



# M2012 - SiteSentinel<sup>®</sup> Nano<sup>®</sup>

## Tank Gauge System

### Operator's Guide

3.71.56.3 Bld 61.1



**NOTE:** Before you use this guide, make sure you have the latest revision. Check the revision level of this document against the most current revision found at <http://www.opwglobal.com/opw-fms/tech-support/manuals-how-to-videos>. Download the latest revision if necessary.

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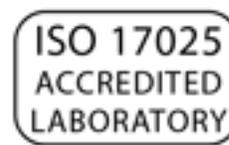
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### Listings and Certifications



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## Section 1 Introduction

### 1.1 Screen Navigation

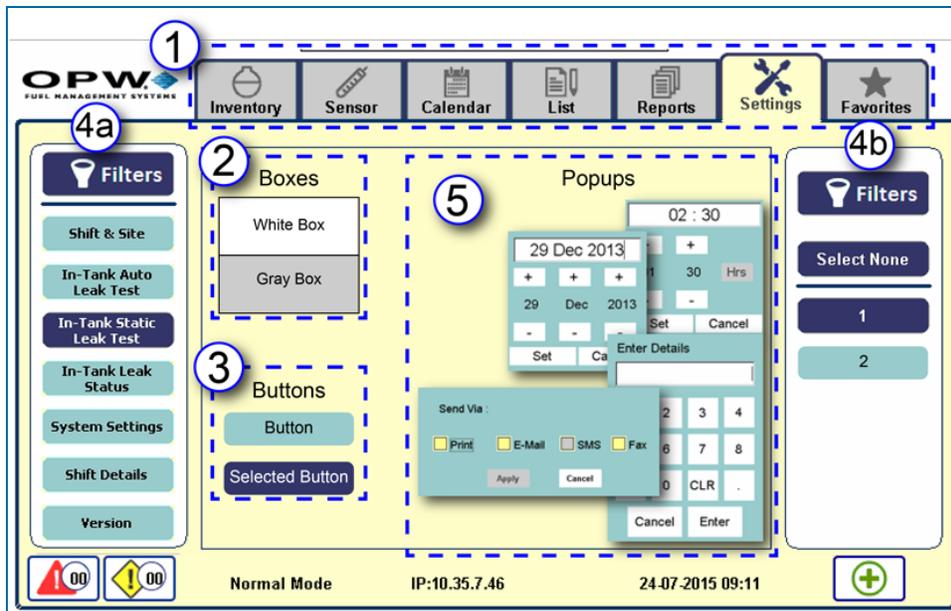


Figure 1-1 Screen Navigation

1. Tabs: Push a screen tab to gain access to its sub-screen(s). The selected tab and screen background will be yellow. Some sub-screens can also show tabs. These will be explained in the sections where they are used later in this manual.
2. Boxes: Some boxes will show in white. In most instances, you will be instructed to push a white box to gain access to another screen. You can also gain access to a popup screen that will let you see controls that you can use to enter information. A gray box shows that the box is not in operation (another selection on the screen is necessary for the box to become serviceable).
3. Buttons: Some buttons will be used to make a selection from a list. Other buttons will be used to **Save** information or **Apply** settings to the system. A selected button will show in dark blue.
4. Panels: There are two (2) panels that can show on a screen:
  - a. A **Filters** panel on the left side of the screen shows buttons for general filters related to the selected Tab.
  - b. A **Filters** panel on the right side of the screen shows buttons for the tanks in the system by number.
5. Popups: Popup screens are used as controls to enter information into the system. Instructions will be given on how to enter the necessary information using the controls seen on the popup.

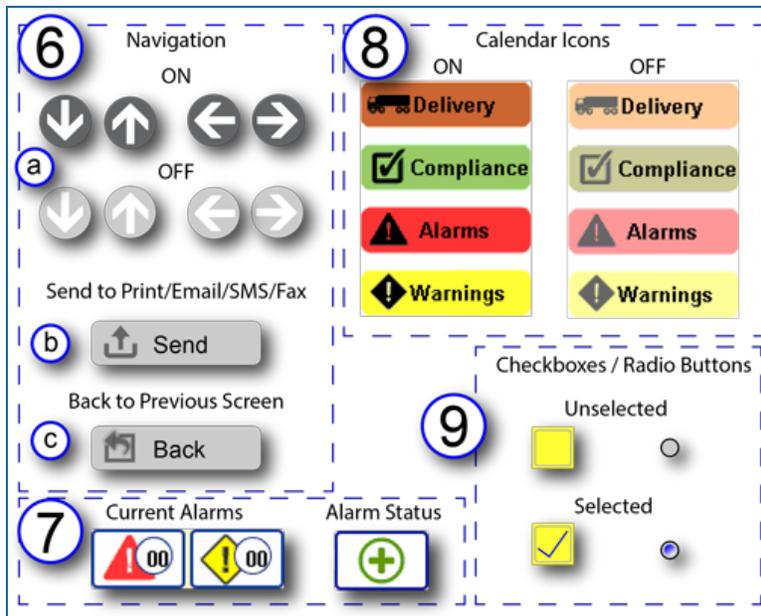


Figure 1-2 Navigation Icons

## 6. Navigation Icons:

- a. Arrow buttons: Instructions on using the Down/Up and Left/Right buttons will be shown on screens where they are used. The buttons are ON when they show in a dark gray color and OFF when they are shown in light gray.
- b. Send: The send button will come into view on screens that can send a report through Print/Email/SMS/Fax. Instructions on using the Send button will be given on screens where it is used.
- c. Back: Use this button to return to the previous screen. The Back button will come into view on screens that have been accessed through a control on a previous screen.

7. Current Alarms: See **Current Alarms and Warnings** in the next section for a full explanation on how these buttons are used.
8. Calendar Icons: Instructions on using these buttons will be given in the List and Calendar sections (see Section 5, Calendar and Section 6, List). The figure above shows the icons when they are ON (full color) and OFF (faded color). Alarm and Warning icons can change depending on the condition of the notification (see Appendix B – Icon Glossary – Alarms and Notifications).
9. Checkboxes/Radio Buttons: These controls are used on some screens to make selections. The figure above shows these controls when they are in unselected and selected conditions.

## 1.2 Current Alarms/Warnings, Status and One-Touch Alarm Silence

**Current Active Alarms/Warnings** are shown in the buttons in the lower left-hand corner of the screen. The number in the circle shows the number of current active warnings or alarms in the system.

**Alarm/Warning Status** is shown in the button in the lower right-hand corner of the screen. A red "plus" icon indicates that there is at least one active alarm or warning in the system. A green icon indicates there are no active alarms or warnings.

**One Touch Alarm Silence:** When an audible alarm (buzzer) is on, you can push the button with the active warning or alarm once to immediately silence the alarm.



**NOTE:** One Touch Alarm Silence does not acknowledge the alarm. The alarm will remain active until acknowledged in the Calendar or List views.

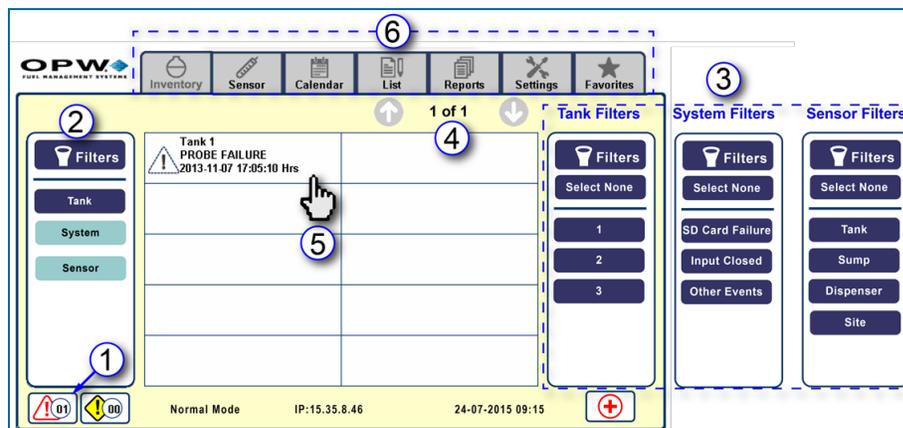


Figure 1-3 Current Alarms/Warnings

1. Push the active **Alarm/Warning** button.
2. The left **Filters** panel shows the type of alerts that are active; **Tank**, **System** or **Sensor** (in this example **Tank** has an active alert).
3. The right **Filters** panel shows the available tanks in the system when Tank is selected in the left Filters panel. The right Filters panel for System Alarms is shown next to the Tank Filters panel in the example above; this panel will come into view when **System** is selected in the left Filters panel. The right Filters panel for Sensor is shown next to the System Filters panel in the example above; this panel will come into view when **Sensor** is selected in the left Filters panel.
4. This screen can show up to 10 current **Alarm/Warning** results. The number of shown results and the total number of results for the selected tank(s) show at the top right of this screen. To view more results (if available) use the arrow buttons on either side of the numbers to scroll down or up.
5. To get more information about an alarm push the box containing the Alarm/Warning description to take you to the next screen.
6. To exit this screen, select a tab from the top of the screen.

## 1.3 Language Support

The system language is set up in the remote configuration User Preferences (refer to the M2011 SiteSentinel® Nano® Configuration Guide for details). After the appropriate language for your console is

selected, all screens in the touchscreen Graphical User Interface (GUI) will be shown in the selected language. Current languages supported include, English, Polish, Portuguese, Turkish, Italian, Russian, French, Spanish and Romanian.

Here is an example of a screen after Portuguese is selected.

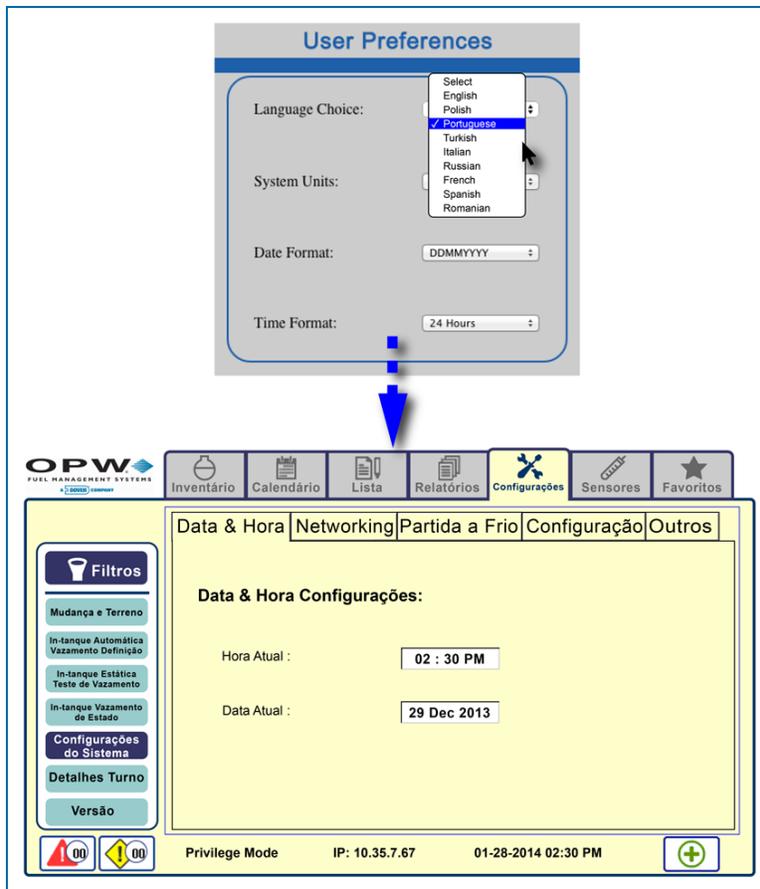


Figure 1-4 SiteSentinel® Nano® Language Support

## 1.4 Default Screen Reactivation

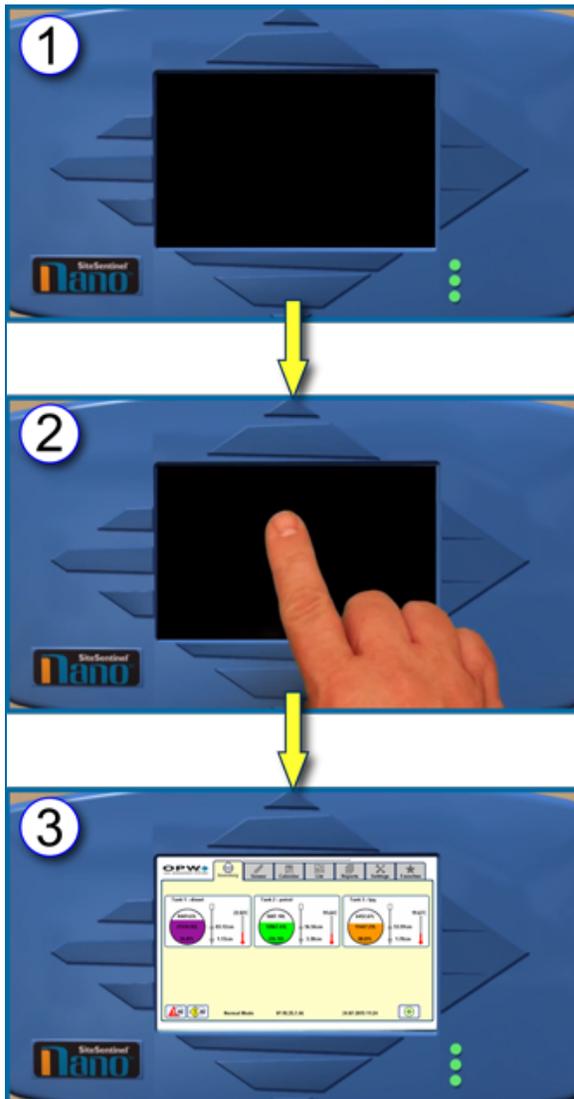


Figure 1-5 Reactivate Default View Inventory Screen

1. When the console has been inactive for a period of time the screen will go blank.
2. Tap the screen with your finger to reactivate it.
3. The Inventory screen comes into view. This is the default view for the Nano® GUI console.

The **Inventory** screen is explained in detail in Section 4, Inventory.

## 1.5 Links to Instructional Videos

This manual includes web links and QR codes that link directly to the OPW training video “Configuring an OPW Nano Tank Gauge via the TCP/IP Port, VNC Viewer and a Laptop” found on the OPWGlobal channel on YouTube.

This code and link will take you to the full video:



This manual includes web links and QR codes that link directly to the OPW training video “Nano Operator Guide” found on the OPWGlobal channel on YouTube.

This code and link will take you to the full video:



The Introduction section of the video will show you how to setup and view the configuration screens using a laptop.

The QR codes and links that accompany various sections in this manual will take you directly to the portion of the video that is related to that manual topic.



**NOTE:** The QR codes and web links to videos in this manual are set to start the video at the appropriate spot for the topic where it is introduced. The video will continue to play till the end. You have the option to manually stop the video at the end of the topic or continue playing.

## Section 2 Getting Started



### 2.1 Entering the Password

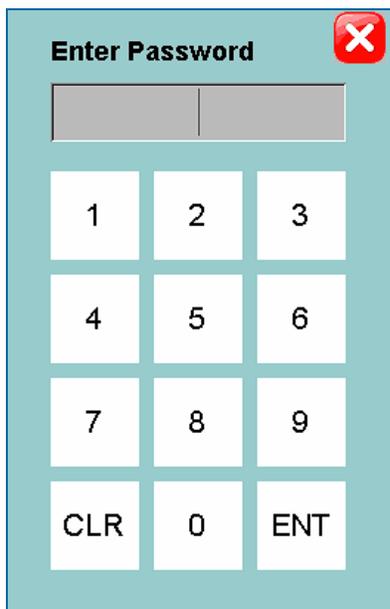


Figure 2-1 Password Keypad

Push the **Settings** tab. The **Enter Password** keypad will pop-up. Enter the password code using the number keys and push **ENT** to enter. If you make a mistake inputting the number you can clear an entry by pushing the **CLR** button. The default password is 12345. Changing the default password is described in Section 3.4, Other Settings.

## 2.2 Cold Start



This procedure will reset the configuration settings of the SiteSentinel® Nano® to the factory-installed defaults.

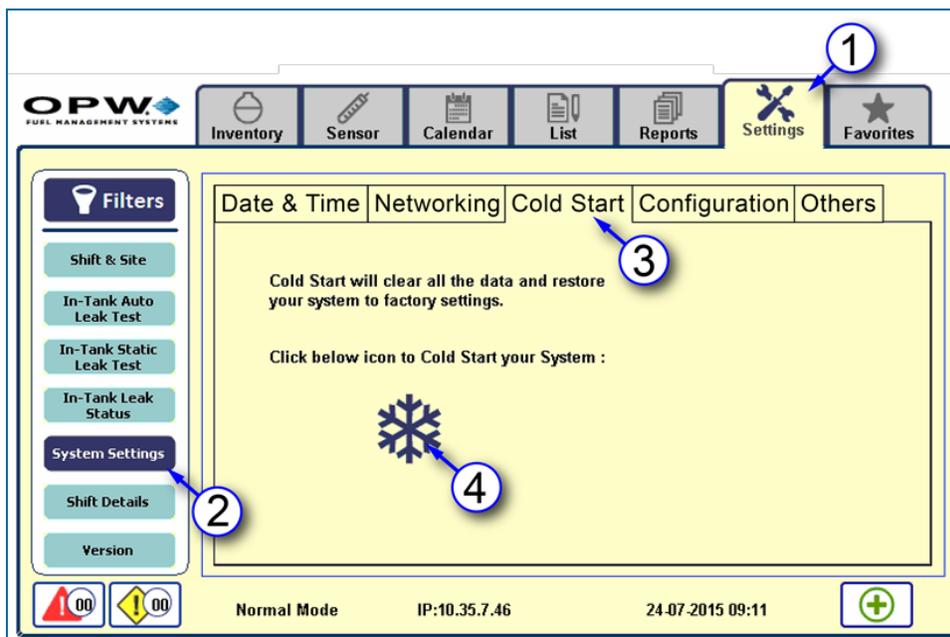


Figure 2-2 Cold Start

1. Push the Settings tab.
2. Push System Settings under Filters.
3. Push the Cold Start tab.
4. Push the  icon to Cold Start the system. Wait for Cold Start to complete before continuing.

## Section 3 Settings

### 3.1 Set Date and Time

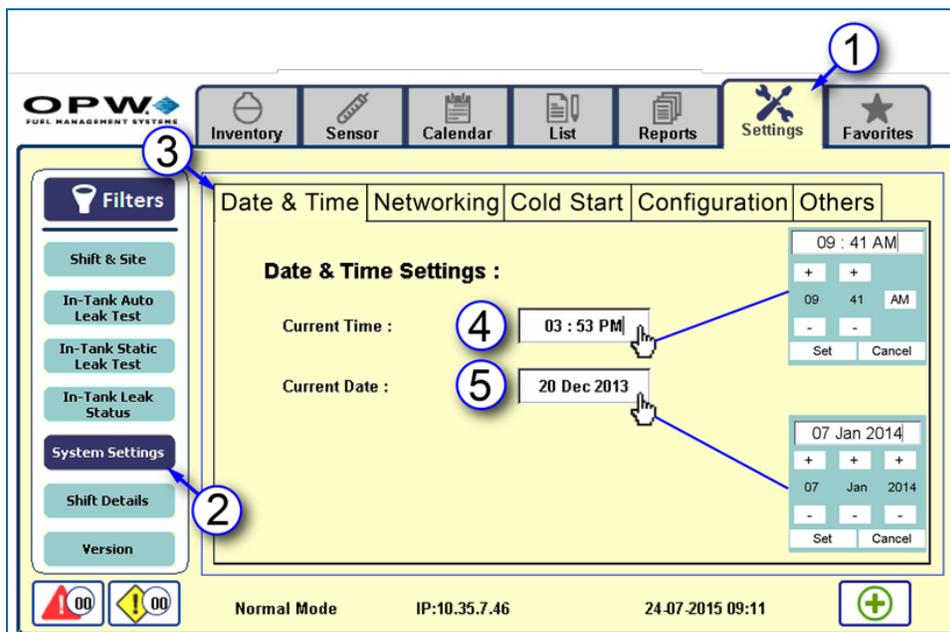


Figure 3-1 Set Date and Time

1. Push the **Settings** tab.
2. Push **System Settings** under **Filters**.
3. Push the **Date & Time** tab.
4. To set the **Current Time**: Push the white box with the time. A pop-up screen will come into view with controls to adjust the time setting. Use the + and – buttons to increase or decrease the hours and minutes. If necessary, select AM/PM (push this button to toggle between AM and PM). Push **Set** to save this setting. If you do not want to reset the time, push **Cancel**.
5. To set the **Current Date**: Push the white box with the date. A pop-up screen will come into view with controls to adjust the date setting. Use the + and – buttons to increase or decrease the day, month and year. Push **Set** to save this setting. If you do not want to reset the date, push **Cancel**.

## 3.2 Networking

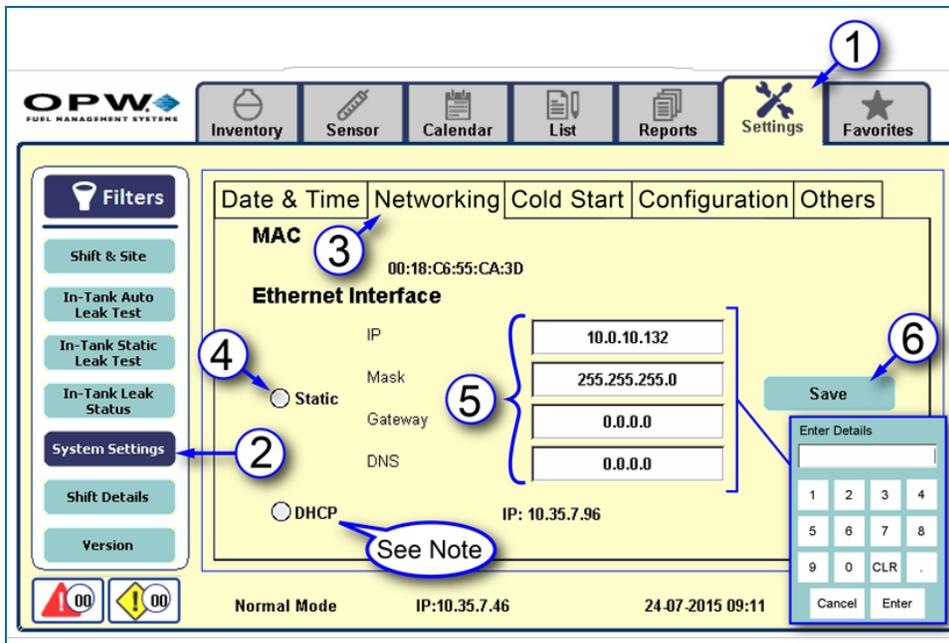


Figure 3-2 IP Settings

Here, the user can select either a **Static** or **DHCP** network connection type.

To set **Static** connection type (speak with your site's IT Administrator to get the correct codes):

1. Push the **Settings** tab.
2. Push **System Settings** under **Filters**.
3. Push the **Networking** tab.
4. Select the **Static** radio button.
5. Enter the address information. When a box is selected the **Enter Details** keypad will pop up. Use this keypad to enter the numbers and push **Enter** when complete. Push **CLR** to clear an entry. Push **Cancel** to return to the **Networking** screen without making a change.
  - a. **IP** address. This is a user-defined IP address. The same IP address will be used each time the tank-gauge system is connected to the network. This is the preferred connection type because the system will always have the same IP address when connecting to the network.
  - b. **Network Mask** is used to modify how local IP numbers are interpreted locally.
  - c. **Gateway** (if applicable): The IP address of the router to which your PC network is connected.

d. **DNS** (if applicable): Domain Name System.

6. Push **Save**.



**NOTE:** If the **DHCP** connection type is selected, the default information provided by the server will be used. It is possible for the IP address of the tank-gauge system to change since it was last connected to the network.

### 3.3 Configuration

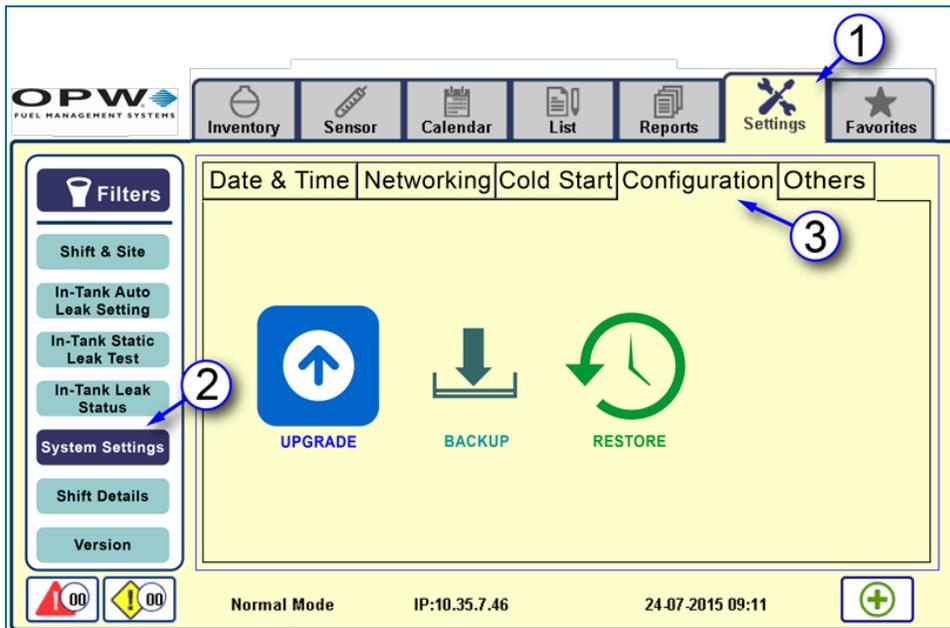


Figure 3-3 Configuration

The **Upgrade** procedure will show how to upload files to the ATG from a USB flash drive.

1. Push the **Settings** tab.
2. Push **System Settings** under **Filters**.
3. Push the **Configuration** tab.

### 3.3.1 Upgrade Procedure

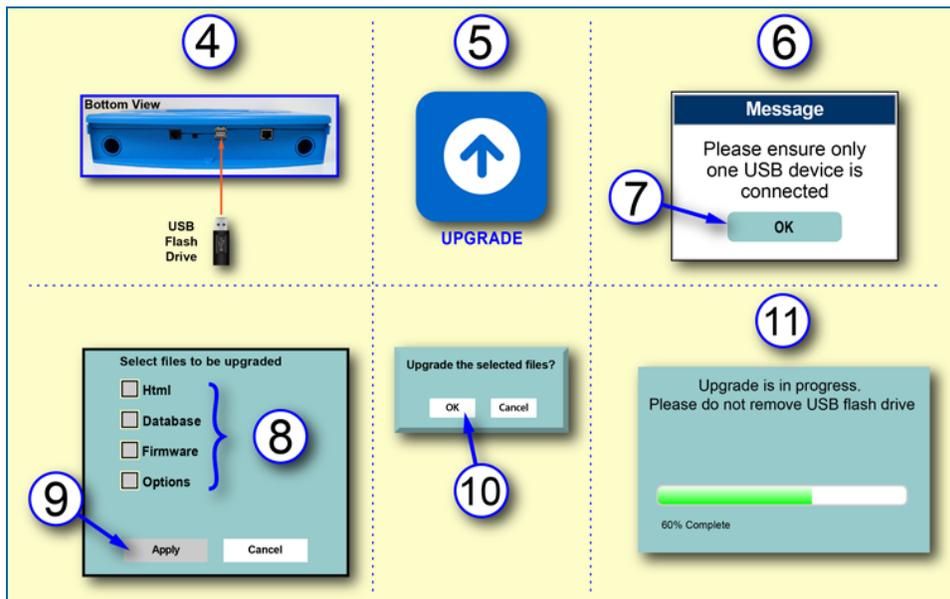


Figure 3-4 Upgrade Procedure

4. Connect the USB flash drive containing the Upgrade files.
5. Push the **Upgrade** button.
6. A pop-up will come into view, "Please ensure only one USB device is connected."



**NOTE:** Make sure that the only flash drive connected to the ATG is the drive that contains the upgrade files. No other flash drive can be connected during this procedure.



**IMPORTANT:** Keep the files together on the flash drive. Do not remove or copy them to any other directory or device.

7. Push **OK**. A screen will come into view listing the files that can be upgraded.
8. Select the files to be upgraded.
  - a. **Html** – HTML.zip (for remote browser UI upgrades)
  - b. **Database** – Nano\_DBUpgrade.sql (for database upgrades)
  - c. **Firmware** – Firmware.Zip (Main application software)
  - d. **Options** – XXXXXXXX.ssr (the Xs identify the SD card serial number of the Nano device)
9. Push **Apply** (if you do not want to upgrade at this time push **Cancel**).
10. A progress bar will come into view.



**NOTE:** Do not remove the USB flash drive while files are being uploaded to the system. Wait until the file upload is complete before trying any other task in the system.

If the upgrade of Firmware.zip is successful, the system will restart automatically.

A system restart is not necessary with a successful upgrade of the Option File.ssr, HTML.zip or Nano\_DBUupgrade.sql files.

### 3.3.2 Backup and Restore

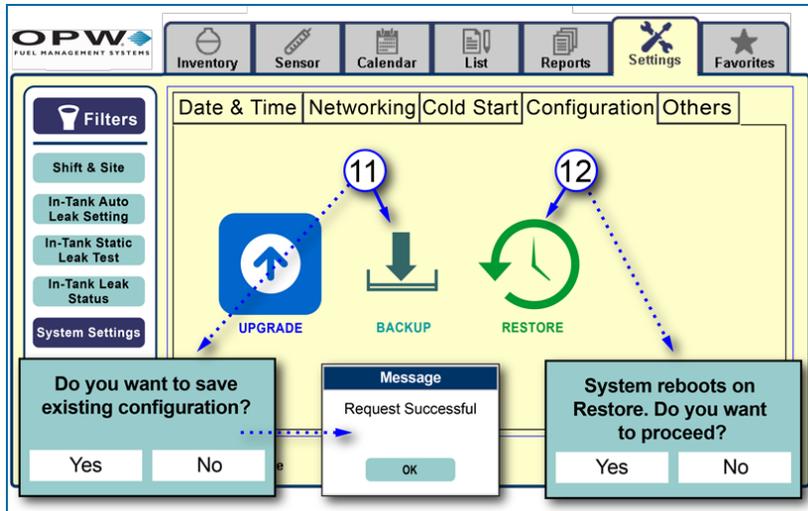


Figure 3-5 Backup and Restore

**Backup** lets the user save the system configuration data to the internal SD card. If the configuration is lost, the files backed-up on the SD card can be put back into the system using the **Restore** function.

11. To backup the current configuration push **Backup**. A confirmation popup window will come into view asking, "Do you want to save existing configuration?" Push **Yes** (or, if you do not want to **Backup** at this time, push **No**). A backup.txt file will be placed on the SD card that can be used later to restore the configuration. If the file transfer is successful a message window will pop up showing "Request Successful." Push **OK**.
12. To return the backed-up files to the system push the **Restore** button. A confirmation popup window will come into view asking, "System reboots on **Restore**. Do you want to proceed?" Push **Yes** (or, if you do not want to **Restore** at this time, push **No**). The system will search for the backup.txt file that was created during the **Backup** procedure and set the system back to the last saved configuration.

### 3.4 Other Settings

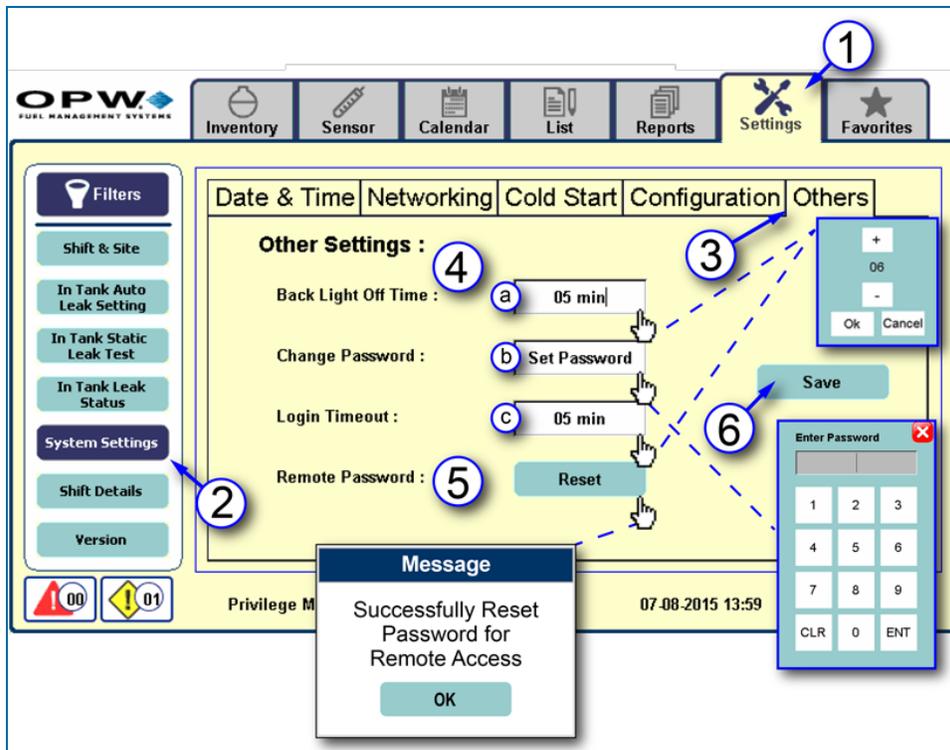


Figure 3-1 Other Settings

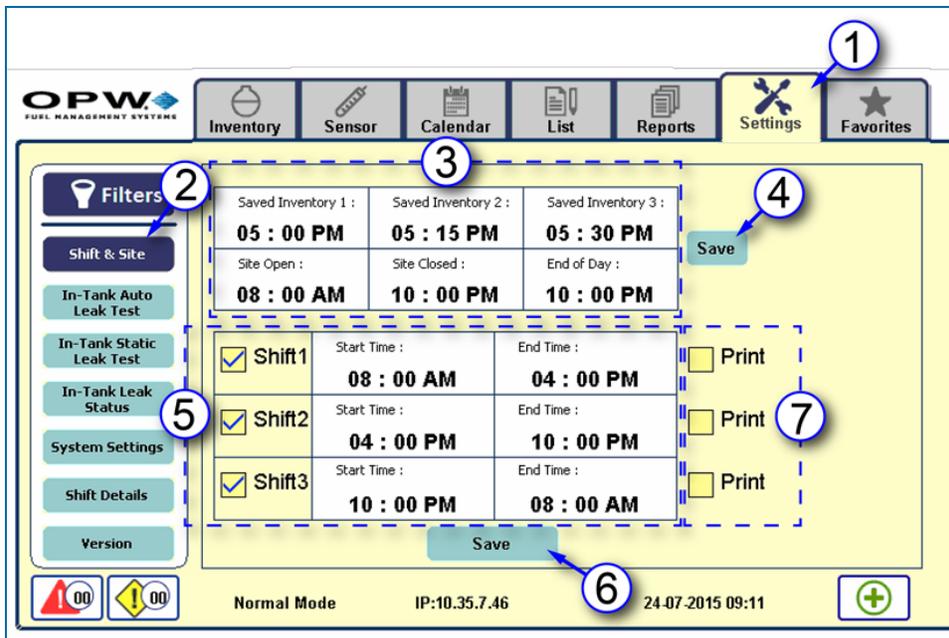
1. Push the **Settings** tab.
2. Push **System Settings** under **Filters**.
3. Push the **Others** tab.
4. Enter the information for:
  - a. **Back Light Off Time:** Minutes of inactivity before the Back Light turns off (from 1 minute minimum to 15 minutes maximum). Push the white box. A pop-up screen will come into view with controls to adjust the minutes setting. Use the + and – buttons to increase or decrease the minutes and push OK when complete.



**NOTE:** To set the Back Light Off Time to "Always On," set the minutes to "00."

- b. **Change Password:** Push the white box. A pop-up screen will come into view with controls to set the Password. Enter the password code using the numeric keys and push **ENT** to enter. If you make an error inputting the number you can clear an entry by push the **CLR** button. To exit without making a change, click the "**X**" in the upper-right corner of the pop-up.
    - c. **Login Timeout:** Minutes of inactivity before the login screen times out (from 5 minutes minimum to 15 minutes maximum). Push the white box. A pop-up screen will come into view with controls to adjust the minutes setting. Use the + and – buttons to increase or decrease the minutes and push **OK** when complete.
5. To reset the password for the remote view of the console to its default, Push the **Reset** button. A confirmation box will come into view. Push **OK** on the confirmation box.
6. Push **Save** to complete these settings.

### 3.5 Shift and Site Information

Saved Inventory 1 :	Saved Inventory 2 :	Saved Inventory 3 :
05 : 00 PM	05 : 15 PM	05 : 30 PM
Site Open :	Site Closed :	End of Day :
08 : 00 AM	10 : 00 PM	10 : 00 PM

Shift	Start Time :	End Time :	Print
<input checked="" type="checkbox"/> Shift1	08 : 00 AM	04 : 00 PM	<input type="checkbox"/> Print
<input checked="" type="checkbox"/> Shift2	04 : 00 PM	10 : 00 PM	<input type="checkbox"/> Print
<input checked="" type="checkbox"/> Shift3	10 : 00 PM	08 : 00 AM	<input type="checkbox"/> Print

Figure 3-1 Shift and Site Information

This screen will let you enter times related to the **Site** and **Shifts**.

1. Push the **Settings** tab.
2. Push **Shift & Site** under **Filters**.
3. Set the times for the three (3) Saved Inventory reports, **Site Open**, **Site Closed** and **End of Day**. To set the times:

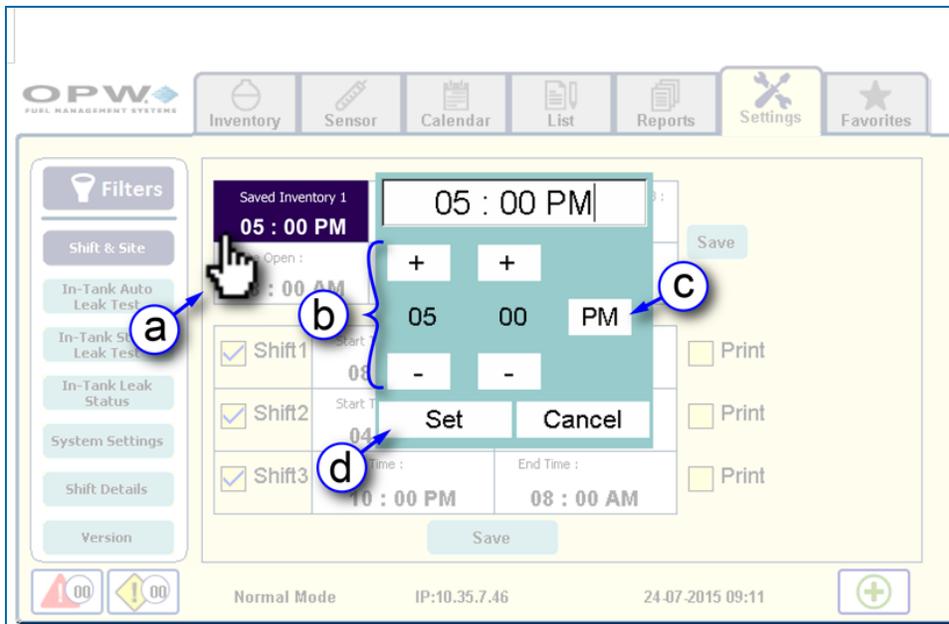


Figure 3-2 Set Times

- a. Select the time you wish to set. A pop-up screen will come into view with controls to adjust the time setting. The last set time will show at the top of the pop-up screen
  - b. Use the + and – buttons to increase or decrease the hours and minutes.
  - c. Select AM/PM (if necessary). Push this button to toggle between AM and PM.
  - d. Push Set to save this setting. To close this pop-up without saving, push Cancel.
4. Push the Save button to the right of the Inventory/Site block to save all of the Inventory and Site time settings.

**NOTE: Saved Inventory** times are used to save an inventory view of the system and will be used in setting up an **Inventory Report** (see Section 8, Creating Reports).



**Site Open** and **Site Closed** tell the system the normal site operating times. After the **Site Closed** time, the system will go into “Sentinel Mode” and will report decreased product level as theft (unauthorized decreased level alarm). However, the system will still accept increased levels for after-hours deliveries without an alarm.

**End of Day** is used for systems with ACR (Auto Calibration and Reconciliation) tanks to set up a **Reconciliation Report** (see Section 8, Creating Reports).

5. Set the Start and End times for one (1) to three (3) shifts. Select the checkbox next to the Shift number to activate a shift. Set the Start and End times as in Step 3 above.
6. Push the Save button under the Shift block when all shift times have been set to save all shift start and end times.
7. Select the checkbox next to Print to set up automatic printing of shift reports for each shift, as necessary. The shift reports will show Inventory, Sales and Delivery information.



**NOTE:** Shifts are set to a 24-hour clock. The system will always make the loop back to the first shift.

### 3.6 In-Tank Auto Leak Test

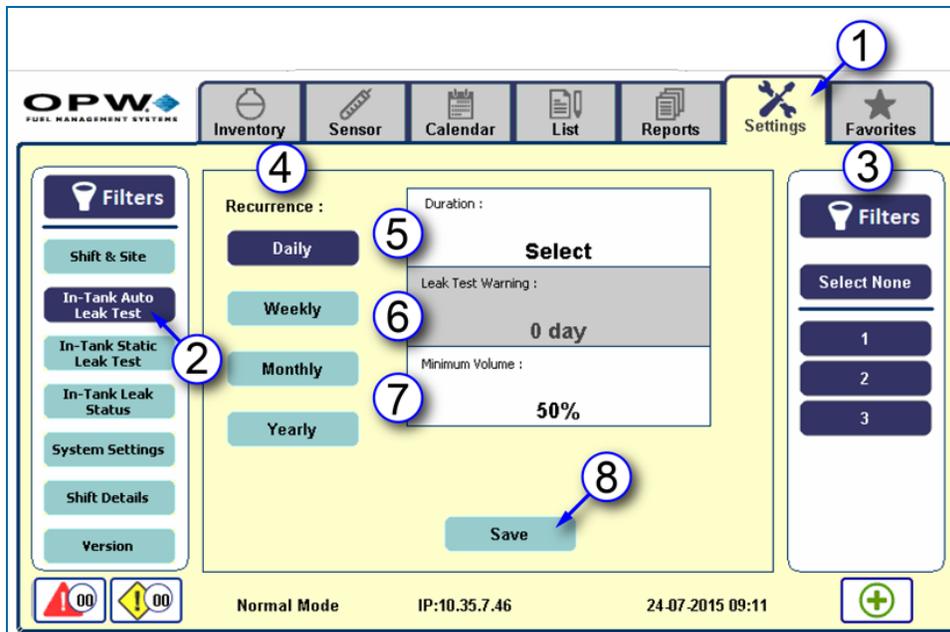


Figure 3-1 In-Tank Auto Leak Test

This screen will let you set up the schedule for an In-Tank Auto Leak Test.

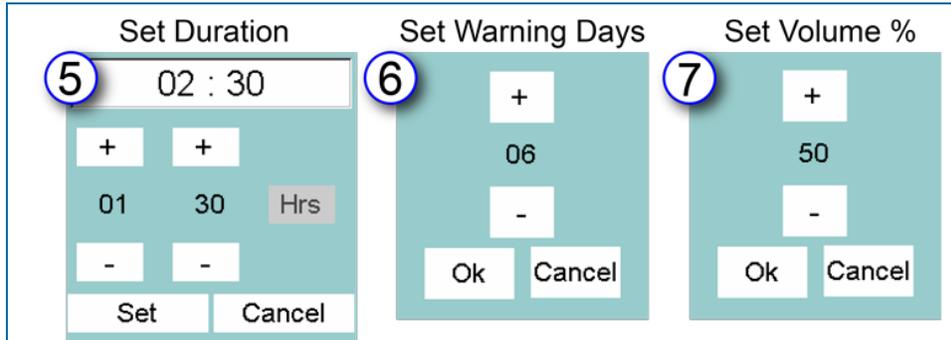
1. Push the Settings tab.
2. Push In-Tank Auto Leak Test under the left side Filters menu.
3. select the tanks to be set up for an auto leak test under the right-side Filters menu.
4. select Recurrence as necessary. Push the applicable button; Daily, Weekly, Monthly or Yearly.
5. Push the Duration box: A pop-up will come into view (see below) to let you set the number of hours for the leak test in 30-minute increments. Use the + and – buttons to increase or decrease the hours and minutes. Push Set to save. To close this pop-up without saving, push Cancel.
6. Push the Leak Test Warning box: A pop-up will come into view (see below) to let you set the number of days for Leak Test Warning (this will vary by Recurrence: Up to six (6) days Weekly, up to 28 days Monthly, up to 364 days Yearly). Use the + and – buttons to increase or decrease the days. Push OK to save. To close this pop-up without saving, push Cancel.
7. Push the Minimum Volume box: A pop-up will come into view (see below) to let you set the Minimum Volume as a percentage. Use the + and – buttons to increase or decrease the percentage. Push OK to save. To close this pop-up without saving, push Cancel.



**NOTE:** This setting can also be set from the console configuration (refer to the M2011 SiteSentinel® Nano® Configuration Guide) and that percentage will show here.

8. Push Save to set the schedule for In-Tank Auto Leak Test.

### 3.6.1 Auto Leak Test Pop-up Screens



Auto Leak Test Pop-up Screens

### 3.7 In-Tank Static Leak Test

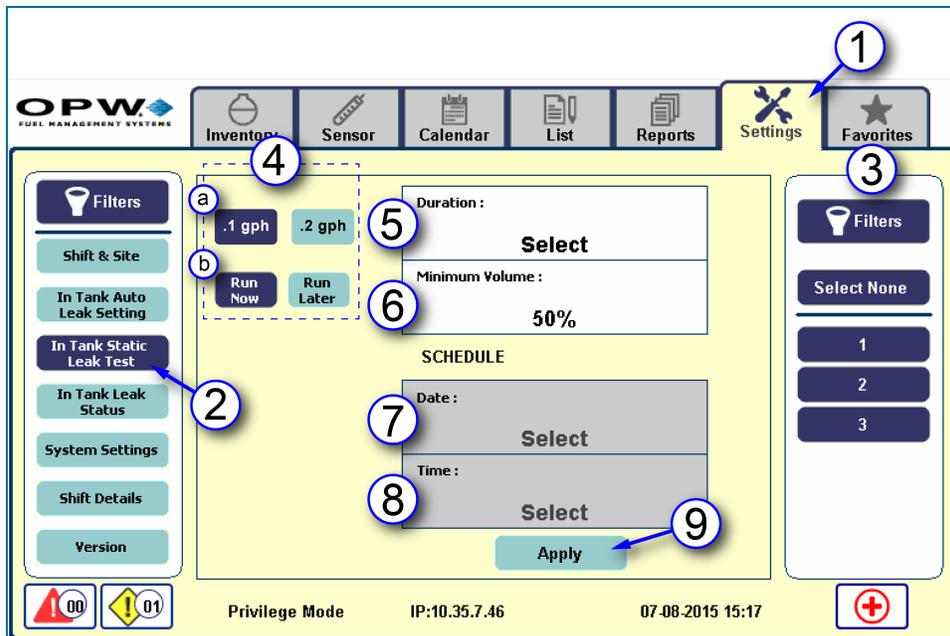
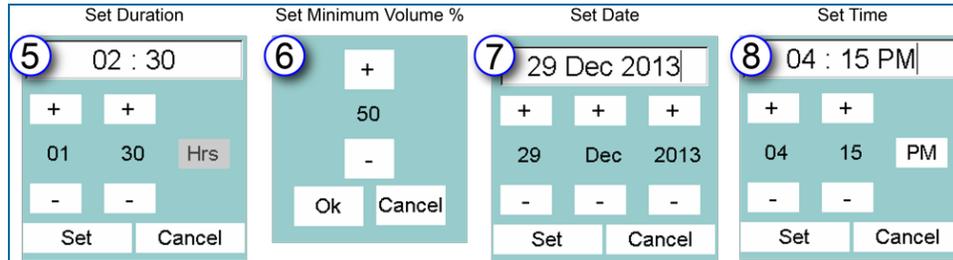


Figure 3-1 In-Tank Static Leak Test

1. Push the Settings tab.
2. Push In-Tank Static Leak Test under the left-side Filters menu.
3. Select the tanks to be set up for auto leak test under the right-side Filters menu.
4. Select the type and when to run the In-Tank Static Leak Test.
  - a. Select the type of test; 0.1 gph or 0.2 gph.
  - b. To run immediately, select Run Now. To run at a later date and time select Run Later.
5. Push Duration: A pop-up will come into view (see below) to let you set the number of hours for the leak test in 30-minute increments. Use the + and – buttons to increase or decrease the hours and minutes. Push Set to save. To close this pop-up without saving, push Cancel.
6. Push Minimum Volume: A pop-up will come into view (see below) to let you set the Minimum Volume as a percentage. Use the + and – buttons to increase or decrease the percentage. Push OK to save. To close this pop-up without saving, push Cancel.
7. If Run Later is selected the Date box under SCHEDULE will be white. Set the desired Date of the leak test from the pop-up (see below) using the + and – buttons to set the Day/Month/Year (the date cannot be set in the past). Push Set to save. To close this pop-up without saving, push Cancel.

8. If Run Later is selected, set the desired Time of the leak test from the pop-up (see below) using the + and – buttons to set the Hours/Minutes. Push Set to save. To close this pop-up without saving, push Cancel.
9. Push Apply to save the settings on this screen.

### 3.7.1 Static Leak Test Pop-up Screens

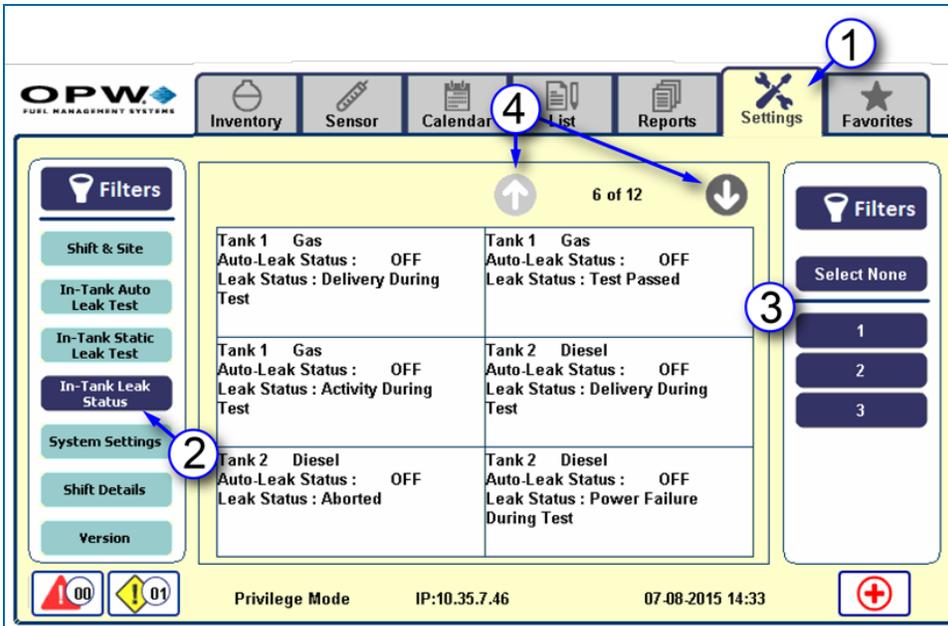


The figure displays four pop-up screens for configuring a static leak test:

- 5. Set Duration:** Shows a digital display of 02 : 30. Below the display are + and - buttons for hours and minutes, and a 'Hrs' label. At the bottom are 'Set' and 'Cancel' buttons.
- 6. Set Minimum Volume %:** Shows a digital display of 50. Above the display is a '+' button and below is a '-' button. At the bottom are 'Ok' and 'Cancel' buttons.
- 7. Set Date:** Shows a digital display of 29 Dec 2013. Below the display are + and - buttons for day, month, and year. At the bottom are 'Set' and 'Cancel' buttons.
- 8. Set Time:** Shows a digital display of 04 : 15 PM. Below the display are + and - buttons for hours and minutes, and a 'PM' label. At the bottom are 'Set' and 'Cancel' buttons.

Figure 3-2 Static Leak Test Pop-up Screens

## 3.8 In-Tank Leak Status

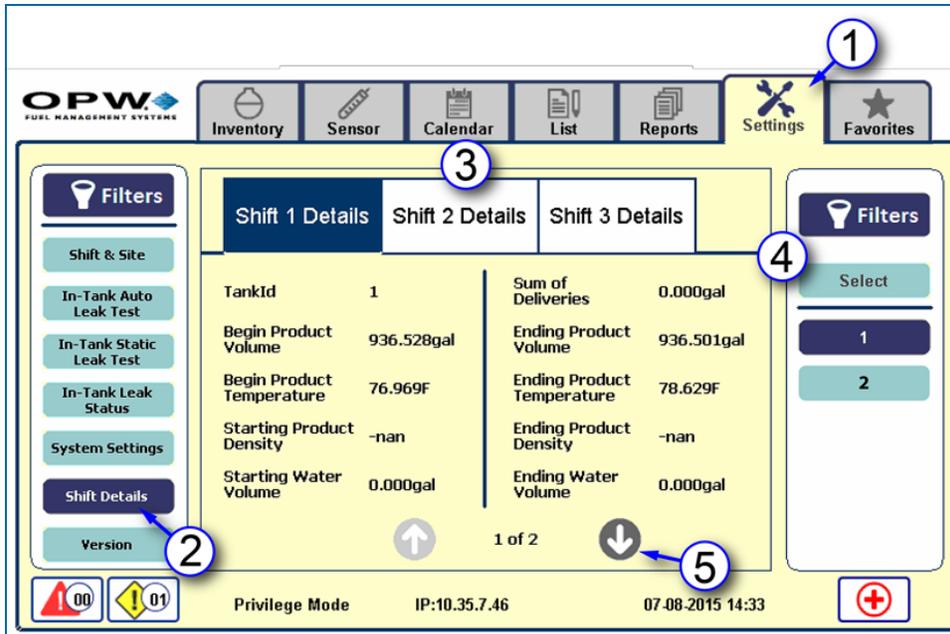



Tank	Fuel Type	Auto-Leak Status	Leak Status
Tank 1	Gas	OFF	Delivery During Test
Tank 1	Gas	OFF	Test Passed
Tank 1	Gas	OFF	Activity During Test
Tank 2	Diesel	OFF	Delivery During Test
Tank 2	Diesel	OFF	Power Failure During Test
Tank 2	Diesel	OFF	Aborted

Figure 3-1 In-Tank Leak Status

1. Push the Settings tab.
2. Push In-Tank Leak Status under Filters.
3. Select a tank number or numbers (if applicable).
4. This screen can show up to six (6) tank leak status results. The number of currently shown results and the total number of results for the selected tank(s) show at the top right of this screen. To view more results (if available) use the arrow buttons on either side of the numbers to move down (right arrow) or up (left arrow).

### 3.9 Shift Details

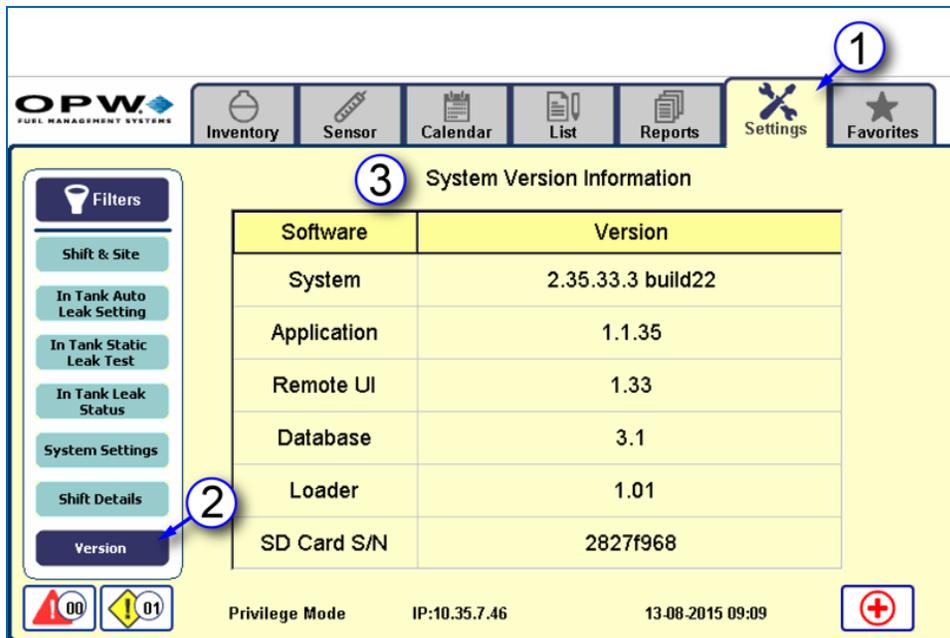
The screenshot shows the OPW Fuel Management System interface. At the top, there is a navigation bar with tabs for Inventory, Sensor, Calendar, List, Reports, Settings, and Favorites. The Settings tab is highlighted with a circled '1'. Below the navigation bar, there is a main content area with a left sidebar containing a Filters menu. The Filters menu has a 'Shift Details' option highlighted with a circled '2'. The main content area has three tabs: Shift 1 Details, Shift 2 Details, and Shift 3 Details. The Shift 1 Details tab is selected and highlighted in dark blue with a circled '3'. The Shift 1 Details tab displays a table of data for TankId 1. The table has two columns: 'TankId' and 'Sum of Deliveries'. The data rows are: 'Begin Product Volume' (936.528gal), 'Ending Product Volume' (936.501gal), 'Begin Product Temperature' (76.969F), 'Ending Product Temperature' (78.629F), 'Starting Product Density' (-nan), 'Ending Product Density' (-nan), and 'Starting Water Volume' (0.000gal), 'Ending Water Volume' (0.000gal). A circled '4' points to the 'Select' button in the right sidebar. At the bottom of the main content area, there are up and down arrow buttons for scrolling, with a circled '5' pointing to the down arrow. The bottom status bar shows 'Privilege Mode', 'IP:10.35.7.46', and '07-08-2015 14:33'.

TankId	1	Sum of Deliveries	0.000gal
Begin Product Volume	936.528gal	Ending Product Volume	936.501gal
Begin Product Temperature	76.969F	Ending Product Temperature	78.629F
Starting Product Density	-nan	Ending Product Density	-nan
Starting Water Volume	0.000gal	Ending Water Volume	0.000gal

Figure 3-1 Shift Details

1. Push the **Settings** tab.
2. Push **Shift Details** under **Filters**.
3. Push a shift tab to see specific details for that shift. The selected shift tab will change to dark blue.
4. Select a tank number (if applicable).
5. Push the arrow buttons to scroll down or up to see more details.

## 3.10 Version

**System Version Information**

Software	Version
System	2.35.33.3 build22
Application	1.1.35
Remote UI	1.33
Database	3.1
Loader	1.01
SD Card S/N	2827f968

Privilege Mode    IP:10.35.7.46    13-08-2015 09:09

Figure 3-1 Version

1. Push the Settings tab.
2. Push Version under Filters.
3. System Version Information is shown.

## 4.1 Inventory

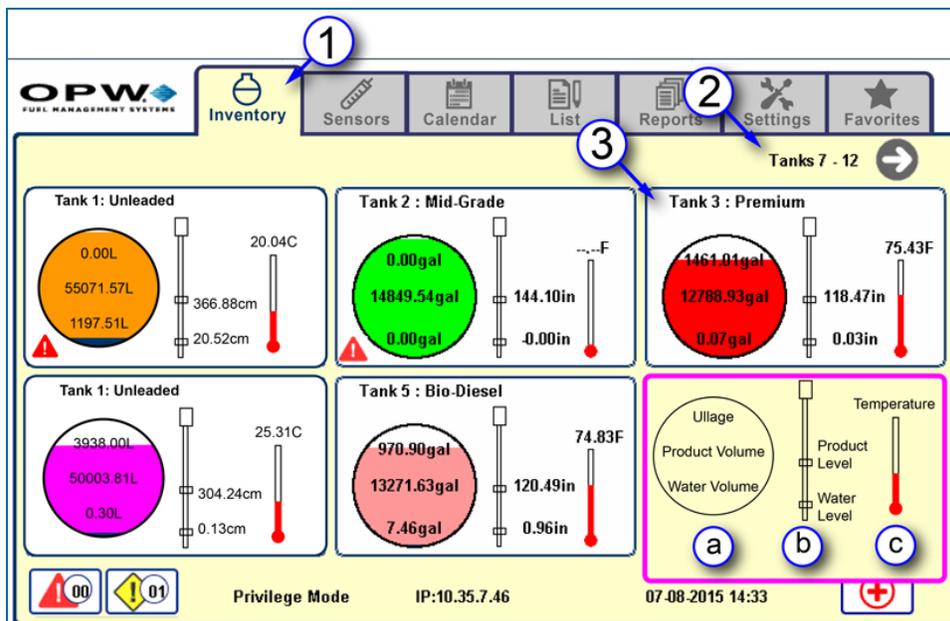


Figure 4-1 Inventory

1. Push the Inventory tab. In addition to the product type, the screen will include a graphic showing the following information for each tank in the system:
  - a. Ullage, Product Volume and Water Volume
  - b. Product Level and Water Level
  - c. Product Temperature
2. This screen can show up to six (6) tanks. To view more tanks (if available in the system) use the arrow buttons on either side of the numbers to move to the next screen (right arrow) or back (left arrow when active).
3. Push a graphic to go to the detail screen for an individual tank.

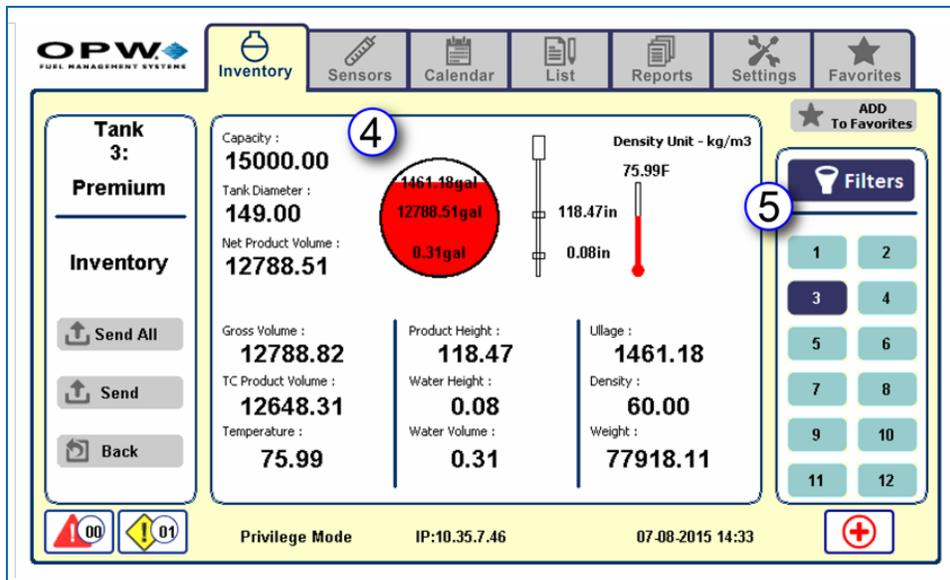


Figure 4-2 Inventory Details

4. This screen shows all Inventory information for the selected tank including:
- Capacity: Total volume capacity of the tank.
  - Tank Diameter: Actual measured diameter of the tank.
  - Gross Volume: Total volume of product and water.
  - Net Volume: Product volume adjusted for temperature (reference temperature of 63°F/15°C) and expansion/contraction.
  - Temperature: Product temperature.
  - Product Height: Measured product height.
  - Water Height: Measured water height.
  - Water Volume: Total water volume.
  - Ullage: Ullage is calculated as Safe Working Capacity [95% of total capacity, generally used as an overfill level] minus Gross Product Volume. For the example above:  $15000 \times 0.95 = 14250 - 12788.82 = 1461.18$ .
  - Density: Product density in kg/m3.
  - Weight: Product weight.



**NOTE:** Information from this screen can be sent to various recipients using the buttons on the left side of the screen as described in Section 4.1, Send Information.

5. Select another tank (if applicable).

## 4.1.1 Send Information

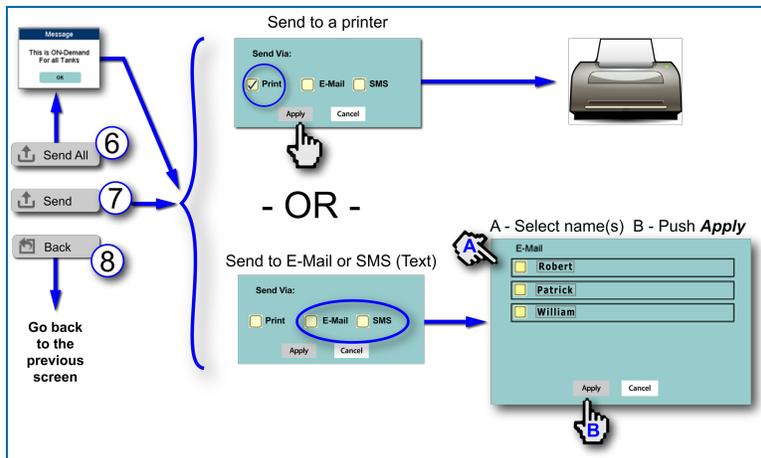


Figure 4-3 Send Inventory Information

6. **Send All:** Push this button and a message will pop up as a reminder that this will send Inventory reports for all tanks. Push OK to bring up the next popup to Send Via: Print (to send to a connected printer), or to a recipient(s) by E-mail, SMS or Fax. Push Print to activate the Apply button. Push Apply to send the report to a connected printer. To close this popup without saving, push Cancel. Push Email, SMS or Fax to check the yellow box(es) and push Apply to bring up another popup. From this popup you can select the recipient(s) of the report. Push the name(s) to check the yellow box next to the name (A). Push Apply from this screen to send the report (B). To close this popup without saving, push Cancel.
7. **Send:** Push this button to send an Inventory report for selected tanks. Push this button to bring up the popup to Send Via: Print (to send to a connected printer), or to a recipient(s) by E-mail, SMS or Fax. Push Print to activate the Apply button. Push Apply to send the report to a connected printer. To close this popup without saving, push Cancel. Push Email, SMS or Fax to check the yellow box(es) and push Apply to bring up another popup. From this popup you can select the recipient(s) of the report from the Address Book. Push the name(s) to check the yellow box next to the name (A). Push Apply from this screen to send the report (B). To close this popup without saving, push Cancel.



**NOTE:** The Address Book is set up in the browser view of the console. Please refer to the M2011 SiteSentinel® Nano® Configuration Guide for information on the Address Book.

8. **Back:** Push this button to return to the original Inventory screen.

## 5.1 Sensor

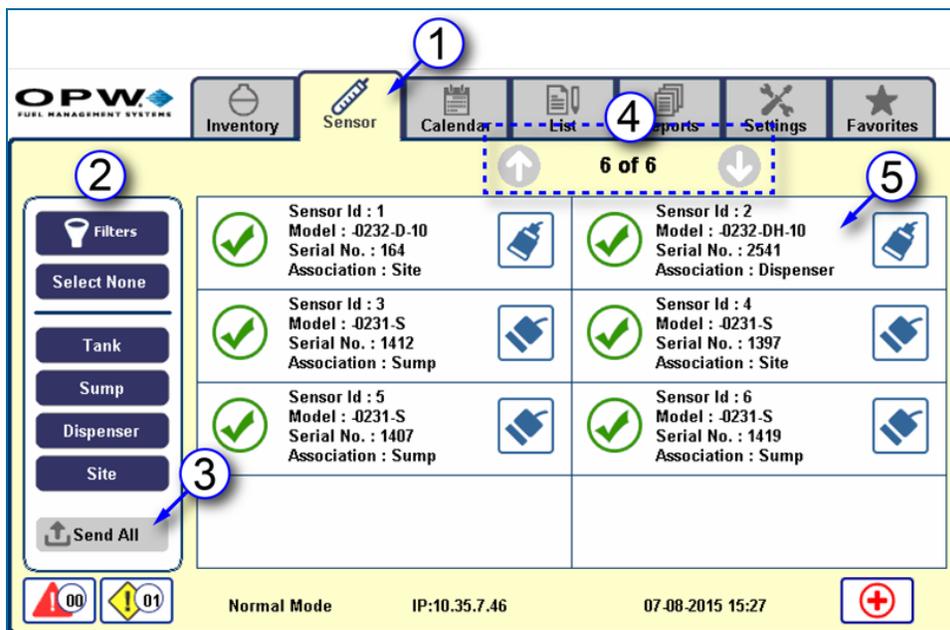


Figure 5-1 Sensor Screen

The Sensor tab shows basic information for all sensors connected to the system.

1. Push the **Sensor** tab.
2. Use the left **Filters** panel to select the sensors you want to see by any combination of sensor categories (Tank, Sump, Dispenser, Site) or all sensors in the system.
3. To **Send All** of the selected information to a connected printer or Address Book recipient see step 6 of Section 4.1.1, Send Information.
4. The **Sensor** screen can show up to eight (8) connected sensors. The numbers show the current number of sensors on the screen and the total number of sensors connected to the system. If more than eight (8) sensors are connected, use the up and down arrows to scroll through the full list.
5. Push one of the sensor information boxes to see **Alarm /Warning** information for the selected sensor. A new screen will come into view.

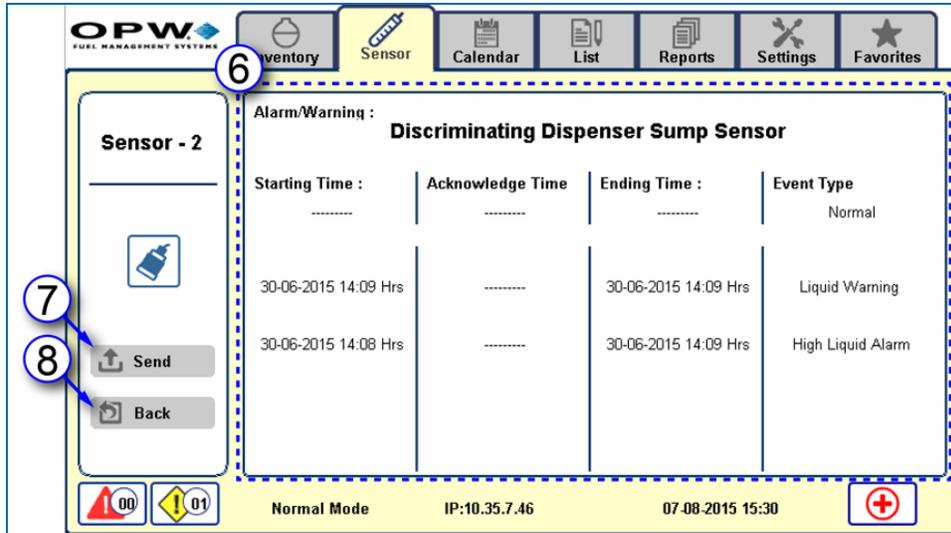


Figure 5-2 Sensor Alarm/Warning Details

6. This screen will show **Alarm/Warning** information for the selected sensor (Starting, Acknowledge and Ending Times and the Event Type).
7. Push the **Send** button to send this information as a report to a connected printer or a recipient(s) in the **Address Book**. (See Section 4.1.1, Step 6 for details).
8. Push the **Back** button to return to the previous screen.

## 6.1 Calendar

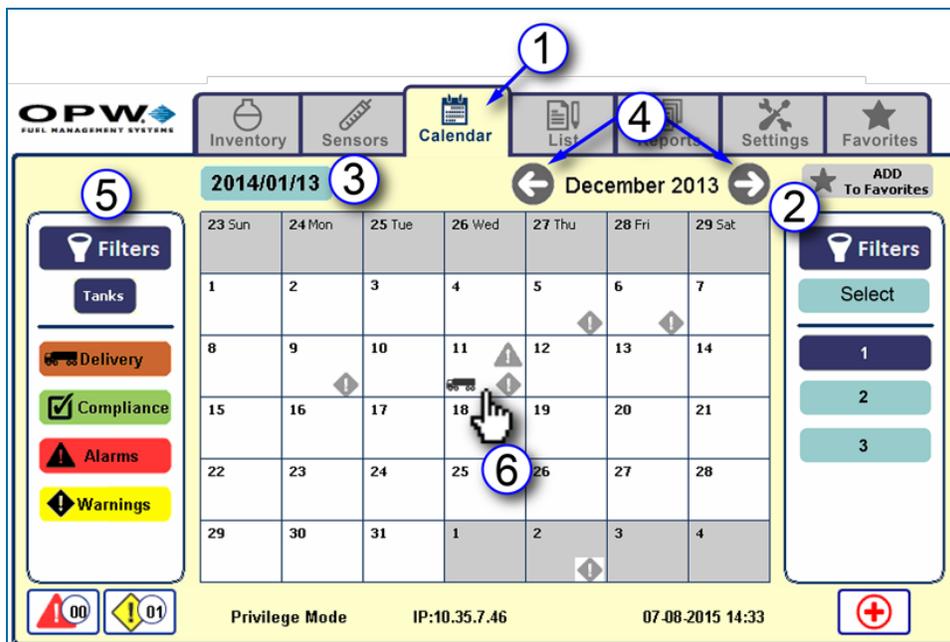


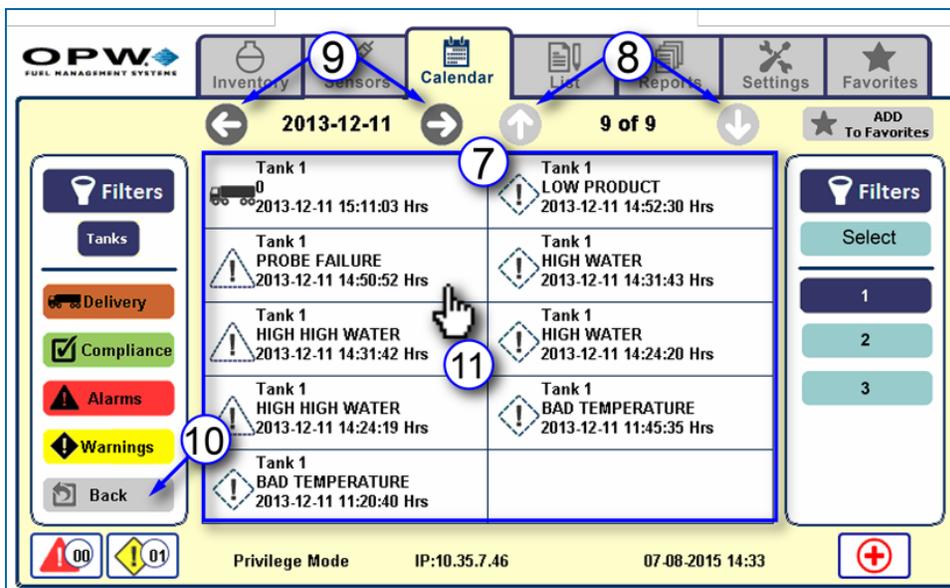
Figure 6-1 Calendar

The **Calendar** tab shows alerts for **Deliveries, Compliance, Alarms and Warnings**. The information shown on this tab can be modified to suit the user's needs.

1. Push the **Calendar** tab.
2. Select a tank number(s) from the right **Filters** panel. Any alerts for the selected tank(s) in the current month will show on the calendar.
3. Today's date is shown at the top-left of the calendar.
4. The currently selected month and year is shown at the top-right of the calendar. To select a different month, use the arrow buttons on either side of the month/year to scroll forward (right arrow) or backward (left arrow).
5. The left Filters panel shows the categories that are seen on the calendar. Push any of the four (4) category buttons to turn off a related category icon shown on the calendar. A category will show as "off" if the background color of the button is faded.
6. Push a date on the calendar to see the alerts for that day. This will open the next screen that shows the alerts in detail.



**NOTE:** The icons that show in the Calendar screens will change appearance based on the state of the alarms and warnings. For an explanation of all icon states see **Appendix B, Icon Glossary – Alarms and Notifications**. Icon states are also explained in the Nano Operator Guide video at the link below.

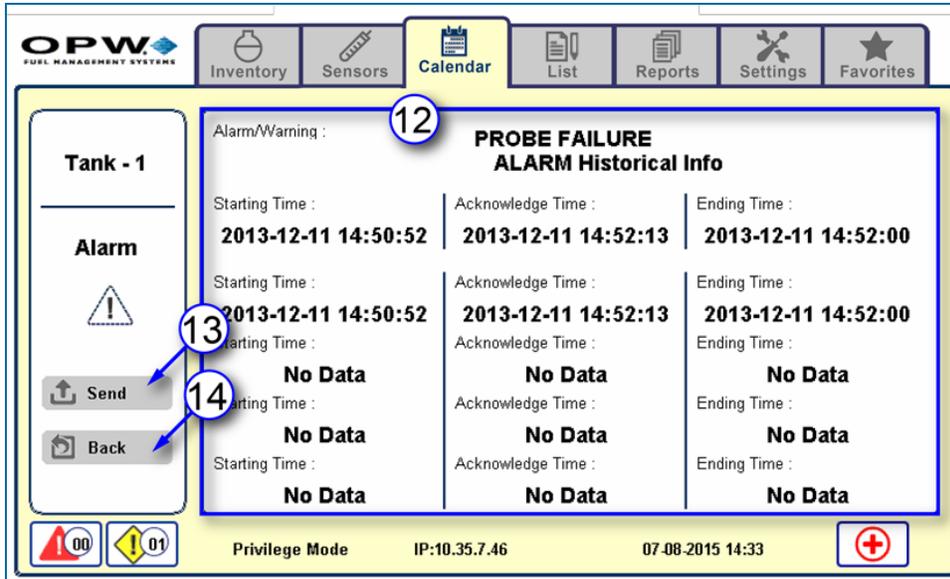
The screenshot shows the OPW Fuel Management System interface. At the top, there are navigation tabs for Inventory, Sensors, Calendar, List, Reports, Settings, and Favorites. The main display area shows the date 2013-12-11 and a list of alerts for Tank 1. The alerts are as follows:

Alert Type	Time
LOW PRODUCT	2013-12-11 14:52:30 Hrs
PROBE FAILURE	2013-12-11 14:50:52 Hrs
HIGH HIGH WATER	2013-12-11 14:31:42 Hrs
HIGH HIGH WATER	2013-12-11 14:24:19 Hrs
BAD TEMPERATURE	2013-12-11 11:20:40 Hrs
HIGH WATER	2013-12-11 14:31:43 Hrs
HIGH WATER	2013-12-11 14:24:20 Hrs
BAD TEMPERATURE	2013-12-11 11:45:35 Hrs

At the bottom of the screen, there is a status bar showing "Privilege Mode", "IP:10.35.7.46", and "07-08-2015 14:33".

Figure 6-2 Calendar; Date Details

7. All of the alerts and alarms for the selected date come into view and show the tank number, type of alert, date and time the alert occurred.
8. This screen can show up to 10 alert boxes. The number of current alerts and the total number of alerts for the selected date show at the top right of this screen. To see more alerts (if available) use the arrow buttons on either side of the numbers to scroll down (right arrow) or up (left arrow).
9. The selected date can be seen at the top left of this screen. To select a different date, use the arrow buttons on either side of the date to move forward (right arrow) or backward (left arrow).
10. Push the **Back** button to return to the **Calendar** view
11. Push an alert box. This will open the next screen to show more details for that alert.



**OPW**  
FUEL MANAGEMENT SYSTEMS

Inventory Sensors **Calendar** List Reports Settings Favorites

**Tank - 1**

**Alarm**

Alarm/Warning : **12** **PROBE FAILURE**  
**ALARM Historical Info**

Starting Time :	Acknowledge Time :	Ending Time :
<b>2013-12-11 14:50:52</b>	<b>2013-12-11 14:52:13</b>	<b>2013-12-11 14:52:00</b>
<b>2013-12-11 14:50:52</b>	<b>2013-12-11 14:52:13</b>	<b>2013-12-11 14:52:00</b>
<b>No Data</b>	<b>No Data</b>	<b>No Data</b>
<b>No Data</b>	<b>No Data</b>	<b>No Data</b>
<b>No Data</b>	<b>No Data</b>	<b>No Data</b>

Send **13**

Back **14**

Privilege Mode IP:10.35.7.46 07-08-2015 14:33

Figure 6-3 Alarm/Warning Historical Information

12. All of the historical information for the selected alert will come into view.
13. Push the **Send** button to send this information as a report to a connected printer or a recipient(s) in the **Address Book**. (See Section 4.1.1, Step 6 for details).
14. Push the **Back** button to return to the previous screen.

## 7.1 List

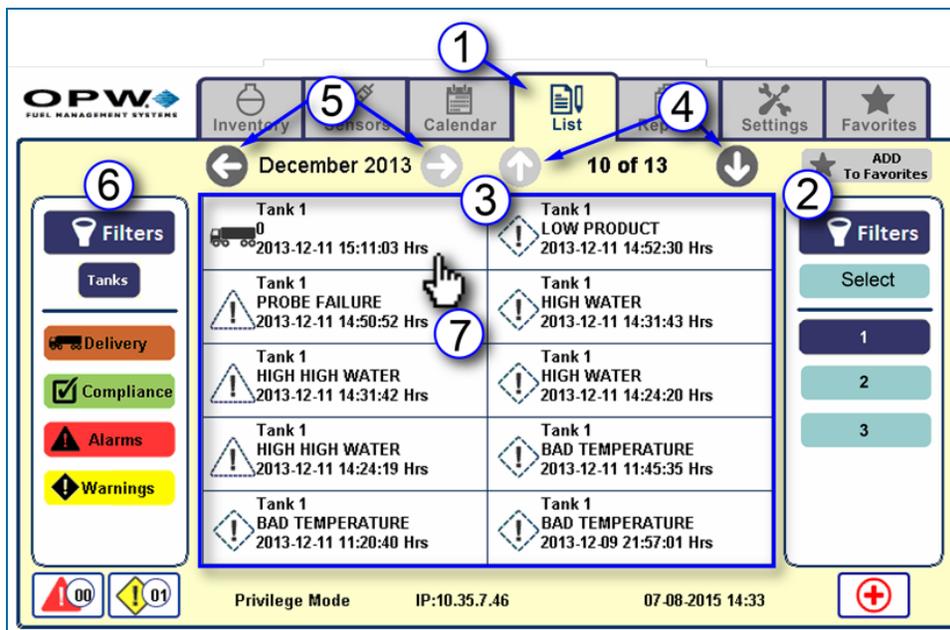
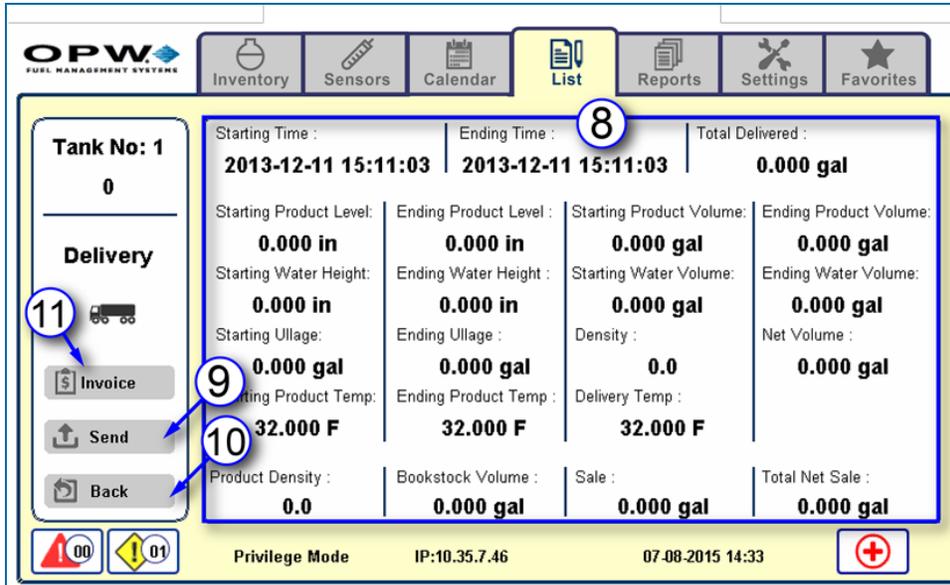


Figure 7-1 List

1. Push the List tab.
2. Select a tank number(s) from the right Filters panel. Any alerts for the selected tank(s) in the current month will show on the list view.
3. All alerts for the month are listed according to category and time.
4. This screen can show up to 10 alerts. The number of current alerts and the total number of alerts for the selected date show at the top right of this screen. To see more alerts (if available) use the arrow buttons on either side of the numbers to scroll down (right arrow) or up (left arrow).
5. The current month shows at the top left of this screen. To select a different month, use the arrow buttons on either side of the month to scroll forward (right arrow) or backward (left arrow).
6. The left Filters panel shows the categories that are seen on the calendar. Push any of the four (4) category buttons to turn off a related category icon shown on the calendar. A category will show as "off" if the background color of the button is faded.
7. Select an alert to open the next screen to show more details for that alert.



OPW FUEL MANAGEMENT SYSTEMS		Inventory	Sensors	Calendar	List	Reports	Settings	Favorites
<b>Tank No: 1</b> 0	Starting Time : <b>2013-12-11 15:11:03</b>	Ending Time : <b>2013-12-11 15:11:03</b>	Total Delivered : <b>0.000 gal</b>					
<b>Delivery</b>	Starting Product Level: <b>0.000 in</b>	Ending Product Level : <b>0.000 in</b>	Starting Product Volume: <b>0.000 gal</b>	Ending Product Volume: <b>0.000 gal</b>				
<b>11</b> 	Starting Water Height: <b>0.000 in</b>	Ending Water Height : <b>0.000 in</b>	Starting Water Volume: <b>0.000 gal</b>	Ending Water Volume: <b>0.000 gal</b>				
<b>9</b> 	Starting Ullage: <b>0.000 gal</b>	Ending Ullage : <b>0.000 gal</b>	Density : <b>0.0</b>	Net Volume : <b>0.000 gal</b>				
<b>10</b> 	Starting Product Temp: <b>32.000 F</b>	Ending Product Temp : <b>32.000 F</b>	Delivery Temp : <b>32.000 F</b>					
<b>Back</b> 	Product Density : <b>0.0</b>	Bookstock Volume : <b>0.000 gal</b>	Sale : <b>0.000 gal</b>	Total Net Sale : <b>0.000 gal</b>				
 	Privilege Mode	IP:10.35.7.46	07-08-2015 14:33					

Figure 7-2 Alarm/Warning Event Details

8. More details for the selected alert are shown on this screen.
9. Push the Send button to send this information as a report to a connected printer or a recipient(s) in the Address Book (See Section 4.1 Step 6 for details).
10. To return to the List view, push the Back button.
11. If the alert is for a Delivery, push the Invoice button to show information regarding the delivery invoice.

## 8.1 Reports

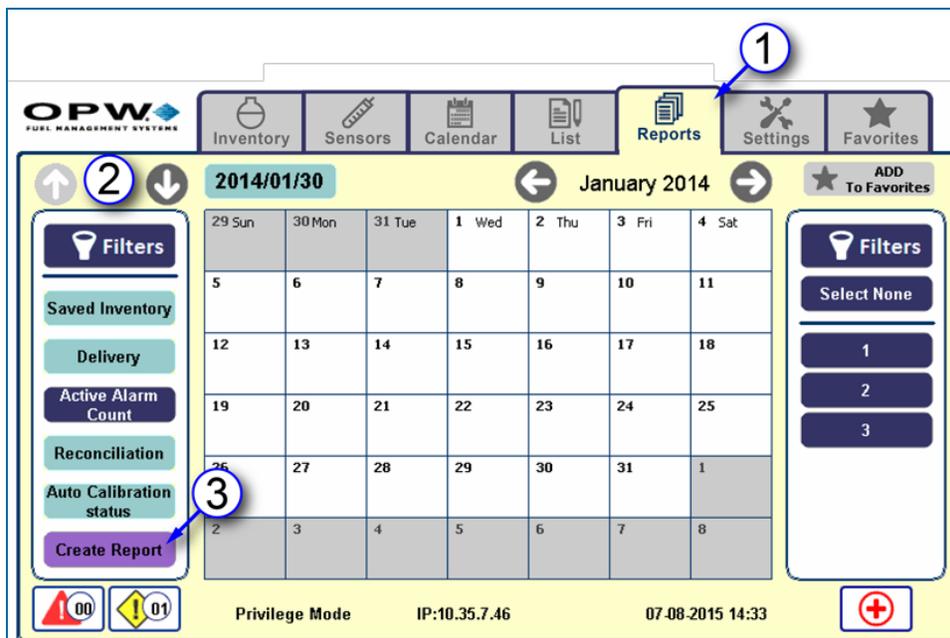


Figure 8-1 Reports

1. Push **Reports**.
2. Select a type of report to create from the left-side **Filters** menu (for example, the screen above shows that **Active Alarm Count** has been selected). Use the up and down arrow buttons to scroll through more choices.
3. Push **Create Report** to bring up the next screen.

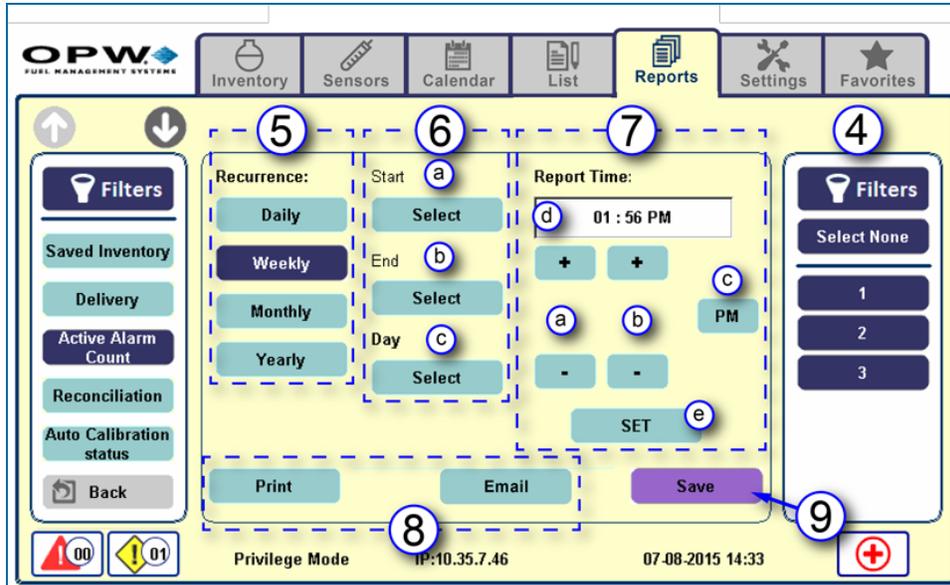


Figure 8-2 Create Report

4. Select the applicable tank number(s) from the right **Filters** panel.
5. Select **Recurrence** as necessary. Push the applicable button: **Daily**, **Weekly**, **Monthly** or **Yearly**.
6. Set the **Report Date**.
  - a. Push **Start Select**. Use the + and – buttons to select the day, month and year. Push **Set** to save.
  - b. Push **End Select**. Use the + and – buttons to select the day, month and year. Push **Set** to save.
  - c. Push **Day Select**, if applicable (this button only comes into view when **Weekly** is selected under **Recurrence**). Choose the applicable day and push **Set**.

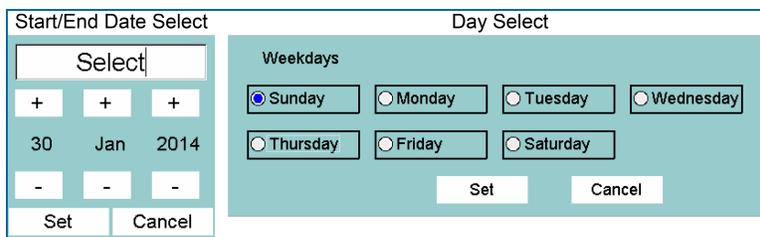


Figure 8-3 Start and End Date and Day Select

7. Set the **Report Time**.
  - a. Push **Start Select**. Use the + and – buttons to select the hour and minutes.
  - b. Push **End Select**. Use the + and – buttons to select the hour and minutes.
  - c. Press this button to choose AM/PM.
  - d. Push **Set**.

8. Select how the report is to be delivered: Send to a connected printer to **Print** a report or send the report to a recipient(s) via **Email**. Choose the recipient(s) from the **Address Book** popup and push **Apply**.
9. Push **Save** to save the report settings.

## 9.1 Favorites



Figure 9-1 Add to Favorites Button

Push the **Add to Favorites** button on any screen that shows it (below the **Favorites** tab) to add that screen to the **Favorites** list.

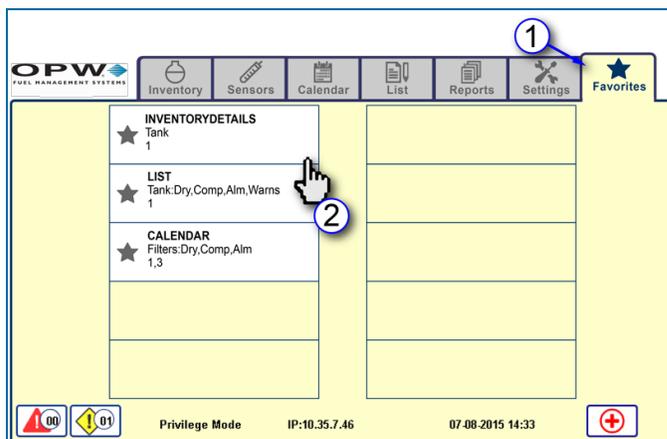


Figure 9-2 Favorites List

1. Push the **Favorites** tab to see the **Favorites** list.
2. Select a **Favorite** and push the white box to jump directly to that screen.

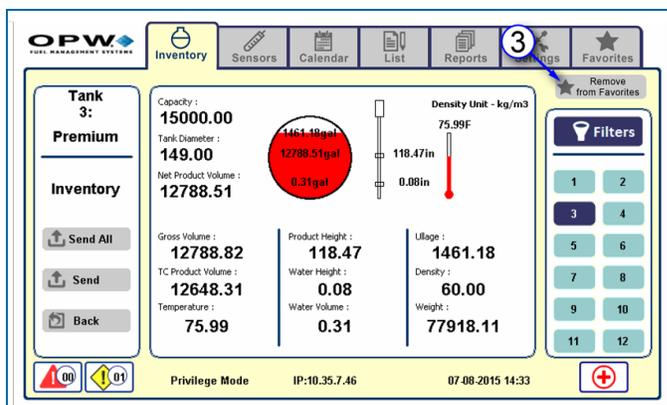


Figure 9-3 Remove From Favorites Button

3. To remove a screen from the **Favorites** list, push the **Remove from Favorites** button.

## Appendix 9 - Icon Glossary - Tabs

### Tabs



The Inventory tab shows Inventory related information for tanks such as product and water volume, Ullage, product and water levels and product temperature. Push a tank graphic that shows on this screen to see more information for that tank.



The Sensor tab shows basic information for all connected sensors in the system such as the sensor ID number, Model, Serial Number and Association. Push a sensor graphic on that shows on this screen to see more information for that sensor



The Calendar tab shows alerts for **Deliveries**, **Compliance**, **Alarms** and **Warnings** in a calendar view.



The List tab shows a list view of all alerts for a selected tank.



The Reports tab lets the user set up and send various reports to chosen names in the Address Book.



The Settings tab lets the user enter important system information and customize many of the console's features.



The Favorites tab shows screens that have been selected as favorites by the user.

## Appendix 9 - Icons - Alarm/Warning Notifications

	Alarm active and unacknowledged.
	Alarm active and acknowledged.
	Alarm inactive and unacknowledged.
	Alarm Inactive and acknowledged.
	Warning active and unacknowledged.
	Warning active and acknowledged.
	Warning inactive and unacknowledged.
	Warning inactive and acknowledged.
	Leak test passed.
	Leak indicated or failed.
	Leak test in progress.
	Leak test stopped because of forced stop (aborted), delivery, power failure, activity etc., during test.
	Delivery occurred.

## Revisions

Revision #	ECO	Effective	Software Version	Key Changes
0	624	7/29/14		Initial Release
1	696	3/3/15	2.27.27.3 Build 13 & 2.30.28.3 Build 17	W&M/Language support
2	834	11/6/15	3.42.38.3- Build 29	Smart Sensors and Multi-drop installation capabilities of Probes and Sensors.
3	1890	3/31/21	3.71.56.3 Bld 61.1	0.1gph Static Leak Test, DMP support



**NOTE:** It is possible that older software versions might not support all features

## Warranty

OPW Fuel Management Systems warrants that all OPW Tank Gauge and Petro Vend Fuel Control systems supplied by OPW Fuel Management Systems to the Original Purchaser will be free from defects in material and/or workmanship under normal use and service for a period of 12 months from the date of installation or 15 months from the date of shipment from OPW. Additionally, OPW Fuel Management Systems warrants that all upgrades and replacement parts (new and remanufactured) supplied by OPW Fuel Management Systems will be free from defects in material and workmanship under normal use and serviced for a period of 90 days from the date of installation or for the remainder of the system's original warranty, whichever is greater, as set forth in the first sentence of this statement. The foregoing warranties will not extend to goods subjected to misuse, neglect, accident, or improper installation or maintenance or which have been altered or repaired by anyone other than OPW Fuel Management Systems or its authorized representative. The buyer's acceptance of delivery of the goods constitutes acceptance of the foregoing warranties and remedies, and all conditions and limitations thereof.

If a claim is made within the warranted time period that any equipment and/or remanufactured part is defective in material or workmanship under normal use and service, such equipment and/or remanufactured part shall be returned to OPW Fuel Management Systems, freight prepaid. If such equipment or remanufactured part is found by OPW Fuel Management Systems in its sole judgment to be defective in material or workmanship under normal use and service, OPW Fuel Management Systems shall, at its sole option, repair or replace such equipment and/or remanufactured part (excluding, in all instances, fuses, ink cartridges, batteries, other consumable items, etc.) OPW Fuel Management Systems shall not be held responsible for data loss or retrieval on returned products.

The warranties, as set forth above, are made expressly in lieu of all other warranties, either expressed or implied (including, without limitation, warranties of merchantability and fitness for any particular purpose and of all other obligations or liabilities on OPW Fuel Management Systems' part.) Further, OPW Fuel Management Systems neither assumes, nor authorizes any other person to assume for it, any other liability in connection with the sale of the systems, or any new/replacement part that has been subject to any damage from any act of nature or any force majeure. Any terms proposed by the Original Purchaser either orally or in writing are expressly rejected. The terms and conditions expressed in this document may only be changed upon the express written consent of OPW Fuel Management Systems.

The term "Original Purchaser" as used in these warranties shall be deemed to mean the authorized OPW Fuel Management Systems' distributor to which the system or any new/replacement part was originally sold. These warranties may be assigned by the original purchaser to any of its customers who purchase any OPW Fuel Management Systems' systems or new/replacement parts. This document shall be governed by and construed in accordance with the law of the State of Illinois. OPW Fuel Management Systems and Original Purchaser agree that any legal action or proceeding under or with respect to this document may ONLY be brought in the courts of the State of Illinois, or the United States District Court having jurisdiction in the City of Hodgkins, Illinois. Original Purchaser expressly consents to personal jurisdiction in any of the above-mentioned forums and agrees to waive all defenses based on improper venue or inconvenient form should an action be brought therein.

The sole liability of OPW Fuel Management Systems, for any breach of warranty, shall be as set forth above. OPW Fuel Management Systems does not warrant against damage caused by accident, abuse, faulty or improper installation or operation. In no event shall manufacturer's liability on any claim for damages arising out of the manufacture, sale, delivery or use of the goods exceed the original purchase price of the goods. In no event shall OPW Fuel Management Systems be liable for any direct, indirect, incidental or consequential damage or loss of product.

### TERMS

Ex-works our factory, Hodgkins, Illinois, USA

Installation not included.

All trade names are registered. Patents pending.

Subject to engineering improvement and/or other changes.



INNOVATIVE SOLUTIONS FUELING BUSINESS SUCCESS WORLDWIDE



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Midlothian, UK  
Elland, UK  
Dundee, UK  
London, UK  
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