to be able to schedule the report.
12. In the **Permissions** drop-down list:
 - Select *Private* if you want your account to be the only one able to see the report.
 - Select *Public* if you want all roles in Fuel View to be able to view the report.
13. Click **Save**.

The Query Form opens.

- Data fields are query dependent.

Query Forms Samples

Sample Query Form 1

Query Form

From - Enter a date for the beginning of the date range.

To - Enter a date for the end of the date range.

Vehicles - Enter vehicle information (Make, Model, Year, Vehicle Number)

Sample Query Form 2

Query Form

Cost (Include >, <, or =) - Enter a Cost (Price). Precede the Cost with an operator (=, >, <, <=, >=, !=, <>)

From - Enter a date for the beginning of the date range.

To - Enter a date for the end of the date range.

Department - Select a Department Name
 --Unknown--
 AGING
 BLDG AND GROUNDS
 FREEHOLDERS
 CENTRAL SERVICES
 FREEHOLDER CLERK
 COMM DEVELOPMENT

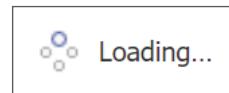
Idle Source - Select one or more Idle Time Sources from the list.
 Heavy Duty Vehicles
 Light Duty Vehicles
 Not Applicable

Product - Select one or more Products(Fuels) from the list.
 Unknown
 Ethanol
 Unleaded
 Premium
 Fast-fill CNG
 Diesel

14. Enter dates, field information, and check fields as required.

15. Click **Query**.

The Loading message displays until the query has completed.



16. If the report was saved as a grid, click **Refresh Grid**.

i You can change your query selections as often as needed before clicking Refresh Grid.

17. To view results, click the **blue +** tabs on the left of each row to expand the section.

Transactions by Site and Product

Query Export Paging Select Columns Save

	#	Type	Date	Time	Term#	Pump	Volume	Unit	Vehicle
<input checked="" type="checkbox"/>									
<input checked="" type="checkbox"/>		Site Name: Downtown							
<input checked="" type="checkbox"/>		Product: Diesel							
<input checked="" type="checkbox"/>		Product: Unleaded							
<input checked="" type="checkbox"/>		Site Name: Midtown Central							
<input checked="" type="checkbox"/>		Site Name: Parks and Recreation							
<input checked="" type="checkbox"/>		Site Name: Police Station							

Query Grid results with closed sections

Transactions by Site and Product

Query Export Paging Select Columns Save

	#	Type	Date	Time	Term#	Pump	Volume	Unit	Vehicle	Odometer
<input checked="" type="checkbox"/>										
<input checked="" type="checkbox"/>		Site Name: Downtown (Continued on the next page)								
<input checked="" type="checkbox"/>		Product: Diesel (Continued on the next page)								
	KPD	3/26/2019	01:44:00		21	2 (6)	53.5000	gallons	1521	12
	KPD	3/26/2019	03:15:00		22	1 (9)	50.3000	gallons	1431	7
	KPD	3/26/2019	05:26:00		20	2 (220)	50.9000	gallons	1541	
	KPD	3/26/2019	05:28:00		21	2 (6)	65.8000	gallons	1333	

Query Grid Results with an open section

 **NOTE: If no data populates the report, there is no data based on the filtering criteria you entered and you will see the *No data to display* message. Go back to the Query form by clicking the Query button and change the filters.**

Saving A Query

Save As A Report

Save

Name	Fuel Adjustments	
Save As	Report	▼
Comments		
Summary Options		
Field Name	Summarize?	Summary Type
Adjustment Type	<input checked="" type="checkbox"/>	Count
New Level	<input type="checkbox"/>	Count Distinct
Address2	<input type="checkbox"/>	Sum
Old Level	<input type="checkbox"/>	Average
Time	<input type="checkbox"/>	
Report Options		
<input type="checkbox"/> Save Query?	Page Layout	Permissions
<input type="checkbox"/> Save for Scheduling?	Landscape	Private

 **Selecting Save As a Report provides additional fields in the Save window**

1. In the **Name** field, enter a meaningful name.
2. In the **Comments** field, enter any helpful notes.
3. In the Summary Options section, check the **Summarize** boxes as needed.
4. In the **Summary Type** drop-down list for each checked Field Name, select a Summary type.

If new report contains a field column used as a Group Header, you have the option of choosing to summarize columns in four different ways, allowing for a field column total.

Summary Type Definitions

Count Total Records in the report

Count Distinct Total number of unique records

Sum Adds numerical columns

Average Averages numerical columns

In the Report Options section:

5. Check **Save Query** to retain the specific query for this report.
6. Check **Save for Scheduling** to have report run automatically at a scheduled time.
 - Covered in Report Scheduling section.
7. In the **Page Layout** drop-down list, select either landscape or portrait.
8. Optional: In the **Permissions** drop-down list, select a viewing option:

Private	Allows only the creator access to the report.
Public	Allows everyone with Fuel View access to view the report.
9. Click **Save**.

Save As A Grid



The screenshot shows the 'Save' dialog box. It has fields for 'Name' (set to 'Fuel Adjustments'), 'Save As' (set to 'Grid'), and 'Comments'. Under 'Report Options', there are checkboxes for 'Save Query?' (unchecked) and 'Save for Scheduling?' (unchecked). On the right, there is a 'Permissions' dropdown set to 'Private'.

1. In the **Name** field, enter a meaningful name.
 - This could be the name from blue hyper-link in the grid you will use to run the report.
2. In the **Comments** field, enter any helpful notes.

In the Report Options section:

3. Check **Save Query** to retain the specific query for this grid.
4. Optional: In the **Permissions** drop-down list, select a viewing option:

Private	Allows only the creator access to the report.
Public	Allows everyone with Fuel View access to view the report.

5. Click **Save**.

Save As A Pivot Grid

A pivot grid is a summarization tool to automatically sort, count the total or give the average of a set of data points. A pivot grid is useful for quickly creating unweighted cross tabulations. The user sets up and changes the summary's structure by dragging and dropping columns and determining how to group information. Pivot grids display data the same as Excel pivot charts.



The screenshot shows the 'Save' dialog box. It has fields for 'Name' (set to 'Fuel Adjustments'), 'Save As' (set to 'PivotGrid'), and 'Comments'. Under 'Report Options', there are checkboxes for 'Save Query?' (unchecked) and 'Save for Scheduling?' (unchecked). On the right, there is a 'Permissions' dropdown set to 'Private'.

1. Optional: In the **Comments** field, enter a descriptive reference.
2. In the **Comments** field, enter any helpful notes.
3. Click **Save Query** to retain the specific query for this report.
4. Optional: In the **Permissions** drop-down list, select a viewing option:

Private	Allows only the creator access to the report.
Public	Allows everyone with Fuel View access to view the report.

5. Click **Save**.

Reports

Run A Report

1. Open the Reports page.
2. Click a category in the **Name** column to open the Query Form.

The Query Form fields vary depending upon the report that has been selected. Behind each Query Form you will see a blank report in shadow with the title of the selected report.



3. Fill out appropriate fields and select appropriate check boxes.
4. Click **Refresh Report**.
 - Fuel View will populate a formatted, print-ready report.

Ward Sales										
Fleet Data by Department and Vehicle										
Department	00640									
Vehicle #	Odometer	Ignition on Fueling	Power Cycles	Max Speed	Max Allocation	Max Volume	Off Road %	Vehicle Code		
000	5556	No			0	0.000	0			
67890	96700	No			25	0.000	0			
Department	No. Of Vehicles		Total Volume							
00640	2		0.000							
Department	Department #10									
Vehicle #	Odometer	Ignition on Fueling	Power Cycles	Max Speed	Max Allocation	Max Volume	Off Road %	Vehicle Code		
1293	50633	No			0	5.000	0			
1295	81230	No			0	150.000	0			
1431	48437	No			0	150.000	0			
2345	7563	No			0	2.000	30			
Department	No. Of Vehicles		Total Volume							
Department #10	4		307.000							
Department	Department #105									
Vehicle #	Odometer	Ignition on Fueling	Power Cycles	Max Speed	Max Allocation	Max Volume	Off Road %	Vehicle Code		
TEST345	0	No			0	20.000	0			
Department	No. Of Vehicles		Total Volume							
Department #105	1		20.000							

View A Report

1. In the Reporting folder open a page for Reports, Grids, or Pivot Grids.
2. Click a blue hyper-link in the **Name** column.

Edit A Grid

A Grid Report is the only report that can be altered after it has been saved.

1. Click the **Columns** tool to alter a grid.
 - Reorder, add, and remove columns.

2. Click **Save**.

Create A Pivot Grid

A pivot grid is a summarization tool that will automatically sort, count the total, or give the average of a set of data points. A pivot grid is also useful for quickly creating unweighted cross tabulations.

1. In the **Name** column select report type by clicking on the blue link to open the Query Form.
2. In the Query Form, enter a **Date Range**.
3. Click **Refresh Grid**.
4. Drag and drop columns to designate them as Column or Row Labels.
5. Optional: Add or remove columns with the **Select Columns** tool.

 **NOTE:** The top section is a list of all available columns. Column labels are light tabs and row labels are shaded.

Scheduled Reports

If the Fuel View server is set up with access to an SMTP (e-mail) server, it can schedule reports to automatically run and be e-mailed to single or multiple addresses.

 **TIP:** The Scheduled Reports grid contains the reports set-up to auto run and e-mail.

1. Open the Scheduled Reports grid and click Add Record.

Report Details			
Report Name: *	<input type="text"/>	Date Filter:	<input type="text"/>
Export Type: *	<input type="text"/>		
Failed Attempts:	<input type="text"/>	Max Failed Attempts:	<input type="text"/>
Run Date: *	<input type="text"/>	Last Run:	<input type="text"/>

In the Report Details section:

2. In the **Report Name** field, select the name of the report for scheduling.
3. In the **Date Filter**, if available, select the time range for the data in the report
4. In the **Export Type** field, select how you want the report formatted before being emailed. The options include PDF, XLS, XLSX and CSV.
5. In the **Max Failed Attempts** field, enter the number of times for report try to run if it fails.
 - The Failed Attempts field will display the number of failures.

 **NOTE:** The Report Name drop-down list is populated only by reports that can be automatically scheduled.

6. In the **Run Date** field enter the start date and time for the initial report.
 - The Last Run date will be automatically populated when the report has been run.

In the Occurrences section:

Occurrences	
Occurrence: *	<input type="button" value="▼"/>
Monday	<input checked="" type="checkbox"/>
Wednesday	<input checked="" type="checkbox"/>
Friday	<input checked="" type="checkbox"/>
Sunday	<input checked="" type="checkbox"/>
Tuesday	<input checked="" type="checkbox"/>
Thursday	<input checked="" type="checkbox"/>
Saturday	<input checked="" type="checkbox"/>

7. In the **Occurrence** drop-down list, select the frequency for the report to run:

Daily Check the day(s) of the week.

Monthly Enter the day of the month.

Weekly Enter the number of weeks between reports.
Check the days of the week to run the report.

8. Select the interval between weeks and the day(s) of the week.

In the E-mail section:

Email	
Email From: *	<input type="text"/>
Email To: *	<input type="text"/>
Email CC:	<input type="text"/>

9. In the **E-mail From** field, enter the source e-mail.
 - This allows the recipient to see where the email came from.
10. In the **E-mail To** field, enter the target e-mails.
 - Separate multiple e-mail entries with a semi-colon.
11. Optional: Add extra e-mails in the **Email CC** field.
12. Click **Save**.

Edit A Schedule

In the Scheduled Reports grid:

1. Click a blue hyper-link in the Report Name column to open the Report schedule.
2. Change information fields as required.
3. Click **Save**.

14. Message Management

Fuel View provides the ability to send notification messages to vehicles when they are fueling at an FCT. This is typically used to notify the drivers of upcoming preventative maintenance work on the vehicle. Messages can be automated for delivery to the entire fleet; groups of vehicles, or a single vehicle. Triggers can be based on odometer, transactions, or time. Messages are displayed on the screen of the FCT during fueling but are not displayed while the FCT has no network connectivity.

The message will be displayed on the FCT each time the vehicle fuels. The user has to deactivate the message using the Vehicle Messages screen in Fuel View. There is an optional setting that allows the message to be deactivated automatically once it has been displayed and acknowledged by the driver. This ensures a message will only display once per vehicle. With the appropriate hardware it is possible to have an alarm signify that a message is pending for vehicles using CANceiver fueling authorization.

Fuel View Message Management allows up to a total of 50 messages. A message can be:

Global Message – sent to everyone that fuels at an FCT

Vehicle Message – sent to specific vehicles only

Messages

To create a Message:

1. Open the Message Management folder in the navigation panel and click the Messages icon to open the Messages page.
2. Click the **Add Record** tool.

In the Profile section:

Profile	
Message Number: *	8
Line One: *	
Line Two:	
Active:	<input checked="" type="checkbox"/>
Date Deactivated:	

Skip the Message Number* field (this field is automatically assigned by the system and is read only).

3. In the **Line One** field, enter the first line of the message (20 characters max). If you need more content, use Line Two.
4. Ensure that the message is **Active**.

In the Attributes section:

Attributes	
Display Seconds: *	5
Send to FCT:	<input checked="" type="checkbox"/>
Send to All:	<input type="checkbox"/>
Disallow Fuel:	<input type="checkbox"/>

5. In the **Display Seconds** field, enter the number of seconds the user has to acknowledge the message on the FCT screen.
6. Check the **Send to FCT** check-box to have the message display on the FCT screen.
 - If unchecked, the message will not be sent to the FCT. This allows a message to be turned off without deleting it.

7. Check the **Send to All** check-box to send the message to all vehicles.
 - This check-box turns the message into a Global message that all people fueling will receive.
 - If this is not set, the message will need to be assigned to the vehicles it is to be sent to (see Messages by Vehicle below).
8. Check the **Disallow Fuel** check-box to deny fueling when the message is displayed at a fueling attempt.

 **IMPORTANT: If Disallow Fuel is active, all vehicles receiving this message will not be allowed to fuel until the user acknowledges the message at the FCT or the message is deactivated in Fuel View.**

In the Automation section:

Automation
Trigger based on Odometer or Hour <input checked="" type="checkbox"/> Meter Reading:

9. Check the **Trigger based on Odometer or Meter Reading** check-box if the message is to be displayed only when the odometer or hour meter reaches a specific value.
10. Click **Save**.

Messages By Vehicle

A Messages must already have been created to assign it to a vehicle.

Apply A Message To A Vehicle

To apply a message to an individual vehicle:

1. Open the Messages by Vehicle page.
 - This grid lists all the vehicles that have been assigned a message.
2. Click the **Add Record** tool to open the Vehicle Message screen.
3. In the **Select a Vehicle** drop-down list, select the vehicle to receive the message.
 - Once selected, that Vehicle's information will be displayed with the Add Message tool bar and a Vehicle Messages Heading:

1333 2008 Jeep 2066
<input type="button" value="Add Message"/> <input type="button" value="Copy Messages"/> <input type="button" value="Save All Messages"/>
Vehicle Messages:

4. Click the **Add Message** button.
5. Select a **Message** from the drop-down list.

Select The Message to Add					
Message Number	Line One	Line Two	Disallow Fuel	Meter	
1	Maint Needed		False	True	<input type="button" value="OK"/>
2	Maintenance Needed	Due at shop	False	True	
4	Oil	Change	False	True	
3	Oil Change	OVERDUE	True	False	
6	Paint Job	Needed	True	True	
5	This is a Test	This is a Test	False	True	
	Tire Rotation	OVERDUE	False	False	

- The list consists of all active messages.

6. Click **OK**.
 - The message will load and will be displayed in the Message # box.

1333 2008 Jeep 2066

	Add Message		Copy Messages		Save All Messages
Vehicle Messages:					
Message #4					
<input checked="" type="checkbox"/> Disallow Fuel? Line One: Oil Change Line Two: OVERDUE <input type="checkbox"/> Active? Meter Reading Trigger: 0					

7. Check the **Active** check-box for the vehicle to receive the message once the requirements are met.
 - If the Trigger is based on an odometer or hour meter reading, the *Meter Reading Trigger* field will be present to edit.
8. In the **Meter Reading Trigger** field, enter the odometer or hour meter value for when to display the message.
9. Click **Save All Messages** or click the **Add Message** tool to add another message.
10. Click **OK**.

NOTE: It is important to call the FCT with *Connect* to upload messages to W3 or W4 FCTs.

Set Hour Or Odometer Trigger

Vehicle Messages:

Message #4	
<input checked="" type="checkbox"/> Disallow Fuel? Line One: Oil Change Line Two: OVERDUE <input checked="" type="checkbox"/> Active? Meter Reading Trigger: 0	

If the message is to be activated by odometer:

1. In the Message By Vehicle grid, select the vehicle with the trigger requirement.
2. In the **Meter Reading Trigger** field, enter the odometer or hours requirement.
3. Click **Save All Messages**.

NOTE: To edit a message, click on the blue Message Number in the Messages grid.

Copy Messages To Other Vehicles

To copy a full set of messages from one vehicle to others:

1. Click the Copy Messages button at the top of a Vehicle Messages detail screen.
2. Select a **Vehicle** from the drop-down list.

3. Click **Save All Messages**.

Remove Messages

1. In the Vehicles Messages grid, click the blue hyper-link in the **Vehicle Number** column.
2. Click the **Remove Message** button.

Vehicle Messages:

Message #4	
<input checked="" type="checkbox"/> Disallow Fuel?	<input type="button" value="Remove Message"/>
Line One:	Oil Change
Line Two:	OVERDUE
<input checked="" type="checkbox"/> Active?	
Meter Reading Trigger:	0

 **IMPORTANT: Clicking Remove Message is irreversible and will remove the message without prompting to Save. If there is only one message, the vehicle will be removed from the Messages By Vehicle grid as well.**

Discontinue A Message To A Vehicle

1. Click a blue hyper-link in the **Vehicle Number** column.
2. Uncheck the **Active** check-box.
3. Click **Save All Messages**.
 - The vehicle will remain in the grid as long as the Message has not been removed.

Deactivate A Message Globally

 **IMPORTANT: Deactivating a message Globally permanently deletes it from the database.**

1. Open a message from the Message page.
2. Uncheck the **Active** check-box.
 - The Date Deactivated field will populate with the current date.
3. Click **Save**.

Delete A Message

1. In the Messages grid, click the blue **Delete** link on the message line.
2. Click **OK** in the Confirm Delete screen.

 **IMPORTANT: Alert to Chrome Users – When deleting a message, you may see the option in the Confirmation box to Prevent this page from creating additional dialog. DO NOT check the box. This will prevent all pop-up screens in Fuel View from opening.**

Confirm Delete?	
<input type="checkbox"/> Prevent this page from creating additional dialogs.	

Notes Management

Fuel View provides the ability to store text with different assets. This is flexible to allow customers to use it to solve different problems. For instance, notes associated with FCTs can be used to track service calls or part replacements for each Terminal. Notes associated with a vehicle can record when oil changes were made, or document results of an accident. Notes can be turned on or off for the different assets through the Notes Management section.

The Notes for an asset can include categories to allow easier reporting and sorting. Thus a vehicle can have Notes in Oil Change and Tire Replacement categories. These categories can be added by each customer as needed. There is no restriction to the number of categories allowed.

Notes can be associated with the following assets:

Notes Categories List

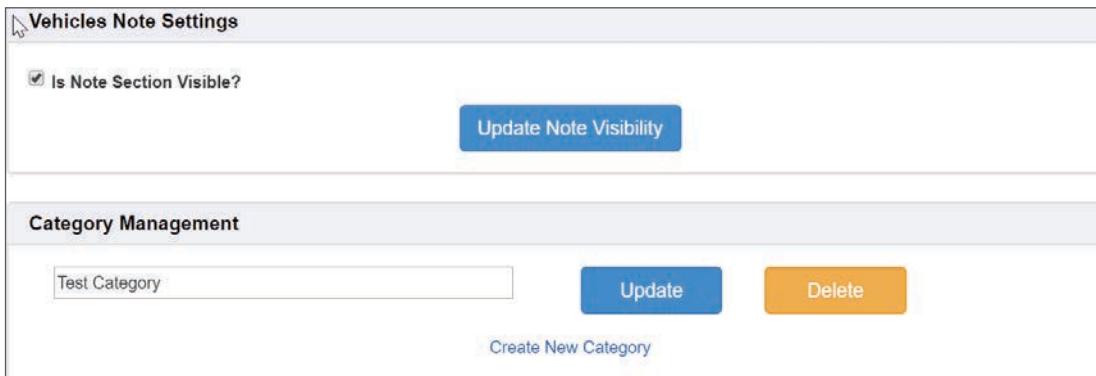
- Vehicles
- Terminals
- Tanks
- Sites
- Pumps
- Manifolds
- Employees

Notes can be added for additional assets if required.

 Please notify your Ward Sales Representative if you see a need for additional note categories.

Notes Management (Visibility and Categories)

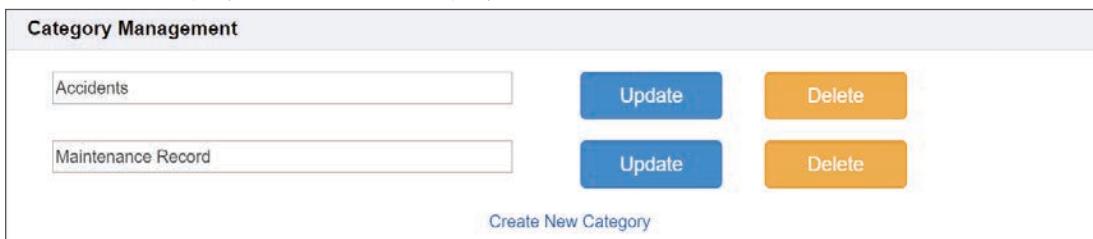
1. By default, Notes are not visible in Fuel View. Notes are made visible through the following steps:
2. Open the Notes Management page.
3. Click the **Edit** link next to the asset Area Name to view the settings screen for this asset type
4. Ensure the **Is Note Section Visible** check-box is checked.



5. Click the **Update Note Visibility** tool to save changes.

To add Categories to a Note:

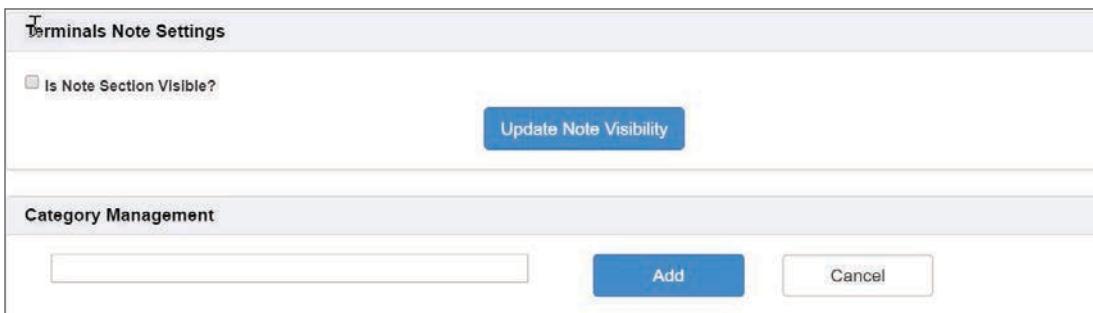
1. Click the Create New Category link to add a category.



Category Management	
Accidents	<input type="button" value="Update"/> <input type="button" value="Delete"/>
Maintenance Record	<input type="button" value="Update"/> <input type="button" value="Delete"/>
Create New Category	

In the Category Management section:

2. Enter the **name or description** of the category.



Terminals Note Settings	
<input checked="" type="checkbox"/> Is Note Section Visible?	<input type="button" value="Update Note Visibility"/>
Category Management	
<input type="text"/>	<input type="button" value="Add"/> <input type="button" value="Cancel"/>

3. Click **Add** to save changes.

The following data is recorded for each note:

Notes Definitions List

Created	Date and time the note was created.
Created By	User name of the person who created the note.
Date Deleted	Date when the note was deleted.
Edit	Link to edit the note.
Modified	Date and time the note was edited.
Modified By	User name of the last person to have modified the note.
Note Category	If there are categories assigned.
Note Text	Content of the note.

 Use the Query tool to filter a date range for viewing notes. The query defaults to the past week of notes.

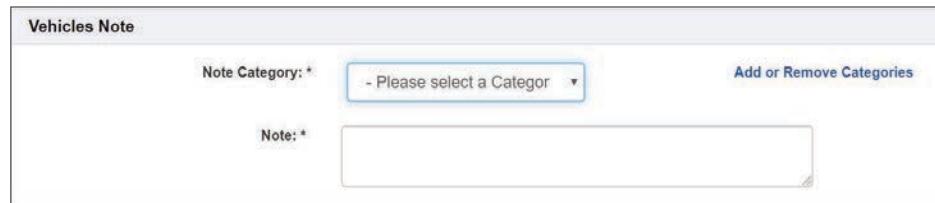
Add A Note To An Asset

1. Navigate to the asset record.

Example: For the notes associated with a vehicle, go to the Vehicles grid, and open the Vehicles record. If Notes are visible for this asset, a Notes link will be present in the navigation folder on the left.

2. Click the **Notes** link to open the Notes page.
 - The Notes grid for the asset will appear with a list of notes associated to the asset.
3. Click the **Add Record** tool.
 - A blank Note will appear.

In the Vehicles Note section:



- Select a **Note Category** from the drop-down list.

 **The Add or Remove Categories link to the right allows you to work in categories without navigating to the Notes Management screen.**

- In the **Note** field enter a note.
- Click **Save**.
 - The Active, Created By, Created On, Modified By, and Modified On fields will populate.

Close the Window and the grid will now include the new Note.



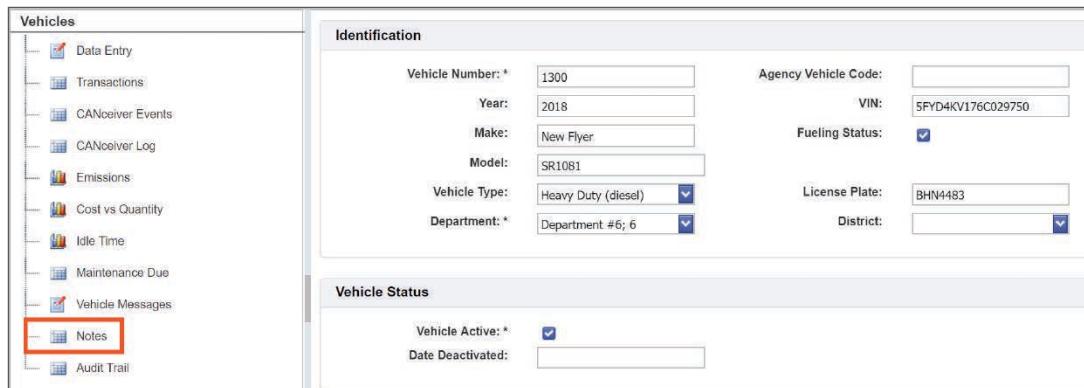
View or Edit Notes For An Asset

To view or edit a note, Notes must be visible for the asset type (see above).

- Navigate to an asset record.

Example: For the notes associated with an vehicle, go to the Vehicles grid, and open the Vehicles record. If Notes are visible for this asset, a Notes link will be present in the navigation folder on the left.

- Click the **Notes** link to open the Notes page.



- The Notes grid for the asset will appear with a list of notes associated to the asset.

 **NOTE: If the grid appears blank, use the Choose Columns tool to add columns to the grid to view the note details.**

To Edit a Note:

3. Click the **Edit** link to open the notes for that asset.



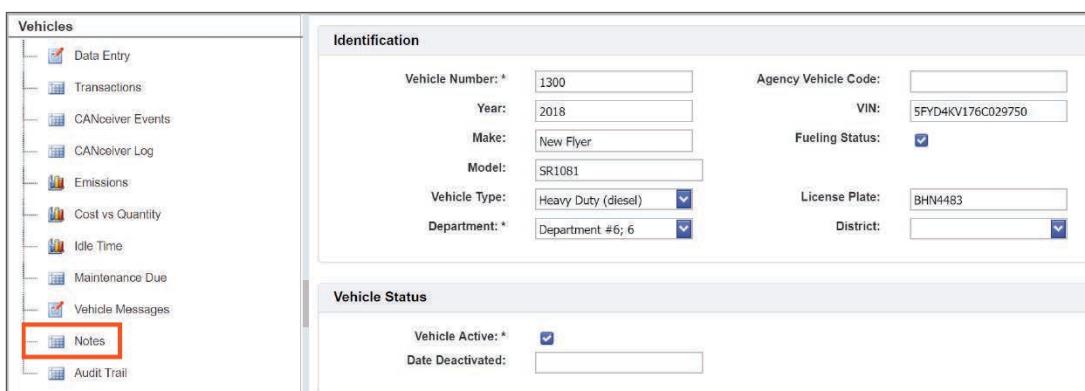
4. In the **Note Category** drop-down list select a different category.

i Use the Add or Remove Categories link to the right to work in categories without navigating to the Notes Management screen.

5. In the **Note** field, edit the text.
6. Click **Save**.
7. Close the Window and the grid will now include the updates to the Note.

Delete A Note From An Asset

1. Navigate to the asset record.
2. Click the **Notes** link to open the Notes page.



The Notes grid for the asset will appear with a list of notes associated to the asset.

3. Click the **Edit** link for the note to be deleted.

In the Details Section:

4. Uncheck the **Active** check-box and save the record.



5. Close the Window and the note will have been removed from the grid.

15. Security

The Security section of Fuel View is restricted to the System Administrator. In Security, the Administrator can manage who can access Fuel View, what functions they can perform and which reports they are able to view and print.

There can be more than one System Administrator per company; however, there can be only one System Administrator email address.

System Administrator Functions List

Manage Users

- Add Users
- Change Users Attributes including Email and Text
- Assign Roles to Users
- Assign Filters (Districts, Departments and Sites) to Limit Accessibility to Users
- Deactivate User
- Reset User Password

Set up Roles and Permissions

- Review and Modify Password Policy
- Review Audit Trail

Fuel View User Functions List

- Change Password

Users

A User is someone with the authority to access Fuel View. All Users access Fuel View through a unique UserID and password. A User can be assigned limited page access rights (Update, Read, No Access) and be assigned which reports they are allowed to view. Page and report access rights can be assigned to a User, or more typically are applied to a Role which can then be assigned to one or more Users. The default system comes with a number of pre-configured roles that can be used out of the box or can be customized as needed. New roles can be added with their own specific page and report access rights.

To support the sending of passwords and reports, the User Email Address is a required field.

A new User will receive an email with a link to verify the email address. The email address must be verified by the User before the User can receive any notifications.

 **NOTE: The SMTP Service must be set up and configured in Fuel View for email to properly function.**

Fuel View can also send text alert notifications to Users. For this to work, the User profile must include both the phone provider and the phone number. Texts are sent to the User phones through the email system, hence the need for the phone provider. Like the email address, the User must verify the phone number before texting will work.

Fuel View is set up to protect a User's password. Even the System Administrator will not know the actual value of the password. When a password is to be changed by the Administrator, they can generate a new password which is not displayed on the User Profile but is sent through email to the User when the User profile record is saved. The User is prompted to change their password from the system generated password.

The User Profile displays information about the User as well as information such as when the User was locked out, deactivated or changed their password.

Add A User

1. Expand the Security directory and open the Users page.
2. Click the **Add Record** tool to open the User screen.

In the User Profile section:

User Profile	
User Name: *	<input type="text"/>
Password: *	<input type="password"/>
Password Resets:	0
First Name: *	<input type="text"/>
Email: *	<input type="text"/>
Mobile Provider:	<input type="button" value="▼"/>
Mobile Phone:	+1(____)___-
Remarks:	<input type="text"/>
Use LDAP:	<input type="checkbox"/>
Active:	<input checked="" type="checkbox"/>
Date Deactivated:	<input type="text"/>
Force Change Password:	<input type="checkbox"/>
Last Password Reset:	<input type="text"/>
Last Name: *	<input type="text"/>
<input type="button" value="Generate Password"/>	
Locked Out:	<input type="button" value="▼"/>

3. In the **User Name** field, enter a unique login name to identify the account.

 **NOTE: If using LDAP for password verification, the User Name must match the user's Windows Login.**

4. For the Password:

- Click the **Generate Password** tool to create a password that will be emailed to the user, or
- Check the **Force Change Password** check-box to require the user to create a new password upon first login.

 **NOTE: By default, a password must be between 6 and 20 characters and contain at least one upper case letter and at least one number. Your System Administrator can change password requirements based on your company's security policy through the Password Policy section.**

5. In the **First Name** field and enter the user's first name.
6. In the **Last Name** field and enter the user's last name.
7. In the **Email** field, enter the user's email address.
8. Optional: In the **Phone Provider** drop-down list select the phone provider for the user's cell phone.
 - This field and the Phone field allow for text alert notifications.
9. Optional: In the **Phone** field, enter the user's cell phone.
10. Optional: In the **Remarks** field, enter a descriptive detail relating to the user.
11. Check the **Use LDAP** check-box if the password will be managed by *Active Directory*.
 - Active Directory is a service that Microsoft developed for Windows domain networks, and is included in most Windows Server operating systems as a set of processes and services. Check with your network engineers if using LDAP is an option within your environment.
 - Note that this is not Single Sign On. Fuel View will still require the User to enter their system password if Use LDAP is selected.

In the Role Membership section (if Roles are being used for assigning Page and Report access):

Role Membership	
Role:	<input type="button" value="▼"/>
<input type="button" value="Reset"/>	

12. In the **Role Membership** drop-down list, select a role for the user.
 - Assign a pre-existing role or create a custom role through the Roles section.

 **NOTE: If you are not using roles, but are assigning Page and Report Access directly by user, do not assign a Role and save the User record with the Save button.**

13. Click **Save**.

14. Click **OK**.

Once the User record has been saved and the User page refreshed a Custom Role Permissions section will appear. This section allows Page Access and Report Access to be configured specifically for this User. See the section on Roles for setting up custom permissions for Page and Report Access as this is common functionality.

 **NOTE: The default for all Page and Report Access in the Custom Role Permissions section is set to not allow access. For details on updating Page and Report Access, see the Roles Section.**

Two emails will be sent to the User:

An email with a login link and temporary password.

An email with a link to confirm the email address

If a phone number is added for texting, the User will receive a request to confirm the text number.

Assign Filters to a User

If User access is to be restricted to specific Districts, Departments, or Sites, use the User Filters to identify which screens the User has access to. If no items are selected, there are no restrictions applied to the User.

Limiting access allows the User to only see the vehicles and transactions that the User is assigned to. The reporting system is designed to honor the filtering set up through the User filters.

Example: Selecting one District will limit the user to only see vehicles or transactions associated with that District.

 **NOTE: Not all Fuel View customers use Departments and Districts. Departments and Districts must be properly set up for filtering to be effective.**

To restrict the sites, departments or districts that a User can view, apply filters to a User.

Filters		
Districts:	Selected?	District Name
	<input type="checkbox"/>	Houston
	<input type="checkbox"/>	San Antonio
Departments:	Selected?	Department Name
	<input type="checkbox"/>	00640
	<input type="checkbox"/>	Department #10
	<input type="checkbox"/>	Department #105
	<input type="checkbox"/>	Department #106
	<input type="checkbox"/>	Department #11
	<input type="checkbox"/>	Department #112
Sites:	Selected?	Site Name
	<input type="checkbox"/>	Airport
	<input type="checkbox"/>	Downtown
	<input type="checkbox"/>	Manhattanville
	<input type="checkbox"/>	Midtown Central
	<input type="checkbox"/>	Parks and Recreation
	<input type="checkbox"/>	Police Station

1. Check the **Districts** check-boxes for allowed access.

- The User will be able to view all of the districts with **Selected** check-box checked.
- To remove access, uncheck the box.

2. Check the **Departments** check-boxes for allowed access.
3. Check the **Sites** check-boxes for allowed access.
4. Click **Save**.
5. Wait for confirmation.
6. Click **Save**.

Edit A User

1. In the User grid, click a blue hyper-link in the Login Name column.
2. Edit fields as required.
 - Editable fields include:
Profile
Role
Filters
3. Click **Save**.
 - The Filter section will appear under Employee Profile and Role Membership.

In the Filters section:

4. Edit fields as required.
5. Click **Save** and wait for confirmation.
6. Click **Close**.

Deactivate A User

In the User grid, click the name of the user to deactivate.

1. Uncheck the **Active** check-box.
 - The Deactivated Date will populate with the current date and time.
2. Click **Save**.



NOTE: Deactivation does not delete the User.

Reactivate A User

3. Click the **Query** tool in the User grid.
4. In the **Status** drop-down box, select Inactive.
5. Click **Refresh**.
6. Click the blue User Name link of the user to reactivate.
 - The User Data Entry screen will open.
7. Check the **Active** check-box.
 - The Date Deactivated will automatically clear.
8. Click **Save** and wait for confirmation.

Roles

For access and function permissions Fuel View operates with designated roles. A Role is an easy way to capture a set of permissions and apply them to multiple Users instead of individually applying permissions to each User. As many Roles can be set up as different sets of permissions are required. Fuel View comes with a number of preprogrammed Roles. These initial Roles can be modified as needed. It is recommended that the permissions for the System Administrator Role not be changed.

Permissions are applied as follows:

Page Access The user can view a page and if so, may or may not have Read access or Write access.

Report Access The user can view a Report, Grid or Data Query.

Roles can be removed from Fuel View by deactivating them.

Sample Role Permissions Definitions

Role	View Screen Data	View Reports	Add/Modify Screen Data	Add/Modify Reports	Create/Modify Users
Central Office	✓	✓	✓	✓*	
District Coordinator	✓	✓	✓	✓*	
District Equipment	✓*	✓	✓*	✓*	
Fuel Management	✓	✓	✓	✓*	
Operator	✓	✓	✓	✓	
Operator Admin	✓	✓	✓	✓	
Read Only	✓	✓		✓	
Reporter	✓*	✓			
Shop Manager	✓*	✓	✓*	✓*	
System Admin	✓	✓	✓	✓	✓
Vehicle Tracker			✓*	✓*	

* Limited Permissions

Create A Role

Custom Role settings can be created by the System Administrator in Role Set Up section.

Open the Roles grid.

1. Click **Add Record**.

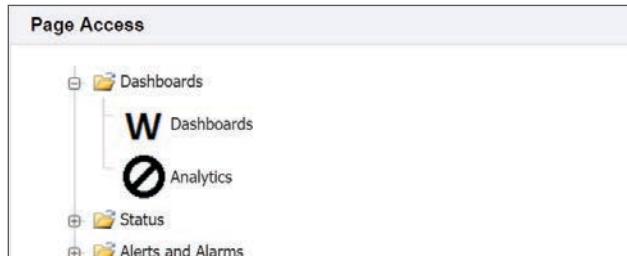
In the Role Profile section:

Role Profile	
Name:	<input type="text" value="SystemAdministrator"/>
Remarks:	<input type="text"/>
Active:	<input checked="" type="checkbox"/>
Date Deactivated:	<input type="text"/>

2. In the **Name** field, enter a unique Role name.
3. In the **Remarks** field enter a simple description.
4. Click **Save**.
 - The Page Access and Report Access sections will appear to allow definition of the role.

In the Page Access section (the folders duplicate the Fuel View directory):

5. Configure a Role's access by opening a folder and clicking a screen icon.
 - The access level changes each time you click the icon to one of three different permissions.



Page Access Definitions

	No access	Users will not see this menu item.
	Read-only access	Users see menu item, and are able to view the data but not have the ability to save update.
	Full access	Users have full access to this menu item, view the data and will be able to save updates.

In the Report Access Section:

Report Access			
#	Name	File Type	Allowed
Edit	Administrator Vehicles	Report	<input checked="" type="checkbox"/>
Edit	Automatic Fuel Control Terminal Restart	Report	<input checked="" type="checkbox"/>
Edit	Bulk Inventory	Report	<input checked="" type="checkbox"/>
Edit	Bypass Transactions	Report	<input checked="" type="checkbox"/>
Edit	CANCeiver Events	Grid	<input checked="" type="checkbox"/>

6. Click an **Edit** link to define Report Permissions for the Role.
7. Check the **Allowed** check-box to provide access to the report.
8. Click the **Update** link to save the change for this report.

 **For large volume grids, use the query function to assist in finding reports to edit.**

9. Click **Save**.
10. Click **OK**.

 **NOTE: Roles are assigned through Users Management.**

Password Policy

Password Policy allows changing the complexity requirements of passwords for Fuel View.

 **NOTE: Password Policy is a System Administrator role.**

Password Requirements

Password Policy Definitions

Minimum Password Length Eight characters are recommended.

Minimum Password Length Minimum total length of the password. At least eight characters are recommended.

Minimum Caps Required	Minimum number of capital letters – at least one capital is recommended.
Minimum Numbers Required	Minimum amount of numbers – at least one number is recommended.
Days Until Expiration	Number of days until a password expires. At this point the User will need to reset the password - 90 days are recommended.
Number of Passwords Saved	Number of previous passwords saved. This prohibits a User from reusing a set number of passwords – at least five passwords are recommended.
Admin Email	All user registration request emails will go to this email account.

 **NOTE: When a password validation period is 80% elapsed, Fuel View will issue a warning to the user to generate a new password. Passwords may not be repeated based on the number of passwords saved.**

Edit Password Requirements

Click the Password Policy icon to open the Password Policy settings screen.

Password Policy	
Password Policy	
Minimum Password Length:	8
Minimum Caps Required:	1
Minimum Numbers Required:	1
Days Until Expiration:	9999
Number of Passwords Saved:	0
Admin Email:	

1. Change the fields as required.
 - Use the Password Policy definitions to assist in complexity requirements.
2. Click **Save**.

Audit Trail

Updates to most of the Fuel View tables are recorded through the Audit Trail. There is one Audit Trail record for each updated field within a given record. Fuel View tracks the following information for a change to the record:

Audit Trail Fields Definitions

Date/Time	Date and time when the change occurred.
Type	Type of change to the data either U(update) or I(insert).
Table	Name of the table in which the record was being changed.
Primary Key Field	The name of the unique identifier field of the record being changed.
Primary Key Value	The unique identifier of the record being changed this is the database ID of the record.
Field	The field being changed.
Old Value	The original value of the field before the change.
New Value	The new value of the field after the change.
Host Name	The Server where the change originated.
Username	The User name that made the change. Note that this is often an internal user due to internal services and scheduled jobs.

Editing User This is typically the User name of the person making the change.

ID The audit record ID.

Action User The User responsible for this change.

Application The program responsible for the change.

Audit Trail Action Definitions

Record deleted or deactivated **D**

New record inserted **I**

Record updated **U**

 **NOTE: Audit Trail records are permanent and cannot be edited or deleted.**

Open An Audit Trail

Audit Trails exist for many of the tables in Fuel View. An Audit Trail is typically accessed from within the child menu for a given detail or edit record. A user with Administrator access can view the Audit Trail for all records from the menu item in the Security folder.

To access the Terminal Audit Trail for a specific FCT:

1. Expand the Site Management folder and open the Terminals screen.
2. Click a **Terminal Number**.
3. In the Terminals directory to the left, click the **Audit Trail** icon.
 - This will display a list of audit records specific to the selected FCT.

Audit Trail					
#	Table	Field	Date/Time	Type	Old Value
1	Terminals	LastTermRelUpdate	8/2/2019 10:25:38 AM	U	
2	Terminals	LastTermRelUpdate	8/2/2019 10:29:01 AM	U	2019-04-15 15:25:27.976074
3	Terminals	LastTermRelUpdate	8/2/2019 10:50:50 AM	U	2019-04-15 15:28:51.429820
4	Terminals	RT_Network_Status_Last_Updated	8/2/2019 2:28:22 PM	U	Oct 22 2018 3:04PM
5	Terminals	RT_Network_Status_Last_Updated	8/2/2019 2:28:51 PM	U	Feb 1 2019 2:28PM

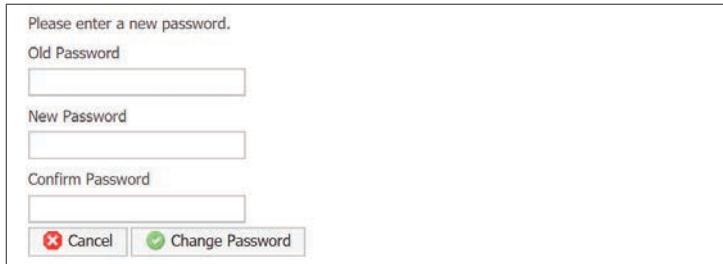
The **Type** column records the user action that was recorded (Insert or Update).

The Query window can be used to restrict the audit records to a specific time frame.

User Function: Change A Password

A User can change their password whenever they like. In addition, when assigned a new password by the System Administrator, the User is prompted to change their password.

1. Click the **Change Password** button in the upper right corner of Fuel View's logo bar.
 - The Login screen will open.



Please enter a new password.

Old Password

New Password

Confirm Password

2. In the **Old Password** field, enter the current password.
3. In the **New Password** field, enter a new password that conforms to the company's password policy.
4. In the **Confirm Password** field, re-enter the new password.
5. Click **Change Password**.
6. Click **Save**.

 **NOTE:** By default, a password must be between 6 and 20 characters and contain at least one upper case letter and at least one number. The System Administrator can change password requirements.

Audit Trail Action Definitions

Record deleted or deactivated	D
New record inserted	I
Record updated	U

 **NOTE:** Audit Trail records are permanent and cannot be edited or deleted.

Open An Audit Trail

Audit Trails exist for many of the tables in Fuel View. An Audit Trail is typically located within the child menu for a given detail or edit record. A user with administrator access can view the Audit Trail for all records from the menu item in the Security folder.

To access the Terminal Audit Trail for a specific FCT:

1. Expand the Site Management folder and open the Terminals grid.
2. Click a **Terminal Number**.
3. In the Terminals directory, click the Audit Trail icon.

Audit Trail						
#	Table	Field	Date/Time	Type	Old Value	
	Terminals	LastTermRelUpdate	8/2/2019 10:25:38 AM	U		
	Terminals	LastTermRelUpdate	8/2/2019 10:29:01 AM	U	2019-04-15 15:25:27.976074	
	Terminals	LastTermRelUpdate	8/2/2019 10:50:50 AM	U	2019-04-15 15:28:51.429820	
	Terminals	RT_Network_Status_Last_Updated	8/2/2019 2:28:22 PM	U	Oct 22 2018 3:04PM	

The Type column records the user action that was recorded.

16. Vehicle Maintenance

Vehicle Maintenance is an optional add-on function that adds the following to Fuel View.

- Creation of Preventative Maintenance Messages to be sent to specified vehicles. These messages can be triggered by events related to odometer, hourmeter or date related. Different levels of messages and different fueling restrictions can be applied. Note that Preventative Maintenance Messaging works best with automated import of data from a customer's Fleet Management system.
- Work Orders that can be created for specific vehicles and track the date and details of the work.



NOTE: Contact Ward to add Vehicle Maintenance functionality to Fuel View

Preventative Maintenance Messages

Fuel View allows the creation of Preventative Maintenance Messages (PMM) at display at Ward Fuel Control FCTs (FCT) for vehicles that meet customer specified criteria triggered by odometer, hour-meter or date. This functionality is an extension of the existing Message Management in Fuel View.

To simplify the assignment and management of complex messaging rules to multiple vehicles, Fuel View includes the following:

Maintenance Plan A Maintenance Plan contains the set of rules and messages to be displayed. The Maintenance Plan stores the rules as to what message is sent when.

Example: A Maintenance Plan can be created for a 50,000 mile checkup or reminder for a monthly car wash.

Maintenance Due The Maintenance Due ties the vehicle to the Maintenance Plan with the specifics of when the trigger for the messaging should occur and is the reminder for the event (the messaging) to occur. Once acknowledged, the Maintenance Due is marked as completed.

Rules Definitions

There are three types of rule definitions:

Odometer Actions to be taken when a vehicle's odometer reading is near to, equals, or exceeds the mileage specified for a vehicle.

Hourmeter Actions to be taken when a vehicle's engine hours meet or exceed the hours specified.

Date Actions to be taken when the specified date is approaching, is current, or has passed.

The rules defining when a message will be activated can be entered through Fuel View data entry screens or through a standard import file. A PMM is activated on the FCT display screen when specified conditions are met and remains on the screen until it is acknowledged by the user or times out. The message can be accentuated on the FCT by a beeper and or an optional flashing light.

Rules Actions Definitions

Notify Contact on Message Timeout

Send an email to the contact person when a driver does not acknowledge a message at the FCT.

Notify Contact on Message Acknowledgment

Send an email to the contact person when a driver acknowledges a message at the FCT.

Disallow Fueling When Message Not Acknowledged

Prohibits the driver from fueling if a message is not acknowledged.

Create A Vehicle Maintenance Plan

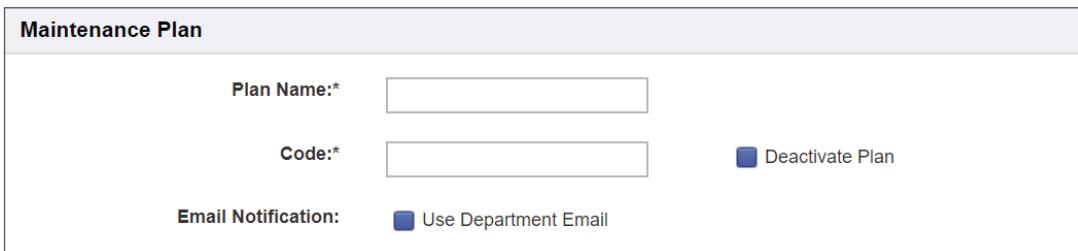
There is typically one Maintenance Plan for each set of rules. Creating a Maintenance Plan requires three steps:

1. *Create a Message through the Messages grid.*
2. *Create the Message Plan through the Message Plan screen.*
3. *Apply the Maintenance plan to a vehicle through the Maintenance Due screen.*

To create a Vehicle Maintenance Plan:

1. In the Messages grid, create a maintenance based message (See Message Management, page 139).
2. In the Vehicle Maintenance folder, open the Maintenance Plan screen.
3. Click the **Add Record** tool.

In the Maintenance Plan section:



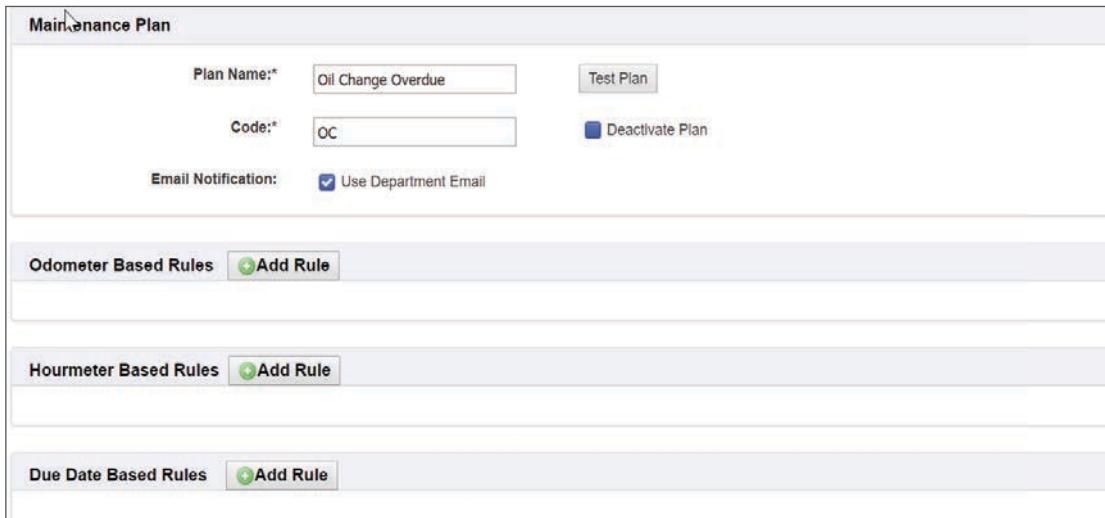
Maintenance Plan	
Plan Name: *	<input type="text"/>
Code: *	<input type="text"/> <input checked="" type="checkbox"/> Deactivate Plan
Email Notification:	<input checked="" type="checkbox"/> Use Department Email

4. In the **Plan Name** field, enter a unique descriptive Maintenance name.
5. In the **Code** field, enter a unique plan Code.
 - The Code can be abbreviated text or a number, and can be used to associate imported vehicle records to the appropriate plan.

Example: OC for oil change, TR for tire rotation, or AM for annual maintenance.

6. Check the **Use Department Email** check-box to distribute notifications to predefined personnel within the department.
7. Click **Save**.

Once a Maintenance Plan has been saved, fields for the three rule categories will appear below the Maintenance Plan field.

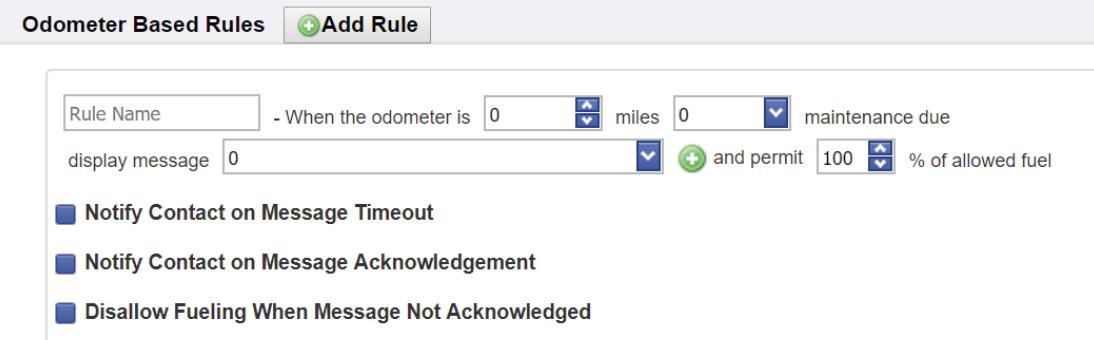


Maintenance Plan	
Plan Name: *	<input type="text" value="Oil Change Overdue"/> <input type="button" value="Test Plan"/>
Code: *	<input type="text" value="OC"/> <input checked="" type="checkbox"/> Deactivate Plan
Email Notification:	<input checked="" type="checkbox"/> Use Department Email
Odometer Based Rules <input type="button" value="Add Rule"/>	
Hourmeter Based Rules <input type="button" value="Add Rule"/>	
Due Date Based Rules <input type="button" value="Add Rule"/>	

8. Click the **Add Rule** tool in the section header to create a rule based on that section.
 - The category will impact which fields are needed to fully define the rule.

Odometer Based Rules

The odometer based rule is based on the number of miles related to each vehicle's odometer. To create an odometer based rule, in the Odometer Based Rules section:



Odometer Based Rules **Add Rule**

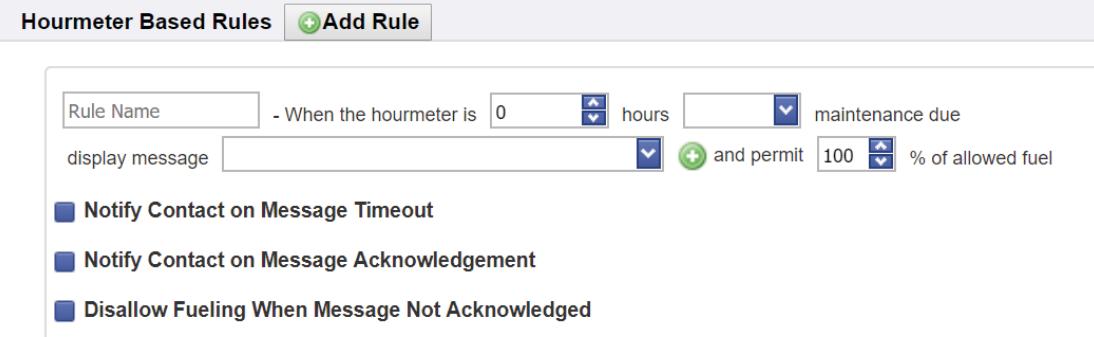
Rule Name - When the odometer is 0 miles maintenance due
 display message 0 and permit 100 % of allowed fuel

Notify Contact on Message Timeout
 Notify Contact on Message Acknowledgement
 Disallow Fueling When Message Not Acknowledged

1. Click the **Add Rule** button.
2. In the **Rule Name** field, enter a unique name.
3. In the **Odometer** field enter a relational number of miles to measure against the actual odometer.
4. In the **Maintenance Due** drop-down list, select a value:
 Above
 Below
 Equal to
5. In the **Display Message** drop-down select a message or create a new message by clicking the green icon next to Display Message (*see Create A Message above*).
6. In the **permit %** field, enter the percentage of fuel the driver is allowed to access when a message is displayed.
 - The default is 100%.
7. Optional: Check the **Notify Contact on Message Timeout** check-box.
8. Optional: Check the **Notify Contact on Message Acknowledgment** check-box.
9. Optional: Check the **Disallow Fueling When Message Not Acknowledged** check-box.
10. Click **Save**.

Hourmeter Based Rules

The Hourmeter based rule is based on the number of miles related to each vehicle's hourmeter. To create an hourmeter based rule, in the Hourmeter Based Rules section:



Hourmeter Based Rules **Add Rule**

Rule Name - When the hourmeter is 0 hours maintenance due
 display message and permit 100 % of allowed fuel

Notify Contact on Message Timeout
 Notify Contact on Message Acknowledgement
 Disallow Fueling When Message Not Acknowledged

1. Click the **Add Rule** button.
2. In the **Rule Name** field, enter a unique name.
3. In the **Hourmeter** field enter a relational number of hour to measure against the actual hourmeter.

In the Maintenance Due dropdown list, select a value:

- Above
- Below
- Equal to

4. In the **Display Message** drop-down select a message or create a new message by clicking the green icon next to Display Message (see Create A Message above).
5. In the **permit %** field, enter the percentage of fuel the driver is allowed to access when a message is displayed.
 - The default is 100%.
6. Optional: Check the **Notify Contact on Message Timeout** check-box.
7. Optional: Check the **Notify Contact on Message Acknowledgment** check-box.
8. Optional: Check the **Disallow Fueling When Message Not Acknowledged** check-box.
9. Click **Save**.

 **NOTE:** To edit a message, click on the blue Message Number in the Messages grid.

Maintenance Due

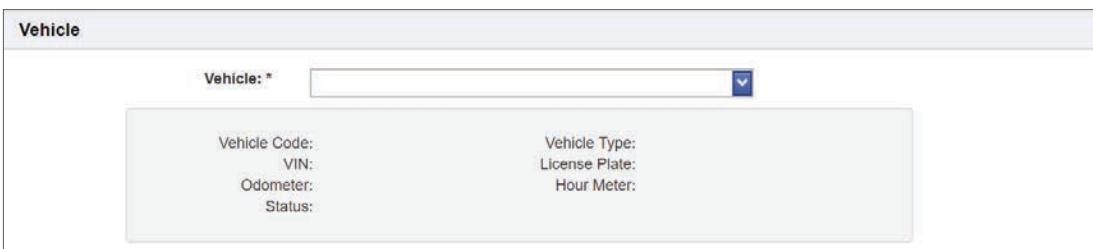
Assign A Maintenance Plan To A Vehicle

The maintenance due information is specified for each vehicle and provides the information against which the vehicle's data is compared to in the maintenance plan rules. If the vehicle's data matches one of the conditions in the Maintenance Plan, the message is displayed at the FCT when the driver activates a fueling.

In the Maintenance Due screen the user selects the vehicle, assigns a maintenance plan and the appropriate due value (odometer, hourmeter, date). An optional Notes field provides a space for further information about the maintenance to be recorded.

To assign a maintenance plan to a vehicle:

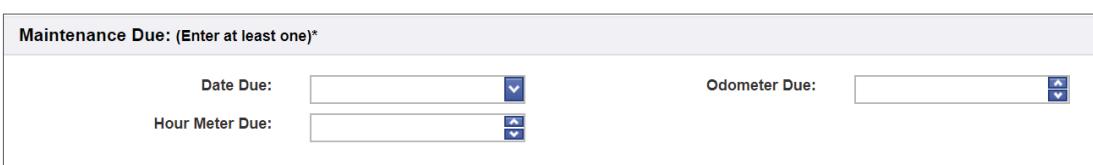
1. In the vehicle Maintenance folder, open the Maintenance Due grid by clicking the icon.
2. Click the **Add Record** tool.
 - To edit an existing maintenance due record, click the vehicle number.
3. In the Vehicle section:



Vehicle	
Vehicle: *	<input type="button"/>
Vehicle Code: VIN: Odometer: Status:	Vehicle Type: License Plate: Hour Meter:

In the Vehicle section:

4. In the **Vehicle** drop-down list select a vehicle.
 - Once selected, details for the vehicle display in the shaded box below the Vehicle field.
5. In the Maintenance Due section:



Maintenance Due: (Enter at least one)*			
Date Due:	<input type="button"/>	Odometer Due:	<input type="button"/>
Hour Meter Due:	<input type="button"/>		

6. In the **Date Due** field enter a date.

7. In the **Odometer Due** field enter an odometer reading reached to initiate the message.
8. In the **Hourmeter Due** field enter an hours reached reading to initiate the message.



NOTE: The user may select one or more of the Maintenance Message Due options.

The Maintenance Due window allows the selection of the vehicle. In the Maintenance Info section:

This screenshot shows the 'Maintenance Info' section of a software interface. It includes a dropdown menu labeled 'Plan: *' with several options visible in the list. Below it is a large text area labeled 'Notes:' for entering descriptive text.

9. Select a **Plan** from the drop-down list.
10. Optional: In the **Notes** field, add any descriptions that will describe the plan.
11. Click **Save**.

The maintenance plan is assigned, and the appropriate due value entered (odometer, hourmeter, date).

Record A Vehicle's Maintenance As Complete

1. Open the Maintenance Due page.
2. Click the **Vehicle Number** link to open the Maintenance Due screen.

This screenshot shows the 'Maintenance Info' section with additional fields. It includes a dropdown menu for 'Plan' set to 'Oil Change; B', a checked checkbox for 'Maintenance Complete', and a text area for 'Notes'. At the bottom right, there is a timestamp indicating the last update.

3. Check the **Maintenance Complete** check-box to record a completed maintenance.
 - The Date Completed will be automatically entered.

 **As maintenance are completed, the next scheduled maintenance should be entered with updated odometer, hourmeter, or date criteria.**

4. Click **Save**.

Work Orders

A Work Order allows the scheduling and recording of work to be done on a vehicle. Currently this is for recording of oil changes but can be expanded as required.

Create A Work Order

To create a work order:

1. In the Vehicle Maintenance folder click on Work Orders to open the Work Orders page.

Work Order Types List

Work Order Number - unique work order identifier
 Vehicle Number - vehicle assigned the work order
 Date of Service
 Type of Oil
 Volume of Oil
 Service Cost
 Next Service Due Date
 Hourmeter or Odometer - when work is due.

2. Click the **Add Record** button.

In the Word Order Summary section:

Work Order Summary		
Work Order Number: *	<input type="text"/>	Service Type: * Regular Oil Service; 5 Quart
Vehicle Number: *	<input type="button" value="▼"/>	

3. In the **Work Order Number** field enter a unique number.
 - If the field is left blank, Fuel View will assign a unique number.
4. Select a **Service Type** from the drop-down list.
5. Select a **Vehicle Number** from the drop-down list.
 - When a vehicle is selected, its details will populate the fields in the Vehicle Details section below.

In the Word Order Details section:

Work Order Details			
Service Date: *	<input type="text"/>	Next Service Due: <input type="text"/>	<input type="button" value="▼"/>
Oil Type: *	Regular Oil	Oil Quantity: *	5
Oil Unit: *	Quarts	Cost of Service: *	10
Current Vehicle Odometer Reading: *	<input type="text"/>		
	Next Vehicle Odometer Due: <input type="text"/>		

6. In the **Service Date** field enter a date.
7. Optional: In the **Next Service Due** field enter the next service due date.
8. Select an **Oil Type** from the drop-down list.
9. In the **Oil Quantity** field enter a number of units to put into the vehicle.
10. Select an **Oil Unit** from the drop-down list.
11. In the **Cost of Service** field, enter a dollar value for the service.
12. In the **Current Vehicle Odometer Reading** field, enter the current reading for the vehicle.
13. Optional: In the **Next Vehicle Odometer Due** field enter the odometer reading for when the next service will be due on the vehicle.
14. Click **Save**.
 - The Work Order will be added to the grid.

View or Edit a Work Order

1. Click on Work Orders in the Vehicle Maintenance folder to open the Work Orders page.
 - Use the Query window to narrow the time range for displaying work orders.
2. Click the **Work Order Number** link in the work order to be viewed or edited.
 - This will bring up the Work Order screen complete with the vehicle's details.
3. Make edits as required.
4. Click **Save**.

Appendix A – CANceiver Event Map Examples

*Example: PID Type: Location
 Measurement Type:
 Polling Frequency: 60
 Include GPS: Yes
 Include GPS Extended: Yes
 Drive Cycle Provides location of vehicle at defined intervals.*

*Example: PID Type: Coolant Temperature
 Measurement Type: Threshold High
 Polling Frequency: n/a
 Measurement Parameter (C): 104° (degrees Celsius)
 Include GPS: n/a
 Include GPS Extended: n/a
 Drive Cycle: n/a
 Triggers alert when coolant exceeds recommended temperature*

*Example: PID Type: Idle Time Total
 Measurement Type: Ignition Off
 Polling Frequency: n/a
 Include GPS: n/a
 Include GPS Extended: n/a
 Drive Cycle: Yes
 Tracks Idle Time for each trip in a vehicle*

*Example: PID Type: Hard Braking (Acceleration)
 Measurement Type: Threshold High
 Measurement Parameter: 0.2736 (G's)
 Polling Frequency: n/a
 Logging Interval:
 Include GPS: Yes
 Include GPS Extended: Yes
 Drive Cycle: Yes
 Tracks hard breaking events. Provides starting speed, ending speed, and G force.
 With GPS enabled, the location of the event will also be recorded.*

Appendix B – PID CANceiver Events List



NOTE: CANceiver events are vehicle make and model dependent.

Absolute Evap System Vapor Pressure	Engine Load	Ignition On
Absolute Throttle Position B	Engine Oil Level	Intake Manifold Absolute Pressure
Absolute Throttle Position C	Engine Oil Pressure	Location
Absolute Throttle Position D	Engine Oil Temperature	Mass Air Flow
Absolute Throttle Position E	Engine RPM	Odometer
Absolute Throttle Position F	Engine Time Total	Output Torque
Air Filter Differential Pressure	Equivalence Ratio	Parking Brake
Air Inlet Temperature	Evap System Vapor Pressure	PTO Fuel Consumed Total
Alcohol Fuel Percentage	Exhaust Back Pressure	PTO Status
Ambient Air Temperature	Exhaust Gas Temperature	PTO Time Total
Average Fuel Economy	Fuel Consumed Total	Relative Throttle Position
Barometric Pressure	Fuel Economy	Seat Belt Status
Battery Voltage	Fuel Filter Differential Pressure	Throttle Position
Brake Status	Fuel Gauge Level	Time Since DTCs Cleared
Commanded Throttle Actuator Control	Fuel Gauge Level 2	Time Since Engine Start
Coolant Filter Differential Pressure	Fuel Pressure	Time With MIL On
Coolant Level	Fuel Rail Pressure	TPM
Coolant Pressure	Fuel Rate	Transmission Filter Differential
Coolant Temperature	Fuel Type	Transmission Oil Level
Crankcase Pressure	GPIO	Transmission Oil Temp
Cruise Control	GS FRONTBACK	Turbo Boost Pressure
Distance With MIL On	GS LEFTRIGHT	Turbo Oil Pressure
Driver Seat Belt	GS UPDOWN	Turbo Speed
DTC	Hard Acceleration	Vehicle Speed
DTC Odometer	Hard Braking	Warm Up Since DTCs Cleared
DTC Summary	Idle Fuel Used	Warning Lamp Status
Emission Monitors	Idle Time Total	Waste Idle Time
Emission Monitors This Drive Cycle	Ignition Count	Water in Fuel Indicator

Appendix C – Measurement Types

A Measurement Type defines how a CANceiver Event is recorded.

Measurement Type Definitions

Ignition On The Parameter ID (PID) will be recorded when the ignition turns on.

Ignition Off The PID event will be recorded when the ignition is turned off. In order to keep vehicle's battery from draining, the CANceiver will go to sleep 15 minutes after ignition is turned off. When vehicle is turned on, the CANceiver will wakeup.

Example: Fuel Gauge Level. The Fuel Gauge Level will be recorded as an event every time the ignition is turned on or off.

Interval Current A Measurement Parameter is required for all Interval Measurement events.

Interval Current will record the last value during that interval setting.

Example: For an Event setting with PID Speed, Interval Current and Measurement Parameter set to 60 seconds. The speed value every 60 seconds is recorded in the Speed Event.

Interval Max Interval Max will record the highest value within the interval range and is recorded in the Speed Event.

Example: If vehicles speed range is 50 to 65 mph during the 60 second interval, 65 mph is recorded in the Speed event.

Interval Min The minimum Event value will be recorded within the interval period.

Example: If vehicles speed range is 45 to 65 mph during the 60 second interval, 45 mph is recorded in the Speed event.

Interval Avg The average value over course of the interval is the recorded event.

Example: If vehicles speed range is 45 to 65 mph during the 60 second interval, 55 mph is recorded in the Speed event.

Threshold High Threshold High requires a Threshold setting and records two events.

The CANceiver will continue to monitor the speed until the vehicle goes below threshold value. This will create a second event of Threshold High Normal. The second event includes the time the vehicle returned to or below the threshold setting and the highest speed reached during the interval.

Example: PID Parameter Speed Threshold High setting is 70 mph, when the vehicle reaches 71 mph, the 70 mph Threshold value and time are recorded.

Example: If vehicle exceeded the 70 mph Threshold High and reached speeds fluctuating between 71 mph and 95 mph, before returning to 70 mph, the second event will record the 95 mph maximum speed.

Threshold Low The Threshold Low setting records the lowest value in the Parameter range. The CANceiver will continue monitoring until the vehicle returns to the threshold value. This will create a second event of Threshold Low Normal. The second event includes the time the vehicle returned to, or above the threshold setting and the lowest value reached during the interval.

*Example: If vehicle's battery is a standard 12V, set threshold Low to 10V**

*Example: If normal oil pressure is 60 psi, set the Threshold Low to 30 psi**

Example: To ensure gas tanks are always acceptable to the next driver, set the Threshold Low to 25%.

Threshold Low Normal The threshold Low Normal is the event recorded after a Threshold Low event has been reached and the measurement returns above the Threshold Low level setting.

* Make and model dependent.

Appendix D – Accelerating, Breaking, and Idle Time

Hard Acceleration and Braking

Hard acceleration or braking is a driver event when more force than normal is applied to the vehicle's accelerator or brake and are measured in gravitational (G) force and requires the Threshold High Measurement Type.¹ An Event is recorded when the threshold is passed.

Example: Entering a value of 20 is equal to 2G.

 **NOTE:** Since there can be different profile settings based upon vehicle type, it's important to know the threshold settings for each vehicle.

Hard Acceleration

Individual customer requirements determine the appropriate value for Hard Acceleration.

 **NOTE:** A relatively quick, RWD mid-engine car may experience about 0.75G at launch, but is limited by the traction of the tires. It is unlikely that a value of 1G will ever be reached. High performance racing vehicles may reach 1G.

Hard Braking

Hard Braking is an event out of the normal braking conditions. The intended purpose of monitoring Hard Braking is to identify driver behavior patterns.

 **IMPORTANT:** It should not be presumed that hard braking or acceleration is an indicator of unsafe driving. Hard Braking and Acceleration events can also indicate crash avoidance, or that a driver has been involved in an accident. If a driver has consistent Hard Braking events, it may indicate non-desirable driving patterns.

¹ The National Highway Traffic Safety Administration (NHTSA) currently does not define Hard Braking. The International Association of Oil and Gas Producers (OGP) recommend 6 mph or 0.2736G. The In Vehicle Monitor Systems (IVMS) use 0.2736G.

Waste Idle Time

Waste Idle Time is calculated based on non-movement with vehicle, with the ignition on after a set threshold time has passed. Waste Idle time measurement is in seconds. Since there are many definitions and allowances for vehicle Idle Time, Fuel View provides customizable, Waste Idle Time parameters.

Waste Idle Time Parameter Definitions

Measurement Type Threshold High, which is used to delay the start of counting Waste Idle Time.

Measurement Parameter Threshold provides an allowance for vehicles stopped at a traffic light or similar situation.

Example: If the Measurement Parameter is set to 120 seconds, Waste Idle Time will not be calculated until the vehicle idles 121 seconds. Once the threshold time is reached, idle time begins recording, and includes the 120 seconds. If the vehicle moves before the threshold expires, no time is recorded for this event.

When the Waste Idle Time threshold is reached, two Events are recorded:

Waste Idle Time Threshold Definitions

Threshold Max Registers date and time.

Threshold Value When ignition is turned off or the vehicle moves, the entire Waste Idle Time period, including the threshold time is recorded.

Appendix E – Reports List

Administrative Cards by Department	Terminals by Terminal Number
Administrator Vehicles	TLS Alarm
Administrator Vehicles - Deleted	TLS BIR Report
Automatic Fuel Control Terminal Restart	TLS Tank Release Passed Report
Bulk Inventory	TOP 20 PVC Transactions by Operator and Department
Bypass Transactions	Total Usage
CANceiver Exception	Total Usage Not Including Harbor & PVC
District Mileage	Transaction Exception
Employee OPS	Transactions
Employees by Department	Transactions - Electric
Fleet Data by Department & Vehicle	Transactions - Employee
Fleet Data by Vehicle	Transactions by Administrative Card
Fuel Adjustment	Transactions by Date and Time
Fuel Dispensed Summary by Site	Transactions by Date/Time and Departments With Product Detail
Fuel Inventories by Fuel Type	Transactions by Date/Time and Departments With Product Totals
Fuel Receipt by Date/Time and Product	Transactions by Date/Time and Departments with Totals
Fuel Receipts by Date/Time and Site - With Parameters	Transactions by Date/Time, Department
Fuel Receipts by Site	Transactions by Date/Time, Department, and Vehicle
Fuel Tank Summary from TLS Readings Today	Transactions by Date/Time, Department, and Vehicle w/ MPG
Fuel Transfers by Product	Transactions by Date/Time, Department, Vehicle and Product
Fuel Transfers by Site	Transactions by Department (Manteca)
Fuel Usage by Department	Transactions by Department and Employee
Fuel Usage for Fleet Summary	Transactions by Department with MPG and HPG
GPIO Usage	Transactions by Department with MPG with Employee
GPIO Usage	Transactions by Employee
Idle Time	Transactions by MPG and HPG
Idle Time for W3 CANceivers	Transactions by Operator and Department
Idle Time for W4 CANceivers	Transactions by Site
NON FLEET Vehicle Transactions	Transactions by Site and Product
Offroad Vehicle Summary	Transactions by Site and Product - SAWS
Polling Failure	Transactions by Site and Transaction Type
Product Summary by Dept	Transactions by Site Card
Product Summary by Dept - No Detail	Transactions by Site District with All Vehicles
Product Summary by Dept, Vehicle	Transactions by Site Summary All Departments
Product Summary by Site	Transactions by Site Summary Harbor Only
Product Summary by Site - No Detail	Transactions by Site Summary PVC Only
Product Summary by Term	Transactions by Site Summary without Harbor & PVC
Product Summary by Term - No Detail	Transactions by Terminal
PTO Vehicle Summary	Transactions by Vehicle
Pump Summary by Site and Terminal	Transactions by Vehicle District with All Sites
Pump Totalizers by Site and Terminal	Transactions by Vehicle This Year
Remote Car Washes	Transactions by Vehicles w/ MPG and Employee
Remote Gate Openings	Transactions with MPG by Vehicle
Security Log	User Report
Site and Tank Summary by Site	Vehicle Cards by Department
Site and Terminal Summary	Vehicle DTC
Site Card Exception	Vehicle Exceptions
Site Cards by Card Number	Vehicle Terminal Authorizations
Site Level Transactions	Vehicle Terminal Authorizations by Site by Terminal
State Fuel Balance	Vehicle Transactions
Tank Deviation	Vehicle Transactions w/ MPG
Tank Level Reconciliation	Vehicle Transactions w/ MPG - Summary Only
Tank Level Reconciliation Summary	Vehicles by Department
Tank Level Summary	Vehicles by Department With Report Total
Tank Water Level	Vehicles by Repair Location
Tanks Below Reorder Level	Vehicles Main Configurations
Terminal Alerts	Zero Fueling Report
Terminal Exceptions	

Appendix F – Reporting Grids List

Administrative Cards by Department	Site Tanks
CANceiver Events	Tank Level Summary
Employees by Department	Tanks
Fleet Data by Department and Vehicle	Terminal Tanks
Fleet Data by Vehicle	Transactions by Administrative Card
Fleet Utilization Details	Transactions by Date and Time
Fleet Utilization Details	Transactions by Department
Fuel Adjustments	Transactions by Employee
Fuel Receipts by Date/Time and Product	Transactions by MPG
Fuel Receipts by Date/Time and Site	Transactions by Site
Fuel Transaction Quantity	Transactions by Site and Product
Fuel Usage by Department	Transactions by Site and Transaction Type
GPIO Events	Transactions by Site Card
Green House Details	Transactions by Terminal
Greenhouse Report	Transactions by Vehicle
Home CANceiver Config	Transactions Extended By Dept
Product Summary by Dept	Transactions Extended By Dept with Mileage
Product Summary by Site	Vehicle Cards by Department
Product Summary by Terminal	Vehicle Diagnostic Trouble Codes (W3 CANceivers)
Product Summary by Vehicle	Vehicles by Department
Site and Tank Summary by Site	Vehicles by Repair Location
Site Pumps	Vehicles with Cards by Department

Appendix G – TLS Alarms List

All Functions Normal

All Functions Normal

System Alarms

- Autodial Error
- Battery Off
- BIR Daily Close Pending
- BIR Shift Close Pending
- BIR Status Warning (Version 2)
- Database Error
- EEPROM Configuration Error
- Expansion Box Unsupported
- File System Error
- iButton Fault Alarm
- iButton Fault Warning

- Maintenance Tracker Communication Module Removed
- Maintenance Tracker NVMem Removed
- PC(H8) Revision Warning
- Printer Error
- Printer Out Of Paper
- Protective Cover Alarm
- Remote Display Communication Error
- ROM Revision Warning
- Software Module Warning
- Software Upgrade Failure Alarm
- System Clock Incorrect Warning
- System Device Poll Timeout
- System Security Warning
- System Self Test Error
- Tank Test Shutdown Warning
- Too Many Tanks
- Version Upgrade Available
- VR Bus Power Outage Warning

Tank Alarms

- Autodial Error
- Battery Off
- BIR Daily Close Pending
- BIR Shift Close Pending
- BIR Status Warning (Version 2)
- Database Error
- EEPROM Configuration Error
- Expansion Box Unsupported
- File System Error
- iButton Fault Alarm
- iButton Fault Warning

- Maintenance Tracker Communication Module Removed
- Maintenance Tracker NVMem Removed
- PC(H8) Revision Warning
- Printer Error
- Printer Out Of Paper
- Protective Cover Alarm
- Remote Display Communication Error
- ROM Revision Warning
- Software Module Warning
- Software Upgrade Failure Alarm
- System Clock Incorrect Warning
- System Device Poll Timeout
- System Security Warning
- System Self Test Error
- Tank Test Shutdown Warning
- Too Many Tanks
- Version Upgrade Available
- VR Bus Power Outage Warning

Liquid Sensor Alarms

- Alarm
- Bus No Reply
- Fuel Alarm
- High Liquid Alarm
- High Temp Alarm
- Level Alarm

- Liquid Alarm
- Liquid Warning
- Low Liquid Alarm
- Low Temp Alarm
- No Reply
- Out Alarm

- Setup Data Warning
- Short Alarm
- Vapors Detected
- Water Alarm
- Water Out Alarm

Vapor Sensor Alarms

- Fuel Alarm
- High Liquid Alarm
- Liquid Warning
- Low Liquid Alarm

- Out Alarm
- Setup Data Warning
- Short Alarm
- Water Alarm

- Water Out Alarm

Input Alarms

Generator Off	Input Alarm	Input Out Alarm
Generator On	Input Normal	Input Setup Data Warning

Volumetric Line Leak (VLLD) Alarms

Annual Line Selftest Fail Alarm	Gross Line Test Fail Alarm	Periodic Test Value Alarm
Annual Line Test Fail Alarm	Gross Pump Selftest Fail Alarm	Periodic Test Warning
Annual Pump Selftest Fail Alarm	Gross Pump Test Fail Alarm	Pressure Alarm
Annual Pump Test Fail Alarm	Gross Test Fault Alarm	Pressure Warning
Annual Test Alarm	Leak Test Fail Alarm	Self Test Alarm
Annual Test Fault Alarm	Periodic Line Selftest Fail Alarm	Self Test Invalid Warning
Annual Test Warning	Periodic Line Test Fail Alarm	Setup Data Warning
Continuous Pump Warning	Periodic Pump Self Test Fail Alarm	Shutdown Alarm
Fuel Out Alarm	Periodic Pump Test Fail Alarm	
Gross Line Selftest Fail Alarm	Periodic Test Alarm	

Groundwater Sensor Alarms

Fuel Alarm	Setup Data Warning	Water Alarm
Out Alarm	Short Alarm	Water Out Alarm

Groundwater Sensor Alarms

High Liquid Alarm	Low Liquid Alarm	Liquid Warning
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Type A Sensor Alarms

Fuel Alarm	Low Liquid Alarm	Short Alarm
High Liquid Alarm	Out Alarm	Water Alarm
Liquid Warning	Setup Data Warning	Water Out Alarm

Remote Addressable Alarms

Fuel Alarm	Low Liquid Alarm	Short Alarm
High Liquid Alarm	Out Alarm	Water Alarm
Liquid Warning	Setup Data Warning	Water Out Alarm

Relay Alarms

Relay Out Alarm	Setup Data Warning
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Type B Sensor Alarms

Fuel Alarm	Low Liquid Alarm	Short Alarm
High Liquid Alarm	Out Alarm	Water Alarm
Liquid Warning	Setup Data Warning	Water Out Alarm

Universal Sensor Alarms

Universal Sensor Alarm

Auto-Dial Fax Alarms

Autodial Alarm Clear Warning	Autodial Service Report Warning
Autodial Delivery Report Warning	Autodial Setup Data Warning
Autodial Failed Alarm	

Mechanical Dispenser Interface Alarms

DIM Communication Failure Alarm	DIM Firmware Alarm	DIM Transaction Alarm
DIM Disabled Alarm	DIM Setup Data Warning	

Electronic Dispenser Interface Alarms

DIM Communication Failure Alarm	DIM Firmware Alarm	DIM Transaction Alarm
DIM Disabled Alarm	DIM Setup Data Warning	

Product Alarms

BIR Close Daily Warning	BIR Setup Data Warning
BIR Close Shift Warning	BIR Threshold Alarm

Pressure Line Leak (PLLD) Alarms

Annual Test Alarm	High Pressure Alarm	Self Test Alarm
Annual Test Warning	High Pressure Warning	Sensor Open Alarm
Continous Pump On Alarm	Line Equipment Alarm	Sensor Short Alarm
Continuous Pump On Warning	Low Pressure Alarm	Setup Data Warning
Fuel Out Alarm	Periodic Test Fail Alarm	Shutdown Alarm
Gross Test Fail Alarm	Periodic Test Fail Alarm	
Gross Test Needed Alarm	Periodic Test Fail Warning	

Wireless PLLD Alarms

Annual Test Alarm	Fuel Out Alarm	Periodic Test Fail Alarm
Annual Test Fail Alarm	Gross Test Fail Alarm	Periodic Test Warning
Annual Test Warning	High Pressure Alarm	Sensor Open Alarm
Communications Alarm	High Pressure Warning	Sensor Short Alarm
Continous Pump On Alarm	Line Equipment Alarm	Setup Data Warning
Continuous Pump On Warning	Periodic Test Alarm	Shutdown Alarm

Smart Sensor Alarms

Communication Alarm	High Liquid Warning	Setup Data Warning
Fault Alarm	Install Alarm	Temperature Warning
Fault Warning	Low Liquid Alarm	Vacuum Warning
Fuel Alarm	Low Liquid Warning	Water Alarm
Fuel Warning	No Vacuum Warning	Water Warning
High Liquid Alarm	Relay Active	

Modbus Alarms

Communication Loss Alarm	
Improper Setup Alarm	

ISD Site Alarms

Containment Monitoring CVLD Failure Alarm	Missing Vapor Pressure Sensor Alarm
Containment Monitoring CVLD Failure Warning	PC-ISD Offline
Containment Monitoring Degradation Failure Alarm	Sensor Out Alarm
Containment Monitoring Degradation Failure Warning	Sensor Out Warning
Containment Monitoring Gross Failure Alarm	Setup Fail Alarm
Containment Monitoring Gross Failure Warning	Setup Fail Warning
Missing Hose Setup Alarm	Stage 1 Transfer Monitoring Failure Warning
Missing Relay Setup Alarm	Vapor Processor Over Pressure Failure Alarm
Missing Tank Setup Alarm	Vapor Processor Over Pressure Failure Warning
Missing Vapor Flow Meter Alarm	Vapor Processor Status Test Alarm
Missing Vapor Pressure Input Alarm	Vapor Processor Status Test Warning

ISD Hose Alarms

Collection Monitoring Degradation Failure Alarm	Flow Performance Hose Blockage Failure Alarm
Collection Monitoring Degradation Failure Warning	Flow Performance Hose Blockage Failure Warning
Collection Monitoring Gross Failure Alarm	Vapor Flow Meter Setup Alarm
Collection Monitoring Gross Failure Warning	

ISD Vapor Flow Meter Alarms

Locked rotor Alarm	VFM Device Out Alarm	VFM Setup Data Warning
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Processor Monitoring (PMC) Alarms

Duty Cycle Failure Alarm	Over Pressure Failure Warning
Duty Cycle Failure Warning	PMC (stand alone mode only) Setup Warning
Effluent Emissions Failure Alarm	PMC Out Alarm
Effluent Emissions Failure Warning	Vapor Processor Run Time Fault Warning
Over Pressure Failure Alarm	

Pump Relay Monitor Alarms

Pump Relay Alarm	Setup Data Warning
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MAG Sensor Alarms

Communication Alarm	High Liquid Warning	Setup Data Warning
Fault Alarm	Low Liquid Warning	Temperature Warning
Fuel Alarm	MAG Sensor Install Alarm	Water Alarm
Fuel Warning	Relay Active	Water Warning
High Liquid Alarm	Sensor Low Liquid Alarm	

Volumetric Leak Test Alarms

VLD.1 Failed,,2 Failed	VLD.1 Failed,,2 Passed	VLD.1 Passed,,2 Passed
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Line Pressure (LPR) Sensor Alarms

Communication Alarm
Setup Data Warning

Printer Alarms

Printer Error	Pump Out Alarm	Stuck Relay or Continuous Pump
Printer out of Paper	Pump Setup Data Warning	

Line Alarms

Line Out Alarm	Line Setup Data Warning
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Communication Alarms

Communication Setup Data Alarm	Communication Setup Data Warning - Omntech
Communication Setup Data Warning	

Contact Alarms

Autodial Alarm Clear Warning	Autodial No Dial Tone Alarm	Contact Setup Data Alarm
Autodial Delivery Report Warning	Autodial Service Report Warning	Contact Setup Data Warning
Autodial Failed Alarm	Autodial Setup Data Warning	Contact Setup Data Warning - Omntech

Auto Event Alarms

Auto Event Setup Data Warning

Externally Detected Alarms

- Communications - Data Reception Timeout
- Communications - Failed Checksum
- Communications - Parity Error
- Externally Detected Communication Alarm
- Modem - Line Busy
- Modem - Modem Error
- Modem - Modem Not Responding
- Modem - No Answer
- Modem - No Carrier
- Modem - No Dial Tone
- Modem - Port Not Available
- Polling - Could Not Update Queue
- Polling - Invalid Data Type Requested

Appendix H – Fields List

Department Fields List

Active	Department	Manager #
Address 1	Department Email	Manager Name
Address 2	Dept. Code	Phone
City	District	State
Code	Fax	User Field 1
Cost Center	Fleet	Zip Code
Count	Fleet Code	
Date Deleted	Level	

Employees Fields List

Active	Employee ID Prompt	Odometer
Card Last Used	Employee ID Validate	PIN Alpha
Card Required	Entry Type	Reassign
Card Status	Facility Code	Status
Card Type	First Name	User Field 1
Compare	Fuel 1	User Field 2
Custom User Field	Fuel 2	Vehicle ID Prompt
Date Deleted	Last Name	Vehicle ID Validate
Date Issued	Maximum Distance	Visits
District	Maximum Quantity	
Employee Code	Middle Name	

Vehicles Fields List

ACC	Employee ID Validate	Max Vol
Agency Vehicle Code	Engine Minutes	Measurement Units
Alloc. Rem.	Entry Type	Model
Allocation	Expiration	N ₂ O Emission
Allocation Remaining 2	External Company	Odometer
Backup Interval	Fuel 1	Odometer Offset
Billing Number	Fuel 1 #	Odometer With Offset
Calibration Count	Fuel 1 Cat	Off Road %
CANceiver ID	Fuel 1 Type	PIN
Card #	Fuel 1 Units	PIN Alpha
Card Last Used	Fuel 2	Power Cycles
Card Req	Fuel 2 #	Power Fail Count
Card Status	Fuel 2 Cat	Prescaler
Card Type	Fuel 2 Type	Primary Meter
CH ₄ Emission	Fuel 2 Units	PTO Fuel Offset
Class Code	Has GPS	PTO Hours
Class Description	Hour Meter	PTO Minutes
Class Number	Hour Meter Input	PTO Time Offset
CO ₂ Coefficient	Hour Meter Offset	Pulse Count
Comment #2	Hour Meter With Offset	Pulses Per Mile
Comment #3	Idle Fuel Offset	RAM Errors
Credit Card	Idle Time Offset	RAM Reinit
Custom User Field 1	Ignition On Fueling	Reassign
Date Deleted	Ignore Loss Of Signal	Receipt Required
Date Issued	IMEI	Repair Location
Department	Include Bumper	Reset Count
Dept. Code	License Plate	Set Mileage
Disable Odometer	Make	Set Pulses
District	Max Distance	Status
District Code	Maximum Allocation 2	Threshold
EPProm Errors	Maximum Quantity 2	User Checkbox 1 Yes/No
Employee ID Prompt	Max Speed	User Checkbox 2 Yes/No

User Checkbox 3 Yes/No	Vehicle ID Validate	VIT
User Notes	Vehicle Type Description	VITSX Version
Vehicle #	Verify Odometer	Year
Vehicle Class	VIN	
Vehicle ID Prompt	Visits	

Administrative Cards Fields List

Administrative Card Active	Employee ID Prompt	Maximum Quantity
Card Last Used	Employee ID Validate	Site Name
Card Number	Employee Name	Vehicle ID Prompt
Card Status	Entry Type	Vehicle ID Validate
Date Deleted	Fuel 1	
Department Code	Fuel 2	

Site Cards Fields List

Card Last Used	Employee ID Validate	Maximum Quantity
Card Number	Employee Name	Site Card Active
Card Status	Entry Type	Site Name
Date Deleted	Fuel 1	Vehicle ID Prompt
Employee ID Prompt	Fuel 2	Vehicle ID Validate

Sites Fields List

Address 1	Date Deleted	Site Code
Address 2	Daylight Bias	Site Dep Code
City	Fax	State
Country	Manager	Time Zone Bias
County	Phone	User Fld
	Site Name	Zip Code

Terminals (FCTs) Fields List

Terminal_Number	Terminal_Type	Radio_Modem
Terminal_Code	Host name	Primary_Phone
fkSite_ID	Terminal_Phone	Backup_Phone
Site	Call_In_Interval	
Site_Code	TCP_Socket	

Terminal (FCT) Alerts Fields List

Alert Code	ID	Site Pump Code
Alert Information	Pump Number	Terminal Number
Alert Type	Site Name	Time

Tanks Fields List

Capacity	Maximum Water Level	Term Code
Category	Reorder	Terminal Number
Current Level	Reorder Level	TLS High Water
Date Deleted	Site Code	TLS Probe Number
Fuel	Tank Number	Unit
Fuel Type	Tank Active	Units
Fuel Code	Tank Code	Water Level
Line Feed	Temperature	

Tank Level Sensors Fields List

fkSite_ID	TLS_Unit_Number	Password
Site	TLS_Type	Pager_Phone
Site_Code	Baud_Rate	Pager_Message
fkTerminal_ID	On_Radio_modem	
Terminal_Number	Call_TLS	
Terminal_Code	TLS_Phone	

TLS Alarms Fields List

Alarm	Last Succeeded	SiteCode
Alarm History	Last TLS Message	TermCode
Alarm Message	Notified	Terminal Number
Alarm Type	Page	Time
Baud Rate	Page Delay	TLS Active
Category	Pager Message	TLS Number
Category Description	Pager Phone	TLS Poll Time
Date Acknowledged	Phone	TLS Type
Date Paged	Poll_Time	TLS Type Code
Dial	Probe Number	TLS Unit Number
Last Connection	Radio	Type Description
Last Message	Site Name	

TLS Schedules Fields List

Date Deleted	Interval	Next Run Date
Failed Attempts	Last Run	Run Time
Frequency	Max Failed Attempts	Schedule Name

Pumps Fields List

Allow Keypad	Interpulse Timeout	Status
Allow Zeros	Pulse Rate	Tank Code
Combined Pump	Pump Active	Tank Number
Controller	Pump Chain	Term Code
Current Price	Pump Code	Terminal Number
Date Deleted	Pump Number	Totalizer
Decay Timeout	Pump Type Name	Unit
Enable Timeout	Recycle Hook	Units
Fuel	Shared Pulser	Units Pumped
Gallon Limit	Site Code	VIT
Grade Description	Site Name	Zero Limit
Ignore Zeros	Site Pump Code	

Manifolds Fields List

Date Activated
Date Deleted
Description
Site Code
Site Name
Tank 1
Tank 2
Tank 3
Tank 4
Tank 5
Tank 6
Tank 7
Tank 8

Appendix I – Import Fields Requirements Table

The following fields are required for Excel imports. This table lists the fields, the type and maximum length allowed, if it is required and whether it must match values in the Fuel View system (Lookup).

Table	Field	Data Type	Required	Look Up	Comments
Department	Code	Character (20)	Required	Unique	Unique department code
	Department	Character (60)	Required	Unique	Unique department name
	Address1	Character (32)			Street address 1 for department contact
	Address2	Character (32)			Street address 2 for department contact
	City	Character (20)			City name of department contact
	State	Character (2)			State code of department contact
	Zip_Code	Character (10)			Zip or postal code of department contact
	Phone	Character (14)			Contact phone number
	Fax	Character (14)			Contact fax number
	User_Field_1	Character			Custom user field 1 – as used by customer
Employee	fkDistrict_ID	Number		Lookup	District record ID department is in
	District_Code	Character (20)		Lookup	District code department is in
	First_Name	Character (27)	Required	Unique	Employee first name
	Middle_Name	Character (27)			Employee middle name
	Last_Name	Character (27)	Required	Unique	Employee last name
	fkDepartment_ID	Number		Lookup	Department record ID employee is assigned to
	Department_Code	Character (20)	Required	Lookup	Department code employee is assigned to
	Emp_Card_Number	Number			Card number of employee
	Card_Status	0 or 1			Card status Either 0=Inactive, 1=Enabled
	Status	0 or 1	Required		Employee fueling status Either 0=Inactive, 1=Active
Employee	User_Field_1	Character (27)			Custom user field – as used by customer
	User_Field_2	Character (27)			Custom user field – as used by customer
	User_Field_3	Character (27)			Custom user field – as used by customer
	fkFacility_Code	Number		Lookup	Facility code record ID for employee proxy card
	Facility_Code_Name	Character (30)		Lookup	Facility code name for employee proxy card

Table	Field	Data Type	Required	Look Up	Comments
	Facility_Code_Number	Number		Lookup	Facility code number for employee proxy card
	fkDistrict_ID	Number		Lookup	District record ID employee is assigned to
	District_Code	Character (20)		Lookup	District code employee is assigned to
Pump	fkTerminal_ID	Number		Lookup	Terminal record ID the pump is connected to
	Terminal_Number	Number	Required	Lookup	Terminal number the pump is connected to
	Terminal_Code	Character (32)		Lookup	Terminal code the pump is connected to
	Pump_Number	Number	Required	Unique	Unique pump identifier number
	Pump_Code	Character (10)		Unique	Unique pump identifier code
	Site_Pump_Code	Character (10)			Unique pump identifier for the site
	fkTank_ID	Number		Lookup	Tank record ID of tank linked to the pump
	Tank_Number	Number	Required	Lookup	Tank number of tank linked to pump
	Tank_Code	Character (10)		Lookup	Tank code of tank linked to pump
	Pulse_Rate	Number			Number of pulses the pump creates per unit of fuel dispensed. Defaults to 10 if not present
	Price	Number			Price per unit of fuel
Site	Site	Character (32)	Required	Unique	Unique name of site
	Site_Code	Character (20)		Unique	Unique code for the site
	Address_1	Character (32)			Address 1 for site
	Address_2	Character (32)			Address 2 for site
	City	Character (20)			City of site
	State	Character (2)			State of site
	Zip	Character (10)			Zip or postal code of site
	fkDepartment_ID	Number		Lookup	Department record ID site is assigned to
	Department	Character (60)		Lookup	Department name site is assigned to
	Department_Code	Character (20)		Lookup	Department code site is assigned to
	fkDistrict_ID	Number		Lookup	District record ID site is assigned to
	District	Character (60)		Lookup	District name site is assigned to
	District_Code	Character (20)		Lookup	District code site is assigned to
	fkManager_ID	Number		Lookup	Employee record ID of site manager
	Manager_Employee_Number	Character (27)		Lookup	Employee last name of site manager
	Phone	Character (14)			Site contact phone number
	Fax	Character (14)			Site contact fax number

Table	Field	Data Type	Required	Look Up	Comments
Tank	fkSite_ID	Number		Lookup	Site record ID of location of tank
	Site	Character (32)	Required	Lookup	Site name of location of tank
	Site_Code	Character (20)	Required	Lookup	Site code of location of tank
	Tank_Number	Number	Required	Unique	Unique tank number
	Tank_Code	Character (10)		Unique	Unique tank code
	fkFuel_ID	Number		Lookup	Fuel record ID of fuel in tank
	Fuel_Name	Character (25)	Required	Lookup	Name of fuel in tank
	Fuel_Type	Character (3)		Lookup	Type (abbreviation) of fuel in tank (must match fuels table)
	Capacity	Number	Required		Capacity of the tank
	Reorder_Level	Number	Required		Level in tank when reorder alerts are to be sent
Terminal	TLS_Probe_Number	Number		Lookup	TLS number of TLS attached to this tank
	Terminal_Number	Number	Required	Unique	Terminal number identifier unique thru system
	Terminal_Code	Character (32)		Unique	Terminal code identifier unique thru system
	fkSite_ID	Number		Lookup	Site record ID of location of terminal
	Site	Character (32)	Required	Lookup	Site name of location of terminal
	Site_Code	Character (20)		Lookup	Site code of location of terminal
	Terminal_Type	Character 2		Lookup	Must Be W3 or W4. Default is W4
	Host name	nn.nn.nn.nn			Network IP address of terminal
	Terminal_Phone				Phone number of terminal, only used for W3 terminals with modem
TLS	Call_In_Interval	Number			Number of minutes between call in cycles – only used for Fast MAB FCT. Default is 120
	TCP_Socket	Number			Indicator to use TCP 0=Not TCP, 1=Use TCP
	fkSite_ID	Number		Lookup	Site record ID of location of TLS
	Site	Character	Required	Lookup	Site name of location of TLS
	Site_Code	Character		Lookup	Site code of location of TLS
TLS	fkTerminal_ID	Number		Lookup	Terminal record ID of terminal attached to TLS
	Terminal_Number	Number		Lookup	Terminal number of terminal attached to TLS
	Terminal_Code	Character (32)		Lookup	Terminal code of terminal attached to TLS
	TLS_Unit_Number	Number	Required	Unique	Unique identifier for the TLS
	TLS_Type		Required	Lookup	Identify the type of the TLS – One of "TLS 250", "TLS 350", "TLS 350 R", "OMNTEC Proteus"

Table	Field	Data Type	Required	Look Up	Comments
	Baud_Rate	Number			Modem baud rate of the TLS
	On_Radio_modem	Number			0=False, 1=True
	Call_TLS	Number			Allow calling TLS – 0=No Call, 1=Call
	TLS_Phone	Character (30)			TLS phone number
	Password	Character (20)			TLS password
	Pager_Phone	Character (30)			Phone number for pager
	Pager_Message	Character (255)			Message for pager
Vehicle	Vehicle_Number	Character (10)	Required	Unique	Unique identifier for vehicle
	Vehicle_Code	Character (30)	Required	Unique	Unique code for vehicle
	Make	Character (27)			Vehicle make
	Model	Character (27)			Vehicle model
	Model_Year	Character (4)			Vehicle year
	VIN	Character (17)			Vehicle VIN
	fk1Fuel_ID	Number		Lookup	Record ID of first fuel vehicle is allowed
	Fuel_Name_1	Character (25)		Lookup	Fuel name of first fuel vehicle is allowed
	Fuel_Type_1	Character (3)	Required	Lookup	Fuel type of first fuel vehicle is allowed
	fk2Fuel_ID	Number		Lookup	Record ID of second fuel vehicle is allowed
	Fuel_Name_2	Character (25)		Lookup	Fuel name of second fuel vehicle is allowed
	Fuel_Type_2	Character		Lookup	Fuel type of second fuel vehicle is allowed
	Card_Number	Number	Required		Unique card number assigned to vehicle
	Card_Status	Number	Required		Whether vehicle can fuel 0=No fuel, 1=Can fuel
	Status	Number	Required		Whether vehicle is active 0=Not Active, 1=Active
	Maximum_Quantity	Number			Maximum amount allowed of fuel 1 – 0 indicates no limitation
	Maximum_Quantity_2	Number			Maximum amount allowed of fuel 2 – 0 indicates no limitation
	Maximum_Distance	Number	Required		Maximum allowed distance between fuelings. 0=No Restrictions
	Odometer	Number	Required		Current vehicle odometer reading
	Hour_Meter	Number	Required		Current vehicle hour meter reading. Set to 0 if not recording hour meter
	fkDepartment_ID	Number		Lookup	Record ID of department vehicle is assigned to
	Department_Code	Character (20)		Lookup	Department code vehicle is assigned to
	User_Field_1	Character (27)			Custom defined field 1 – will depend on customer

Table	Field	Data Type	Required	Look Up	Comments
	User_Field_2	Character (27)			Custom defined field 2 – will depend on customer
	User_Field_3	Character (27)			Custom defined field 3 – will depend on customer
	License_Plate	Character (27)			Vehicle license plate
	Visits	Number			Maximum visits a vehicle is allowed in a day. 0=No Restrictions
	fkType_ID	Number		Lookup	Record ID of type of vehicle
	Type_Description	Character (50)		Lookup	Vehicle type description
	fkDistrict_ID	Number		Lookup	Record ID of district the vehicle is assigned to
	District_Code	Character (20)		Lookup	District code of the district the vehicle is assigned to
	Hour_Meter_Input	number			Indicator that vehicle is to use Hour Meter instead of Odometer – 0=Use Odometer, 1=Use Hour Meter

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