Version 25 | Trapeze Enterprise Asset Management

FuelFocus

Administrator Guide

Trade Secret | February 2025

Technical Support

Trapeze provides several ways to connect with the Customer Care team. Please provide detailed information to the representative. If you are reporting an issue by e-mail, include any error messages, screen shots of your problem, and steps to replicate the issue.

Customer Care is available Monday through Friday, 8:00 a.m. to 8:00 p.m., Eastern Standard Time.

Toll-Free Telephone:	1-877-411-8727
E-mail:	cc@trapezegroup.com
FTP Site:	https://ftps.trapezegroup.com/
Web Site:	https://collaborate.trapezegroup.com

The website provides access to Trapeze Collaborate which offers resources to implement and operate the software, search knowledge, participate in communities, log/track service requests, sign-up for release alerts, view product health recommendations, and download updates or documentation. For secure access to Collaborate, contact Customer Care through the website or by calling the number above.

Product Compatibility

Refer to the latest Product Compatibility information on Trapeze Collaborate for requirements including operating system information, databases, Crystal reports, network protocol, HTTP servers and browsers that are supported.

FuelFocus - Administrator Guide

Version 25.x

February 2025

Contents

1. Overview

The FuelFocus Module allows organizations to better manage information and tasks related to fuel and fluid operations by providing integration with the FuelFocus System. FuelFocus supplies up-to-the-minute fueling information in the database with real-time validations and instantaneous feedback to users at the Island Control Unit (ICU). Once fueling transactions are completed, authorized users can view them on the Internal Fuel Tickets screen in the module.

Requirements

Application 25.x

Web Modules 25.x

Supported software versions for FuelFocus ICU Software include Windows 7 ICU software version 5.16.011 through 5.16.016.

ICU software 5.13.x is currently still supported. New features released in versions 15.0.x or higher are not compatible with this version of the ICU software.

Assumptions

This guide assumes familiarity with workflows and configuration of the application.

User defined required fields that do not appear in the Web Modules will return validation messages.

Special characters cannot be placed into the Web Modules fields or unanticipated results may occur. This would include any character that cannot be typed with a standard keyboard.

Do not use the browser’s **Back** button in the Web Modules as unanticipated results may occur.

Do not open or use the same instance of the Web Modules in multiple browser windows or tabs. This can cause errors or unexpected performance issues.

2. Data Setup

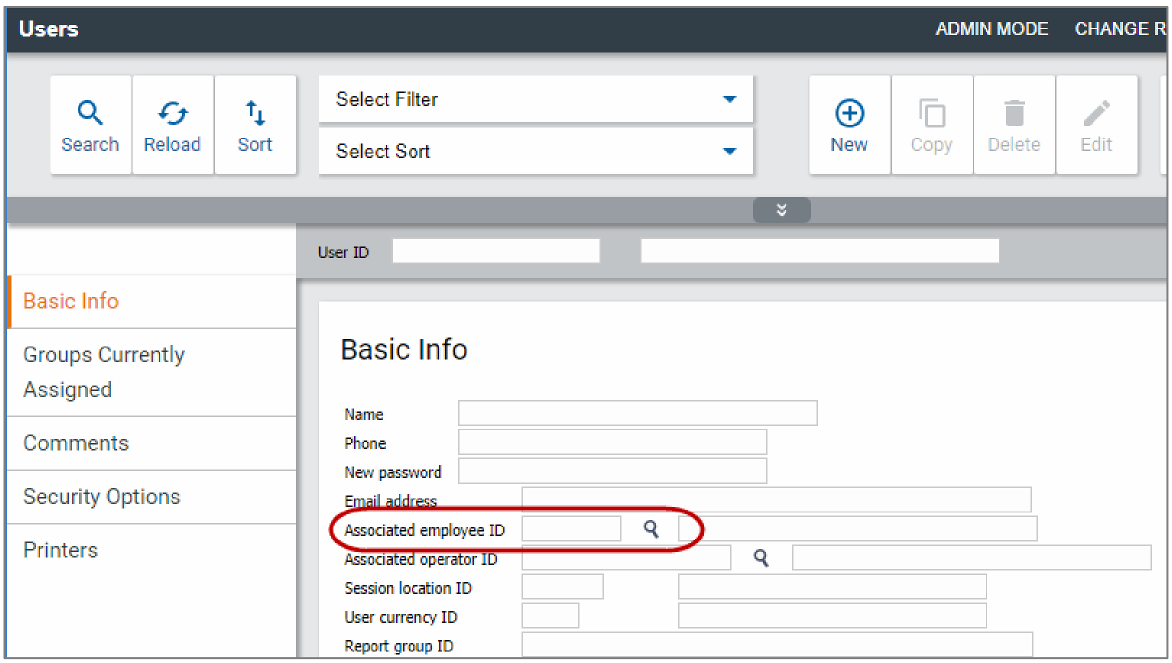
Customers must perform the following data setup for the module.

The FuelFocus ICU and system validate all of the information below before the fuel pump will activate and allow fueling.

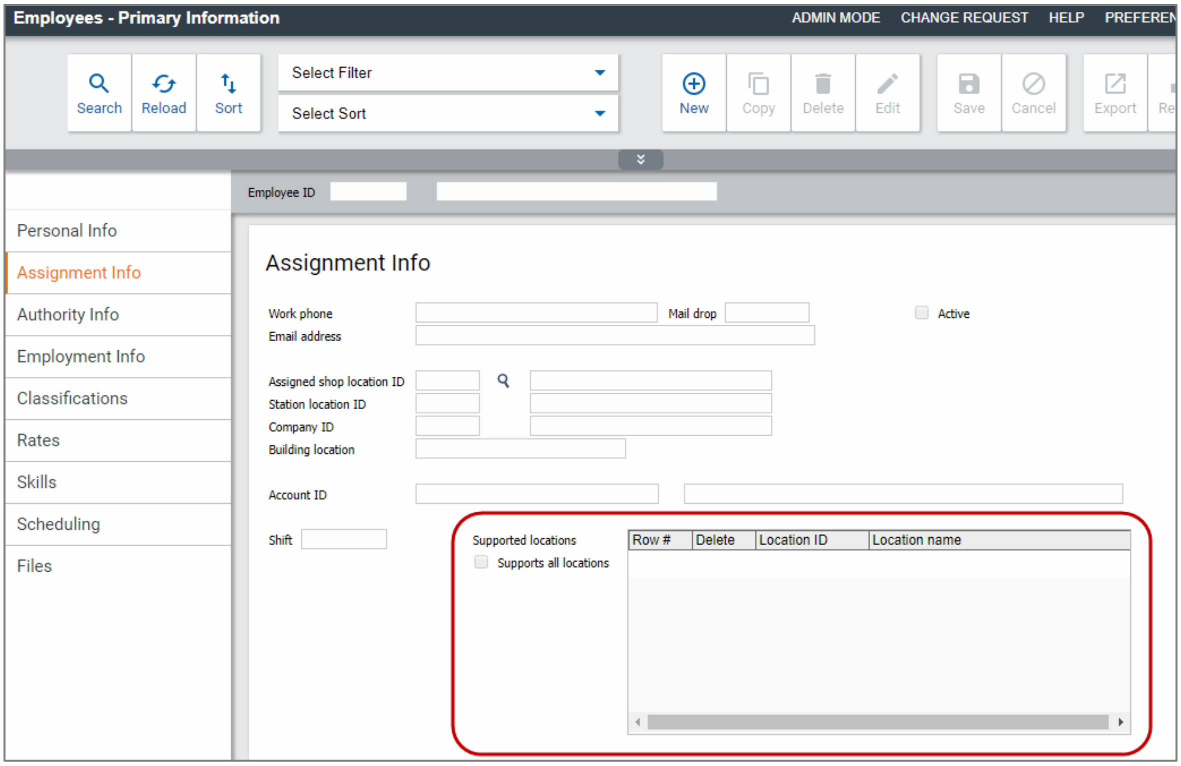
User ID

Users screen, Basic Info tab

All Web Modules users that want to access the FuelFocus tab need an Employee ID associated with the user.



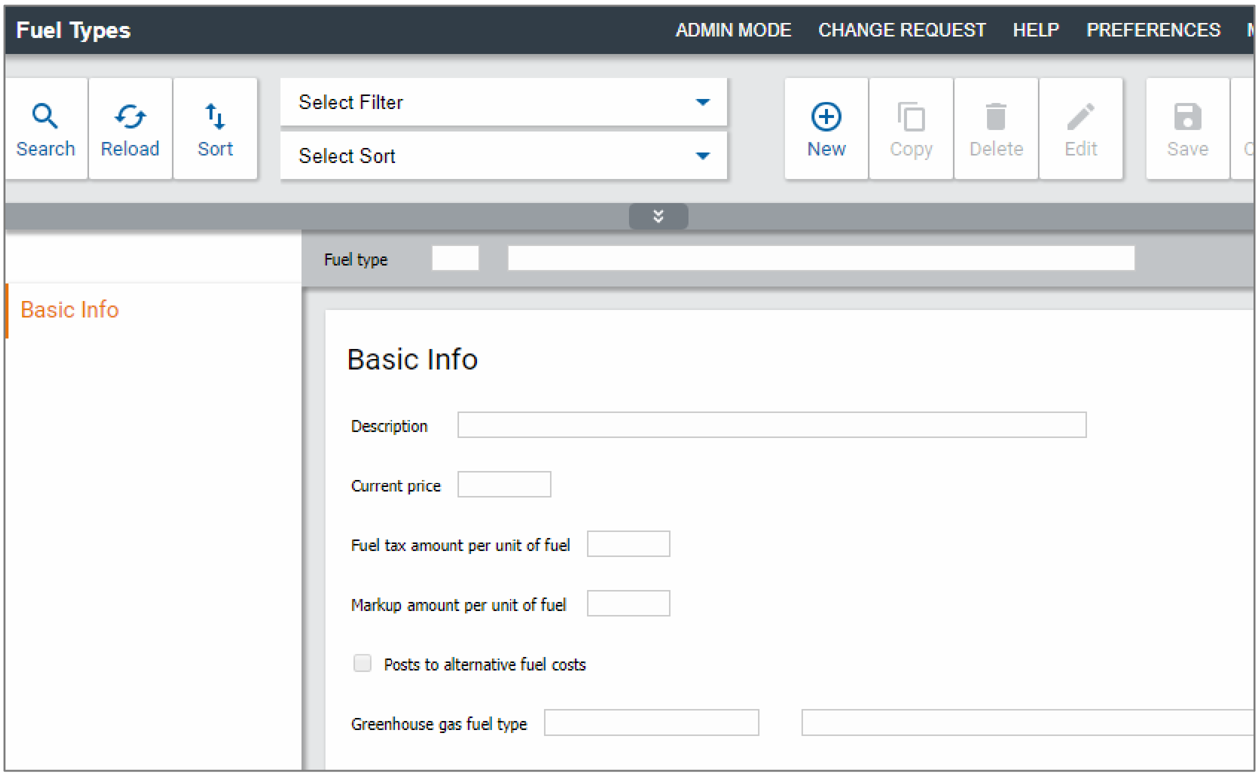
This Employee ID also has to have either Supports All locations checked or a list of supported locations to allow access to the fueling sites listed on the Pending Transaction page. To see the supported locations, open the Employees – Primary Information screen, Assignment Info tab. A location must either support all locations, or the location needed must be listed in the supported location table.


Employees - Primary Information
ADMIN MODE
CHANGE REQUEST
HELP
Search
Reload
Sort
Select Filter
Select Sort
New
Copy
Delete
Edit
Save
Cancel
Export
Employee ID
Personal Info
Assignment Info
Authority Info
Employment Info
Classifications
Rates
Skills
Scheduling
Files
Assignment Info
Work phone
Mail drop
Active
Email address
Assigned shop location ID
Station location ID
Company ID
Building location
Account ID
Shift
Supported locations
Supports all locations
Row #
Delete
Location ID
Location name

Fuel Types

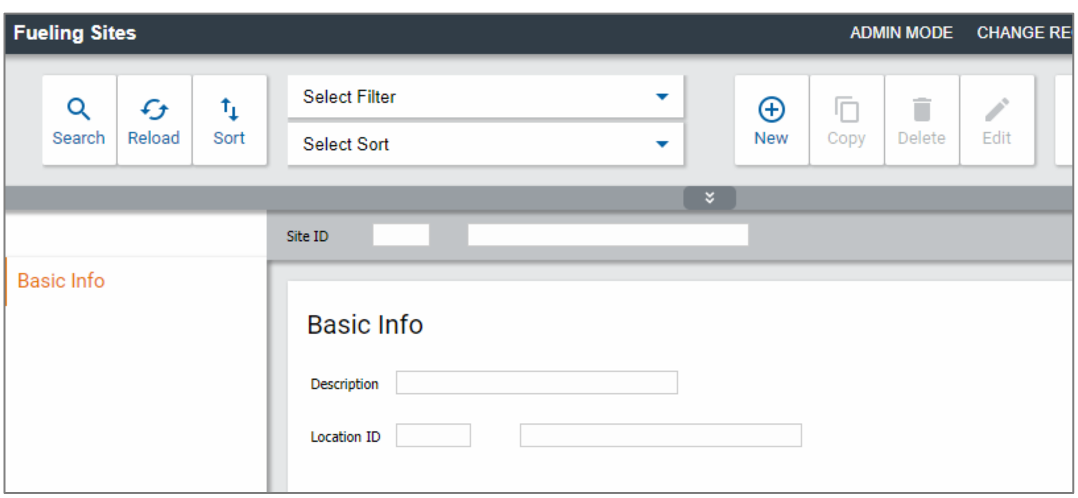
Fuel Types screen

All fuel types to be dispensed via FuelFocus must exist in the system. Complete all fields on the Basic Info tab on the Fuel Types screen.



Fuel Sites

Use the Fueling Sites screen to create and associate a fueling site with a valid location.

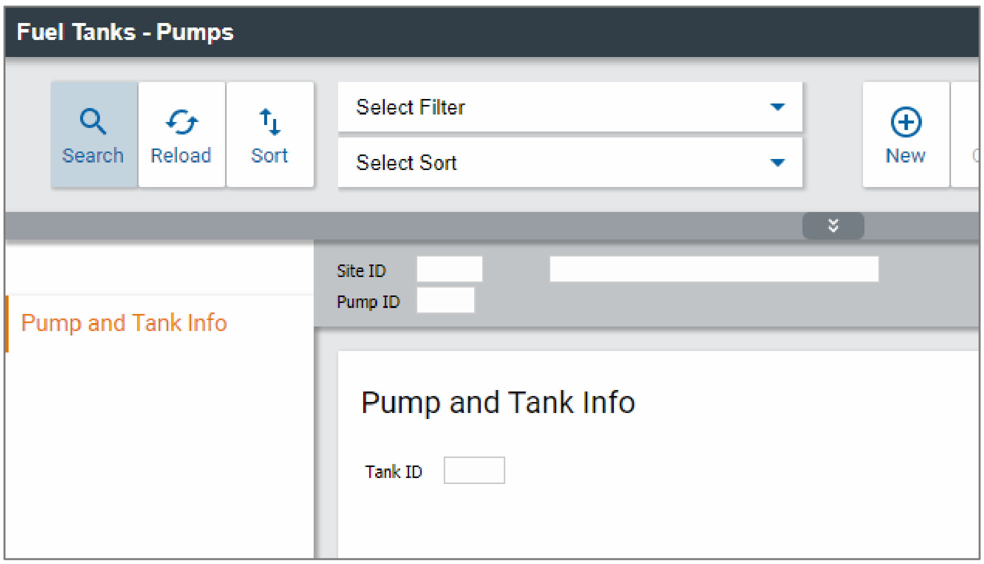


Pumps

Fuel Tanks – Pumps screen

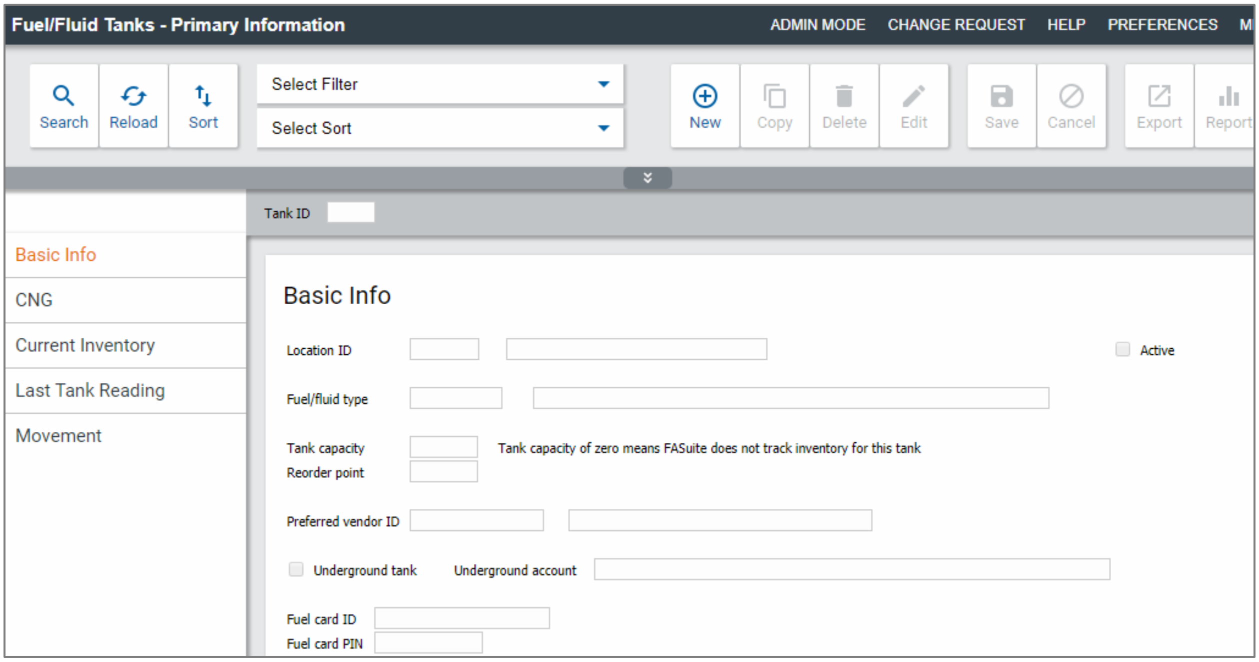
All pumps controlled by the ICUs must be created in the system with a valid Site ID. The site/pump combination determines which ICU controls the pump and also allows the system to deplete inventory from the proper tank. Complete the fields on the Pump and Tank Info tab on the Fuel Tanks – Pumps screen.

Pumps are two digits maximum length. Make sure Pumps are numeric (without leading zeroes) as the ICUs require numeric characters. In other words, if you have Pump 1 make sure it is entered as 1 and not 01.



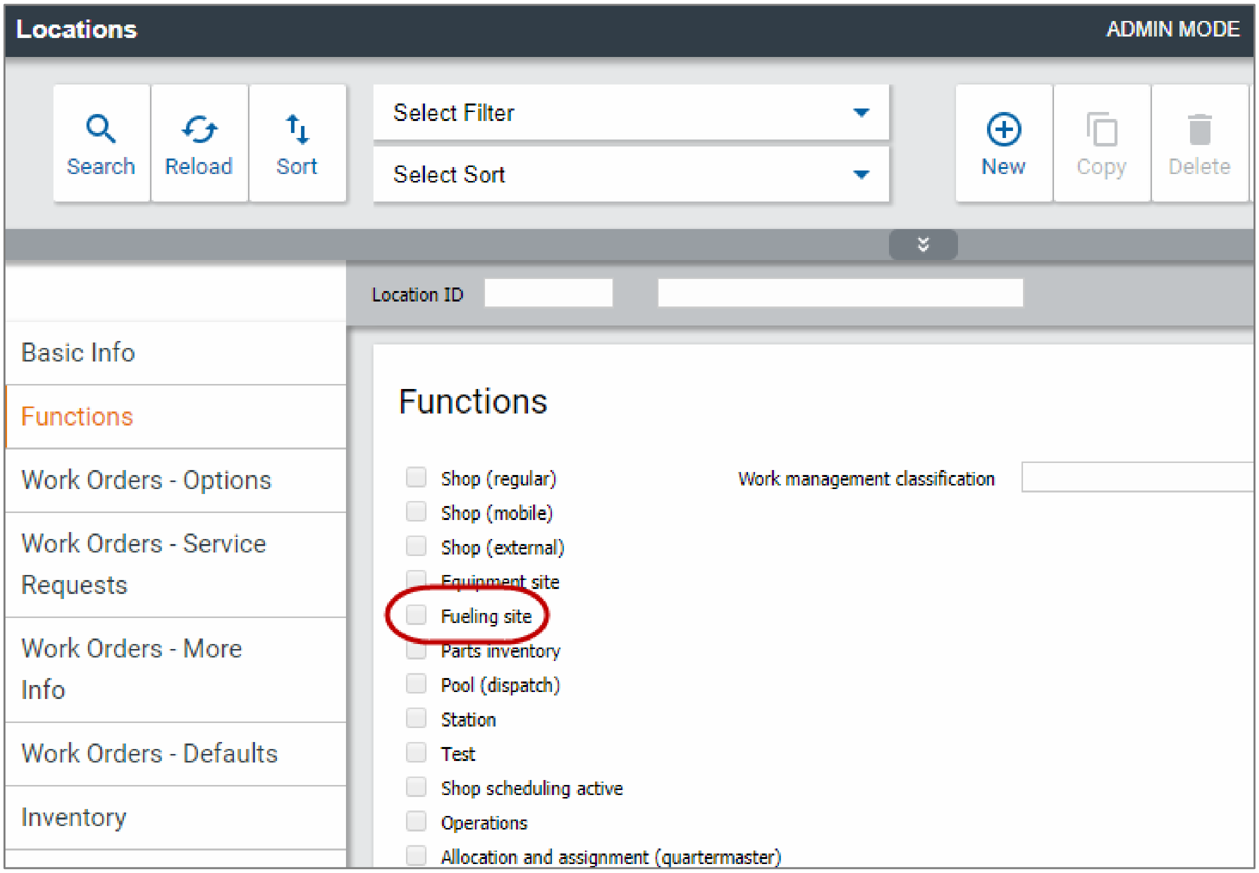
Fuel/Fluid Tanks Primary Information

Fuel/Fluid Tanks – Primary Information



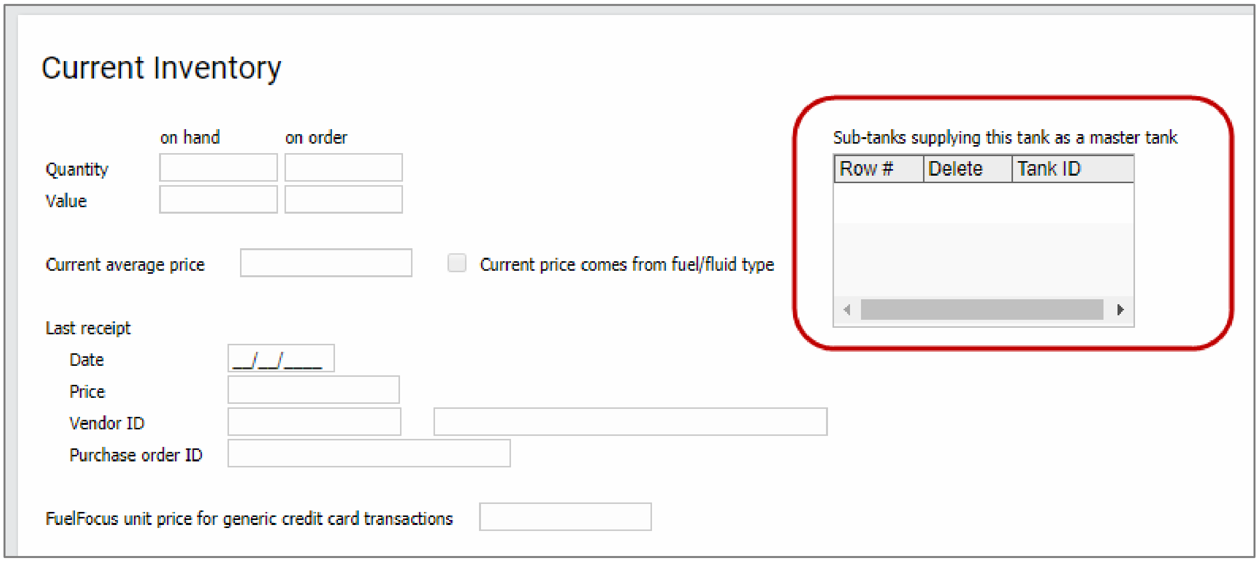
FuelFocus will deplete the inventory from tanks while fuel is being pumped into a unit. Complete the fields on the Basic Info tab of the Fuel/Fluid Tanks – Primary Information screen to ensure the tank is associated with the appropriate Fuel Type and Location where it resides. The Location ID must be a valid fueling location in order for it to appear in the drop down list.

To verify that a location is set up as a fueling site, open the Organization Structure Locations – Primary Information screen, Functions tab and verify the **Fueling site** option is checked for the location.



Make sure Fuel Tanks are numeric (without leading zeroes) as the ICUs require numeric characters. In other words, if you have Fuel Tank 1 make sure it is entered as 1 and not 01.

Fuel/Fluid Sub-tanks

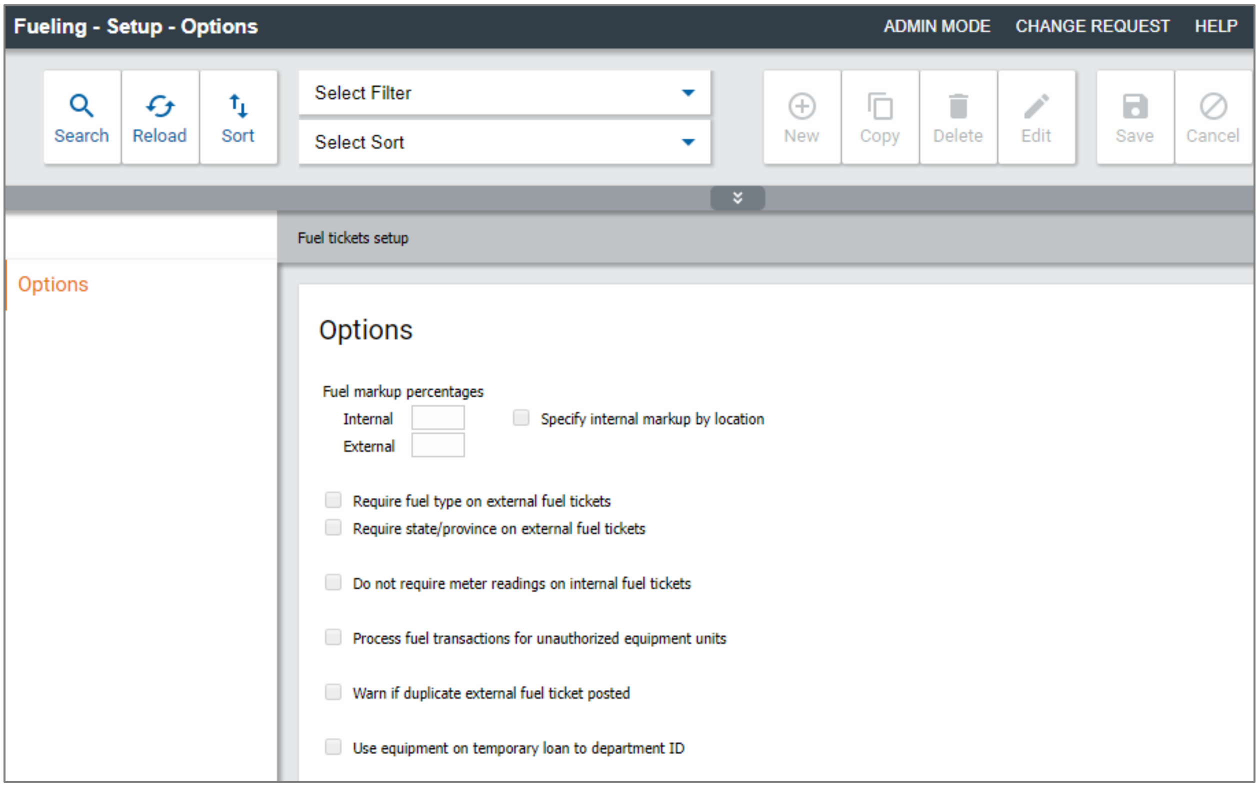


On the Current Inventory tab of the Fuel/Fluid Tanks Primary Information screen, use the sub-tanks area to work with sub-tanks or manifold tanks. The fields in this section enable you to define a fuel tank as a master tank, which is made up of multiple attached separate tanks (sub-tanks). This is useful if you have a single pump that is fed by a group of tanks, instead of being tied to only one tank. The inventory of a master tank is updated any time the inventory of one of its sub-tanks is affected, whether through a tank reading, a receipt, or an issue. Because the master tank itself does not really exist, you cannot perform tank readings or receipts against it. Issues from the master tank affect the recorded inventory of the master tank because the system does not know which sub-tank it came from.

Fuel/Fluid Tanks Setup Options

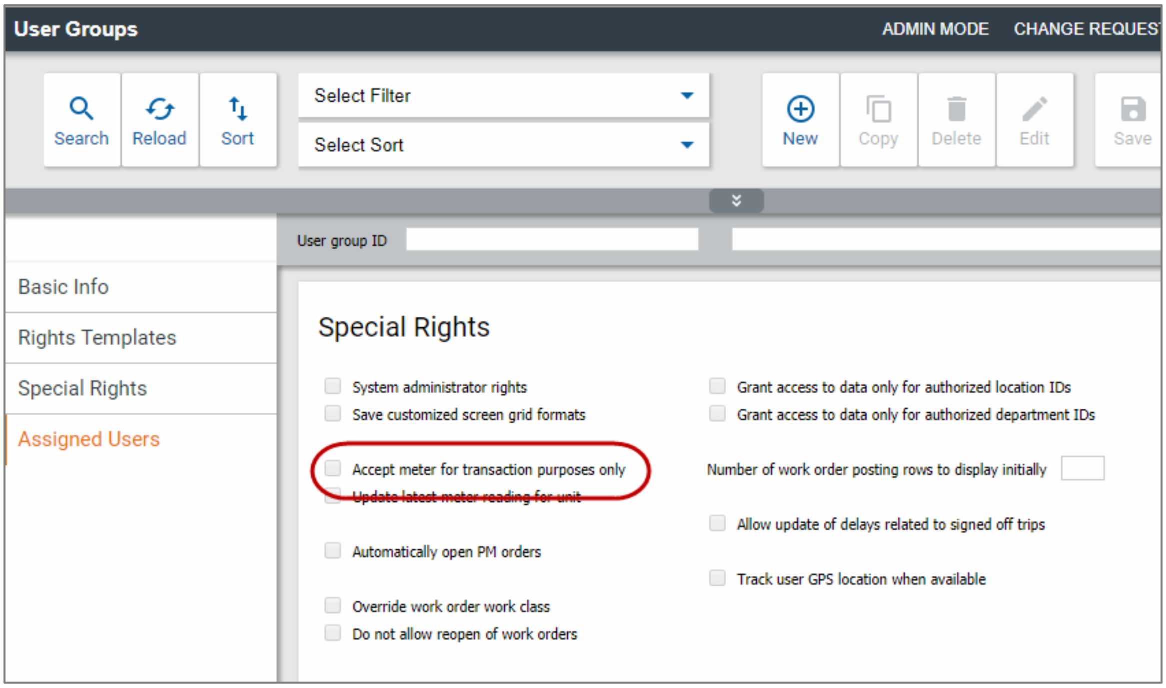
Fuel/Fluid Tanks - Setup – Options screen

The password that can be viewed under options must be properly set in order for Fuel Focus to function properly.



FuelFocus settings that used to be set in the portal are set through the Fuel/Fluid Tanks Setup Options screen. The Fuel/Fluid Tanks – Setup – Options screen includes the **FuelFocus user ID**, **FuelFocus new password**, and **White list update frequency (hours)** fields:

- **FuelFocus user ID** - Enter a User ID that has insert rights to the Internal Fuel Tickets screen and rights to update the meter for transactions. Make sure the **Accept meter for transaction purposes only** box is checked on the Special Rights tab in the User Groups screen. If this is not set, all transactions that out of the meter edit range will go to the Pending Transactions screen.

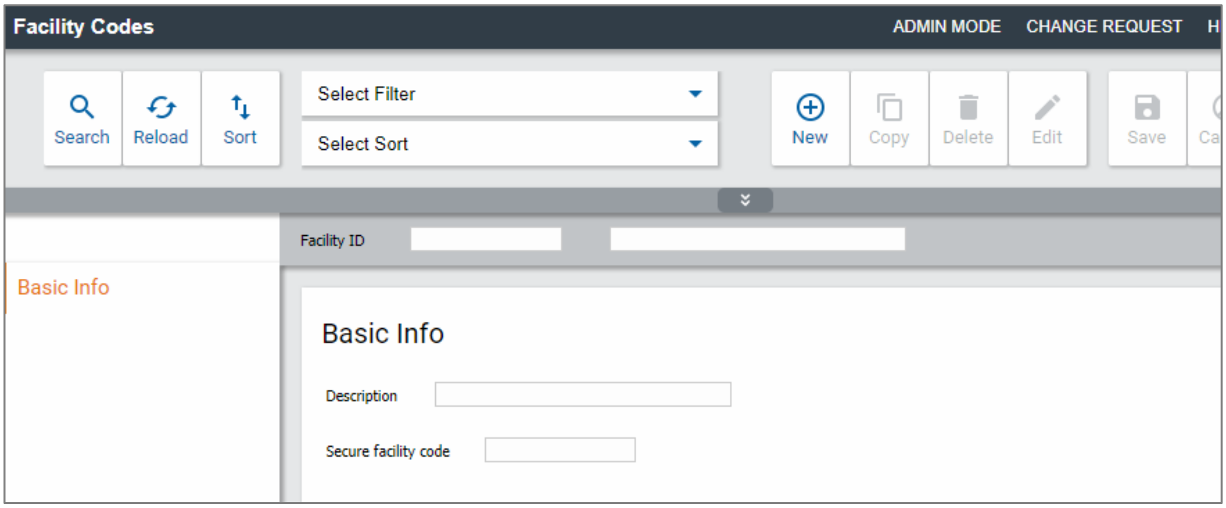


- **FuelFocus new password:** Enter the password used to login to FuelFocus. If a user changes the password via the Change Password screen, the user must also apply this change to the FuelFocus setting.
- **White list update frequency (hours):** This sets the frequency to create or update the FuelWhiteList.txt contained in the InfoCenter/WebModules/DataFiles directory. Enter the number of hours for the update frequency to occur. This update refreshes the file.
- **Authentication** settings set the system to receive encrypted header information from the ICU, and to specify the system uses HTTPS communication.
    - **Enable Encryption:** Check this to enable performing validations when transactions are received from ICUS on the server. The validation data is found in encrypted header values.
    - **Use HTTPS:** Check this option to set up the web server to use HTTPS. This allows the Enable Encryption to correctly receive header values when HTTPS is in use.

Facility Codes

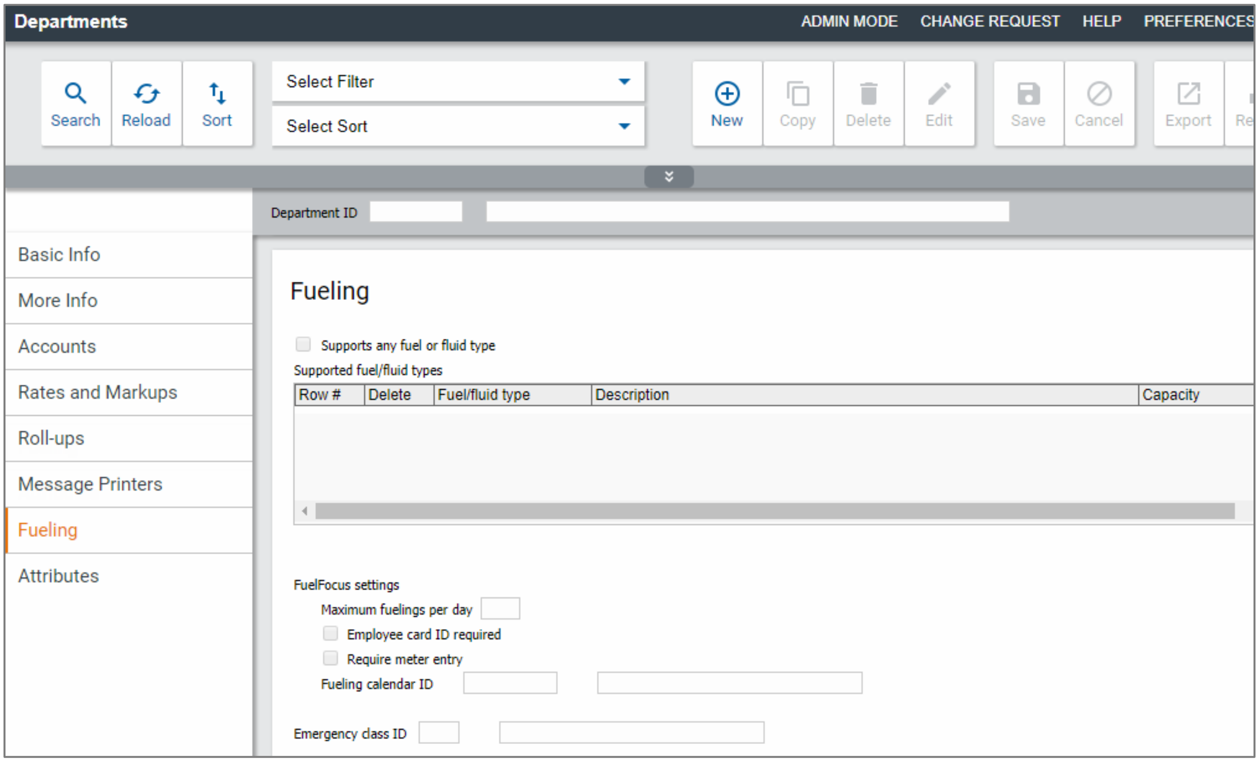
Applicable to Version 5.8+/InfoCenter 1.4.1+/ICU 5.29+

Use the Facility Codes screen to set valid facility codes for the supported Facility IDs on the ICU setup screen.



Department Fueling

Use the Department Primary Information screen to set fuel or fluid type and other FuelFocus settings used by department fueling. On the Departments screen, use the Fueling tab to set up the needed information for department fueling.



Fill out the necessary information for your department, and click **Save**.

Access Keys

Use the Access Keys screen to manage and assign keys and other access cards for equipment units, locations, employees, operators, and departments. Multiple access keys can be assigned to employees and equipment.

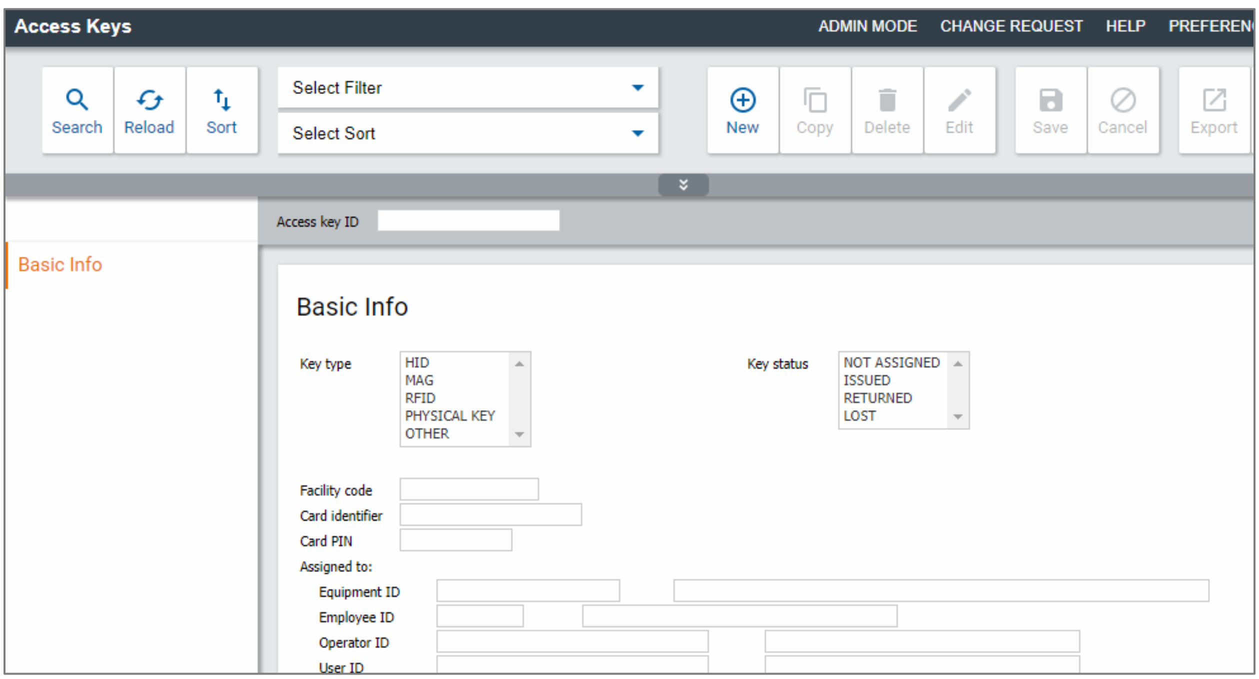
To create an access key card:

1. Fill in the necessary information for assigning as access key to the necessary item.

   When creating access keys for fuel, enter an **Employee ID** or an **Operator ID**, but not both.

2. When you are done filling in information, click **Save**.

For more information on this screen, refer to the help page for the Access Keys screen by clicking **Help** from the screen itself.



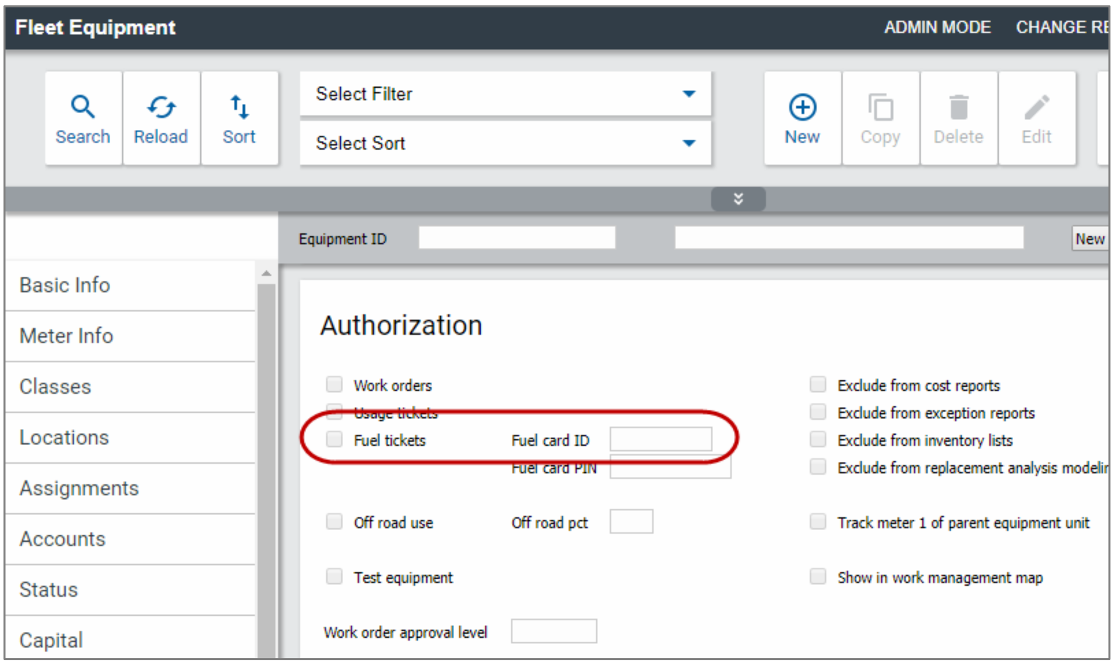
Equipment Primary

Fleet Equipment, Asset Primary Information, and Components – Primary Information screens

Each equipment unit or component that will be fueled through the ICU must have the following items set up (these items apply to fleet and components).

- On the Fleet Equipment screen's Authorization tab, check the Fuel Tickets checkbox.

Although you can set the Fuel card ID and Fuel card PIN on this tab, best practice is to configure this information through the Access Keys screen as described in the Access Keys section.

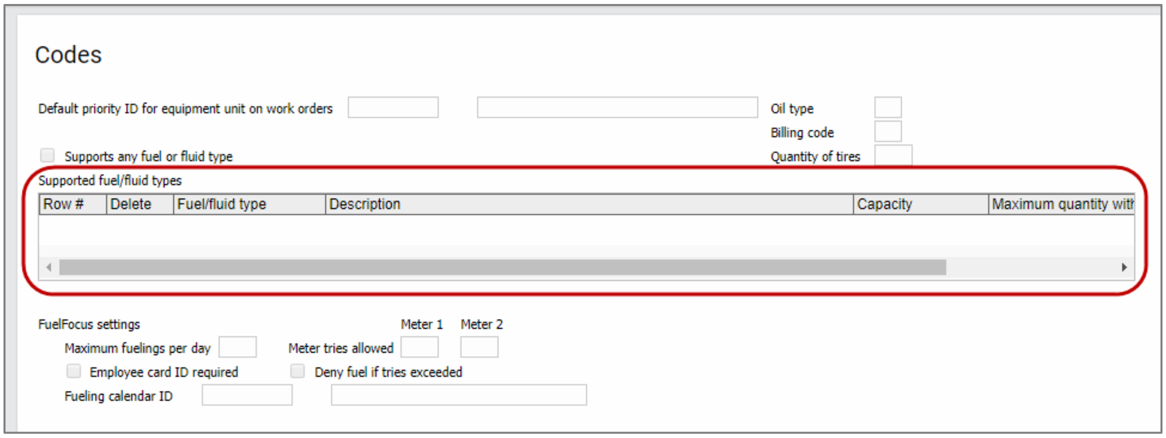


Make sure Fuel Card IDs are numeric as the ICUs require numeric characters.

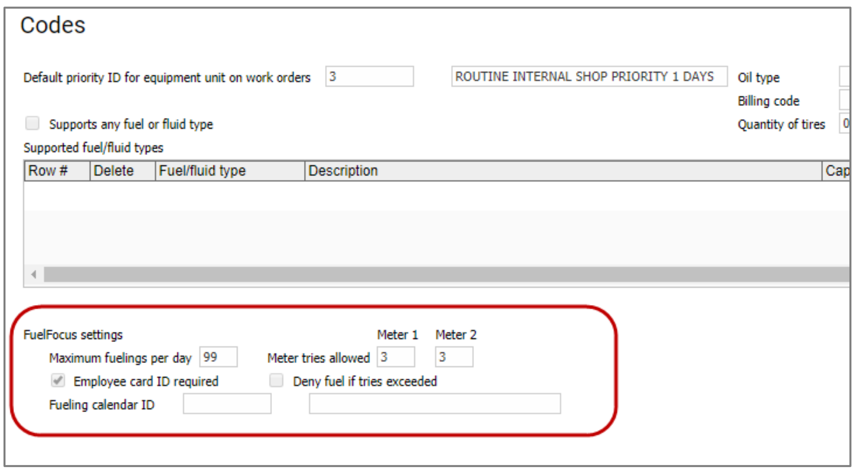
The setting **Send leading zeroes of fuel card number from FuelFocus** option on the Fuel/Fluid Tanks – Setup – Options screen allows the system to send leading zeroes of fuel card numbers. This setting affects all fuel cards, including equipment, component, department, operator, and employee cards. If this is not set, make sure fuel card number does not have leading zeros as errors could occur.

  - On the Codes tab, enter the Fuel Types and capacity for the vehicle.

If the box, **Supports any fuel or fluid type**, is checked, then the whitelist will have every fuel and fluid type, with a maximum capacity of 999. If there is also a row for that fuel or fluid type listed below, then the whitelist will use that maximum capacity instead.



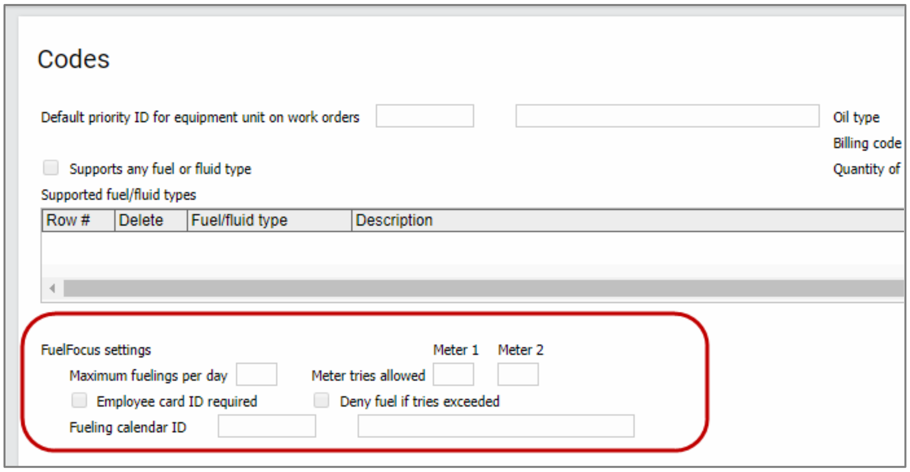
- In the Codes tab, FuelFocus settings section, enter the **Maximum fuelings per day**, **Meter tries allowed**, and (*optional*) check the boxes if you want to enable **Employee card ID required** (**E**) and **Deny fuel if tries exceeded** (**M**).



The Meter 2 retries prompt parameter is separate from Meter 1. If you want a particular equipment unit to never be prompted for entry of meter 2, use the appropriate Equipment Primary Information screen and set this parameter to 0.

The rules followed for granting or denying fuel are listed below:

- If an **E** prompt (or **EM**) shows, you must enter a valid employee ID or operator fuel card, otherwise, fueling is denied.
- If there is an error message of any sort, then fuel is denied.
- If an **M** prompt shows you need to enter a valid meter entry. The equipment class determines the minimum and maximum of mileage expected when fueling a vehicle.
    - If the number of tries to enter a valid meter is exceeded, fuel is denied.
    - If a valid entry is made and no error message shows, then fueling is granted.
- The **M** prompt does not affect whether a granted or denied message is sent to the ICU.

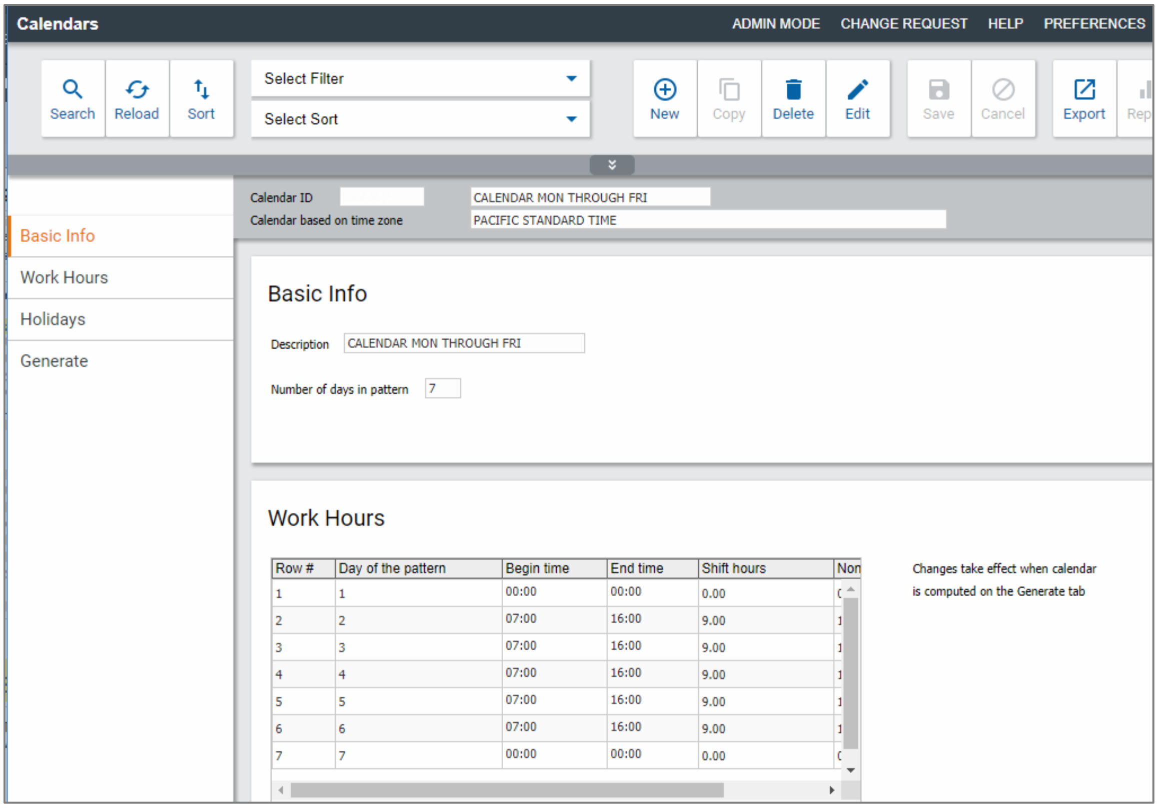


Limit an Asset's Fuel Quantity for a Time Period (optional)

To limit fuel quantity for an asset during a time period, set the following:

1. On the Calendars screen (Basic Info and Work Hours tabs), set the following:
   - Number of days in the pattern
   - Calendar ID

   The sample Calendar ID (RA-0-8-M-F) is set up to define a period of one week, but days in pattern can range from 1 – 60. This is set up to cover a seven day pattern, which starts on Sunday, and ends on Saturday. The periods when fueling is allowed are Monday – Friday, 00:00 – 08:00.



2. On the Fleet Equipment screen (Codes tab), set the following:

    - Maximum quantity within calendar period
    - Fueling calendar ID

    The asset in the sample screenshot is set up to allow a maximum of 250 gallons of Diesel during the calendar period of RA-0-8-M-F.

    ICU – Pre-authorization for fuel is based on the following rules:

    - If the Asset ID ***does not*** have a Calendar ID set on the Codes tab

    Then no further validation will need to be performed for allowing fuel during a time period, and if the asset passes all validation checks, fuel will be authorized for the asset.

If the Asset ID *does* have a Calendar ID set on the Codes tab:

1. First, a check is done to see if the current time falls within the period defined by the Calendar ID.

    - If the current date time does not fall between 00:00 – 08:00 on a Monday – Friday

      Then display a message on the ICU: ***Not Allowed at Current Time****.*

  - If the current date time does fall in the period defined by the Calendar ID, the system continues on to the next step.

2. Check if the quantity dispensed during the current period is less than the **Maximum quantity within calendar period** for the fuel pump and asset ID.

  - If the quantity for the period has been exceeded

    *The ICU displays **Quantity for Period Exceeded**.*

  - If the fuel pump type Capacity is 0 for the Asset ID (i.e. , Diesel is the fuel pump type, the Asset ID has Diesel as an allowed fuel type, but the Capacity is 0)

    *The ICUS returns a pre-authorization DENIED with the message: **Invalid Product for Unit**.*

  - If the quantity for the period has not been exceeded, and the Capacity + Quantity dispensed is greater than the "Maximum quantity within calendar period.

    *The ICU returns a pre-authorization GRANTED with the difference of capacity and **Maximum quantity within calendar period**.*

      - Example: Quantity dispensed so far for the Calendar ID period is 100. Capacity is 200. "Maximum quantity within calendar period" is 250. (100 + 200 = 300 > 250) Return an allowed quantity of 150 (250 - 100).

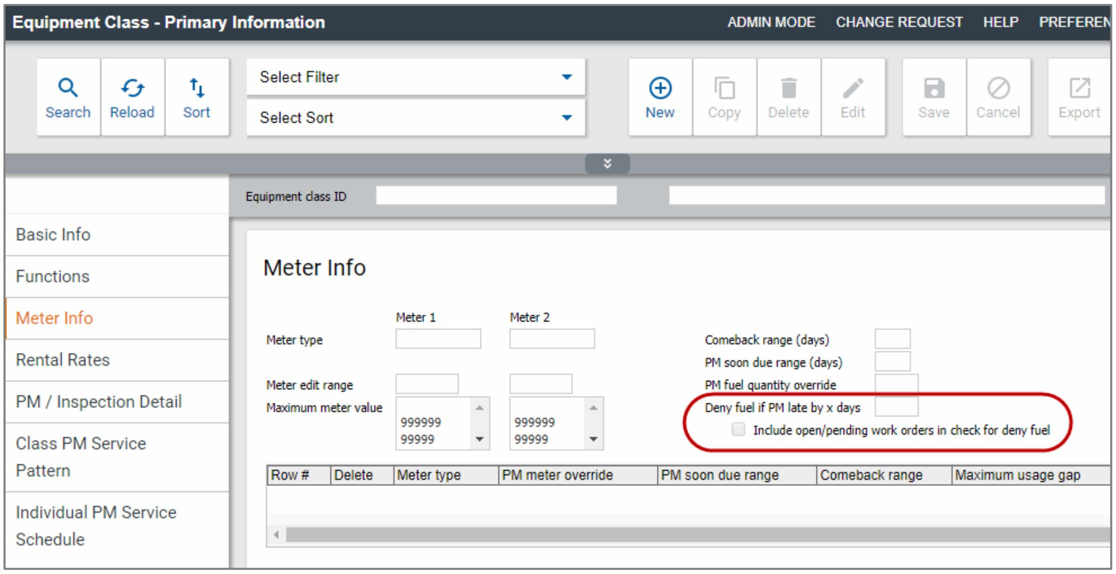
3. Otherwise, The ICU returns pre-authorization GRANTED with the capacity allowed for the fuel type of the pump.

  - Any fuel codes that have a capacity of 0 will not be returned in the pre-authorization. This is specific to a fuel pump that is part of a pump group.

Equipment Class Primary Information (optional)

Each Equipment Class that will be fueled through the ICU may be set up to be denied fuel if PM is late and if the equipment has open or wait for equipment work orders.

- On the Equipment Class Primary Information screen's Meter Info tab, enter a number in the **Deny fuel if PM late by x days** field to deny fuel to the equipment class when PM is late by x days.
- On the Equipment Class Primary Information screen's Meter Info tab, check the box **Include open/wait for equip work orders in check for deny fuel** to deny fuel to equipment classes that have open/wait for equip work orders.


Equipment Class - Primary Information
ADMIN MODE
CHANGE REQUEST
HELP
Search
Reload
Sort
Select Filter
Select Sort
New
Copy
Delete
Edit
Save
Cancel
Export
Equipment class ID
Basic Info
Functions
Meter Info
Rental Rates
PM / Inspection Detail
Class PM Service Pattern
Individual PM Service Schedule
Meter Info
Meter 1
Meter 2
Meter type
Meter edit range
Maximum meter value
999999
99999
999999
99999
Comeback range (days)
PM soon due range (days)
PM fuel quantity override
Deny fuel if PM late by x days
Include open/pending work orders in check for deny fuel
Row #
Delete
Meter type
PM meter override
PM soon due range
Comeback range
Maximum usage gap

Employee or Operator Fuel Cards

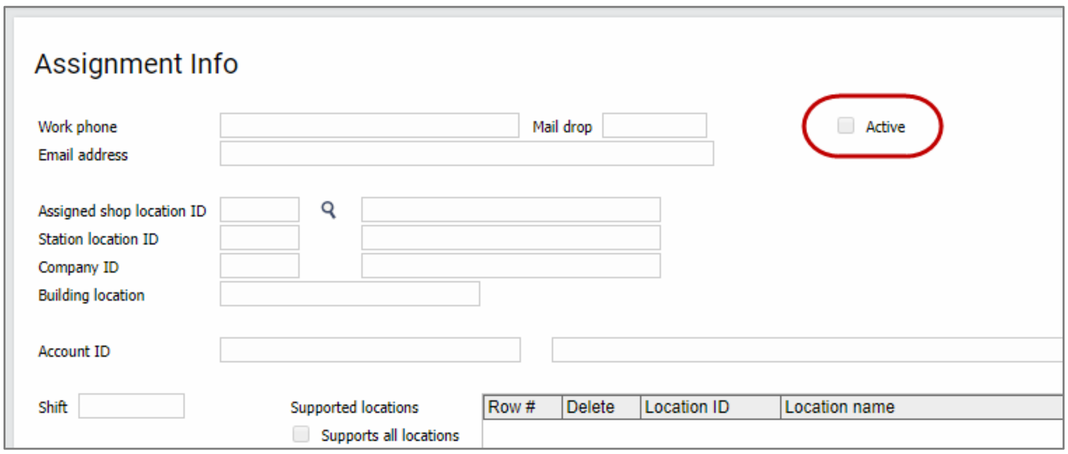
You may create fuel card IDs by employee or operator.

Although you can set the Fuel card ID and Fuel card PIN on this tab, best practice is to configure this information through the Access Keys screen as described in the Access Keys section.

Each fueling employee or operator must be marked active and have a **unique** fuel card defined on either of the following screens:

Validating by Employee

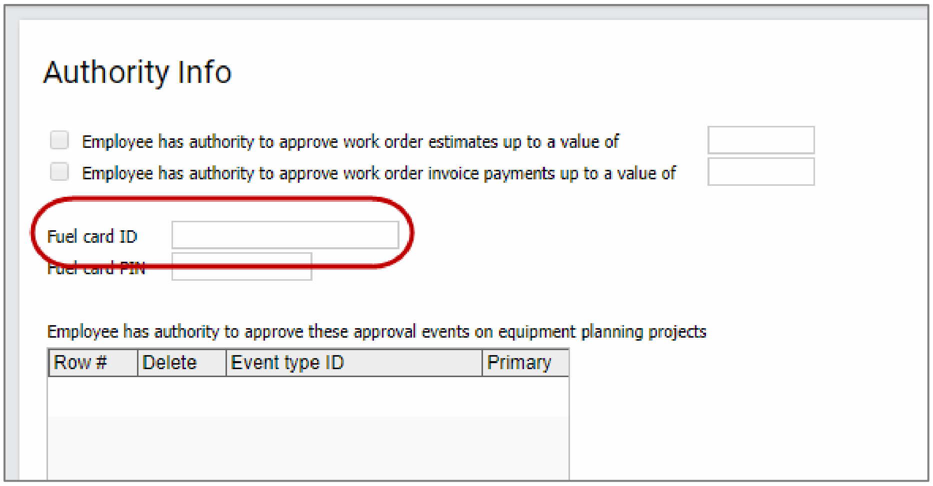
1. Open the Employees – Primary Information screen.
2. On the Assignment Info tab, check the **Active** box to indicate the employee is active.



3. On the **Authority Info** tab, enter the employee's Fuel Card ID number.

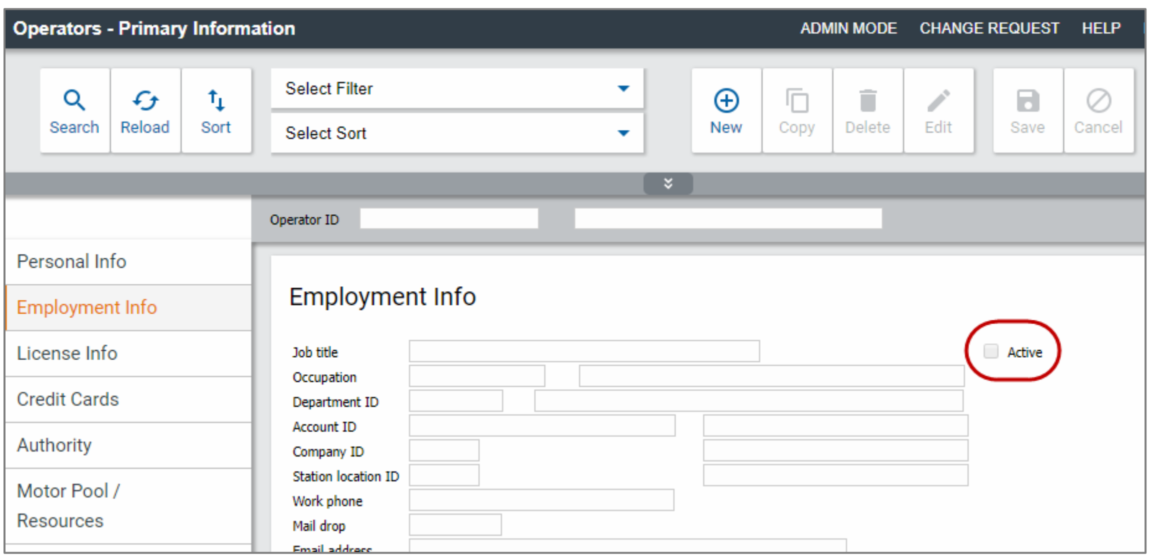
   Make sure Fuel Card IDs are numeric as the ICUs require numeric characters.

   The setting **Send leading zeroes of fuel card number from FuelFocus** option on the Fuel/Fluid Tanks – Setup – Options screen allows the system to send leading zeroes of fuel card numbers. This setting affects all fuel cards, including equipment, component, department, operator, and employee cards. If this is not set, make sure fuel card number does not have leading zeros as errors could occur.

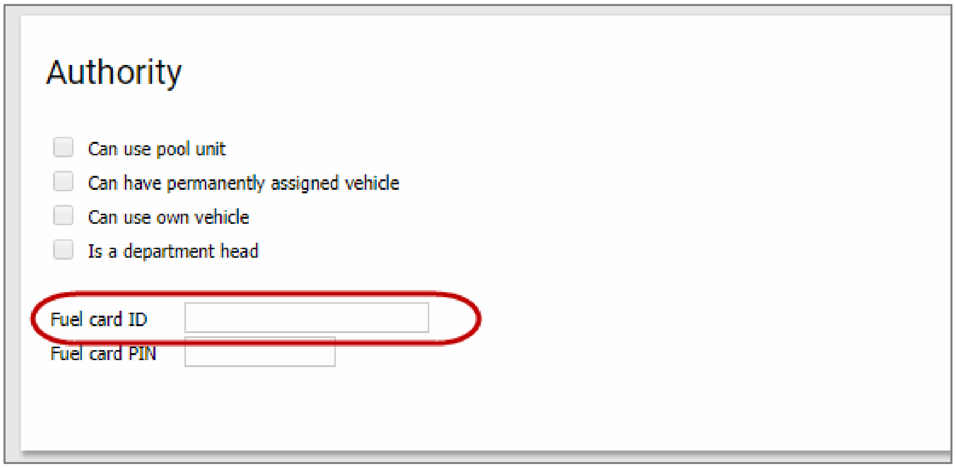


To validate by operator

1. Open the Operators – Primary Information screen.
2. On the **Employment Info** tab, check the **Active** box to indicate that the employee is active.



3. On the Authority tab, enter the Fuel Card ID number in the field.

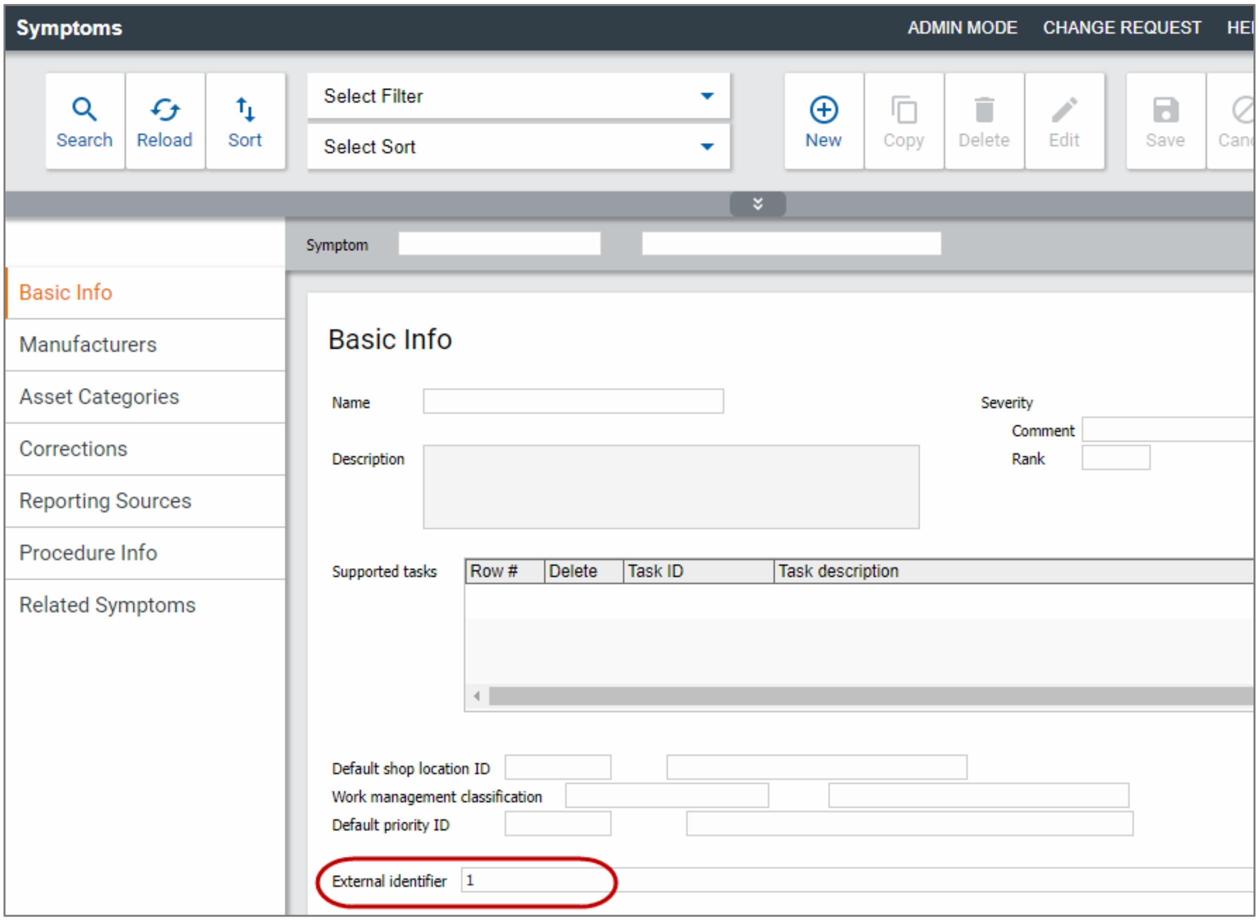


Employee Fuel Card IDs are numeric as ICUs require numeric characters. Normally, leading zeros do not appear. However, if you want the leading zeros to appear, make sure to check the box **Send leading zeroes of fuel card number from fuelfocus**.

If you are not prompting for employee or operator, you must set up one employee or operator with a Fuel Card ID of 0.

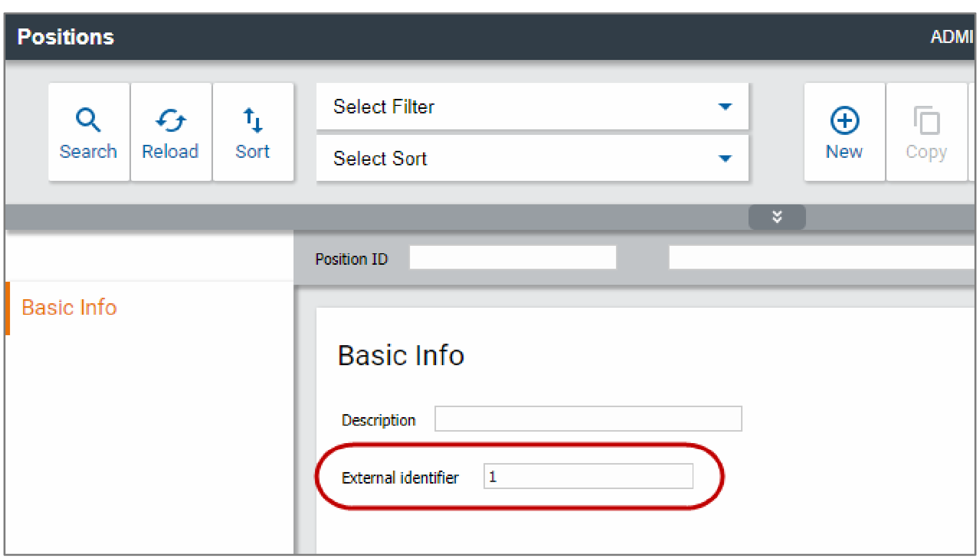
Symptoms

If using the service request functionality with the ICU, you need to set up the Shop Activity Symptoms screen with an external identifier of 1.



Positions

If using the service request functionality with the ICU, you need to set up the Positions screen with an external identifier of 1.



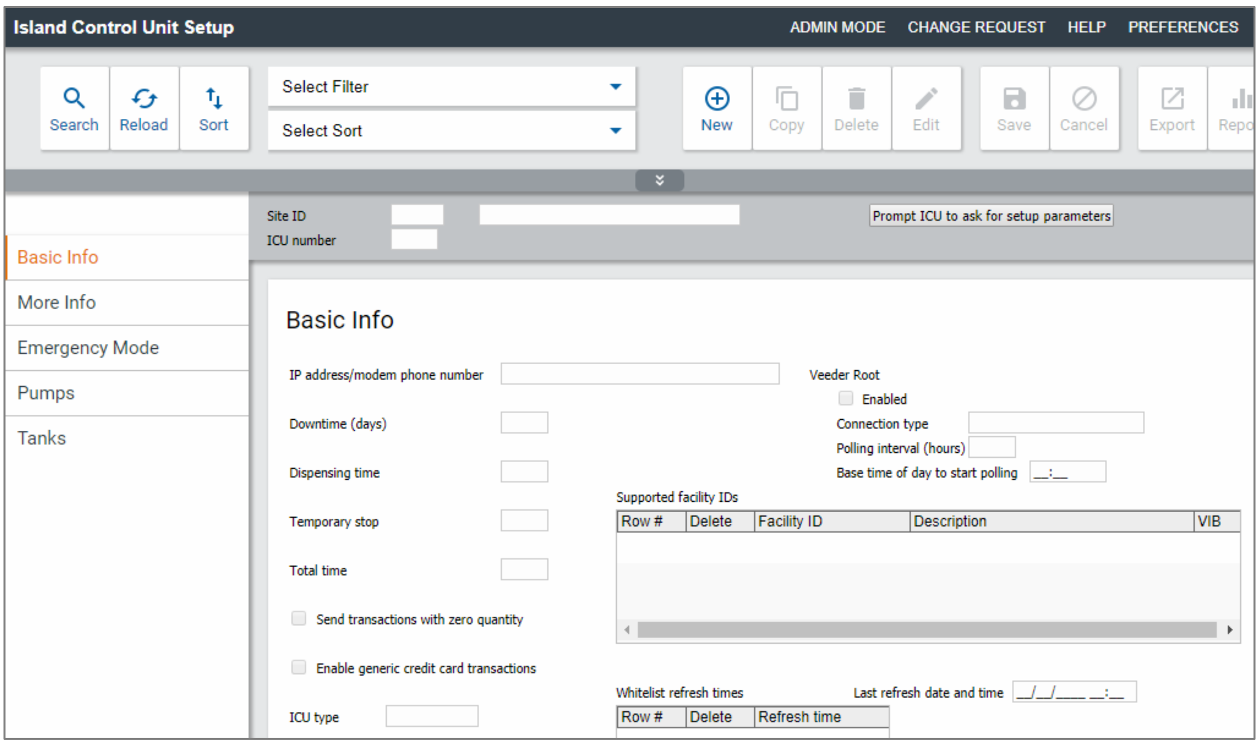
3. Additional Data Setup

These steps will be performed via remote connectivity as part of the installation services.

Island Control Units (ICUs)

The Island Control Unit Setup screen contains all the ICUs that are configured. Each ICU has a Site ID, ICU number, and IP address. Refer to your network administrator if you are unsure of the IP address.

Make sure Island Control Units are numeric (without leading zeros) as the ICUs require numeric characters. In other words, if you have ICU 1 make sure it is entered as **1** and not **01**.



Basic Info Tab

Enter the basic island control unit information as needed by your organization. For more information on each field, refer to the help on the Island Control Unit Setup screen.

The table below gives general recommended settings for some of the fields on this tab. Your organization's needs may differ. Not all fields are listed, only fields from the tab with recommended settings.

Field Name	Setting/Description
Downtime Days	Set as **0**.
Dispensing Time	Set as **60**. The time it takes, in seconds, to go from the ICU to the dispenser and turn on the handle.
Temporary Stop	Set as **30**. The time after fueling, in seconds, to top off your tank. Note: If this time is set too long, you run the risk of another car fueling from your authorized transaction.
Total Time:	Set as **600**. This is the total time, in seconds, a person has to fill the tank (if the duration is needed). If desired, check the boxes for **Send transactions with zero quantity** and **Enable generic credit card transactions**.
Polling interval	Enter the polling interval. Polling interval is how often the ICU will collect tank readings from Veeder Root. It must be a number between 0 and 1440 in minutes. Entering 0 indicates the ICU will never poll Veeder Root, while 1440 minutes will poll once a day.
Whitelist refresh times	Enter up to three Whitelist refresh times. These refresh times determine when the ICU will pull the FuelWhiteList.txt file from InfoCenter/WebModules/DataFiles. Note: If this is left blank, the ICU defaults these times to 02:00, 10:00, and 18:00.

More Info Tab

Enter additional island control unit information as needed by your organization. For more information on each field, refer to the help on the Island Control Unit Setup screen.

The table below gives general recommended settings for some of the fields on this tab. Your organization's needs may differ. Not all fields are listed, only fields from the tab with recommended settings.

Field Name	Setting/Description
Messaging	
Enable equipment notification messages:	Check this box if you would like to enable notifications to be sent to the ICU.
Send equipment service status:	Check the box if you want the vehicle's Service Status displayed on the ICU during fueling.
Send health check status notification message:	Check this box you would like to send health check status notifications. This section can display the last health check update and allows you to set the time interval between health checks.
Service Code Events	
Symptom code length	Maps to the External Identifier on the Symptoms screen. Set the Symptom Code Length to a value of 1.
Position code length	Maps to External Identifier on the Positions screen. Set the Position Code Length to a value of 1. If you are not using the service request functionality, enter a 0 for both the Symptom and Position Code Lengths. If you are using symptoms and not positions, enter a value for your Symptom Code Length and a enter 0 for your Position Code Length. If you use a two digit symptom code length and a one digit position code length (for example), entering 123 on a service request at the ICU would indicate that the symptom is 12 and the position is 3.
Repair reason	Sets the default repair reason on service requests
Authentication	
Token/GUID	Enter the token or GUID number for the Island Control Unit. If the This ID can be used for authentication purposes. Maximum length of this field is 40 characters. If the **Enable encryption** option is checked on the Fuel/Fluid Tank - Setup – Options screen, this field is required. Note: This same Token/GUID must be set on the ICU in the xml.INI file in the Global section area **authorizationGUID=[Enter Token/GUID here]**.

Emergency Mode Tab

Enter the emergency mode information as needed by your organization. For more information on each field on this tab, refer to the help on the Island Control Unit Setup screen. There are no recommended settings for emergency mode and these can be set as needed.

Pumps Tab

Enter the pumps information as needed by your organization. For more information on each field, refer to the help on the Island Control Unit Setup screen.

The table below gives general recommended settings for some of the fields on this tab. Your organization’s needs may differ. Not all fields are listed, only fields from the tab with recommended settings.

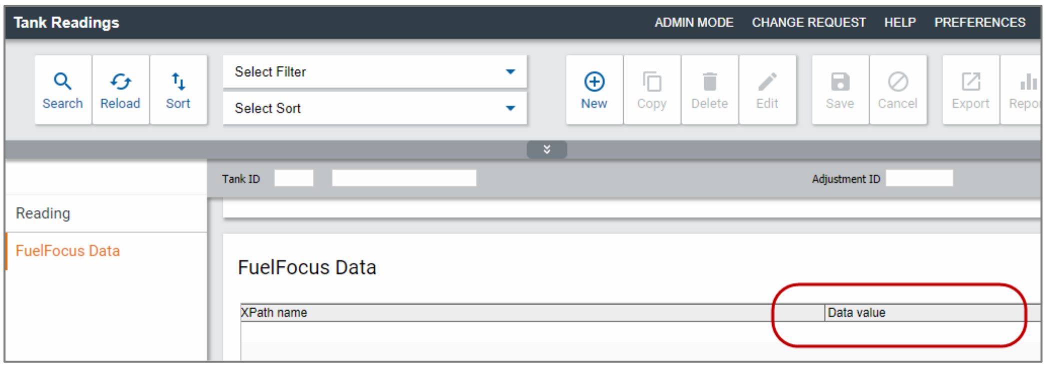
Field Name	Setting/Description
Handle	Set as **0**
Pulse ratio	Normally **10** or **100**. Most ratios are set to 10. This ratio is based on the pump type. Ask your onsite FuelFocus Installer for recommended setting.
Pump group	Enter **0** if you want all hoses to act independently of each other. Put pumps in the same group number to have multiple pumps turn on when fuel is authorized. For example, Pump group 1 authorizes diesel and any other product hose that is associated with the group.
Active	Checked if the pump is active on the ICU.
Dedicated Fuel Card ID	Enter fuel card ID if you want a dedicated pump to always be recorded against a specific fuel card.

Tanks Tab

If Veeder Root is used, complete the fields on the Tanks tab. For more information on each field, refer to the help on the Island Control Unit Setup screen.

Since the Veeder Root interface may have a different Tank ID than the one assigned to it, you must associate the Tank ID the Veeder Root uses to the Tank ID associated to this tank.

Data transferred from VeederRoot may be read on the Tank Readings screen, FuelFocus Data tab as shown below. The data can be then analyzed and may also be used to create notifications when certain data appear in the XML.



Finishing ICU Setup

Save the settings.

Now FuelFocus is configured with rights to process pending fuel transactions.

Custom ICU Meter Prompts

Meter prompts can be customized on the ICU. To customize meter prompts, an equipment unit must have a meter class assigned to it, and that meter class must have a meter type set up.

If the ICU cannot connect to the asset management system and must use a whitelist, the prompts will be truncated to 16 characters.

To customize the meter prompts on the ICU:

1. Open the Meter Types Enterprise Portal screen.
2. Search for the meter type record or create a new meter type using the help for this screen as necessary.
3. For that meter type, enter a **Meter prompt message** as it needs to display on the ICU.
4. Click **Save**.

4. Installing/Upgrading FuelFocus

These steps will be performed via remote connectivity as part of the installation services.

Please refer to the *Administrator Guide, Install and Configure Web Modules* section for instructions on installing and upgrading web modules.

Depending on your organization's requirements, you may also choose to run additional scripts from the following table:

Script File Name	System Version	What it does	When to use
Add_Index_EQ_Fueltype.sql	5.8.x thru 5.7.x	Adds an index on the Fuel type table for the equipment ID and group row ID. This is needed for retrieving fuel type.	This is required for all organizations that are using version 5.7.x through 5.8.x.
Add_Position_ExternalId.sql	5.7.x and older	Adds an external identifier to the Position Id.	If the organization plans on using the additional ICU prompting for symptom codes and/or position IDs.
fix_veederroot.sql	5.7.x and older	To expand the Veeder Root - "Connection Type" and have it take characters.	If the organization plans to use Veeder Root interface to track fuel tank levels.

Using the appropriate method for your DBMS, execute the following SQL scripts (found by default in your C:\AssetWorks\FASuite\InfoCenter\Web\FAFuelFocus\dbinit directory):

For Oracle databases:

1. Open a Command Prompt
2. Navigate to the install directory, then to the web\FAFuelFocus\dbinit\Oracle directory.
3. Type the following for your desired scripts:

   sqlplus emsdba/emsdba@<tnsname> <@scriptfilename>

   Where <tnsname> is the name of the Oracle database and <@scriptfilename> is the name of the script file.

   Example: sqlplus emsdba/emsdba@fa @ Add_Index_EQ_Fueltype.sql

For Microsoft SQL (MSSQL) databases:

1. Open the Query Analyzer and log in as emsdba.
2. Navigate to the install directory, then to the web\FAFuelFocus\dbinit\MSSQL directory.
3. Execute the desired scripts by typing the file name as indicated in the above table. For example, you would type: fix_veederroot.sql.

You have now completed the FuelFocus installation or upgrade. If you installed FuelFocus, you need to add a tab to Web Modules. Please continue to the next section, *Add a FuelFocus Tab to Web Modules*. *Otherwise, please skip to Section 7,* *Wireless Automated Fueling (WAF)*.

5. Add a FuelFocus Tab to Web Modules

A FuelFocus tab must be created for FuelFocus to process pending transactions. This tab allows the Administrator to assign the authority to process fuel transactions to a User ID.

Please refer to the *Administrator Guide, Web Modules Configuration - Adding Modules and Tabs* section for detailed instructions on adding new tabs and configuring security access for those tabs.

6. Wireless Automated Fueling (WAF) Configuration - Optional

These steps will be performed via remote connectivity as part of the installation services.

Wireless Automated Fueling is an optional add-on. This technology uses the concept of a master ICU that is associated with slave ICUs. The master ICU is the ICU with the WAF antennae attached to it. This is the ICU that handles all communication between FuelFocus and the equipment units. The master ICU then communicates information to the slave ICUs.

Additional files need to be configured for the correct information to be passed from the master ICU to the slaves. To use WAF technology with FuelFocus, follow the configuration steps as shown in the example below.

Setup Required on the Master ICU

The instructions below refer to a site with 4 ICUs (1 master and 3 slaves) and a total of 26 pumps.

1. If there are more than 16 hoses at one site you will need to edit the **c:dda\station\vsu\PC2IDHF.INI** file and set the Max_Vehicles parameter as indicated:

   [general]
   Max_Vehicles=26

2. Open the file **c:\dda\station\procman.ini** and ensure the process types below are configured to run (i.e., not commented out).

   dda.exe
   pos.exe
   usa_xml.exe
   pc2idr.exe
   pipemux.exe
   router2k.exe

   i. A process ***configured to run*** would look like the following:

      [PROCESS 4]
      Type=KEEP_ALIVE
      Prog=vsu\pc2idr.exe

   ii. Whereas, a process ***not configured to run*** in the procman.ini file (commented out) would look like the following:

      //[PROCESS 4]

//Type=KEEP_ALIVE
//Prog=vsu\pc2idr.exe

3. Edit the **c:dda\station\AssetWorks\pipemux.ini** file and list each ICU (computer_x) with its IP address in the [Computers] section. Set the computer_x IP for the "master" to be 127.0.0.1. In the [Pumps] section, map the hose numbers to the computers.

   The following example refers to a site with 4 ICUs and 26 hoses.

   ----------------------------- c:\dda\station\AssetWorks\pipemux.ini ---------------------------------

   [Globals]
   BufferSize=1024
   LocalPipeName=PS
   LogDir=C:\dda\Station\Log

   [Computers]
   Computer_1=142.15.119.41
   Computer_2=142.15.119.42
   Computer_3=127.0.0.1
   Computer_4=142.15.119.43

   port=3046

   Hose #
   [Pumps]
   Pump_1=1
   Pump_2=1
   Pump_3=1
   Pump_4=1
   Pump_5=1
   Pump_6=1 Computer #
   Pump_7=2
   Pump_8=2
   Pump_9=2
   Pump_10=2
   Pump_11=2
   Pump_12=2
   Pump_13=3
   Pump_14=3
   Pump_15=3
   Pump_16=3
   Pump_17=3
   Pump_18=3
   Pump_19=3

Pump_20=4
Pump_21=4
Pump_22=4
Pump_23=4
Pump_24=4
Pump_25=4
Pump_26=4

---------------------------------- end of procman.ini --------------------

4. Restart Procman.

Setup Required on the Slave ICUs

Make sure the processes below are uncommented out in the **C:\dda\station\procman.ini** file (modify if necessary):

dda.exe
pos.exe
usa_xml.exe
router2k.exe

After making all the required changes on each ICU, stop, and restart ProcMan on each ICU.

You have finished configuring FuelFocus for WAF technology.

7. Integrate the ICU with the FuelFocus Module

These steps will be performed via remote connectivity as part of the installation services.

For the ICU to communicate with the system database, it must be configured to locate and communicate with the FuelFocus module.

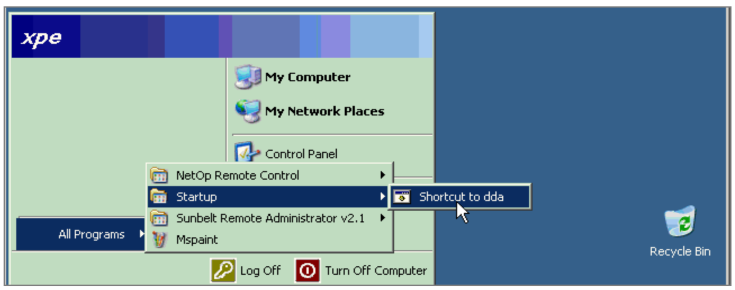
1. Connect to the ICU using TightVNC which is provided by the FuelFocus Installer.

   The default password for the Remote Administrator is 12345678.

2. If ProcMan is running, close it. This will also close all child processes running.

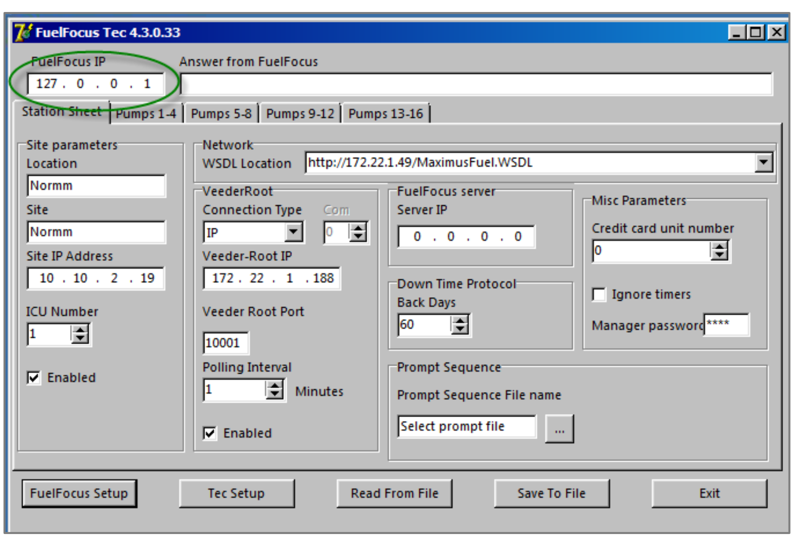
3. If TecProg is running, close it.

4. Start ProcMan by going to Start ➡ Programs ➡ Startup and run the shortcut to dda.exe file or click on the computer icon in the task bar.

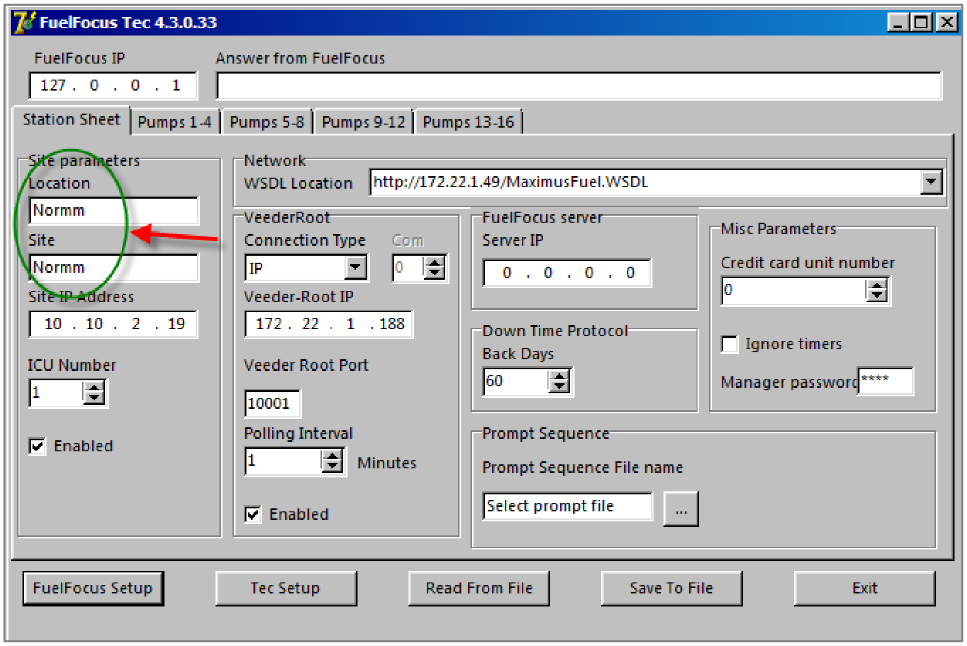


5. Minimize all screens and start TecProg  by double-clicking it from the desktop of the ICU, or clicking on the icon in the task bar.

6. The FuelFocus screen will appear. In the upper left corner of this screen, set the RFC-2500IP to 127.0.0.1 (if it is not already set accordingly).



7. Set the Location and Site Name to match the values established. The Location and Site are the Site ID on the Pumps screen (**Data** ➡ **Fuel/Fluid Tanks** ➡ **Setup** ➡ **Pumps**).

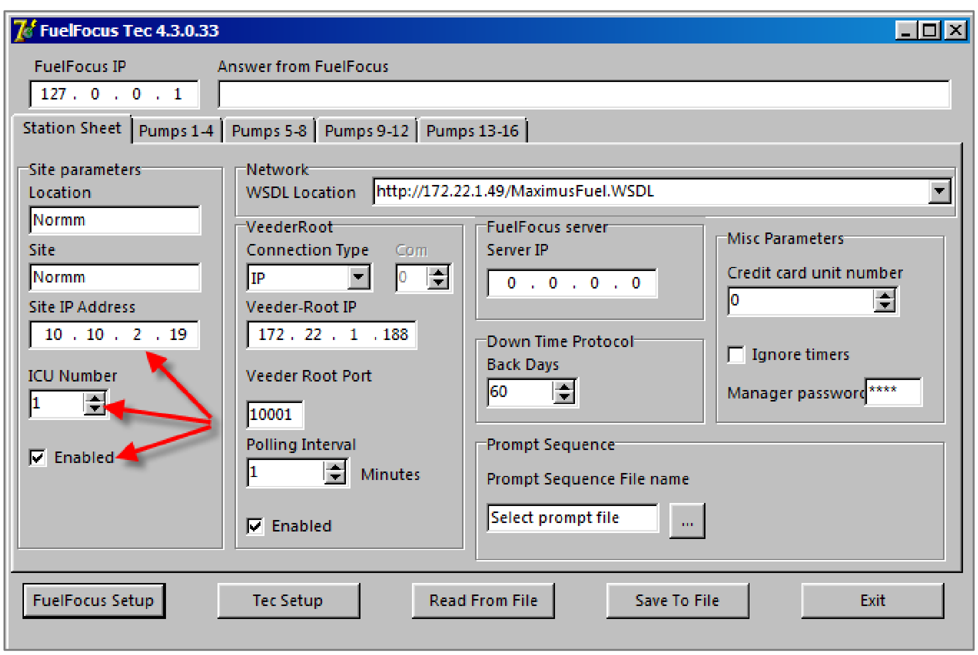


8. Enter the IP Address of this ICU in the Site IP Address field.

This MUST be a static IP address or DHCP reservation address.

9. Enter the ICU Number in the ICU field.

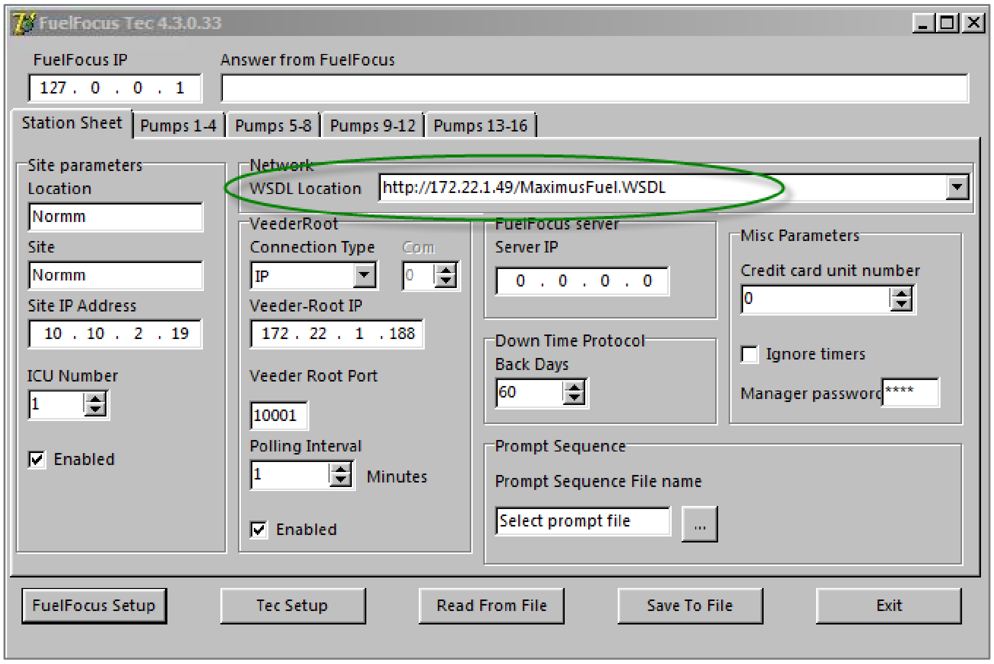
10. Check the Enabled checkbox in the Site parameters section of the screen.



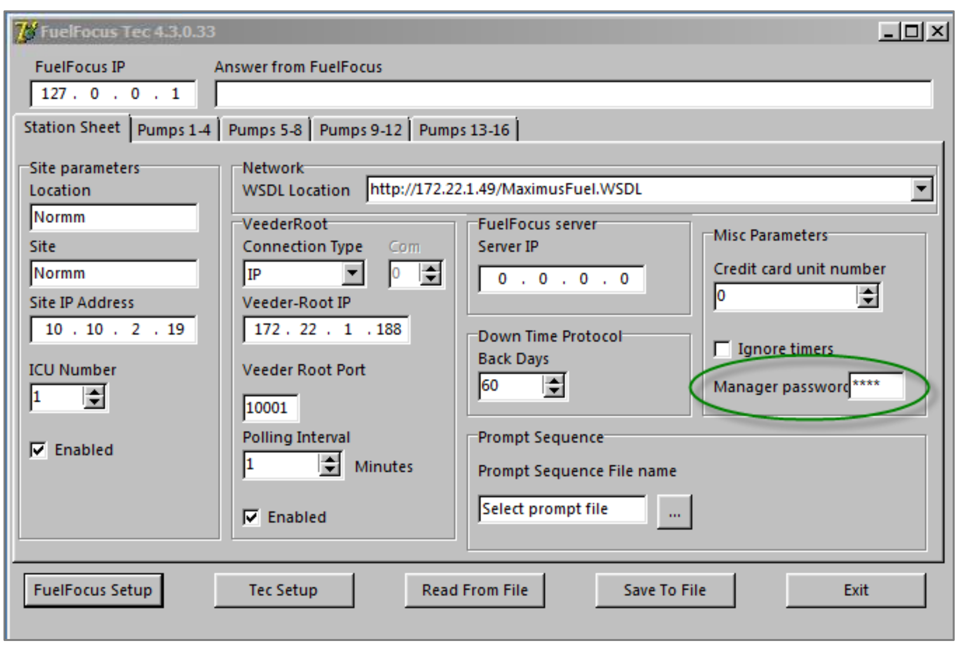
11. Set the Network Server IP Address to:

    http://<IC_SERVER>/<IC_ALIAS>/FAFuelFocus/FuelFocus.asmx?WSDL

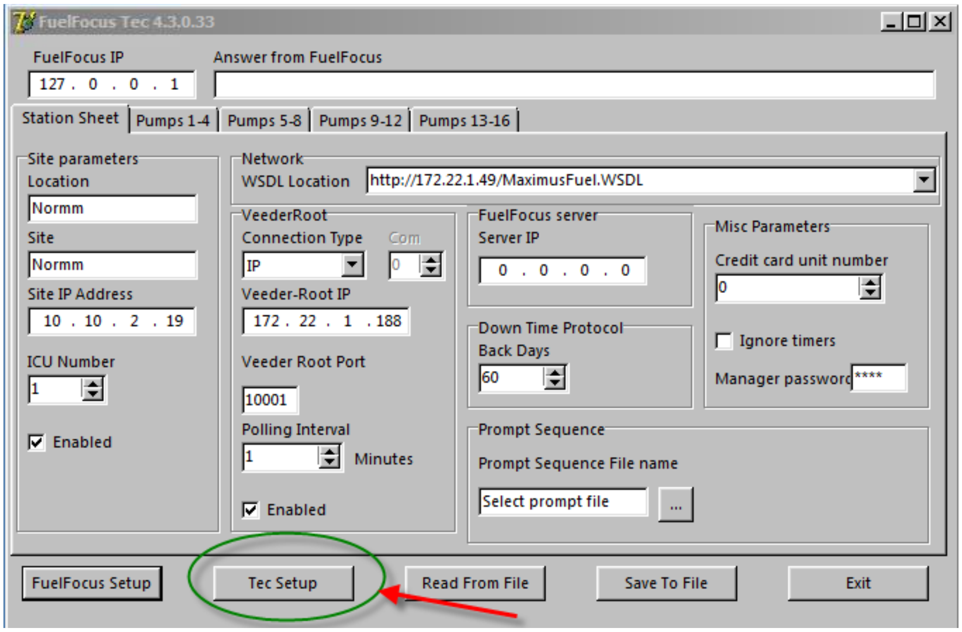
    Where IC_SERVER is the IP Address of the Web Modules Server and IC_ALIAS is the virtual directory name of the Web Modules Instance.



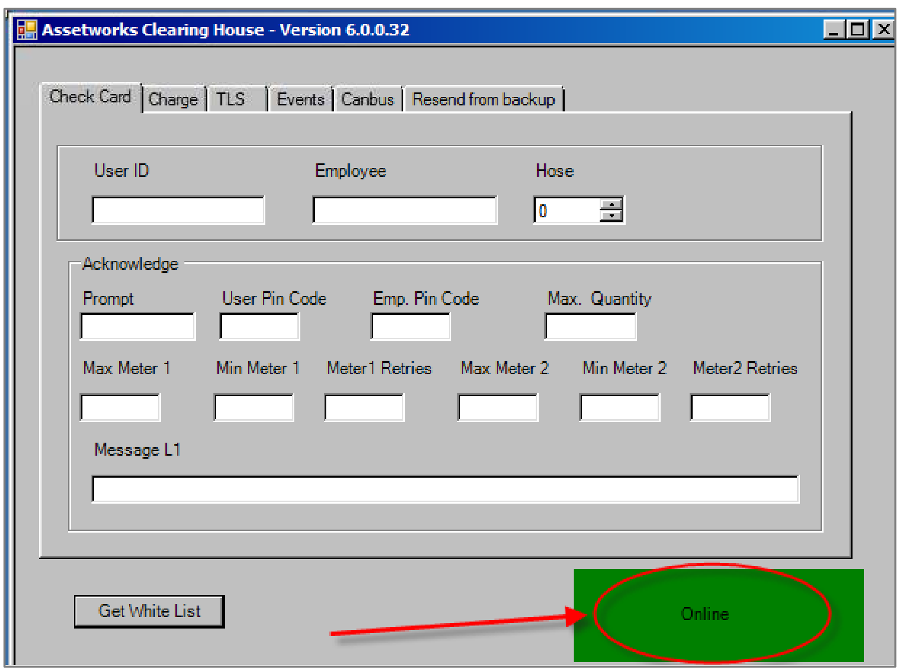
12. Set the **Manager Password**. The password is a four character numeric field.



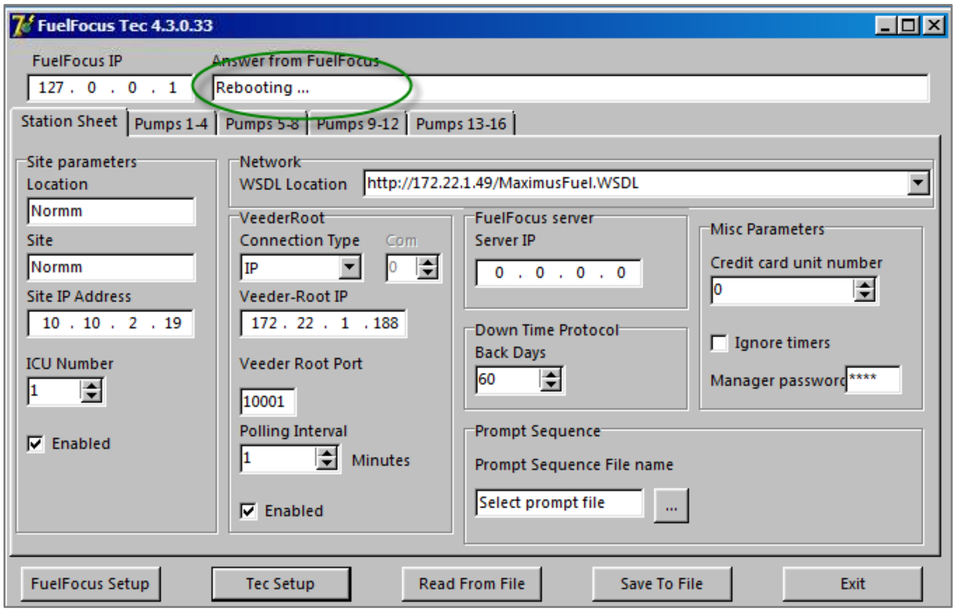
13. Click **Tec Setup** to configure the ICU.



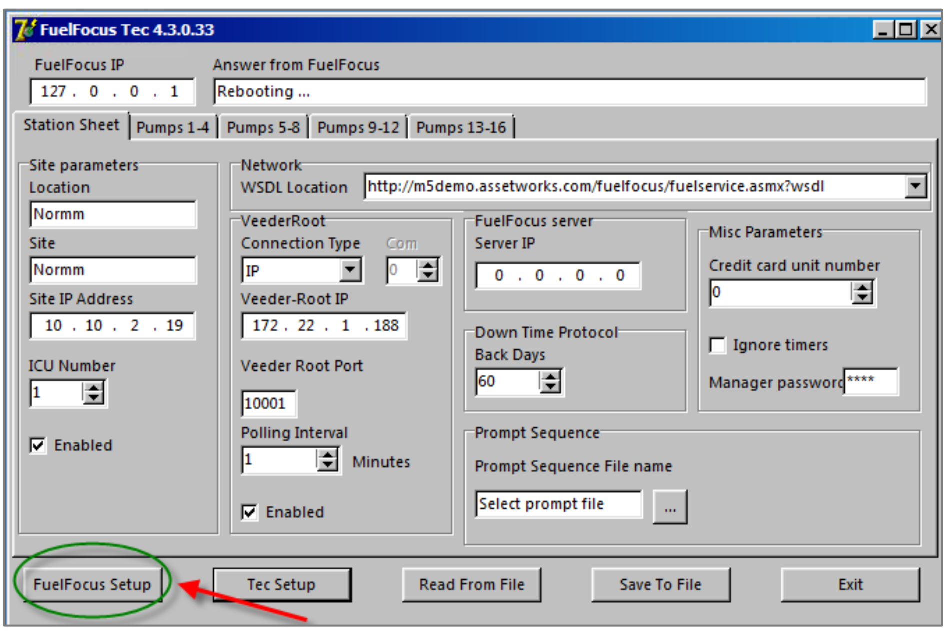
14. Once the Clearing House screen appears, verify that it indicates the system is online then minimize the screen. If it is offline, contact support by referring to the Technical Support section at the beginning of this document.



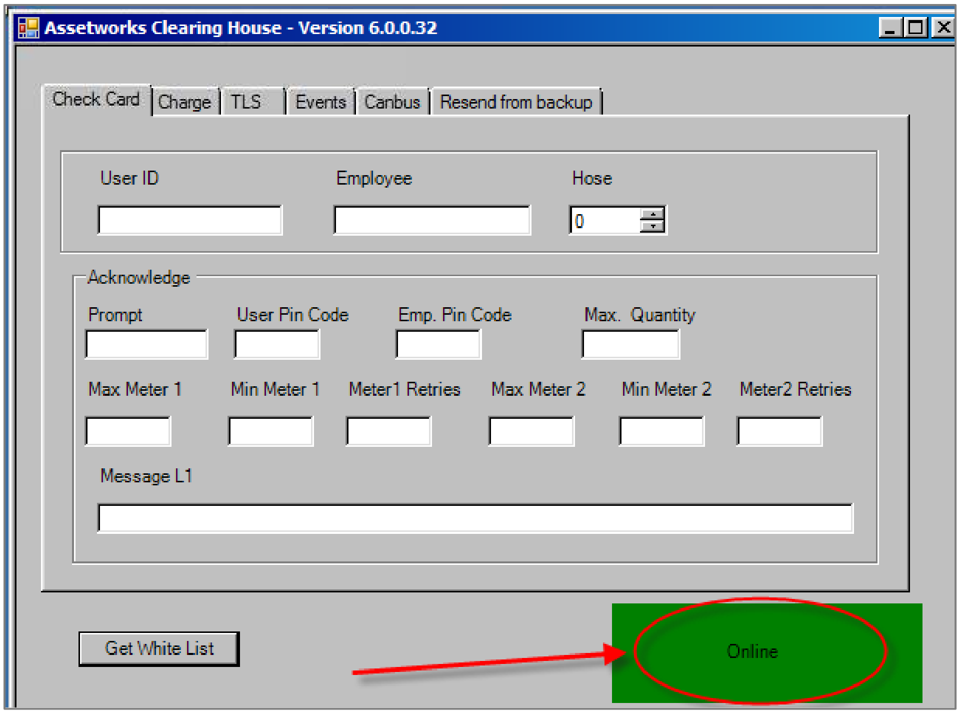
15. On the FuelFocus screen, the Answer from FuelFocus field should display **Rebooting…** if the ICU configuration was successful. **Rebooting** indicates that the ICU is successfully creating xml files on the ICU for data configuration. If anything else is displayed in this field, contact Customer Support.



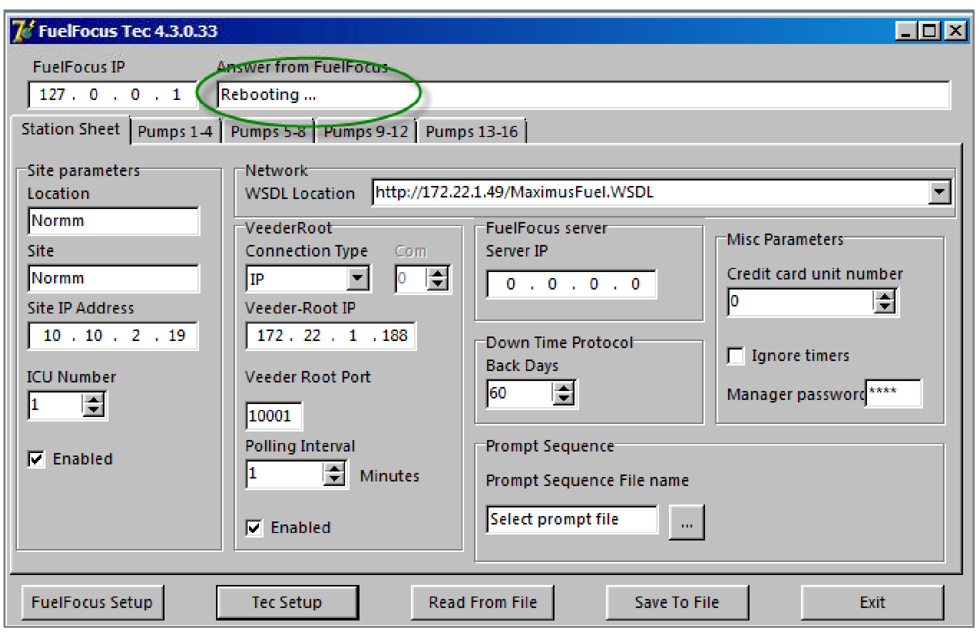
16. Click the **FuelFocus Setup** button to configure the ICU to communicate with the FuelFocus module. At this point, TecProg gathers and stores the fuel setup information to use during fuel transaction processing.



17. The Clearing House screen appears again. Verify that it indicates the system is online then minimize the screen. If it is offline, contact support by referring to the Contact Information section below.



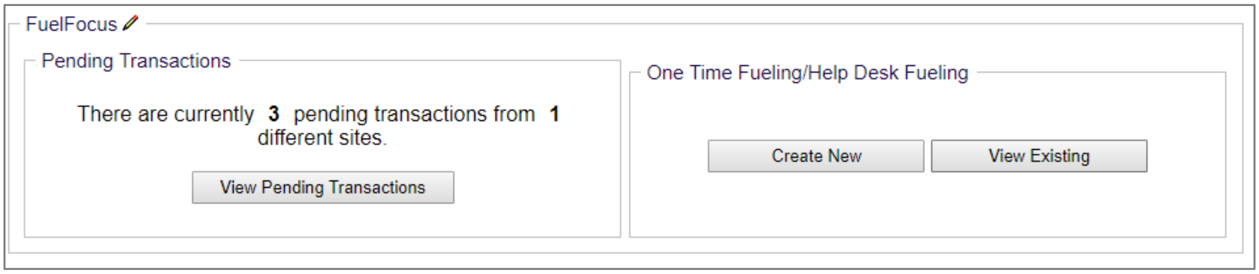
18. The Answer from FuelFocus field should display **Rebooting…** if the connection was successfully established. If anything else is displayed in this field, contact Customer Support.



You have now finished installing, configuring, and integrating the FuelFocus module.

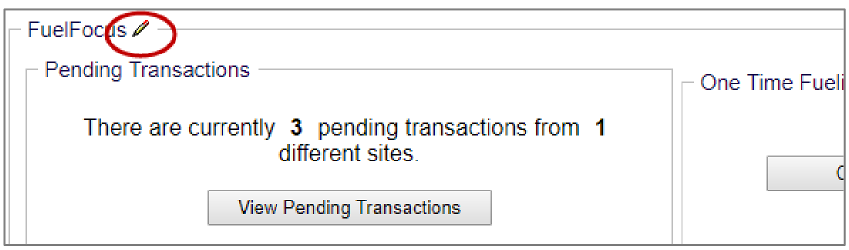
8. FuelFocus Module

The FuelFocus module allows you to edit settings for FuelFocus, work with transactions, and set up and use one-time fueling and help desk fueling options.



FuelFocus Settings

Click the edit pencil on the main page of the FuelFocus Module to open the settings page.



Authentication Options

The following settings are also available on the Fuel/Fluid Tanks – Setup – Options Enterprise Portal screen.

Use Encryption: Check this option to enable validations to be performed when transactions are received on the server from the ICUs. The validation data is found in the encrypted header values.

Use HTTPS: If the web server has been set up to use HTTPS, check this to enable the encryption to correctly receive header values when HTTPS is in use.

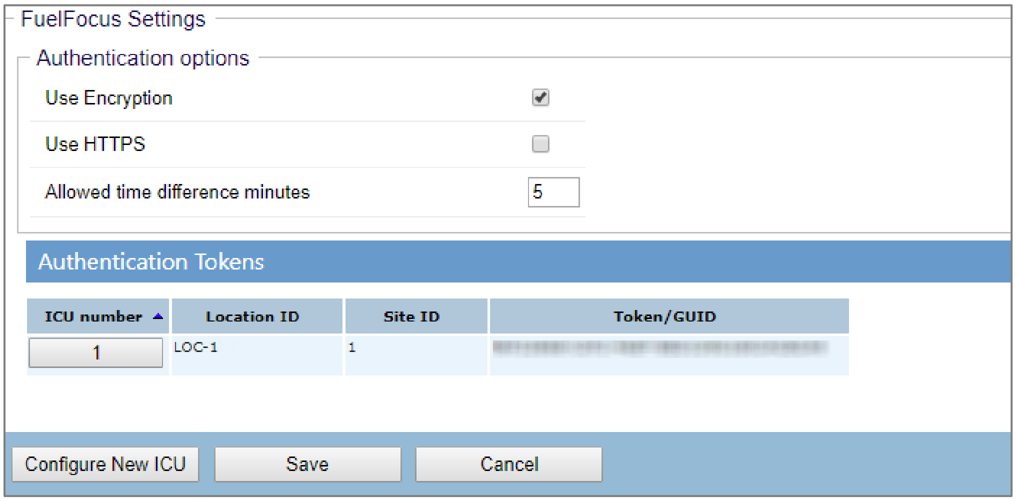
Allowed time difference minutes: Enter a time (in minutes) to set a time buffer for the ICU signature. This allows for a buffer time between the ICU and the server in case of slight variances in time settings. If there is no additional buffer time (the default is 1 minute), if the two times do not match, the server does not consider the signature as a valid entry.

Authentications Tokens

To add or edit an authentication token:

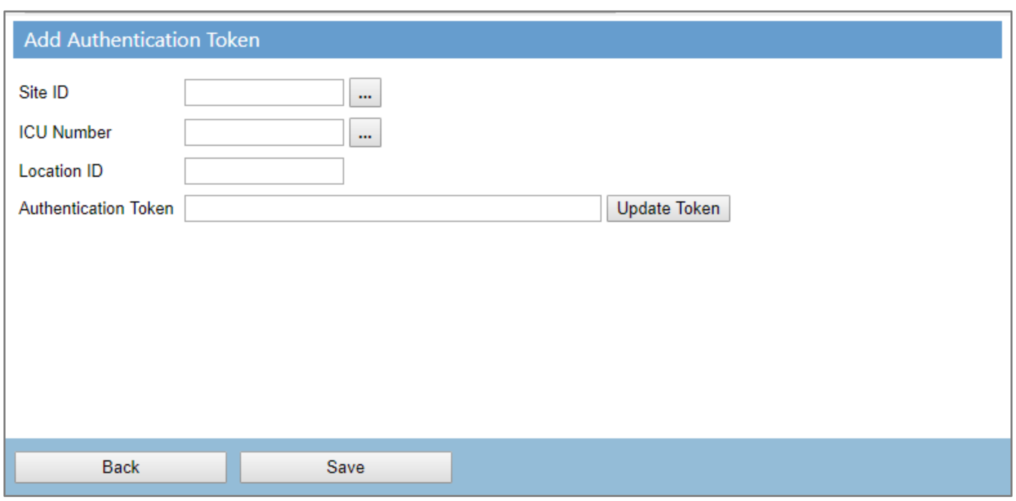
1. From the main FuelFocus page, click the edit pencil.

   The FuelFocus Settings page displays.



2. Click the **ICU number** column button to edit an ICU token, or click **Configure New ICU** to add a new token.

   The Add Authentication Token or Authentication Token Edit page displays.



3. Edit or enter correct information in the **Site ID**, **ICU Number**, and **Location ID** fields. Use the chooser buttons to help find the correct entries for these fields.

4. Click **Update Token** to auto-generate an authentication token for a new authentication token.

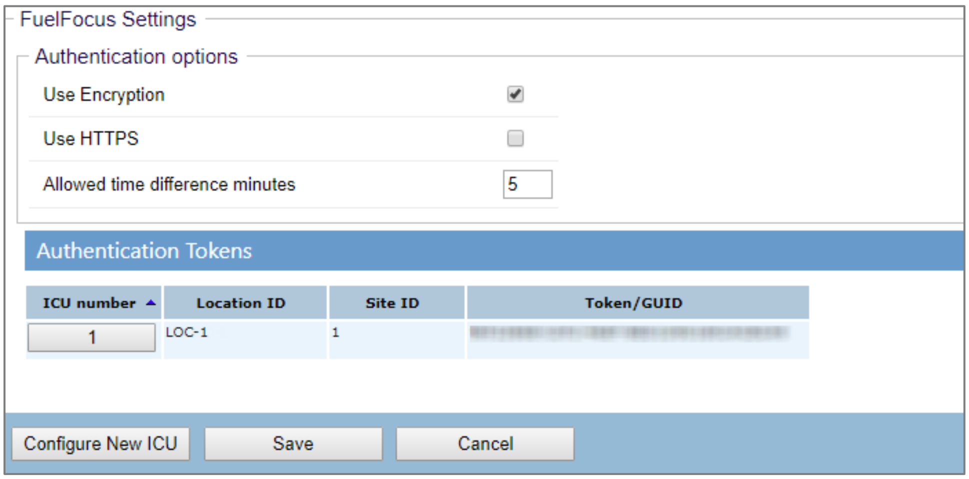
5. After completing the fields, click **Save** to save the edits or new ICU, or click **Back** to exit without saving.

   The new ICU displays in the Authentication Tokens list.

To remove an authentication token:

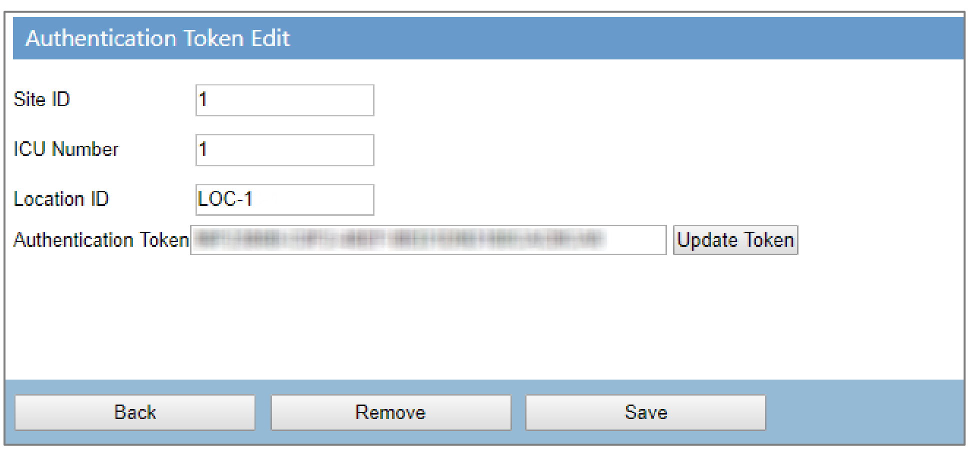
1. From the main FuelFocus page, click the edit pencil.

   The FuelFocus Settings page displays.



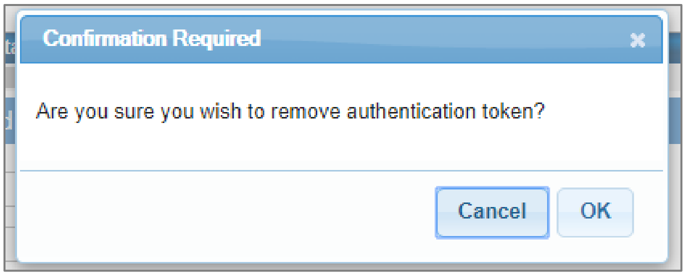
2. Click the **ICU number** column button next to the token you need to remove.

   The Authentication Token Edit page displays.



3. Click **Remove**.

4. A confirmation message displays.



5. Click **OK** on the Confirmation Request pop-in to remove the token, or click **Cancel** to cancel the removal and keep information as is.

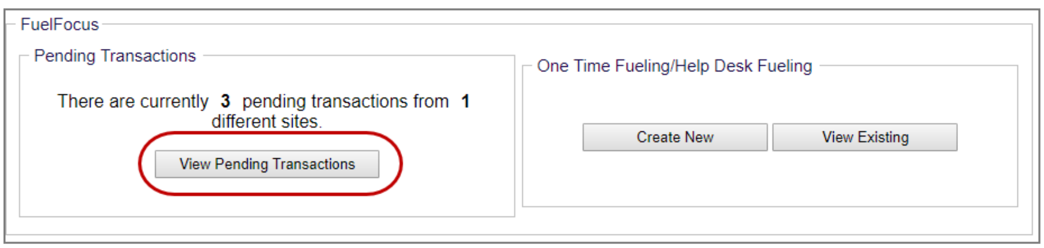
   The token is removed from the list.

Managing Transactions

When fuel transactions are unsuccessfully process, they are added into the Pending transaction list.

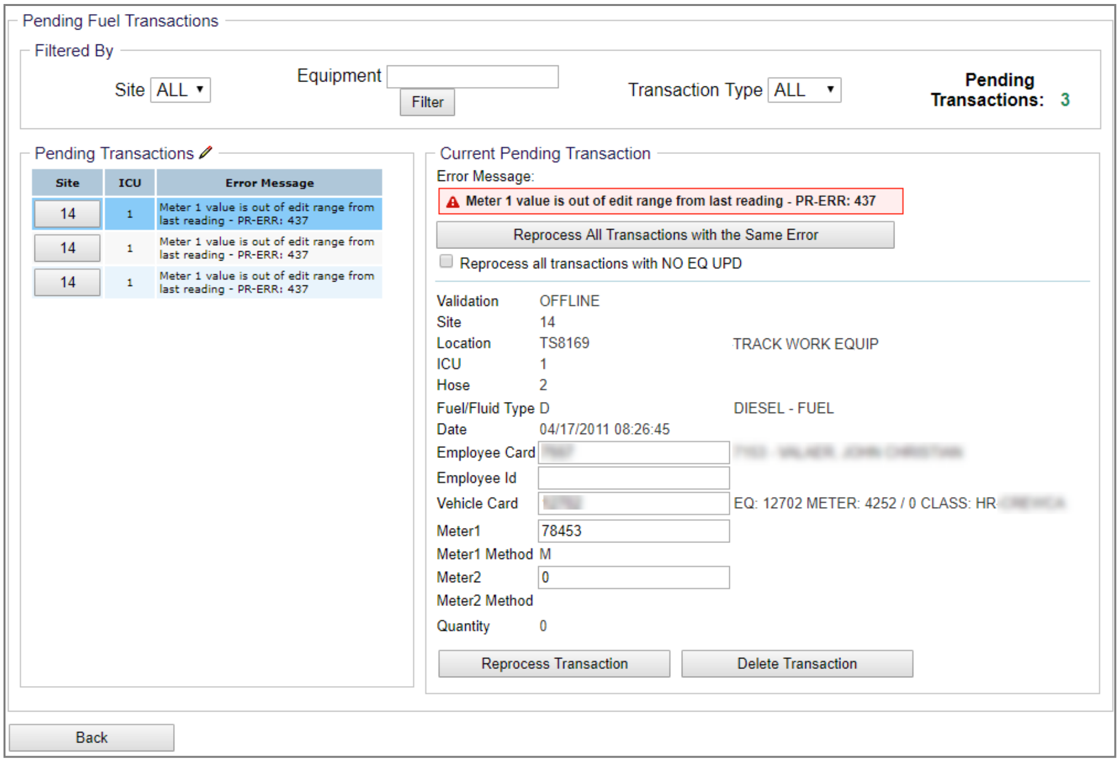
To view pending transactions:

On the main FuelFocus portal page, click **View Pending Transactions**.



The Pending Transactions page has three sections:

- Filtered By: Filter transactions and limit the transactions viewed in the list
- Pending Transactions: The list of actual pending transactions
- Current Pending Transaction: Detailed information on the selected transaction in the Pending Transaction section

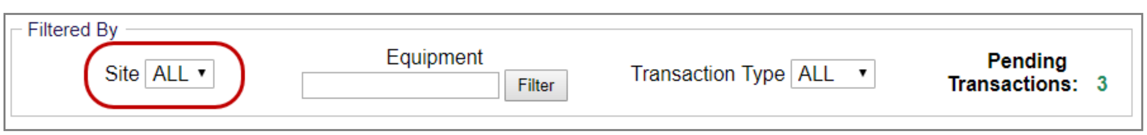


Filtering Transactions

Use the available filtering options to reduce the list of available transactions to those that pertain to your current needs. Filter options include filtering by site, equipment ID, and transaction type. Select which sites to filter for the pending transactions list. The Pending Transactions are the transactions left after filtering out unwanted issues.

To filter transactions:

1. On the Pending Fuel Transactions page, to select a site, click the **Site** drop-down menu.



2. Select the fuel site to use for the filter. Select **ALL** to use all locations available to the logged-in user, or an individual site for transactions only applying to that transaction site.

   The list updates automatically once a site is selected.

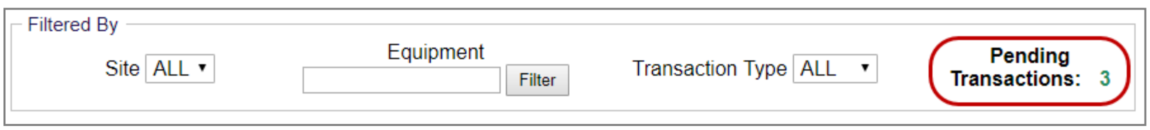
3. Enter the Equipment ID to see transactions posted for a specific equipment ID. The wild card **%** may be used to filter on equipment IDs that match part of the entry.

4. Click **Filter** after entering an equipment ID to update the transactions currently displayed.

5. To select a transaction type, click the **Transaction Type** drop-down menu. This drop-down only displays the available transaction types in the list of transactions. If there are only fuel type transactions in the list, only ALL and FUEL will display as options.

The list is updated when a transaction type is selected.

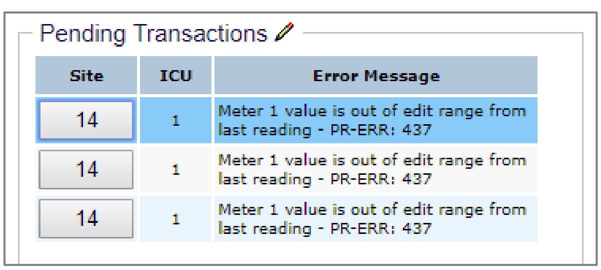
The Pending Transactions number updates as new selections are chosen.



Pending Transactions

The Pending Transactions section shows all the transactions existing within the selected filter. The list includes the Site, ICU and Error Message.

Click the needed **Site** button to display the particular transaction in detail on the right side of the page (in the Current Pending Transaction section).


Pending Transactions

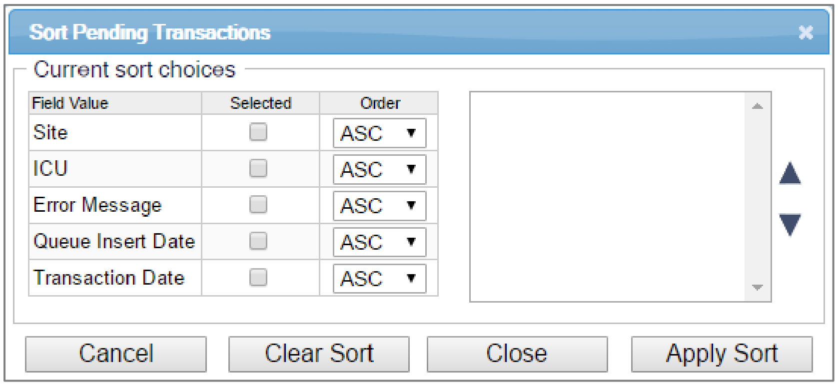
Site	ICU	Error Message
14	1	Meter 1 value is out of edit range from last reading - PR-ERR: 437
14	1	Meter 1 value is out of edit range from last reading - PR-ERR: 437
14	1	Meter 1 value is out of edit range from last reading - PR-ERR: 437

Pending Transactions Settings

To edit the settings for sorting transactions:

1. Click the edit pencil in the Pending Transactions section.

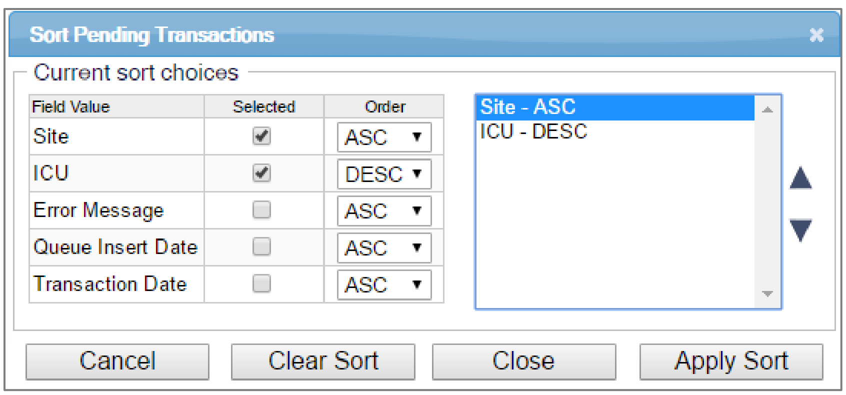
   The Sort Pending Transactions pop-in displays.



2. For the needed **Field Value**, select an order in the **Order** column (ASC or DESC).

3. In the **Selected** column, check the checkbox next to the needed field value to edit.

4. As you check the boxes, the sort options are added to the right side with the descriptor of **ASC** or **DESC**.



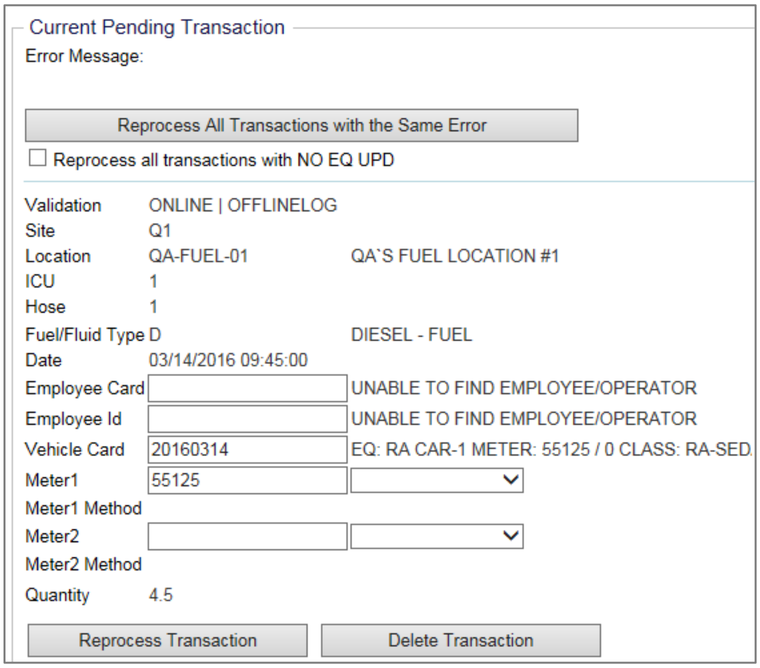
5. To move the individual items up or down in sort priority, select an item and click the up or down arrow on the right to move the item.

6. Click **Clear Sort** to clear the fields if you need to start over.

7. Click **Apply Sort** to apply the sort to the pending transactions, or click **Cancel** to close the pop-in without saving changes.

Current Pending Transaction

The Current Pending Transaction section displays specific transaction details and allows you to choose how to handle fuel transactions.



The Error Message displays at the top of the section.

Use the **Reprocess All Transactions with the Same Error** when a correction has been made in the GUI that caused a certain error. Once the correction is made in the GUI and this button is selected, all the transactions that had the same error are reprocessed.

In the event that meter readings were entered incorrectly and caused error messages do the following:

1. Go into one of transactions
2. Update the meter with the correct reading.
3. Select the checkbox for Reprocess all except current transaction with NO EQ UPD.

   The transaction you updated will reprocess based on the updated meter reading. The rest of the transactions are performed but the meter reading is ignored.

   The rest of the Current Pending Transaction section provides specific details about the selected transaction including the following:

Transaction	Description
Validation	Indicates how the ICU validated the employee fuel card or equipment fuel card prior to allowing fueling (ONLINE, OFFLINE, BYPASS, MGRBYPASS, NONE).
Site	Fueling site the transaction occurred
Location	Location of system
ICU	The particular ICU
Hose	Hose number
Fuel/Fluid Type	Code for fuel
Date	Transaction date
Employee Card	Fuel Card ID number for the employee
Employee ID	Employee's ID number
Vehicle Card	Fuel Card of the Equipment ID
Meter 1	Meter 1 reading entered on the ICU
Meter 1 dropdown	**Blank:** It will attempt to update the record, **EQ UPD**: It will update the Fleet Equipment record with the meter reading, **NO EQ UPD**: It will not update the FleetEquipment record with the meter reading.
Meter 1 Method	How Meter 1 was entered (M=Manual, W=Wireless)
Meter 2	Meter 2 reading entered on the ICU
Meter 2 dropdown	**Blank:** It will attempt to update the record, **EQ UPD**: It will update the Fleet Equipment record with the meter reading, **NO EQ UPD**: It will not update the FleetEquipment record with the meter reading.
Meter 2 Method	How Meter 2 was entered (M=Manual, W=Wireless)
Quantity	Amount of fuel dispensed

4. Make the desired changes and then do one of the following:

    i. Click **Reprocess Transaction** to reprocess the specific transaction.

    ii. Click **Delete Transaction** to delete the transaction.

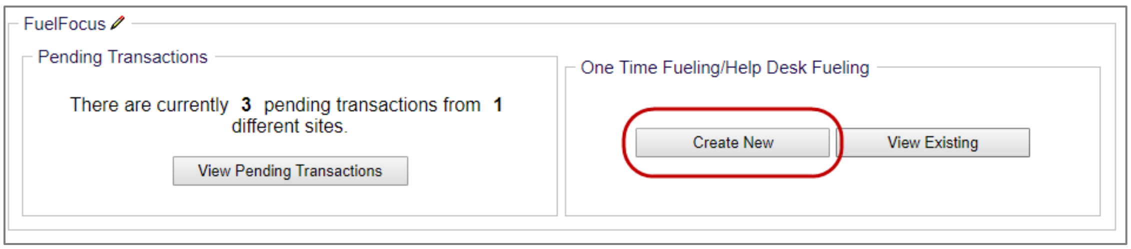
    iii. Click **Back** to return to the Main FuelFocus page.

One Time Fueling/Help Desk Fueling

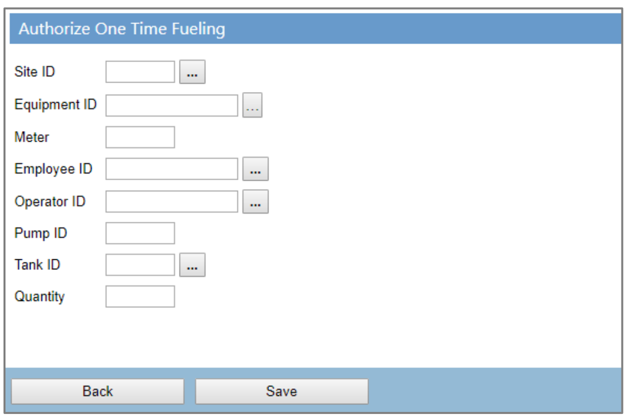
The FuelFocus module allows you to set up an authorized one time fueling access, or view current access information. This functionality allows an operator or employee, who does not have their fuel card with them, to get a single-use code for fueling at an ICU. The operator or employee calls in to a manager or authorized system user for this code. Use the following process to create a one-time code in the system.

To set up one-time fueling:

1. From the main page, click **Create New**.



The Authorize One Time Fueling page displays.

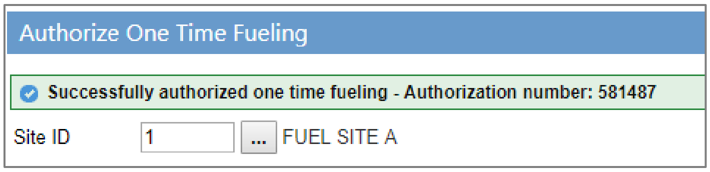


2. Fill out the form with the information from the operator or employee.

   Note: All fields are required for the fueling. You must enter an Employee ID or Operator ID, but you cannot enter both.

3. After completing the form, click **Save**. Or, click **Back** at any point to exit the form without saving changes.

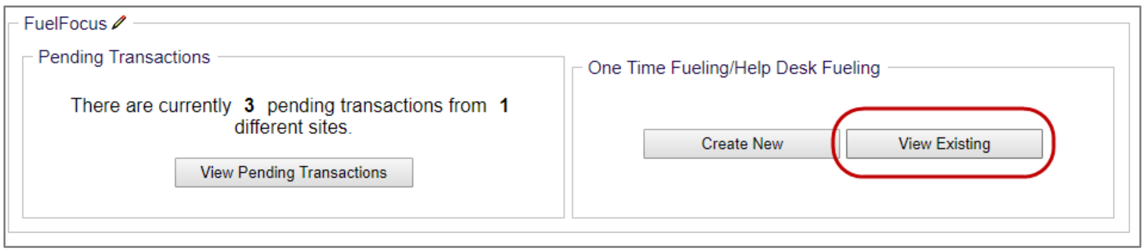
   If there are no errors, an authorization code displays to give to the operator or employee. If there are errors, fix the errors and re-save the form.



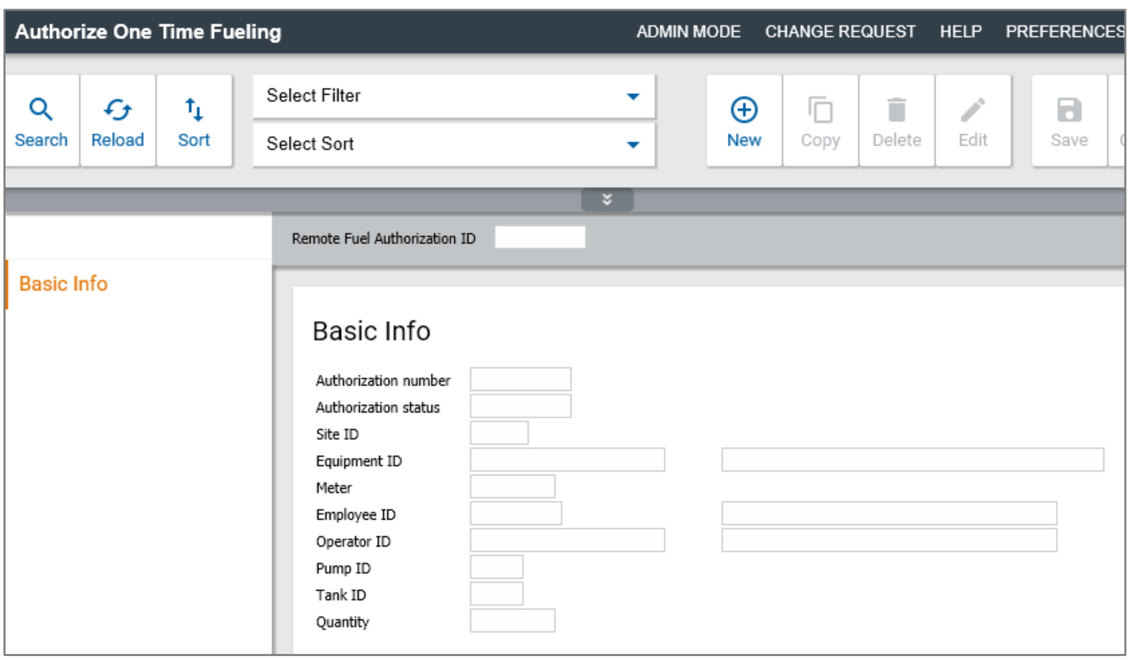
This authorization code is good for one fueling session. Once the code is entered and a successful fueling occurs, the code is set as COMPLETED in the system and is no longer usable.

To edit or view one-time fueling authorizations:

1. From the main page on the FuelFocus portal, click **View Existing**.



The Authorize One Time Fueling Enterprise Portal screen opens.



2. Search for the necessary record.
3. View or edit the record as needed.
4. Click **Save**, or close the screen when you are done.

Running a Query for Fuel Data

You can query information for fuel data as needed. Before you can run a query for transaction data, you must allow permissions for running the query. For more information on running a query or adding permissions, refer to the *AdHoc Query Administrator Guide* documentation.

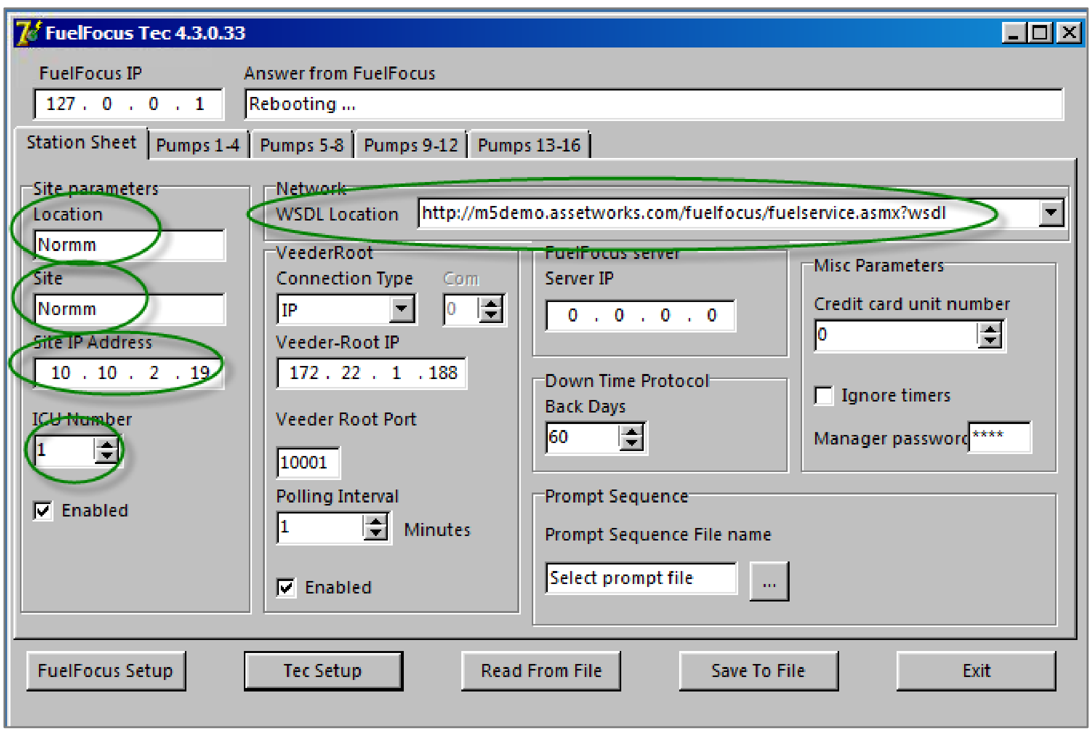
Appendix A. Upgrading the ICU Software - Optional

This appendix outlines how to upgrade the ICU software. This section includes information you will need to have on hand for an optional upgrade as well as steps required to upgrade the software.

A.1 Information Needed for the Upgrade

To make the upgrade go smoothly, locate and write down the following information:

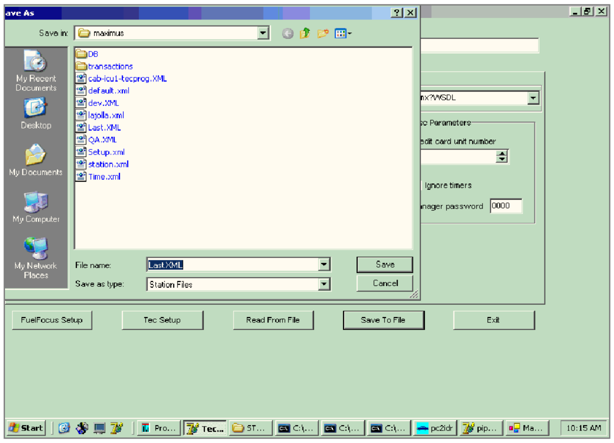
- The location, site, IP address, ICU number, and the WSDL location of each ICU. This information is located in the TecProg screen as indicated in the screenshot below.



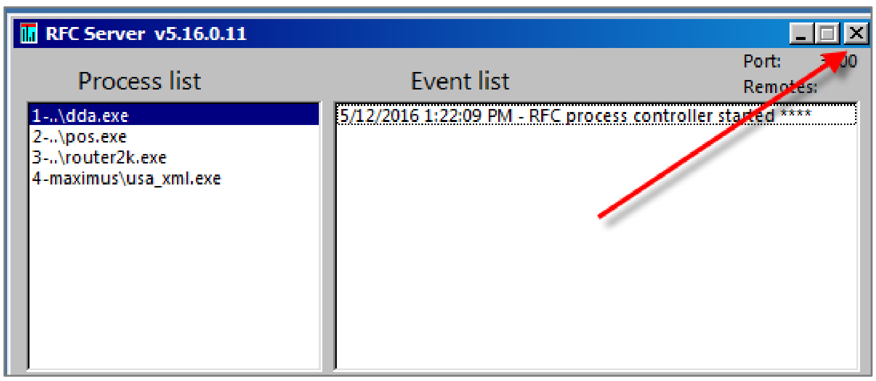
A.2 ICU Software Upgrade Steps

To upgrade your ICU software:

1. Save a copy of the DDA folder to another server.
   - Open Tec Setup and save the current ICU setup to file. Make sure to note where you have saved this file to use below.

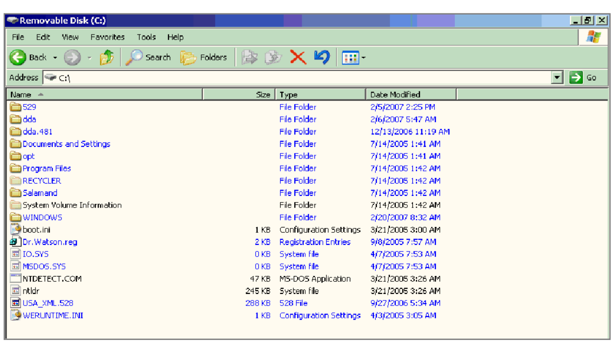


2. Close Tec Setup and stop the current instance of ProcMan.



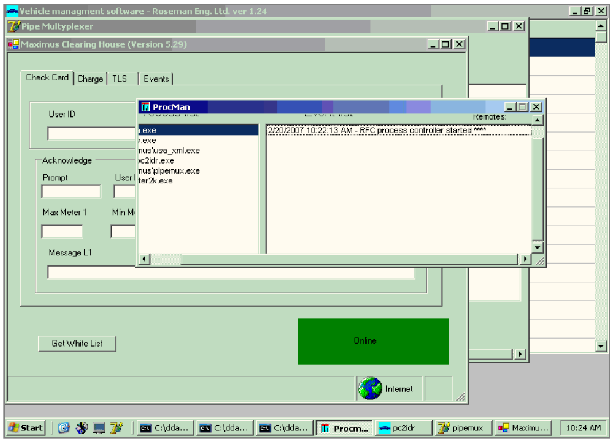
3. Rename the current DDA folder to DDA.OLD.

4. Move the installshield to the ICU and run the installshield following the upgrade and installation procedures.

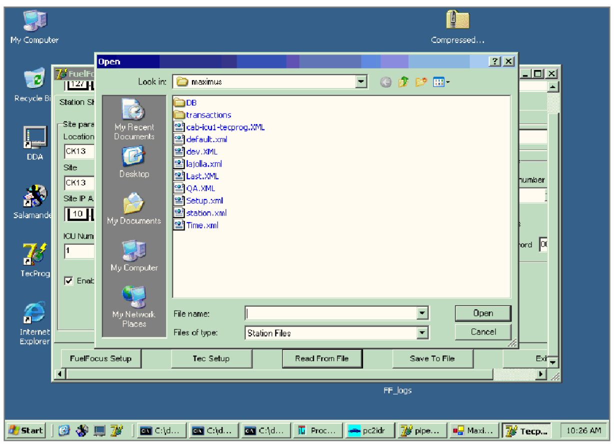


5. **OPTIONAL:** Follow the [WAF setup steps](#).

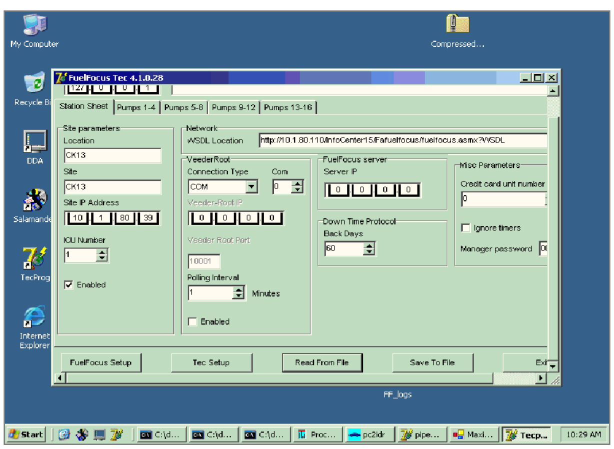
6. Start ProcMan.



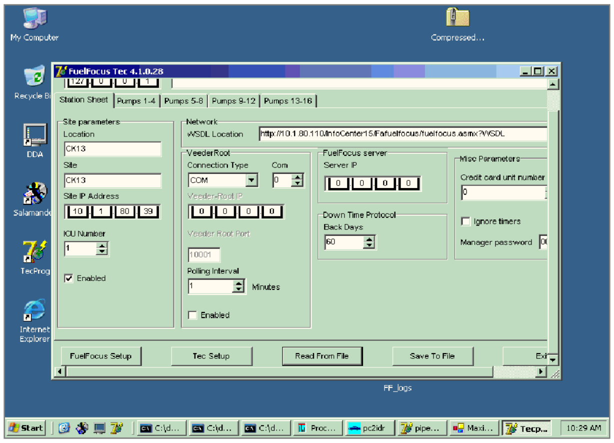
7. Reopen Tec Setup and retrieve the file saved in the first step above by clicking the **Read from File** button.



8. Run Tec Setup by clicking the **Tec Setup** button.



9. Run FuelFocus Setup by clicking the **FuelFocus Setup** button.



The ICU software upgrade process is complete.

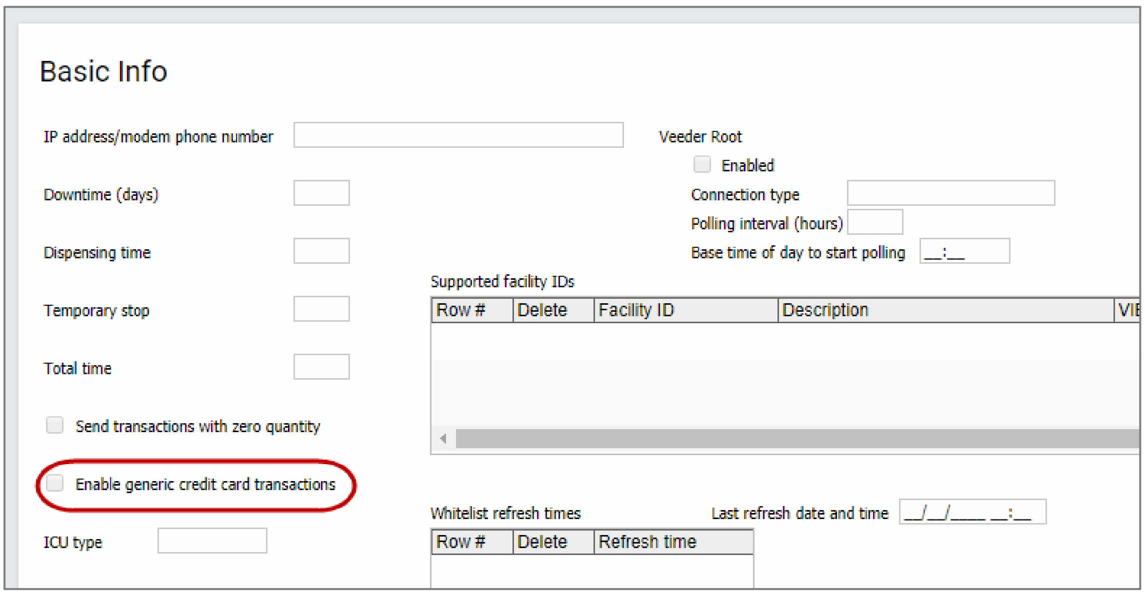
Appendix B. Installing FirstData - Optional

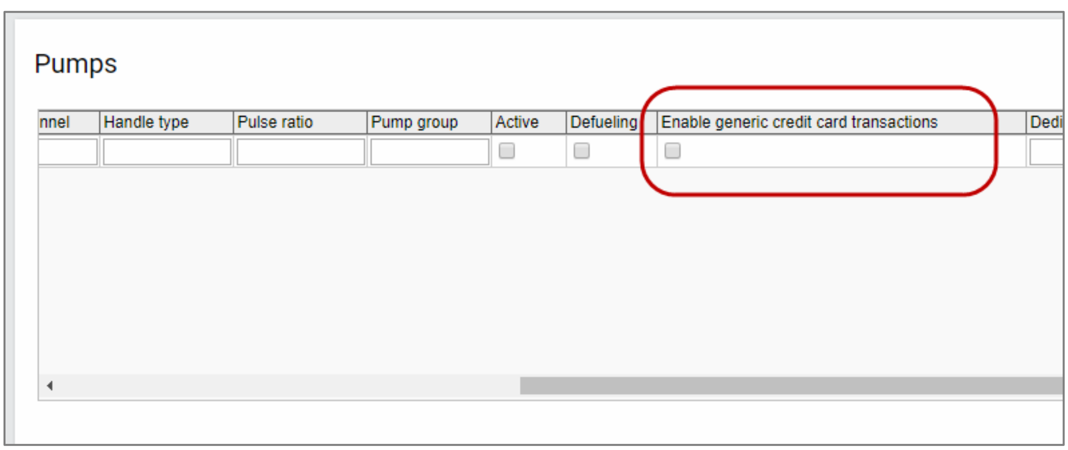
This appendix outlines how to install First Date for credit card payments.

B.1 Fuel Island Setup

To set up the fuel island:

1. Check the **Enable generic credit card transactions** box on the ICU and for each hose that is allowed credit card transactions. See screenshots below:





2. After the changes have been made, it is necessary to perform a TecSetup and FuelFocus Setup on the ICU as described in section 7 Integrate the ICU with the FuelFocus Module.

B.2 Turn on FirstData

To turn on FirstData:

1. Open dda\station\procman.ini.
2. Uncomment the FirstData process by removing the forward slashes (//) in front of all four lines associated with Process 10 in the screenshot below.
3. Make sure the process number is not duplicated.

ProcMan.ini - Notepad

File Edit Format View Help

```
//Param=11

//[PROCESS 7]
//Type=KEEP_ALIVE
//Prog=maximus\pipemux.exe

//[PROCESS 8]
//Type=KEEP_ALIVE
//Prog=..\ddm2.exe
//Mode=Min
//Dir=.

//[PROCESS 9]
//Type=KEEP_ALIVE
//Prog=GPS\gps2500.exe

//[PROCESS 10]
//Type=KEEP_ALIVE
//Prog=FirstData\GnrCH.exe
//Mode=Min
//Param=12

//[PROCESS 11]
//Type=KEEP_ALIVE
//Prog=sinp\sinp23k.exe
//Mode=Min
```

B.3 Turn on the Printer

To turn on the printer:

1. Open the **dda\station\dda.rpm** file set the auto-print-type-1=Y and the log printer=Y as illustrated in the following screenshots.

```
[auto-print]
auto-print-type-1=y                    // print without question
auto-print-type-2=n
print-locals=y
//print-master=n
```

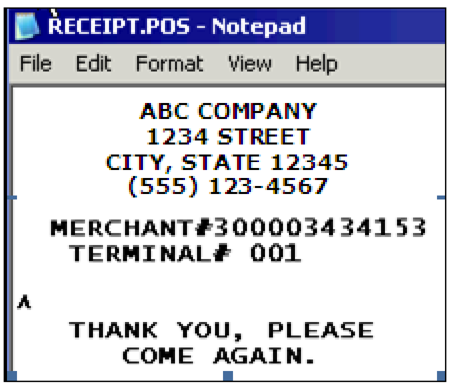
```
//==================================================================
//=============  Log ===============================================
//==================================================================

[log-printer]
log-lpt=LPT3:                         // Logical name of backup printer

[log-file]                            // Size of Communication Port Log
max-size=200000

[log-tran]                            // Definition of Transactions Log
log-printer=Y
log-file=Y
log-file-prefix=LOG\LG
log-file-prefix2=
```

2. Save and close the file.

B.4 Setup the Receipt Header

To setup the receipt header:

1. Open the dda\station\receipt.pos file.
2. Using all capital letters, update the file to reflect customer information.
3. Save and close the file.

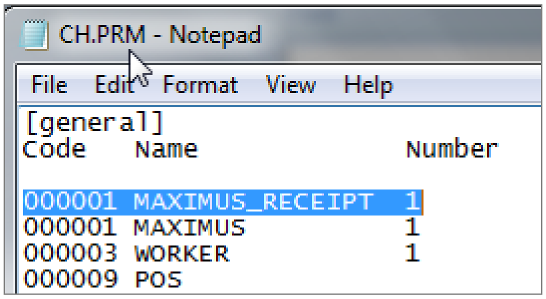



```
ABC COMPANY
1234 STREET
CITY, STATE 12345
(555) 123-4567

MERCHANT#300003434153
TERMINAL# 001

A

THANK YOU, PLEASE
COME AGAIN.
```

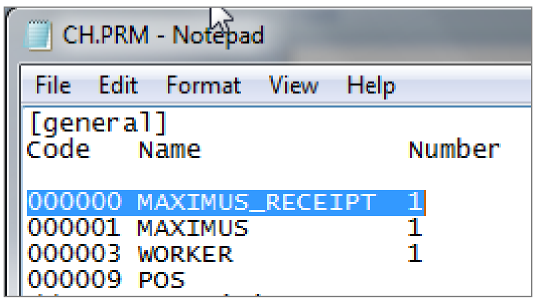
B.5 Setup Receipts to Print

To setup the receipts to print:

1. Open the dda\station\ch.prm file.
2. If the line is listed as 000001 MAXIMUS_RECEIPT 1, then ALL transactions will print a receipt.



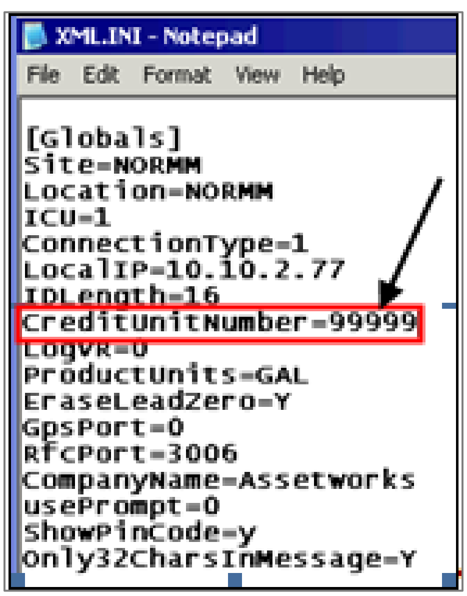
3. If the line is listed as 000000 MAXIMUS_RECEIPT 1 then ONLY credit card transactions will print receipts.



B.6 Setup Credit Card Fuel Card Number in xml.ini

To setup the credit card fuel card number in the xml.ini file, follow the steps below.

1. Open the dda\station\maximus\xml.ini file.
2. Make sure to enter the fuel card number that is assigned to the unit in the application for credit card transactions. The line is CreditUnitNumber.



B.7 Enable Credit Card for Hoses and ICU

To enable the credit card for the hoses and the ICU:

1. Edit or Open with Notepad the **dda\station\maximus\station.xml** file.

2. Make sure that each hose on an ICU that will process credit card transactions has the <hose_cc_enabled> tag set to 1 and the <icu_cc_enabled> tag set to 1.

3. Confirm pricing information.

station.xml - Notepad

File Edit Format View Help

```xml
<ROOT>
  <RECORD status="valid">
    <TYPE>SETUP</TYPE>
    <HOSES>4</HOSES>
    <HOSE>
      <PRODUCT_TYPE>3</PRODUCT_TYPE>
      <PULSE_RATIO>999</PULSE_RATIO>
      <HANDLE_TYPE>0</HANDLE_TYPE>
      <TIME_TO_DISPENSING>600</TIME_TO_DISPENSING>
      <TEMPORARY_STOP>600</TEMPORARY_STOP>
      <TOTAL_TIME>600</TOTAL_TIME>
      <CHANNEL>1</CHANNEL>
      <MPD_CHANNEL>0</MPD_CHANNEL>
      <HOSE_NO>1</HOSE_NO>
      <GROUP>0</GROUP>
      <HOSE_STATUS>E</HOSE_STATUS>
      <ATTACHED_TO_TANK>05</ATTACHED_TO_TANK>
      <HOSE_CC_ENABLED>1</HOSE_CC_ENABLED>
      <CC_PRICE>3.5</CC_PRICE>
```

station.xml - Notepad

File Edit Format View Help

```xml
      <HOSE_STATUS>E</HOSE_STATUS>
      <ATTACHED_TO_TANK>06</ATTACHED_TO_TANK>
      <HOSE_CC_ENABLED>1</HOSE_CC_ENABLED>
      <CC_PRICE>3.644</CC_PRICE>
    </HOSE>
    <SITE_NAME>NORMM</SITE_NAME>
    <LOCATION>NORMM</LOCATION>
    <SITE>NORMM</SITE>
    <SITE_ADDRESS>10.10.2.77</SITE_ADDRESS>
    <NUMBER_OF_ICU>1</NUMBER_OF_ICU>
    <ICU_TYPE>PUMP</ICU_TYPE>
    <ICU_STATUS>E</ICU_STATUS>
    <ICU_CC_ENABLED>1</ICU_CC_ENABLED>
    <CC_ITEM_TO_CHARGE>961234</CC_ITEM_TO_CHARGE>
```

B.8 Setup the Paymentech.ini File

To setup the FirstData.ini file:

1. Open the dda\station\FirstData\paymentec.ini file.
2. Enter the client#, merchant#, and terminal#.
3. Save and close the file.

```
paymentech.ini - Notepad
File  Edit  Format  View  Help
[Global]
name= Paymentech
client#= 2
merchant#= 700000000487
terminal#= 501
username= Maximus1
password= fuelfocus

[Server]
serverType= TCP // T[CP] / P[ipe]
serverPort= 3032

[Log]
logLevel= 1
pathFile= ..\log\Pay
```

B.9 Confirm the price in the prices.dat file

To confirm the credit price in the prices.dat file:

1. Open the dda\station\prices\prices.dat file.
2. Make sure the product that is credit card enabled contains the correct credit price.

```
prices.dat - Notepad
File  Edit  Format  View  Help
InUse =28/1/2010 09:03
                            Fuel type & prices
                            ==================

fuel-type     fuel-name     units     price-cash     price-crdt   strt-time  stop-time
  0           Diesel        GAL       0.00           3.500
  1           CNG           GAL       0.00           3.644
 90           NIGHT SUPL              2.500          2.500          /          /
 91           SUNDAY SPL              0.000          0.000          /          /
 92           HOLIDAY SP                             0.000          /          /
 93                                                  0.000          /          /
```

B.10 Internet Access Information and Troubleshooting

The following is information on the FirstData connection.

- Production host name = vxn.datawire.net

- IP = 216.220.36.75
- 3032 = an internal port of the local ICU application
- This application transfers the request to the FirstData DCOM component.
- This component handles the Internet communication to FirstData host, which uses HTTPS communication on port 443.