DOVER
FUELING SOLUTIONS

Installation/Operation

iX Fleet™ Fuel Control System

powered by Dover Fueling Solutions

Software Version 1.7.74.0

P/N 000-W2940084-
Rev. 10

Wayne
FUELING SYSTEMS

DANGER

READ THIS MANUAL BEFORE YOU BEGIN

Dispensers have both electricity and a hazardous, flammable and potentially explosive liquid. Failure to follow the below precautions and the Warning and Caution instructions in this manual may result in serious injury or death. Read every tag attached to the equipment before commencing installation. Follow all rules, codes and laws that apply to your area and installation.

SAFETY PRECAUTIONS - INSTALLATION AND MAINTENANCE

Before beginning installation, block off the work area with safety cones. Always make sure ALL power to the equipment is turned OFF before you open the cabinet for maintenance. Physically lock, restrict access to, or tag the circuit breakers you turn off when servicing equipment. Be sure to trip (close) the emergency valve(s) under the dispenser BEFORE beginning maintenance.

Make sure that you know how to turn OFF power to the dispenser and submersible pumps in an emergency. Have all leaks or defects repaired immediately.

Before you proceed, you must be trained to comply with all applicable safety measures associated with working in this type of environment.

NOTE: This kit may require installation of several wiring and hardware assemblies. Any installation or modification must comply with the requirements of the National Electrical Code (NFPA 70), and NFPA 30 and any other applicable electrical codes.

Instructions within this manual may call for the removal and disposal of parts. Whenever removing or discarding any part, those parts should be properly disposed of or recycled according to Federal, State, and Local regulations. Dover Fueling Solutions (DFS) always recommends that parts not under disposal regulations be recycled whenever possible.

Any questions concerning the installation and operation of this kit that are not covered in this document should be referred to DFS Technical Support. An ASO with a technician number can receive assistance by calling DFS Technical Support at:

1-800-926-3737

[1]NFPA 30A states that:

"When maintenance to Class 1 dispensing devices becomes necessary and such maintenance may allow the accidental release or ignition of liquid, the following precautions shall be taken before such maintenance is begun:

- Only persons knowledgeable in performing the required maintenance shall perform the work.
- All electrical power to the dispensing device and pump serving the dispenser shall be shut off at the main electrical disconnect panel.
- The emergency shut-off valve at the dispenser, if installed, shall be closed.
- All vehicle traffic and unauthorized persons shall be prevented from coming within 20 ft.(6 m) of the dispensing device.[1] "

WARNING

Electric shock hazard! More than one disconnect switch may be required to de-energize the dispenser for maintenance and servicing. Use a voltmeter to make sure ALL circuits in the dispenser are de-energized. Failure to do so may result in serious injury.

Lockout/Tagout requirements of the U. S. Dept. of Labor, Occupational Safety and Health Administration (OSHA) may also apply. Refer to Title 29, Part 1910 of the Code of Federal Regulations (29CFR1910), *Control of Hazardous Energy Source (Lockout/Tagout)*

---

1. Reprinted with permission from NFPA 30A-2012, *Automotive and Marine Service Station Codes*, Copyright ©2012, National Fire Protection Association, Quincy MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association on the referenced subject, which is represented only by the standard in its entirety.

iX Fleet
Fuel Control System
P/N 000-W2940084-

Installation/Operation

Table of Contents

Table of Contents (continued)

Table of Contents (continued)

Table of Contents (continued)

Title **Page**

1 INTRODUCTION

The iX Fleet™ fuel control system is used to control and monitor unattended dispenser fueling operations. Hardware and software resides in each dispenser, and is controlled by software on an iX Fleet™ fuel controller. Users are identified at the dispenser by using a magnetic stripe card, Radio Frequency Identification (RFID) tag, or keypad entry. Data gathered at the iX Fleet fuel controller is used for reporting of dispenser transactions.

NOTE: Antivirus software is no longer included with the iX Fleet™ fuel control system. It is strongly recommended to install antivirus software if the fuel controller will be connected to a network with other computer systems.

1.1 iX Fleet™ In-Dispenser Terminal (IDT)

The in-dispenser terminal (IDT) is used to interface with the user attempting to fuel a vehicle. There can be one or two IDTs in each dispenser. The IDT can be side-specific, or can be used for authorizing both sides of a dual-sided dispenser. Dispenser includes the following hardware:

- **Controller:** iX Technology™ platform R2 Board with Windows CE software
- **Display:** 6” qVGA backlit screen
- **Soft Keys:** 8 soft keys surrounding the screen
- **Keypad:** 4 x 3 membrane keypad
- **Reader:** (one of the three that follow)
  - * RFID tag reader, 15693 technology
  - * Magnetic stripe card reader for Track I and II
  - * HID Card/Tag reader

1.2 iX Fleet™ Fuel Controller Hardware/Software

The iX Fleet fuel controller is used for controlling, gathering, analyzing, and reporting site activity. One iX Fleet fuel controller can access and coordinate the activity of one or more sites. The iX Fleet fuel controller is the primary storage location for system information. The software runs on the Windows 8.1 Embedded Industry Pro operating system, and the Windows POS Ready operating system on legacy platforms. The following functionality is a part of the iX Fleet fuel controller:

- **Management Dashboard:** A single screen showing the status of the fueling sites
- **Vehicle Database:** Authorized vehicles and their associated information
- **Employee Database:** Authorized employees and their associated information
- **Department/Account Database:** Descriptive department or account information
- **Vehicle Type Database:** Groups vehicles for reporting and common control parameters
- **Transaction Database:** Fuel transaction from the iX Fleet IDTs
- **Tank Inventory:** Book inventory with delivery and adjustment entries
- **Add/Edit Transactions:** The ability to add off-line transactions or edit existing transactions
- **Communication:** On-line or off-line communication to the iX Fleet IDTs
- **Reports:** Prepared report types that can be filtered to generate custom reports
- **Data Import/Export:** Import or export employee and vehicle files, or export transactions
- **Database Utilities:** Backup and restore capabilities

1.3 Communication Hardware

An Ethernet communication link must be established between the iX Fleet IDT and the iX Fleet fuel controller to transfer data between the two devices. The following options are available:

- Direct connection from the iX Fleet IDT to the iX Fleet fuel controller. Multiple iX Fleet IDTs can be daisy-chained together with one line run to the iX Fleet fuel controller.
- The iX Fleet IDT and controller are connected to the same LAN.

1.4 Access ID Media

The Access ID Media is used to identify the user or vehicle. The iX Fleet fuel control system uses a look-up database to store information about the employee and/or vehicle. The Access ID is a unique number stored on a magnetic stripe card, an HID card/tag, or an RFID tag that identifies the employee and/or vehicle. At initial start-up, a system-wide setting is configured to indicate whether the Access ID represents a vehicle or an employee. The bulk of the information pertaining to that lookup number is stored in the database on the iX Fleet fuel controller. Information needed to authorize and control a transaction is downloaded from the iX Fleet fuel controller database to a database on the iX Fleet IDT. The following types of media can be used:

- **RFID Fuel Tags:** Radio Frequency Identification (RFID) contactless tags used with the iX Fleet fuel control system are only available from Dover. Each tag is encoded with a unique number (printed on back of tag). A special encryption protocol in the tag ensures that other tags cannot be used in the system and that genuine tags cannot be duplicated. The tags are designed to easily fit on a vehicle key ring.
- **Magnetic Stripe Cards:** ABA Track I or II cards can be used with the system. This feature is primarily designed to allow the use of existing encoded cards that are already present for offsite retail fueling or building security. However, cards could be specially encoded to work with the system. Each existing card must have a field containing a unique number that can be used as the access ID.
- **HID or Indala Proximity Cards:** Proximity cards utilize radio frequencies (RFID) or a special microprocessor embedded into an ID card. The cards are encoded upon printing, which is usually done with a special encoder like a Fargo HDP5000 ID card printer. ID cards with RFID antennas have small radio receivers embedded in an ID card that hold the encoded information. When held close to a reader, the information encoded in the card's antenna is exchanged with the reader and authenticated. A novel feature of RFID cards is that they do not have to touch the reader in order for information to be exchanged. Smart cards, on the other hand, must come in contact with a reader in order to be verified. Information encoded in smart cards is stored in a small microprocessor that is embedded in an ID card in a small chip. Proximity cards are verified when the chip is connected with a specialized reader.

1.5 Sites and Data Synchronization

Sites typically represent a physical location at which one or more dispensers are present. However, several sites can be created for a single physical location to organize large numbers of dispensers. There is only one iX Fleet fuel controller application, but there can be many sites.

The iX Fleet host application uses up to four sync services to synchronize information with dispensers. Each sync service can communicate with up to 70 dispensers, for a total of 280 dispensers that can be managed by the iX Fleet fuel controller.

By default, the iX Fleet fuel controller automatically synchronizes with dispensers every five minutes. To configure the interval see the AutoSync Interval setting in Section 5.3.2 on page 29. Synchronization can also be manually forced using On-Demand Polling. The controller sends employee and vehicle updates to the IDT, and retrieves transactions and alerts stored in the IDT since the last synchronization.

The iX Fleet host application software has been updated to detect when the time has been changed on the system clock. If synchronization is not in progress when the clock is changed, the following message will be displayed in the status bar:

Please make sure all fueling points are synched after datetime change to keep data in sync.

When this message is displayed, manually synchronize all fueling points using On-Demand Polling to ensure that synchronized data and transactions are appropriately updated.

If synchronization is in progress when the system clock is changed, the following message will be displayed in the status bar:

> *Sync is in progress. Please revert the datetime change. Change datetime after sync is complete to keep data in sync.*

In this situation, reset the system time to its previous value, then allow the synchronization to complete before changing the system clock to the new time.

1.6 Firewall Information - TCP Server Ports

The following information is helpful if you want to set up a firewall while still allowing the necessary bidirectional communication required between the iX Fleet controller and the IDTs.

NOTE: All of the following ports must be open in the network configuration, even if only one channel is used to sync with terminals.

Table 1-1 IDT Software TCP Server Ports

Port #	Purpose
1001	Data synchronization over TCP Channel

Table 1-2 Host Software TCP Server Ports

Port #	Purpose
1010	Sync service TCP status channel 1
1011	Sync service TCP status channel 2
1012	Sync service TCP status channel 3
1013	Sync service TCP status channel 4
1003	Sync service TCP IDT command receiver port channel 1
1004	Sync service TCP IDT command receiver port channel 2
1005	Sync service TCP IDT command receiver port channel 3
1006	Sync service TCP IDT command receiver port channel 4

2 IX FLEET FUEL CONTROLLER HARDWARE SET UP

The iX Fleet fuel controller can be installed in a variety of locations, but should be located in a non-hazardous area of an enclosed, weather-protected building. Table 2-1 lists the space requirements to keep in mind while selecting a location for the iX Fleet fuel controller.

Table 2-1 Space Requirements (in inches)

Component	Width	Height	Depth
iX Fleet Fuel Controller V1	16	14	2
iX Fleet Fuel Controller V2	22	16	4

The iX Fleet fuel controller software can be installed on one of two different hardware platforms. The V1 hardware platform might still be available from distributors, but will be phased out as the V2 hardware platform becomes available. The two hardware platforms are shown in Figure 2-1.

Figure 2-1 iX Fleet Fuel Controller V1 (left) and V2 (right) Hardware Platforms

2.1 Environmental Requirements

Ensure that the iX Fleet fuel controller is located in an area that offers easy access for service, and at least 6” of free air space for cooling.

When wall mounting, orient the iX Fleet fuel controller so that the ventilation slots are clear of obstructions to allow free air flow across the unit for cooling, and to allow proper access to the power button and ports on the rear panel of the iX Fleet fuel controller.

Care should be taken to ensure that the ambient temperature does not exceed the operational range of 0°C to 40°C (32°F to 104°F).

2.2 Setting Up the iX Fleet Fuel Controller

Perform the steps in this section to set up the iX Fleet fuel controller:

1. If installing the iX Fleet fuel controller with the V2 hardware platform, refer to Section 2.4 on page 16 for mounting instructions if needed, then skip to step 5.

   NOTE: If installing the V1 hardware platform you must perform step 2 through step 5.

2. Select a stable work surface to place the iX Fleet fuel controller. This does not need to be its final location.
3. Remove the three cover screws from the top of the iX Fleet fuel controller and remove the cover.

4. Attach the battery connector to J18 on the CUPS board as shown in Table 2-2.

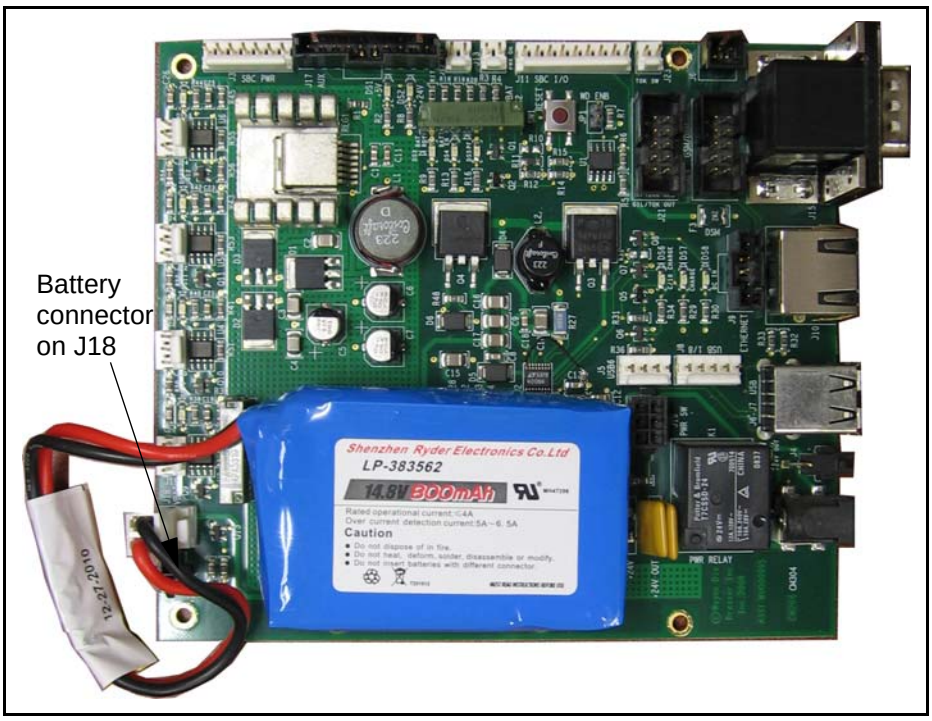


Figure 2-2 Battery Connection on CUPS Board

5. If wall mounting the iX Fleet fuel controller with the V1 hardware platform, refer to Section 2.3.1 for mounting instructions then continue to step 6. Otherwise, replace the cover and its screws.

   If you are rack mounting the iX Fleet fuel controller with the V1 hardware platform, refer to Section 2.3.2 for mounting instructions and then continue to step 6.

   If you are not mounting the iX Fleet fuel controller, select a stable and flat surface, such as a desk, to set up the iX Fleet fuel controller and monitor.

6. Perform the following steps to connect the iX Fleet fuel controller to peripherals. Figure 2-3 shows the port locations on the iX Fleet Fuel Controller V1 rear panel.

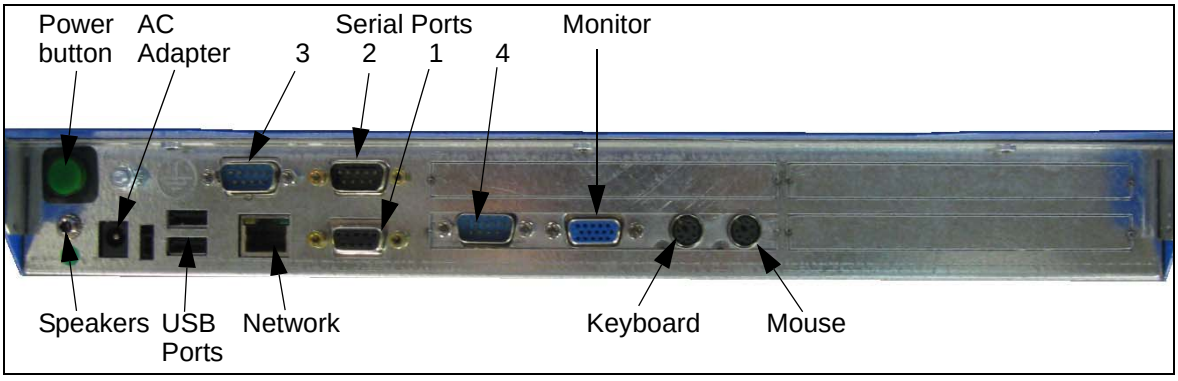


Figure 2-3 iX Fleet Fuel Controller V1 Rear Panel

Figure 2-4 shows the port locations on the iX Fleet Fuel Controller V2 rear panel.

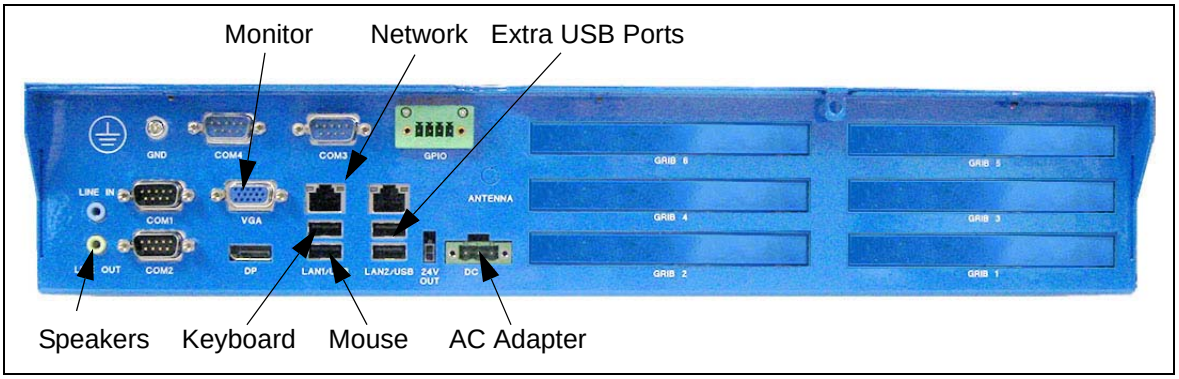


Figure 2-4 iX Fleet Fuel Controller V2 Rear Panel

7. Connect an Ethernet cable to the network port on the back of the iX Fleet fuel controller, and then connect the other end to the Ethernet switch in the dispenser, or to an external Ethernet switch connected to the dispensers.

IMPORTANT: Reference the appendix *iX Fleet Fuel Control System* in the *Select™ 3/ G7200 Fleet Dispensers Installation/Operation* manual (PN 000-920812-) for complete instructions on the wiring to the iX Fleet In-Dispenser Terminals (IDTs) and making the proper terminations in the dispenser.

---

8. Connect the VGA cable, keyboard and mouse to their respective ports on the rear panel.
9. Connect the monitor power cable to the monitor, and then plug the other end into a wall outlet.
10. Connect the AC adapter to its port on the rear panel, and then plug the other end into a wall outlet.
11. Press the power buttons on the monitor and the iX Fleet fuel controller to power them on.

2.3 Mounting the iX Fleet Fuel Controller V1

The iX Fleet fuel controller may be optionally mounted either to a wall or an existing equipment rack, but requires the appropriate additional mounting kit:

- Wall Mount Kit PN WU005347-0002
- Rack Mount Kit PN WU005347-0001

2.3.1 Wall Mounting the iX Fleet Fuel Controller

Table 2-2 lists the required tools and parts that are not included with the mounting kit.

Table 2-2 Required Tools and Parts

Quantity	Description
1	Phillips Screwdriver Set (standard sizes)
1	Standard Drill Bit Set
1	Drill
6	Mounting Screws and Anchors

To mount the iX Fleet Fuel Controller on a wall, complete these steps:

1. Select a mounting location on the wall. The mounting bracket should be oriented so that the iX Fleet fuel controller rear panel will be facing down.

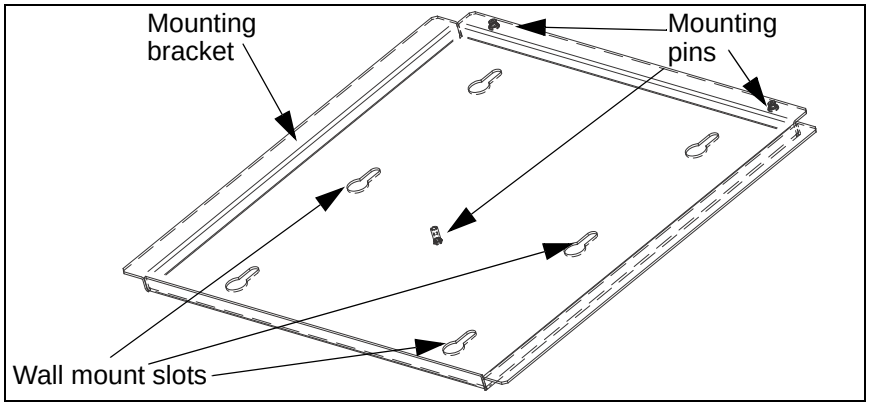


Figure 2-5 Mounting Bracket PN WU002114-0001

2. After selecting a mounting location, attach the bracket to the wall by using screws (not provided).
3. Remove the wall mount screw (PN 882666-011) from the mounting pin that is near the center of the bracket and put it in a safe place.
4. Slide the iX Fleet fuel controller onto the mounting pins of the bracket.
5. Re-insert the wall mount screw into its mounting pin (through the wall mount screw hole in the bottom of the chassis) and tighten to secure the iX Fleet fuel controller to the wall mount plate.
6. Replace the cover and secure it with the cover screws.

2.3.2 Rack Mounting the iX Fleet Fuel Controller

Table 2-3 lists the required tools and parts that are not included with the mounting kit.

Table 2-3 Required Tools and Parts

Quantity	Description
1	Phillips Screwdriver Set (standard sizes)
4-6	Equipment Rack Mounting Screws

To mount the iX Fleet Fuel Controller on a rack, complete these steps:

1. Attach the rack mounting brackets (PN WU001806-001) to the iX Fleet fuel controller chassis with screws (PN WU003414-0001) as shown in Figure 2-6.

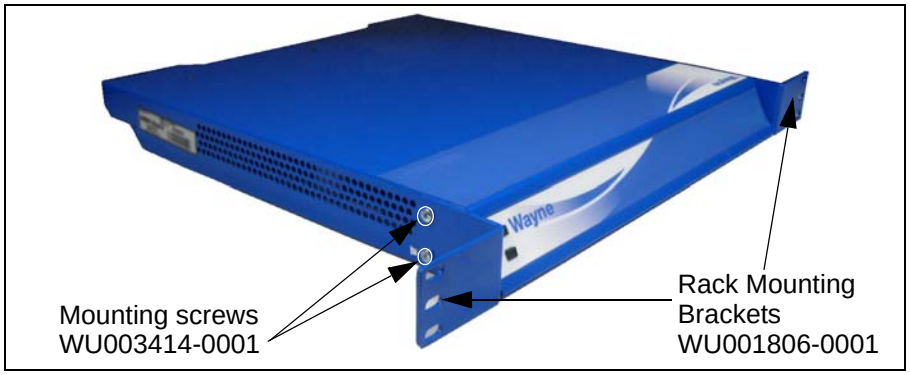


Figure 2-6 Rack Mount Bracket Kit PN WU005347-0001

2. Slide the iX Fleet fuel controller onto the equipment rack with the rear panel facing outwards.
3. Secure the mounting brackets to the equipment rack with screws that are compatible with your equipment rack (not provided).

2.4 Mounting the iX Fleet Fuel Controller V2

This section explains how to prepare the iX Fleet fuel controller cabinet for mounting.

IMPORTANT: All Phillips screws on the system chassis are sized for a Phillips #2 screwdriver. Using a Phillips #1 screwdriver on smaller screws might strip the heads.

NOTE: If the iX Fleet fuel controller will be rack mounted skip to step 3. DO NOT install the wall mounting rails if rack mounting as they will prevent the system from sliding into equipment racks.

1. Remove the two long mounting rails and the package of machine screws from their packaging. Mount the rails on both sides of the bottom of the iX Fleet fuel controller cabinet as shown.

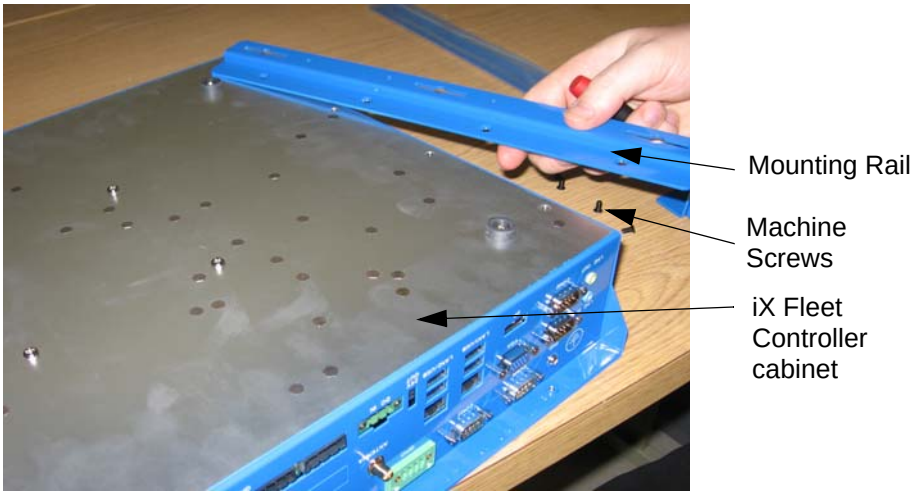


Figure 2-7 Install the Mounting Rails

2. Secure the mounting rails using four black machine screws per side.

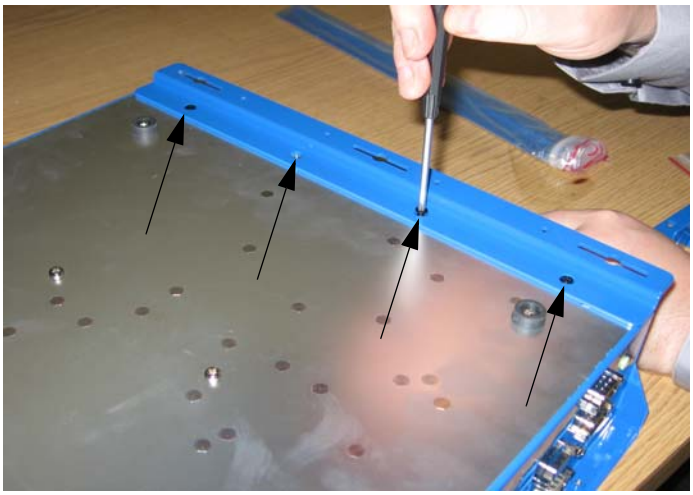


Figure 2-8 Secure the Mounting Rails

3. Attach the two “L” brackets as shown using three black machine screws per bracket.

Figure 2-9 Secure the “L” Brackets

4. The completed iX Fleet fuel controller cabinet should look like Figure 2-10 if you will be mounting it on a wall.

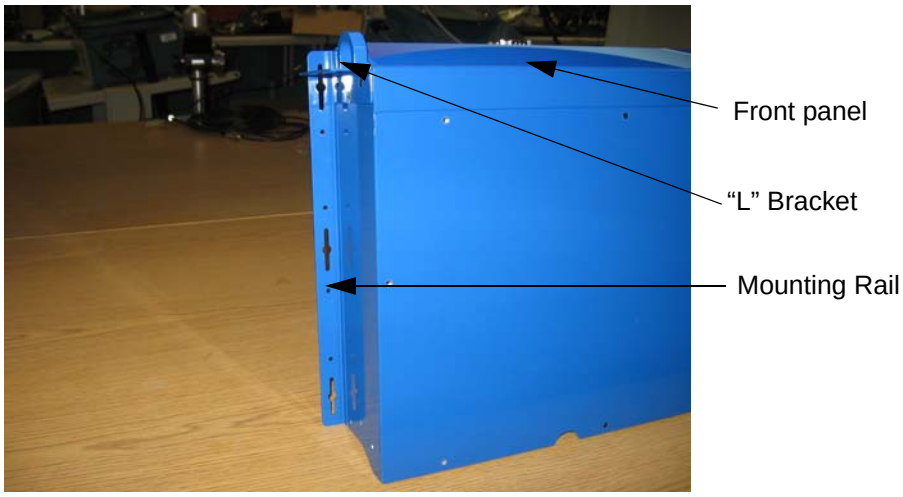


Figure 2-10 iX Fleet fuel controller Cabinet

3 START UP AND LOGIN

1. After the iX Fleet fuel controller has completed startup, log in to the Windows operating system. If the iX Fleet fuel controller is not used on a Windows domain, the default username and password are as follows:

   Username: **Administrator**

   Password: **ar26wmi**

   NOTE: The Password above is case sensitive and must be typed exactly as shown. If you are unable to log in to the iX Fleet fuel controller with the above credentials, contact DFS Technical Support for assistance.

   TIP: *If it is necessary to set up the iX Fleet fuel controller on a Windows domain, refer to Section 16.2 on page 131 for instructions to configure the host application to run under a Windows network account.*

2. Upon first login after hardware installation, or if the operating system has been reinstalled, verify that the iX Fleet fuel controller IP address is set correctly. Refer to Section 16.6 on page 132 for instructions, if needed.

NOTE: Antivirus software is no longer included with the iX Fleet™ fuel control system. It is strongly recommended that you install antivirus software if the fuel controller will be connected to a network with other computer systems.

3. Double-click the **iXFleet Host** icon on the Windows desktop to start the application.

iXFleet Host

   NOTE: The first time the application is run after install or upgrade you will be prompted to enter a code to register the software. Contact DFS Customer Service and provide the Challenge Code that on the screen. Enter the response code provided and then click **Continue**.

4. The System Login window is then displayed. Enter your **User Name** and **Password**, and then click **Login**. If this is the first time that you are using the iX Fleet Host Application, the default username and password are as follows:

   Username: **Administrator**

   Password: **iXFleet**

   NOTE: The Password above is case sensitive and must be typed exactly as shown.

   TIP: *You should change the Administrator password by clicking the **Change Password** button and entering a new password for system security. Record this password so that it is not forgotten. After you add users, use the applicable user name and password to sign on to the system. At this point, the Administrator sign-on should only be used for adding or modifying user names and passwords.*

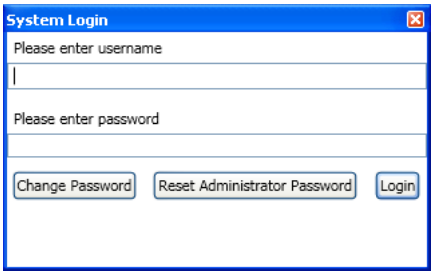


Figure 3-1 System Login

   NOTE: If the Administrator password has been forgotten, refer to Section 14.2 on page 118.

5. Upon successful login the iX Fleet home page is displayed. If a Database Max Size Alert window is displayed, refer to *Database Max Size Alert* on page 118 to resolve the alert.

3.1 Using the Workspace

After login, the iX Fleet fuel control system home page is displayed as shown in Figure 3-2. The window consists of two sections. The section at the top of the window is the Fleet menu for accessing iX Fleet fuel controller functions. The main section is a management dashboard that provides fueling operation status at a glance, including tank inventory and equipment alerts by site, transaction alerts, and fuel usage statistics.

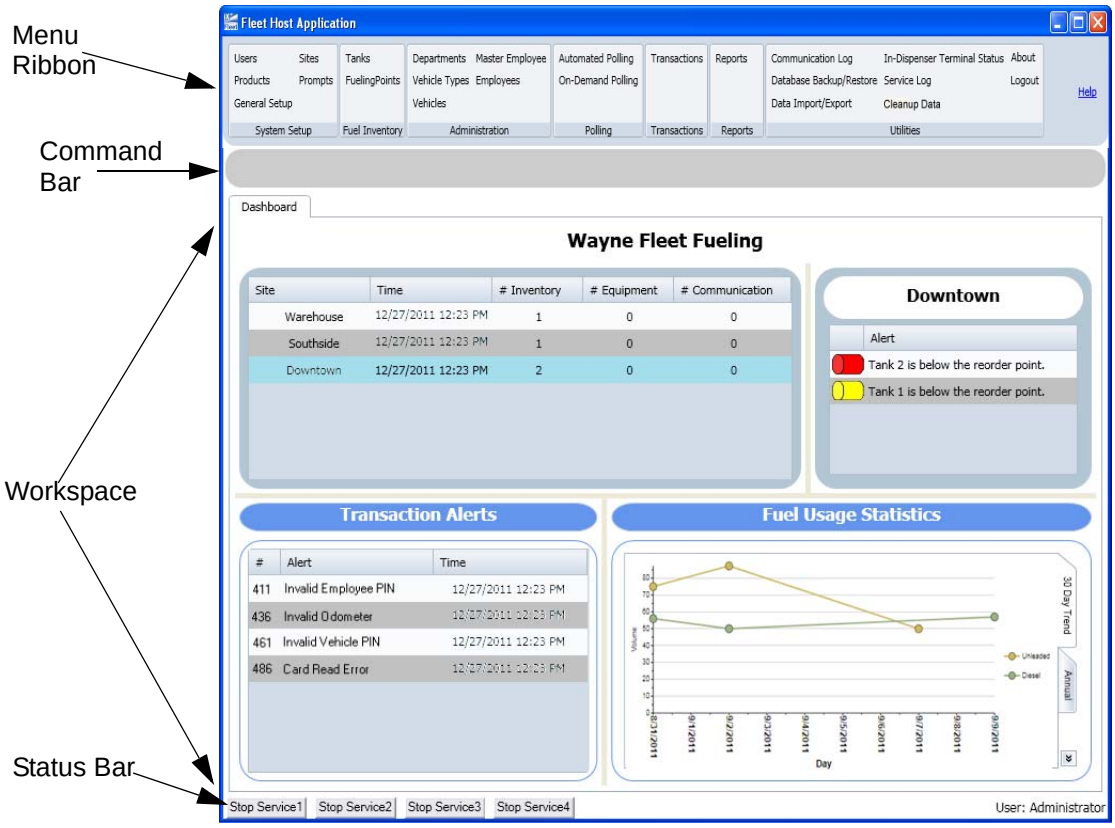


Figure 3-2 iX Fleet Fuel Control System Home Page

The home page consists of four distinct areas:

- **Menu Ribbon:** All features are accessible through this menu. The individual items in this menu are detailed in *Menu Functions* on page 24.
- **Command Bar:** This area displays command buttons for the various screens as required. The most common buttons are **Save**, **Refresh**, **New**, and **Delete Record**.
- **Workspace:** All feature and configuration screens are displayed in this area as tabs. By default, the Management Dashboard is displayed, which is the only tab that cannot be closed.
- **Status Bar:** Indicates the current user in the lower right corner, and also has buttons to stop or restart the sync services with sites.

  NOTE: By default, all four Sync Services will automatically restart every day at 12:00 AM. If the automatic restart time must be changed to avoid interruption of site operations, refer to Section 16.3 on page 131 for instructions.

3.1.1 Managing Tabs

When a feature is selected from the Menu Ribbon, a tab is opened in the Workspace area. Multiple tabs can be open simultaneously, and you can switch between tabs by clicking the tab's title. If more tabs are opened than can fit within the Workspace area, arrow buttons are displayed to each side of the tabs to allow scrolling through the tabs.

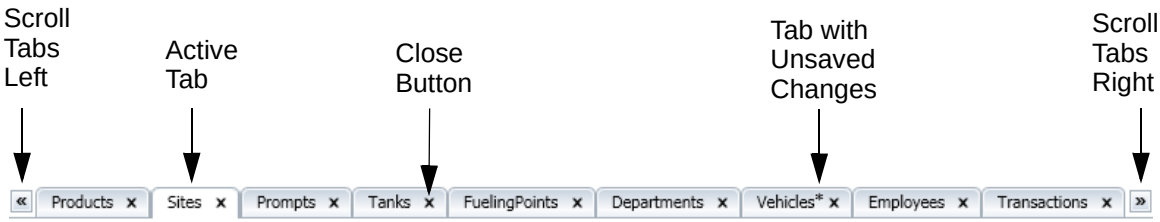


Figure 3-3 Workspace Tabs

The tabs in the Workspace can each be individually closed when you are finished with them. To close a tab, click the **X** icon on the tab. If the tab has unsaved changes, an asterisk (*) appears to the right of the tab name, and you are prompted to save the changes before closing or refreshing.

3.1.2 Entering and Editing Data

Depending on the feature selected from the Menu Ribbon, information can be entered for system configuration or multiple items. Configuration screens, such as **General Setup** (shown below), do not require the editing of multiple records.

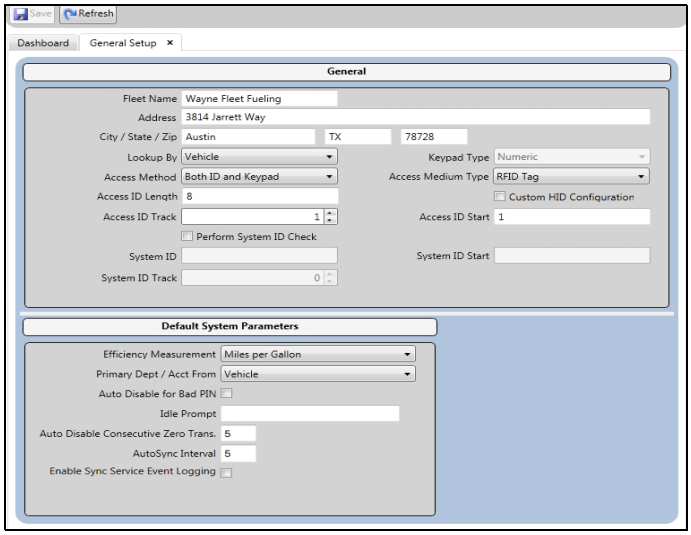


Figure 3-4 General Setup Tab

After editing the required fields, click **Save** in the Command Bar to save the changes, and then click the tab's **X** icon to close the tab.

> ***TIP:*** *Worksheets have been provided to gather the necessary information for setting up the iX Fleet fuel control system, and are included in Section 16.9 on page 139.*

Most features, such as Sites (see Figure 3-5), require editing multiple items. To create a new item, click the **New** button in the Command Bar, or click to select the item in the upper part of the tab to edit an existing item. Make changes in the lower part of the tab and then click the **Save** button in the Command Bar to save the changes. This can be repeated for as many items as needed.

To delete an existing item, click to select the item and then either click the **Delete Record** button, or press the <Delete> key on the keyboard. Click the **Save** button in the Command Bar to save the changes.

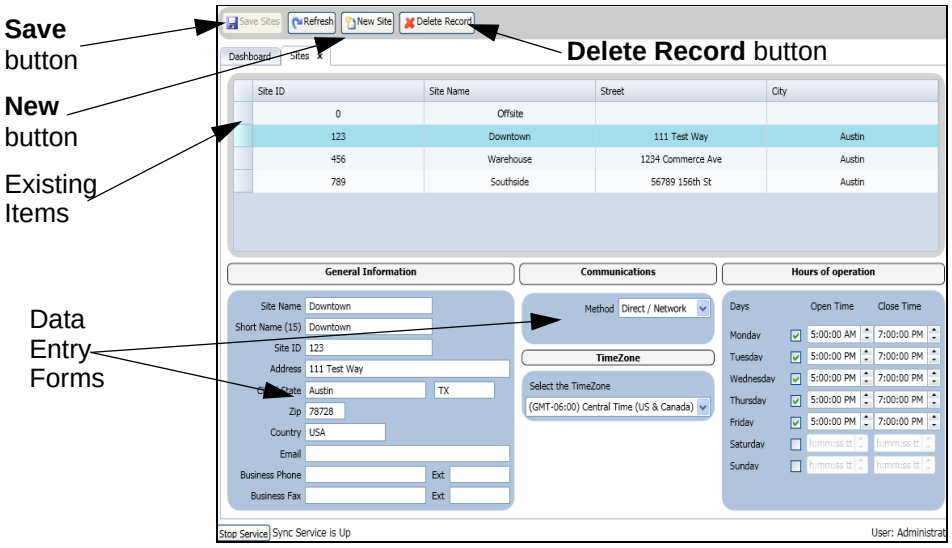


Figure 3-5 Sites Tab

For more information about what should be entered in a field, hover the mouse pointer over the field and a tool tip appears with information to guide you (see Figure 3-6). If required data is missing, or there is a problem with the data entered, the field is shaded red.

NOTE: If working with multiple open tabs, you must save the changes on the other open tabs and then click the **Refresh** button before any related changes are displayed on the current tab.

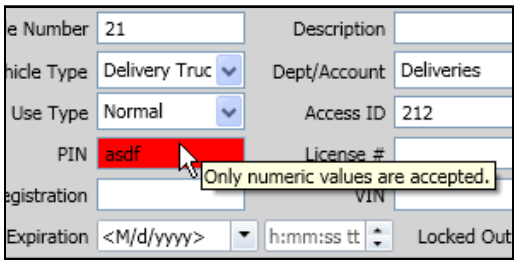


Figure 3-6 Data Entry Error With Tool Tip

The Vehicles, Employees, Transactions, and Communication Log tabs have additional buttons to make viewing records easier. On these tabs only a limited number records will be displayed at a time. The **< Previous** and **> Next** buttons allow you to browse between pages of records, and the **<< First Page** and **>> Last Page** buttons allow skipping directly to the first and last pages of records.

Figure 3-7 Paging Buttons

3.1.3 Sorting Data

In each tab that displays a listing of multiple items, there are several features to assist with finding the desired item or information. The most basic is a simple sort. To sort the displayed items, click a column header to sort the list by the data in that column. Each time that the column header is clicked, the sort will alternate between ascending and descending order. An arrow at the top of the column header indicates the sort direction.

NOTE: For the Vehicles, Employees, Transactions, and Communication Log tabs, the sort will only apply to the currently displayed page of records and will NOT sort all records.

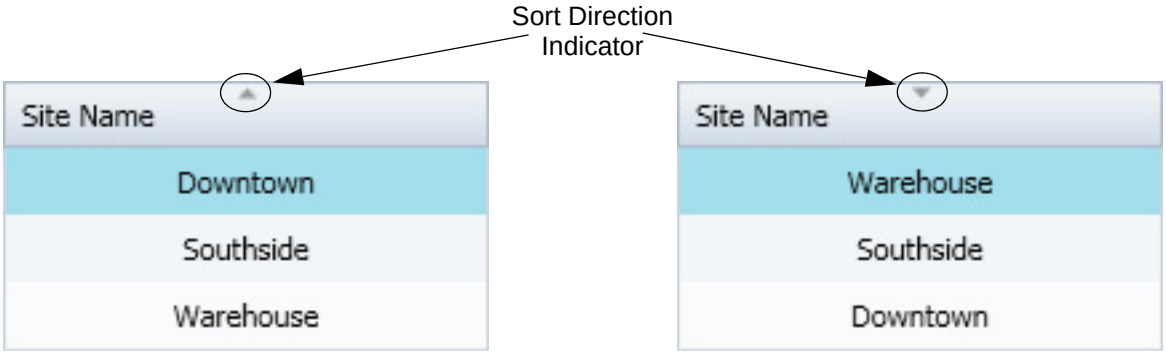


Figure 3-8 Column Headers Sorted In Ascending (left) and Descending (right) Order

3.1.4 Filtering Data

Data displayed in the tabs can also be filtered across multiple columns to find information more quickly. To set a filter, move the mouse pointer over a column header but do not click. A drop-down arrow appears on the right side of the column header. See Figure 3-9.

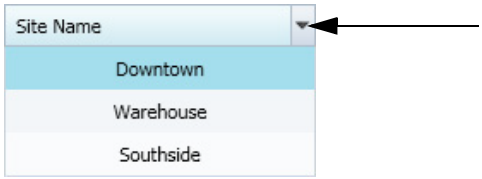


Figure 3-9 Filter Drop-Down Arrow on Column Header

Click the drop-down arrow to display the filter. After selecting the filter options, click the **Filter** button to filter the data. Click the **Clear** button to remove any filtering. The type of filter that appears is determined by the data represented by the column. There are three types of filters. See Figure 3-10.

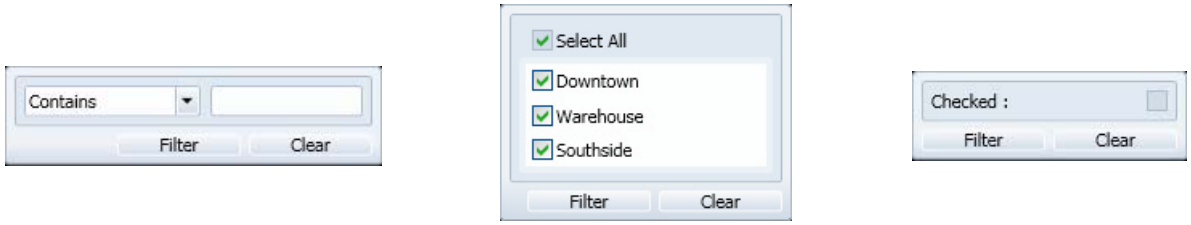


Figure 3-10 Text Filter (left), Selection Filter (center), and Checkbox Filter (right)

- **Text Filter:** Filters the column using text entered by the user. This filter appears for columns with arbitrary or free-form data, such as names, addresses, or amounts. The following filter options determine how the filter is applied:

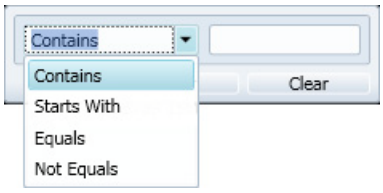


Figure 3-11 Text Filter Options

  - ***Contains:*** Displays all items which contain the entered text anywhere in the column field. This is the default option.
  - ***Starts With:*** Displays only those items for which the entered text appears at the beginning of the column field.
  - ***Equals:*** Displays only those items for which the entered text EXACTLY matches the column field.
  - ***Not Equals:*** Displays all items for which the entered text does NOT exactly match the column field.
- **Selection Filter:** Filters the column based on a list of checkboxes. This filter appears for columns with values from a fixed list of options. Click to uncheck filter criteria to remove matching items from the list, or check criteria to show matching items. Checking or unchecking the **Select All** option checks or unchecks all items in the list.
- **Checkbox Filter:** Filters the column based on a single checkbox. This filter appears for columns with data based on a binary option (e.g. Yes/No, On/Off, Locked/Unlocked).

4 MENU FUNCTIONS

All features are accessible through this menu. The features are separated into logical sections that are grouped for ease of use. The navigation is as follows:

- **System Setup:** Define and edit configuration and control data:
  - Users
  - Products
  - General Setup
  - Sites
  - Prompts
- **Fuel Inventory:** Define and edit tanks and dispenser configuration data:
  - Tanks
  - Fueling Points
- **Administration:** Define and edit vehicle and user data:
  - Departments
  - Vehicle Types (template)
  - Vehicles
  - Master Employee (template)
  - Employees
- **Polling:** Set up and initiate communication with sites. Primarily used for dial-up communication.
  - Automated Polling
  - On-Demand Polling
- **Transactions:** Review and edit transaction data.
- **Reports:** Generate reports.
- **Utilities:** Tools for maintaining the iX Fleet fuel control system:
  - Communication Log
  - Database Backup/Restore
  - Data Import/Export
  - In-Dispenser Terminal Status
  - Service Log
  - Cleanup Data
  - About
  - Logout

5 SYSTEM SETUP

The System Setup section is shown in Figure 5-1.

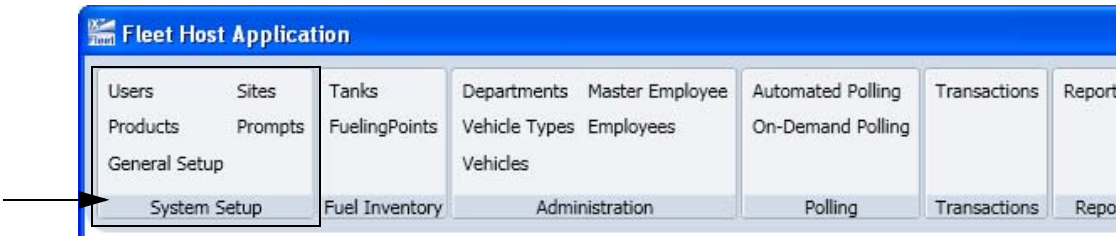


Figure 5-1 System Setup

This section details the following System Setup functions:

- Users
- Products
- General Setup
- Sites
- Prompts

> ***TIP:*** *To ensure that system setup is completed properly, perform the system setup in the order presented by this manual when setting up the system for the first time.*

5.1 Users

The **Users** selection displays Figure 5-2. Enter **Administrator** as the user name and the administrator password, and then click **Login**. The Administrator logon is the only one allowed to add, delete, or modify Users.

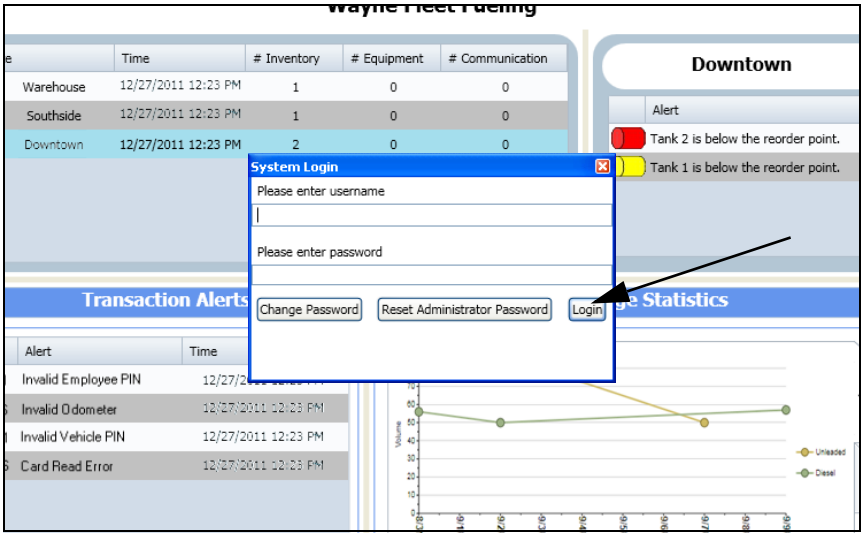


Figure 5-2 Users Sign On

The tab shown in Figure 5-3 is then displayed, allowing you to add a new user or modify an existing user that will have access to the iX Fleet fuel controller application.

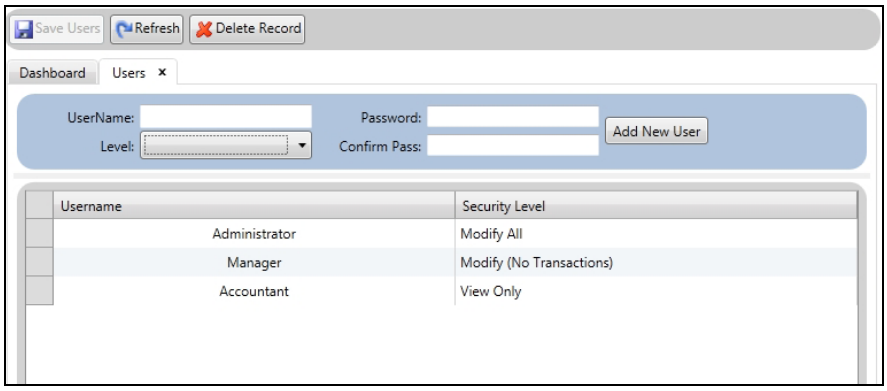


Figure 5-3 Users Tab

To add a new user, enter a **UserName** and select the security **Level**. Next, enter the desired **Password**, and then re-enter the password in the **Confirm Pass** field. Click the **Add New User** button to add the user to the list.

NOTE: The maximum length for user passwords is 30 characters.

To modify a user's access level, double click the **Security Level** pull-down box next to the desired user name. There are three access levels:

- **View Only:** View system configuration and reports. Cannot modify settings.
- **Modify (No Transactions):** View and modify reports and system configuration. Cannot modify transactions or users. Cannot perform backup or restore functions.
- **Modify All:** View and modify reports, system configuration, and transactions. Perform backup and restore functions. Cannot modify users.

5.2 Products

The **Products** selection opens the tab shown in Figure 5-4, which contains a listing of all products used in the fueling operation, including any products that can be recorded in manual transactions.

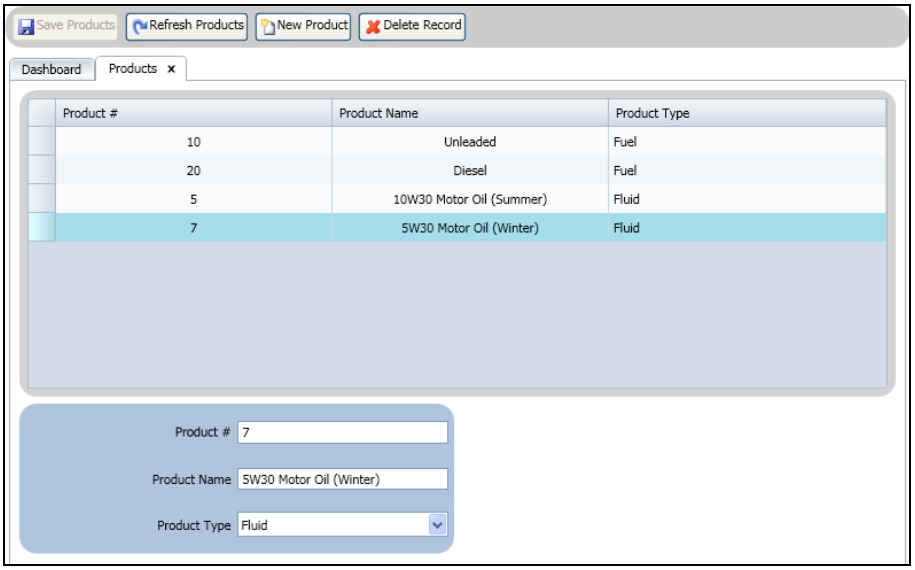


Figure 5-4 Products Tab

Click the **New Product** button to create a new entry, or select and modify an existing product.

Enter the **Product #**, the **Product Name**, and the **Product Type** (**Fuel** or **Fluid**) in the pane below the product listing.

- **Product #:** For ease of use, begin numbering the products at “1” unless a product numbering system already exists in the fueling operation.
- **Product Type:** Only Fuel products can be dispensed through a dispenser, and are assigned to tanks and fueling points in the Fuel Inventory section. The dispensing of Fluid products are recorded either at the iX Fleet IDT using the miscellaneous prompts (e.g. “Enter Oil - Quarts”), or as manual transactions.

Click **Save Products** to save any changes to the Products information.

5.3 General Setup

The **General Setup** selection opens the tab shown in Figure 5-5, where site-wide settings are configured.

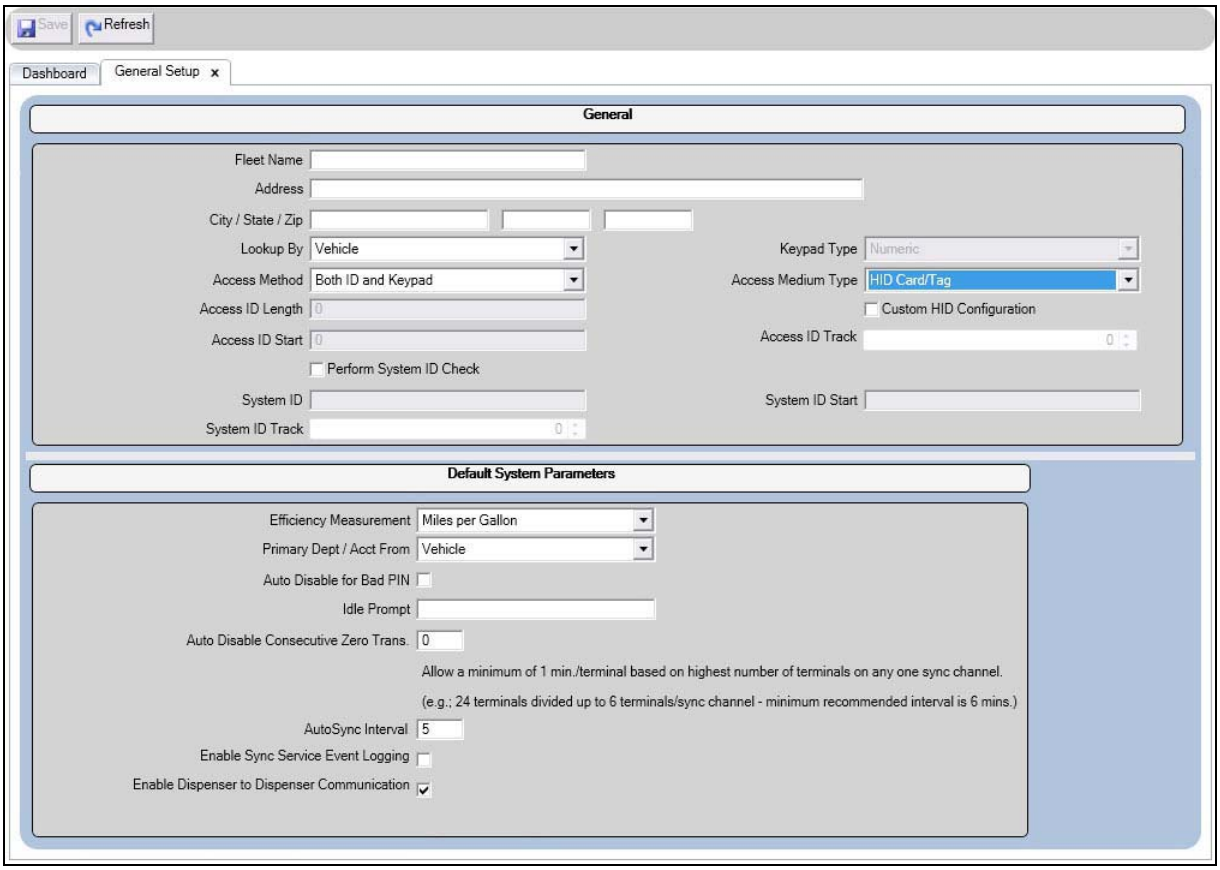


Figure 5-5 General Setup Tab

5.3.1 General

The following are the data fields in the General pane:

- **Fleet Name:** The fleet owner’s name, which appears on the Dashboard and report headings.
- **Address:** (Optional) The business address.
- **City / State / Zip:** (Optional) The business City, State and Zip Code.
- **Lookup By:** Determine whether the Access Identifier represents a Vehicle or Employee:
  - **Vehicle:** The system will match the access ID to an ID in the vehicle database. That vehicle can be set up to prompt for the keypad entry of an employee number if desired. Because the RFID fuel tags are designed to go on a vehicle key ring, this selection is typically used for RFID fuel tags. For transactions initiated with a keypad entry, the prompt entry is for the vehicle number because the vehicle access ID numbers are not typically known.

- **Employee:** The system will match the access ID to an ID in the employee database. That employee can be set up to prompt for the keypad entry of a vehicle number if desired. For transactions initiated by keypad entry, the prompted entry is for the employee number because the employee access ID numbers are not typically known.

- **Keypad Type:** (disabled) The only available option is Numeric.
- **Access Method:** Select from the options below to determine how transactions are initiated:
  - **ID Only:** Must use access medium RFID Tag, HID Card/Tag, or Magnetic Stripe Card.
  - **Keypad Only:** Must enter a vehicle or employee number (as defined in the **Lookup By** field).
  - **Both ID and Keypad**: Can use either access medium, or enter a vehicle or employee number.
- **Access Medium Type:** Select **RFID Tag**, **HID Card/Tag**, **Magnetic Stripe Card**, or **None**. If **Access Method** is **Keypad Only**, **None** will be the only available option.

  NOTE: **HID Card/Tag** includes Indala 26-bit format cards/tags.

  TIP: *The HID tag/card format and facility (FAC) code can be determined at the dispenser during the setup wizard (see Section 13.4 on page 99) by selecting the **HID** option and scanning the card/tag, or by performing the HID test in dispenser diagnostics (see Section 13.6 on page 112).*

- **Access ID Length:** (Magnetic Stripe Card, HID Corporate 1000 format (35-bit), and HID Custom format cards/tags only) Enter the length of the Access ID obtained from the card provider.

  NOTE: No entry is required for RFID tags or HID 26-bit (H10301) format cards/tags, HID 37-bit (H10302 or H10304) format cards/tags, or Indala 26-bit standard format cards/tags.
- **Custom HID Configuration:** (HID Card/Tag only) Check this box if a custom card number format is used for HID Cards/Tags. The Access ID and/or System ID fields must be set depending upon the card number format. Length and start information for the Access ID and System ID options must be obtained from the card provider.
- **Access ID Start:** (Magnetic Stripe Card, HID Corporate 1000 format (35-bit), and HID Custom format cards/tags only) The position where the Access ID starts on the card/tag. This value is obtained from the card provider.

  NOTE: No entry is required for RFID tags or HID 26-bit (H10301) format cards/tags, HID 37-bit (H10302 or H10304) format cards/tags, or Indala 26-bit standard format cards/tags.
- **Access ID Track:** (Magnetic Stripe Card only) The track (1 or 2) containing the Access ID.
- **Perform System ID Check:** (Magnetic Stripe Card and HID Card/Tag only - not available for HID 37-bit (H10302) cards/tags) Enable this option if cards/tags have an ID for verifying that the cards/tags are authorized for use with the system. Enabling this option also activates the following data fields:
  - ***System ID:*** The system identifier encoded on the card/tag.
  - ***System ID Start:*** The position where the system ID starts on the card/tag. This value is obtained from the card provider.
    - For HID 26-bit (H10301) format cards/tags, HID 37-bit (H10304) format cards/tags, or Indala 26-bit standard format cards/tags, enter **0** (zero).
    - For HID Corporate 1000 format (35-bit) and HID Custom format cards/tags, this value is obtained from the card provider.
  - ***System ID Track:*** (Magnetic Stripe Card only) The track (1 or 2) containing the System ID.

5.3.2 Default System Parameters

The following are the data fields in the Default System Parameters pane:

- **Efficiency Measurement:** This setting specifies how efficiency is measured for reporting purposes. Select an appropriate setting based upon the unit of measure typically used by the fleet's odometers (Hours, Miles, or Kilometers) and the unit of measure used to dispense fuel (Liters or Gallons). The available options are **Miles per Gallon**, **Hours per Gallon**, **Liters per 100km**, **Liters per Hour**, **Kilometers per Liter**, and **Hours per Liter**.
- **Primary Dept / Acct From:** This setting determines whether fueling transactions are recorded under the employee department or the vehicle department. and depends upon how the business performs accounting. For example, if individual vehicles are at the disposal of multiple employees for business purposes, it is better to track fueling by the vehicle department. However, if individual employees have access to multiple vehicles, it is better to track fueling by employee.
- **Auto Disable for Bad PIN:** Designates whether to automatically lock out a related employee or vehicle if the maximum number of PIN tries is reached.
- **Idle Prompt:** Enter the prompt that will be displayed at the dispenser while waiting for a transaction to begin. A maximum of 44 characters is allowed.

  NOTE: After updating the Idle Prompt one transaction must be performed, or started and canceled, at the dispenser before the prompt will change.
- **Auto Disable Consecutive Zero Trans.:** Number of zero quantity transactions allowed before a dispenser is automatically disabled under the assumption that an equipment failure has occurred and the dispenser is not recording fuel. Transactions that are cancelled at the dispenser are not counted as zero quantity transactions. This setting applies to all dispensers at the site, but individual dispenser settings will take precedence. See Section 6.2.1 on page 36.

  NOTE: The dispenser iGEM electronics also have a separate consecutive no flow event timer. Whichever setting is lowest disables the dispenser.
- **AutoSync Interval:** (default 5) This option is the interval, in minutes, between automatic synchronizations of data between the dispensers and the host. If set to **0** automatic synchronization will not occur and dispensers must be manually synchronized.

  TIP: *For best performance, the AutoSync Interval should be set to allow 1 minute per dispenser assigned to the most-populated channel. For example, a site with 22 dispensers would ideally have two channels with six dispensers each, and two channels with five dispensers each. The AutoSync Interval should be set to a minimum of 6 minutes.*

  NOTE: To eliminate repeated sync service error messages on the dashboard, unused sync services should be disabled. Sync services that are manually stopped using the Stop Service buttons will automatically restart at the configured restart time. However, a disabled sync service will not automatically restart. See Section 16.4 on page 131 for instructions to disable unused sync services.
- **Enable Sync Service Event Logging:** In the event of a system issue, check this box to have the Sync Service log errors and informational events to the Windows Application Event Log.
- **Enable Dispenser to Dispenser Communication:** By default, the IDTs synchronize data with each of the other IDTs. However, a large number of dispensers might cause network communication issues at some sites. Uncheck this box to disable data synchronization between IDTs.

Click **Save** to save any changes to the General Setup information.

5.4 Sites

The **Sites** selection opens the tab shown in Figure 5-6 listing all sites set up in the system. Click the **New Site** button to add a new site, or click an existing site to select and modify it. When you have finished entering or modifying site information, click the **Save Sites** button to save changes to the Sites information.

NOTE: The “Offsite” entry is used to record offsite fueling and cannot be deleted.

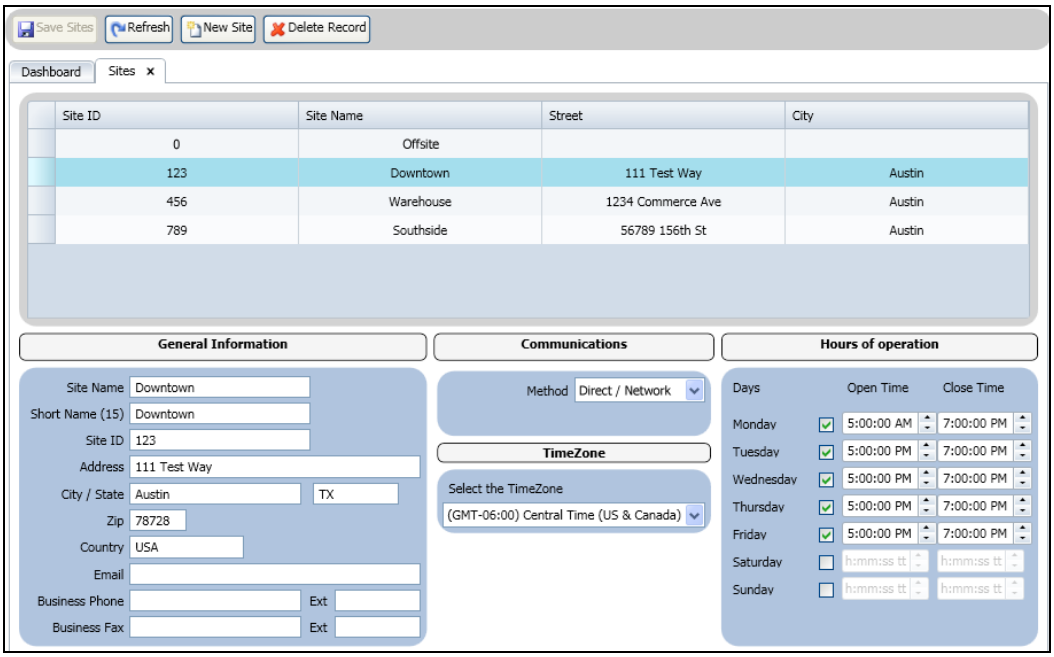


Figure 5-6 Sites Tab

5.4.1 General Information

The following are the data fields in the General Information pane:

- **Site Name:** - The site’s name
- **Short Name (15):** - Short version of the Site Name, which is used for report headings if the site name is too long; can be a maximum of 15 characters
- **Site ID:** Unique site identifier

  TIP: *Start numbering sites with "1" unless unique site numbers already exist.*

- **Address:** (Optional) Street address of the site
- **City / State:** (Optional) City and State of the site
- **Zip:** (Optional) Zip code of the site
- **Country:** (Optional) Country of the site
- **Email:** (Optional) Email address of the site
- **Business Phone:** (Optional) The phone number of the site
- **Business Fax:** (Optional) The fax number of the site

5.4.2 Communications

In the Communications pane, click the **Method** pull-down and select **Direct / Network**. This is the only supported communication option.

5.4.3 TimeZone

Select the time zone in which the site is located from the pull-down list.

5.4.4 Hours of Operation

Hours of Operation allows you to specify when the fueling points at the site will be accessible for fueling. The fueling points at the site will only be available to dispense fuel between the open time and close time for the selected day(s).

Setting the Hours of Operation is optional. If no days are selected, then the fueling points at the site will be available to dispense fuel at any time on any day.

> ***TIP:*** *The Hours of Operation can also be set for individual fueling points on the Fueling Points tab. If your Hours of Operation will vary by fueling point, it is better to set the* ***Hours of Operation*** *on the Fueling Points tab, and leave* ***Hours of Operation*** *on the Sites tab unconfigured.*

To configure the Hours of Operation, check the days that the site is open for fueling and then enter the **Open Time** and **Close Time** for each day. To enter the open and close times, click the field for the time and then use the up or down arrows on the right side of the field to set the time. The up/down arrows will adjust the time in 5 minute increments.

> ***TIP:*** *You can also type the time in the field using the following format: HH:MM:SS AM/PM. For example, you would enter the following times by typing the values in quotes:*
>
> *5:00:00 AM - "5am"*
> *8:30:00 AM - "8:30am"*
> *7:05:45 PM - "7:5:45pm"*

5.5 Prompts

The **Prompts** selection opens the following tab with a listing of all prompts available to select from when setting up the authorization process for vehicles and employees. A default list is provided. You can edit the existing prompts or add new prompts. Click the **New Prompt** button to add a new entry or click to select and edit one of the existing prompts.

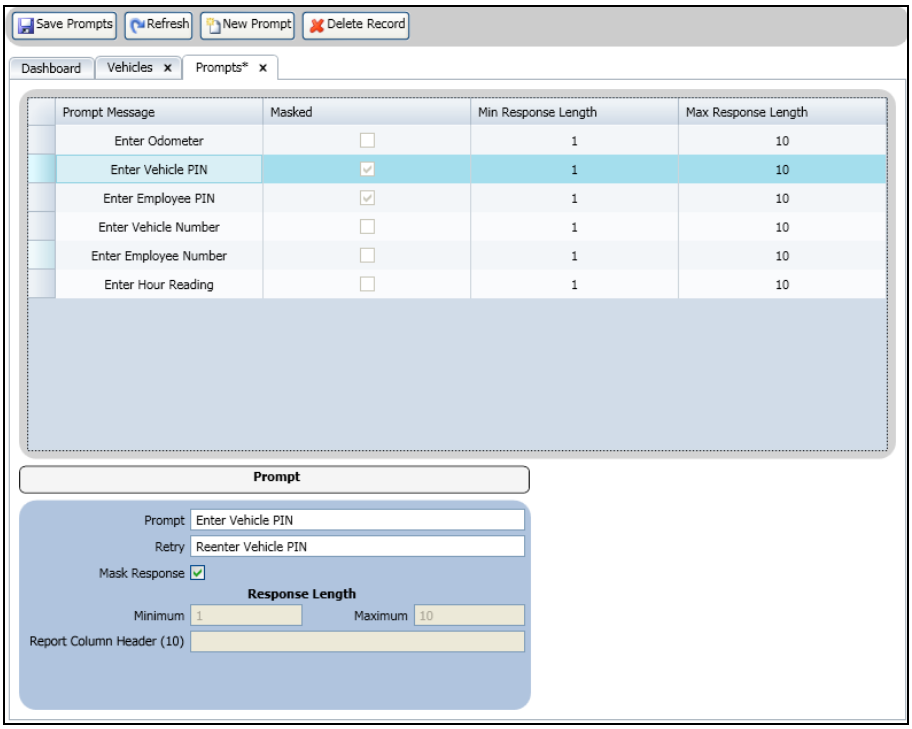


Figure 5-7 Prompts Tab

TIP: *If you want to use another name for an employee or vehicle prompt to match the terminology used by your organization, you must edit the existing prompt because it is linked to other functionality. For example, if you would rather use "equipment" instead of "vehicle", modify the "Enter Vehicle Number" prompt to say "Enter Equipment Number". However, in the vehicle file, the field will still be labeled "Vehicle Number" because it is fixed in the file. For miscellaneous entry prompts, like "Enter Job Number," you can create a new prompt.*

Enter the following information to define a prompt:

- **Prompt:** The prompt as it will appear at the fueling point
- **Retry:** An alternate prompt displayed for response entry retries
- **Mask Response:** When checked displays "*" instead of the response entry for security
- **Response Length:** Minimum and maximum length allowed for response entries

  NOTE: The Response Length for the default system prompts cannot be modified as it is linked to other functionality within the iX Fleet fuel control system.
- **Report Column Header:** The name of the prompt as it will appear on reports (maximum 10 characters). This option only applies to miscellaneous prompts, and cannot be modified for the default system prompts.

6 FUEL INVENTORY

The Fuel Inventory section is shown in Figure 6-1.

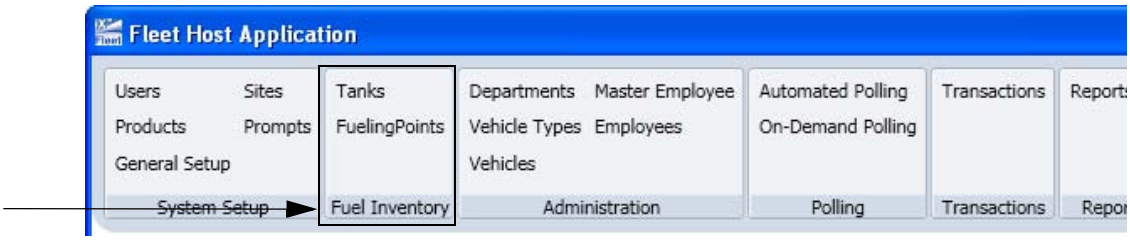


Figure 6-1 Fuel Inventory

This section details the following Fuel Inventory functions:

- Tanks
- Fueling Points

6.1 Tanks

The **Tanks** selection opens the following tab listing all tanks in the system. Click the **New Tank** button to add a new tank, or select and modify an existing tank. You can configure the tank options, add a delivery, or make inventory adjustments.

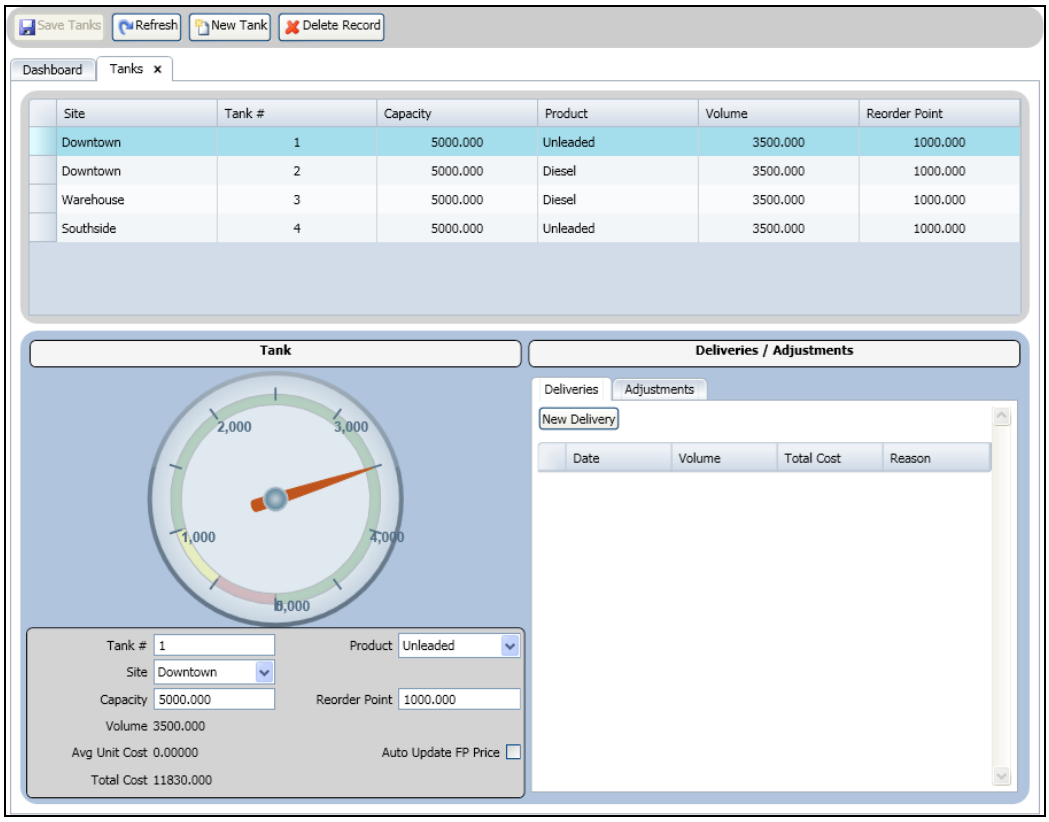


Figure 6-2 Tanks Tab

6.1.1 Tank

Enter the following information to define a tank:

- **Tank #:** Enter the tank number. For ease of use, begin numbering the tanks at “1” unless a numbering system already exists in the fueling operation.

- **Product:** Use the pull-down to select the product in the tank. If a desired product is not available, then it must be added in the Products tab.
- **Site:** Use the pull-down to select the site where the tank is located.
- **Capacity:** The tank capacity.
- **Reorder Point:** Volume at which to reorder product. When the tank level drops below this point, an alert is created on the dashboard.
- **Auto Update FP Price:** Enable this option to make all fueling points attached to this tank use the Average Unit Cost as the price for fueling transactions.

The following information is calculated:

- **Volume:** Current Tank Volume + Deliveries Quantities - Transaction Quantities.
- **Avg Unit Cost:** (Current Total Cost + Delivery Cost) / (Current Tank Volume + Delivery Quantity). Calculated at the time each delivery is entered into the system (NOT when the delivery actually occurs). Calculated to five decimal places to minimize rounding effect in the Total Cost calculation.
- **Total Cost:** Tank Volume x Average Unit Cost. For example, a 5000 gallon delivery @ $3.00/gallon produces the following results:

	Current	After Delivery
Tank Volume	4355.000	9355.000
Average Unit Cost	2.67000	2.84638
Total Cost	11,627.85	26,627.88

Tank volume and cost can be incremented/decremented by entering positive/negative adjustments on the Adjustments tab.

> ***TIP:*** *For the most accurate average costs, enter delivery information into the system as close to the actual delivery as possible so transactions which occur directly after the delivery reflect the actual new average cost.*

6.1.2 Deliveries

Select the Deliveries tab to show a list of all delivery entries for the selected tank.

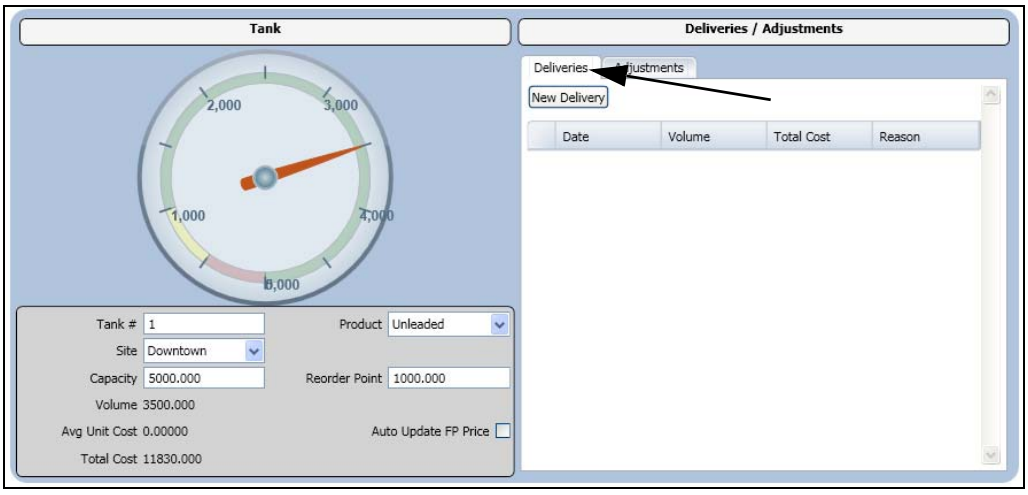


Figure 6-3 Tanks - Deliveries Tab

Click the **New Delivery** button to enter the following information to create a new delivery:

- Set the delivery **Date**.
- Enter the **Volume** of the delivery for the specified tank.
- Enter the **Total Cost** of the delivery for the specified tank.

- Enter any comments that you might have about the delivery in the **Reason** field.

Click **Save Tanks** to save changes to the Tanks information.

NOTE: Upon entering a delivery that generates a new average cost, you are given the option to modify transactions that occurred after the delivery date with the new average cost if the **Auto Update FP Price per Unit** box is checked.

6.1.3 Adjustments

Click the Adjustments tab to show a list of all adjustment entries for the selected tank.

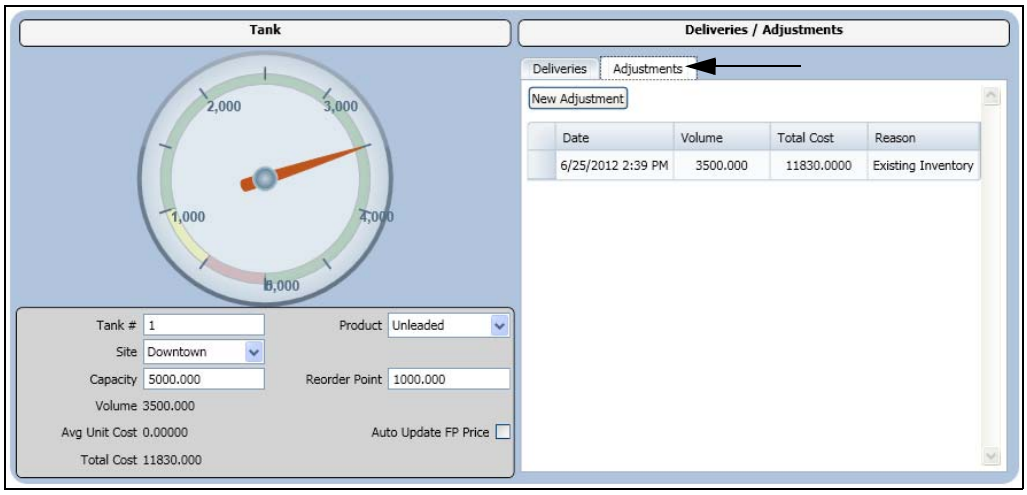


Figure 6-4 Tanks - Adjustments Tab

Click the **New Adjustment** button to enter a new adjustment to increase or decrease the volume and/or total cost of the tank's current inventory. Enter the following information:

- Set the adjustment **Date**.
- Enter the **Volume** of the adjustment for the specified tank. Positive values will increase the tank volume, and negative values will decrease the tank volume.
- Enter the **Total Cost** of the adjustment for the specified tank.
- Enter any comments that you may have about the adjustment in the **Reason** field.

Click **Save Tanks** to save changes to the Tanks information.

NOTE: Upon entering an adjustment that generates a new average cost, you are given the option to modify transactions that occurred after the adjustment date with the new average cost if the **Auto Update FP Price per Unit** box is checked.

6.2 Fueling Points

The **Fueling Points** selection opens the tab shown in Figure 6-5 which displays a list of all Fueling Point assignments. Click the **New Fueling Point** button to add a new fueling point, or select an existing fueling point.

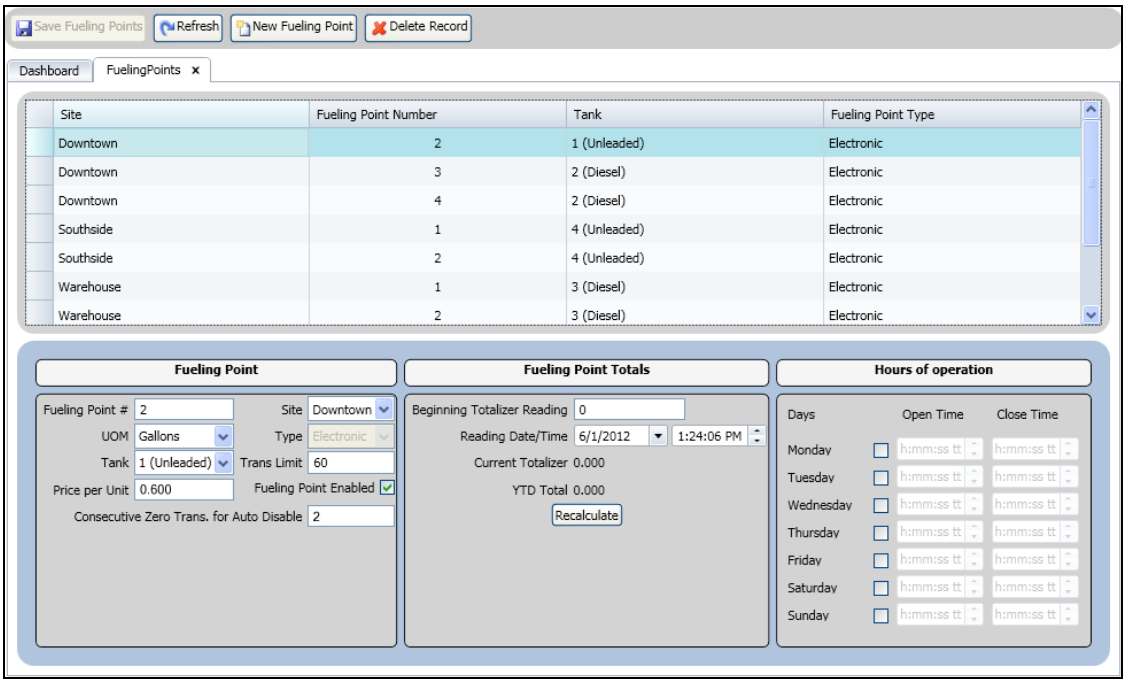


Figure 6-5 Fueling Points Tab

6.2.1 Fueling Point

Enter the following information to define a fueling point:

- **Fueling Point #:** Define the fueling point number.

  TIP: *Begin numbering the fueling points at "1" unless a fueling point numbering system already exists in the fueling operation. You can match the fueling point number to the product dispensed if you only have one hose per product at the site.*

- **Site:** Select the site where the fueling point is installed.
- **UOM:** Unit of measure (gallons or liters).
- **Type:** The only available option is Electronic, so this field cannot be changed.
- **Tank:** The tank that feeds the fueling point.
- **Trans Limit:** Maximum units allowed during a transaction. The maximum units allowed during a transaction will be the lower of the Fueling Point and Vehicle transaction limits.
- **Price per Unit:** Price, or cost, per unit of measure. The desired price per unit can be entered into this field and will be downloaded to the dispenser for transaction pricing. If the **Automatically Update FP Price per Unit** check box on the Sites tab is checked, then this field shows the average unit cost of the product and cannot be modified. If the dispenser is equipped with price displays the price on the dispenser unit price display will also be updated.
- **Fueling Point Enabled:** Check this box to enable the fueling point. If this box is not checked the fueling point is disabled and the color of the workspace background becomes red.
- **Consecutive Zero Trans. for Auto Disable:** Number of consecutive zero quantity transactions before a lockout occurs. This value defaults to the system-wide **Consecutive Zero Trans. for Auto Disable** from General Setup. It can be modified per fueling point, if desired.

6.2.2 Fueling Point Totals

Enter the following information to change the display of the totals for the fueling point:

- **Beginning Totalizer Reading:** Starting value for the fueling point accumulative totalizer.

  TIP: *Enter the value from the dispenser's accumulative totalizer at the point when the system will start recording transactions, or at any time you wish to re-synchronize the dispenser and system accumulative totalizers. This process allows the dispenser's accumulative totalizer to be compared to the system's accumulative totalizer to determine if the dispenser has been put into manual mode to override system control.*

- **Reading Date/Time:** Date and Time to start adding quantities from recorded transactions to the accumulative totalizer. This process allows you to take a reading from the dispenser and not have to instantaneously enter it into the system for the totalizers to be in sync.
- **Current Totalizer:** Accumulator starting value plus transactions since the Reading Date/Time.
- **YTD Total:** Transaction quantity for the year-to-date.
- **Recalculate:** Update the Current Totalizer value to include all transactions.

6.2.3 Hours of Operation

Hours of Operation allows you to specify when the individual fueling point will be available for fueling. The fueling point will only dispense fuel between the open time and close time for the selected day(s).

Setting the Hours of Operation is optional. If no days are selected, then the fueling point will be available to dispense fuel at any time on any day.

TIP: *The Hours of Operation can also be set for the entire site on the Sites tab. If your Hours of Operation will not vary by fueling point, it is better to set the* ***Hours of Operation*** *on the Sites tab and leave the* ***Hours of Operation*** *on the Fueling Points tab unconfigured.*

To configure the Hours of Operation, check the days that the fueling point is available for fueling and then enter the **Open Time** and **Close Time** for each day. To enter the open and close times, click the field for the time and then use the up or down arrows on the right side of the field to set the time. The up/down arrows will adjust the time in 5 minute increments.

TIP: *You can also type the time in the field using the following format: HH:MM:SS AM/PM. For example, you would enter the following times by typing the values in quotes:*

5:00:00 AM - “5am”
8:30:00 AM - “8:30am”
7:05:45 PM - “7:5:45pm”

7 ADMINISTRATION

The Administration section is shown in Figure 7-1.

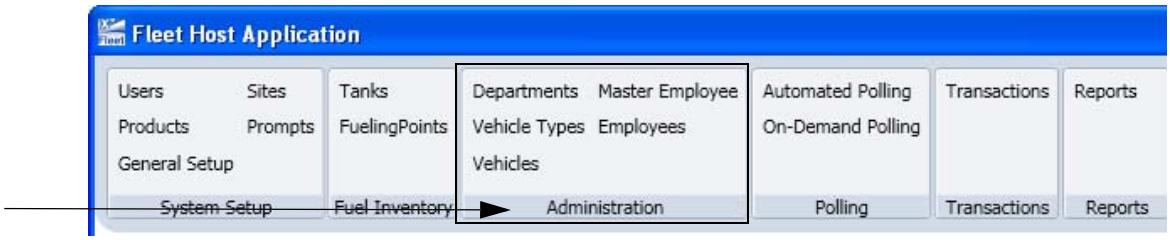


Figure 7-1 Administration

This section details the following Administration functions:

- Departments
- Vehicle Types
- Vehicles
- Master Employee
- Employees

7.1 Departments

The Departments tab is where departments or accounts are defined. This field can refer to departments for intra-company fueling operations, or to accounts if more than one company are fueling at the site. Its main benefit is for grouping information in reports. Click the **New** button to define a new Department, or select and modify an existing entry.

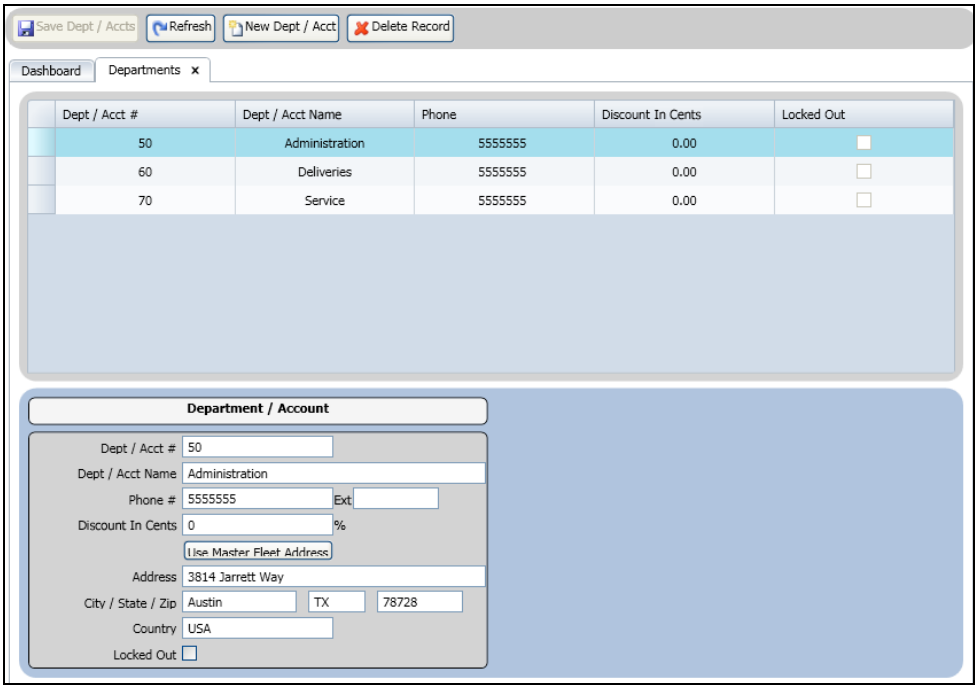


Figure 7-2 Departments Tab

From the Departments tab, enter the following information:

- **Dept / Acct #:** Unique department or account identifier.
- **Dept / Acct Name:** Department or Account Name.
- **Phone #** and **Ext:** Phone number, and extension if applicable (for reference only).

- **Discount In Cents:** Amount in whole cents to discount the price per unit, which can be 0.00 - 99.00 cents. Positive values increase the price per unit (for “cost plus” pricing) and a negative value decreases (discounts) the price per unit. For example, entering “-5.00” applies a discount of 5 cents.

  NOTE: If the set discount amount is greater than the fuel unit price at a fueling point, the transaction will be authorized with a $0.00 unit price.
- **Use Master Fleet Address:** Use the Fleet main address as this dept / account address.
- **Address, City, State, ZIP and Country:** Department/Account’s information (for reference only).
- **Locked Out:** Check this box if you wish to lock an entire department/account from fuel access.

7.2 Vehicle Types

The Vehicle Types tab is where the different vehicle types are defined. Vehicle Types are used to group similar vehicles together for reporting purposes and to facilitate data entry. The control parameters for a vehicle type automatically populate individual vehicle fields when that vehicle type is assigned to a vehicle. This feature saves having to repeatedly enter the same parameters in individual vehicle records. Click the **New Vehicle Type** button to define a new Vehicle Type, or select and modify an existing Vehicle Type.

NOTE: After a Vehicle Type is selected in a vehicle record, the automatically populated fields can then be individually updated as desired. If the fields in the Vehicle Type are updated, the corresponding fields in any existing vehicle records are NOT updated. The values in **Vehicle Type** fields are applied to an individual vehicle record only when the Vehicle Type is initially selected for the vehicle record.

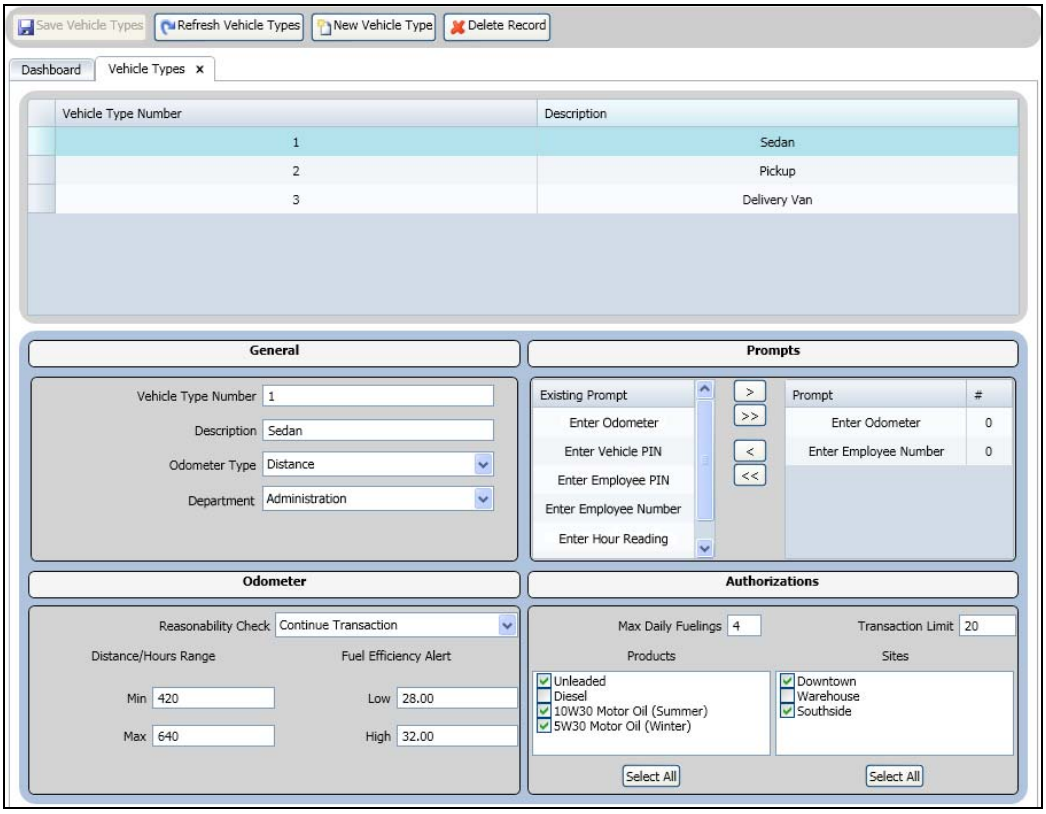


Figure 7-3 Vehicle Types Tab

7.2.1 General

Enter the following information in the General pane to define a Vehicle Type:

- **Vehicle Type Number:** Unique number identifier for this vehicle type

  TIP: *Begin numbering the vehicle type at "1" unless another numbering system is desired.*

- **Description:** Vehicle type description (e.g "Delivery Van")
- **Odometer Type:** The type of odometer measurement (distance or hours)
- **Department:** The Department to which this vehicle type will typically be assigned

7.2.2 Odometer

Enter the following information in the Odometer pane to define a Vehicle Type:

- **Reasonability Check:** How to handle an odometer entry that is out of range. The following options are available:
  - **Not Required:** No check is required. Therefore, whatever is entered is immediately accepted.
  - **Continue Transaction:** If an "in-range" odometer reading is not entered within the allowed prompt retries, record the last entry and flag the transaction.
  - **Cancel Transaction:** If an "in-range" odometer reading is not entered within the allowed prompt retries, end the transaction authorization session.

  TIP: *Select the **Cancel Transaction** setting for vehicle types for which you wish to enforce getting valid odometer readings. Avoid using this setting for emergency vehicles or vehicles that frequently fuel off-site.*

- **Distance/Hours Range:** The range (minimum and maximum) a vehicle type typically travels or operates between fuelings. For an odometer reading to be accepted by the system it must be greater than the previous reading plus the range minimum, but less than the previous reading plus the range maximum. This feature helps enforce the entry of accurate odometer information.
- **Fuel Efficiency Alert:** The Low and High fuel efficiency limits (miles per gallon, kilometers per liter, etc.). A "Fuel Efficiency Alert" is triggered if the fuel efficiency falls outside of this range.

  TIP: *A low alert might indicate a vehicle maintenance problem, fuel theft, or inaccurate odometer entry. A high alert might indicate an off-site fueling that was not recorded, or inaccurate odometer entry.*

7.2.3 Prompts

Complete these steps in the Prompts pane to define prompts for a Vehicle Type:

1. Select a prompt from the Existing Prompt list on the left. The prompts are configured on the Prompts tab in System Setup.
2. Click "**>**" to move the selected prompt to the Prompt list on the right. Click "**<**" to remove a prompt from the Prompt list. Click "**<<**" to completely clear the Prompt list. Clicking "**>>**" moves all prompts to the Prompt list, which is not practical.
3. Repeat the above steps for additional prompts as needed.
4. Click the # column field and enter the number of retries to allow for the prompt.
5. To change the order in which the prompts are presented, right-click a prompt and select an option from the popup menu. The prompt can be moved up or down by one position, or to the top or bottom of the Prompt list.

   TIP: *You never want to use the "Enter Vehicle Number" prompt in Vehicle Types or Vehicles. During a transaction, the vehicle number must already have been entered for the system to access the Vehicle record.*

TIP: *If recording odometer entries, having "Enter Odometer" as the first prompt is recommended because it is easier for the user to accurately remember right after getting out of the vehicle.*

TIP: *For systems where the access ID identifies vehicles, but you also want to authorize employees, add the "Enter Employee Number" prompt as the last prompt after the vehicle-related prompts. Any other Employee-related prompts should be added in Master Employee or Employees.*

7.2.4 Authorizations

Enter the following information in the Authorizations pane to define a Vehicle Type:

- **Max Daily Fuelings:** Maximum number of fuelings allowed per day. The maximum daily fuelings coupled with the transaction limit also control the maximum amount of fuel per day (transaction limit x maximum fuelings per day). Blank or zero equals no maximum.
- **Transaction Limit:** Maximum quantity of fuel allowed in one transaction. The transaction limit helps provide security (limiting fuel theft) and safety (if a drive-off occurs that allows the dispenser to dispense, it will automatically cut-off at the transaction limit). The lower limit value of the Vehicle transaction limit and the Fueling Point transaction limit will prevail.

  NOTE: The Transaction Limit must be greater than 0 (zero). Setting Transaction Limit to 0 will cause transaction errors at the dispenser and prevent fueling.

  TIP: *Set the transaction limit amount close to the tank size of the vehicle type because there is no need to dispense more fuel than the tank can hold.*

- **Products:** Allowable product(s) to fuel.
- **Sites:** Site(s) where fueling is allowed.

7.3 Vehicles

The Vehicles tab is where the individual vehicles are defined. Click the **New Vehicle** selection to add a new vehicle, or select and modify an existing vehicle.

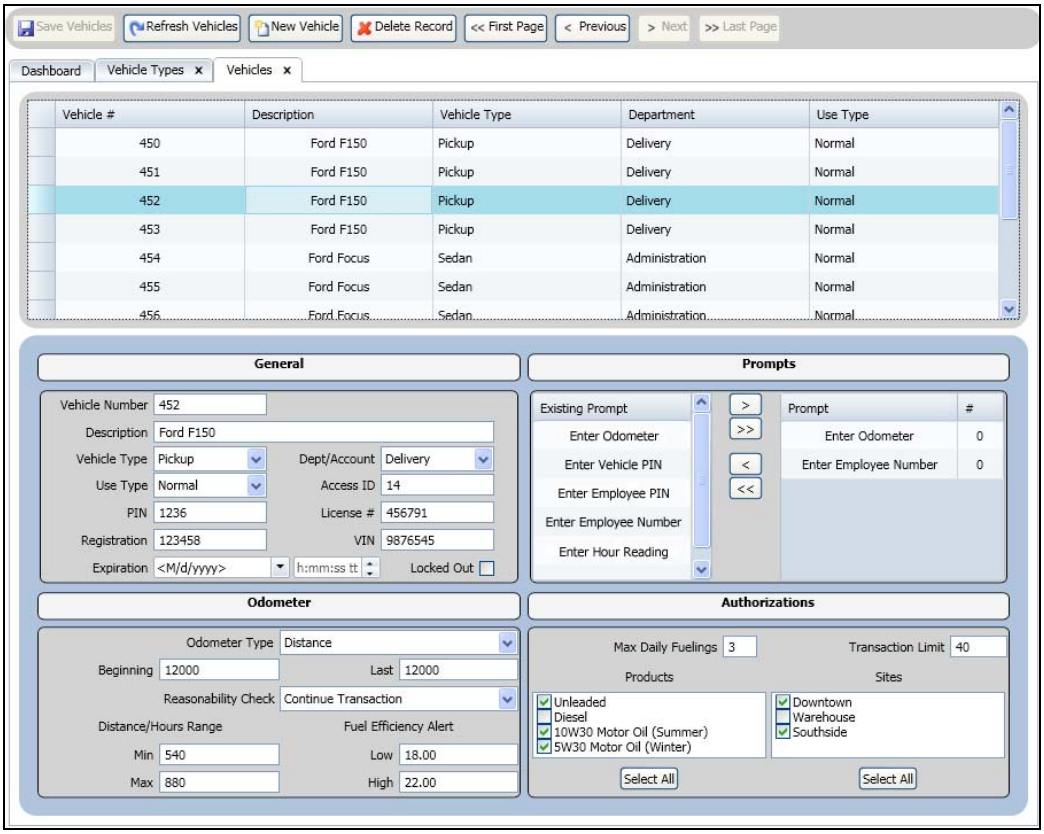


Figure 7-4 Vehicles Tab

7.3.1 General

Enter the following information in the General pane to define a Vehicle:

- **Vehicle Number:** Unique numeric identifier for the vehicle. The same numbers cannot be repeated!

  TIP: *If different accounts use existing vehicle numbering systems that overlap, you have two choices: (1) assign new unique vehicle numbers for the fueling system and record the existing numbers in an unused reference field (i.e. License #, Registration, or VIN), or (2) add a digit to the beginning of the existing vehicle number that identifies the account (e.g. the first account's vehicle numbers have "1" as the first digit, while the second account's vehicle numbers have "2" as the first digit).*

- **Description:** Vehicle description (e.g. 2001 Ford F150 White).
- **Vehicle Type:** The type of vehicle. Selecting a vehicle type prompts you to automatically apply the vehicle type's default values to the selected vehicle. Click **No** to manually specify all settings, or click **Yes** to apply the vehicle type's settings. Individual settings can be changed manually.

  NOTE: After clicking **Yes** to automatically populate the defined Vehicle Type settings, you can still change any of vehicle record's settings as you desire.

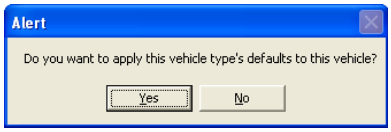


Figure 7-5 Confirm Applying Vehicle Type Settings

- **Dept/Account:** Department or account that the vehicle is associated with.
- **Use Type:** Use Type allows a vehicle access ID to be turned into a special supervisor access ID. This access ID can be used by a supervisor to initiate a transaction when the user does not have a normal vehicle access ID (i.e. lost). When the **Use Type** field is set to **Supervisor**, the first prompt will be “Enter Vehicle Number”. At that point, the system looks up that vehicle number and proceeds as if it read the corresponding access ID from a tag or card. For standard vehicle records, set this field to “Normal”. For employee-based systems (access ID identifies employee), the supervisor capability must instead be set up in Employees.
- **Access ID:** Unique access ID encoded on the RFID tag or magnetic stripe card that identifies the vehicle. For employee-based systems (access ID links to employee), this field is not used.
- **PIN:** (Optional) Personal Identification Number (4 digits are recommended)

  TIP: *Vehicle PINs are only recommended when vehicles are permanently assigned to one person and recording the employee is not desired.*

- **License #:** (Optional) License number
- **Registration:** (Optional) Vehicle registration number
- **VIN:** (Optional) Vehicle Identification Number
- **Expiration:** (Optional) Date at which the vehicle will be automatically locked out from accessing fuel.
- **Locked Out:** Check this box to manually lock out a vehicle from fueling. When a vehicle is locked out, the color of the workspace background is red as shown in Figure 7-6.

Figure 7-6 Locked Out Vehicle Rziecord

7.3.2 Odometer

Enter the following information in the Odometer pane to define a Vehicle:

- **Odometer Type:** Enter the odometer type (hours or distance)
- **Beginning:** Odometer reading for the vehicle when entered into the system. If left blank the first odometer entry recorded will populate this field.
- **Last:** Odometer reading recorded from the last fueling transaction
- **Reasonability Check:** How to handle an odometer entry that is out of range. The following options are available:
  - **Not Required:** No check is required. Therefore, whatever is entered is immediately accepted.
  - **Continue Transaction:** If an “in-range” odometer reading is not entered within the allowed prompt retries, record the last entry and flag the transaction.
  - **Cancel Transaction:** If an “in-range” odometer reading is not entered within the allowed prompt retries, end the transaction authorization session.

  TIP: *Select the “Cancel Transaction” setting for vehicle types for which you wish to enforce getting valid odometer readings. Avoid using this setting for emergency vehicles or vehicles that frequently fuel off-site.*

- **Distance/Hours Range:** The range (minimum and maximum) a vehicle type typically travels or operates between fuelings. For an odometer reading to be accepted by the system it must be greater than the previous reading plus the range minimum, but less than the previous reading plus the range maximum. This feature helps enforce the entry of accurate odometer information.
- **Fuel Efficiency Alert:** The Low and High fuel efficiency limits (miles per gallon, kilometers per liter, etc.). A “Fuel Efficiency Alert” is triggered if the fuel efficiency falls outside of this range.

  TIP: *A low alert might indicate a vehicle maintenance problem, fuel theft, or inaccurate odometer entry. A high alert might indicate an off-site fueling that was not recorded, or inaccurate odometer entry.*

7.3.3 Prompts

Complete these steps in the Prompts pane to define a Vehicle:

1. Select a prompt from the Existing Prompt list on the left. The prompts are configured on the Prompts tab in System Setup.
2. Click “**>**” to move the selected prompt to the Prompt list on the right. Click "**<**" to remove a prompt from the Prompt list. Click "**<<**" to completely clear the Prompt list. Clicking "**>>**" moves all prompts to the Prompt list, which is not practical.
3. Repeat the above steps for additional prompts as needed.
4. Click the # column field and enter the number of retries to allow for the prompt.
5. To change the order in which the prompts are presented, right-click a prompt and select an option from the popup menu. The prompt can be moved up or down by one position, or to the top or bottom of the Prompt list.

   TIP: *You never want to use the “Enter Vehicle Number” prompt in Vehicle Types or Vehicles. During a transaction, the vehicle number must already have been entered for the system to access the Vehicle record.*

   TIP: *If recording odometer entries, having "Enter Odometer" as the first prompt is recommended because it is easier for the user to accurately remember right after getting out of the vehicle.*

   TIP: *For systems where the access ID identifies vehicles, but you also want to authorize employees, add the "Enter Employee Number" prompt as the last prompt after the vehicle-related prompts. Any other Employee-related prompts should be added in Master Employee or Employees.*

7.3.4 Authorizations

Enter the following information in the Authorizations pane to define a Vehicle:

- **Max Daily Fuelings:** Maximum number of times this vehicle can fuel in one day (zero or blank for no limit). The maximum daily fuelings coupled with the transaction limit also controls the maximum amount of fuel per day (transaction limit x maximum fuelings per day).
- **Transaction Limit:** Maximum dispensed quantity allowed per transaction. The transaction limit helps provide security (limiting fuel theft) and safety (if a drive-off occurs that allows the dispenser to dispense, it will automatically cut-off at the transaction limit). The lower limit value of the Vehicle transaction limit and the Fueling Point transaction limit will prevail.

  NOTE: The Transaction Limit must be greater than 0 (zero). Setting Transaction Limit to 0 will cause transaction errors at the dispenser and prevent fueling.

  TIP: *Set the transaction limit amount close to the tank size of the vehicle because there is no need to dispense more fuel than the tank can hold.*

- **Products:** Allowable product(s) to be dispensed.

- **Sites:** Location(s) to fuel that are authorized.

7.4 Master Employee

The Master Employee tab is an employee programming template that defines common control parameters and prompt messages. These parameters and messages can be used when creating employees for the fleet system to save data entry time. The parameters and prompt messages can then be changed at the individual employee level as desired.

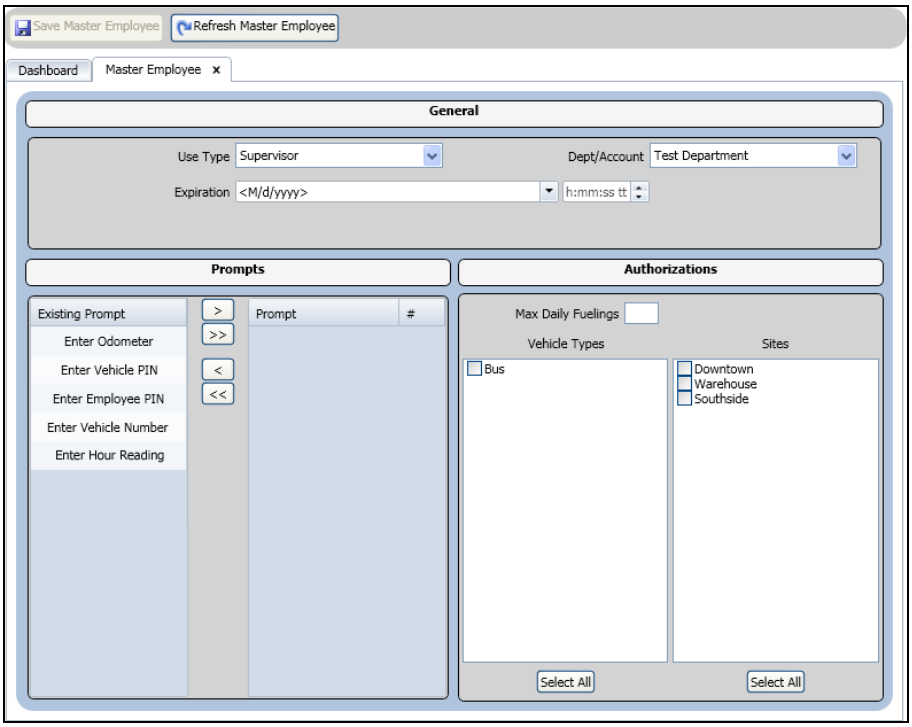


Figure 7-7 Master Employee Tab

Enter the following data to define the Master Employee, and then click the **Save Master Employee** button to save the settings for the Master Employee.

If you have employee groups that will require the same data, perform the following steps to reduce data entry time during initial setup:

1. Set up the Master Employee to match the requirements of one employee group, and then enter all employees in that group. See Section 7.5.
2. Change the Master Employee to match the requirements for the next group, and then enter all employees in that group.
3. Repeat the above steps for each employee group until all employees have been entered, and then change the Master Employee to match the requirements for the most commonly created employees.

7.4.1 General

Enter the following information in the General pane to manage the Master Employee:

- **Use Type:** Default Use Type, which defines whether the employee file is for a normal employee or has special supervisor capabilities. For the master employee template, the “normal” setting is recommended.
- **Dept/Account:** Default Department or Account
- **Expiration:** Enable or disable the expiration function which automatically locks out a user from fuel access at a predetermined date

7.4.2 Prompts

Complete these steps in the Prompts pane to manage the Master Employee:

1. Select a prompt from the Existing Prompt list on the left. The prompts are configured on the Prompts tab in System Setup.
2. Click “**>**” to move the selected prompt to the Prompt list on the right. Click "**<**" to remove a prompt from the Prompt list. Click "**<<**" to completely clear the Prompt list. Clicking "**>>**" moves all prompts to the Prompt list, which is not practical.
3. Repeat the above steps for additional prompts as needed.
4. Click the # column field and enter the number of retries to allow for the prompt.
5. To change the order in which the prompts are presented, right-click a prompt and select an option from the popup menu. The prompt can be moved up or down by one position, or to the top or bottom of the Prompt list.

   TIP: *Never use the “Enter Employee Number” prompt in Master Employee or Employees. During a transaction, the employee number must already have been entered for the system to access the Employee record.*

   TIP: *For systems where the access ID identifies the vehicle, do not use an “Enter Vehicle Number” prompt because the vehicle has already been identified by the access ID. In this case the only relevant employee prompts are for an employee PIN or other miscellaneous prompts. In a vehicle-based system, there might not be any prompts in Master Employee or Employees.*

   TIP: *For systems where the access ID identifies the employee, but you also want to authorize the vehicle, add the "Enter Vehicle Number" prompt as the last prompt after the employee-related prompts. Any other Vehicle-related prompts should be added in Vehicle Types or Vehicles.*

7.4.3 Authorizations

Enter the following information in the Authorizations pane to manage the Master Employee:

- **Max Daily Fuelings:** Maximum number of times that the employee can fuel a vehicle in one day (zero or blank for no limit)
- **Vehicle Types:** List of vehicle types that the employee is allowed to operate
- **Sites:** List of sites where the employee is allowed to fuel

When you are finished defining the Master Employee, click the **Save Master Employee** button to save the settings.

7.5 Employees

The Employees tab is where individual employee control parameters and prompts are set.

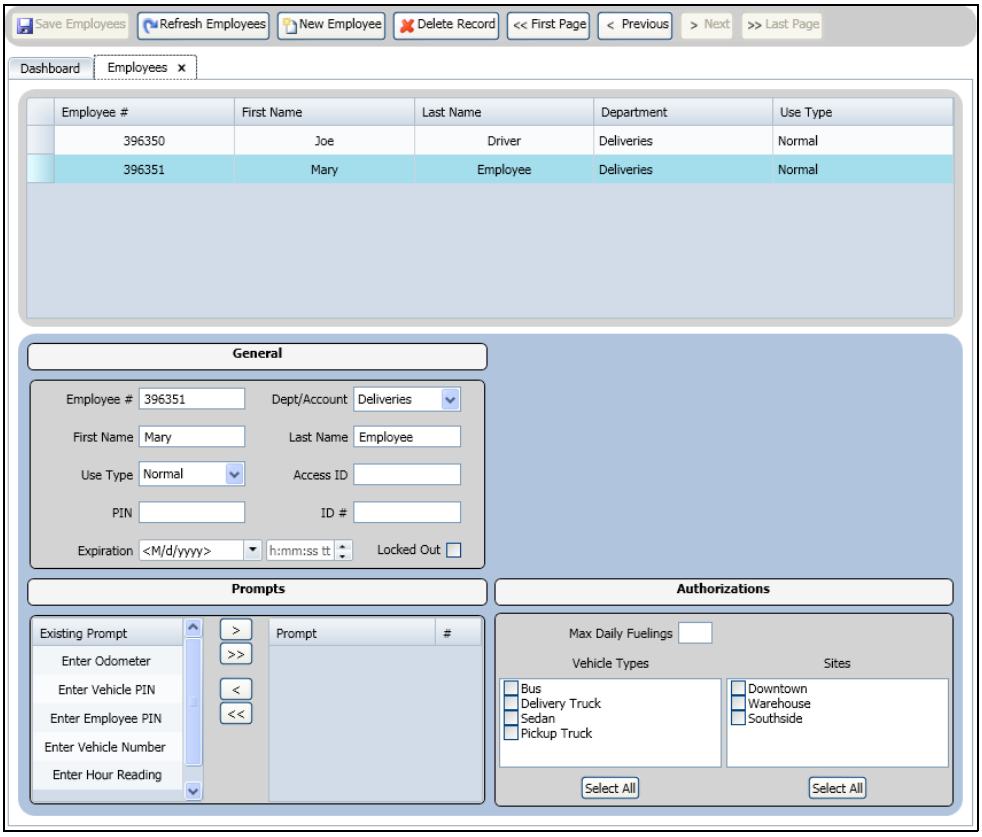


Figure 7-8 Employees Tab

Select an existing Employee to modify, or click the **New Employee** button, and enter the following information to define the Employee. When finished, click the **Save Employees** button to save the settings.

7.5.1 General

Enter the following information in the General pane to manage an Employee:

- **Employee #:** Unique numeric identifier for this employee. The same numbers cannot be repeated!

  TIP: *If different accounts (companies) use existing employee numbering systems that have overlapping numbers, you have two choices: (1) assign new unique employee numbers for the fueling system and record the existing numbers in the ID # reference field, or (2) add a digit to the beginning of the existing employee number that identifies the account (e.g. the first account's employee numbers have "1" as the first digit, while the second account's employee numbers have "2" as the first digit).*

- **Dept/Account:** Department or account that the employee is associated with.
- **First Name**: Employee's first name.
- **Last Name:** Employee's last name.
- **Use Type:** Use Type allows an employee access ID to be turned into a special supervisor access ID. This access ID can be used by a supervisor to initiate a transaction when the user does not have a normal employee access ID (i.e. lost). When the **Use Type** field is set to **Supervisor**, the first prompt will be "Enter Employee Number". At this point, the system looks up the employee number and proceeds as if it read the corresponding access ID from a tag or card. For standard employee records, set this field to **Normal**. For vehicle-based systems (access ID identifies vehicle), the supervisor capability must be set up in Vehicles.

- **Access ID:** Unique access ID that is encoded on the RFID tag or magnetic stripe card that will identify this employee. For vehicle-based systems (access ID links to vehicle), this field is not used.
- **PIN:** (Optional) Personal Identification Number (4 digits are recommended).
- **ID #:** (Optional) ID to match with other systems that use alphanumeric characters and cannot be represented by the numeric employee number field.
- **Expiration:** (Optional) Date at which the employee will be automatically locked out from fueling access.
- **Locked Out:** Check this box to manually lock out an employee from fueling. When an employee is locked out, the color of the workspace background changes to red.

7.5.2 Prompts

Enter the following information in the Prompts pane to manage an Employee:

1. Select a prompt from the Existing Prompt list on the left. The prompts are configured on the Prompts tab in System Setup.
2. Click "**>**" to move the selected prompt to the Prompt list on the right. Click "**<**" to remove a prompt from the Prompt list. Click "**<<**" to completely clear the Prompt list. Clicking "**>>**" moves all prompts to the Prompt list, which is not practical.
3. Repeat the above steps for additional prompts as needed.
4. Click the # column field and enter the number of retries to allow for the prompt.
5. To change the order in which the prompts are presented, right-click a prompt and select an option from the popup menu. The prompt can be moved up or down by one position, or to the top or bottom of the Prompt list.

TIP: *Do not use the "Enter Employee Number" prompt in Master Employee or Employees. During a transaction, the employee number must already have been entered for the system to access the Employee record.*

TIP: *For systems where the access ID identifies the vehicle, do not use an "Enter Vehicle Number" prompt because the vehicle has already been identified by the access ID. In this case the only relevant employee prompts are for an employee PIN or other miscellaneous prompts. In a vehicle-based system, there might not be any prompts in Master Employee or Employees.*

TIP: *For systems where the access ID identifies the employee, but you also want to authorize the vehicle, add the "Enter Vehicle Number" prompt as the last prompt after the employee-related prompts. Any other Vehicle-related prompts should be added in Vehicle Types or Vehicles.*

7.5.3 Authorizations

Enter the following information in the Authorizations pane to manage an Employee:

- **Max Daily Fuelings:** The maximum number of times that this employee is allowed to fuel a vehicle in one day.
- **Vehicle Types:** Select the vehicle type(s) that the employee is authorized to fuel.
- **Sites:** Select the site(s) where the employee is authorized to fuel.

When you are finished, click the **Save Employees** button to save the settings.

8 POLLING

Polling is communication from the iX Fleet fuel controller to the dispensers to retrieve transactions and to update the dispenser databases with latest changes from the central iX Fleet fuel controller database. The iX Fleet fuel controller automatically synchronizes with the dispensers, so setting up an automatic polling schedule is not required.

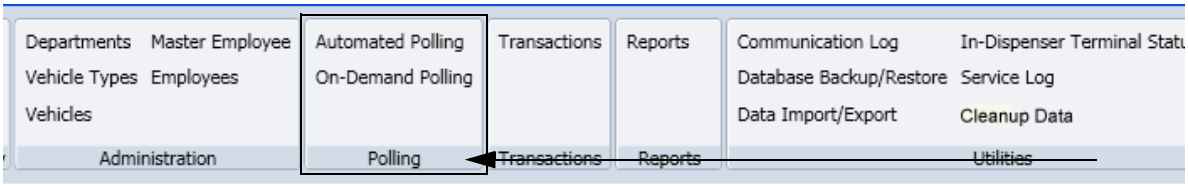


Figure 8-1 Polling

8.1 Automated Polling (Scheduled Polling)

IMPORTANT: Only use this feature if instructed to do so by DFS Technical Support. If you have a special situation that requires a polling schedule, set the **AutoSync Interval** setting to **0** (zero) on the General Setup tab.

Automated Polling allows you to set up schedules for the iX Fleet fuel controller to automatically initiate communication with sites by days of the week and times of the day. You can specify which functions are supposed to occur during the polling: Retrieve Transactions, Send Configuration, or Send Odometer.

Click the **Automated Polling** selection and the tab shown in Figure 8-2 is displayed.

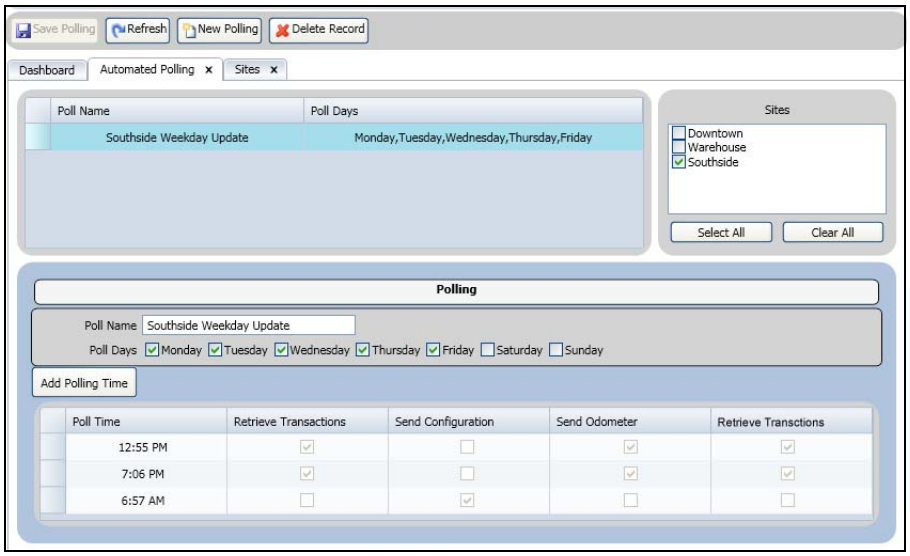


Figure 8-2 Automated Polling Tab

Click the **New Polling** button to define a new poll, or select and modify existing poll.

The Polling Schedule in Figure 8-2 shows the site to poll, the days of the week, and poll times for the selected poll. It also allows you to select the actions that take place during the selected poll time. You can also initiate these actions:

- **Retrieve Transactions:** Retrieve transaction data from the dispenser(s)
- **Send Configuration:** Update the files in the dispenser(s) with the latest information from the central iX Fleet fuel controller database
- **Send Odometer:** Update odometer readings in the dispenser(s) with the latest odometer information that the iX Fleet fuel controller collects from all sites
- **Retrieve Alerts**: Retrieve any Fuel Inventory or Equipment alerts from the selected site(s)

From this tab you can click the **Add Polling Time** button to add a new polling time. To delete a poll or polling time, click to select the entry and then press <Delete> on the keyboard.

TIP: *Schedule frequency depends upon your fueling operation. Many operations poll in the middle of the night to have updated information at the start of each day. However, if vehicles fuel at multiple sites, more frequent polling might be needed to update odometer information for reasonability checking.*

8.2 On-Demand Polling

On-Demand polling allows you to manually initiate communication with dispensers. The polling is based on manual selection of the type of data to be exchanged, the sync service(s) to be used, the site(s), and fueling point. Click **On-Demand Polling** and the tab shown in Figure 8-3 is displayed.

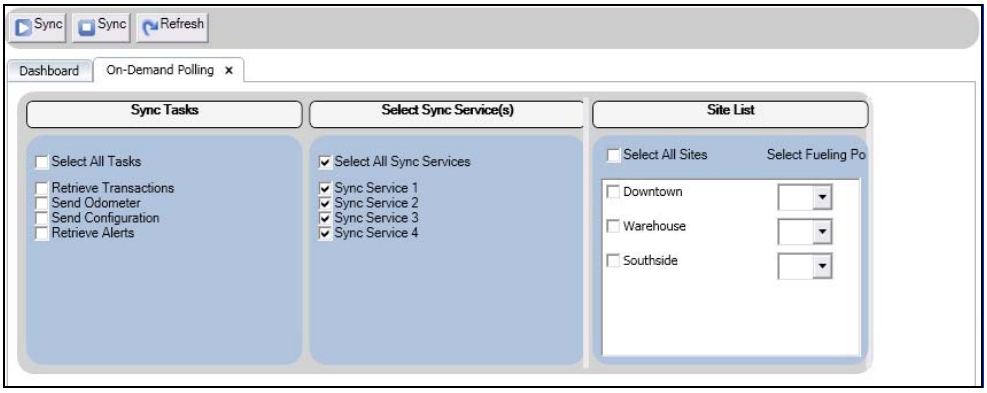


Figure 8-3 On-Demand Polling Tab

Perform the following steps to initiate On-Demand Polling:

1. Select the type of data to exchange from Sync Tasks. The following options are available.
   - **Select All Tasks:** Select all of task options with a single click
   - **Retrieve Transactions:** Retrieve transactions from the selected site(s)
   - **Send Odometer:** Send the latest odometer readings to the site(s)
   - **Send Configuration Files:** Send the database changes to the site(s)
   - **Retrieve Alerts:** Retrieve any Fuel Inventory or Equipment alerts from the selected site(s)

   TIP: *To verify communication with the dispenser, initiate an on-demand poll then click Communication Log in the Utilities section. See Section 12 on page 91. You can then determine whether the iX Fleet fuel controller is communicating with the dispenser(s).*

2. Select the sync service(s) to use for polling, or check the **Select All Sync Services** box to select all of the sync services. Selecting individual sync services might be preferred for large or particularly busy sites to mitigate the performance impact from syncing with large numbers of fueling points.

   NOTE: Most systems will have all terminals on Sync Service 1. When there are more than 10 terminals, it might be desirable to split the terminals between more than one service to reduce the time it takes to sync all terminals. Click **Utilities > In-Dispenser Terminal Status** to determine the sync service used for particular sites and/or fueling points. See Section 11.4 on page 88.

3. Select site(s) to poll from the Site List, or check the **Select All Sites** box to select all sites.
4. For each selected site click the **Select Fueling Position** pull-down and select the fueling point with which to sync data, or select **0** to sync all fueling points for the select site and sync service.
5. Click the Sync button to initiate communication with the selected sites and fueling points.

   TIP: *If there are adverse affects on system performance due to On-Demand Polling, click the Sync button to stop polling.*

9 TRANSACTIONS

The Transactions section is shown in Figure 9-1.

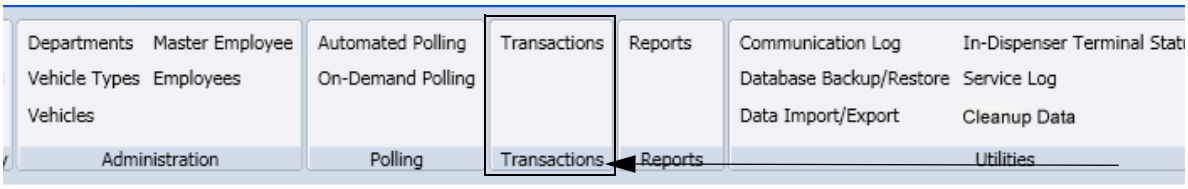


Figure 9-1 Transactions

Clicking **Transactions** opens the Transactions tab. Select the desired site at the top of the tab to see the transactions from that site.

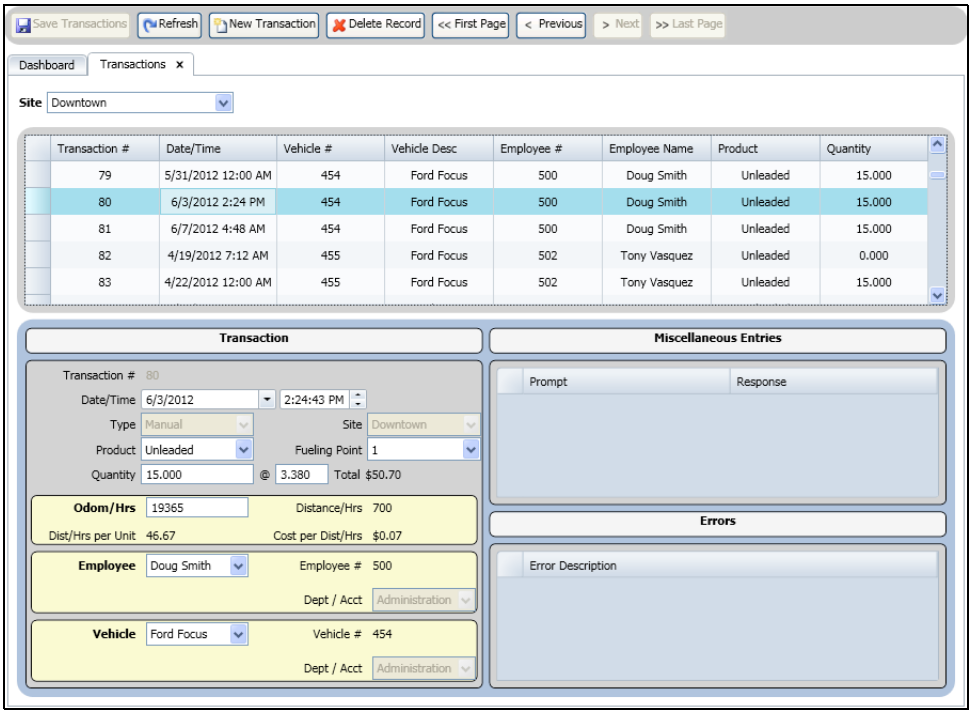


Figure 9-2 Transactions Tab

Click a transaction from the list to view its details in the Transaction pane. Fields which are not grayed out can be modified, if necessary, to make corrections to transactions. The editable fields typically include **Date/Time**, **Product**, **Fueling Point**, **Odom/Hrs**, **Employee**, and **Vehicle**.

NOTE: All changes to transactions are recorded in the Transaction Audit report to maintain the integrity of the system.

The Miscellaneous Entries pane displays the responses entered for any miscellaneous prompts for the selected transaction.

The Errors pane shows any recorded errors that occurred during the selected transaction.

Transactions can also be manually added by clicking the **New Transaction** button. Manual transactions are necessary to record activities such as offsite fueling or the use of Fluid products so that vehicle and employee records contain all activity. As with transaction edits, all fields not grayed out can be modified to enter transaction information. In addition to the fields already mentioned for transaction edits, the fuel **Quantity** can also be specified when manually entering a transaction.

NOTE: New transactions will decrease the inventory of the selected site and tank. When entering offsite fueling transactions be sure to select **Offsite** from the **Site** pull-down to avoid negative impacts to fuel inventory for the configured sites.

When entering manual transactions, they are initially assigned a negative transaction number (i.e. -1, -2, etc.). As the system assigns transaction numbers to automated transactions, the negative transaction numbers are changed to regular transaction numbers that fit into the sequence. If the date for automated transactions is already past the manual transaction date, the manual transaction will be assigned the next sequential transaction number.

10 REPORTS

The Reports section is shown in Figure 10-1.

Figure 10-1 Reports

Click **Reports** to open the tab shown in Figure 10-2.

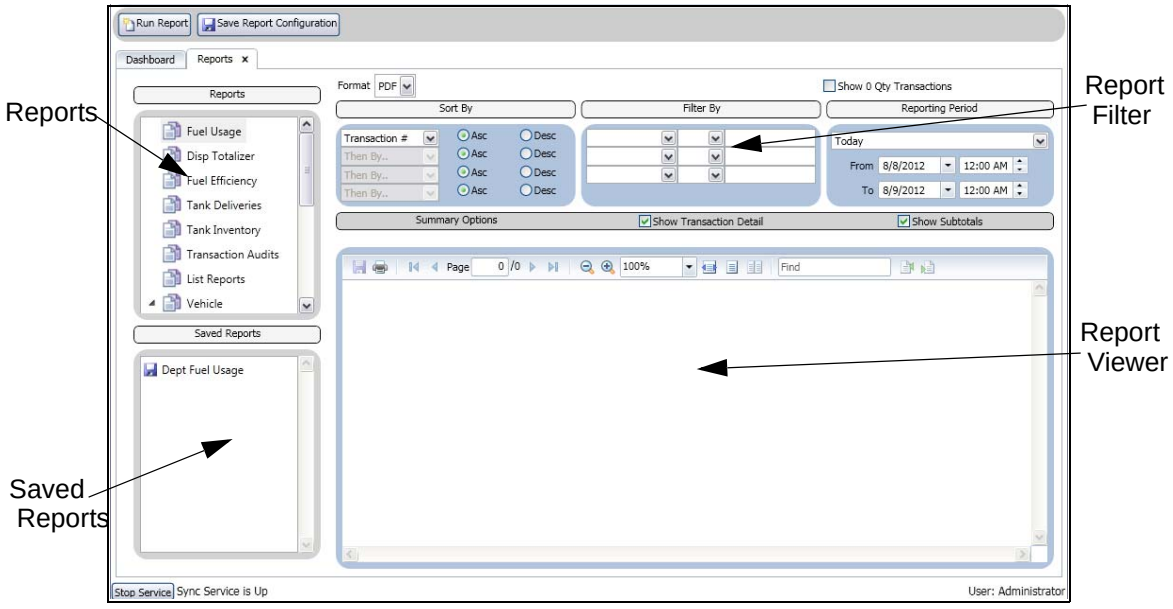


Figure 10-2 Reports Tab

The Reports tab is divided into four panes:

- Reports lists the available reports.
- Saved Reports lists saved report configurations, which are built from the existing reports.
- Report Filter shows the available sorting and filtering options for each report. The specific options displayed vary depending upon the report selected. However, the Format selection is common to all of the reports, and determines if the report is generated in PDF or Excel format when the **Run Report** button is clicked.

If connected to a network, reports can be saved to a network drive for general accessibility, or saved to a USB key inserted into the iX Fleet fuel controller for a portable copy.

The following report formats are available:

- PDF reports are displayed in Report Viewer, and can be saved for later viewing on any platform that supports the PDF file format. These reports cannot be manipulated after they have been generated. Selecting sort options includes that data as part of the report headers. Therefore, those columns are not included in the individual transaction data. See the sample report in Figure 10-3.

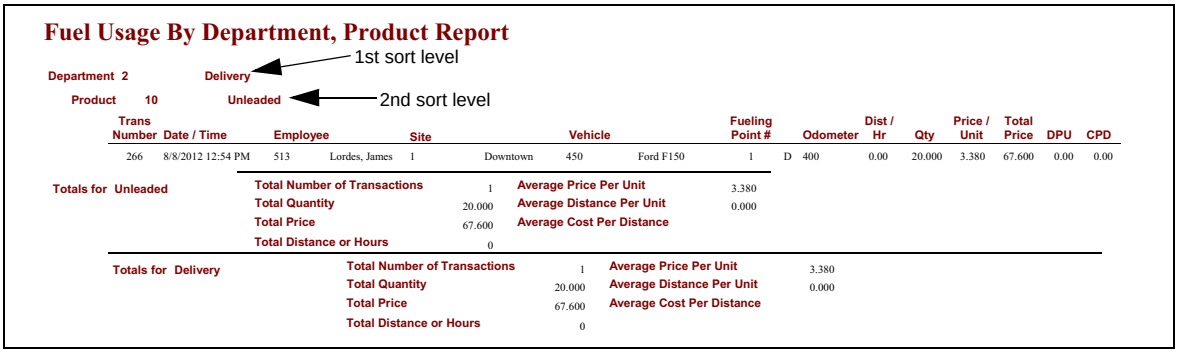


Figure 10-3 PDF Report Sample

The report is first sorted by Department and then by Product, so those two columns are not included in the individual transaction data.

- Excel reports are saved in Comma Separated Values (CSV) format, which can be viewed and manipulated with a spreadsheet application such as Microsoft Excel. With the **Excel** format option selected, you are prompted for a file name and a location to save the file when you click the **Run Report** button.

  Unlike PDF reports, selecting sort criteria (if available) only sorts the transaction data and does not exclude the associated columns. This format allows further analysis of the data in the saved *.csv file without requiring the report to be run again. See the report sample in Figure 10-4.

	A	B	C	D	E	F	G	H	
1	Trans Number	DateTime	Department Number	Department Name	Employee Number	Employee Name	Product Number	Product Name	Vehi
2	265	8/8/2012 12:52	3	Service	517	Rahl, Rick	20	Diesel	
3	266	8/8/2012 12:54	2	Delivery	513	Lordes, James	10	Unleaded	
4									

Figure 10-4 Excel Report Sample

The report sample in Figure 10-4 is the same report as in Figure 10-3 except that it was saved using the Excel format option. Notice that the Department and Product columns are included.

- **Report Viewer** displays the generated report if PDF is selected from the **Format** pull-down in the Report Filter, and features the following controls.

Figure 10-5 Report Viewer Controls

1. Save		10. Zoom Level (Percent)
2. Print	6. Next Page	11. Fit Width
3. First Page	7. Last Page	12. One Page View
4. Previous Page	8. Zoom Out	13. Two Page View
5. Enter Page Number	9. Zoom In	14. Search Text

Refer to the following subsections for details about the individual reports.

10.1 Fuel Usage

The Fuel Usage report allows you to create your own custom fuel usage reports from the fuel transactions. You define the sort levels, filters for specific data or ranges, reporting period, and the level of transaction detail. You can just view the data if you are filtering the database to find specific information or you can print the reports for analysis or distribution. For report configurations that you will want to run periodically, you can save the configuration options so you can easily run that report again with a few clicks.

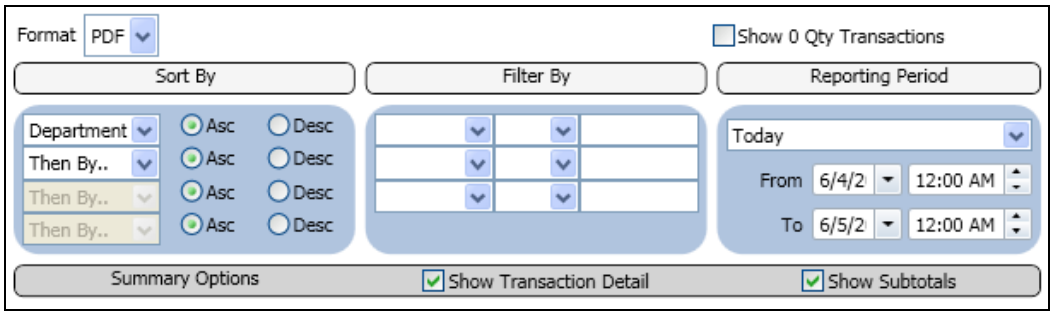


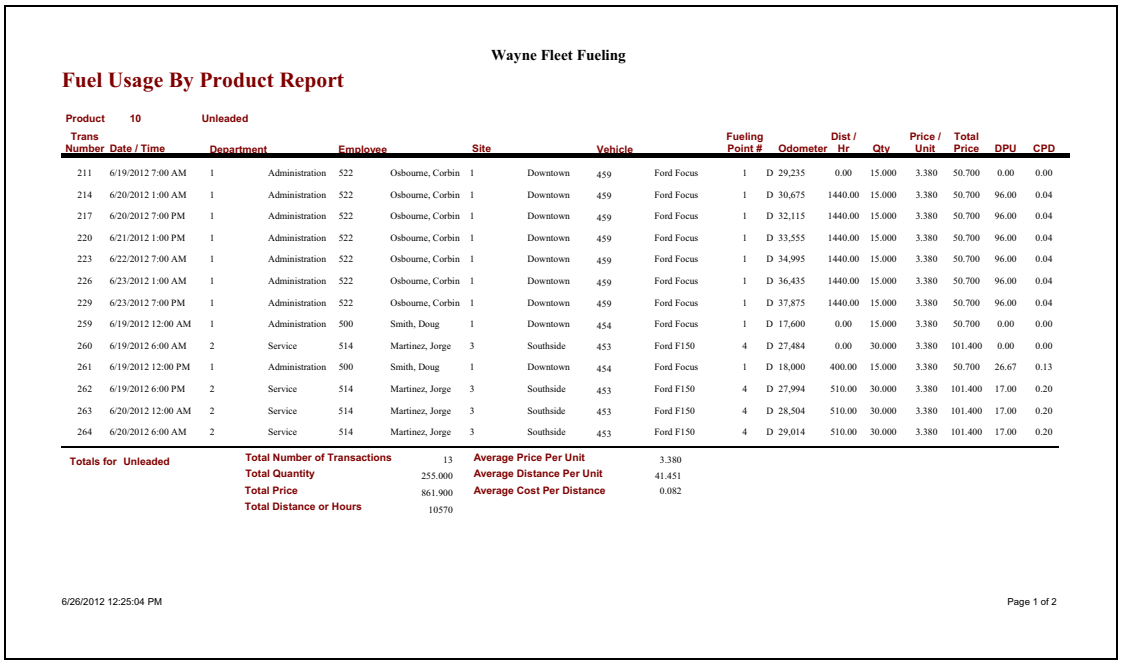
Figure 10-6 Fuel Usage Filter

Fuel Usage reports have these options:

- **Show 0 Qty Transactions:** Check this box to include recorded transactions for which fuel was not dispensed.
- **Sort By:** Define up to four levels to sort fuel transaction data. For each level you can select to sort by **Department**, **Employee**, **Product**, **Site**, or **Vehicle**. Select ascending or descending sort order for each level.

  NOTE: The sorting options are not available when generating a report in Excel format.
- **Filter By:** If you are looking for specific transaction data, you can specify up to three filters. For each filter, you can select from the following transaction fields: **Transaction #**, **Product #**, **Vehicle #**, **Employee #**, **Department #**, **Site ID**, **Fueling Point #**, **Quantity Dispensed**, or **Misc Prompts**. Then select the operand to look for specific data or ranges of data: equals (**=**), does not equal (**!=**), greater than (**>**), less than (**<**), greater than or equal (**>=**), or less than or equal (**<=**). Finally, enter the data to match.
- **Reporting Period:** Select the reporting time period from which to gather the report data. You can specify a particular date range or select a report period:
  - **Today:** Period from midnight of the current day to the present time
  - **Yesterday:** Period from midnight of the previous day to midnight of the current day
  - **Week to Date:** Period from Sunday of the current week to the present time
  - **Month to Date:** Period from the first day of the current month to the present time
  - **Year to Date:** Period from the first day of the current year to the present time
- **Summary Options:** Select **Show Transaction Detail** to list the individual transactions for each sort level. Select **Show Subtotals** to display the subtotals and totals. For example, if you do not check **Show Transaction Detail** and check **Show Subtotals**, you will get a summary report of subtotals and totals without individual transaction data.

After the report filter is defined, click **Run Report** to generate the report. Figure 10-7 and Figure 10-8 show an example of a Fuel Usage report with one sort level: Product.



Wayne Fleet Fueling

Fuel Usage By Product Report

Product 10 Unleaded

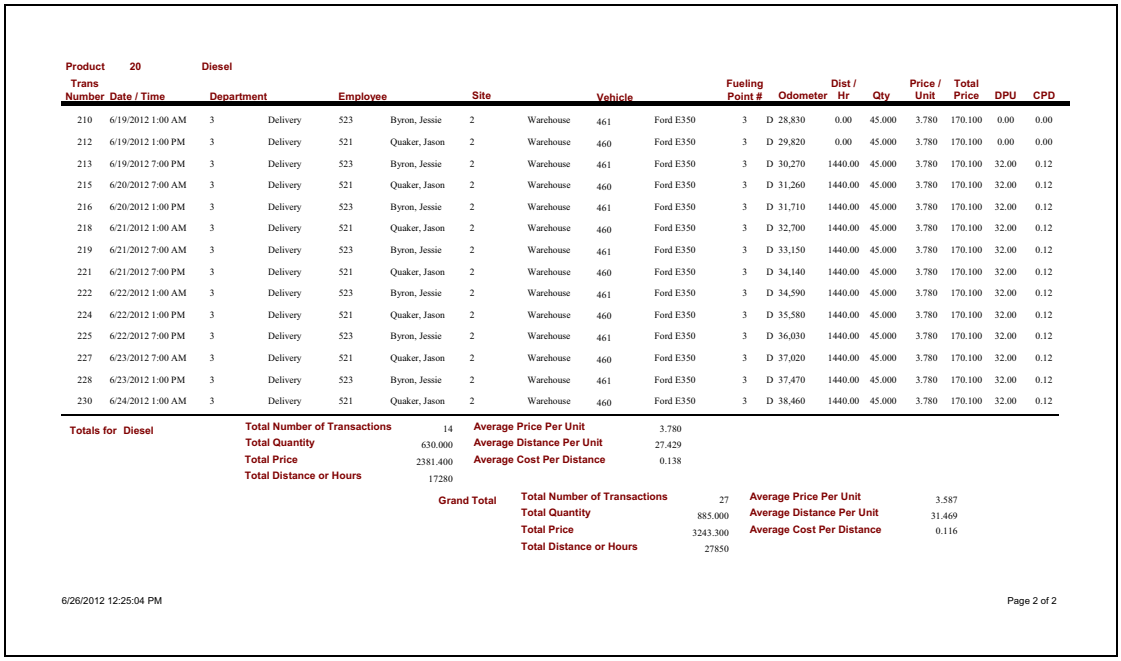
Trans Number	Date / Time	Department		Employee		Site		Vehicle		Fueling Point #	Odometer	Dist / Hr	Qty	Price / Unit	Total Price	DPU	CPD
211	6/19/2012 7:00 AM	1	Administration	522	Osbourne, Corbin	1	Downtown	459	Ford Focus	1	D 29,235	0.00	15.000	3.380	50.700	0.00	0.00
214	6/20/2012 1:00 AM	1	Administration	522	Osbourne, Corbin	1	Downtown	459	Ford Focus	1	D 30,675	1440.00	15.000	3.380	50.700	96.00	0.04
217	6/20/2012 7:00 PM	1	Administration	522	Osbourne, Corbin	1	Downtown	459	Ford Focus	1	D 32,115	1440.00	15.000	3.380	50.700	96.00	0.04
220	6/21/2012 1:00 PM	1	Administration	522	Osbourne, Corbin	1	Downtown	459	Ford Focus	1	D 33,555	1440.00	15.000	3.380	50.700	96.00	0.04
223	6/22/2012 7:00 AM	1	Administration	522	Osbourne, Corbin	1	Downtown	459	Ford Focus	1	D 34,995	1440.00	15.000	3.380	50.700	96.00	0.04
226	6/23/2012 1:00 AM	1	Administration	522	Osbourne, Corbin	1	Downtown	459	Ford Focus	1	D 36,435	1440.00	15.000	3.380	50.700	96.00	0.04
229	6/23/2012 7:00 PM	1	Administration	522	Osbourne, Corbin	1	Downtown	459	Ford Focus	1	D 37,875	1440.00	15.000	3.380	50.700	96.00	0.04
259	6/19/2012 12:00 AM	1	Administration	500	Smith, Doug	1	Downtown	454	Ford Focus	1	D 17,600	0.00	15.000	3.380	50.700	0.00	0.00
260	6/19/2012 6:00 AM	2	Service	514	Martinez, Jorge	3	Southside	453	Ford F150	4	D 27,484	0.00	30.000	3.380	101.400	0.00	0.00
261	6/19/2012 12:00 PM	1	Administration	500	Smith, Doug	1	Downtown	454	Ford Focus	1	D 18,000	400.00	15.000	3.380	50.700	26.67	0.13
262	6/19/2012 6:00 PM	2	Service	514	Martinez, Jorge	3	Southside	453	Ford F150	4	D 27,994	510.00	30.000	3.380	101.400	17.00	0.20
263	6/20/2012 12:00 AM	2	Service	514	Martinez, Jorge	3	Southside	453	Ford F150	4	D 28,504	510.00	30.000	3.380	101.400	17.00	0.20
264	6/20/2012 6:00 AM	2	Service	514	Martinez, Jorge	3	Southside	453	Ford F150	4	D 29,014	510.00	30.000	3.380	101.400	17.00	0.20

Totals for Unleaded

Total Number of Transactions	13	Average Price Per Unit	3.380
Total Quantity	255.000	Average Distance Per Unit	41.451
Total Price	861.900	Average Cost Per Distance	0.082
Total Distance or Hours	10570		

6/26/2012 12:25:04 PM Page 1 of 2

Figure 10-7 Fuel Usage Report Example Page 1



Product 20 Diesel

Trans Number	Date / Time	Department		Employee		Site		Vehicle		Fueling Point #	Odometer	Dist / Hr	Qty	Price / Unit	Total Price	DPU	CPD
210	6/19/2012 1:00 AM	3	Delivery	523	Byron, Jessie	2	Warehouse	461	Ford E350	3	D 28,830	0.00	45.000	3.780	170.100	0.00	0.00
212	6/19/2012 1:00 PM	3	Delivery	521	Quaker, Jason	2	Warehouse	460	Ford E350	3	D 29,820	0.00	45.000	3.780	170.100	0.00	0.00
213	6/19/2012 7:00 PM	3	Delivery	523	Byron, Jessie	2	Warehouse	461	Ford E350	3	D 30,270	1440.00	45.000	3.780	170.100	32.00	0.12
215	6/20/2012 7:00 AM	3	Delivery	521	Quaker, Jason	2	Warehouse	460	Ford E350	3	D 31,260	1440.00	45.000	3.780	170.100	32.00	0.12
216	6/20/2012 1:00 PM	3	Delivery	523	Byron, Jessie	2	Warehouse	461	Ford E350	3	D 31,710	1440.00	45.000	3.780	170.100	32.00	0.12
218	6/21/2012 1:00 AM	3	Delivery	521	Quaker, Jason	2	Warehouse	460	Ford E350	3	D 32,700	1440.00	45.000	3.780	170.100	32.00	0.12
219	6/21/2012 7:00 AM	3	Delivery	523	Byron, Jessie	2	Warehouse	461	Ford E350	3	D 33,150	1440.00	45.000	3.780	170.100	32.00	0.12
221	6/21/2012 7:00 PM	3	Delivery	521	Quaker, Jason	2	Warehouse	460	Ford E350	3	D 34,140	1440.00	45.000	3.780	170.100	32.00	0.12
222	6/22/2012 1:00 AM	3	Delivery	523	Byron, Jessie	2	Warehouse	461	Ford E350	3	D 34,590	1440.00	45.000	3.780	170.100	32.00	0.12
224	6/22/2012 1:00 PM	3	Delivery	521	Quaker, Jason	2	Warehouse	460	Ford E350	3	D 35,580	1440.00	45.000	3.780	170.100	32.00	0.12
225	6/22/2012 7:00 PM	3	Delivery	523	Byron, Jessie	2	Warehouse	461	Ford E350	3	D 36,030	1440.00	45.000	3.780	170.100	32.00	0.12
227	6/23/2012 7:00 AM	3	Delivery	521	Quaker, Jason	2	Warehouse	460	Ford E350	3	D 37,020	1440.00	45.000	3.780	170.100	32.00	0.12
228	6/23/2012 1:00 PM	3	Delivery	523	Byron, Jessie	2	Warehouse	461	Ford E350	3	D 37,470	1440.00	45.000	3.780	170.100	32.00	0.12
230	6/24/2012 1:00 AM	3	Delivery	521	Quaker, Jason	2	Warehouse	460	Ford E350	3	D 38,460	1440.00	45.000	3.780	170.100	32.00	0.12

Totals for Diesel

Total Number of Transactions	14	Average Price Per Unit	3.780
Total Quantity	630.000	Average Distance Per Unit	27.429
Total Price	2381.400	Average Cost Per Distance	0.138
Total Distance or Hours	17280		

Grand Total

Total Number of Transactions	27	Average Price Per Unit	3.587
Total Quantity	885.000	Average Distance Per Unit	31.469
Total Price	3243.300	Average Cost Per Distance	0.116
Total Distance or Hours	27850		

6/26/2012 12:25:04 PM Page 2 of 2

Figure 10-8 Fuel Usage Report Example Page 2

In calculations, subtotals and totals, distance and hours are reported under one heading: Distance. For calculations to be meaningful, structure reports so that vehicles that are measured differently are not intermixed. Refer to the definitions below to understand the report column headings:

- **Dist. or Distance:** Miles, kilometers, etc. as applicable
- **Unit:** Gallons, liters, etc. as applicable
- **Dist/Hr:** Distance travelled or hours elapsed since last transaction
- **DPU (Distance per Unit):** Miles per gallon, hours per gallon, etc. as applicable
- **CPD (Cost per Distance):** Cost per mile, cost per hour, etc. as applicable

10.2 Dispenser Totalizer

The Dispenser Totalizer report is used to generate reports that provide the current totalizer value for each fueling point, as well as tank and product assignments, current price, and YTD totals. Figure 10-9 is an example of the Dispenser Totalizer report filter.

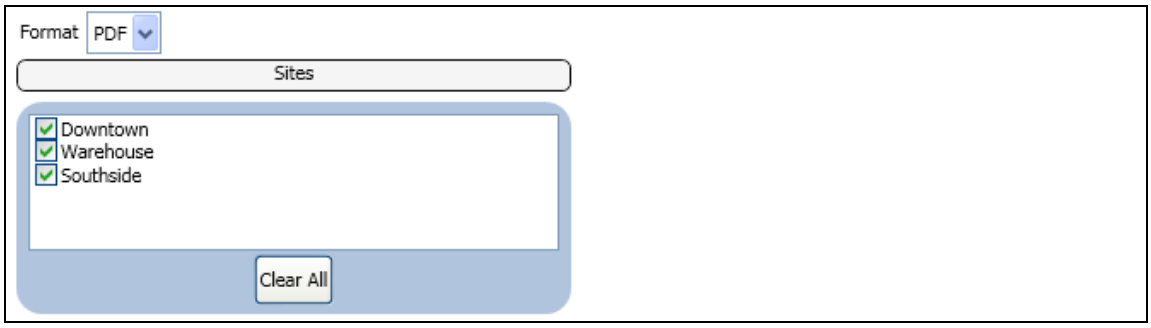
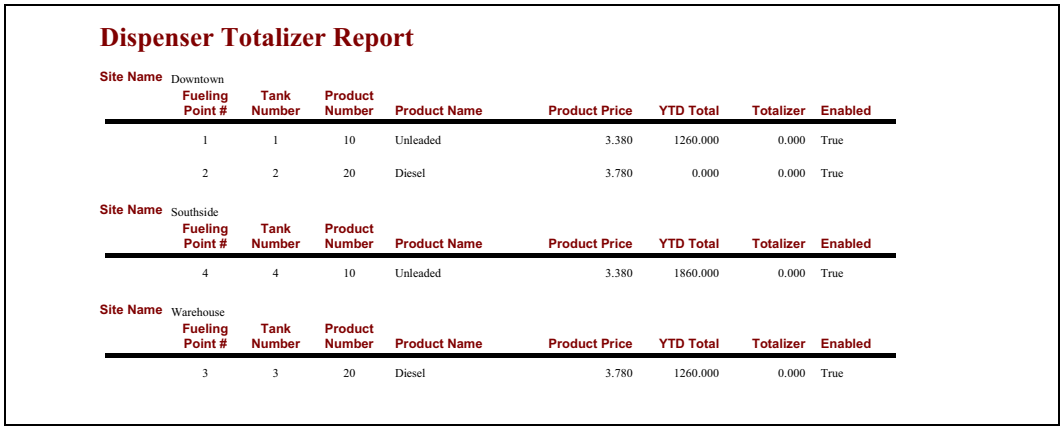


Figure 10-9 Dispenser Totalizer Filter

From this window you select which Site(s) you want to see data for and then create a report with dispenser totalizer information by clicking the **Run Report** button.



Dispenser Totalizer Report

Site Name Downtown

Fueling Point #	Tank Number	Product Number	Product Name	Product Price	YTD Total	Totalizer	Enabled
1	1	10	Unleaded	3.380	1260.000	0.000	True
2	2	20	Diesel	3.780	0.000	0.000	True

Site Name Southside

Fueling Point #	Tank Number	Product Number	Product Name	Product Price	YTD Total	Totalizer	Enabled
4	4	10	Unleaded	3.380	1860.000	0.000	True

Site Name Warehouse

Fueling Point #	Tank Number	Product Number	Product Name	Product Price	YTD Total	Totalizer	Enabled
3	3	20	Diesel	3.780	1260.000	0.000	True

Figure 10-10 Dispenser Totalizer Reports

10.3 Fuel Efficiency

The Fuel Efficiency report is used to create reports on transactions that have generated low or high vehicle fuel efficiency (MPG, LPG, etc.) alerts. Alerts are created when the fuel efficiency calculation for the transaction falls short of the low, or exceeds the high, fuel efficiency values set in the Fuel Efficiency Alert section of the Odometer pane in the Vehicle file. Transactions with low fuel efficiency alerts are listed first in the report followed by high fuel efficiency transactions. Figure 10-11 is an example of the Fuel Efficiency report filter.

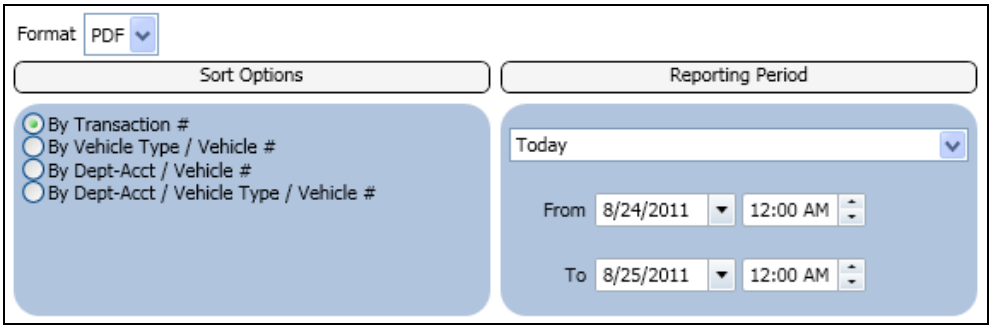


Figure 10-11 Fuel Efficiency Filter

From this window you can create a report sorted by these options:

- By Transaction Number
- By Vehicle Type / Vehicle #
- By Dept-Acct / Vehicle #
- By Dept-Acct / Vehicle Type / Vehicle #

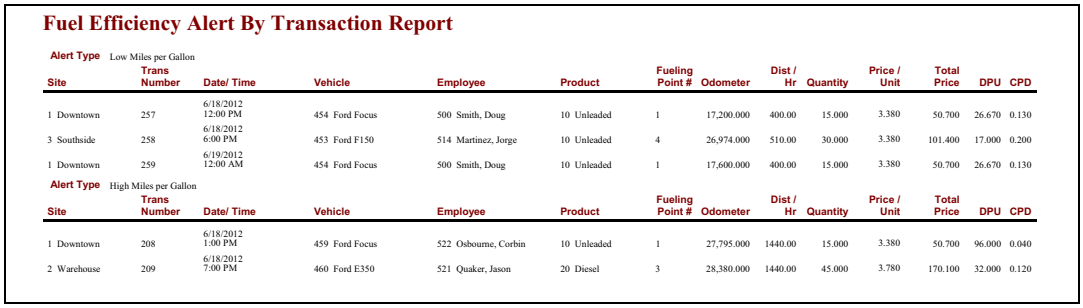
Select the reporting period from the pull-down window or enter a specific date range. Pull-down selections include the following options:

- **Today:** Period from midnight of the current day to the present time
- **Yesterday:** Period from midnight of the previous day to midnight of the current day
- **Week to Date:** Period from Sunday of the current week to the present time
- **Month to Date:** Period from the first day of the current month to the present time
- **Year to Date:** Period from the first day of the current year to the present time

Click the **Run Report** button to generate the report. Refer to Figure 10-12 through Figure 10-15 for examples.

TIP: *The data in the Fuel Efficiency Reports can be very helpful:*

Low MPG	High MPG
• Incorrect odometer entries • Vehicle requires maintenance • The fuel has been stolen and therefore not being used in the vehicle identified in the transaction	• Incorrect odometer entries • Vehicle has fueled off-site, or on-site when the system was in manual mode, and a manual transaction for the vehicle was not created



Fuel Efficiency Alert By Transaction Report

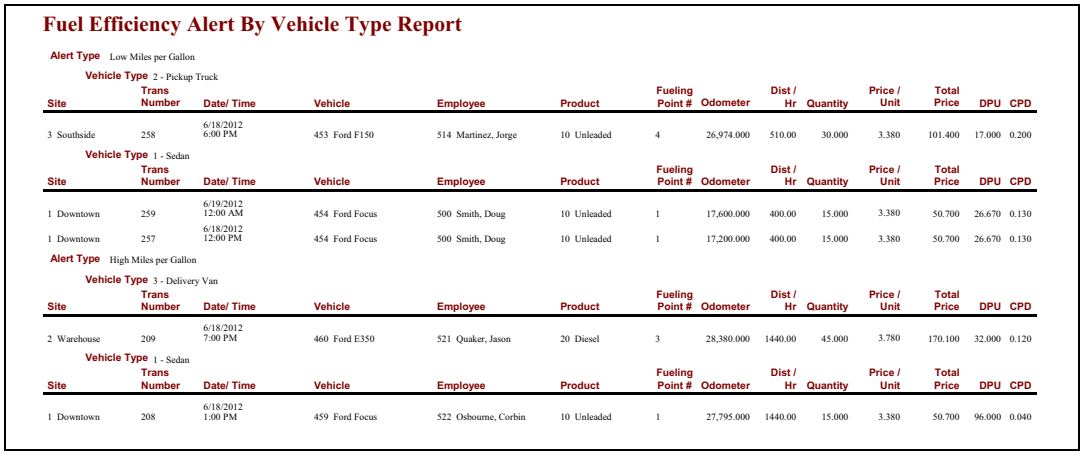
Alert Type Low Miles per Gallon

Site	Trans Number	Date/ Time	Vehicle	Employee	Product	Fueling Point #	Odometer	Dist / Hr	Quantity	Price / Unit	Total Price	DPU	CPD
1 Downtown	257	6/18/2012 12:00 PM	454 Ford Focus	500 Smith, Doug	10 Unleaded	1	17,200.000	400.00	15.000	3.380	50.700	26.670	0.130
3 Southside	258	6/18/2012 6:00 PM	453 Ford F150	514 Martinez, Jorge	10 Unleaded	4	26,974.000	510.00	30.000	3.380	101.400	17.000	0.200
1 Downtown	259	6/19/2012 12:00 AM	454 Ford Focus	500 Smith, Doug	10 Unleaded	1	17,600.000	400.00	15.000	3.380	50.700	26.670	0.130

Alert Type High Miles per Gallon

Site	Trans Number	Date/ Time	Vehicle	Employee	Product	Fueling Point #	Odometer	Dist / Hr	Quantity	Price / Unit	Total Price	DPU	CPD
1 Downtown	208	6/18/2012 1:00 PM	459 Ford Focus	522 Osbourne, Corbin	10 Unleaded	1	27,795.000	1440.00	15.000	3.380	50.700	96.000	0.040
2 Warehouse	209	6/18/2012 7:00 PM	460 Ford E350	521 Quaker, Jason	20 Diesel	3	28,380.000	1440.00	45.000	3.780	170.100	32.000	0.120

Figure 10-12 Fuel Efficiency Reports - Sort by Transaction #



Fuel Efficiency Alert By Vehicle Type Report

Alert Type Low Miles per Gallon

Vehicle Type 2 - Pickup Truck

Site	Trans Number	Date/ Time	Vehicle	Employee	Product	Fueling Point #	Odometer	Dist / Hr	Quantity	Price / Unit	Total Price	DPU	CPD
3 Southside	258	6/18/2012 6:00 PM	453 Ford F150	514 Martinez, Jorge	10 Unleaded	4	26,974.000	510.00	30.000	3.380	101.400	17.000	0.200

Vehicle Type 1 - Sedan

Site	Trans Number	Date/ Time	Vehicle	Employee	Product	Fueling Point #	Odometer	Dist / Hr	Quantity	Price / Unit	Total Price	DPU	CPD
1 Downtown	259	6/19/2012 12:00 AM	454 Ford Focus	500 Smith, Doug	10 Unleaded	1	17,600.000	400.00	15.000	3.380	50.700	26.670	0.130
1 Downtown	257	6/18/2012 12:00 PM	454 Ford Focus	500 Smith, Doug	10 Unleaded	1	17,200.000	400.00	15.000	3.380	50.700	26.670	0.130

Alert Type High Miles per Gallon

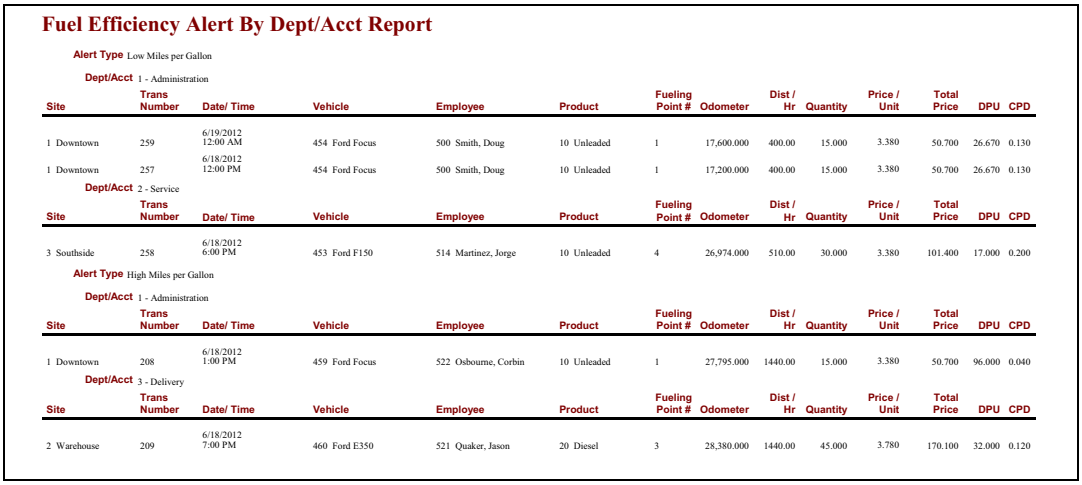
Vehicle Type 3 - Delivery Van

Site	Trans Number	Date/ Time	Vehicle	Employee	Product	Fueling Point #	Odometer	Dist / Hr	Quantity	Price / Unit	Total Price	DPU	CPD
2 Warehouse	209	6/18/2012 7:00 PM	460 Ford E350	521 Quaker, Jason	20 Diesel	3	28,380.000	1440.00	45.000	3.780	170.100	32.000	0.120

Vehicle Type 1 - Sedan

Site	Trans Number	Date/ Time	Vehicle	Employee	Product	Fueling Point #	Odometer	Dist / Hr	Quantity	Price / Unit	Total Price	DPU	CPD
1 Downtown	208	6/18/2012 1:00 PM	459 Ford Focus	522 Osbourne, Corbin	10 Unleaded	1	27,795.000	1440.00	15.000	3.380	50.700	96.000	0.040

Figure 10-13 Fuel Efficiency Reports - Sort by Vehicle Type / Vehicle #



Fuel Efficiency Alert By Dept/Acct Report

Alert Type Low Miles per Gallon

Dept/Acct 1 - Administration

Site	Trans Number	Date/ Time	Vehicle	Employee	Product	Fueling Point #	Odometer	Dist / Hr	Quantity	Price / Unit	Total Price	DPU	CPD
1 Downtown	259	6/19/2012 12:00 AM	454 Ford Focus	500 Smith, Doug	10 Unleaded	1	17,600.000	400.00	15.000	3.380	50.700	26.670	0.130
1 Downtown	257	6/18/2012 12:00 PM	454 Ford Focus	500 Smith, Doug	10 Unleaded	1	17,200.000	400.00	15.000	3.380	50.700	26.670	0.130

Dept/Acct 2 - Service

Site	Trans Number	Date/ Time	Vehicle	Employee	Product	Fueling Point #	Odometer	Dist / Hr	Quantity	Price / Unit	Total Price	DPU	CPD
3 Southside	258	6/18/2012 6:00 PM	453 Ford F150	514 Martinez, Jorge	10 Unleaded	4	26,974.000	510.00	30.000	3.380	101.400	17.000	0.200

Alert Type High Miles per Gallon

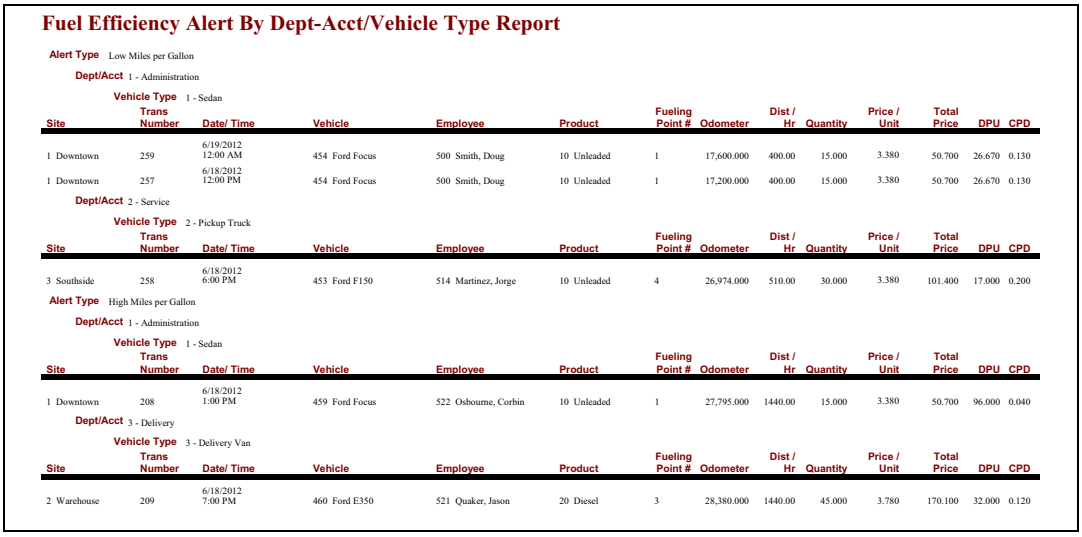
Dept/Acct 1 - Administration

Site	Trans Number	Date/ Time	Vehicle	Employee	Product	Fueling Point #	Odometer	Dist / Hr	Quantity	Price / Unit	Total Price	DPU	CPD
1 Downtown	208	6/18/2012 1:00 PM	459 Ford Focus	522 Osbourne, Corbin	10 Unleaded	1	27,795.000	1440.00	15.000	3.380	50.700	96.000	0.040

Dept/Acct 3 - Delivery

Site	Trans Number	Date/ Time	Vehicle	Employee	Product	Fueling Point #	Odometer	Dist / Hr	Quantity	Price / Unit	Total Price	DPU	CPD
2 Warehouse	209	6/18/2012 7:00 PM	460 Ford E350	521 Quaker, Jason	20 Diesel	3	28,380.000	1440.00	45.000	3.780	170.100	32.000	0.120

Figure 10-14 Fuel Efficiency Reports - Sort by Dept-Acct / Vehicle #



Fuel Efficiency Alert By Dept-Acct/Vehicle Type Report

Alert Type Low Miles per Gallon

Dept/Acct 1 - Administration

Vehicle Type 1 - Sedan

Site	Trans Number	Date/ Time	Vehicle	Employee	Product	Fueling Point #	Odometer	Dist / Hr	Quantity	Price / Unit	Total Price	DPU	CPD
1 Downtown	259	6/19/2012 12:00 AM	454 Ford Focus	500 Smith, Doug	10 Unleaded	1	17,600.000	400.00	15.000	3.380	50.700	26.670	0.130
1 Downtown	257	6/18/2012 12:00 PM	454 Ford Focus	500 Smith, Doug	10 Unleaded	1	17,200.000	400.00	15.000	3.380	50.700	26.670	0.130

Dept/Acct 2 - Service

Vehicle Type 2 - Pickup Truck

Site	Trans Number	Date/ Time	Vehicle	Employee	Product	Fueling Point #	Odometer	Dist / Hr	Quantity	Price / Unit	Total Price	DPU	CPD
3 Southside	258	6/18/2012 6:00 PM	453 Ford F150	514 Martinez, Jorge	10 Unleaded	4	26,974.000	510.00	30.000	3.380	101.400	17.000	0.200

Alert Type High Miles per Gallon

Dept/Acct 1 - Administration

Vehicle Type 1 - Sedan

Site	Trans Number	Date/ Time	Vehicle	Employee	Product	Fueling Point #	Odometer	Dist / Hr	Quantity	Price / Unit	Total Price	DPU	CPD
1 Downtown	208	6/18/2012 1:00 PM	459 Ford Focus	522 Osbourne, Corbin	10 Unleaded	1	27,795.000	1440.00	15.000	3.380	50.700	96.000	0.040

Dept/Acct 3 - Delivery

Vehicle Type 3 - Delivery Van

Site	Trans Number	Date/ Time	Vehicle	Employee	Product	Fueling Point #	Odometer	Dist / Hr	Quantity	Price / Unit	Total Price	DPU	CPD
2 Warehouse	209	6/18/2012 7:00 PM	460 Ford E350	521 Quaker, Jason	20 Diesel	3	28,380.000	1440.00	45.000	3.780	170.100	32.000	0.120

Figure 10-15 Fuel Efficiency Reports - Sort by Dept-Acct / Vehicle Type / Vehicle #

10.4 Tank Deliveries

The Tank Deliveries report is where you can generate fuel delivery history reports for the different sites in the fleet system. The filter allows you to select the Sites, Sort Options, and the Reporting Period. Figure 10-16 shows an example of the Tank Deliveries filter.

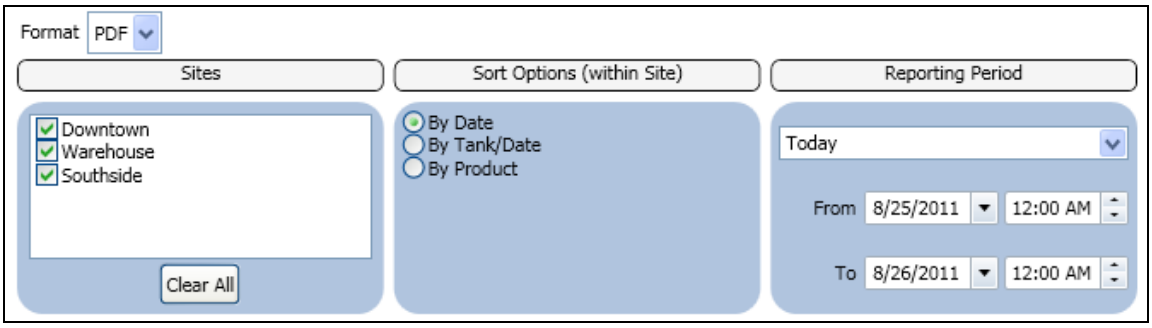
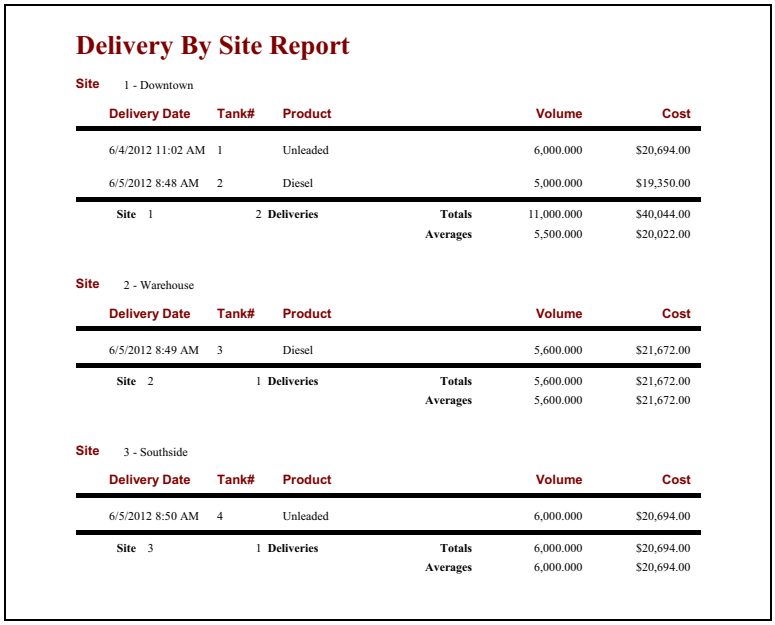


Figure 10-16 Tank Deliveries Filter

Select a report using the steps below:

1. Select the site(s) that you want to generate the report for by clicking a site within the Sites field.
2. Select the Sort Options for the report. Sorting options include **By Date**, **By Tank/Date**, or **By Product**.
3. Select the Reporting Period by using the pull-down or by selecting a specific date range. Pull-down selections include the following options:
   - **Today:** Period from midnight of the current day to the present time
   - **Yesterday:** Period from midnight of the previous day to midnight of the current day
   - **Week to Date:** Period from Sunday of the current week to the present time
   - **Month to Date:** Period from the first day of the current month to the present time
   - **Year to Date:** Period from the first day of the current year to the present time
4. Click the **Run Report** button to generate the report.

Figure 10-17 through Figure 10-19 show examples of what is produced by each of the sort options.



Delivery By Site Report

Site 1 - Downtown

Delivery Date	Tank#	Product		Volume	Cost
6/4/2012 11:02 AM	1	Unleaded		6,000.000	$20,694.00
6/5/2012 8:48 AM	2	Diesel		5,000.000	$19,350.00
Site 1	2	**Deliveries**	**Totals**	11,000.000	$40,044.00
			Averages	5,500.000	$20,022.00

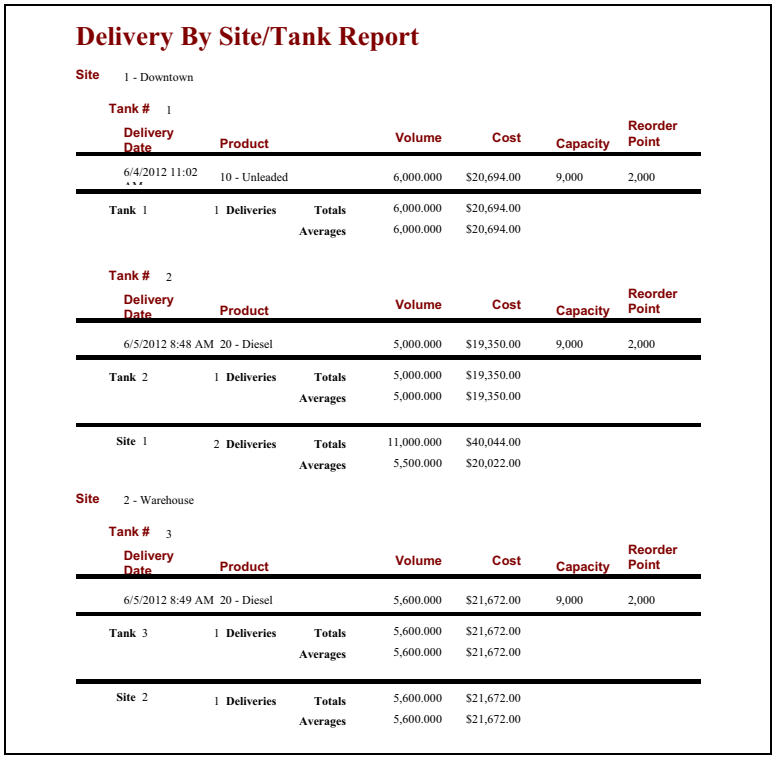
Site 2 - Warehouse

Delivery Date	Tank#	Product		Volume	Cost
6/5/2012 8:49 AM	3	Diesel		5,600.000	$21,672.00
Site 2	1	**Deliveries**	**Totals**	5,600.000	$21,672.00
			Averages	5,600.000	$21,672.00

Site 3 - Southside

Delivery Date	Tank#	Product		Volume	Cost
6/5/2012 8:50 AM	4	Unleaded		6,000.000	$20,694.00
Site 3	1	**Deliveries**	**Totals**	6,000.000	$20,694.00
			Averages	6,000.000	$20,694.00

Figure 10-17 Tank Deliveries - Sort by Site



Delivery By Site/Tank Report

Site 1 - Downtown

Tank # 1

Delivery Date	Product		Volume	Cost	Capacity	Reorder Point
6/4/2012 11:02 AM	10 - Unleaded		6,000.000	$20,694.00	9,000	2,000
Tank 1	1 **Deliveries**	**Totals**	6,000.000	$20,694.00		
		Averages	6,000.000	$20,694.00		

Tank # 2

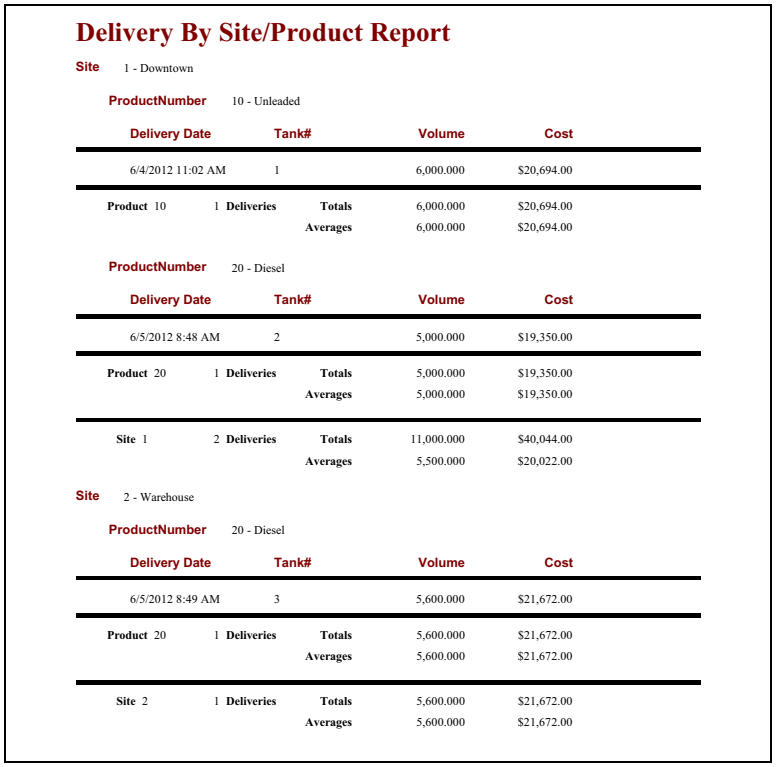
Delivery Date	Product		Volume	Cost	Capacity	Reorder Point
6/5/2012 8:48 AM	20 - Diesel		5,000.000	$19,350.00	9,000	2,000
Tank 2	1 **Deliveries**	**Totals**	5,000.000	$19,350.00		
		Averages	5,000.000	$19,350.00		
Site 1	2 **Deliveries**	**Totals**	11,000.000	$40,044.00		
		Averages	5,500.000	$20,022.00		

Site 2 - Warehouse

Tank # 3

Delivery Date	Product		Volume	Cost	Capacity	Reorder Point
6/5/2012 8:49 AM	20 - Diesel		5,600.000	$21,672.00	9,000	2,000
Tank 3	1 **Deliveries**	**Totals**	5,600.000	$21,672.00		
		Averages	5,600.000	$21,672.00		
Site 2	1 **Deliveries**	**Totals**	5,600.000	$21,672.00		
		Averages	5,600.000	$21,672.00		

Figure 10-18 Tank Deliveries - Sort by Tank



Delivery By Site/Product Report

Site 1 - Downtown

ProductNumber 10 - Unleaded

Delivery Date	Tank#		Volume	Cost
6/4/2012 11:02 AM	1		6,000.000	$20,694.00
Product 10	1 **Deliveries**	**Totals**	6,000.000	$20,694.00
		Averages	6,000.000	$20,694.00

ProductNumber 20 - Diesel

Delivery Date	Tank#		Volume	Cost
6/5/2012 8:48 AM	2		5,000.000	$19,350.00
Product 20	1 **Deliveries**	**Totals**	5,000.000	$19,350.00
		Averages	5,000.000	$19,350.00
Site 1	2 **Deliveries**	**Totals**	11,000.000	$40,044.00
		Averages	5,500.000	$20,022.00

Site 2 - Warehouse

ProductNumber 20 - Diesel

Delivery Date	Tank#		Volume	Cost
6/5/2012 8:49 AM	3		5,600.000	$21,672.00
Product 20	1 **Deliveries**	**Totals**	5,600.000	$21,672.00
		Averages	5,600.000	$21,672.00
Site 2	1 **Deliveries**	**Totals**	5,600.000	$21,672.00
		Averages	5,600.000	$21,672.00

Figure 10-19 Tank Deliveries - Sort by Product

10.5 Tank Inventory

The Tank Inventory report is used generate reports that contain information about tank volumes at the sites in the fleet system. Figure 10-20 is an example of the Tank Inventory filter.

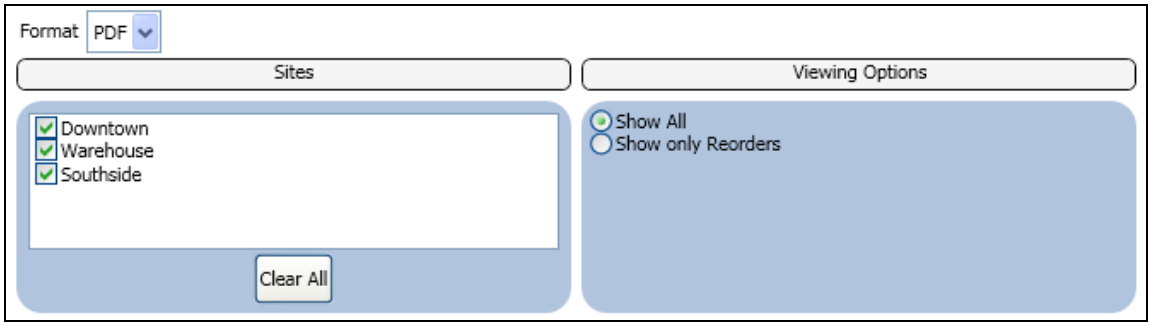
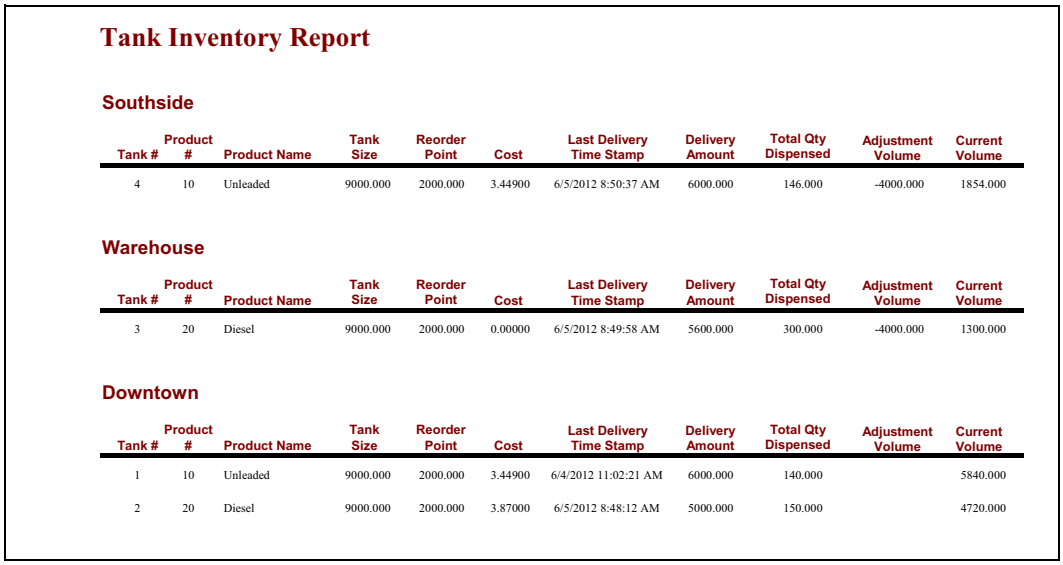


Figure 10-20 Tank Inventory Filter

Select which Sites should be included in the report, and then choose if all tanks, or only those tanks which have fallen below their reorder points, should be included in the report. Click the **Run Report** button to generate the report. Figure 10-21 and Figure 10-22 show examples of the Viewing Options.



Tank Inventory Report

Southside

Tank #	Product #	Product Name	Tank Size	Reorder Point	Cost	Last Delivery Time Stamp	Delivery Amount	Total Qty Dispensed	Adjustment Volume	Current Volume
4	10	Unleaded	9000.000	2000.000	3.44900	6/5/2012 8:50:37 AM	6000.000	146.000	-4000.000	1854.000

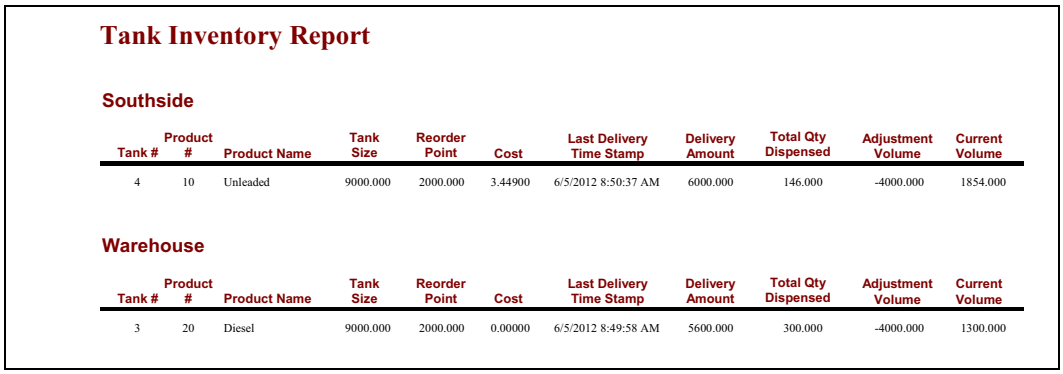
Warehouse

Tank #	Product #	Product Name	Tank Size	Reorder Point	Cost	Last Delivery Time Stamp	Delivery Amount	Total Qty Dispensed	Adjustment Volume	Current Volume
3	20	Diesel	9000.000	2000.000	0.00000	6/5/2012 8:49:58 AM	5600.000	300.000	-4000.000	1300.000

Downtown

Tank #	Product #	Product Name	Tank Size	Reorder Point	Cost	Last Delivery Time Stamp	Delivery Amount	Total Qty Dispensed	Adjustment Volume	Current Volume
1	10	Unleaded	9000.000	2000.000	3.44900	6/4/2012 11:02:21 AM	6000.000	140.000		5840.000
2	20	Diesel	9000.000	2000.000	3.87000	6/5/2012 8:48:12 AM	5000.000	150.000		4720.000

Figure 10-21 Tank Inventory Reports - All Tanks



Tank Inventory Report

Southside

Tank #	Product #	Product Name	Tank Size	Reorder Point	Cost	Last Delivery Time Stamp	Delivery Amount	Total Qty Dispensed	Adjustment Volume	Current Volume
4	10	Unleaded	9000.000	2000.000	3.44900	6/5/2012 8:50:37 AM	6000.000	146.000	-4000.000	1854.000

Warehouse

Tank #	Product #	Product Name	Tank Size	Reorder Point	Cost	Last Delivery Time Stamp	Delivery Amount	Total Qty Dispensed	Adjustment Volume	Current Volume
3	20	Diesel	9000.000	2000.000	0.00000	6/5/2012 8:49:58 AM	5600.000	300.000	-4000.000	1300.000

Figure 10-22 Tank Inventory Reports - Reorder Needed

10.6 Transaction Audits

The Transaction Audits report is used generate reports that provide an audit trail of edited transactions to ensure data integrity within the system. Figure 10-23 is an example of the Transaction Audits Reports filter.

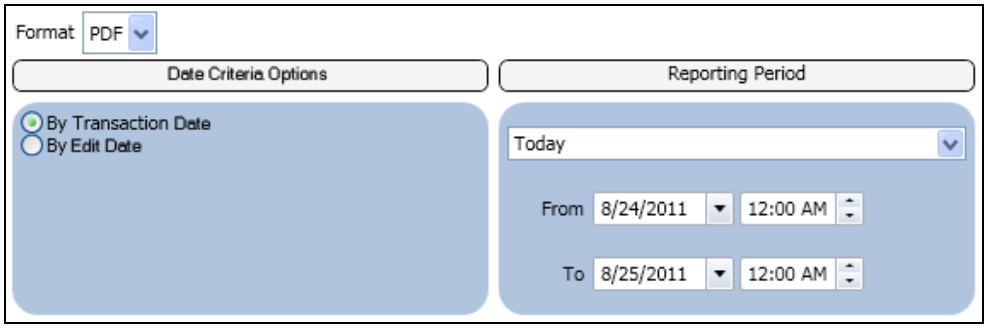


Figure 10-23 Transaction Audits Filter

From this window you select view by transaction date or by edit date. Select the reporting period from the pull-down window or enter a specific date range. Pull-down selections include **Current Day**, **Previous Day**, **Week to Date**, **Month to Date**, **Year to Date**, and **Show All**. Create a report with transaction audits information by clicking the **Run Report** button. Figure 10-24 and Figure 10-25 show examples of the Data Criteria Options.

Transaction Audit Trail Report

Edited By Administrator
Edit Date 6/5/2012 9:12 AM

Trans Type	Trans Number	Site	Employee Info	Department Info	Vehicle Info	Odometer / Hours	Fueling Point	Product Info	Quantity Used	Trans Date
Insert	2	Southside	333 Driver, Joe	70 Service	1313 1997 Ford F150	34560	1	10 Unleaded	30.000	6/5/2012 9:11 AM
Insert	3	Warehouse	123 Employee, Mary	50 Administration	21 Gray Bus	54370	3	20 Diesel	100.000	6/5/2012 9:12 AM
Insert	4	Downtown	9124 two, test	50 Administration	23 Red Bus	68250	4	20 Diesel	150.000	6/5/2012 9:15 AM
Insert	5	Southside	6666 Bahamoth, Jane	70 Service	1313 1997 Ford F150	78920	2	10 Unleaded	50.000	6/5/2012 9:16 AM
Insert	2	Southside	333 Driver, Joe	70 Service	1313 1997 Ford F150	34560	4	10 Unleaded	30.000	6/5/2012 9:11 AM
Delete	2	Southside	333 Driver, Joe	70 Service	1313 1997 Ford F150	34560	1	10 Unleaded	30.000	6/5/2012 9:11 AM
Insert	6	Warehouse	123 Employee, Mary	50 Administration	21 Gray Bus	87620	2	20 Diesel	200.000	6/5/2012 9:17 AM
Insert	2	Southside	6666 Bahamoth, Jane	70 Service	1313 1997 Ford F150	34560	1	10 Unleaded	30.000	6/5/2012 9:11 AM
Delete	2	Southside	333 Driver, Joe	70 Service	1313 1997 Ford F150	34560	4	10 Unleaded	30.000	6/5/2012 9:11 AM

Figure 10-24 Transaction Audits Reports - By Transaction Date

Transaction Audit Trail Report

Edited By Administrator
Edit Date 6/5/2012 9:08 AM

Trans Type	Trans Number	Site	Employee Info	Department Info	Vehicle Info	Odometer / Hours	Fueling Point	Product Info	Quantity Used	Trans Date
Insert	1	Downtown	111 Employee, Fred	50 Administration	23 Red Bus	100	4	20 Diesel	100.000	6/1/2012 9:07 AM
Insert	2	Southside	333 Driver, Joe	70 Service	1313 1997 Ford F150	34560	1	10 Unleaded	30.000	6/5/2012 9:11 AM
Insert	3	Warehouse	123 Employee, Mary	50 Administration	21 Gray Bus	54370	3	20 Diesel	100.000	6/5/2012 9:12 AM
Insert	4	Downtown	9124 two, test	50 Administration	23 Red Bus	68250	4	20 Diesel	150.000	6/5/2012 9:15 AM
Insert	5	Southside	6666 Bahamoth, Jane	70 Service	1313 1997 Ford F150	78920	2	10 Unleaded	50.000	6/5/2012 9:16 AM
Insert	2	Southside	333 Driver, Joe	70 Service	1313 1997 Ford F150	34560	4	10 Unleaded	30.000	6/5/2012 9:11 AM
Delete	2	Southside	333 Driver, Joe	70 Service	1313 1997 Ford F150	34560	1	10 Unleaded	30.000	6/5/2012 9:11 AM
Insert	6	Warehouse	123 Employee, Mary	50 Administration	21 Gray Bus	87620	2	20 Diesel	200.000	6/5/2012 9:17 AM
Insert	2	Southside	6666 Bahamoth, Jane	70 Service	1313 1997 Ford F150	34560	1	10 Unleaded	30.000	6/5/2012 9:11 AM

Figure 10-25 Transaction Audits Reports - By Edit Date

10.7 List Reports

The List Reports section contains a list of reports that are available for viewing or printing. Figure 10-26 is an example of the List Reports filter.

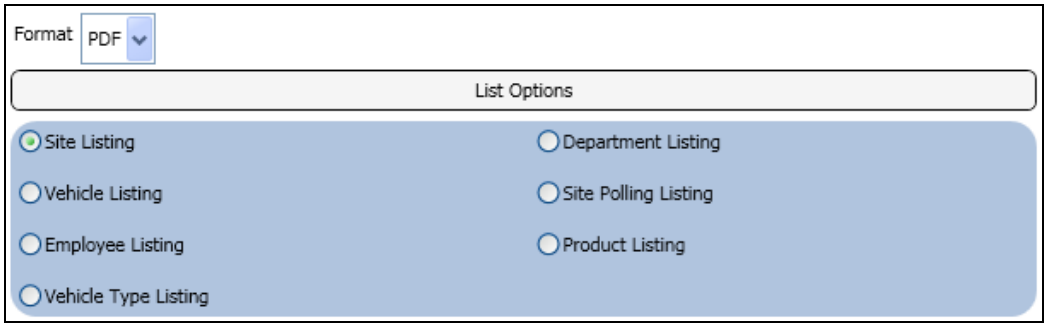
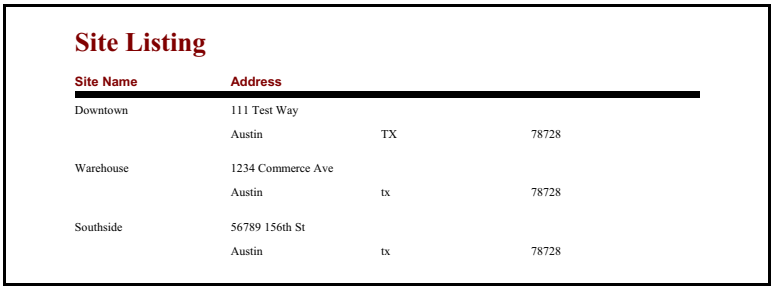


Figure 10-26 List Reports Filter

Select from the following report types and the click the **Run Report** button. Figure 10-27 through Figure 10-33 show examples of all these report types.

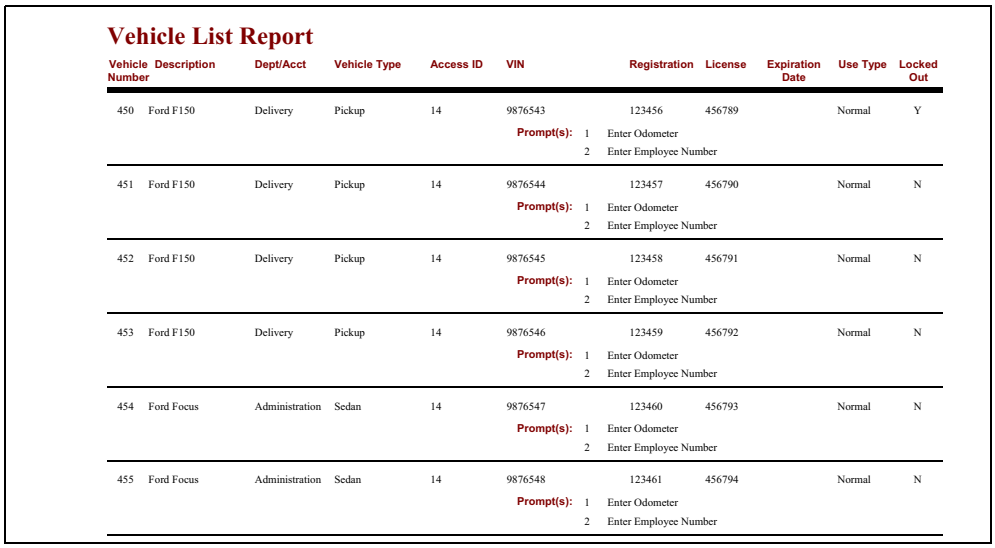
- **Site Listing:** All sites and their addresses.
- **Vehicle Listing:** All vehicles and their General tab and Prompting tab settings
- **Employee Listing:** All employees and their General tab and Prompting tab settings
- **Vehicle Type Listing:** All vehicle types and their General, Authorizations, and Prompting tab settings
- **Department Listing:** All departments and their department file settings
- **Site Polling Listing:** Polling schedules and actions
- **Product Listing:** All product numbers and names



Site Listing

Site Name	Address		
Downtown	111 Test Way		
	Austin	TX	78728
Warehouse	1234 Commerce Ave		
	Austin	tx	78728
Southside	56789 156th St		
	Austin	tx	78728

Figure 10-27 Site Listing Report Example



Vehicle List Report

Vehicle Number	Description	Dept/Acct	Vehicle Type	Access ID	VIN	Registration	License	Expiration Date	Use Type	Locked Out
450	Ford F150	Delivery	Pickup	14	9876543	123456	456789		Normal	Y
					Prompt(s): 1 Enter Odometer 2 Enter Employee Number					
451	Ford F150	Delivery	Pickup	14	9876544	123457	456790		Normal	N
					Prompt(s): 1 Enter Odometer 2 Enter Employee Number					
452	Ford F150	Delivery	Pickup	14	9876545	123458	456791		Normal	N
					Prompt(s): 1 Enter Odometer 2 Enter Employee Number					
453	Ford F150	Delivery	Pickup	14	9876546	123459	456792		Normal	N
					Prompt(s): 1 Enter Odometer 2 Enter Employee Number					
454	Ford Focus	Administration	Sedan	14	9876547	123460	456793		Normal	N
					Prompt(s): 1 Enter Odometer 2 Enter Employee Number					
455	Ford Focus	Administration	Sedan	14	9876548	123461	456794		Normal	N
					Prompt(s): 1 Enter Odometer 2 Enter Employee Number					

Figure 10-28 Vehicle List Report Example

Employee List

Emp#	Last Name	First Name	Dpt/Acct	ID Number	Access ID	Expiration Date	Use Type	Locked Out
500	Smith	Doug	Administration	4567	21		Normal	Y
				Prompt(s): 1	Enter Employee PIN			
501	Toll	Elizabeth	Administration	4568	22		Normal	N
				Prompt(s): 1	Enter Employee PIN			
502	Vasquez	Tony	Administration	4569	23		Normal	N
				Prompt(s): 1	Enter Employee PIN			
503	Wayland	Robert	Administration	4570	24		Normal	N
				Prompt(s): 1	Enter Employee PIN			
504	Alvarez	Juan	Administration	4571	25		Normal	N
				Prompt(s): 1	Enter Employee PIN			
505	Baker	Lisa	Administration	4572	26		Normal	N
				Prompt(s): 1	Enter Employee PIN			

Figure 10-29 Employee List Report Example

Vehicle Type List Report

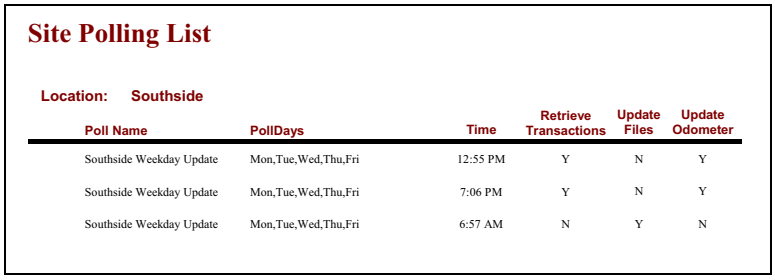
Vehicle Type #	Description	Odometer Type	Odometer Range	Reasonability Check	Low Efficiency	High Efficiency	Transaction Limit	Max Daily Fuelings	Authorized Products
2	Bus	Hours	900		10.00	20.00	250	2	Diesel
					Prompt(s):				
3	Delivery Truck	Hours	0	Continue Transaction	0.00	0.00	60	4	Diesel
					Prompt(s):				
4	Sedan	Hours	0	Not Required	0.00	0.00	60	2	Unleaded 10W30 Motor Oil (Summer)
					Prompt(s):				5W30 Motor Oil (Winter)
5	Pickup Truck	Hours	0		0.00	0.00	60	2	Unleaded 10W30 Motor Oil (Summer)
					Prompt(s):				5W30 Motor Oil (Winter)

Figure 10-30 Vehicle Type List Report Example

Department List

Dep't #	Dep't Name	Phone	Ext	Address	Country	Locked Out	Discount %
50	Administration	5555555	5555	3814 Jarrett Way Austin TX 78728	USA	N	0.00
60	Deliveries	5555555	5555	1234 Commerce Ave Austin TX 78728	USA	N	0.00
70	Service	5555555	5555	56789 156th St Austin TX 78727	USA	N	0.00

Figure 10-31 Department Listing Report Example

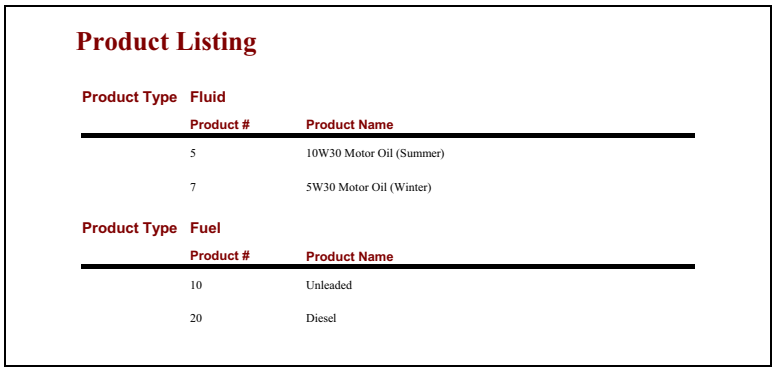


Site Polling List

Location: Southside

Poll Name	PollDays	Time	Retrieve Transactions	Update Files	Update Odometer
Southside Weekday Update	Mon,Tue,Wed,Thu,Fri	12:55 PM	Y	N	Y
Southside Weekday Update	Mon,Tue,Wed,Thu,Fri	7:06 PM	Y	N	Y
Southside Weekday Update	Mon,Tue,Wed,Thu,Fri	6:57 AM	N	Y	N

Figure 10-32 Site Polling List Report Example



Product Listing

Product Type Fluid

Product #	Product Name
5	10W30 Motor Oil (Summer)
7	5W30 Motor Oil (Winter)

Product Type Fuel

Product #	Product Name
10	Unleaded
20	Diesel

Figure 10-33 Product Listing Report Example

10.8 Vehicle Reports

The Vehicle Reports contain five sub-reports:

- **Vehicle List:** Vehicle listing
- **Vehicle Authorization:** Vehicle authorizations listings
- **Vehicle LockedOut:** Locked out vehicle listings
- **Vehicle Reasonable Odometer:** Reasonable odometer reports
- **Vehicle Odometer Efficiency:** Odometer efficiency reports

10.8.1 Vehicle List Reports

The Vehicle List Reports provide the same vehicle list as offered by List Reports (see Figure 10-28), but allows the report to be filtered and sorted. Figure 10-34 is an example of the Vehicle List Reports filter.

NOTE: Sort Options are not available when generating a report in Excel format.

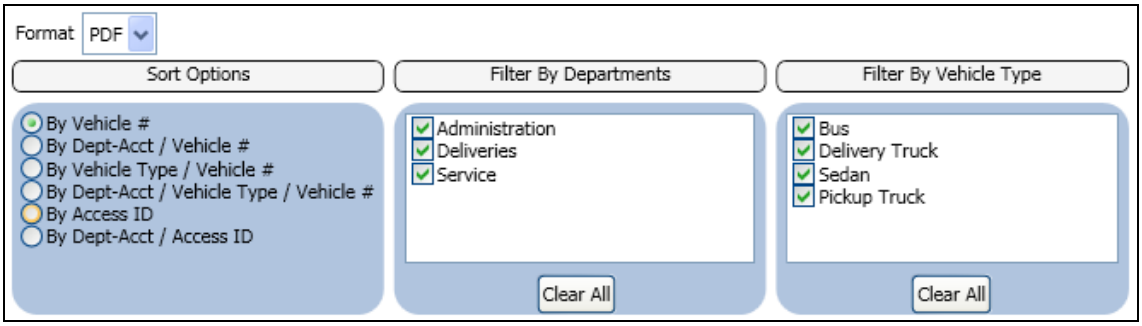
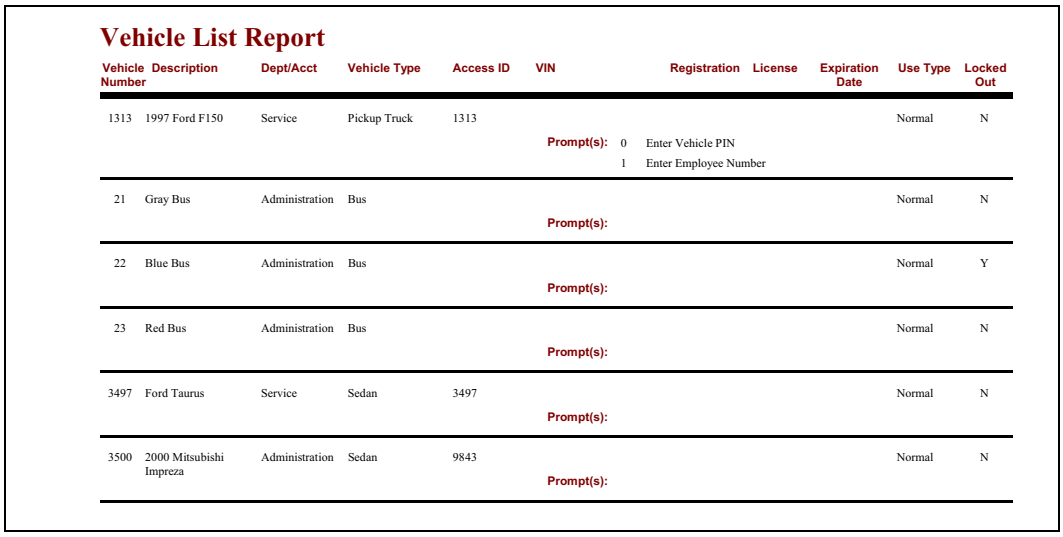


Figure 10-34 Vehicle List Reports Filter

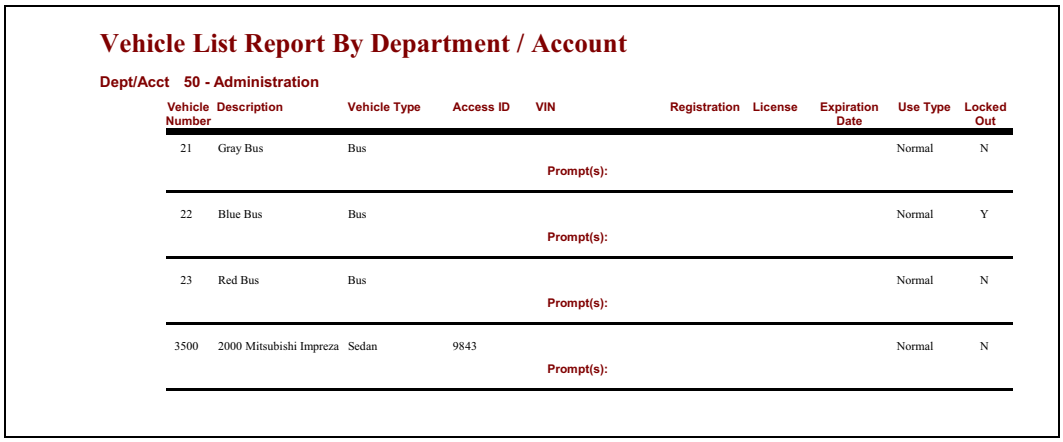
Select the sorting and filter options and then click the **Run Report** button. Access ID reports are only available if the system is set up to link access IDs to vehicles. Figure 10-35 through Figure 10-43 show examples of the different sort options.



Vehicle List Report

Vehicle Number	Description	Dept/Acct	Vehicle Type	Access ID	VIN	Registration	License	Expiration Date	Use Type	Locked Out
1313	1997 Ford F150	Service	Pickup Truck	1313					Normal	N
					Prompt(s): 0 Enter Vehicle PIN 1 Enter Employee Number					
21	Gray Bus	Administration	Bus						Normal	N
					Prompt(s):					
22	Blue Bus	Administration	Bus						Normal	Y
					Prompt(s):					
23	Red Bus	Administration	Bus						Normal	N
					Prompt(s):					
3497	Ford Taurus	Service	Sedan	3497					Normal	N
					Prompt(s):					
3500	2000 Mitsubishi Impreza	Administration	Sedan	9843					Normal	N
					Prompt(s):					

Figure 10-35 Vehicle Listing - Sort by Vehicle Number

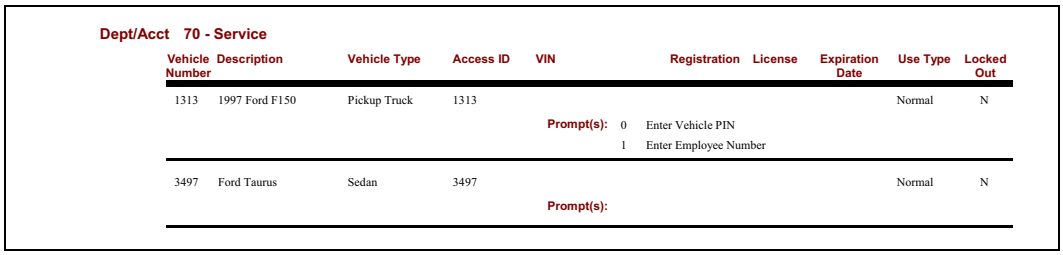


Vehicle List Report By Department / Account

Dept/Acct 50 - Administration

Vehicle Number	Description	Vehicle Type	Access ID	VIN	Registration	License	Expiration Date	Use Type	Locked Out
21	Gray Bus	Bus						Normal	N
				Prompt(s):					
22	Blue Bus	Bus						Normal	Y
				Prompt(s):					
23	Red Bus	Bus						Normal	N
				Prompt(s):					
3500	2000 Mitsubishi Impreza	Sedan	9843					Normal	N
				Prompt(s):					

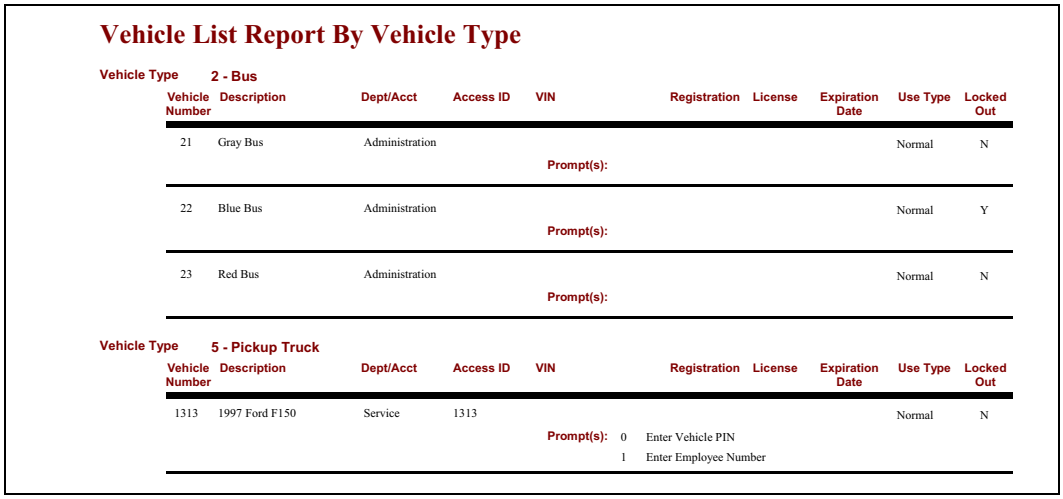
Figure 10-36 Vehicle Listing - Sort by Dept-Acct / Vehicle Number - page 1



Dept/Acct 70 - Service

Vehicle Number	Description	Vehicle Type	Access ID	VIN	Registration	License	Expiration Date	Use Type	Locked Out
1313	1997 Ford F150	Pickup Truck	1313					Normal	N
				Prompt(s): 0 Enter Vehicle PIN 1 Enter Employee Number					
3497	Ford Taurus	Sedan	3497					Normal	N
				Prompt(s):					

Figure 10-37 Vehicle Listing - Sort by Dept-Acct / Vehicle Number - page 2



Vehicle List Report By Vehicle Type

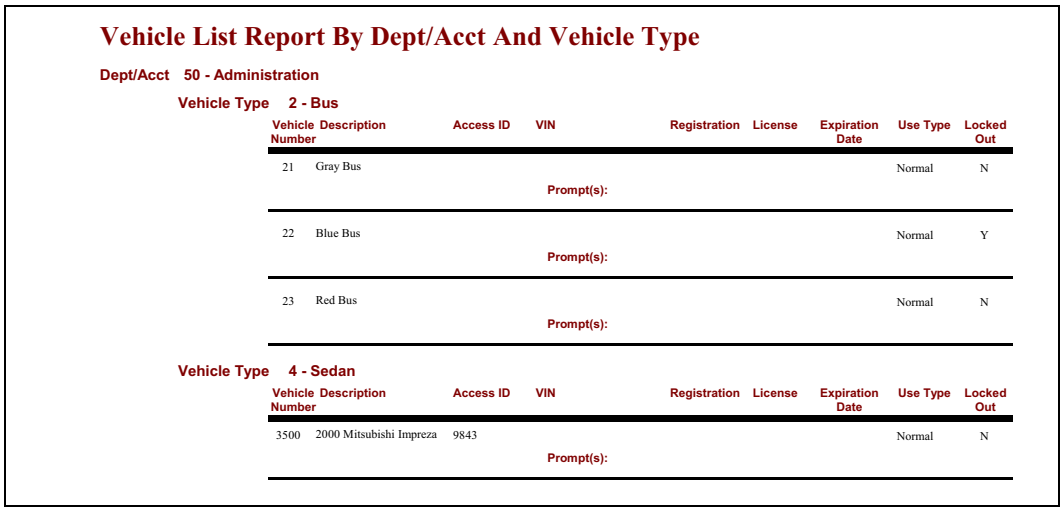
Vehicle Type 2 - Bus

Vehicle Number	Description	Dept/Acct	Access ID	VIN	Registration	License	Expiration Date	Use Type	Locked Out
21	Gray Bus	Administration						Normal	N
				Prompt(s):					
22	Blue Bus	Administration						Normal	Y
				Prompt(s):					
23	Red Bus	Administration						Normal	N
				Prompt(s):					

Vehicle Type 5 - Pickup Truck

Vehicle Number	Description	Dept/Acct	Access ID	VIN	Registration	License	Expiration Date	Use Type	Locked Out
1313	1997 Ford F150	Service	1313					Normal	N
				Prompt(s): 0 Enter Vehicle PIN					
				1 Enter Employee Number					

Figure 10-38 Vehicle Listing - Sort by Vehicle Type / Vehicle Number



Vehicle List Report By Dept/Acct And Vehicle Type

Dept/Acct 50 - Administration

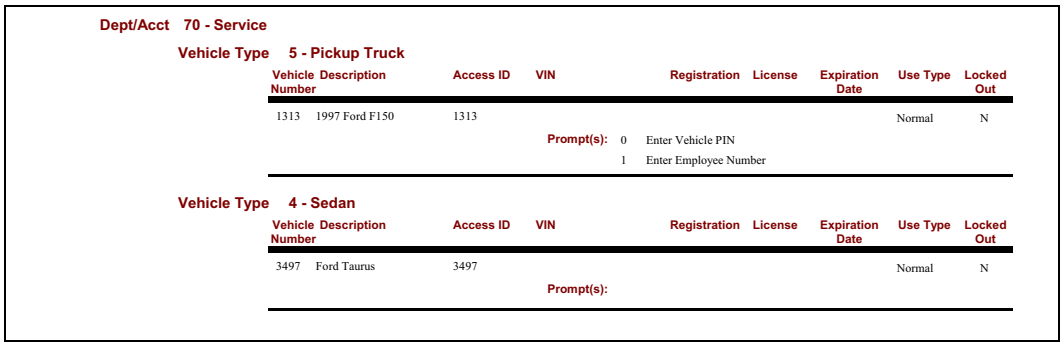
Vehicle Type 2 - Bus

Vehicle Number	Description	Access ID	VIN	Registration	License	Expiration Date	Use Type	Locked Out
21	Gray Bus						Normal	N
			Prompt(s):					
22	Blue Bus						Normal	Y
			Prompt(s):					
23	Red Bus						Normal	N
			Prompt(s):					

Vehicle Type 4 - Sedan

Vehicle Number	Description	Access ID	VIN	Registration	License	Expiration Date	Use Type	Locked Out
3500	2000 Mitsubishi Impreza	9843					Normal	N
			Prompt(s):					

Figure 10-39 Vehicle Listing - Sort by Dept-Acct / Vehicle Type / Vehicle Number - page 1



Dept/Acct 70 - Service

Vehicle Type 5 - Pickup Truck

Vehicle Number	Description	Access ID	VIN	Registration	License	Expiration Date	Use Type	Locked Out
1313	1997 Ford F150	1313					Normal	N
			Prompt(s): 0 Enter Vehicle PIN					
			1 Enter Employee Number					

Vehicle Type 4 - Sedan

Vehicle Number	Description	Access ID	VIN	Registration	License	Expiration Date	Use Type	Locked Out
3497	Ford Taurus	3497					Normal	N
			Prompt(s):					

Figure 10-40 Vehicle Listing - Sort by Dept-Acct / Vehicle Type / Vehicle Number - page 2

Vehicle List Report by Access ID

Access ID	Vehicle Number	Description	Dept/Acct	Vehicle Type	VIN	Registration	License	Expiration Date	Use Type	Locked Out
9843	3500	2000 Mitsubishi Impreza	Administration	Sedan					Normal	N
					Prompt(s):					
3497	3497	Ford Taurus	Service	Sedan					Normal	N
					Prompt(s):					
1313	1313	1997 Ford F150	Service	Pickup Truck					Normal	N
					Prompt(s): 0 Enter Vehicle PIN					
					1 Enter Employee Number					
	21	Gray Bus	Administration	Bus					Normal	N
					Prompt(s):					
	22	Blue Bus	Administration	Bus					Normal	Y
					Prompt(s):					
	23	Red Bus	Administration	Bus					Normal	N
					Prompt(s):					

Figure 10-41 Vehicle Listing - Sort by Access ID

Vehicle List Report By Department / Account and Access ID

Dept/Acct 50 - Administration

Access ID	Vehicle Number	Description	Vehicle Type	VIN	Registration	License	Expiration Date	Use Type	Locked Out
	21	Gray Bus	Bus					Normal	N
				Prompt(s):					
	22	Blue Bus	Bus					Normal	Y
				Prompt(s):					
	23	Red Bus	Bus					Normal	N
				Prompt(s):					
9843	3500	2000 Mitsubishi Impreza	Sedan					Normal	N
				Prompt(s):					

Figure 10-42 Vehicle Listing - Sort by Dept-Acct / Access ID - page 1

Dept/Acct 70 - Service

Access ID	Vehicle Number	Description	Vehicle Type	VIN	Registration	License	Expiration Date	Use Type	Locked Out
1313	1313	1997 Ford F150	Pickup Truck					Normal	N
				Prompt(s): 0 Enter Vehicle PIN					
				1 Enter Employee Number					
3497	3497	Ford Taurus	Sedan					Normal	N
				Prompt(s):					

Figure 10-43 Vehicle Listing - Sort by Dept-Acct / Access ID - page 2

10.8.2 Vehicle Authorization Reports

Vehicle Authorization Reports provide the vehicle authorization settings: transaction limit, maximum daily fuelings, authorized products, and authorized sites. Figure 10-44 is an example of the Vehicle Authorizations Reports filter.

NOTE: Sort Options are not available when generating a report in Excel format.

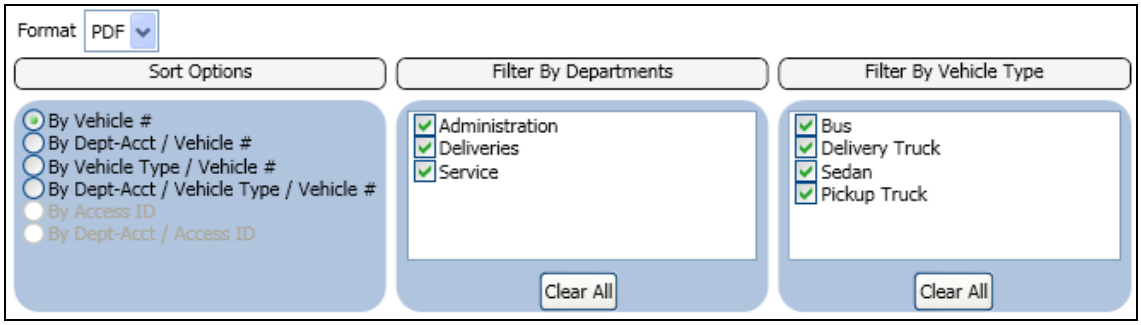
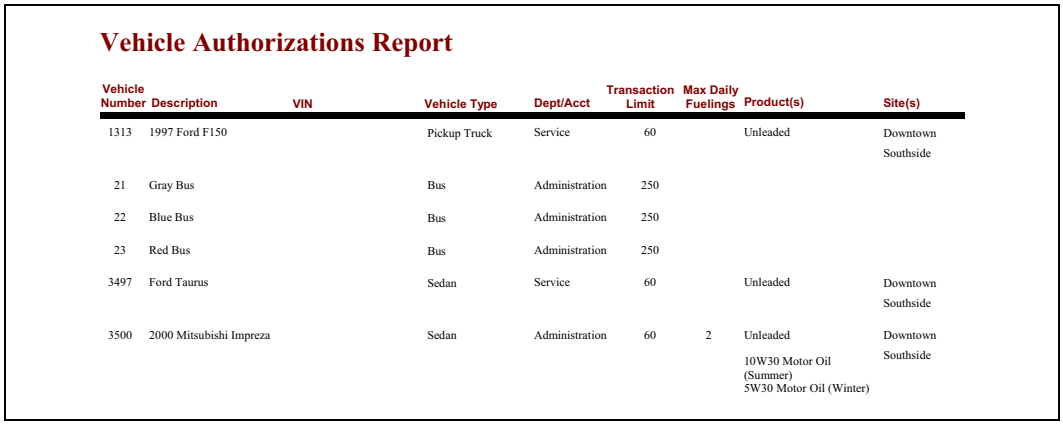


Figure 10-44 Vehicle Authorizations Reports Filter

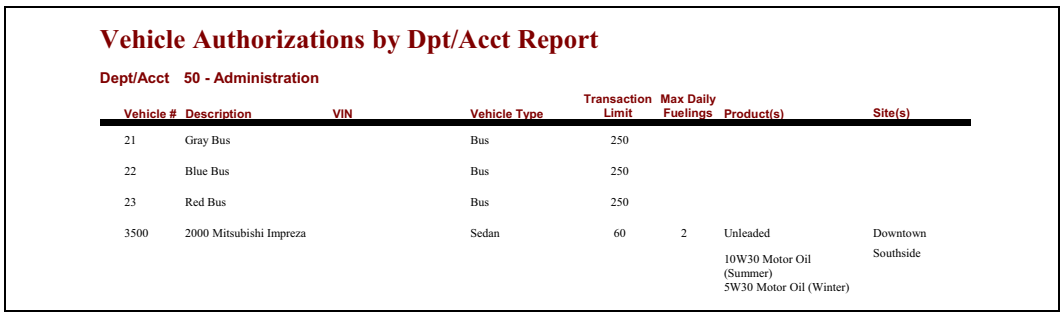
Select the sorting and filter options and then click the **Run Report** button. Access ID reports are not available for this report type. Figure 10-45 through Figure 10-50 show examples of the different sort options.



Vehicle Authorizations Report

Vehicle Number	Description	VIN	Vehicle Type	Dept/Acct	Transaction Limit	Max Daily Fuelings	Product(s)	Site(s)
1313	1997 Ford F150		Pickup Truck	Service	60		Unleaded	Downtown Southside
21	Gray Bus		Bus	Administration	250			
22	Blue Bus		Bus	Administration	250			
23	Red Bus		Bus	Administration	250			
3497	Ford Taurus		Sedan	Service	60		Unleaded	Downtown Southside
3500	2000 Mitsubishi Impreza		Sedan	Administration	60	2	Unleaded 10W30 Motor Oil (Summer) 5W30 Motor Oil (Winter)	Downtown Southside

Figure 10-45 Vehicle Authorization - Sort by Vehicle Number

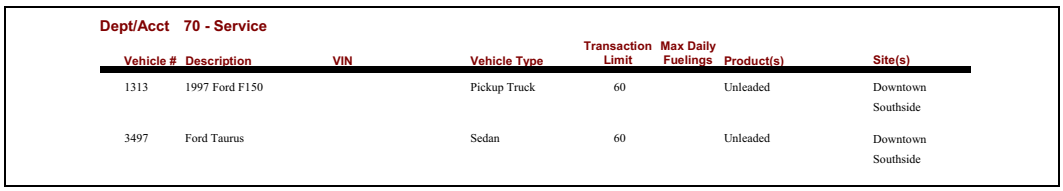


Vehicle Authorizations by Dpt/Acct Report

Dept/Acct 50 - Administration

Vehicle #	Description	VIN	Vehicle Type	Transaction Limit	Max Daily Fuelings	Product(s)	Site(s)
21	Gray Bus		Bus	250			
22	Blue Bus		Bus	250			
23	Red Bus		Bus	250			
3500	2000 Mitsubishi Impreza		Sedan	60	2	Unleaded 10W30 Motor Oil (Summer) 5W30 Motor Oil (Winter)	Downtown Southside

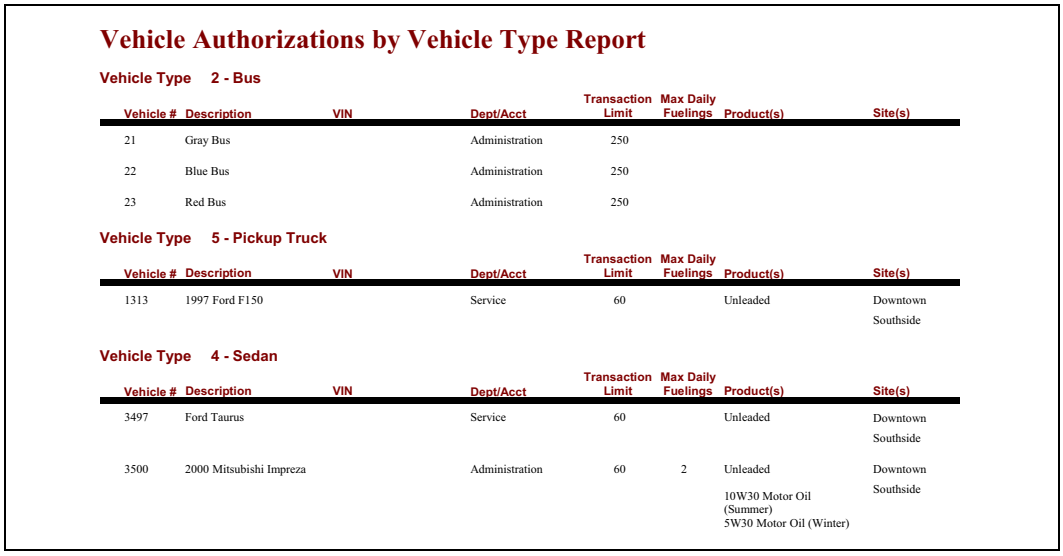
Figure 10-46 Vehicle Authorization - Sort by Dept-Acct / Vehicle Number - page 1



Dept/Acct 70 - Service

Vehicle #	Description	VIN	Vehicle Type	Transaction Limit	Max Daily Fuelings	Product(s)	Site(s)
1313	1997 Ford F150		Pickup Truck	60		Unleaded	Downtown Southside
3497	Ford Taurus		Sedan	60		Unleaded	Downtown Southside

Figure 10-47 Vehicle Authorization - Sort by Dept-Acct / Vehicle Number - page 2



Vehicle Authorizations by Vehicle Type Report

Vehicle Type 2 - Bus

Vehicle #	Description	VIN	Dept/Acct	Transaction Limit	Max Daily Fuelings	Product(s)	Site(s)
21	Gray Bus		Administration	250			
22	Blue Bus		Administration	250			
23	Red Bus		Administration	250			

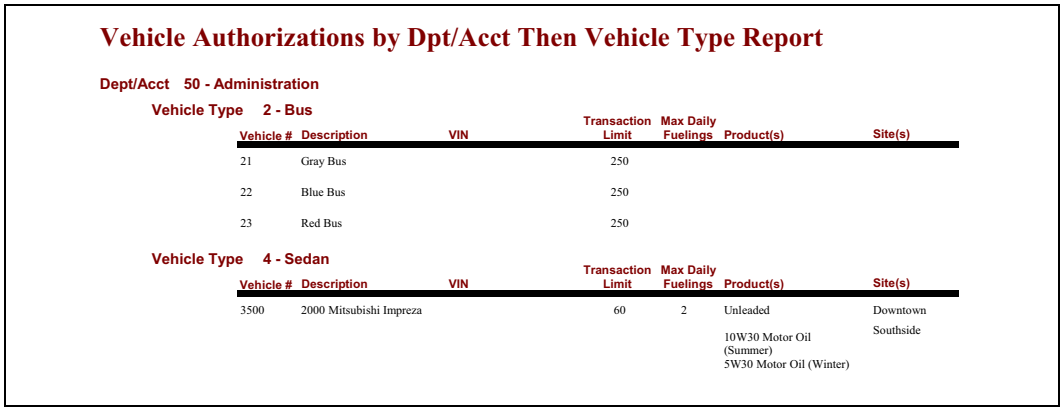
Vehicle Type 5 - Pickup Truck

Vehicle #	Description	VIN	Dept/Acct	Transaction Limit	Max Daily Fuelings	Product(s)	Site(s)
1313	1997 Ford F150		Service	60		Unleaded	Downtown Southside

Vehicle Type 4 - Sedan

Vehicle #	Description	VIN	Dept/Acct	Transaction Limit	Max Daily Fuelings	Product(s)	Site(s)
3497	Ford Taurus		Service	60		Unleaded	Downtown Southside
3500	2000 Mitsubishi Impreza		Administration	60	2	Unleaded 10W30 Motor Oil (Summer) 5W30 Motor Oil (Winter)	Downtown Southside

Figure 10-48 Vehicle Authorization - Sort by Vehicle Type / Vehicle Number



Vehicle Authorizations by Dpt/Acct Then Vehicle Type Report

Dept/Acct 50 - Administration

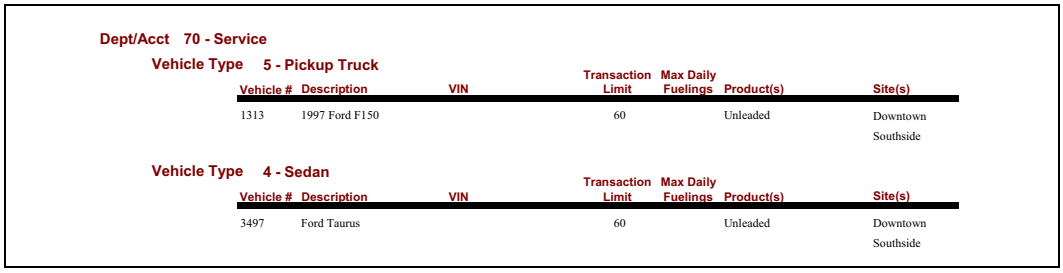
Vehicle Type 2 - Bus

Vehicle #	Description	VIN	Transaction Limit	Max Daily Fuelings	Product(s)	Site(s)
21	Gray Bus		250			
22	Blue Bus		250			
23	Red Bus		250			

Vehicle Type 4 - Sedan

Vehicle #	Description	VIN	Transaction Limit	Max Daily Fuelings	Product(s)	Site(s)
3500	2000 Mitsubishi Impreza		60	2	Unleaded 10W30 Motor Oil (Summer) 5W30 Motor Oil (Winter)	Downtown Southside

Figure 10-49 Vehicle Authorization - Sort by Dept-Acct / Vehicle Type / Vehicle Number - page 1



Dept/Acct 70 - Service

Vehicle Type 5 - Pickup Truck

Vehicle #	Description	VIN	Transaction Limit	Max Daily Fuelings	Product(s)	Site(s)
1313	1997 Ford F150		60		Unleaded	Downtown Southside

Vehicle Type 4 - Sedan

Vehicle #	Description	VIN	Transaction Limit	Max Daily Fuelings	Product(s)	Site(s)
3497	Ford Taurus		60		Unleaded	Downtown Southside

Figure 10-50 Vehicle Authorization - Sort by Dept-Acct / Vehicle Type / Vehicle Number - page 2

10.8.3 Vehicle LockedOut Reports

Vehicle LockedOut Reports provide a list of vehicles locked out from fueling access. Figure 10-51 is an example of the Vehicle Lockout Reports filter.

NOTE: Sort Options are not available when generating a report in Excel format.

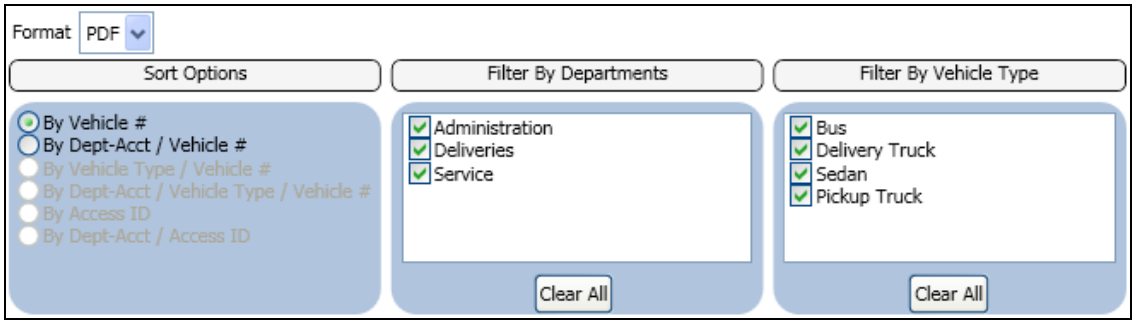
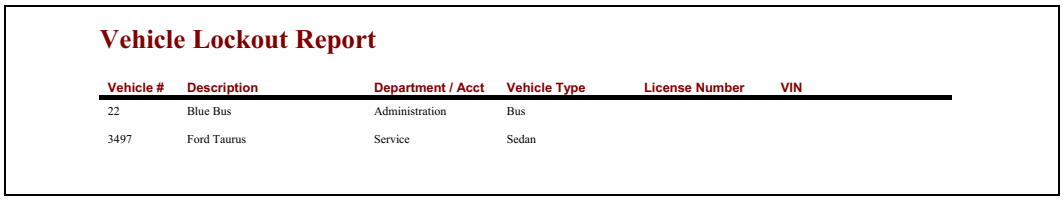


Figure 10-51 Vehicle Lockout Reports

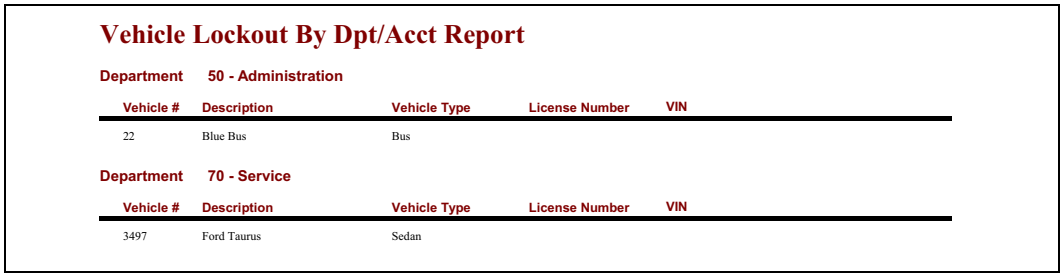
Select the sorting and filter options and then click the **Run Report** button. The only available sort options for this report type are **By Vehicle #** and **By Dept-Acct / Vehicle #**. Figure 10-52 and Figure 10-53 show examples of the different sort options.



Vehicle Lockout Report

Vehicle #	Description	Department / Acct	Vehicle Type	License Number	VIN
22	Blue Bus	Administration	Bus		
3497	Ford Taurus	Service	Sedan		

Figure 10-52 Vehicle Lockout - Sort by Vehicle Number



Vehicle Lockout By Dpt/Acct Report

Department 50 - Administration

Vehicle #	Description	Vehicle Type	License Number	VIN
22	Blue Bus	Bus		

Department 70 - Service

Vehicle #	Description	Vehicle Type	License Number	VIN
3497	Ford Taurus	Sedan		

Figure 10-53 Vehicle Lockout - Sort by Dept-Acct / Vehicle Number

10.8.4 Vehicle Reasonable Odometer Reports

Vehicle Reasonable Odometer Reports provide the reasonable odometer settings: minimum and maximum fueling range, and reasonability check value. Figure 10-54 is an example of the Vehicle Reasonable Odometer Reports filter.

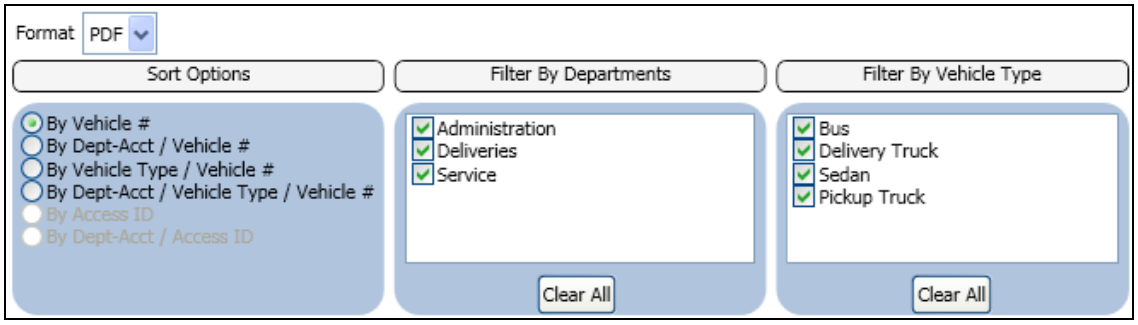
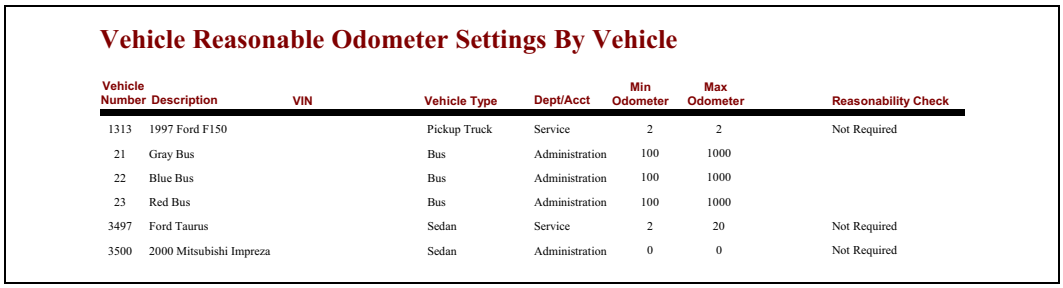


Figure 10-54 Vehicle Reasonable Odometer Reports

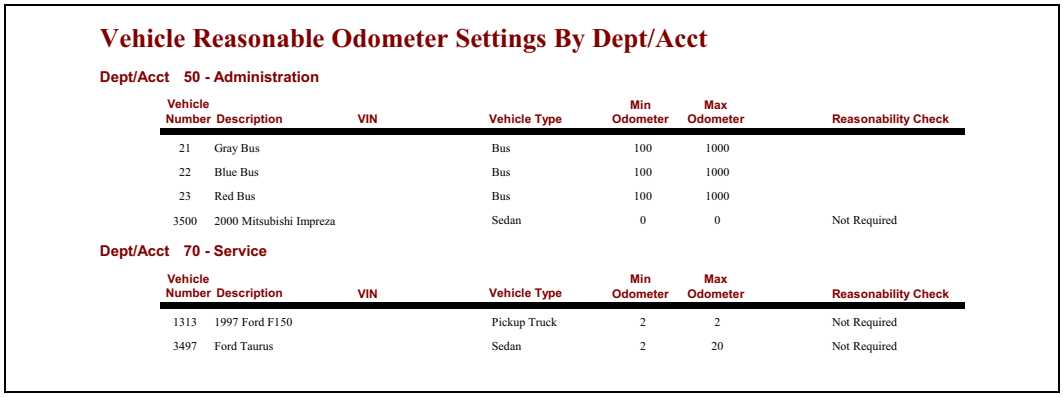
Select the sorting and filter options and then click the **Run Report** button. Access ID reports are not available for this report type. Figure 10-55 through Figure 10-59 show examples of the different sort options.



Vehicle Reasonable Odometer Settings By Vehicle

Vehicle Number	Description	VIN	Vehicle Type	Dept/Acct	Min Odometer	Max Odometer	Reasonability Check
1313	1997 Ford F150		Pickup Truck	Service	2	2	Not Required
21	Gray Bus		Bus	Administration	100	1000	
22	Blue Bus		Bus	Administration	100	1000	
23	Red Bus		Bus	Administration	100	1000	
3497	Ford Taurus		Sedan	Service	2	20	Not Required
3500	2000 Mitsubishi Impreza		Sedan	Administration	0	0	Not Required

Figure 10-55 Vehicle Reasonable Odometer - Sort by Vehicle Number



Vehicle Reasonable Odometer Settings By Dept/Acct

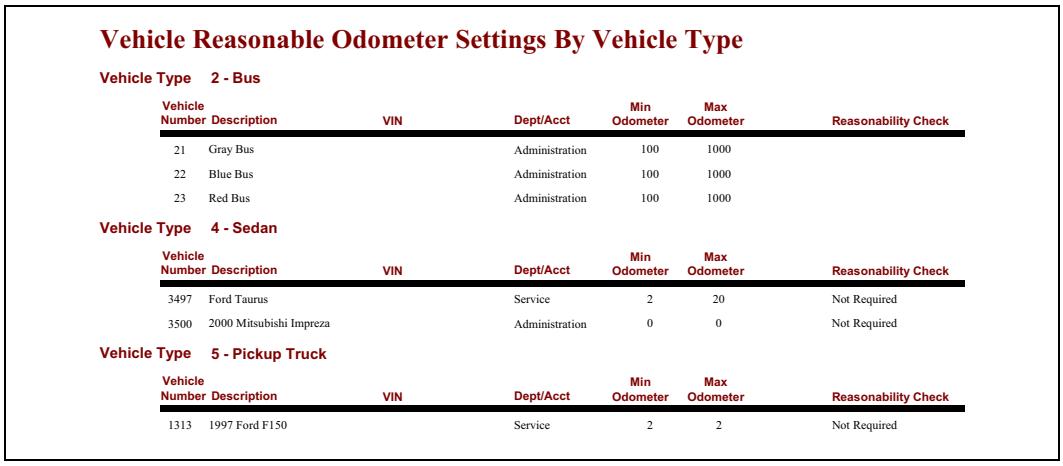
Dept/Acct 50 - Administration

Vehicle Number	Description	VIN	Vehicle Type	Min Odometer	Max Odometer	Reasonability Check
21	Gray Bus		Bus	100	1000	
22	Blue Bus		Bus	100	1000	
23	Red Bus		Bus	100	1000	
3500	2000 Mitsubishi Impreza		Sedan	0	0	Not Required

Dept/Acct 70 - Service

Vehicle Number	Description	VIN	Vehicle Type	Min Odometer	Max Odometer	Reasonability Check
1313	1997 Ford F150		Pickup Truck	2	2	Not Required
3497	Ford Taurus		Sedan	2	20	Not Required

Figure 10-56 Vehicle Reasonable Odometer - Sort by Dept-Acct / Vehicle Number



Vehicle Reasonable Odometer Settings By Vehicle Type

Vehicle Type 2 - Bus

Vehicle Number	Description	VIN	Dept/Acct	Min Odometer	Max Odometer	Reasonability Check
21	Gray Bus		Administration	100	1000	
22	Blue Bus		Administration	100	1000	
23	Red Bus		Administration	100	1000	

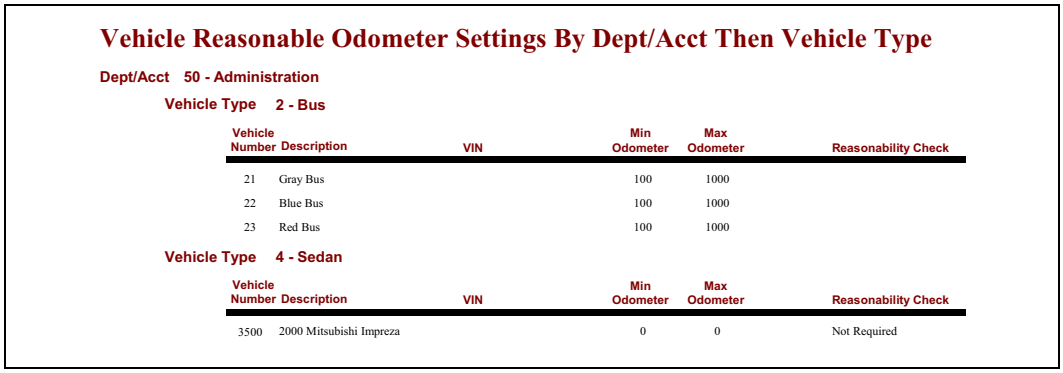
Vehicle Type 4 - Sedan

Vehicle Number	Description	VIN	Dept/Acct	Min Odometer	Max Odometer	Reasonability Check
3497	Ford Taurus		Service	2	20	Not Required
3500	2000 Mitsubishi Impreza		Administration	0	0	Not Required

Vehicle Type 5 - Pickup Truck

Vehicle Number	Description	VIN	Dept/Acct	Min Odometer	Max Odometer	Reasonability Check
1313	1997 Ford F150		Service	2	2	Not Required

Figure 10-57 Vehicle Reasonable Odometer - Sort by Vehicle Type / Vehicle Number



Vehicle Reasonable Odometer Settings By Dept/Acct Then Vehicle Type

Dept/Acct 50 - Administration

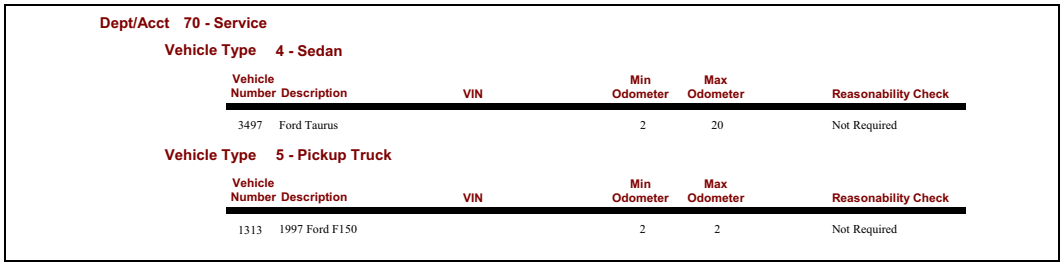
Vehicle Type 2 - Bus

Vehicle Number	Description	VIN	Min Odometer	Max Odometer	Reasonability Check
21	Gray Bus		100	1000	
22	Blue Bus		100	1000	
23	Red Bus		100	1000	

Vehicle Type 4 - Sedan

Vehicle Number	Description	VIN	Min Odometer	Max Odometer	Reasonability Check
3500	2000 Mitsubishi Impreza		0	0	Not Required

Figure 10-58 Vehicle Reasonable Odometer - Sort by Dept-Acct / Vehicle Type - page 1



Dept/Acct 70 - Service

Vehicle Type 4 - Sedan

Vehicle Number	Description	VIN	Min Odometer	Max Odometer	Reasonability Check
3497	Ford Taurus		2	20	Not Required

Vehicle Type 5 - Pickup Truck

Vehicle Number	Description	VIN	Min Odometer	Max Odometer	Reasonability Check
1313	1997 Ford F150		2	2	Not Required

Figure 10-59 Vehicle Reasonable Odometer - Sort by Dept-Acct / Vehicle Type - page 2

10.8.5 Vehicle Odometer Efficiency Reports

Vehicle Odometer Efficiency Reports provide the vehicles' last odometer, total distance, average MPG, and efficiency status. Figure 10-60 is an example of the Vehicle Odometer Efficiency Reports filter.

NOTE: Sort Options are not available when generating a report in Excel format.

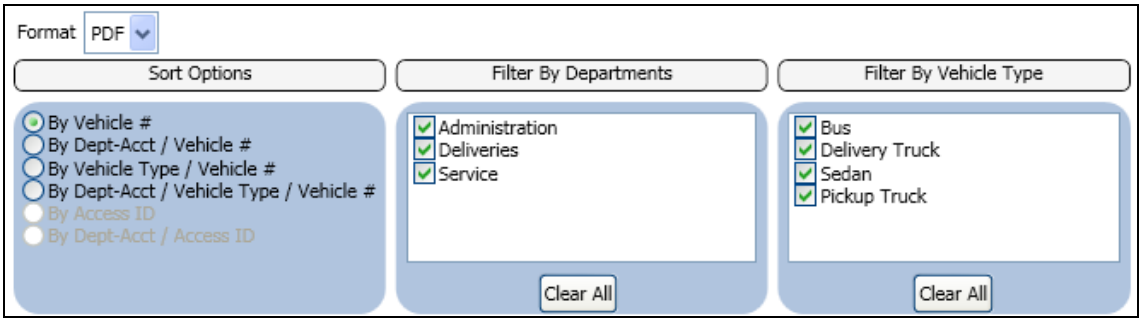


Figure 10-60 Vehicle Odometer Efficiency Reports

Select the sorting and filter options and then click the **Run Report** button. Access ID reports are not available for this report type. Figure 10-61 through Figure 10-65 show examples of the different sort options.

Odometer Efficiency By Vehicle Report

Vehicle Number	Description	VIN	Vehicle Type	Dept/Acct	Odometer Type	Beginning Odometer	Last Odometer	Total Distance	Average MPG	Efficiency Status
450	Ford F150	9876543	Pickup Truck	Service	Distance	12000	21000	9000	20.0000	WITHIN RANGE
451	Ford F150	9876544	Pickup Truck	Service	Distance	12000	22800	10800	20.0000	WITHIN RANGE
452	Ford F150	9876545	Pickup Truck	Service	Distance	12000	21000	9000	20.0000	WITHIN RANGE
453	Ford F150	9876546	Pickup Truck	Service	Distance	12000	20429	8429	15.6093	LOW
454	Ford Focus	9876547	Sedan	Administration	Distance	12000	20844	8844	39.3067	HIGH
455	Ford Focus	9876548	Sedan	Administration	Distance	12000	19200	7200	30.0000	WITHIN RANGE
456	Ford Focus	9876549	Sedan	Administration	Distance	12000	18750	6750	30.0000	WITHIN RANGE
457	Ford Focus	9876550	Sedan	Administration	Distance	12000	18750	6750	30.0000	WITHIN RANGE
458	Ford Focus	9876551	Sedan	Service	Distance	12000	18750	6750	30.0000	WITHIN RANGE
459	Ford Focus	9876552	Sedan	Delivery	Distance	12000	18750	6750	30.0000	WITHIN RANGE
460	Ford E350	9876553	Delivery Van	Delivery	Distance	12000	18750	6750	10.0000	WITHIN RANGE
461	Ford E350	9876554	Delivery Van	Delivery	Distance	12000	18750	6750	10.0000	WITHIN RANGE
Grand Total Vehicle Count:	**12**							**93773**	**23.743**	

Figure 10-61 Vehicle Odometer Efficiency - Sort by Vehicle Number

Odometer Efficiency By Department Report

Department / Account (1) Administration

Vehicle Number	Description	VIN	Vehicle Type	Odometer Type	Beginning Odometer	Last Odometer	Total Distance	Average MPG	Efficiency Status
454	Ford Focus	9876547	Sedan	Distance	12000	20844	8844	39.3067	HIGH
455	Ford Focus	9876548	Sedan	Distance	12000	19200	7200	30.0000	WITHIN RANGE
456	Ford Focus	9876549	Sedan	Distance	12000	18750	6750	30.0000	WITHIN RANGE
457	Ford Focus	9876550	Sedan	Distance	12000	18750	6750	30.0000	WITHIN RANGE
Department Subtotal Vehicle Count:	**4**						**29544**	**32.3266**	

Department / Account (2) Service

Vehicle Number	Description	VIN	Vehicle Type	Odometer Type	Beginning Odometer	Last Odometer	Total Distance	Average MPG	Efficiency Status
450	Ford F150	9876543	Pickup Truck	Distance	12000	21000	9000	20.0000	WITHIN RANGE
451	Ford F150	9876544	Pickup Truck	Distance	12000	22800	10800	20.0000	WITHIN RANGE
452	Ford F150	9876545	Pickup Truck	Distance	12000	21000	9000	20.0000	WITHIN RANGE
453	Ford F150	9876546	Pickup Truck	Distance	12000	20429	8429	15.6093	LOW
458	Ford Focus	9876551	Sedan	Distance	12000	18750	6750	30.0000	WITHIN RANGE
Department Subtotal Vehicle Count:	**5**						**43979**	**21.1218**	

Figure 10-62 Vehicle Odometer Efficiency - Sort by Dept-Acct / Vehicle Number

Odometer Efficiency By Vehicle Type Report

Vehicle Type (454) Sedan

Vehicle Number	Description	VIN	Department/Account	Odometer Type	Beginning Odometer	Last Odometer	Total Distance	Average MPG	Efficiency Status
454	Ford Focus	9876547	Administration	Distance	12000	20844	8844	39.3067	HIGH
455	Ford Focus	9876548	Administration	Distance	12000	19200	7200	30.0000	WITHIN RANGE
456	Ford Focus	9876549	Administration	Distance	12000	18750	6750	30.0000	WITHIN RANGE
457	Ford Focus	9876550	Administration	Distance	12000	18750	6750	30.0000	WITHIN RANGE
458	Ford Focus	9876551	Service	Distance	12000	18750	6750	30.0000	WITHIN RANGE
459	Ford Focus	9876552	Delivery	Distance	12000	18750	6750	30.0000	WITHIN RANGE
Vehicle Type Subtotal Vehicle Count:	**6**						**43044**	**31.5511 1666666**	

Vehicle Type (450) Pickup Truck

Vehicle Number	Description	VIN	Department/Account	Odometer Type	Beginning Odometer	Last Odometer	Total Distance	Average MPG	Efficiency Status
450	Ford F150	9876543	Service	Distance	12000	21000	9000	20.0000	WITHIN RANGE
451	Ford F150	9876544	Service	Distance	12000	22800	10800	20.0000	WITHIN RANGE
452	Ford F150	9876545	Service	Distance	12000	21000	9000	20.0000	WITHIN RANGE
453	Ford F150	9876546	Service	Distance	12000	20429	8429	15.6093	LOW

Figure 10-63 Vehicle Odometer Efficiency - Sort by Vehicle Type / Vehicle Number

Odometer Efficiency By Department Report

Department / Account (1) Administration

Vehicle Type (454) Sedan

Vehicle Number	Description	VIN	Odometer Type	Beginning Odometer	Last Odometer	Total Distance	Average MPG	Efficiency Status
454	Ford Focus	9876547	Distance	12000	20844	8844	39.3067	HIGH
455	Ford Focus	9876548	Distance	12000	19200	7200	30.0000	WITHIN RANGE
456	Ford Focus	9876549	Distance	12000	18750	6750	30.0000	WITHIN RANGE
457	Ford Focus	9876550	Distance	12000	18750	6750	30.0000	WITHIN RANGE
Vehicle Type Subtotal Vehicle Count:	**4**					**29544**	**32.3266 75**	
Department Subtotal Vehicle Count:	**4**					**29544**	**32.3266 75**	

Figure 10-64 Vehicle Odometer Efficiency - Sort by Dept-Acct / Vehicle Type - page 1

Department / Account (2) Service

Vehicle Type (458) Sedan

Vehicle Number	Description	VIN	Odometer Type	Beginning Odometer	Last Odometer	Total Distance	Average MPG	Efficiency Status
458	Ford Focus	9876551	Distance	12000	18750	6750	30.0000	WITHIN RANGE
Vehicle Type Subtotal Vehicle Count:	**1**					**6750**	**30**	

Vehicle Type (450) Pickup Truck

Vehicle Number	Description	VIN	Odometer Type	Beginning Odometer	Last Odometer	Total Distance	Average MPG	Efficiency Status
450	Ford F150	9876543	Distance	12000	21000	9000	20.0000	WITHIN RANGE
451	Ford F150	9876544	Distance	12000	22800	10800	20.0000	WITHIN RANGE
452	Ford F150	9876545	Distance	12000	21000	9000	20.0000	WITHIN RANGE
453	Ford F150	9876546	Distance	12000	20429	8429	15.6093	LOW
Vehicle Type Subtotal Vehicle Count:	**4**					**37229**	**18.9023 25**	
Department Subtotal Vehicle Count:	**5**					**43979**	**21.1218 6**	

Figure 10-65 Vehicle Odometer Efficiency - Sort by Dept-Acct / Vehicle Type - page 2

10.9 Employee Reports

The Employee Reports contain three sub-reports.

- **Employee List:** Employee listing
- **Employee Authorization:** Employee authorizations listings
- **Employee Lock51edOut:** Locked out employee listing

10.9.1 Employee List Reports

The Employee List Reports provide the same employee list as offered by List Reports (see Figure 10-29), but allows the report to be filtered and sorted. Figure 10-66 is an example of the Employee Listing Reports filter.

NOTE: Sort Options are not available when generating a report in Excel format.

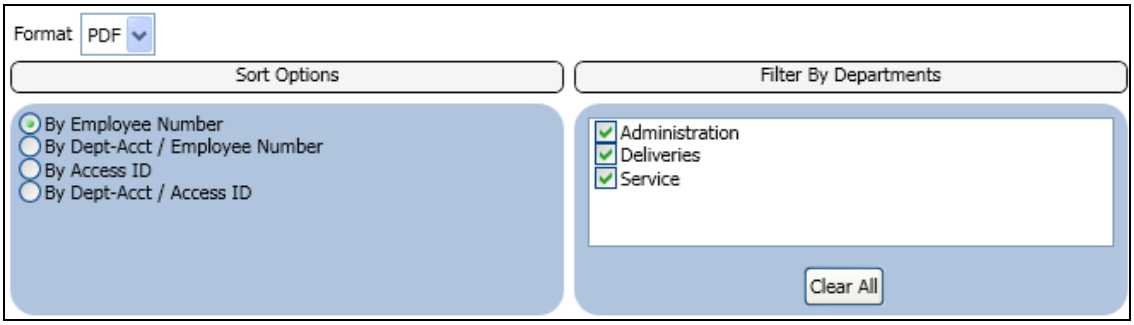
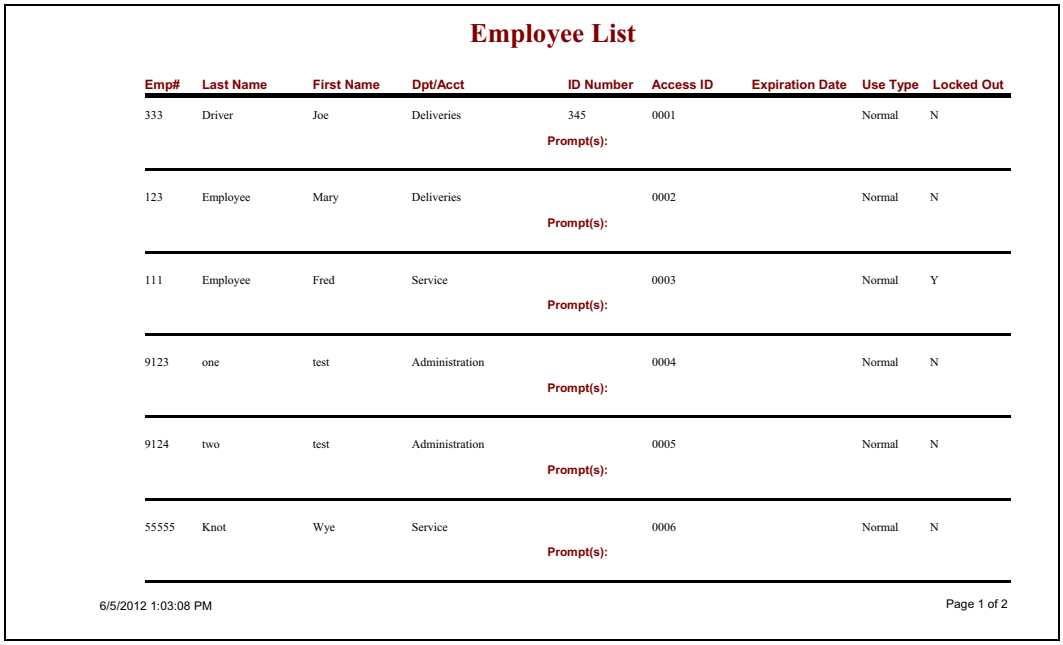


Figure 10-66 Employee Listing Reports

Select the sorting and filter options and then click the **Run Report** button. Access ID reports are only available if the system is set up to link access IDs to vehicles. Figure 10-67 through Figure 10-70 show examples of the different sort options.

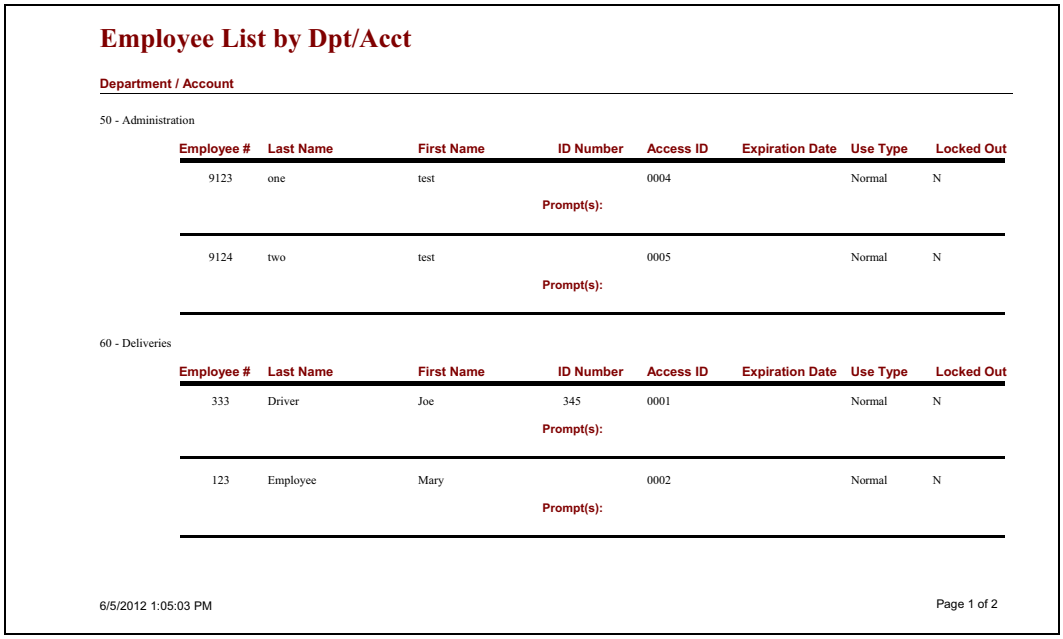


Employee List

Emp#	Last Name	First Name	Dpt/Acct	ID Number	Access ID	Expiration Date	Use Type	Locked Out
333	Driver	Joe	Deliveries	345	0001		Normal	N
				Prompt(s):				
123	Employee	Mary	Deliveries		0002		Normal	N
				Prompt(s):				
111	Employee	Fred	Service		0003		Normal	Y
				Prompt(s):				
9123	one	test	Administration		0004		Normal	N
				Prompt(s):				
9124	two	test	Administration		0005		Normal	N
				Prompt(s):				
55555	Knot	Wye	Service		0006		Normal	N
				Prompt(s):				

6/5/2012 1:03:08 PM Page 1 of 2

Figure 10-67 Employee List - Sort by Employee Number



Employee List by Dpt/Acct

Department / Account

50 - Administration

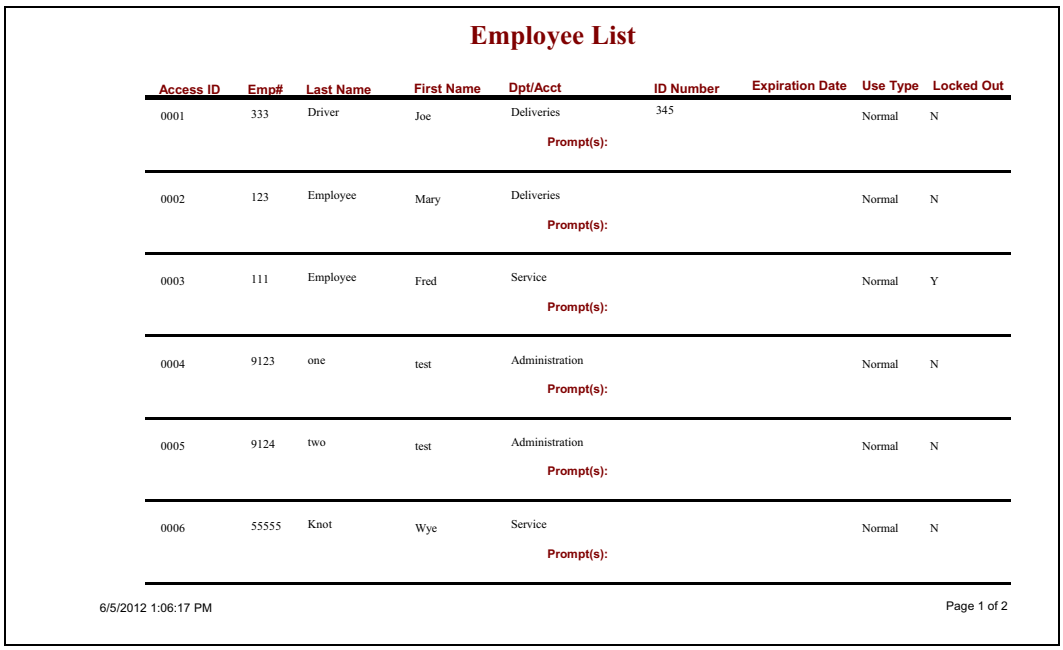
Employee #	Last Name	First Name	ID Number	Access ID	Expiration Date	Use Type	Locked Out
9123	one	test		0004		Normal	N
			Prompt(s):				
9124	two	test		0005		Normal	N
			Prompt(s):				

60 - Deliveries

Employee #	Last Name	First Name	ID Number	Access ID	Expiration Date	Use Type	Locked Out
333	Driver	Joe	345	0001		Normal	N
			Prompt(s):				
123	Employee	Mary		0002		Normal	N
			Prompt(s):				

6/5/2012 1:05:03 PM Page 1 of 2

Figure 10-68 Employee List - Sort by Dept-Account / Employee Number

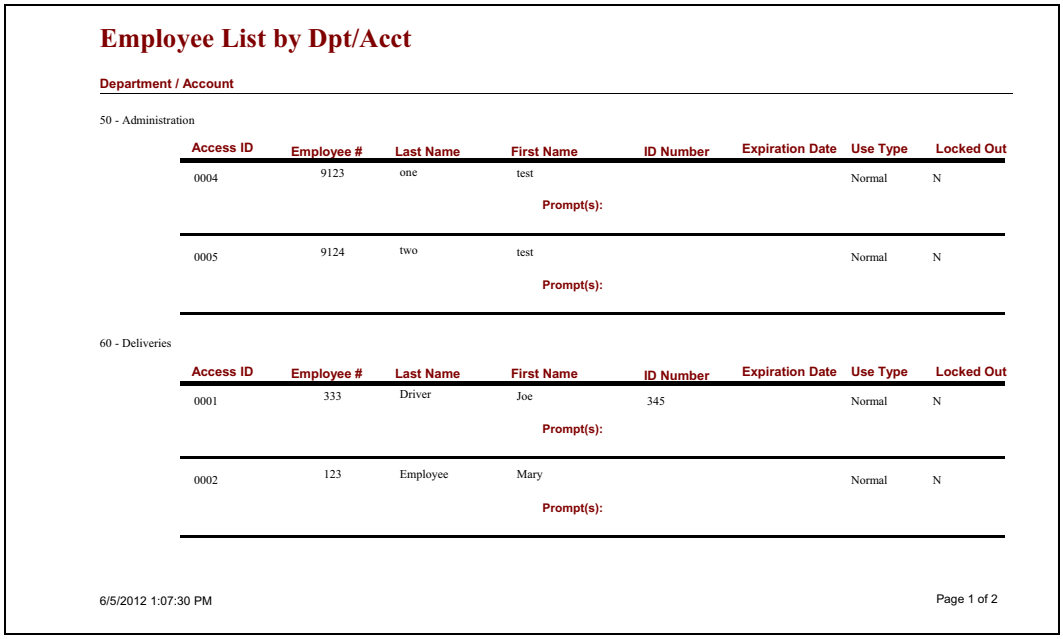


Employee List

Access ID	Emp#	Last Name	First Name	Dpt/Acct	ID Number	Expiration Date	Use Type	Locked Out
0001	333	Driver	Joe	Deliveries	345		Normal	N
				Prompt(s):				
0002	123	Employee	Mary	Deliveries			Normal	N
				Prompt(s):				
0003	111	Employee	Fred	Service			Normal	Y
				Prompt(s):				
0004	9123	one	test	Administration			Normal	N
				Prompt(s):				
0005	9124	two	test	Administration			Normal	N
				Prompt(s):				
0006	55555	Knot	Wye	Service			Normal	N
				Prompt(s):				

6/5/2012 1:06:17 PM Page 1 of 2

Figure 10-69 Employee List - Sort by Access ID



Employee List by Dpt/Acct

Department / Account

50 - Administration

Access ID	Employee #	Last Name	First Name	ID Number	Expiration Date	Use Type	Locked Out
0004	9123	one	test			Normal	N
			Prompt(s):				
0005	9124	two	test			Normal	N
			Prompt(s):				

60 - Deliveries

Access ID	Employee #	Last Name	First Name	ID Number	Expiration Date	Use Type	Locked Out
0001	333	Driver	Joe	345		Normal	N
			Prompt(s):				
0002	123	Employee	Mary			Normal	N
			Prompt(s):				

6/5/2012 1:07:30 PM Page 1 of 2

Figure 10-70 Employee List - Sort by Dept-Account / Access ID

10.9.2 Employee Authorization Reports

Employee Authorization reports show the employee authorization settings: maximum daily fuelings, authorized vehicle types, and authorized sites. Figure 10-71 is an example of the Employee Authorizations Reports filter.

NOTE: Sort Options are not available when generating a report in Excel format.

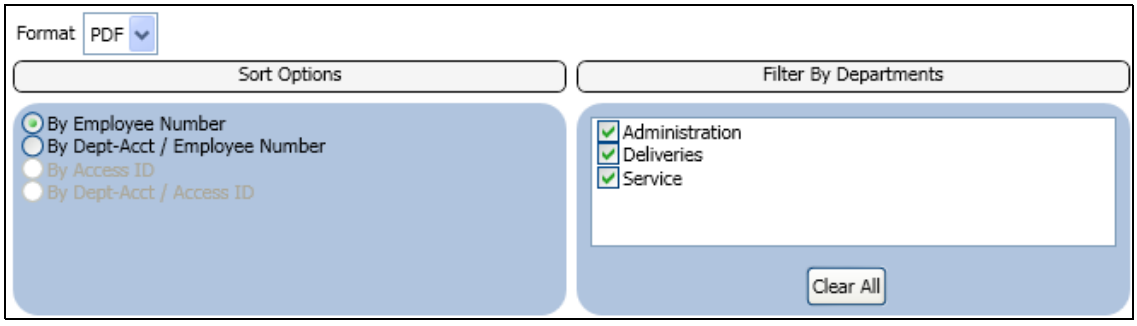
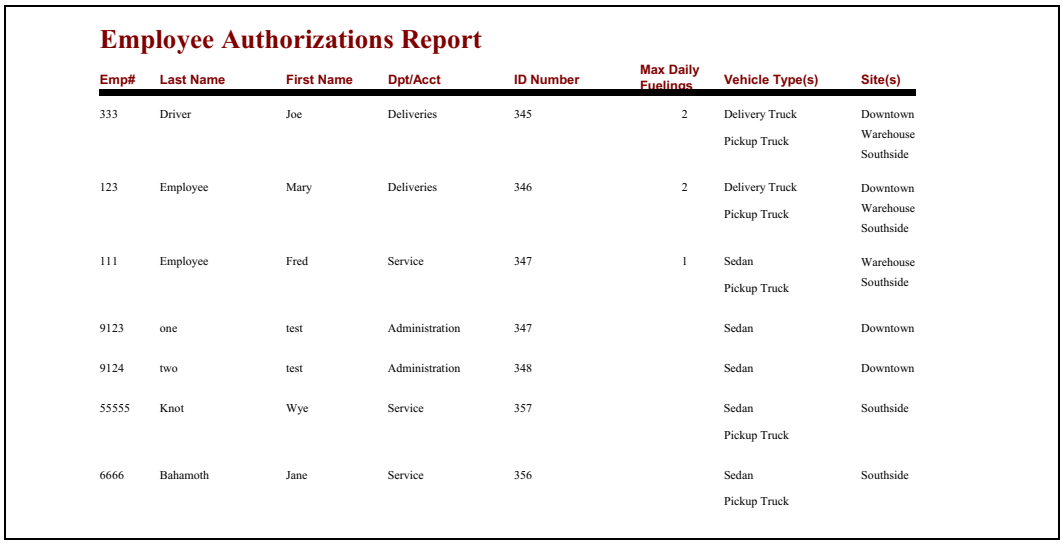


Figure 10-71 Employee Authorizations Reports

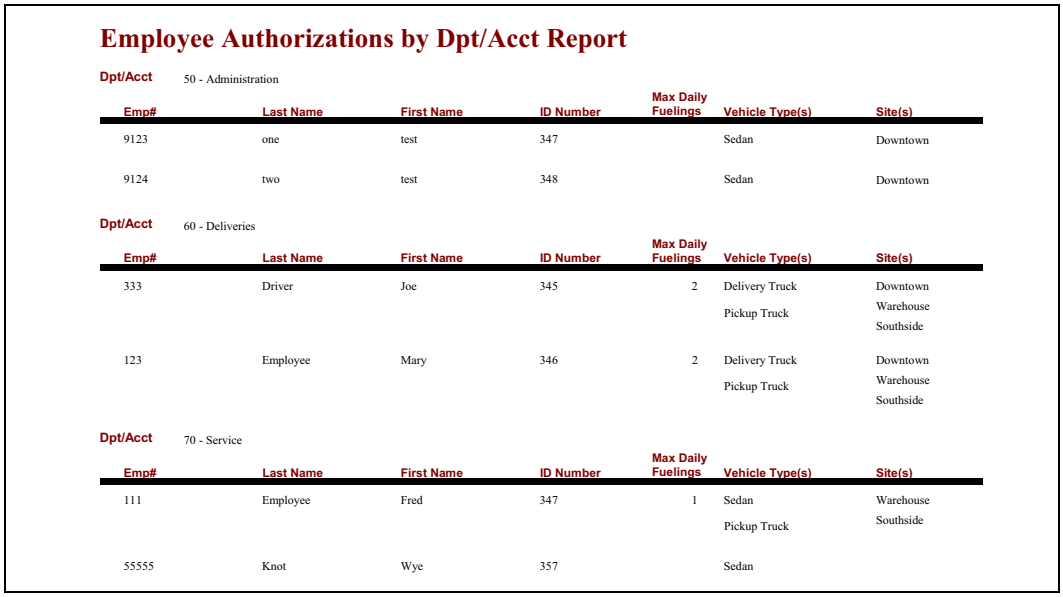
Select the sorting and filter options and then click the **Run Report** button. Access ID reports are not available for this report type. Figure 10-72 and Figure 10-73 show examples of the different sort options.



Employee Authorizations Report

Emp#	Last Name	First Name	Dpt/Acct	ID Number	Max Daily Fuelings	Vehicle Type(s)	Site(s)
333	Driver	Joe	Deliveries	345	2	Delivery Truck Pickup Truck	Downtown Warehouse Southside
123	Employee	Mary	Deliveries	346	2	Delivery Truck Pickup Truck	Downtown Warehouse Southside
111	Employee	Fred	Service	347	1	Sedan Pickup Truck	Warehouse Southside
9123	one	test	Administration	347		Sedan	Downtown
9124	two	test	Administration	348		Sedan	Downtown
55555	Knot	Wye	Service	357		Sedan Pickup Truck	Southside
6666	Bahamoth	Jane	Service	356		Sedan Pickup Truck	Southside

Figure 10-72 Employee Authorizations - Sort by Employee Number



Employee Authorizations by Dpt/Acct Report

Dpt/Acct 50 - Administration

Emp#	Last Name	First Name	ID Number	Max Daily Fuelings	Vehicle Type(s)	Site(s)
9123	one	test	347		Sedan	Downtown
9124	two	test	348		Sedan	Downtown

Dpt/Acct 60 - Deliveries

Emp#	Last Name	First Name	ID Number	Max Daily Fuelings	Vehicle Type(s)	Site(s)
333	Driver	Joe	345	2	Delivery Truck Pickup Truck	Downtown Warehouse Southside
123	Employee	Mary	346	2	Delivery Truck Pickup Truck	Downtown Warehouse Southside

Dpt/Acct 70 - Service

Emp#	Last Name	First Name	ID Number	Max Daily Fuelings	Vehicle Type(s)	Site(s)
111	Employee	Fred	347	1	Sedan Pickup Truck	Warehouse Southside
55555	Knot	Wye	357		Sedan	

Figure 10-73 Employee Authorizations - Sort by Department-Account/Employee Number

10.9.3 Employee LockedOut Reports

Employee LockedOut Reports show any employees that are locked out from accessing fuel. Figure 10-74 is an example of the Employee Lockout Reports filter.

NOTE: Sort Options are not available when generating a report in Excel format.

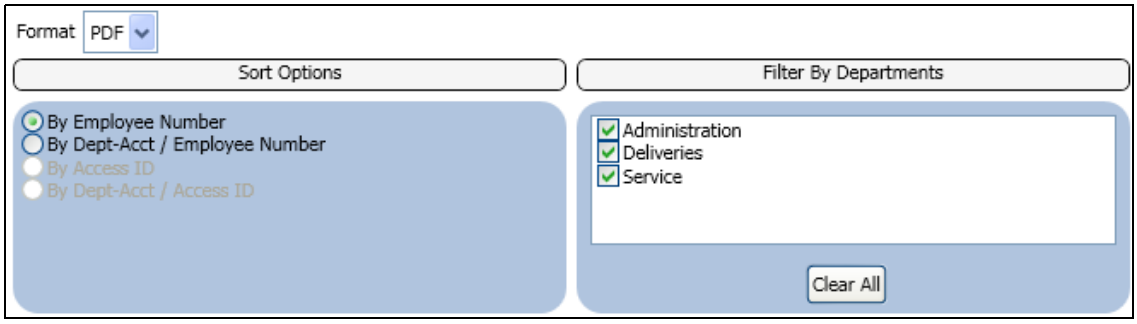
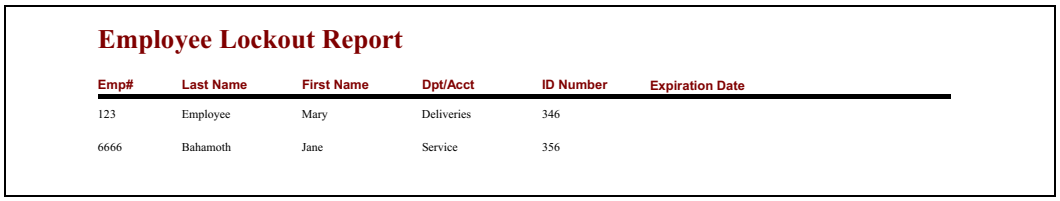


Figure 10-74 Employee Lockout Reports

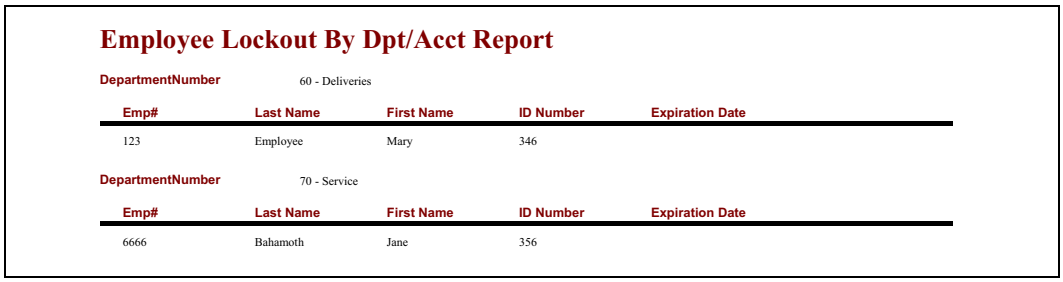
Select the sorting and filter options and then click the **Run Report** button. Access ID reports are not available for this report type. Figure 10-75 and Figure 10-76 show examples of the different sort options.



Employee Lockout Report

Emp#	Last Name	First Name	Dpt/Acct	ID Number	Expiration Date
123	Employee	Mary	Deliveries	346	
6666	Bahamoth	Jane	Service	356	

Figure 10-75 Employee Lockout - Sort by Employee Number



Employee Lockout By Dpt/Acct Report

DepartmentNumber 60 - Deliveries

Emp#	Last Name	First Name	ID Number	Expiration Date
123	Employee	Mary	346	

DepartmentNumber 70 - Service

Emp#	Last Name	First Name	ID Number	Expiration Date
6666	Bahamoth	Jane	356	

Figure 10-76 Employee Lockout - Sort by Department-Account / Employee Number

10.10 Polling History Reports

The Polling History Reports generate reports that contain information about the iX Fleet fuel controller communication history with the sites in the fleet system. Figure 10-77 is an example of the Polling History Reports filter.

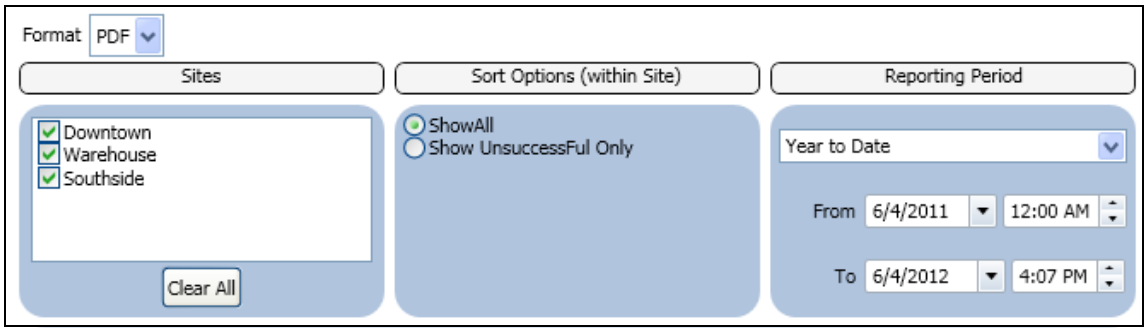
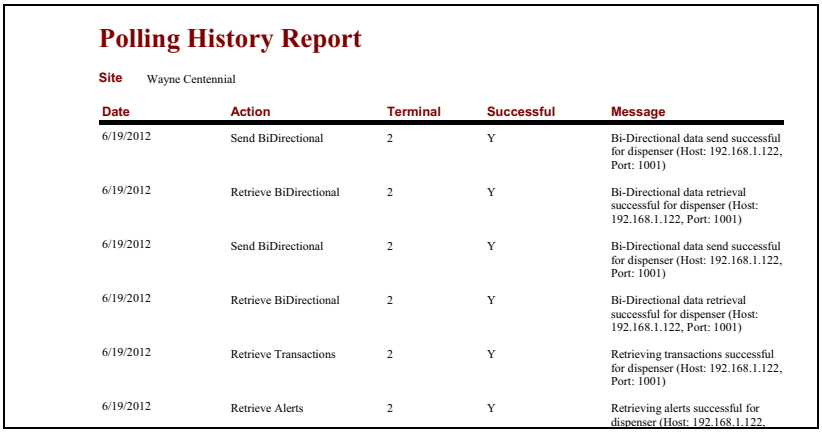


Figure 10-77 Polling History Reports

From this filter you select which sites to include, and then create a report showing all polling history information or a report with unsuccessful polls information only. Select the reporting period from the pull-down window or enter a specific date range. Pull-down selections include the following options:

- **Today:** Period from midnight of the current day to the present time
- **Yesterday:** Period from midnight of the previous day to midnight of the current day
- **Week to Date:** Period from Sunday of the current week to the present time
- **Month to Date:** Period from the first day of the current month to the present time
- **Year to Date:** Period from the first day of the current year to the present time

Select the Sort Options for the report and then click the **Run Report** button. Figure 10-77 and Figure 10-78 show examples for the different sort options.

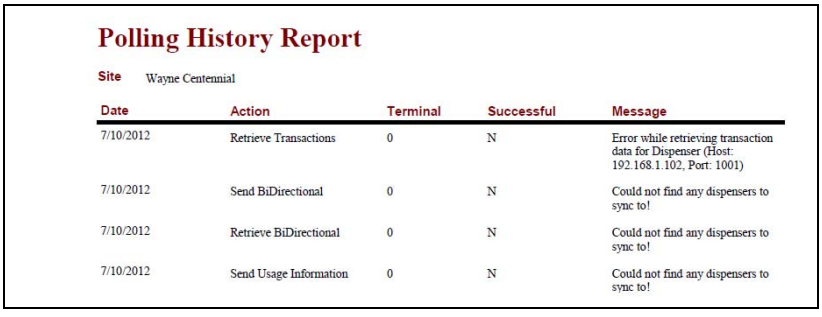


Polling History Report

Site Wayne Centennial

Date	Action	Terminal	Successful	Message
6/19/2012	Send BiDirectional	2	Y	Bi-Directional data send successful for dispenser (Host: 192.168.1.122, Port: 1001)
6/19/2012	Retrieve BiDirectional	2	Y	Bi-Directional data retrieval successful for dispenser (Host: 192.168.1.122, Port: 1001)
6/19/2012	Send BiDirectional	2	Y	Bi-Directional data send successful for dispenser (Host: 192.168.1.122, Port: 1001)
6/19/2012	Retrieve BiDirectional	2	Y	Bi-Directional data retrieval successful for dispenser (Host: 192.168.1.122, Port: 1001)
6/19/2012	Retrieve Transactions	2	Y	Retrieving transactions successful for dispenser (Host: 192.168.1.122, Port: 1001)
6/19/2012	Retrieve Alerts	2	Y	Retrieving alerts successful for dispenser (Host: 192.168.1.122,

Figure 10-78 Polling History Reports - All



Polling History Report

Site Wayne Centennial

Date	Action	Terminal	Successful	Message
7/10/2012	Retrieve Transactions	0	N	Error while retrieving transaction data for Dispenser (Host: 192.168.1.102, Port: 1001)
7/10/2012	Send BiDirectional	0	N	Could not find any dispensers to sync to!
7/10/2012	Retrieve BiDirectional	0	N	Could not find any dispensers to sync to!
7/10/2012	Send Usage Information	0	N	Could not find any dispensers to sync to!

Figure 10-79 Polling History Reports - Unsuccessful Only

10.11 Saved Reports

The Saved Reports pane is where saved report configurations are listed.

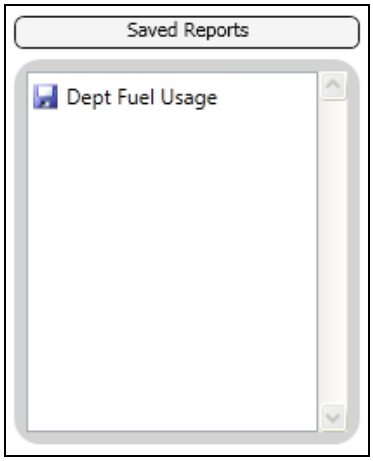


Figure 10-80 Saved Reports Pane

To use a Saved Report, click the report in the Saved Reports pane. The previously set filter options are restored to the Report Filter area. At this point the filters can be adjusted, if needed, before clicking **Run Report** to generate a fresh copy of the report.

To create a Saved Report, set the filter options as desired for any of the built-in reports and then click the **Save Report** button in the Command Bar. The popup window shown in Figure 10-81 is displayed. Enter a name for the saved report and then click the **Save Report** button on the popup window.

IMPORTANT: If the name entered is already used for an existing saved report, the existing saved report is overwritten without any warning.

Figure 10-81 Enter Saved Report Name

To delete a saved report, right-click the saved report and then select **Delete Save Report**.

11 UTILITIES

The Utilities section is shown in Figure 11-1.

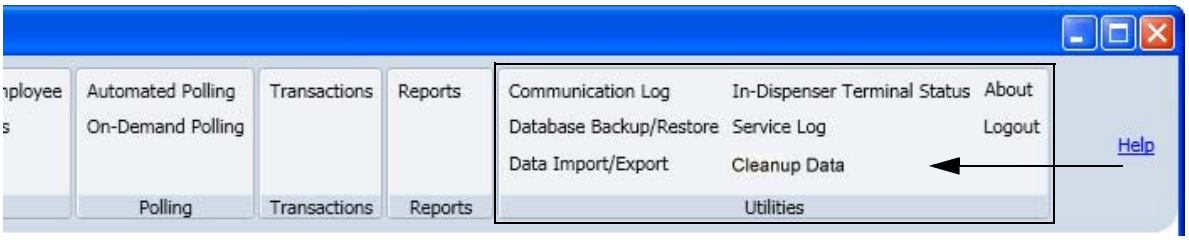


Figure 11-1 Utilities

This section details the following Utilities functions:

- Communication Log
- Database Backup/Restore
- Data Import/Export
- In-Dispenser Terminal Status
- Service Log
- Cleanup Data
- About
- Logout

11.1 Communication Log

The Communication Log tab displays a list of the most recent communication attempts. This list shows what type of action was attempted, the date, and whether it was successful or not.

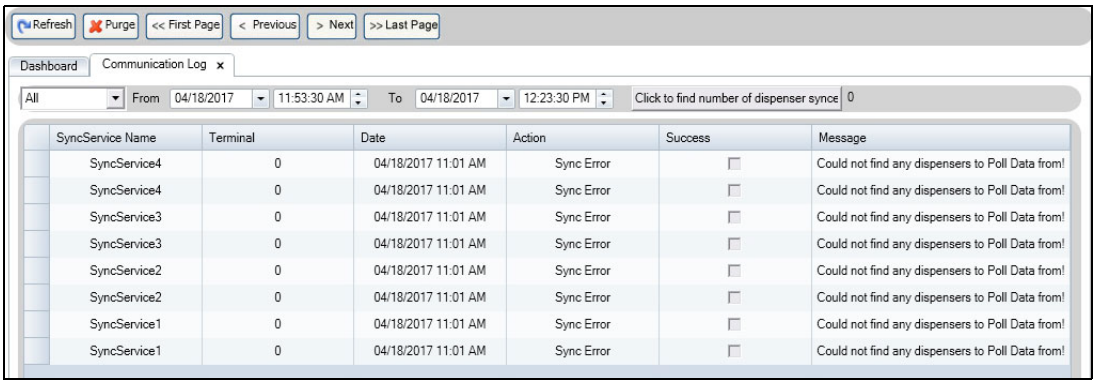


Figure 11-2 Communication Log Tab

the Communication Log tab provides these controls:

- To find out how many dispensers have synced during a specific time frame, set a start and end date / time in the **From** and **To** areas, then click the **Click to find number of dispensers synced** button. The count of synced dispensers is displayed to the right of the button.

  NOTE: You can also limit the count of synced dispensers to a specific sync service by selecting the desired sync service from the pull-down to the left of the **From** box.

- Click **Refresh** to update the list of communications logs.

- Click the **Purge** to clear all communication log entries. You will be prompted to confirm the action before it is performed because there is no way to undo it if this button is clicked in error.

  NOTE: By default the system automatically purges log entries that are older than one day. See Section 11.6 on page 89 to modify retention of communication logs.

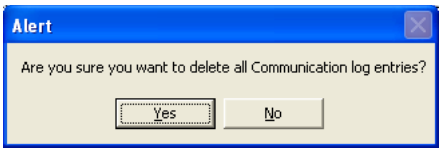


Figure 11-3 Confirm Communication Log Purge

11.2 Database Backup/Restore

The Database Backup/Restore tab is used to create or restore a backup of the current configuration databases, which can be used to restore the site should there be any kind of system failure. At a minimum, it is recommended to back up on a weekly basis. The configuration and data are stored in the following databases:

- **iXFleetConfig:** Contains the iX Fleet fuel controller settings, vehicle and employee definitions, and other configuration data
- **iXFleetData:** Contains the transaction data and logs

NOTE: Only the Administrator logon, or users with the “Modify All” security level, are able to back up and restore databases.

Click **Database Backup/Restore** and the tab shown in Figure 11-4 is displayed.

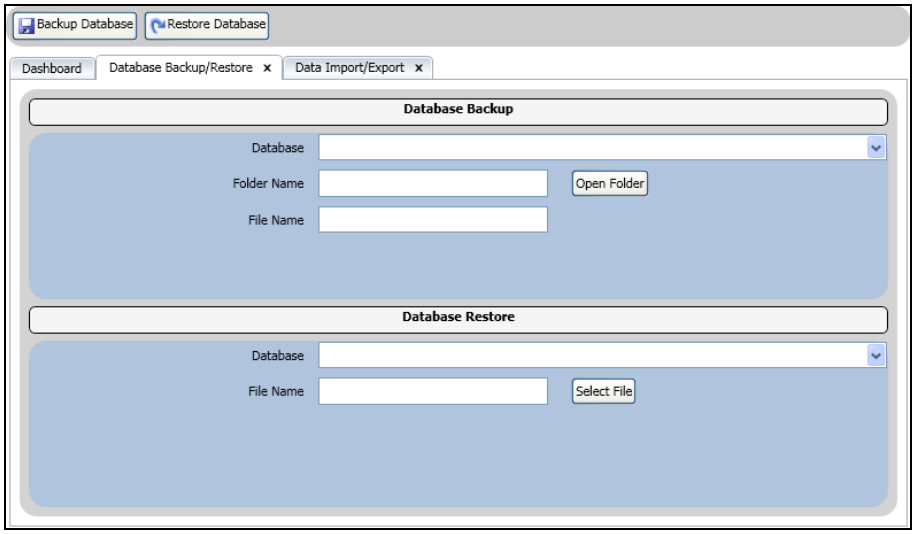


Figure 11-4 Database Backup / Restore Tab

From the Database Backup pane, select the database to back up using the **Database** pull-down, and then either enter the path to the location where the backup will be saved or click **Open Folder** to browse to the location. If connected to a network, you can save to a network drive, or you can insert a USB key into the iX Fleet fuel controller and save to the USB key for a portable backup. Finally, enter a file name for the backup and then click the **Backup Database** button to begin the backup.

From the Database Restore pane, select the database to restore using the **Database** pull-down, and then either enter the path and file name of backup file, or click **Select File** to browse for and select the filename of the database. Click the **Restore Database** button to begin the restore. After restoring the database(s), exit and restart the host application for the changes to be visible.

11.3 Data Import/Export

The Data Import/Export tab is used to export transaction data, import employee and vehicle data, and import dispenser transaction data. Click **Data Import/Export** to display the tab shown in Figure 11-5.

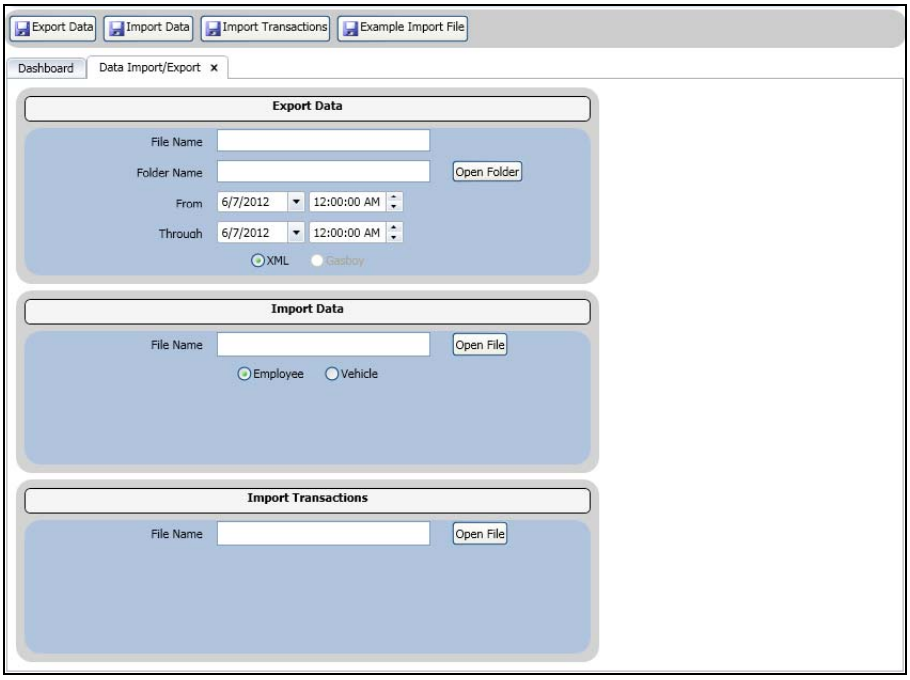


Figure 11-5 Data Import / Export Tab

11.3.1 Exporting Transactions

The Export Data pane allows you to export transactions in XML format so they can be used with other systems. From the Export Data pane, enter a file name for the exported data and then either enter the path and folder name of the location to save the file, or click **Open Folder** to browse and select a folder to save the file to. Next, select the start and end dates from the pull-downs for the transaction data to be exported. Click **Export Data** to begin exporting the data. Refer to Section 16.8 on page 138 for an example of exported transaction data.

> ***TIP:*** *If connected to a network, you can save to a network drive, or you can insert a USB key into the iX Fleet fuel controller and save to the USB key for a portable copy.*

11.3.2 Importing Employee or Vehicle Information

Click the **Example Import File** button to save an example spreadsheet for vehicle and employee data. These sheets provide a template so the data is in the correct format for importing. Before you choose the file to import, be sure to save the sheet desired (Employee or Vehicle) into CSV format. You can only save one sheet at a time as you can only import either vehicles or employees into the database.

Before filling out the vehicle spreadsheet, you must first set up vehicle types in the iX Fleet fuel controller. The vehicle types must be indicated in the vehicle spreadsheet for each vehicle. The vehicle type parameters are not included in the vehicle spreadsheet for the vehicle records. They must be changed directly in the vehicle records after importing, if desired.

The Master Employee must be set up in the iX Fleet fuel controller before filling out the employee worksheet. Data contained in the Master Employee is not included in the employee worksheet and must be changed directly in the employee records after importing, if desired.

IMPORTANT: The Master Employee Dept/Account must be set before importing employee records. If the Master Employee Dept/Account is left blank the alert shown in Figure 11-6 will be displayed.

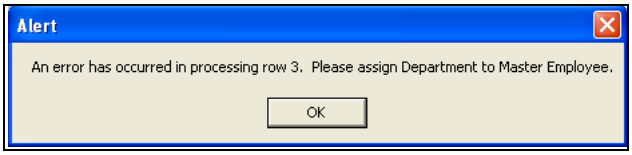


Figure 11-6 Department Not Assigned Alert

From the Import Data pane use the radio buttons to select either **Employee** or **Vehicle** as the type of data that you are importing, and then enter the name of the file to import from or click **Open File** to select the file. The data is imported from CSV formatted files. Click the **Import Data** button to begin importing the data.

NOTE: If the system displays errors during data import, data does not import correctly, or data does not import at all, recheck the data in the CSV file. Values for any pre-established fields, such as Vehicle Type names or Dept/Account names or numbers, must exactly match the existing values in the system.

11.3.3 Importing Transactions

In the event that an iX Fleet In-Dispenser Terminal (IDT) is unable to synchronize its transactions and requires service or replacement to correct the problem, the *.bin file, which contains the dispenser's unsynchronized transactions, can be imported into the iX Fleet fuel controller.

The *.bin file is located on either a USB key attached to the dispenser's iX Technology platform R2 board or the dispenser's SD card. To retrieve the *.bin file, insert the dispenser's USB key or SD card into a computer and then copy the *.bin file to a location suitable for importing into the iX Fleet fuel controller, such as another USB key or a network drive that is accessible from the iX Fleet fuel controller.

To import transactions into the iX Fleet fuel controller enter the path and file name in the box in the Import Transactions pane, or click **Open File** to browse for and select the file. Next, click the **Import Transactions** button to begin importing the dispenser transactions.

11.4 In-Dispenser Terminal Status

The In-Dispenser Terminal Status tab displays the status of all dispensers that have communicated with the iX Fleet fuel controller. If the controller is powered off this window will be cleared. When the controller is restarted, this window will be blank until communications are restored with the dispensers.

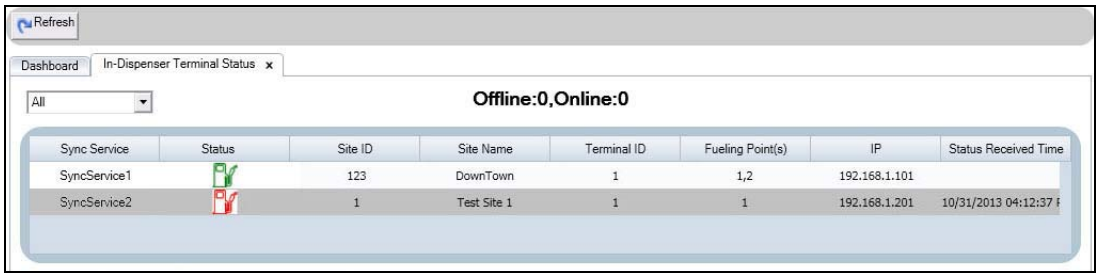


Figure 11-7 In-Dispenser Terminal Status Tab

The following information is provided on this screen in an at-a-glance format:

- **Online/Offline Summary:** The line above the workspace shows the total offline and online terminals. You can also filter the displayed terminals to a specific sync service by selecting it from the pull-down on the left side of the tab.
- **Sync Service:** This column indicates which sync service is used to communicate with the terminal.
- **Status:** The icon indicates the dispenser's communication status with the host. A green icon indicates that the terminal is connected and a **red** icon indicates that the terminal is disconnected.

  NOTE: Alerts are shown on the Management Dashboard when terminal disconnections occur.
- **Site ID and Name:** Displays the number and name of the site.
- **Terminal ID, Fueling Point(s) and IP:** Displays the terminal number, fueling points, and IP address.
- **Status Received Time:** The date and time of the last status message from the IDT.

11.5 Service Log

The Service Log tab displays a list of events and errors from system services, which can be useful for troubleshooting problems with the system, if needed. When an item is selected from the list, the full text of the message is displayed in the Message area at the bottom of the tab.

NOTE: Use the pull-down in the upper left corner of the tab to filter the logs to a specific sync service. You can also click the **Open** button in the Command bar to view the complete Host Service log.

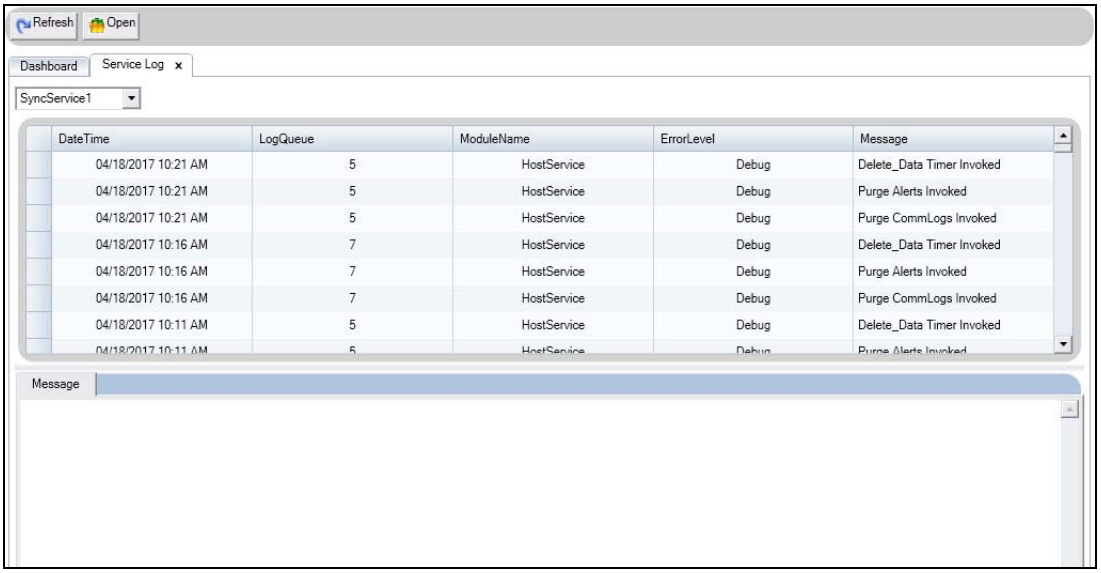


Figure 11-8 Service Log Tab

11.6 Cleanup Data

Cleanup Data provides a single screen with which to manage accumulated system data. This tab allows the station to configure the amount of alerts, communication logs, and transactions to retain when the system automatically purges old records to keep a sufficient amount of disk space for proper operation.

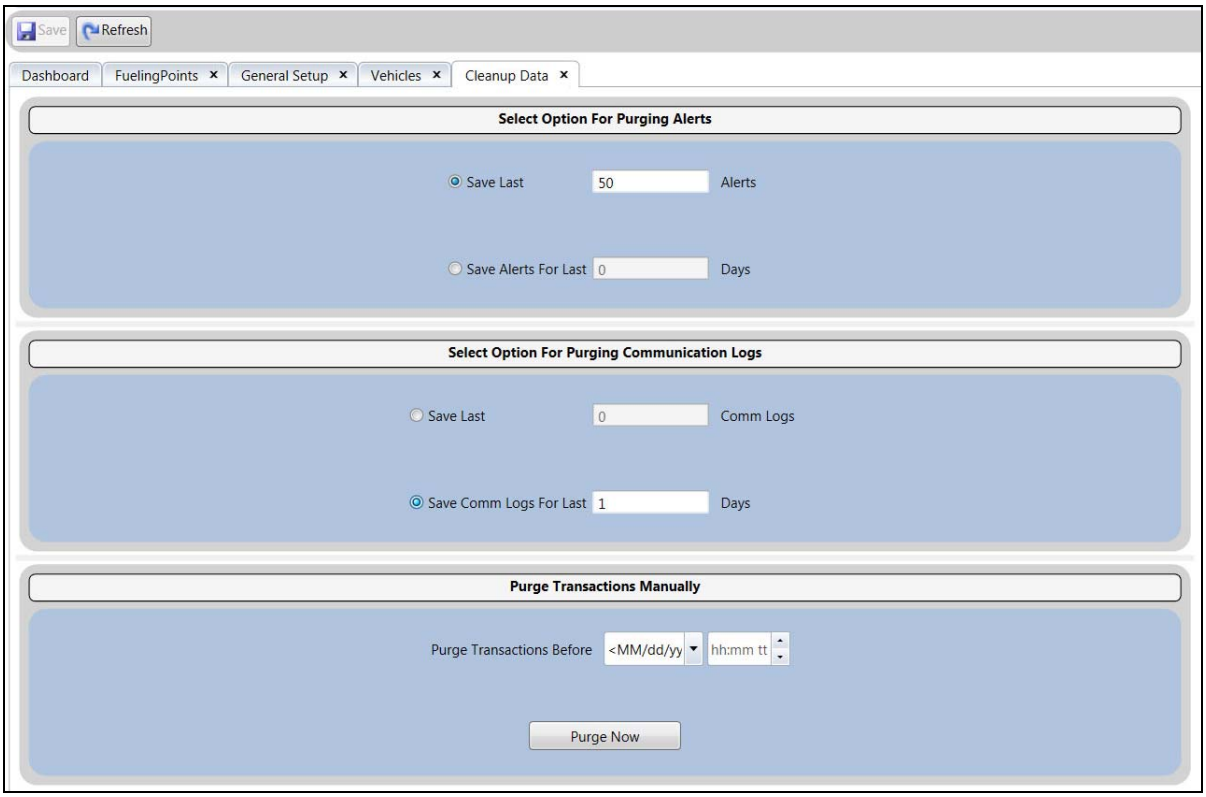


Figure 11-9 Service Log Tab

The following configurable options are available on this screen. After selecting the desired options, click the **Save** button on the toolbar and the options will be effective at the next automatic cleanup interval.

- **Select Options for Purging Alerts:** This option will purge all alerts outside of the configured retention guidelines. Select the **Save Last** radio button and enter the number of alerts to retain, or select the **Save Alerts for Last** radio button and enter the number of days of alerts to retain.
- **Select Options for Purging Communication Logs:** This option will purge all communication logs outside of the configured retention guidelines. Select the **Save Last** radio button and enter the number of communication logs to retain, or select the **Save Alerts for Last** radio button and enter the number of days of communication logs to retain.
- **Purge Transactions Manually:** This option allows setting a date and time for the oldest transaction that will be retained/ All transactions that occurred before the set date and time will be purged. After this option is set and saved, the transactions will be purged at the next automatic cleanup interval.

  NOTE: Transactions can be purged immediately by clicking **Purge Now**.

11.7 About

Click **About** to display the popup window shown in Figure 11-10, which shows the software version of the iXFleet fuel control system host application.

Figure 11-10 About Window

11.8 Logout

Click **Logout** to end your current session and log in with a different user name. When logging out, the popup window shown in Figure 11-11 is displayed to confirm.

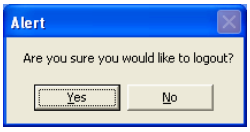


Figure 11-11 Logout Confirmation

12 USING THE MANAGEMENT DASHBOARD

The Management Dashboard allows you to effectively managing your entire fuel operation on a single screen.

TIP: *To resize the dashboard sections for easier viewing, position the mouse cursor over the bars between sections. When the cursor changes to a double arrow, click and drag the bar to resize the sections as desired.*

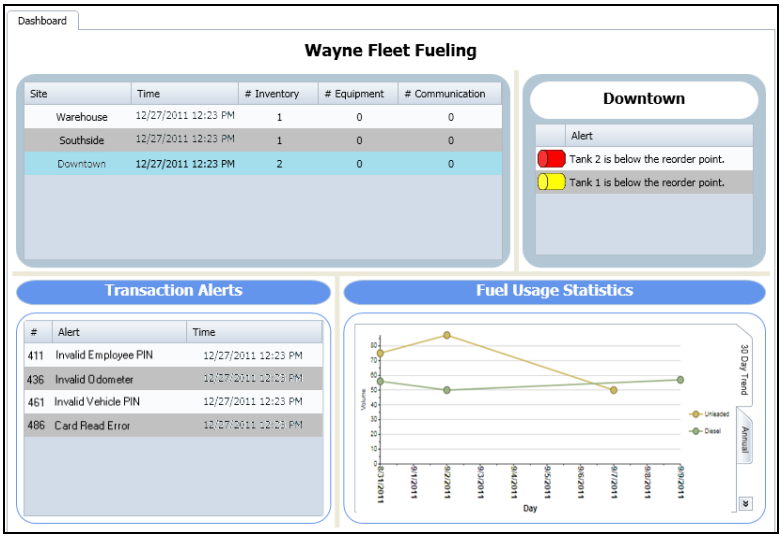


Figure 12-1 Management Dashboard

12.1 Fuel Inventory & Equipment Alerts

This section of the dashboard employs “management by exception”, so it only lists sites with items that require attention. Clicking the alert counts provides more information in the Alert Detail window as shown in Figure 12-2.

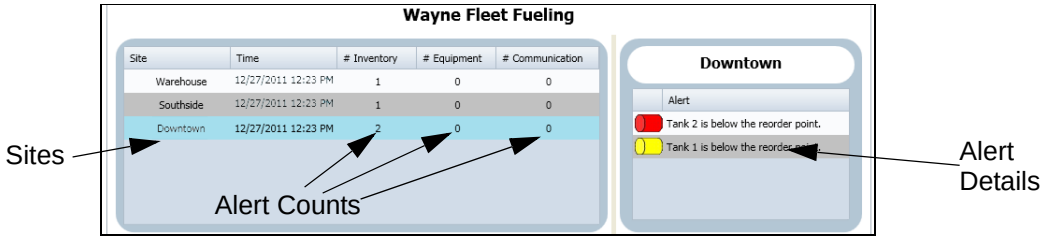


Figure 12-2 Fuel Inventory & Equipment Alerts

Alerts are displayed for the following items:

- **Inventory** - Displays warnings for tanks when the tank inventory level is below the reorder point. For more information about the reorder point refer to Section 6.1 on page 33. The warning icons are color coded.

  
  The Yellow icon is displayed as a Warning when the tank inventory level has fallen below the reorder point.

  
  The Red icon is displayed as a Severe Warning when the tank inventory has fallen more than 50% below the reorder point.

- **Equipment** - Displays alerts for hose positions that are disabled.
- **Communications** - Displays alerts for sites where communication problems have been detected.

12.2 Transaction Alerts

The Transaction Alerts section of the dashboard displays alerts from individual transactions. Alerts include invalid entries by employees, card or RFID tag read errors, or Fuel Efficiency alerts (Low or High MPG) that can indicate issues such as vehicle maintenance problems or fuel misappropriation.

Clicking the transaction takes you to the transaction detail on the Transactions tab to further drill down into the issue. Right-clicking the alert provides the option to delete the alert so you can remove it after reviewing it. Use the <Shift> key to highlight all of the alerts and delete them as a group, if desired.

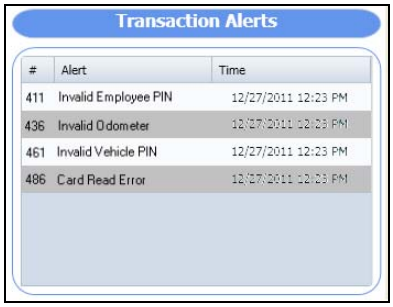


Figure 12-3 Transaction Alerts Window

12.3 Fuel Usage Statistics

The Fuel Usage Statistics provide a comprehensive view of system performance over time. Through a series of charts, the Fuel Usage Statistics can assist with identifying trends in fuel usage.

The available statistics charts are as follows:

> ***TIP:*** *The products to display in the 30 Day Trend and Annual charts can be selected from the product list on the Products tab. If the Products tab is not visible, click any tab within the section and then press the down arrow key to cycle through all of the tabs.*

- **30 Day Trend:** This chart displays fuel usage over the last 30 days for up to five different products.

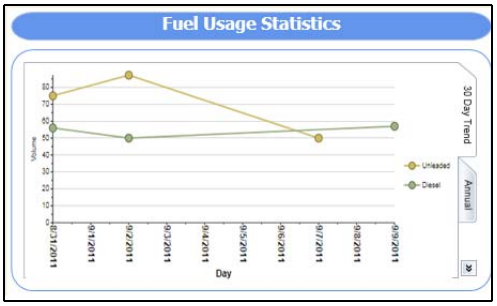


Figure 12-4 30 Day Trend Chart

- **Annual:** This chart displays fuel usage over the last 12 months for up to five different products

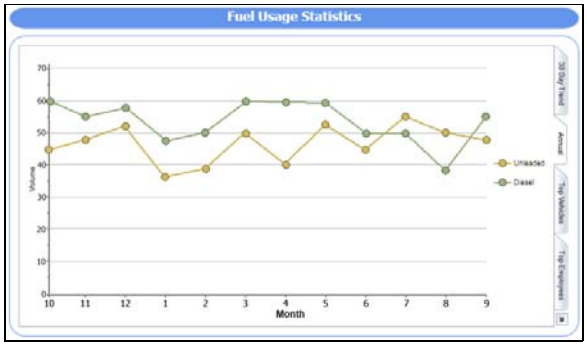


Figure 12-5 Annual Trend Chart

- **Top Vehicles:** This chart displays the 10 vehicles with the highest fuel usage.

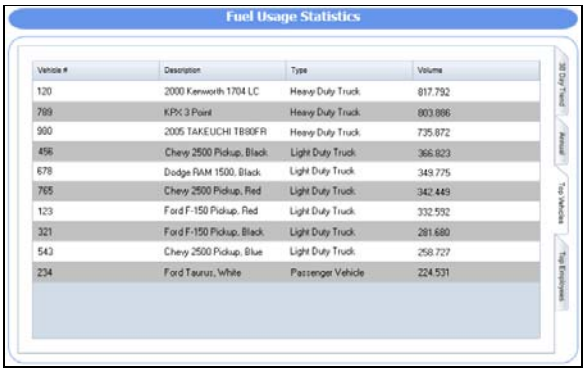


Figure 12-6 Top Vehicles Chart

- **Top Employees:** This chart displays the 10 employees with the highest fuel usage.

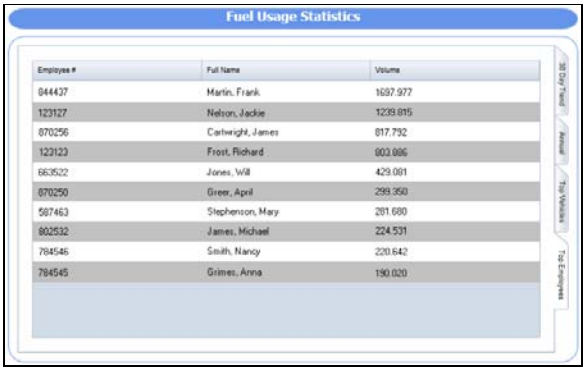


Figure 12-7 Top Employees Chart

- **Products:** From this tab you can select the products to include in the 30 Day and Annual Trend Charts. You can select up to five products.

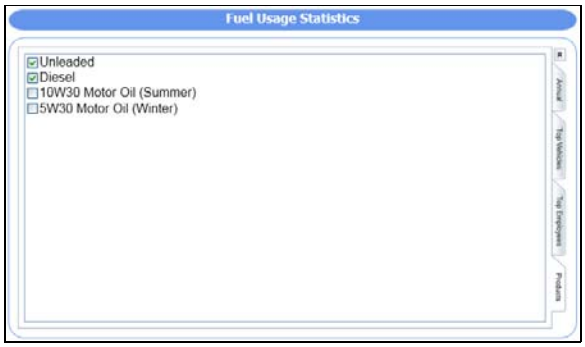


Figure 12-8 Products Tab

13 DISPENSER SETUP

This section covers setting up fuel dispensers.

13.1 SoftKey Assignments

When running the dispenser setup and configuration, it is necessary to know the assignments of the softkeys. Figure 13-1 shows the SoftKey assignments.

Figure 13-1 Dispenser SoftKeys

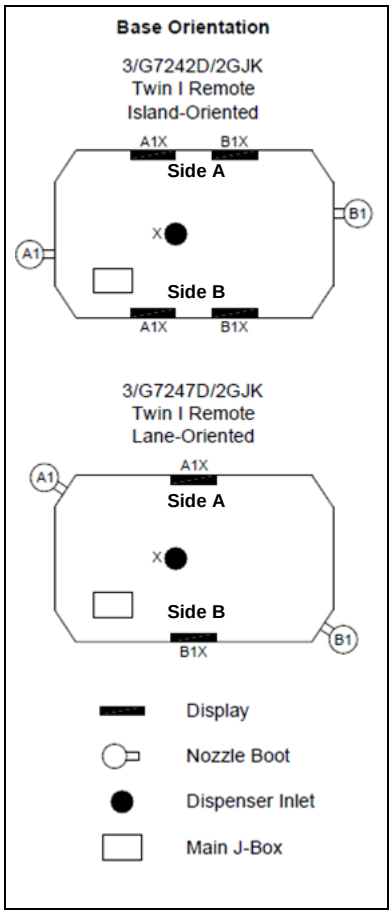
13.2 Determining Dispenser Sides

On dual dispensers, Side A of the dispenser is the side of the dispenser that is opposite of the main AC junction box location, and Side B is on the same side as the main AC junction box.

The Side A hose is always on the right side when facing Side A of the dispenser and the Side B hose is always on the right side when facing Side B of the dispenser.

NOTE: On island-oriented nozzle boot models, the Side A and Side B volume displays are on both sides of the dispenser. See the figure to the right for an example of island-oriented versus lane-oriented dispensers.

If you wish to see the base orientation for a specific dispenser model, refer to the base layout for that dispenser model in Appendix A of the *Select Dispenser Installation & Operation* manual PN 920812 that is provided with the dispenser.



13.3 Start Up

Follow the procedure below to start each dispenser:

1. Restart the dispenser by turning power off and then back on at the breaker, or open the terminal door and press the reset switch on the iX™ board as shown in Figure 13-2.

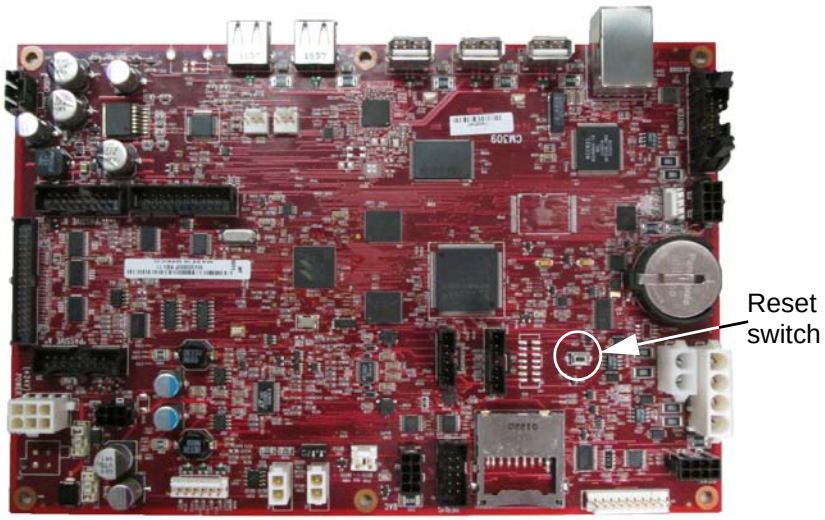


Figure 13-2 Reset Button on iX Board

2. At power up the screens shown in Figure 13-3 are displayed.

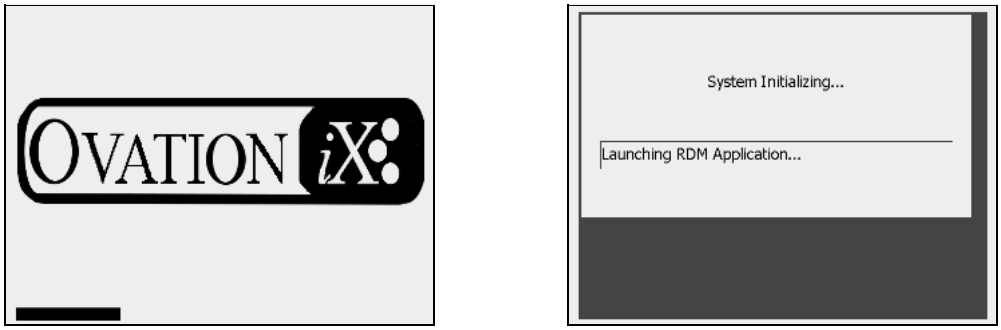


Figure 13-3 Dispenser Power On

3. The screens shown in Figure 13-4 are then displayed as the dispenser software starts and initializes basic devices.

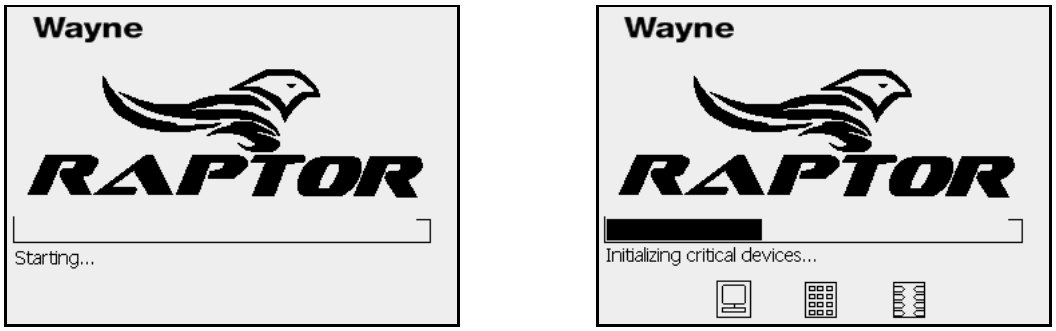


Figure 13-4 Dispenser Start and Initialization

4. As each of the critical devices (display, keypad, and softkeys) is initialized, its icon darkens. See Figure 13-5 for an example. If there are any problems, an error message is displayed. Refer to the dispenser's service manual to address these issues.

5. After the devices are initialized, the “Configuring...” message is displayed with a countdown. See Figure 13-5. Press and release SoftKey #2 (second key down on the left side of the display) to enter System Configuration. The message is displayed for only 5 seconds.

   NOTE: During the initial startup, the dispenser automatically starts in configuration mode without requiring user intervention.

   TIP: *If you miss the screen, reboot and try again.*

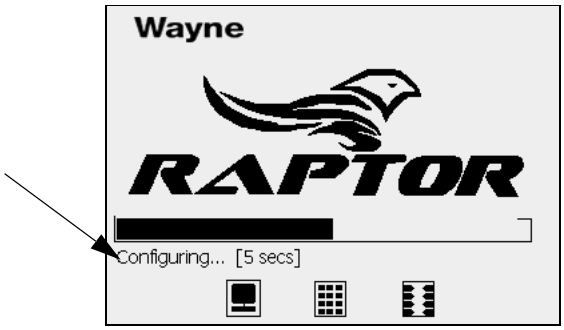


Figure 13-5 Initialization Complete

6. The System Configuration screen appears when you successfully enter configuration mode.

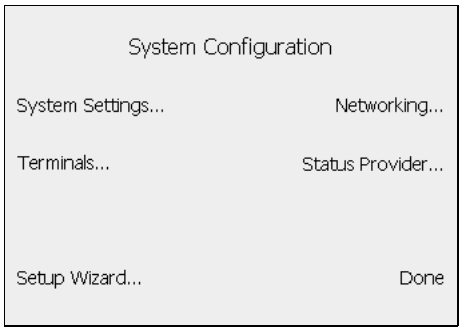


Figure 13-6 System Configuration Screen

System Configuration consists of the following options:

- **System Settings:** Configure Site ID, Date/Time, and VGA Orientation; see Section 13.5.1 on page 107
- **Terminals:** Configure terminal hardware; see Section 13.5.2 on page 107
- **Networking:** Configure network settings; see Section 13.5.3 on page 110
- **Status Provider:** Configure the Status Provider; see Section 13.5.4 on page 111
- **Setup Wizard:** Guided configuration of all settings necessary for dispenser communications, recommended for initial setup of the dispenser; see Section 13.4 on page 99
- **Done:** Exit configuration mode and restart the terminal

13.3.1 Selection and Input

When configuring items on the various screens in configuration mode, there are three common ways that in which you make selections or enter values:

- **On Screen Selection**

  Menu items that require selection from a fixed set of options change the setting on screen without displaying a new screen. For example, the **Type** option on the Add CardReader device screen displays the current value. When the corresponding softkey (SoftKey #1) for this item is pressed, the displayed setting changes on screen. Each softkey press cycles through the available options.

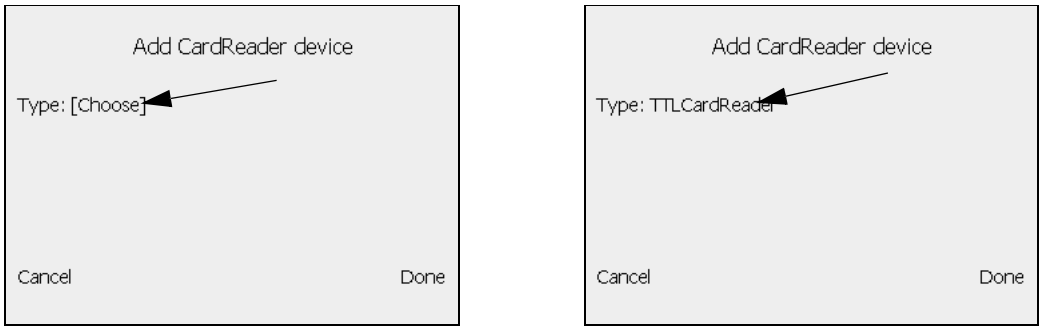


Figure 13-7 System Configuration Screen - SoftKeyType Changed

- **Menu and Variable Option Selection**

  Menu items that require selection from a variable set of options display a screen with the available options. One example of this is basic menu navigation. On the System Configuration screen, pressing SoftKey #1 selects **System Settings**, which displays the System Settings screen.

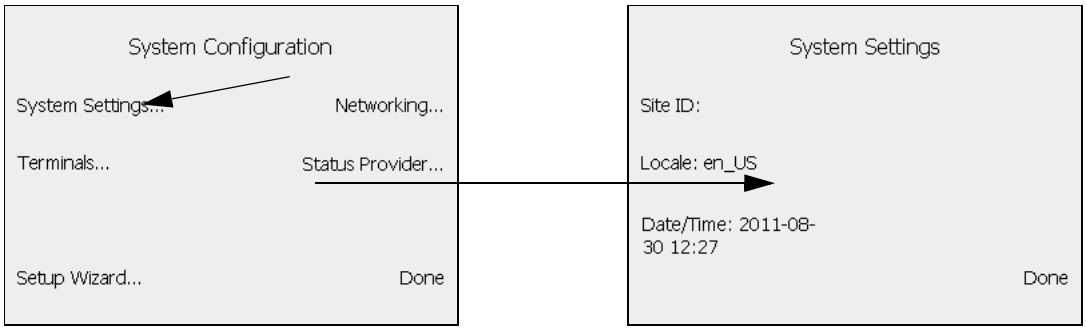


Figure 13-8 Menu Selection

A second example of this is device configuration. On the Devices screen, pressing SoftKey #2 selects **CardReader**, which then displays a screen to choose which card reader to configure, or to add a card reader for dispenser side A.

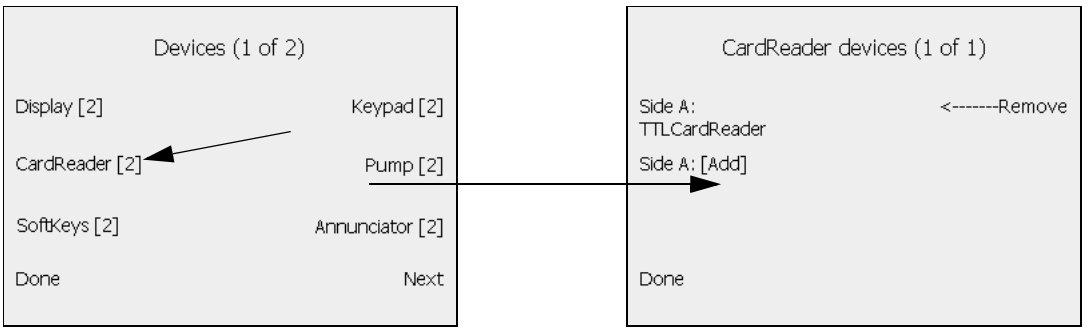


Figure 13-9 Device Selection Screen

- **Keypad Entry**

  Many items require you to enter information, such as the site ID, the date and time, network addresses, or other specific settings. When necessary, a keypad entry screen is displayed similar to the following **Date/Time** screen.

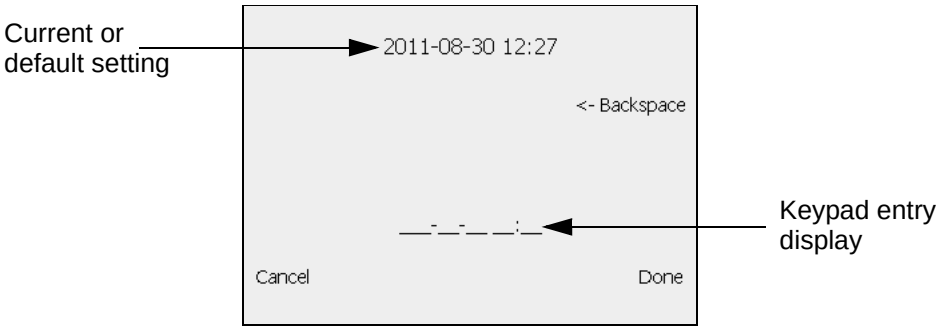


Figure 13-10 Date/Time Screen

The current or default value for the setting is displayed at the top of the screen, if available. To change the setting, use the iX Fleet IDT keypad. As you enter numbers on the keypad, they are shown in the Keypad entry display. If you make a mistake, select **Backspace** (SoftKey #5, which is the first key down on the right side of the display) to correct the entry.

The appearance of the Keypad entry display changes depending upon the information required. For example, the entry displayed for a network address appears as ___.___.___.___, avoiding the need to enter dots in the address.

The beginning of an entry must be padded with zeroes (0) if it does not have enough digits to fill the conventionally required space, such as in the following examples:

- When setting the date, press “08” on the keypad to enter the month of August.
- When entering the third octet of IP address 192.168.1.101, press “001” on the keypad.

When finished select **Done** (SoftKey # 8) to save the entry, or select **Cancel** (SoftKey #4) to discard the changes and return to the previous menu.

13.4 Setup Wizard

The Setup Wizard simplifies dispenser setup for the iX Fleet fuel control system by presenting all of the settings necessary for dispenser communication. To complete the Setup Wizard perform the following steps:

1. Start the dispenser in configuration mode. See Section 13.3 on page 95. The System Configuration menu is displayed. Press SoftKey #4 to select **Setup Wizard**.
2. The Select Configuration window is displayed. Press the SoftKey that corresponds to the dispenser's hardware configuration.

   NOTE: If you entered the Setup Wizard by mistake, press SoftKey #8 to select **Done** and return to the System Configuration menu.

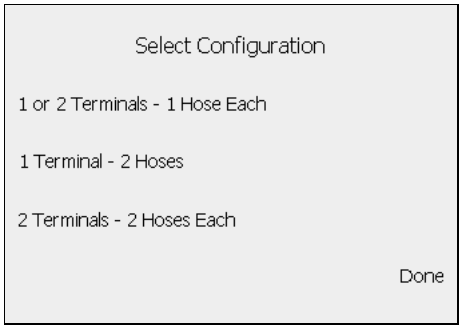


Figure 13-11 Select Configuration Screen

3. Select the configuration that matches your dispenser. The available configurations are as follows:
   - **1 or 2 Terminals - 1 Hose Each:** One or two iX Fleet IDTs where each iX Fleet IDT controls only one hose. A single hose dispenser with one iX Fleet IDT or a dual hose, lane-oriented dispenser with an iX Fleet IDT on each side which only controls the hose on its side. With two iX Fleet IDTs the Setup Wizard must be run on each iX Fleet IDT.
   - **1 Terminal - 2 Hoses:** One iX Fleet IDT controls two hoses. A dual hose dispenser with a single iX Fleet IDT controlling both hoses.
   - **2 Terminals - 2 Hoses Each:** Two iX Fleet IDTs where each iX Fleet IDT can control the same two hoses. A dual hose dispenser with an iX Fleet IDT on each side which can control either hose. The Setup Wizard must be run on each iX Fleet IDT.
4. After you make a selection the screen shown in Figure 13-12 is displayed. If this is a Helix™ fuel dispenser press SoftKey #1 to select **Helix**. Otherwise press SoftKey #2 to select **Non-Helix**.

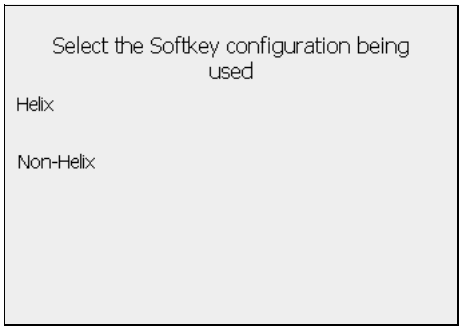


Figure 13-12 Select SoftKey Configuration Screen

5. The Set Side screen is displayed. If the displayed side is not correct, press SoftKey #1 to cycle between Side A and Side B. When the correct side is displayed, press SoftKey #8 to select **Next**.

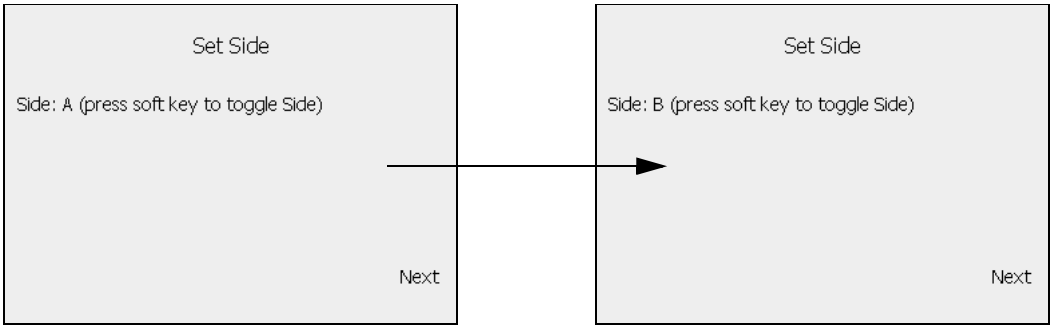


Figure 13-13 Set Side Screen

6. The Set Fueling Points screen is displayed. If you are configuring a dual hose, single-terminal dispenser, both sides of the dispenser are displayed (see Figure 13-14, right side). Press the SoftKey that corresponds to the side for which you want to change the fueling point number. When you are finished configuring the fueling point numbers, press SoftKey #8 to select **Next**.

   NOTE: Fueling point assignments must match the fueling point numbers in the dispenser's iGEM™ computer configuration (i.e. Side A - F5.00 and Side B - F6.00).

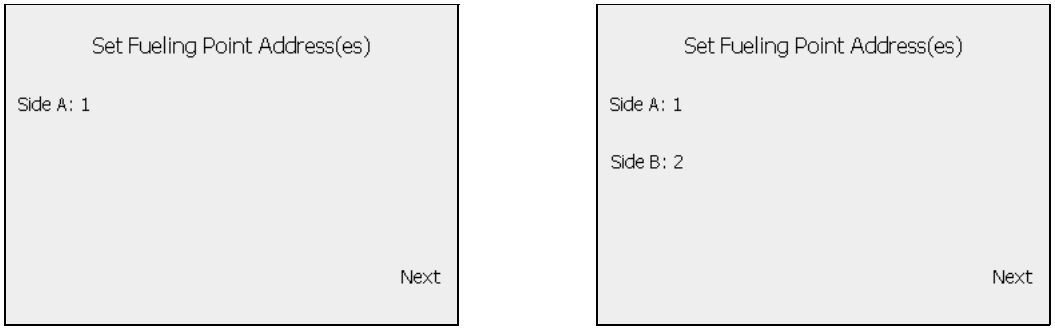


Figure 13-14 Set Fueling Points Screen

The Fueling Point screen is displayed, with the current side listed in the title.

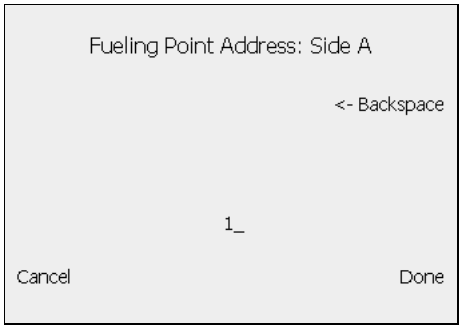


Figure 13-15 Fueling Point Screen

Configure the fueling point number using these steps:

a. Press SoftKey #5 to select **Backspace** and delete numbers, as needed, from the currently programmed fueling point number.

b. Enter the correct fueling point number on the dispenser keypad.

c. When finished, press SoftKey #8 to select **Done** and save the setting, or press SoftKey #4 to select **Cancel** and leave the fueling point number unmodified.

d. You are returned to the Set Fueling Points screen. Repeat from step 6 for any additional fueling points.

7. If the **2 Terminals - 2 Hoses Each** option was selected in step 2 the Set Opposite Hose screen is displayed (otherwise, skip to step 8). This setting allows the terminal to control another terminal's primary hose, and is used only for dual-hose, dual-terminal dispensers.

   NOTE: This screen is not displayed for single-terminal (single or dual-hose) configurations.

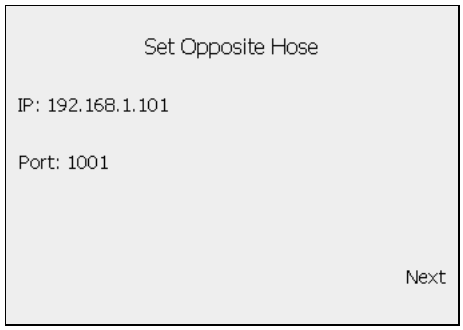


Figure 13-16 Set Opposite Hose Screen

Complete these steps to set the opposite hose:

a. Verify that the IP address listed on the screen is the IP address for the terminal on the other side of the dispenser. If the IP address is correct, press SoftKey #8 to select **Next**, and then skip to step 8. Otherwise, press SoftKey #1 to change the IP address.

   NOTE: IP addresses are automatically assigned as 192.168.1.1*xx*, where *xx* is the primary fueling point number (01, 02, etc.). Alternate IP addresses can be used, if desired, for network reasons.

   TIP: *Fueling point IP addresses must be unique within the iX Fleet fuel control system. If the iX Fleet fuel controller is managing multiple sites, and fueling point numbers are not unique within the system (i.e. each site has a fueling point #1, #2, etc.), then the IP address for the fueling point must be changed to be unique. For example, the IP address for fueling point #1 at site 1 would be the default address (192.168.1.101), while the IP address for fueling point #1 at site 2 would be changed to 192.168.1.201).*

b. The Enter Dispenser IP screen is displayed. Press SoftKey #5 to select **Backspace** and delete numbers, as needed, from the currently programmed opposite hose IP address.

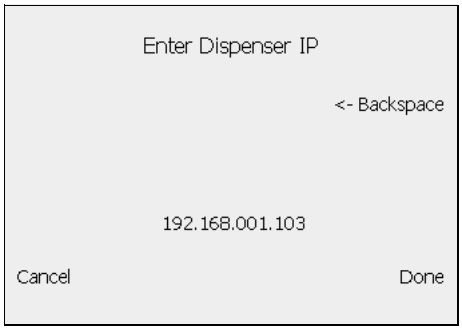


Figure 13-17 Enter Dispenser IP Screen for Opposite Hose

c. Enter the IP address of the terminal on the other side of the dispenser using the dispenser keypad. The dots (.) in the IP address will be automatically added. However, you must enter three digits for each octet of the address. For example, to enter the IP address "192.168.1.103", on the keypad you would press "1 9 2 1 6 8 0 0 1 1 0 3".

d. When finished, press SoftKey #8 to select **Done** to save the setting, or press SoftKey #4 to select **Cancel** and leave the setting unmodified.

e. You are returned to the Set Opposite Hose screen (Figure 13-16). Press SoftKey #8 to select **Next**.

8. The Set Dispenser IP screen is displayed. Verify that the IP address listed on the screen is the correct IP address for the terminal. If the IP address is correct, press SoftKey #8 to select **Next**, and then skip to step 9. Otherwise, press SoftKey #1 to change the IP address.

   NOTE: IP addresses are automatically assigned as 192.168.1.1*xx*, where *xx* is the primary fueling point number (01, 02, etc.). Alternate IP addresses can be used, if desired, for network reasons.

   TIP: *Fueling point IP addresses must be unique within the iX Fleet fuel control system. If the iX Fleet fuel controller is managing multiple sites, and fueling point numbers are not unique within the system (i.e. each site has a fueling point #1, #2, etc.), then the IP address for the fueling point must be changed to be unique. For example, the IP address for fueling point #1 at site 1 would be the default address (192.168.1.101), while the IP address for fueling point #1 at site 2 would be changed to 192.168.1.201).*

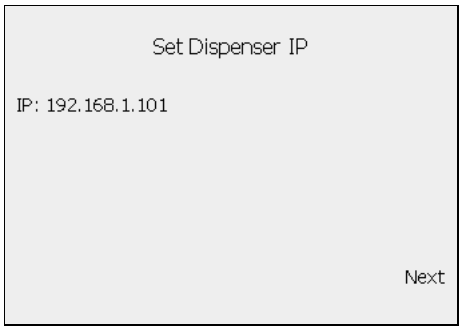


Figure 13-18 Set Dispenser IP Screen

Complete these steps to change the IP address:

a. The Enter Dispenser IP screen is displayed. Press SoftKey #5 to select **Backspace** and delete numbers, as needed, from the currently programmed IP address.

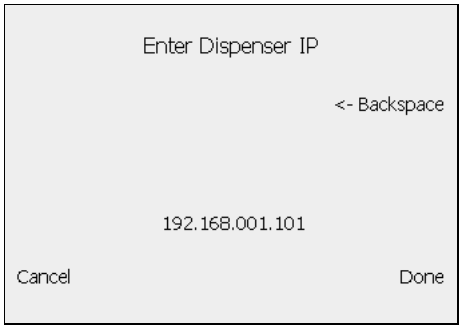


Figure 13-19 Enter Dispenser IP Screen

b. Enter the IP address of the dispenser terminal using the dispenser keypad. The dots (.) in the IP address will be automatically added. However, you must enter three digits for each octet of the address. For example, to enter the IP address “192.168.1.101”, on the keypad you would press “1 9 2 1 6 8 0 0 1 1 0 1”.

c. When finished, press SoftKey #8 to select **Done** to save the setting, or press SoftKey #4 to select **Cancel** and leave the setting unmodified.

d. You are returned to the Set IP screen (Figure 13-18 on page 102). Press SoftKey #8 to select **Next**.

9. The Set Controller IP screen is displayed. Verify that **Controller IP** and **Sync Service #** are correct for the iX Fleet fuel controller. If correct, press SoftKey #8 to select **Next** and then skip to step 12.

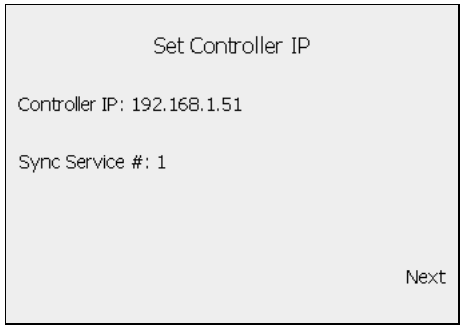


Figure 13-20 Set Controller IP Screen

10. To change **Sync Service #**, repeatedly press and release SoftKey #2 until the correct sync service number is displayed (1, 2, 3, or 4).

    NOTE: Sites with 5 terminals or less will have all terminals on Sync Service 1. See Section 16.4 on page 131 for disabling unused sync services on the iX Fleet controller. Refer to the following guidelines for sites with a larger number of terminals.

    - A maximum of 70 terminals are supported per Sync Service.
    - For the AutoSync interval set in the controller, allow a minimum of 1 minute per terminal based on the highest number of terminals on any one Sync Service.
    - To maintain the default 5 minute AutoSync interval each Sync Service must have 5 terminals or less. For example, for a site with 12 terminals select: Sync Service # 1 for terminals 1 - 3, Sync Service # 2 for terminals 4 - 6, Sync Service # 3 for terminals 7 - 9, and Sync Service # 4 for terminals 10 -12.
    - If the site has more than 20 terminals, the AutoSync interval on the General Setup screen in the host application must be increased to allow one minute per terminal, based on the highest number of terminals on any one Sync Service. For example, a site with 48 terminals would require 12 terminals per Sync Service, with a recommended minimum AutoSync interval of 12 minutes.

11. To change **Controller IP**, press SoftKey #1 and perform the following steps:

    a. Press SoftKey #5 to select **Backspace** and delete numbers, as needed, from the currently programmed IP address.

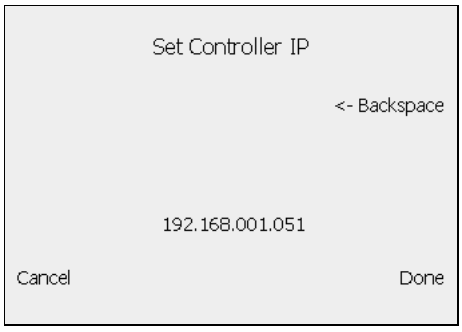


Figure 13-21 Enter Controller IP Screen

    b. Enter the IP address of the iX Fleet fuel controller using the dispenser keypad. The dots (.) in the IP address will be automatically added. However, you must enter three digits for each octet of the address. For example, to enter the IP address “192.168.1.51”, on the keypad you would press “1 9 2 1 6 8 0 0 1 0 5 1”.

    c. When finished, press SoftKey #8 to select **Done** to save the setting, or press SoftKey #4 to select **Cancel** and leave the setting unmodified.

d. You are returned to the Set Controller IP screen (Figure 13-20 on page 103). Press SoftKey #8 to select **Next**.

12. The Set Site ID screen is displayed. Verify that the Site ID listed on the screen is the correct. If the Site ID is correct, press SoftKey #8 to select **Next**, and then skip to step 13. Otherwise, press SoftKey #1 to change the Site ID.

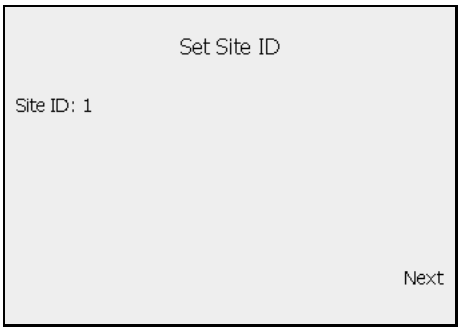


Figure 13-22 Set Site ID Screen

Complete these steps to change the Site ID:

a. The Site ID Entry screen is displayed. Press SoftKey #5 to select **Backspace** and delete numbers, as needed, from the currently programmed Site ID.

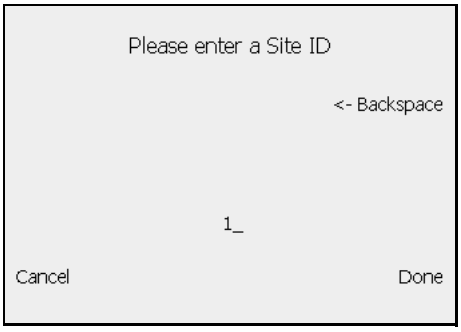


Figure 13-23 Site ID Entry Screen

b. Enter the Site ID using the dispenser keypad. When finished, press SoftKey #8 to select **Done** to save the setting, or press SoftKey #4 to select **Cancel** and leave the setting unmodified.

c. You are returned to the Set Site ID screen (Figure 13-22 on page 104). Press SoftKey #8 to select **Next**.

13. The Reader selection screen is displayed. If the dispenser does not have a reader installed press SoftKey #4 to select **No** and skip to step 18. Otherwise, press SoftKey #1 to toggle the reader type between **HID**, **RFID**, and **Card** to select the type of reader installed in the dispenser and then press SoftKey #8 to select **Yes**.

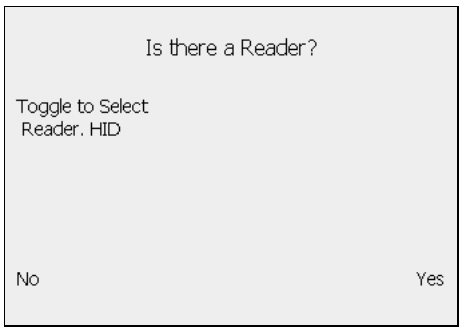


Figure 13-24 Reader Selection Screen

14. The Set Bit Format screen is displayed if the selected Reader type is HID. Otherwise skip to step 18.

15. Scan a test card to set the bit format and then press SoftKey #8 to select **Next**. Skip to step 18.

    NOTE: If a test card is not available press SoftKey #1 to manually enter the bit format. Continue to step 16.

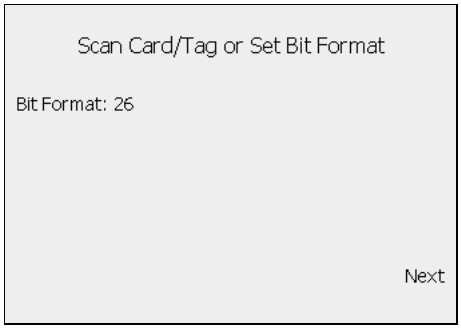


Figure 13-25 Scan Card/Tag or Set Bit Format Screen

16. The screen shown in Figure 13-26 will be displayed. Press SoftKey #5 to select **<-Backspace** to clear the default bitmap format. Then manually enter the bit format using the dispenser key pad and press SoftKey #8 to select **Done**.

    NOTE: The bit format is the number of bits used to encode information on the HID card. Refer to the card provider for this information if it is not known.

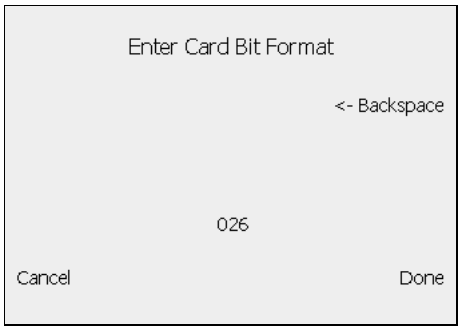


Figure 13-26 Scan Card/Tag or Set Bit Format Screen

17. After manually setting the bit format you are returned to the Scan Card/Tag or Set Bit Format screen. Press SoftKey #8 to select **Next**.
18. The Modem selection screen is displayed. Press SoftKey #4 to select **No** if the dispenser is not equipped with a modem and skip to step 19, or press SoftKey #8 to select **Yes** if it is equipped with a modem, and then complete the following steps:

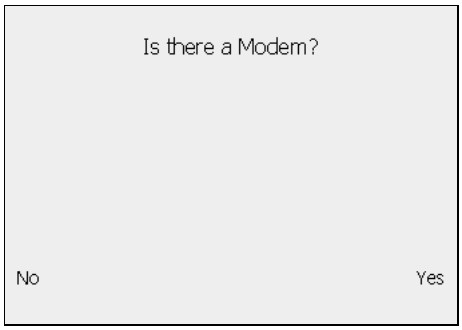


Figure 13-27 Modem Selection Screen

a. The Set Modem screen is displayed. Verify that the IP address listed on the screen is the correct IP address for the modem. If the IP address is correct, press SoftKey #8 to select **Next**, and then skip to step 19. Otherwise, press SoftKey #1 to change the IP address.

   NOTE: The default IP address for the modem is 192.168.1.999. This address should only be changed if there is an IP address conflict with another device on the network. Modem IP addresses do not need to be unique within the iX Fleet fuel control system because only one modem can connect to the iX Fleet fuel controller at a time.

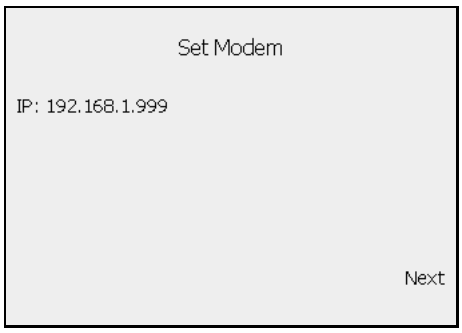


Figure 13-28 Set Modem Screen

b. The Enter IP screen is displayed. Press SoftKey #5 to select **Backspace** and delete numbers, as needed, from the currently programmed IP address.

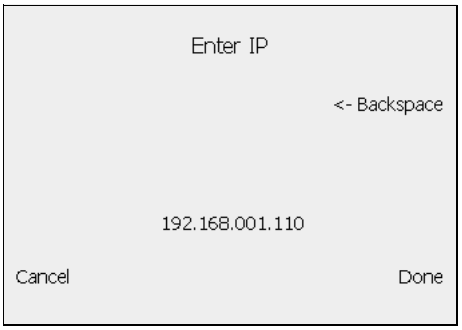


Figure 13-29 Enter IP Screen for Modem

c. Enter the IP address of the dispenser's modem using the dispenser keypad. The dots (.) in the IP address will be automatically added. However, you must enter three digits for each octet of the address. For example, to enter the IP address "192.168.1.110" for the modem, on the keypad you would press "1 9 2 1 6 8 0 0 1 1 1 0".

d. When finished, press SoftKey #8 to select **Done** to save the setting, or press SoftKey #4 to select **Cancel** and leave the setting unmodified.

e. You are returned to the Set Modem screen (Figure 13-28). Press SoftKey #8 to select **Next**.

19. The Finish screen is displayed. Press SoftKey #8 to select **Done** and return to the System Configuration menu. See Figure 13-6 on page 96.

20. If additional configuration is required, refer to Section 13.5 for detailed information about the available configuration options. Otherwise, press SoftKey #8 to select **Done** and the dispenser will start using the new configuration.

13.5 Manual Configuration

The System Configuration screen contains the following options that allow the manual configuration of the dispenser. The options within the following sections allow particular options to be set directly without having to complete the Setup Wizard, and allow access options that are not included in the Setup Wizard.

- **System Settings:** Includes the Site ID, Locale, and Date/Time
- **Terminals:** Includes all device/hardware-specific settings
- **Networking:** Includes networking and communication settings for the individual dispenser
- **Status Provider:** Includes settings to establish communications with the iX Fleet fuel controller

13.5.1 System Settings

From the System Configuration screen (Figure 13-6 on page 96), press SoftKey #1 to select **System Settings**. The screen shown in Figure 13-30 is displayed.

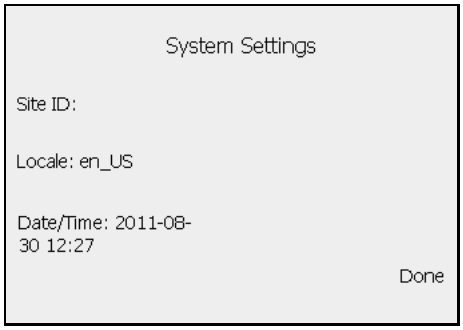


Figure 13-30 System Settings Screen

System Settings consists of the following options:

- **Site ID:** (required) Displays a keypad entry screen to enter the Site ID, which must be entered for the terminal to work as part of the iX Fleet fuel control system
- **Locale:** The only supported locale at this time is **en_US**
- **Date/Time:** Displays a keypad entry screen to update the date and time

  NOTE: The iX Fleet fuel controller will automatically set the iX Fleet IDT time during communication.
- **Done:** Return to the System Configuration menu

13.5.2 Terminals

From the System Configuration screen (Figure 13-6 on page 96), press SoftKey #2 to select **Terminals**. The screen shown in Figure 13-31 is displayed.

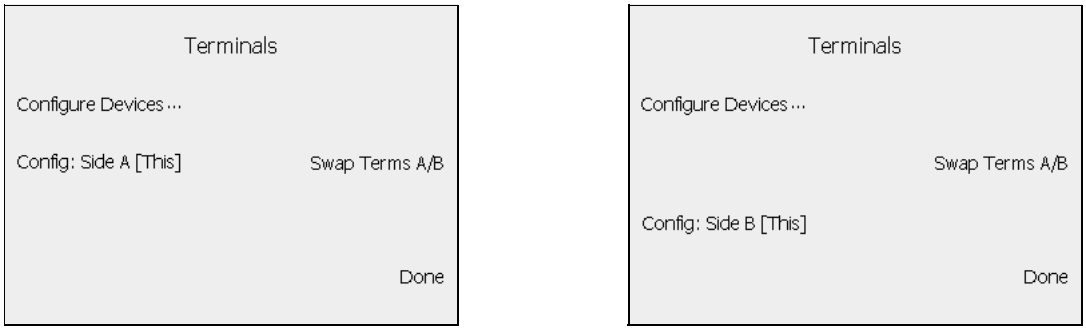


Figure 13-31 Terminals Screen

The Terminals screen provides the following options:

- **Configure Devices:** Configure the dispenser hardware.
- **Swap Terms A/B:** Specify which side of the dispenser to configure.

- **Config: Side A/B [This]:** Displays the Edit Terminal screen for the selected side. You can configure the Terminal ID, display contrast, and Backlight (On or Off). Press SoftKey #8 to select **Done** to return to the Terminals screen.

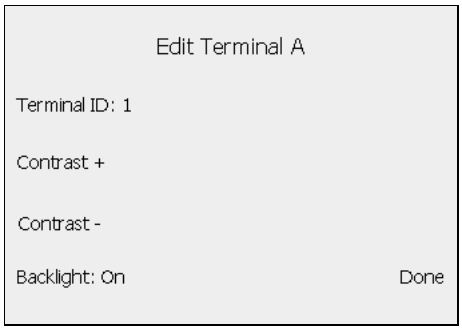


Figure 13-32 Edit Terminal Screen

- **Done:** Return to the System Configuration menu.

13.5.2.1 Devices

From the Terminals screen, press SoftKey #1 to select **Configure Devices**.

The device types are as follows. The displayed options depend upon the hardware installed in the dispenser. Refer to the installation and service manuals for your dispenser for details about settings.

- Display
- SoftKeys
- Pump
- RFIDReader
- CardReader
- Keypad
- Annunciator
- SystemDevice

TIP: *The number in brackets beside each option indicate how many devices of each type were detected during start up.*

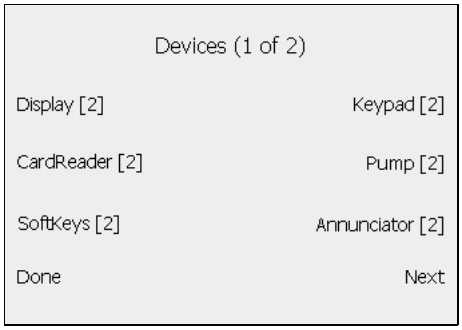


Figure 13-33 Devices (1 of 2) Screen

NOTE: If the device you want to configure is not listed, press SoftKey #8 to select **Next** and the next screen of devices is displayed. Select **Previous** to return to the first screen, or select **Done** from either screen to return to the Terminals screen.

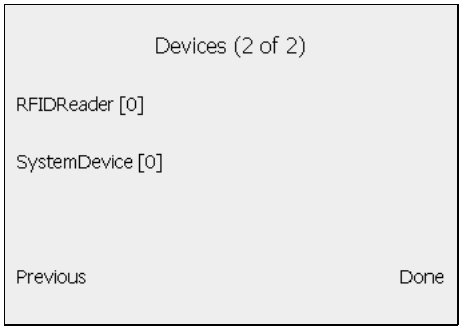


Figure 13-34 Devices (2 of 2) Screen

13.5.2.2 Configuring A Device

Complete these steps to configure a device:

1. Press the device's associated softkey to select it. For example, press SoftKey #6 to select **Pump** devices. The device selection screen is displayed.

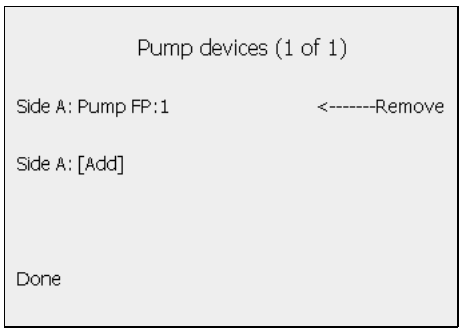


Figure 13-35 Device Selection Screen - Pump

2. Press the corresponding softkey to select an existing device. In the example above, you would press SoftKey #1. After selecting the device, the device options screen is displayed.

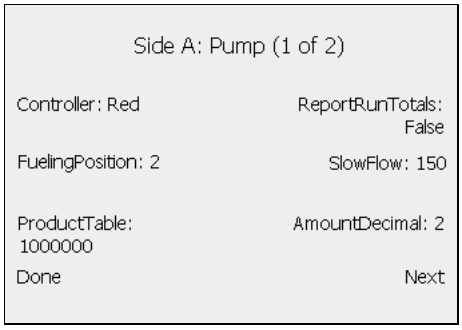


Figure 13-36 Pump (1 of 2) Screen

3. Press the corresponding softkey for the option you want to modify. The type of input screen that is displayed next depends upon the requirements of the specific setting. Refer to Section 13.3.1 for a reference of the different input types.

   NOTE: FuelingPosition, and possibly AmountDecimal, are the only fields you should update. The other fields are fixed, or are not applicable for the iX Fleet fuel control system.

4. If there are more device options than can be displayed on a single screen, the **Next** option is displayed. Press SoftKey #8 to display additional options.

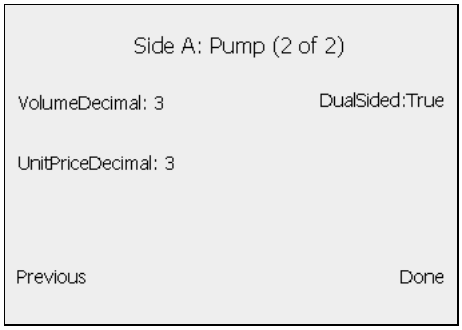


Figure 13-37 Pump (2 of 2) Screen

5. Select an option to configure, or select **Previous** to return to the last screen.
6. When you are finished configuring the device, select **Done** to return to the Devices screen.

13.5.2.3 Adding and Removing Devices

To add or remove devices, complete these steps:

1. Press the device types associated softkey to select it. For example, press SoftKey #2 to select **CardReader** devices. The device selection screen is displayed.

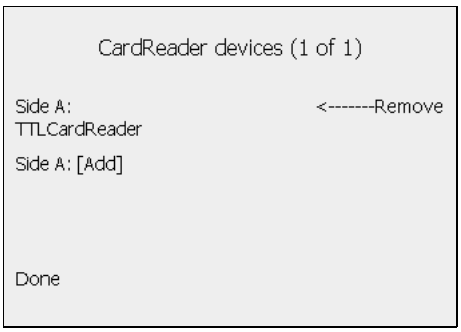


Figure 13-38 Device Selection Screen - CardReader

2. To remove an existing device, press the corresponding softkey on the right side of the display. In the above example, you would press Softkey #5 and the device would be removed.

   To add a new device, press the corresponding softkey for **Side *X*: [Add]** on the left side of the display, where *X* is the side of the dispenser you are configuring. In the above example, you would press Softkey #2 to display the screen shown in Figure 13-39.

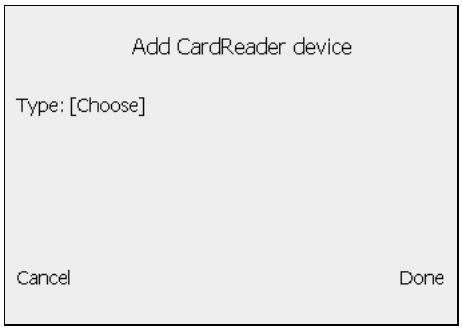


Figure 13-39 Add CardReader Device Screen

3. Press Softkey #1 repeatedly to cycle through the available device types until the correct type is displayed. Select **Done** (by pressing Softkey #8) to add the device, or select **Cancel** (by pressing Softkey #4) to return to the previous screen without adding the device.

13.5.3 Networking

From the System Configuration screen (Figure 13-6), press SoftKey #5 to select **Networking**. The screen shown in Figure 13-40 appears.

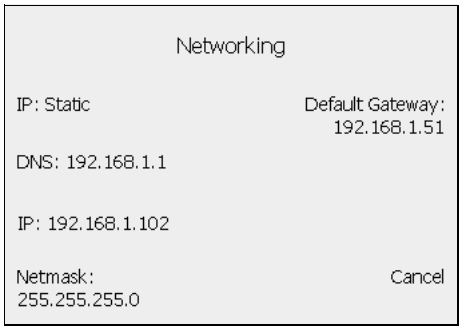


Figure 13-40 Networking Screen

Networking consists of the following options:

- **IP:** Select the type of IP address; choose from Static or DHCP.
- **DNS:** Not applicable to the iX Fleet fuel control system. Defaults to 192.168.1.1.
- **IP:** Enter the IP address of the terminal.

  NOTE: IP addresses are automatically assigned as 192.168.1.1*xx*, where *xx* is the primary fueling point number (01, 02, etc.). Alternate IP addresses can be used if desired for network reasons.

  TIP: *Fueling point IP addresses must be unique within the iX Fleet fuel control system. If the iX Fleet fuel controller is managing multiple sites, and fueling point numbers are not unique within the system (i.e. each site has a fueling point #1, #2, etc.), then the IP address for the fueling point must be changed to be unique. For example, the IP address for fueling point #1 at site 1 would be the default address (192.168.1.101), while the IP address for fueling point #1 at site 2 would be changed to 192.168.1.201).*

- **Netmask:** Enter the Netmask. Default is 255.255.255.0
- **Default Gateway:** Not applicable to the iX Fleet fuel control system.
- **Cancel:** Return to the System Configuration screen without applying changes.

13.5.4 Status Provider

From the System Configuration screen (Figure 13-6 on page 96), press SoftKey #6 to select **Status Provider**. The screen shown in Figure 13-41 is displayed. The Status Provider settings determine how the dispenser will communicate with the iX Fleet fuel controller for exchanging information.

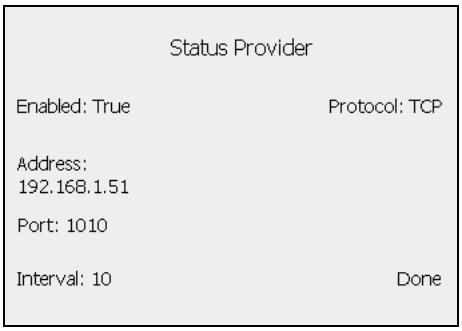


Figure 13-41 Networking Screen

Status provider settings consist of the following options:

- **Enabled:** Allows enabling or disabling of the Status Provider.
- **Protocol:** Select the communication protocol from the following options:
  - **TCP:** (default) The dispenser will communicate with the iX Fleet fuel controller directly using the Address and Port specified below.
  - **UDP:** The dispenser will communicate with the iX Fleet fuel controller and other dispensers in a multicasting environment. *This configuration has been deprecated and is no longer supported.*
- **Address:** The address of the status provider. If Protocol is set to TCP this is the address of the iX Fleet fuel controller. Otherwise this will be a group address to create a UDP multicasting socket.
- **Port:** The communications port number for status provider communications (default 1010).
- **Interval:** The amount of time, in seconds, that updates will be sent from the status provider.
- **Done:** Select this option to apply changes and return to the System Configuration screen.

13.6 Dispenser Diagnostics

After completing the dispenser configuration, verify that the dispenser hardware is functioning properly. The dispenser software includes a diagnostic mode to facilitate this verification. To use it. complete these steps:

1. Enter Diagnostics mode by holding down SoftKey #2 and the SoftKey #6 at the same time. The Diagnostics Menu screen is displayed.

   TIP: *The SoftKey #2 is the second key down on the left side of the display, and the SoftKey #6 is the second key down on the right side of the display.*

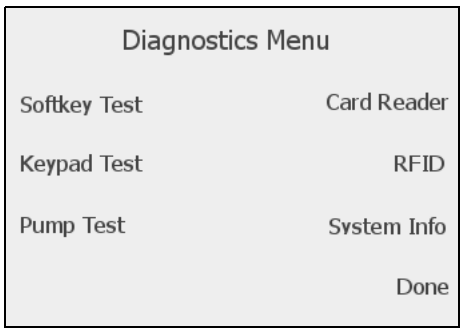


Figure 13-42 Diagnostics Menu Screen

2. Select **Softkey Test**. The screen shown in Figure 13-43 is displayed.

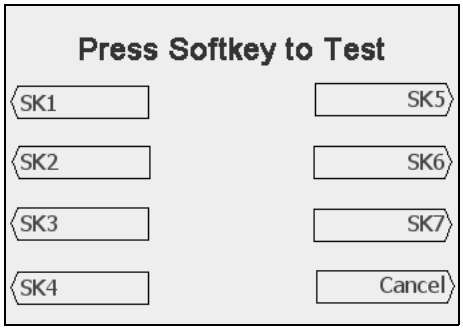


Figure 13-43 Softkey Test Screen

3. Press each softkey to test. The screen will change after each key press indicating that the key is functioning. For example, the screen will appear as in Figure 13-44 after SoftKey #1 is pressed.

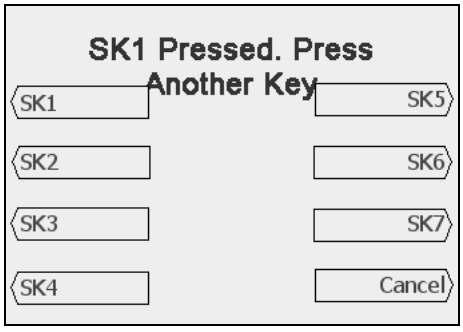


Figure 13-44 Softkey Test Screen - SoftKey #1 Pressed

4. When finished testing the softkeys, press SoftKey #8 to select **Cancel** and return to the Diagnostics Menu.

5. Select **Keypad Test** from the Diagnostics Menu (Figure 13-42). The screen shown in Figure 13-45 is displayed. Press each key on the keypad to test. The key pressed is displayed on the lower half of the screen.

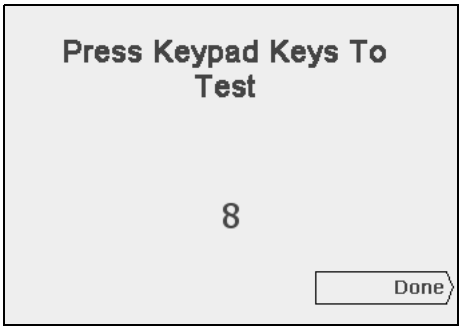


Figure 13-45 Keypad Test Screen

6. When finished testing press SoftKey #8 to select **Cancel** and return to the Diagnostics Menu.
7. Select **Pump Test** from the Diagnostics Menu (Figure 13-42). The screen shown in Figure 13-46 is displayed. Remove the nozzle from the dispenser and the line **Nozzle: Down** should change to **Nozzle: Up**.

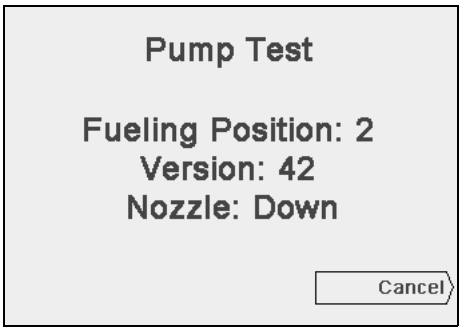


Figure 13-46 Pump Test Screen

8. When finished testing, replace the nozzle in the dispenser and then press SoftKey #8 to select **Cancel** and return to the Diagnostics Menu.
9. Select **Card Reader** from the Diagnostics Menu (Figure 13-42). The screen shown in Figure 13-47 is displayed.

NOTE: The Card Reader option is displayed only if the card reader is present and enabled. If the card reader is not present, or is disabled, skip to step 13.

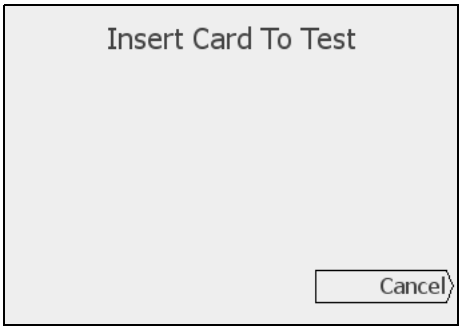


Figure 13-47 Card Reader Test Screen

10. Insert a test card to verify the reader is working. The screen changes as in Figure 13-48 if the card is successfully detected.

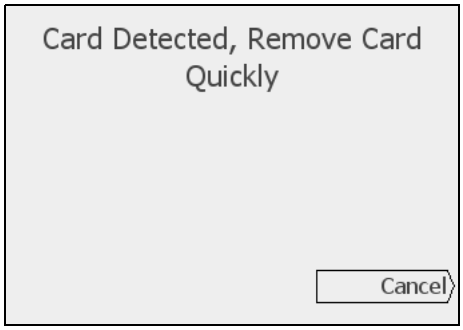


Figure 13-48 Card Reader Test Screen - Card Inserted

11. Remove the card quickly. If the card read is successful, the screen changes as shown in Figure 13-49.

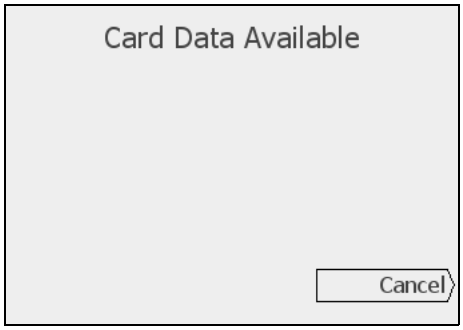


Figure 13-49 Card Reader Test Screen - Card Removed

12. When finished testing press SoftKey #8 to select **Cancel** and return to the Diagnostics Menu.
13. Select **RFID** from the Diagnostics Menu (Figure 13-42). The screen shown in Figure 13-50 is displayed.

NOTE: The RFID option is displayed only if the RFID reader is present and enabled. If the RFID reader is not present, or is disabled, skip to step 16.

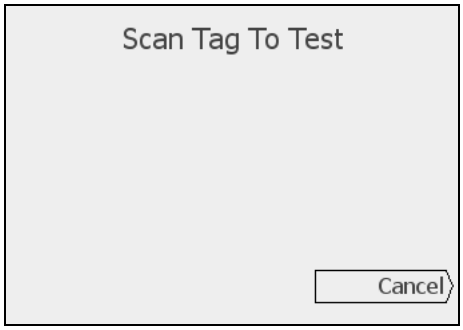


Figure 13-50 RFID Test Screen

14. Pass a test tag across the RFID reader. If the tag is successfully scanned, a screen similar to Figure 13-51 is displayed.

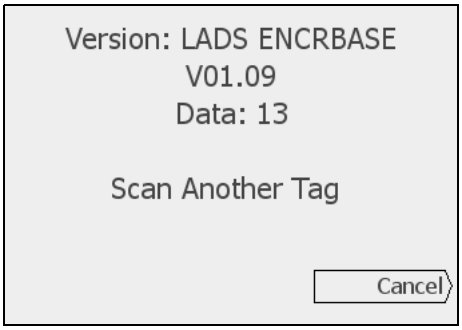


Figure 13-51 RFID Test Screen - Successful Tag Scan

15. When finished testing press SoftKey #8 to select **Cancel** and return to the Diagnostics Menu.
16. Select **HID** from the Diagnostics Menu (Figure 13-42 on page 112). The screen shown in Figure 13-52 is displayed.

    NOTE: The HID option is displayed only if the HID reader is present and enabled. If the HID reader is not present, or is disabled, skip to step 19.

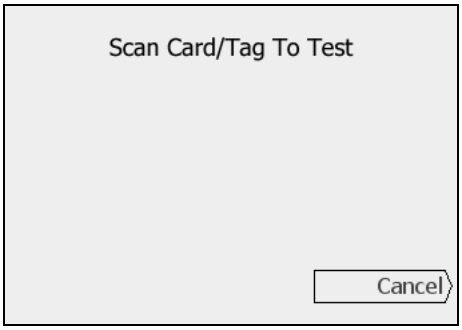


Figure 13-52 HID Test Screen

17. Pass a test card/tag across the HID reader. If the card/tag is successfully scanned, a screen similar to Figure 13-53 is displayed.

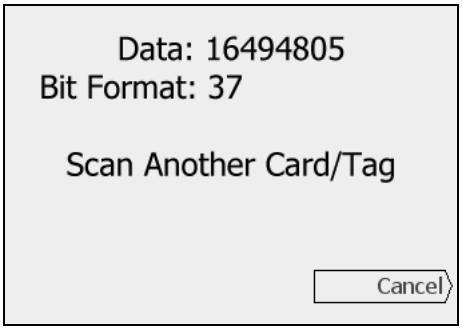


Figure 13-53 RFID Test Screen - Successful Tag Scan

18. When finished testing press SoftKey #8 to select **Cancel** and return to the Diagnostics Menu.

19. Select **System Info** from the Diagnostics Menu (Figure 13-42). The screens shown in Figure 13-54 are displayed. You can navigate between screens by selecting **Previous** or **Next**. Review the information on the System Information screens to verify that it is correct.

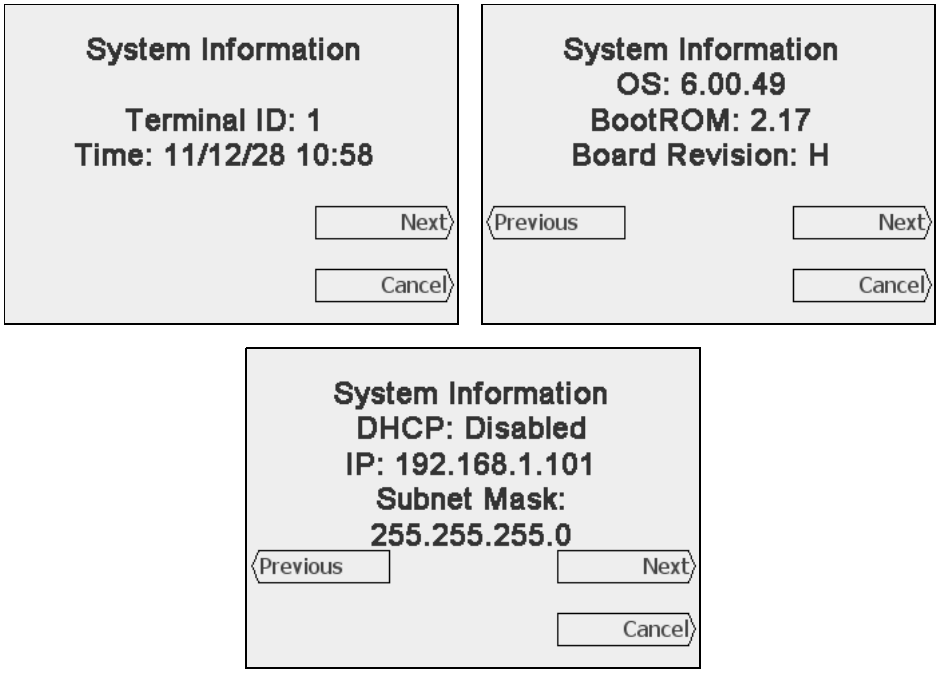


Figure 13-54 System Information Screens

20. When finished, select **Cancel** to return to the Diagnostics Menu.
21. When you have completed diagnostics, select **Done** from the Diagnostics Menu (Figure 13-42). The appropriate idle screen is displayed, and the dispenser is ready to begin transactions.

14 TROUBLESHOOTING

14.1 Unable to Sync With One or More Dispensers

The iX Fleet fuel control system can communicate with the dispensers on a dedicated network, or can function as part of an existing network. Use the following steps to troubleshoot synchronization problems:

IMPORTANT: The iX Fleet fuel control system is not compatible with the Wayne Connect™ IP-485® network solution in any configuration.

1. If you are using the iX Fleet fuel control system on an existing network, check the following items:
   - During installation it is recommended to have a network administrator or technician available that is familiar with the site network.
   - Refer to Section 16.2 on page 131 to configure the iX Fleet host application to run under a network account.
   - Check for any network features, such as domain caching, that might interfere with network discovery and communication.
   - Be aware that excessive traffic on the network can interfere with dispenser communications.
2. Verify the network configuration of the iX Fleet fuel controller. If using a dedicated network, the default IP address is 192.168.1.51 and the subnet mask is 255.255.255.0. The iX Fleet fuel controller and dispensers must be in the same subnet to communicate properly.

   NOTE: Refer to Section 16.6 on page 132 for instructions, if needed.
3. Restart the iX Fleet fuel controller to ensure that any changes to its network configuration take effect.
4. Look in the lower-left corner of the host application window and verify that “Sync Service is Up” is displayed. If “Sync Service is Down” is displayed click **Start Service**.
5. Go to **Utilities > In-Dispenser Terminal Status** in the iX Fleet Host application and check that you have a green pump icon for each of your dispenser terminals. If you do not have a green pump icon for a terminal then the status messages being sent from that terminal are not reaching the controller. The controller will only sync with terminals that it is currently receiving status messages.
6. If you do not have any green pump icons on the In-Dispenser Terminal Status screen, verify that the Windows firewall is turned off. If turned on, it will block the terminal messages from being received by the controller. If a firewall is required by the network, refer to Section 1.6 on page 11 for the list of network ports that must be open for the application to work successfully.
7. On the iX Fleet fuel controller, open a command prompt and attempt to ping the dispenser(s). If you are unable to successfully ping the dispenser(s), verify that the network cables are properly connected from the iX Fleet fuel controller and dispensers to the hub/switch.
8. Use a network cable tester to check the cables that connect the iX Fleet fuel controller and dispensers to the network.
9. Restart the dispenser(s) in configuration mode (see Section 13.3 on page 95) and check the network configuration. If using a dedicated network the IP address is 192.168.1.1*xx*, where *xx* is the fueling point number, and the subnet mask is 255.255.255.0. Also, verify that the IP address in the Status provider configuration screen is the IP address of the controller, such that the terminal is sending its status messages to the correct address.

10. Open the dispenser head and verify that the Ethernet switch is configured for 10 Mbps. See Section 14-1 on page 118.
11. If the iX Fleet fuel controller and dispensers still cannot sync, contact DFS Technical Support for further guidance.

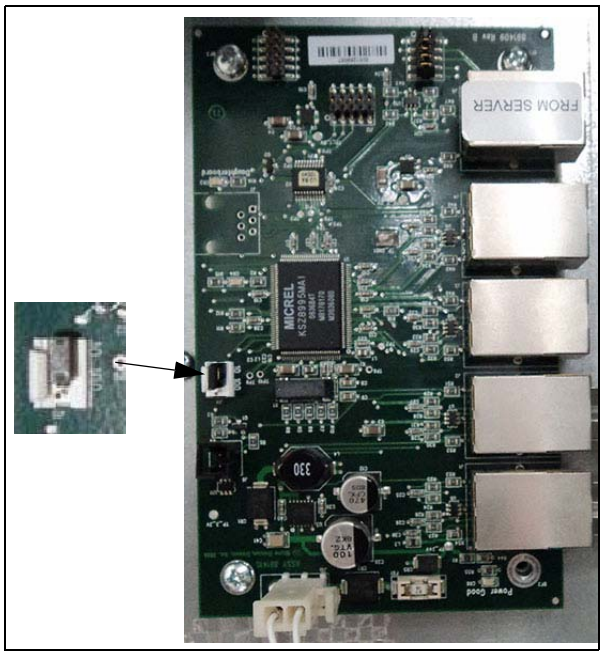


Figure 14-1 Ethernet Switch - 10Mbps

14.2 Resetting the Administrator Password

If the Administrator password has been forgotten, click the **Reset Administrator Password** button (see Figure 14-2) and the Reset Administrator Password window is displayed. Call DFS Customer Service at 800-926-3737, option 4, and provide the Challenge Code. Enter the response code provided by the customer service agent and then click **Reset**.

NOTE: The **Reset** button is disabled until the code is entered correctly.

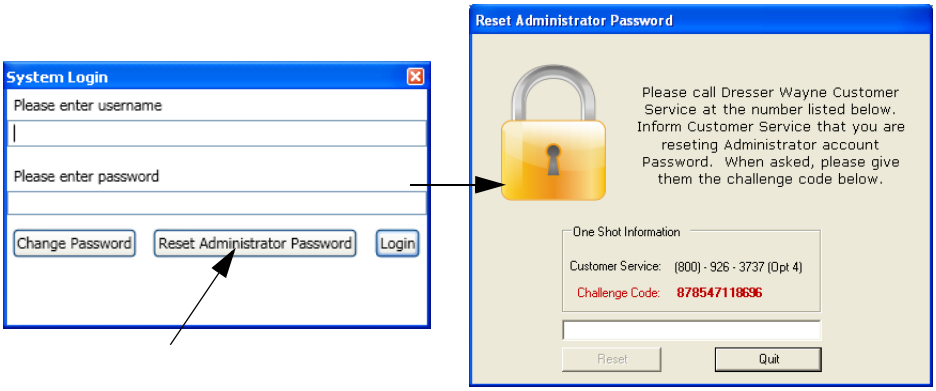


Figure 14-2 Resetting the Administrator Password

14.3 Database Max Size Alert

Upon login, the iX Fleet fuel control system checks the database. If the database has grown beyond the maximum size limit the Database Max Size Alert popup is displayed. See Figure 14-3. To reduce the size of the database, remove transactions using the Purge Transactions pane by completing the following steps:

1. Select which transactions to remove. The following are your options:
   - **Latest:** Remove the most recent transactions
   - **Old:** Remove the oldest transactions
2. Enter the number of transactions to remove.
3. Click the **Purge** button.

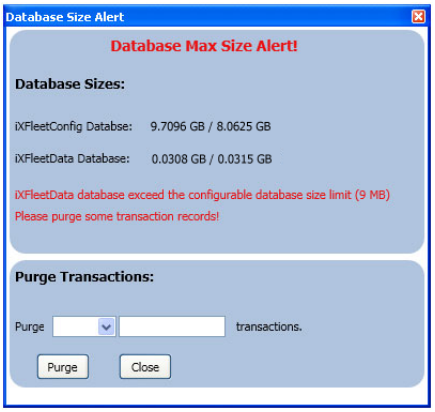


Figure 14-3 Database Size Alert

If the database size is still greater than the maximum size limit, the alert window reappears. Repeat the above steps. Otherwise the host application continues with the normal login.

14.4 Retrieving Transactions from In-Dispenser Terminals (IDTs)

It might be necessary to recover transactions from an In-Dispenser Terminal (IDT) that have not been synchronized with the iX Fleet fuel controller. There are two options for retrieving transactions: 1) from IDT logs or 2) from the iX board SD card.

IMPORTANT: If upgrading iX Fleet IDT and host application software, unsynchronized transactions MUST be retrieved and imported before proceeding with the upgrade.

14.4.1 Retrieving Transactions From In-Dispenser Terminal Logs

NOTE: iX Fleet terminal software version 1.6.6.0 and later store the last 500 transactions in the terminal log files. Software versions prior to 1.6.6.0 only store the last 200 transactions. If the number of transactions to recover are greater than the limits above, refer to Section 14.4.2 to recover transactions from the iX board SD card.

Complete these steps to retrieve transactions:

1. Perform the following steps to create a USB thumb drive to retrieve logs from the IDTs:
   a. Insert a blank USB thumb drive into your laptop.
   b. Extract the dispenser software *.zip file.
   c. Copy the **wayne.at** file to the root folder of the USB thumb drive.
   d. Disconnect the USB thumb drive from your laptop.
2. Perform the following steps to retrieve logs from the IDTs:
   a. Open the terminal bezel door and insert the log retrieval thumb drive into a USB port on the iX board.

      NOTE: The log file download will start automatically and does not require a reboot of the iX board. Logs are identified by the terminal numbers, so the same IDT retrieval thumb drive can be used to retrieve logs from multiple dispensers.
   b. Wait at least one minute for the log files to be retrieved, then remove the USB thumb drive.
   c. Repeat the above steps for each IDT suspected of having unsynchronized transactions.
3. Insert the log retrieval USB thumb drive into your laptop, and a blank USB thumb drive to which the recovered transactions will be copied.
4. Perform the following steps to retrieve the transactions from the log retrieval USB thumb drive.
   a. Navigate to the dispenser log folder and double-click the folder with “Data” in its name.
   b. Locate the **HistoricalTransactions.bin** file and copy it to the blank USB thumb drive.

      NOTE: It might be necessary to rename the file, or place it in a sub folder, if retrieving transactions for multiple IDTs.
   c. Repeat the above steps for each IDT suspected of having unsynchronized transactions.
5. Remove the USB thumb drive with the copied transaction files and take it to the iX Fleet fuel controller.
6. Proceed to Section 14.4.3 on page 120 to import the retrieved transactions into the iX Fleet controller.

14.4.2 Retrieving Transactions from iX Board SD Cards

To retrieve transactions, complete these steps:

1. Insert a blank USB thumb drive into an available USB port on your laptop.
2. Attach a SD card reader to your laptop, if needed.

3. Perform the following steps to retrieve the transactions from the SD card:
    a. Open the terminal bezel door and disconnect the power cable from the iX board.
    b. Remove the SD card from its slot.
    c. Insert the SD card into a reader attached to your laptop.
    d. Locate the **HistoricalTransactions.bin** file and copy it to the blank USB thumb drive.

       NOTE: It might be necessary to rename the file, or place it in a sub folder, if retrieving transactions for multiple IDTs.
    e. Remove the SD card from the card reader and reinstall it in the IDT.
    f. Reconnect the power cable to the iX board and close the terminal bezel door.
    g. Repeat the above steps for each IDT suspected of having unsynchronized transactions.
4. Remove the USB thumb drive with the copied transaction files and take it to the iX Fleet fuel controller.

14.4.3 Importing Recovered Transactions into the iX Fleet Fuel Controller

To import the transactions that you recovered, complete these steps:

1. Insert the USB thumb drive with the retrieved **HistoricalTransaction.bin** files into an available USB port on the iX Fleet fuel controller.
2. Open the iX Fleet host application and log on with a username that has administrator privileges.

   NOTE: Only the Administrator logon, or users with the “Modify All” security level, are able to import transactions. If necessary, log out of the host application and log on with an account that has an adequate security level.
3. The sync services must be started to import transactions. Click the **Start Service** button in the lower left corner of the window for each of the sync services.
4. Click **Data Import/Export** in the **Utilities** section of the menu bar and perform the following steps:
    a. In the **Import Transactions** section click **Open File**.
    b. Navigate to the location of the **HistoricalTransactions.bin** file(s) and select a file to import.
    c. Click **Import Transactions** in the toolbar.
    d. Click **Transactions** in the Transactions section of the menu bar. Verify that the missing transactions have been imported.

       NOTE: If Transactions was already open, click **Refresh** to update the displayed information.
    e. Repeat the above steps for each file to be imported.
5. When all transactions have been imported, remove the USB thumb drive from the iX Fleet controller.

15 UPGRADING IX FLEET FUEL CONTROLLER SOFTWARE

This section details the steps necessary to successfully upgrade the iX Fleet™ Fuel Control System software, which includes software upgrades of the Host application and the In-Dispenser Terminal (IDT) software. The software versions of the Host application and IDT software must match for the iX Fleet Fuel Control System to operate.

15.1 Required Tools and Software

Refer to Table 15-1 for the required tools and software to perform software upgrades for the iX Fleet Host application and the iX Fleet IDTs.

IMPORTANT: Have copies of the currently installed IDT software and Host application installer on hand in case the upgrade must be reverted, or if the iX Fleet fuel controller hardware will be replaced during the upgrade. Software versions 1.6.5.0 and later are available to download from Wayne Portal (**https://portal.wayne.com/**).

Table 15-1 Required Tools and Software

Quantity	Description
1	Laptop running Windows XP or later with USB 2.0 support
4	4GB USB thumb drive (PNY Brand recommended)
1	iX Fleet Host application software installer v1.7.74.0
1	iX Fleet In-Dispenser Terminal (IDT) software v1.7.74.0
1	Hydraulic/electronic door key (PN 001-202022-)
1	Bezel lock key, if applicable
1	Infrared remote control (PN 886446-001)

15.2 Create USB Thumb Drives

The following USB thumb drives are required to successfully upgrade the iX Fleet Fuel Control System software. These USB thumb drives can be prepared before the day of the software upgrade.

- **Host application database backup:** This USB thumb drive will be used to save a backup of the existing iX Fleet fuel controller database. No special preparation is required, but it is recommended to use a blank USB thumb drive.
- **Host application software upgrade:** This USB thumb drive will be used to copy the new Host application installer to the iX Fleet fuel controller. To prepare the USB thumb drive, extract the host application *.zip file and copy its contents to a blank USB thumb drive.

NOTE: The IDT software and log retrieval USB thumb drives can be used for all terminals at the site. However, if the site has many dispensers, create several copies of the USB thumb drives below so you can service multiple terminals at the same time.

- **IDT software:** This USB thumb drive will be used to upgrade the IDT software. To prepare the USB thumb drive, extract the dispenser software *.zip file and copy its contents to a blank USB thumb drive.
- **IDT log retrieval:** This USB thumb drive will be used to retrieve logs from the IDTs, which might be required to import unsynchronized transactions into the iX Fleet Host application. To prepare this USB thumb drive, extract the dispenser software *.zip file and copy the **wayne.at** file to the root folder of the USB thumb drive.

15.3 Prepare the Site

Perform the following steps to prepare the site for the software upgrade, and capture necessary information from the installed iX Fleet Fuel Control System:

1. Stop all fueling at the site. No fueling should be performed while the upgrade is in progress.
2. In the iX Fleet Host application, look at the status bar in the lower-left corner of the window and verify that the sync service button(s) show **Stop Service**, which indicates that the sync service(s) are started. Click any **Start Service** button that is shown.
3. Click **On-Demand Polling** in the Polling section of the menu bar and perform the following steps:
   a. Check the boxes to select all tasks and sites.
   b. For software version 1.6.6.0 and later also check the boxes to select all sync services, and click the **Select Fueling Position** pull-down for each site and select **0** (zero) to select all positions.
   c. Click the **Sync Data** (software version 1.6.5.0 and earlier) or 

(software version 1.6.6.0 and later) button to start polling all terminals.
4. Click **Communication Log** in the Utilities section of the menu bar and perform the following steps:
   a. Click **Refresh** to update the communications logs.
   b. In the **From** area select today's date and enter the time that fueling was stopped.
   c. In the **To** area and select today's date and enter the current time.
   d. For software version 1.6.6.0 and later, verify that **All** is selected in the pull-down to the left of the **From** area.
   e. Click the **Click to find number of dispensers synced** button. The count of dispensers that have synced since fueling was stopped is displayed to the right of the button.
   f. Repeat the above steps until the count of dispensers equals the number of dispensers at the site.

NOTE: If you are unable to get all terminals synced, refer to Section 14.1 on page 117 to troubleshoot communications problems. If needed, refer to Section 14.4 on page 119 to retrieve and import unsynchronized transactions from the IDTs.

5. Click **Transactions** in the Transactions section of the menu bar. Verify the date and time of the latest transactions to confirm that all transactions have been synchronized.
6. Click the **Stop Service** buttons in the status bar to stop all of the sync services.
7. Click **In-Dispenser Terminal Status** in the Utilities section of the menu bar. Record the **IP Address** for each terminal. These addresses will need to be entered at the terminals after upgrading the IDT software.
8. Perform the following steps to retrieve the iX Fleet controller network configuration. This information will need to be entered at the terminals after upgrading the IDT software.
   a. Open the Windows network settings from Control Panel. Refer to the following navigation instructions appropriate to the operating system installed.
      - **Windows POSReady 2009:** Click the **Start** button and select **Control Panel**, then double-click the **Network Connections** icon.
      - **Windows 8.1:** Click **Start** and type "control", then click the **Control Panel** icon. Click the **Network and Sharing Center** icon, then click **Change adapter settings** in the left pane.

        NOTE: If the Windows 8.1 Control Panel is displayed in Category view, under **Network and Internet** click **View network status and tasks** to display the Network and Sharing Center.
   b. Right-click the network adapter icon and select **Properties**.

      NOTE: The network adapter for iX Fleet fuel controller V1 is **Local Area Connection 2**, while the adapter for iX Fleet fuel controller V2 is **LAN1**. If in doubt, choose the network adapter that shows "Connected" in the status column.

c. Scroll down and click to select **Internet Protocol (TCP/IP)** then click **Properties**.

d. Record the **IP address**, **Subnet mask**, and **Default gateway**.

e. Click **Cancel** on each window to close the network adapter properties, then close the Network Connections window.

15.4 Retrieve Terminal Logs

Perform the following steps at each iX Fleet dispenser.

1. If you were not able to retrieve the dispenser IP Address from the In-Dispenser Terminal Status screen, perform the following steps.

   a. Simultaneously press the second softkeys from the top on the left and right sides (SK2 and SK6; see Figure 13-1 on page 94) to enter the Diagnostic menu.

   b. Select **System Info**, then select **Next** until the network information is displayed.

   c. Record the IP address, then select **Cancel** followed by **Done** to exit Diagnostics.

2. Open the terminal bezel door and insert the IDT log retrieval thumb drive into a USB port on the iX board.

   NOTE: The log file download will start automatically and does not require a reboot of the iX board. Logs are identified by the terminal numbers, therefore the same IDT retrieval thumb drive can be used to retrieve logs from multiple dispensers.

3. Wait at least one minute for the log files to be retrieved, then remove the USB thumb drive.

15.5 Upgrade the IDT Software

Perform the following steps at each iX Fleet dispenser.

1. Open the terminal bezel door and disconnect the power cable from the iX board.
2. Insert the IDT software thumb drive into a USB port.
3. Reconnect the power cable to the iX board.
4. The software upgrade will automatically begin upon startup.

IMPORTANT:DO NOT remove the USB thumb drive until the message “Please remove USB and reboot system” is displayed,

---

5. When the software upgrade is complete, remove the IDT software thumb drive and reboot the iX board. This process can be done by disconnecting and reconnecting the power cable, or by pressing the reset button (see Figure 13-2 on page 95).
6. The terminal will restart to the Configuration screen. Select **Setup Wizard** (SK4) to configure the terminal. Refer to Section 13.4 on page 99 for details regarding wizard selections.

   NOTE: The following specific settings are recommended while completing the Setup Wizard:

   - **Select the SoftKey configuration being used:** Select **Non-Helix**.
   - **Set Controller IP > Sync Service #:** If there are fewer than five terminals, select Sync Service # 1 for all terminals. Otherwise, to improve performance evenly distribute the terminals between the four sync services. Up to 70 terminals can be assigned to each sync service.
   - **Is there a Reader?:** If the terminal is equipped with a card reader, press SK1 to select the reader type *before* selecting **Yes**.
   - **Is there a Modem?:** *Always* select **No**. This setting is specific to an optional dial-up modem that is not supported, and does NOT refer to wireless modems or other wireless equipment.

7. When the Setup Wizard is finished select **Done** to return to the Configuration screen, then select **Done** again to exit Configuration. The screen will show “No Database Found” until the terminal has reconnected to the iX Fleet fuel controller.

NOTE: An Update folder will be created on the IDT software thumb drive for each terminal upgraded. These folders should be periodically deleted to ensure there is sufficient space for completing the upgrades.

15.6 Backup the Host Application Database

Perform the following steps on the iX Fleet fuel controller to back up the database. This backup will be required to restore the site if the upgrade must be aborted, or if replacing the existing iX Fleet controller.

1. Insert the database backup thumb drive into a USB port on the iX Fleet fuel controller.
2. In the iX Fleet host application, select **About** from the Utilities section of the menu bar. Make a note of the current iX Fleet software version.
3. Select **Database Backup/Restore** from the Utilities section of the menu bar.

   NOTE: Only the Administrator logon, or users with the “Modify All” security level, are able to backup or restore databases. If necessary, log out of the host application and log on with an account that has an adequate security level.
4. Perform the following step to back up the system configuration:
   a. Click the **Database** pull-down in the Database Backup pane and select **iXFleetConfig**.
   b. Click **Open Folder** and navigate to the database backup thumb drive.
   c. Click the **File Name** box and enter **iXFleetConfig-*version***, where *version* is the currently installed iX Fleet software version.
   d. Click **Backup Database** to save the configuration backup file.
   e. Click **OK** in the “Database backup successful” popup.
5. Perform the following step to back up the system data:
   a. Click the **Database** pull-down in the Database Backup pane and select **iXFleetData**.
   b. Click **Open Folder** and navigate to the database backup thumb drive.
   c. Click the **File Name** box and enter **iXFleetData-*version***, where *version* is the currently installed iX Fleet software version.
   d. Click **Backup Database** to save the data backup file.
   e. Click **OK** in the “Database backup successful” popup.
6. Disconnect the database backup thumb drive from the iX Fleet fuel controller.
7. Disconnect the Ethernet cable from the iX Fleet fuel controller. Leave the Ethernet cable disconnected until the iX Fleet host application upgrade is complete.

15.7 Replacing the iX Fleet Fuel Controller Hardware

If the iX Fleet host application will be upgraded on the existing hardware, skip to Section 15.8 on page 126. Otherwise, perform the steps in this section to replace the existing iX Fleet fuel controller hardware.

IMPORTANT: Before you begin you must have a copy of the installer for the site's currently installed iX Fleet host application. The database must be restored onto the same software version that created it before the software is upgraded.

15.7.1 Install the New iX Fleet Fuel Controller Hardware

To install the hardware, complete these steps:

1. Press and release the power button on the existing iX Fleet fuel controller to power it off.
2. Disconnect and remove the existing iX Fleet fuel controller hardware.
3. Install the new iX Fleet fuel controller. Refer to Section 2 on page 12 for hardware install information.
4. Press the power button to power on the iX Fleet fuel controller and log on to Windows.

15.7.2 Uninstall the New iX Fleet Host Application

To uninstall the application, complete these steps:

1. Click **Start** then type **control**. Click the **Control Panel** icon, then click **Uninstall a program**.
2. Scroll through the list of programs and select **iXFleet** then click **Uninstall** in the toolbar.
3. Click **Yes** to confirm uninstalling the program. When the software has been removed, click **Yes** to confirm restarting the iX Fleet fuel controller.
4. After the system restarts log on to Windows.

15.7.3 Install the Original iX Fleet Host Application

To install the application, complete these steps:

1. Insert a USB thumb drive with a copy of the iX Fleet host application installer that matches the version of the backed up database.
2. Navigate to the iX Fleet folder on the USB thumb drive, then right-click the **setup.exe** file and select **Run as administrator**. If a User Account Control window is displayed click **Yes**.
3. The Setup Wizard opens. Click **Next** to continue.
4. Select Installation Folder is displayed. Leave the settings at defaults and click **Next** to continue.
5. A progress window is displayed as the software is prepared. This step can require up to five minutes.
6. Confirm "Installation" is displayed. Click **Next** to continue.
7. Installation Complete is displayed. Click **Close** and a popup is displayed advising that the system must be restarted. Click **Yes** to restart the iX Fleet fuel controller.
8. After the system has restarted, sign back on to Windows.
9. Start the iX Fleet Host application.
10. You are prompted to register the software. You must call DFS Customer Service and provide the Challenge Code that appears on-screen to register the software and complete the installation. Enter the code provided by the customer service representative and then click **Continue**.

15.7.4 Restore the Host Application Database

To restore the database, complete these steps:

1. Insert the database backup thumb drive into a USB port on the iX Fleet fuel controller.

2. The sync services must be started to restore the database. Click any **Start Service** button in the lower left corner of the window for each of the sync services.
3. Select **Database Backup/Restore** from the **Utilities** section of the menu bar.

   NOTE: Only the Administrator logon, or users with the “Modify All” security level, are able to back up or restore databases. If necessary, log out of the host application and log on with an account that has an adequate security level.
4. Perform the following steps to restore the system configuration:
   a. Click the **Database** pull-down in the Database Restore pane and select **iXFleetConfig**.
   b. Click **Select File** and navigate to the database backup thumb drive.
   c. Click the **iXFleetConfig-*version*.bak** file, where *version* is the iX Fleet software version that created the backup file.
   d. Click **Restore Database** to restore the configuration from the backup file.
   e. Click **OK** in the “Database restore successful” popup.
5. Perform the following steps to back up the system data:
   a. Click the **Database** pull-down in the Database Restore pane and select **iXFleetData**.
   b. Click **Select File** and navigate to the database backup thumb drive.
   c. Click the **iXFleetData-*version*.bak** file, where *version* is the iX Fleet software version that created the backup file.
   d. Click **Restore Database** to restore the data from the backup file.
   e. Click **OK** on the “Database restore successful” popup.
6. Disconnect the database backup thumb drive from the iX Fleet fuel controller, then continue to the next section to upgrade the iX Fleet host application.

15.8 Upgrade the Host Application

Perform the following steps to upgrade the iX Fleet host application:

1. Close the iX Fleet host application.
2. Insert the host application software upgrade thumb drive into a USB port on the iX Fleet fuel controller.
3. Navigate to the root folder of the USB thumb drive and copy the **AutoBackupScripts** and **RecoverDatabaseScripts** folders to the **C:** folder for later use.
4. Run the installer by following the instructions appropriate to the operating system installed.
   - **Windows POSReady 2009:** Double-click the **InstallHost.bat** file.
   - **Windows 8.1:** Right-click the **InstallHost.bat** file and select **Run as administrator**. If a User Account Control window is displayed click **Yes**.
5. A command prompt window is displayed as the installer attempts to stop any running iX Fleet services. DO NOT close this command prompt window.
6. The Setup Wizard appears. Click **Next** to continue.
7. Select Installation Folder is displayed. Leave the settings at defaults and click **Next** to continue.
8. A progress window is displayed as the software is prepared. This step can require up to 5 minutes.
9. Confirm Installation is displayed. Click **Next** to continue.
10. Installation Complete is displayed. Click **Close** and a popup is displayed advising that the system must be restarted. Click **Yes** to restart the iX Fleet fuel controller.
11. After the system has restarted, sign back on to Windows.
12. Start the iX Fleet Host application.

13. You are prompted to register the software. You must call DFS Customer Service and provide the Challenge Code that appears on-screen to register the software and complete the installation. Enter the code provided by the customer service representative and then click **Continue**.
14. Reconnect the Ethernet cable to the iX Fleet fuel controller.
15. Click the **Start Service** in the lower left corner of the window for each sync service being used.
16. Click **In-Dispenser Terminal Status** in the Utilities section of the menu bar and wait until you see a green pump icon for each of the terminal(s) to appear.
17. Click **On-Demand Polling** in the **Polling** section of the menu bar and perform the following steps:
    a. Check the boxes to select all tasks and sites.
    b. For software version 1.6.6.0 and later also check the boxes to select all sync services, and click the **Select Fueling Position** pull-down for each site and select **0** (zero) to select all positions.
    c. Click the **Sync Data** (software version 1.6.5.0 and earlier) or 

(software version 1.6.6.0 and later) button to start polling all terminals.
18. Click **Communication Log** in the Utilities section of the menu bar and perform the following steps.
    a. Click **Refresh** to update the communications logs.
    b. In the **From** area select today's date and enter the time that fueling was stopped.
    c. In the **To** area and select today's date and enter the current time.
    d. For software version 1.6.6.0 and later, verify that **All** is selected in the pull-down to the left of the **From** area.
    e. Click the **Click to find number of dispensers synced** button. The count of dispensers that have synced since fueling was stopped is displayed to the right of the button.
    f. Repeat the above steps until the count of dispensers equals the number of dispensers at the site.
19. The message on the dispenser terminal(s) should have changed from "No Database Found" to an idle message such as "Scan Tag".
20. Run some test transactions, go back to the controller, and sync. Click **Transactions** in the menu bar and verify that the new transactions were synchronized.
21. Create a backup of the host application configuration and data on the new software version. See Section 15.6 on page 124 for instructions.
22. See Section 16.5 on page 132 to set up an automatic backup schedule to automatically back up the databases rather than relying on the user to remember to do backups manually.

16 APPENDIX

This appendix covers installation and configuration tasks along with worksheets to help you configure your system.

16.1 Installing the iX Fleet Host Application

Perform the following steps to install the iX Fleet Host Application if the operating system has been reinstalled, or if the iX Fleet fuel controller software has been removed to resolve a problem.

NOTE: If you received the software on a CD, you will need to copy the contents of the disc onto a USB thumb drive. The contents of the USB thumb drive should appear as shown in Figure 16-1.

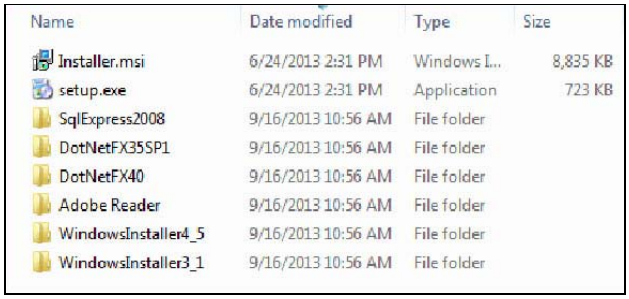


Figure 16-1 iX Fleet Fuel Controller Software on USB Thumbdrive

1. Insert the installation media into the iX Fleet fuel controller.
2. Locate and double-click **setup.exe**.
3. The installer starts and checks for required software, and installs it if necessary. The iX Fleet fuel control system requires the following Microsoft software, which is included on the installation media:
   - Windows Installer 4.5
   - .NET Framework 4
   - SQL Server 2008 Express

   If all required software is already installed the Setup Wizard opens. Skip to step 6.
4. If one or more of the required components are not installed, a window similar to the following is displayed for each component that needs to be installed. Click the **Accept** button for the End User Licence Agreement (EULA) for each component to continue with the installation.

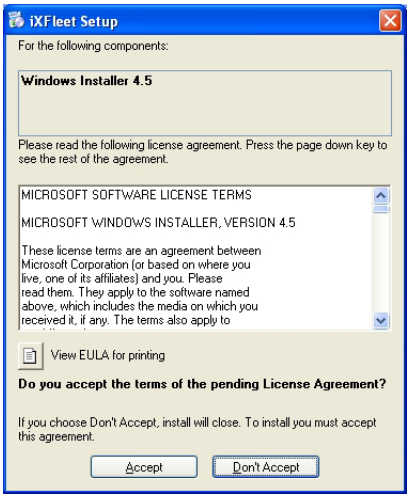


Figure 16-2 Windows Installer 4.5 EULA

5. After accepting all of the EULAs the component installations begin. Several minutes can be required to install each component. If a restart is required to complete the installation of a component, a window similar to the following is displayed. Click **Yes** to restart the computer. The installation automatically continues with the next component after restart.

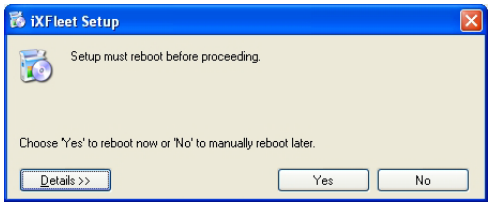


Figure 16-3 Restart Required

6. When all of the required components are installed, the Setup Wizard opens. Click **Next** to install the iX Fleet fuel control system host application.
7. The Select Installation Folder window is displayed. Select the desired installation options and then click **Next** to continue:

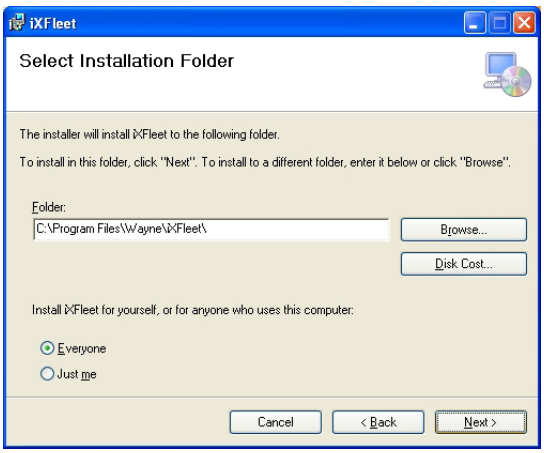


Figure 16-4 Select Installation Folder Window

- **Installation Folder:** Specify the directory where the host application will be installed. It is recommended to use the default directory.
- **Disk Cost:** Click to display a list of drives that the software can be installed on. The list includes the drive capacity, available space, and the space required to install the iX Fleet fuel control system.
- **Security:** Select **Everyone** to allow any user to run the host application, or select **Just me** to allow only the current user to run the host application.

8. The Confirm Installation window is displayed. If you are unsure about the options selected, click **Back** to return to the previous window or click **Cancel** to abort the installation. Otherwise, click **Next** to begin the installation. A progress bar is displayed while the software is installed.
9. The Installation Complete window is displayed. Click **Close** to close the window.
10. Refer to Section 5 on page 25 to reconfigure the iX Fleet fuel control system, or refer to Section 11.2 on page 85 to restore the configuration from backup.

TIP: *If you experience problems establishing communication with fueling points, refer to Section 14.1 on page 117 for troubleshooting procedures.*

16.2 Configuring the Host Application to Run Under a Network Account

By default the iX Fleet fuel control system maintains its own user accounts, but it may be desirable for the software to run using the Windows network account. To configure the host application to use the Windows network accounts, perform the following steps:

1. Log in to the computer with the Administrator account.
2. Open SQL Server Management studio.
3. Click the **New Query** button.
4. Run the following commands, where *$username* is the Windows network account name that will need to run the host application:

   CREATE LOGIN [*$username*] FROM WINDOWS WITH DEFAULT_DATABASE=[master], DEFAULT_LANGUAGE=[us_english]

   EXEC sp_addsrvrolemember '*$username*', 'sysadmin'
5. Press <F5> on the keyboard to verify that the query has run successfully.
6. Log out and then log back in with the desired Windows account. You should now be able to access the host application.

16.3 Configuring Automatic Restart Time for Sync Service

When the iX Fleet fuel controller Host Application is installed, by default the Sync Service is configured to automatically restart every day at 12:00 AM. If the automatic restart must be changed to a different time to prevent interruption of site operations perform the following steps:

1. Click **Start** and then click **Run**.
2. In the **Open** box type **cmd** then click **OK**.
3. Navigate to the iX Fleet installation directory.
   For example, type **cd "C:\Program Files\Wayne\iXFleet"** and then press <Enter>.
4. Type the command below, where *HH:MM:SS* is the desired automatic restart time using the 24-hour clock (i.e. 10:00 AM is 10:00:00, while 10:00 PM is 22:00:00).

   iXFleetRestartSync_CreateTaskSchedular.bat DAILY *HH:MM:SS*
5. Press <Enter> to execute the command. If successful the following message will be displayed:

   SUCCESS: The scheduled task "iXFleetRestartSync" has successfully been created.

16.4 Disabling Unused Sync Services

To eliminate repeated sync service error messages on the dashboard, unused sync services should be disabled. Sync services that are manually stopped using the Stop Service buttons will automatically restart at the configured restart time. However, a disabled sync service will not automatically restart.

Perform the following steps to disable an unused sync service.

1. In the lower-left corner of the iX Fleet host application window click the **Stop Service** button for each of the sync services that you are not using.
2. Press <Ctrl> + <Alt> + <Delete> on the keyboard then click **Task Manager**.
3. Click **More details** in the lower-left corner to view the the window tabs, then click the **Services** tab follwoed by the **Open Services** link at the bottom of Task Manager window.
4. Scroll through the list of services and locate the **SyncAgentService** (i.e. *SyncAgentService2*) that you want to stop. Right-click the service and select **Properties**.
5. Click the **Stop** button, if available, to stop the service and wait for it to stop.
6. Click the **Startup Type** pull-down and select **Disabled**, then click **OK**.
7. Repeat from step 4 to disable additional sync services.

16.5 Configuring Automatic Database Backups

To configure your system so that database backups are run automatically, complete these steps:

1. Click **Start** and then click **Run**. In the **Open** box type **cmd** then click **OK**.
2. Navigate to the AutoBackupScripts folder in the iX Fleet installation directory. For example, type **cd "C:\Program Files\Wayne\iXFleet\AutoBackupScripts"** and then press <Enter>.

   NOTE: If the AutoBackupScripts folder is not present it must be copied to the system from the iX Fleet fuel controller software installation media.
3. Type the command **iXFleetDBBackup_DeleteTaskSchedular.bat** to clear any previously scheduled backup tasks. There can only be one backup task scheduled on the system.

   The following messages are expected and their meaning are listed below:

   - **ERROR: The specified task name "iXFleetDatabasesBackup" does not exist in the system.** There were no previously scheduled backup tasks.
   - **SUCCESS: The scheduled task "iXFleetDatabasesBackup" was successfully deleted.** The previously scheduled backup task was successfully deleted.
4. Type the command below to schedule the automatic backup:

   iXFleetDBBackup_CreateTaskSchedular.bat *frequency* "*location*" *HH:MM:SS* #*_of_backups*

   The following parameters are available to configure the automatic backup schedule:

   - ***frequency:*** Specifies how often the backup will be performed. Valid options are MINUTE, HOURLY, DAILY, WEEKLY, MONTHLY, and ONCE.
   - ***location:*** Specifies the folder path where backups will be written. It is recommended to enclose the file path in quotes to avoid access problems if the folder path includes spaces.
   - ***HH:MM:SS:*** The desired automatic backup time using the 24-hour clock (i.e. 10:00 AM is 10:00:00, while 10:00 PM is 22:00:00).
   - ***#_of_backups:*** The maximum number of backups to keep. After the maximum number of backups has been reached, the oldest backup will be deleted as new backups are created.

   EXAMPLE: Type the following command to create daily backups in the **C:\Backups** folder. Backups will be created at 2:00 AM, and five backups will be kept.

   iXFleetDBBackup_CreateTaskSchedular.bat DAILY "C:\Backups" 02:00:00 5
5. Press <Enter> to execute the command. If successful the following message will be displayed:

   SUCCESS: The scheduled task "iXFleetDatabasesBackup" has successfully been created.

16.6 Verifying the IP Address of the iX Fleet Fuel Controller

Perform the steps in this section to verify the IP address of the iX Fleet fuel controller:

1. Open the Windows network settings from Control Panel. Use the navigation instructions appropriate to the operating system installed:
   - **Windows POSReady 2009:** Click the **Start** button and select **Control Panel**, then double-click the **Network Connections** icon.
   - **Windows 8.1:** Click **Start** and type **control**, then click the **Control Panel** icon. Click the **Network and Sharing Center** icon, then click **Change adapter settings** in the left pane.

     NOTE: If the Windows 8.1 Control Panel is displayed in Category view, under **Network and Internet** click **View network status and tasks** to display the Network and Sharing Center.
2. Right-click the network adapter icon and select **Properties**.

   NOTE: The network adapter for iX Fleet fuel controller V1 is **Local Area Connection 2**, while the adapter for iX Fleet fuel controller V2 is **LAN1**. If in doubt, select the network adapter that shows "Connected" in the status column.

3. Scroll down and click to select **Internet Protocol (TCP/IP)** then click **Properties**.
4. Verify that the **Use the following IP address** radio button is selected and then verify that the **IP address**, **Subnet mask**, and **Default gateway** are set appropriately for the site network.

   NOTE: The default configuration values for the iX Fleet fuel controller are as follows:

   - **IP address:** 192.168.1.51
   - **Subnet mask:** 255.255.255.0
   - **Default gateway:** 192.168.1.51
5. Click **OK** to save changes and then click **OK** to close the network adapter properties window.
6. Close the Network Connections window.

16.7 Placing the Dispenser into Standalone Operation

The sections on the following pages provide instructions for changing the dispenser operation mode between Standalone Mode and Serial Mode. To perform these procedures you must have the infrared remote control (IRC) for the dispensers. To use the IRC, hold the remote approximately one foot away from the dispenser head and point at the LCDs while pushing the remote buttons.

Standalone operation requires a Local Authorization jumper to be plugged into the back of the display board for each hose of the dispenser. See Figure . This provides more security than just allowing the operating mode to be changed via the infrared remote control (IRC), and is factory-installed on all models that do not have the Pulse Output Interface option. If a dispenser is connected to a fuel control system using the Wayne serial protocol, the jumper should also be removed as an extra security measure.

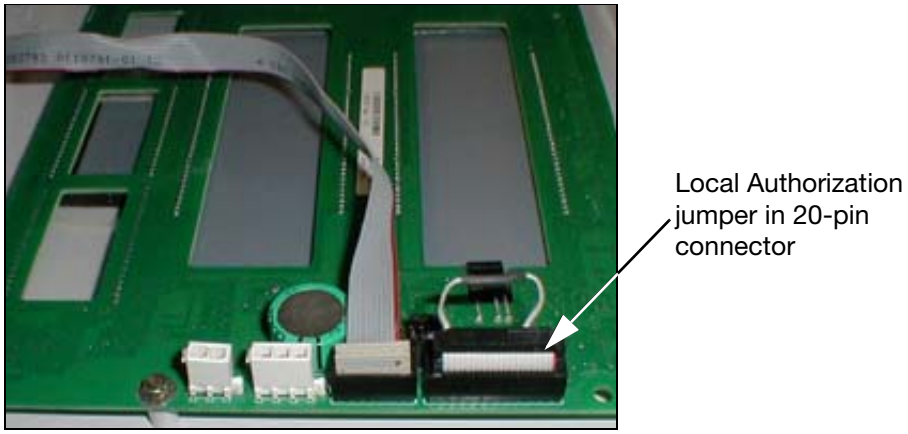


Figure F-1 Local Authorization Jumper

16.7.1 iX Fleet Dispenser Without Pulse Output Option

NOTE: The following table shows the setting for units without price displays. Units with price displays will look slightly different as they typically utilize all three displays.

Step 1 Turn off the power to the dispenser(s) at the breaker panel.

Step 2 You will need one Local Authorization jumper for each hose you desire to operate in standalone mode. The jumpers should have been given to you along with this manual and the infrared remote control.

Step 3 Determine the display panel(s) that need to be opened. The Local Authorization jumper needs to be plugged into the back of the display board for each hose that you desire to operate in standalone mode.
Island-oriented nozzle models – single or twin: For island-oriented nozzle models with matching displays on each side of the dispenser, the jumper only needs to be in one of the two matching displays for each hose. Open the display panel that is opposite of the main AC junction box (AC j-box has ¾" conduit and pulse output j-box has ½" conduit).
Lane-oriented nozzle models – single or twin: Lane-oriented models only have one display board per hose, so you will need to open the display panel that has the displays (singles – one side, twins – both sides).

Step 4 To open the display panel, support the weight of the display panel with your free hand, and unscrew the two screws on the front bottom edge of the panel. When you have the panel loose, slide it down from underneath the lip of the top panel. Support the panel with your right hand, so the back of the panel is facing up.

Step 5 Follow the instructions for your model type:
Island-oriented nozzle models – single or twin: There should be an empty 20-pin connector on the side of the display board. See Figure F-1. Carefully push the jumper into the connector (match the tab on the jumper to the notch in the connector). Repeat for both display boards on the panel if it is a twin unit.
Lane-oriented nozzle models – single or twin: There should be a cable in the 20-pin connector on the side of the display board. See Figure F-1. Carefully push the jumper into the connector (match the tab on the jumper to the notch in the connector). Repeat for both sides of the dispenser if it is a twin unit.

Step 6 Slide the display panel back underneath the lip of the top panel and re-install the two screws.

Step 7 Turn on the power to the dispenser at the breaker panel.

Step 8 Follow the steps in the following table to change the dispenser configuration to standalone operation.

Enter Configuration Mode			
Step	**IRC Command**	**Volume Display**	**Status Display**
1 Service engineer sign on	Press <ENTER>	PASS 1	[blank]
2 Enter service engineer password	Type your service engineer password & Press <ENTER>	PASS 2	[blank]
3 Enter service engineer password	Type your service engineer password & Press <ENTER>	[alternating software version & date]	F - -
Change From Serial Mode to Standalone Mode			
4 Go to Filling Mode configuration function	Type <01> & Press <ENTER>	- - - - - -	F 01
5 Go to Filling Mode parameter	Pres <ENTER> again	1 (serial mode)	01.00
6 Clear display	Press <#>	[blank]	01.00
7 Enter standalone value	Type <2> for standalone mode & then press <ENTER>	2	01.00
8 Return to function level	Press <ENTER> again	- - - - -	F 01
Exit Configuration Mode			
9 Go to exit function	Type <0> and then Press <ENTER>	- - - - - -	F 00
10 Go to exit sub-function	Press <ENTER> again	1	0.00
11 Clear display	Press"#"	[blank]	0.00
12 Exit and save changes	Type <3> and then press <ENTER>	3	0.00
13 Exit configuration	Press <ENTER> again	[alternating CHAnGE StorEd]	0.00

NOTE: When you wish to return to original mode, you can follow the above steps to remove the local authorization jumper. In the configuration, change subfunction 01.00 back to "1".

16.7.2 iX Fleet Dispenser With Pulse Output Option

NOTE: The following table shows the setting for units without price displays. Units with price displays will look slightly different as they typically utilize all three displays.

Step 1 Turn off the power to the dispenser(s) at the breaker panel.

Step 2 You will need one Local Authorization jumper for each hose you desire to operate in standalone mode. The jumpers should have been given to you along with this manual and the infrared remote control.

Step 3 Determine the display panel(s) that need to be opened. The Local Authorization jumper needs to be plugged into the back of the display board for each hose that you desire to operate in standalone mode.
Island-oriented nozzle models – single or twin: For island-oriented nozzle models with matching displays on each side of the dispenser, the jumper only needs to be in one of the two matching displays for each hose. Open the display panel that is opposite of the main AC junction box (AC j-box has ¾" conduit and pulse output j-box has ½" conduit).
Lane-oriented nozzle models – single or twin: Lane-oriented models only have one display board per hose, so you will need to open the display panel that has the displays (singles – one side, twins – both sides).

Step 4 To open the display panel, support the weight of the display panel with your free hand, and unscrew the two screws on the front bottom edge of the panel. When you have the panel loose, slide it down from underneath the lip of the top panel. Support the panel with your right hand, so the back of the panel is facing up.

Step 5 Follow the instructions for your model type:
Island-oriented nozzle models – single or twin: There should be an empty 20-pin connector on the side of the display board. If there is a cable in this 20-pin connector, re-install the display panel and remove the opposite display panel. Carefully push the jumper into the connector (match the tab on the jumper to the notch in the connector). Repeat for both display boards on the panel if it is a twin unit.
Lane-oriented nozzle models – single or twin: There should be a cable in the 20-pin connector on the side of the display board. This cable is used for the pulse output interface. See Figure F-2. You will need to temporarily unplug this cable from the connector and substitute the jumper. Carefully push the jumper into the connector (match the tab on the jumper to the notch in the connector). Repeat for both sides of the dispenser if it is a twin unit.

Figure F-2 Pulse Output Interface Cable

In lane-oriented nozzle models that only have one display per hose, a cable for the pulse output interface will need to be temporarily unplugged from the 20-pin connector in order to install the local authorization jumper.

Step 6 Slide the display panel back underneath the lip of the top panel and re-install the two screws.

Step 7 Turn on the power to the dispenser at the breaker panel.

Step 8 Follow the steps in the following table to change the dispenser configuration to standalone operation.

Enter Configuration Mode			
Step	**IRC Command**	**Volume Display**	**Status Display**
1 Service engineer sign on	Press <ENTER>	PASS 1	[blank]
2 Enter service engineer password	Type your service engineer password & Press <ENTER>	PASS 2	[blank]
3 Enter service engineer password	Type your service engineer password & Press <ENTER>	[alternating software version & date]	F - -
Change Authorize Function to Standalone – Side A Nozzle #1 (A1)			
4 Go to Side A dispenser configuration function	Type <27> & Press <ENTER>	- - - - - -	F 27
5 Go to Side A local authorize sub-function	Press <ENTER> again	0 ("0" = set for pulse output interface authorization)	27.00
6 Clear display	Press <#>	[blank]	27.00
7 Enter standalone value	Type <8> for standalone mode & then press <ENTER>	8	27.00
8 Return to function level	Press <ENTER> again	- - - - -	F 27
Change Authorize Function to Standalone – Side B Nozzle #1 (B1) (if you only have one nozzle, skip to Step #14)			
9 Go to Side B dispenser configuration function	Press <NEXT>	- - - - - -	F 28
10 Go to Side B local authorize sub-function	Press <ENTER>	0 ("0" = set for pulse output interface authorization)	28.00
11 Clear display	Press <#>	[blank]	28.00
12 Enter standalone value	Type <8> for standalone mode & then press <ENTER>	8	28.00
13 Return to function level	Press <ENTER> again	- - - - -	F 28
Change From Serial Mode to Standalone Mode – iXFleet Only (if you do not have iXFleet, skip to Step #19)			
14 Go to Filling Mode configuration function	Type <01> & Press <ENTER>	- - - - - -	F 01
15 Go to Filling Mode parameter	Press <ENTER> again	1 (serial mode)	01.00
16 Clear display	Press <#>	[blank]	01.00
17 Enter standalone value	Type <2> for standalone mode & then press <ENTER>	2	01.00
18 Return to function level	Press <ENTER> again	- - - - -	F 01
Exit Configuration Mode			
19 Go to exit function	Type <0> and then Press <ENTER>	- - - - - -	F 00
20 Go to exit sub-function	Press <ENTER> again	1	0.00
21 Clear display	Press"#"	[blank]	0.00
22 Exit and save changes	Type <3> and then press <ENTER>	3	0.00
23 Exit configuration	Press <ENTER> again	[alternating CHAnGE StorEd]	0.00

NOTE: When you wish to return to original mode, you can follow the above steps to remove the local authorization jumper. In the configuration, change subfunction 01.00 back to "1" instead of "2". Subfunctions 27.00 and 28.00 can remain set to "8" as these subfunctions are not used with the iX Fleet configuration. With future changes into standalone mode, subfunctions 27.00 and 28.00 can be ignored.

16.8 Exported Transaction Data Example

Figure 16-5 shows an example of the resulting XML file produced when transaction data is exported using the Export Data function. This example contains a single transaction and has been formatted to improve readability. An actual exported file will not contain embedded line breaks or indentation, and can include multiple transactions between the <SyncData...> and </SyncData> tags.

```
<?xml version="1.0" encoding="utf-8" ?>
<IXFleet>
  <SyncConfig xmlns="http://tempuri.org/SyncConfig.xsd" />
  <SyncData xmlns="http://tempuri.org/SyncData.xsd">
    <Transaction>
      <TransactionGUID>4b00a3d9-95fc-4a4b-9f8b-d9fe93ddc5f4</TransactionGUID>
      <TransactionID>184</TransactionID>
      <LocationID>2</LocationID>
      <LocationName>iX Fleet Fueling Services</LocationName>
      <SiteID>1</SiteID>
      <FuelingPointID>1</FuelingPointID>
      <FuelingPointNumber>1</FuelingPointNumber>
      <TankID>1</TankID>
      <TankNumber>1</TankNumber>
      <Discount>0.00</Discount>
      <EmployeeID>15</EmployeeID>
      <EmployeeFirstName>John</EmployeeFirstName>
      <EmployeeLastName>Doe</EmployeeLastName>
      <EmployeeFullName>John Doe</EmployeeFullName>
      <EmployeeNumber>5326</EmployeeNumber>
      <EmployeeDepartmentID>1</EmployeeDepartmentID>
      <EmployeeDepartmentNumber>1</EmployeeDepartmentNumber>
      <EmployeeDepartmentName>Transportation</EmployeeDepartmentName>
      <VehicleID>2</VehicleID>
      <VehicleNumber>1</VehicleNumber>
      <VehicleTypeID>2</VehicleTypeID>
      <VehicleTypeNumber>2</VehicleTypeNumber>
      <VehicleTypeDescription>Freightliner/Thomas/C2/54 Pass./Bus</VehicleTypeDescription>
      <VehicleDescription>2008</VehicleDescription>
      <VehicleLicenseNumber>S1-S897</VehicleLicenseNumber>
      <VehicleVIN>XXXXXXXXXXXXXXXXX</VehicleVIN>
      <VehicleDepartmentID>1</VehicleDepartmentID>
      <VehicleDepartmentNumber>1</VehicleDepartmentNumber>
      <VehicleDepartmentName>Transportation</VehicleDepartmentName>
      <VehicleLowEfficiency>5.00</VehicleLowEfficiency>
      <VehicleHighEfficiency>10.00</VehicleHighEfficiency>
      <ProductID>1</ProductID>
      <ProductNumber>1</ProductNumber>
      <ProductName>Diesel</ProductName>
      <DateTimeStamp>2013-11-01T03:03:00-05:00</DateTimeStamp>
      <QuantityDispensed>20.000</QuantityDispensed>
      <PricePerUOM>0.000</PricePerUOM>
      <OdometerHours>18400</OdometerHours>
      <OdometerType>Distance</OdometerType>
      <AccessIdentificationID>2233</AccessIdentificationID>
      <TransactionTypeID>1</TransactionTypeID>
    </Transaction>
  </SyncData>
</IXFleet>
```

Figure 16-5 Sample Exported Transaction Data in XML Format

16.9 Worksheets

Make copies of the worksheets on the following pages to record necessary information for entry into the iX Fleet fuel control system. However, worksheets have not been provided for the Employees or Vehicles tabs. If you have a significant number of individual employees or vehicles, import the data rather than manually entering it. Refer to Section 11.3.2 on page 86 for more information about importing employee or vehicle data.

Products

Product #	Name	Type	Product #	Name	Type
1	*Unleaded*	☑ **Fuel** ☐ **Fluid**			☐ **Fuel** ☐ **Fluid**
		☐ **Fuel** ☐ **Fluid**			☐ **Fuel** ☐ **Fluid**
		☐ **Fuel** ☐ **Fluid**			☐ **Fuel** ☐ **Fluid**
		☐ **Fuel** ☐ **Fluid**			☐ **Fuel** ☐ **Fluid**
		☐ **Fuel** ☐ **Fluid**			☐ **Fuel** ☐ **Fluid**
		☐ **Fuel** ☐ **Fluid**			☐ **Fuel** ☐ **Fluid**
		☐ **Fuel** ☐ **Fluid**			☐ **Fuel** ☐ **Fluid**
		☐ **Fuel** ☐ **Fluid**			☐ **Fuel** ☐ **Fluid**
		☐ **Fuel** ☐ **Fluid**			☐ **Fuel** ☐ **Fluid**
		☐ **Fuel** ☐ **Fluid**			☐ **Fuel** ☐ **Fluid**
		☐ **Fuel** ☐ **Fluid**			☐ **Fuel** ☐ **Fluid**
		☐ **Fuel** ☐ **Fluid**			☐ **Fuel** ☐ **Fluid**
		☐ **Fuel** ☐ **Fluid**			☐ **Fuel** ☐ **Fluid**
		☐ **Fuel** ☐ **Fluid**			☐ **Fuel** ☐ **Fluid**
		☐ **Fuel** ☐ **Fluid**			☐ **Fuel** ☐ **Fluid**
		☐ **Fuel** ☐ **Fluid**			☐ **Fuel** ☐ **Fluid**
		☐ **Fuel** ☐ **Fluid**			☐ **Fuel** ☐ **Fluid**
		☐ **Fuel** ☐ **Fluid**			☐ **Fuel** ☐ **Fluid**
		☐ **Fuel** ☐ **Fluid**			☐ **Fuel** ☐ **Fluid**
		☐ **Fuel** ☐ **Fluid**			☐ **Fuel** ☐ **Fluid**
		☐ **Fuel** ☐ **Fluid**			☐ **Fuel** ☐ **Fluid**

Sites

Name (Short)	ID	Modem #	Time Zone	Address Information	
Airport Rental Car Service Center *(Airport Svc Ctr)*	*1*	*555-555-5555*	*Central - US* *(GMT - 06:00)*	**Address:**	*111 Test Way* *Ste. 14B*
				City/State/Zip:	*Austin, TX 78728*
				Email:	*ARCSC@fleetco.com*
				Phone:	*555-555-5555*
				Fax:	*555-555-5555*
				Address:	
				City/State/Zip:	
				Email:	
				Phone:	
				Fax:	
				Address:	
				City/State/Zip:	
				Email:	
				Phone:	
				Fax:	
				Address:	
				City/State/Zip:	
				Email:	
				Phone:	
				Fax:	
				Address:	
				City/State/Zip:	
				Email:	
				Phone:	
				Fax:	

Hours of Operation

Site ID	Fueling Point #	Day	Open Time	Close Time
1	*1*	**MON**	*04:00:00 AM*	*11:00:00 PM*
		TUE	*04:00:00 AM*	*11:00:00 PM*
		WED	*04:00:00 AM*	*11:00:00 PM*
		THU	*04:00:00 AM*	*11:00:00 PM*
		FRI	*04:00:00 AM*	*11:00:00 PM*
		SAT	*04:00:00 AM*	*11:00:00 PM*
		SUN	*04:00:00 AM*	*11:00:00 PM*
		MON		
		TUE		
		WED		
		THU		
		FRI		
		SAT		
		SUN		
		MON		
		TUE		
		WED		
		THU		
		FRI		
		SAT		
		SUN		
		MON		
		TUE		
		WED		
		THU		
		FRI		
		SAT		
		SUN		
		MON		
		TUE		
		WED		
		THU		
		FRI		
		SAT		
		SUN		

Site ID	Fueling Point #	Day	Open Time	Close Time
		MON		
		TUE		
		WED		
		THU		
		FRI		
		SAT		
		SUN		
		MON		
		TUE		
		WED		
		THU		
		FRI		
		SAT		
		SUN		
		MON		
		TUE		
		WED		
		THU		
		FRI		
		SAT		
		SUN		
		MON		
		TUE		
		WED		
		THU		
		FRI		
		SAT		
		SUN		
		MON		
		TUE		
		WED		
		THU		
		FRI		
		SAT		
		SUN		

Tanks

Tank #	Product	Site	Capacity	Reorder Point	Auto Update FP Price
1	*Unleaded*	*Airport Svc Ctr*	*10000*	*2000*	☑
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐

Fueling Points

Fueling Point #	Site	Tank	Trans. Limit	Price per Unit (PPU)	Beginning Totalizer	Reading Date	Reading Time
1	*Airport Svc Ctr*	*1*	*40*	*3.189*	*14275*	*08/12/12*	*08:26:52 AM*

Departments

Dept./ Acct. #	Name	Disc. (Cents)	Address Information	
1	*Service*	*- 99*	**Address:** **City/State/Zip:** **Phone:**	*111 Test Way* *Ste. 14B* *Austin, TX 78728* *555-555-5555*
			Address: **City/State/Zip:** **Phone:**	
			Address: **City/State/Zip:** **Phone:**	
			Address: **City/State/Zip:** **Phone:**	
			Address: **City/State/Zip:** **Phone:**	
			Address: **City/State/Zip:** **Phone:**	
			Address: **City/State/Zip:** **Phone:**	
			Address: **City/State/Zip:** **Phone:**	
			Address: **City/State/Zip:** **Phone:**	

Vehicle Types

Type #	Description	Odom. Type	Dept	Reasonability Check	Odom. Range (Min. - Max.)	MPG Alert (Low - High)	Max Daily Fuelings	Trans. Limit
1	*Passenger Car*	☑ **Dist.** ☐ **Hrs.**	*Service*	☐ **Not Req'd** ☑ **Continue** ☐ **Cancel**	*10 - 500*	*10 - 40*	*1*	*15*
		☐ **Dist.** ☐ **Hrs.**		☐ **Not Req'd** ☐ **Continue** ☐ **Cancel**				
		☐ **Dist.** ☐ **Hrs.**		☐ **Not Req'd** ☐ **Continue** ☐ **Cancel**				
		☐ **Dist.** ☐ **Hrs.**		☐ **Not Req'd** ☐ **Continue** ☐ **Cancel**				
		☐ **Dist.** ☐ **Hrs.**		☐ **Not Req'd** ☐ **Continue** ☐ **Cancel**				
		☐ **Dist.** ☐ **Hrs.**		☐ **Not Req'd** ☐ **Continue** ☐ **Cancel**				
		☐ **Dist.** ☐ **Hrs.**		☐ **Not Req'd** ☐ **Continue** ☐ **Cancel**				
		☐ **Dist.** ☐ **Hrs.**		☐ **Not Req'd** ☐ **Continue** ☐ **Cancel**				
		☐ **Dist.** ☐ **Hrs.**		☐ **Not Req'd** ☐ **Continue** ☐ **Cancel**				
		☐ **Dist.** ☐ **Hrs.**		☐ **Not Req'd** ☐ **Continue** ☐ **Cancel**				
		☐ **Dist.** ☐ **Hrs.**		☐ **Not Req'd** ☐ **Continue** ☐ **Cancel**				
		☐ **Dist.** ☐ **Hrs.**		☐ **Not Req'd** ☐ **Continue** ☐ **Cancel**				
		☐ **Dist.** ☐ **Hrs.**		☐ **Not Req'd** ☐ **Continue** ☐ **Cancel**				
		☐ **Dist.** ☐ **Hrs.**		☐ **Not Req'd** ☐ **Continue** ☐ **Cancel**				
		☐ **Dist.** ☐ **Hrs.**		☐ **Not Req'd** ☐ **Continue** ☐ **Cancel**				

INSTALLATION/OPERATION

iX Fleet™ Fuel Control System

powered by Dover Fueling Solutions

Software Version 1.7.74.0

This product complies with Part 15 of the FCC rules and regulations. Operation is subject to the following two conditions: (1) This product may not cause harmful interference, and (2) this product must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device as set forth in Part 15 of the FCC Rules. Those limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if it is not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case you will be required to correct the interference at your own expense.

Any modifications made to this product that are not approved by Dover Fueling Solutions could void your authority to operate this equipment.

Dover Fueling Solutions

Corporate Headquarters
3814 Jarrett Way
Austin, TX 78728
United States
Tel +1 512 388 8311

Scotland
Unit 3 Baker Road,
West Pitkerro Industrial Estate
DD5 3RT Dundee
United Kingdom
Tel +44 (0)1382 598 000

Latin America
Estrada do Timbó
126 - Bonsucesso
Rio de Janeiro 21061-280
Brasil
Tel +55 21 2598 7722

DOVER®
FUELING SOLUTIONS