



# **VEEDER-ROOT'S 450PLUS UPDATED PRESENTATION**

**C2-3/29 Dave Emmington**  
**March 29, 2022**



**24th California Unified Program  
Annual Training Conference**  
March 22, 23, 24, 29, 30, 31 - 2022

# Thank you to all our 2022 SPONSORS and EXHIBITORS!



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# Other Important CUPA 2022 Info for You

- Most of last week's Sessions are available as "Watch Now"
- Slido for Polls/Q&A for 90% of Sessions
- Check for Post Zoom meeting follow up link in Q&A
- Zoom meetings – Use Q&A/Stay in meeting for post Session...there will be NO "Are you still watching?" in Zoom
- To earn CEUs, make sure to join the Session within the first 10 minutes for LIVE Sessions, click on "Are you still watching?" popups and attend at least 90% of the Session. Complete Session Evaluations and Conference Survey.



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# TLS-4xx Series Overview



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# TLS-4xx Series Overview

- Internet of Things (IoT) connectivity
- Intuitive “Workflow Wizard” Touchscreen User Access
- Color touchscreen Graphic User Interface (GUI)
- Three-year memory of alarm history and compliance reports
- Universal Sensor Modules (USM)
- Free Remote Access



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# TLS-4xx Series Overview

- Best-in-Class security
- Enhanced Performance
- Software upgrades via USB or download
- Web enabled with email notifications
- Role based login (Admin, Operator, Regulator)



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# TLS<sub>4</sub> Overview

- TLS<sub>4</sub>i
  - ✓ 4 probes and 8 sensors
  - ✓ Replaces TLS-300i
- TLS<sub>4</sub>c
  - ✓ 2 probes and 4 sensors
  - ✓ Replaces TLS-300c
- 7-inch color touch screen Graphic User Interface (GUI)
- For smaller non-retail/commercial facilities
- Static tank testing and CSLD optional
- No PLLD line leak detection
- Optional network printer



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# TLS-450PLUS Overview

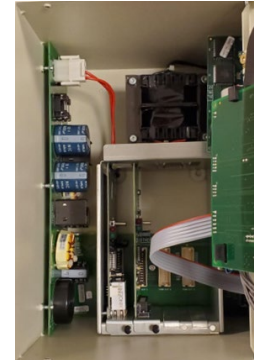
- 8-inch color touchscreen Graphic User Interface (GUI)
- 80 Column Printer
- Supports
  - ✓ 32 probes
  - ✓ 16 PLLDs
  - ✓ 99 sensors
- Universal Sensor Modules (USM)
- Enhanced Performance
- Software upgrades via USB or download
- Print from console or network printer
- Expandable



# TLS-350 Module Examples

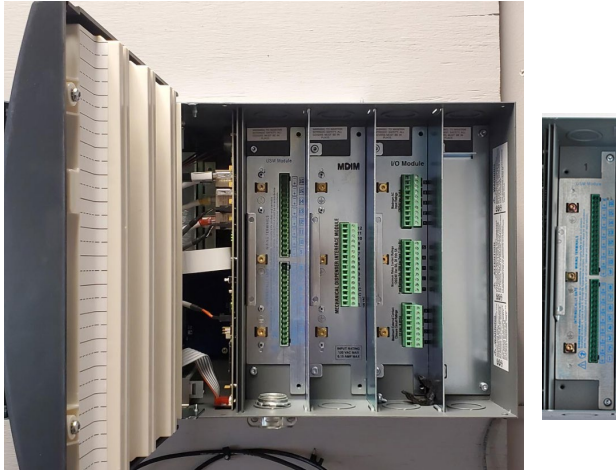


- ✓ Probe/Thermistor Module
- ✓ 8 Input Interstitial Module
- ✓ Type A Module
- ✓ Type B Module
- ✓ 7 Input Smart Sensor Module
- ✓ 8 Input Smart Sensor Module
- ✓ PLLD Sensor Module



- ✓ Software Module

# TLS-450PLUS Overview



- Universal Sensor Modules (USM)
- Universal Input Output Modules (UIOM)
- “Plug and Play”
- Download software via USB



# TLS-450PLUS Benefits



**CONNECTIVITY**



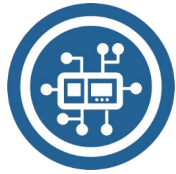
**ENHANCED  
SECURITY**



**TOTAL COST  
OF  
OWNERSHIP**

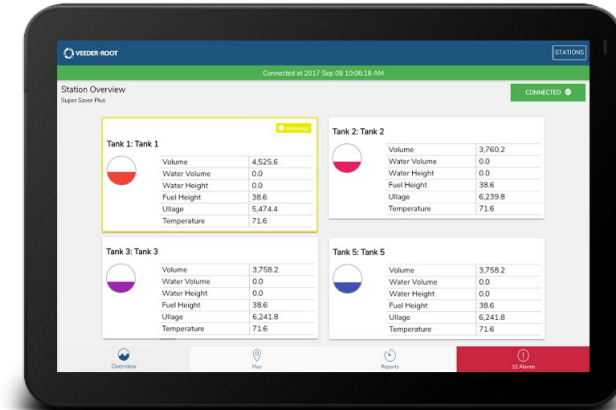


**EXPANDED  
CAPABILITY**



# Connectivity

- The TLS-450PLUS provides multiple connectivity options.
- Provides remote access to manage critical data
- Ensures operators always know what is going on with their fueling facility assets.





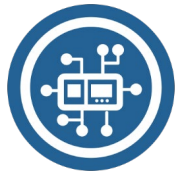
# Connectivity

## Apps

- **PLUS VIEW** app
  - ✓ Provides periodic status updates from off-site.
  - ✓ Station overview for an immediate status check of UST inventory
  - ✓ Reports tab for quick access to Alarm, Inventory, and Last Delivery reports
  - ✓ Map view to allow for easy navigation between sites
- **REMOTE VIEW** app provides continuous management data for in-store use.
  - ✓ Provides continuous onsite management data
  - ✓ Updates ATG data as activity happens on site in real-time
  - ✓ View Active Alarms with one touch
  - ✓ Audible and on-screen notifications







# Connectivity

## Remote Access

- Web enabled
  - ✓ Accessible from any web browser. Anywhere, anytime
  - ✓ As if you're standing at gauge
  - ✓ Print compliance and wet stock reports
  - ✓ Access diagnostics
  - ✓ Email notifications
- To access the Web-enabled feature you need to have web access enabled, the IP address for the device, and active login credentials





# Connectivity

## Managed Services

- **Insite360 delivers cloud-based fuel management and provides total control of your network.**
  - ✓ Environmental Compliance and Alarm Management
  - ✓ Fuel Logistics and Procurement
  - ✓ Fleet Communications and Tracking
  - ✓ Inventory Management
  - ✓ Profit Optimization

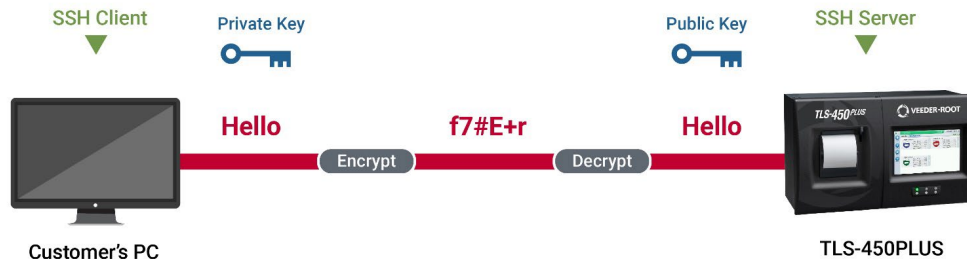




# Enhanced Security

Greater Connectivity Needs Greater Protection

- The TLS-450PLUS provides the security needed for today's connected world, supporting the following features:
  - ✓ Isolated Networks
  - ✓ Encrypted Web Access
  - ✓ Encrypted Serial Access
  - ✓ Role-Based Access
  - ✓ Front Panel Access
  - ✓ Network Routing





# Enhanced Security

Greater Connectivity Needs Greater Protection

- **What can happen if you do not take ownership of your network?**
  - ✓ Rename Tank Information
  - ✓ Resize Tanks (From 10K to 20K Gallons)
  - ✓ Shutdown Dispensing (PLLD and Relay Settings)
  - ✓ Capture Sensitive Corporate Data
  - ✓ Shutdown IP Cards / Network Services
  - ✓ Loss of Compliance Data



# Enhanced Security



	TLS-350	TLS-450PLUS
Network Separation of Internet from POS	No	Yes
Encrypted Web Access (HTTPS)	No	Yes
Encrypted Serial Access (SSH)	No	Yes
Role-Based User Access	No	Yes
Front Panel Access Control	No	Yes
Network Routing Tables	No	Yes

# Total Cost of Ownership

- The TLS-450PLUS provides an expanded, advanced feature set at a lower price point than the TLS-350 console without needing to replace your probes or sensors
- Upgrading automatically extends the warranty of your probes and sensors for the duration of the warranty on your new TLS-450PLUS.





# Expanded Capability

- With regular updates, your operating software is always up to date with the latest enhancements and features, and your data is secure.
- Features improved on the TLS-450PLUS include:
  - Digital Pressurized Line Leak Detection (DPLLD)
    - ✓ Certified line length up to 1178 gallons
  - AccuChart™
    - ✓ Calibration range increase
  - Business Inventory Reconciliation (BIR)
    - ✓ Increased deliveries





# Expanded Capability

## TLS-XB

- ✓ For larger retail sites
- ✓ Four module slots per XB
- ✓ Can daisy chain up to 3 XBs
- ✓ Expands TLS-450Plus inputs to 256 total devices



# Why TLS-XB?



# Software Updates

- Online
  - ✓ Software posted on Veeder.com
  - ✓ Download to Thumb Drive for Site Upgrades
- Centralized Device Management (CDM)



## AUTOMATIC TANK GAUGE SOFTWARE

### TLS-450PLUS and TLS4 Software

This portal provides software and documentation that can be downloaded at no charge. The software can be copied to a standard FAT-32 thumbdrive to upgrade a site console. The thumbdrive can be used at multiple sites to upgrade the software. Note that software cannot be downgraded from a newer version.

SOFTWARE VERSION

RELEASE DATE

SOFTWARE

Version 7.N

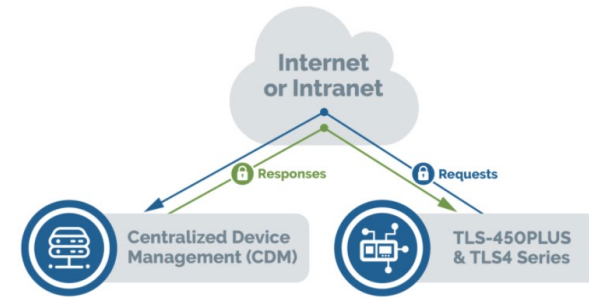
August 17, 2017

DOWNLOAD NOW



# Central Device Management - CDM

- CDM is a server-based software suite to manage your entire network of sites
- CDM defends against catastrophic data loss and creates a secure operating environment with the latest software upgrades



# CDM - Software Upgrades

- ✓ Automate remote software downloads and upgrades for your entire network.
- ✓ Set software to automatically download and activate, or manually download and activate at your convenience.
- ✓ Schedule upgrades around your specific needs.
- ✓ Group consoles by location, site type, time zone, etc.



**VIEW PACKAGE**

**PACKAGE**

**Name:** TLS-450PLUS 9M Software Release

**URL:** http://documents/CDM\_Software\_Packages

**File Size:** 35830454 Bytes

**Version:** 9M 225.21

**Type:** Software Download Package

**Mode:** active

**Checksum:** b0f5e52eb1a29e5554b5836a036a0ad

**Notes:**

Updated By: tjornlund at 9/3/2020, 11:52 AM

Created By: tjornlund at 9/3/2020, 11:52 AM

EDIT



# CDM - Console Backup

- ✓ Automatically backup TLS-450PLUS and TLS4 Series console data for any console in your network.
- ✓ Protect your site data to ensure proper compliance
- ✓ Use the backup file to configure new build sites



**VIEW VAULT**

<b>VAULT</b>		<b>EDIT</b>
Name:	SimGas Backup Amazon Vault	Method: S3
Location:	https://s3.amazonaws.com/445/	Certificate: ---
Access Key ID:	jamith@simgas.com	Secret Access Key: ---
Bucket:	buckets/simgas-backups	Region: eastern-us

**VIEW PACKAGE**

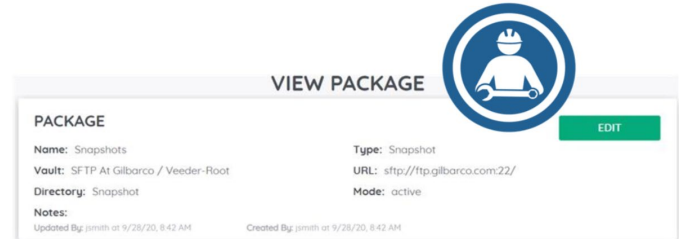
<b>PACKAGE</b>		<b>EDIT</b>
Name:	Daily Backups to Amazon S3	Type: Backup
Vault:	SimGas Backup Amazon Vault	URL: https://s3.amazonaws.com/445/
Directory:	Console ID / Year	Mode: active

**VIEW PLAN**

<b>PLAN</b>		<b>EDIT</b>
Plan Name:	Daily Backup to Amazon S3	Package: Daily Backups to Amazon S3
Start Date:	9/29/20, 12:00 AM	End Date: 12/31/20, 11:59 PM
Active From:	12:00 AM	Active Thru: 6:00 AM
Schedule Type:	Daily	Occurrence:
Day Of Month:		Week Day:
# of Consoles:	2	Mode: active
Status:	Defined	
Created By: jamith on 9/29/20, 9:23 AM		Updated By: jamith on 9/29/20, 9:23 AM

# CDM - Console Snapshot

- ✓ A Console Snapshot captures the database and logs.
- ✓ Capture a Console Snapshot to provide useful information to Veeder-Root Technical Support.
- ✓ Easily troubleshoot site issues

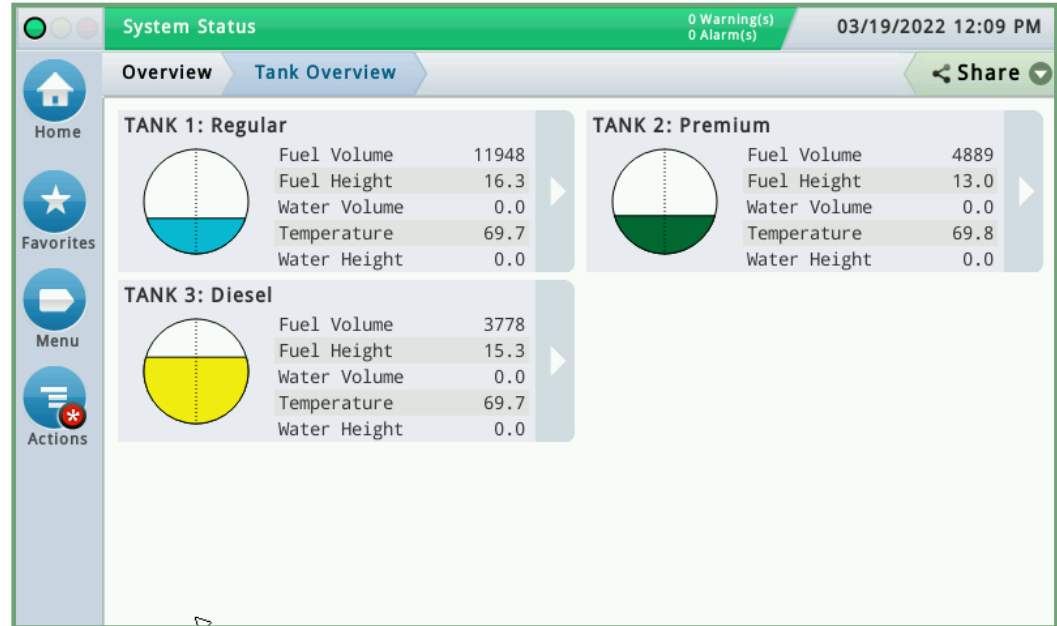


# TLS-450PLUS Touchscreen



# TLS-450PLUS Overview - Touchscreen

- Factory default Home Screen is Tank Overview
- Home Screen is user defined

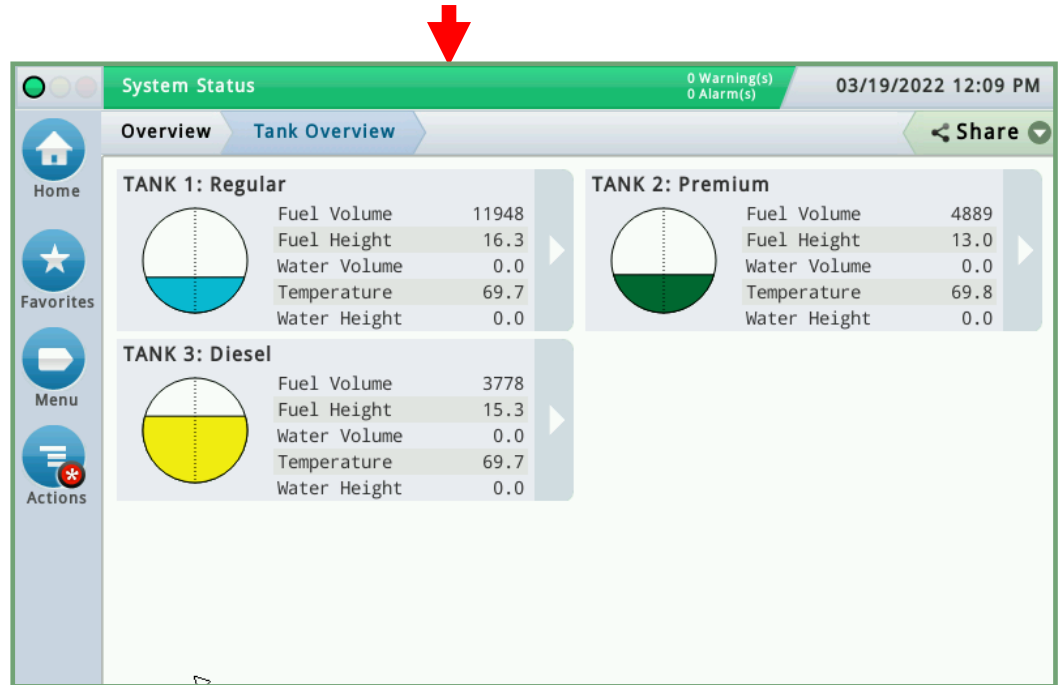
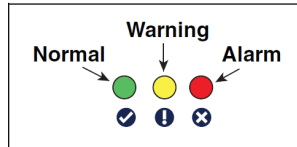


# TLS-450PLUS Overview - Touchscreen

- System Status bar displays current system status

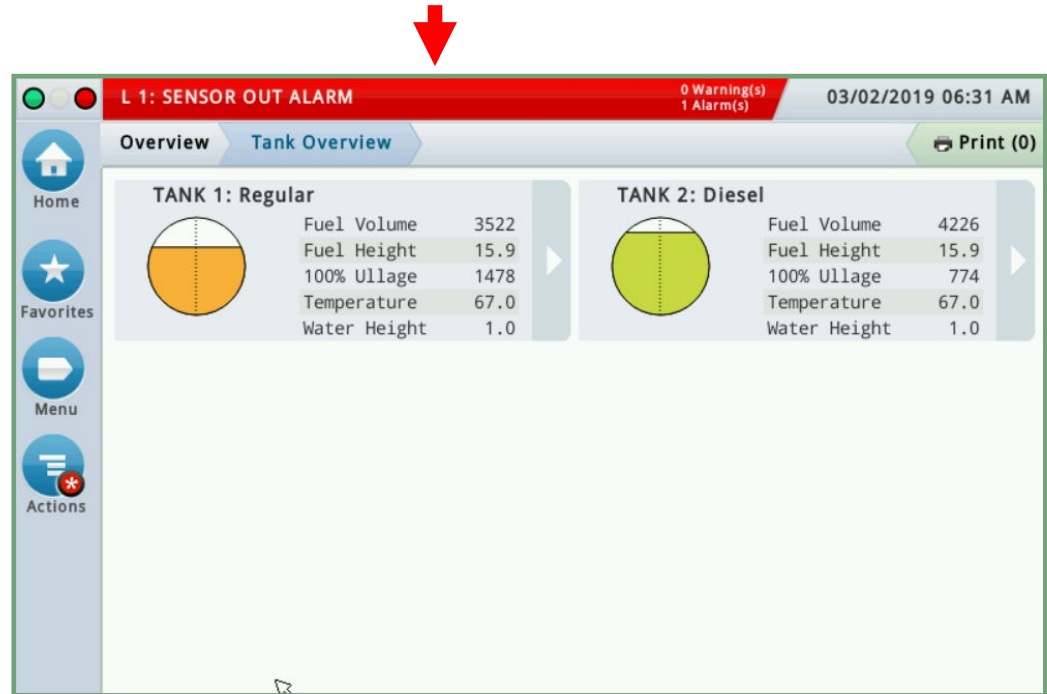
- ✓ Green
- ✓ Yellow
- ✓ Red

- Corresponds to console warning lights



# TLS-450 PLUS Overview - Touchscreen


- When pressed will display Alarm and Warning History screen





# TLS-450 PLUS Overview - Touchscreen

- All active Alarm and Warnings will be displayed

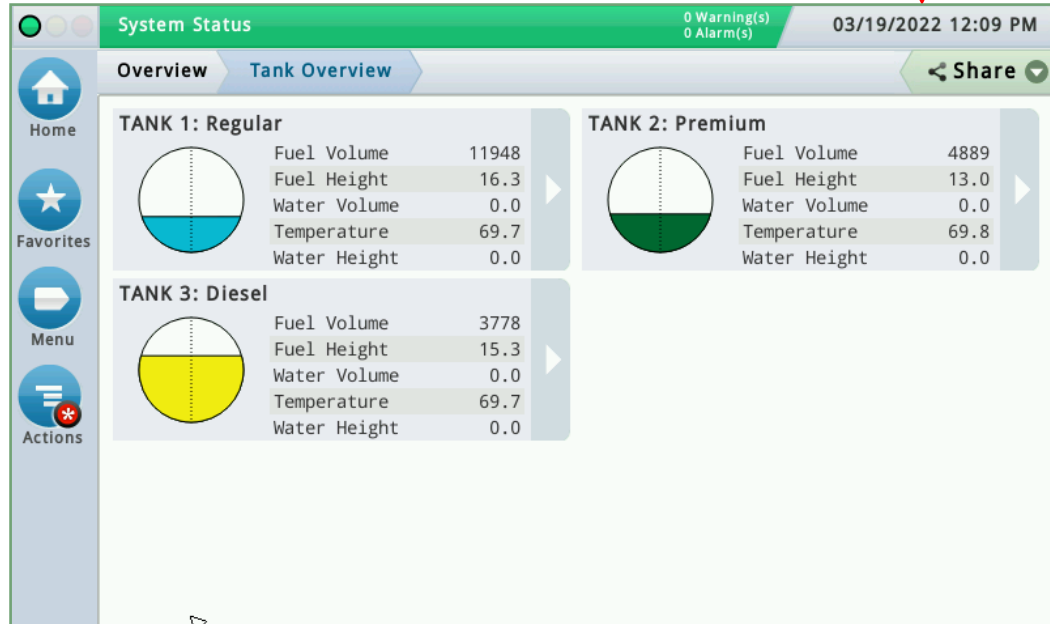


The screenshot displays the TLS-450 PLUS touchscreen interface. At the top, a red status bar shows 'L 1: SENSOR OUT ALARM' and '0 Warning(s) 1 Alarm(s)' with the timestamp '03/02/2019 06:33 AM'. Below this, a navigation bar includes 'Reports', 'Alarms', and 'Active'. A sidebar on the left contains icons for 'Home', 'Favorites', 'Menu', and 'Actions'. The main area features a table with columns for '#', 'Label', 'Alarm Description', 'Active Time', and 'Clear T'. One alarm is listed: 'L 1' with label 'Fuel Position 1 & 2', description 'SENSOR OUT ALARM', and active time '03/02/2019 06:30 AM'. A 'Print (0)' button is visible in the top right.

#	Label	Alarm Description	Active Time	Clear T
<input type="checkbox"/> L 1	Fuel Position 1 & 2	SENSOR OUT ALARM	03/02/2019 06:30 AM	

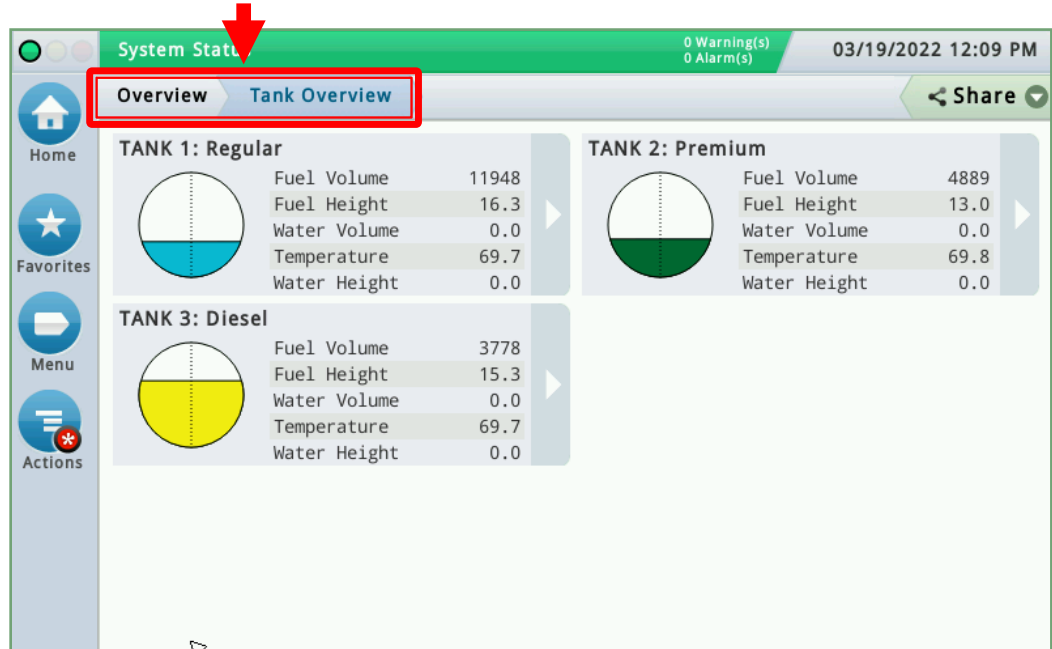
# TLS-450PLUS Overview - Touchscreen

- System date and time



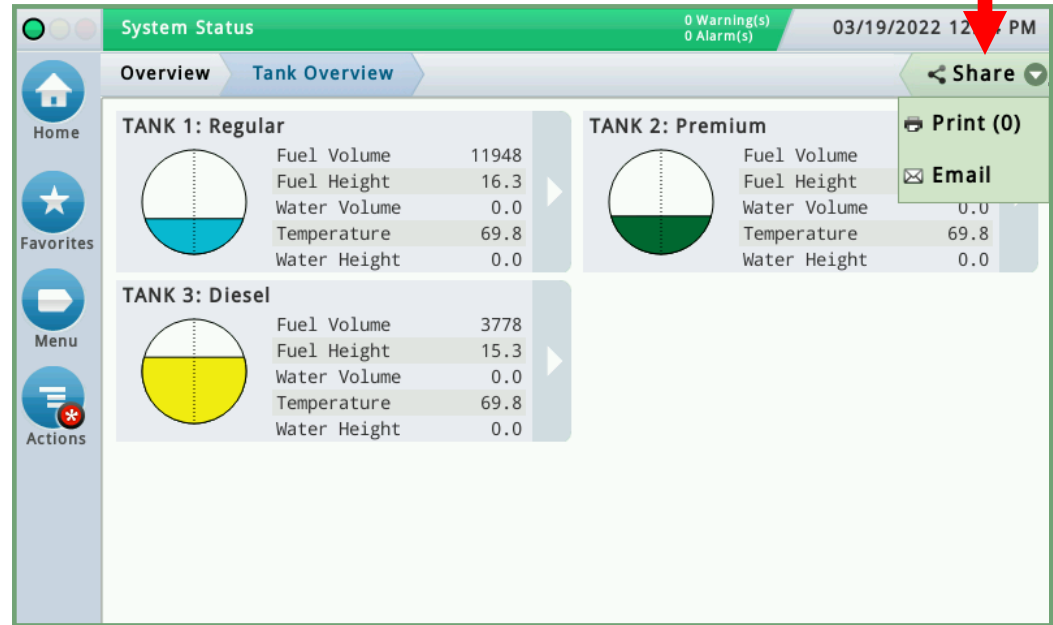
# TLS-450 PLUS Overview - Touchscreen

- Breadcrumbs indicate what screen is currently displayed



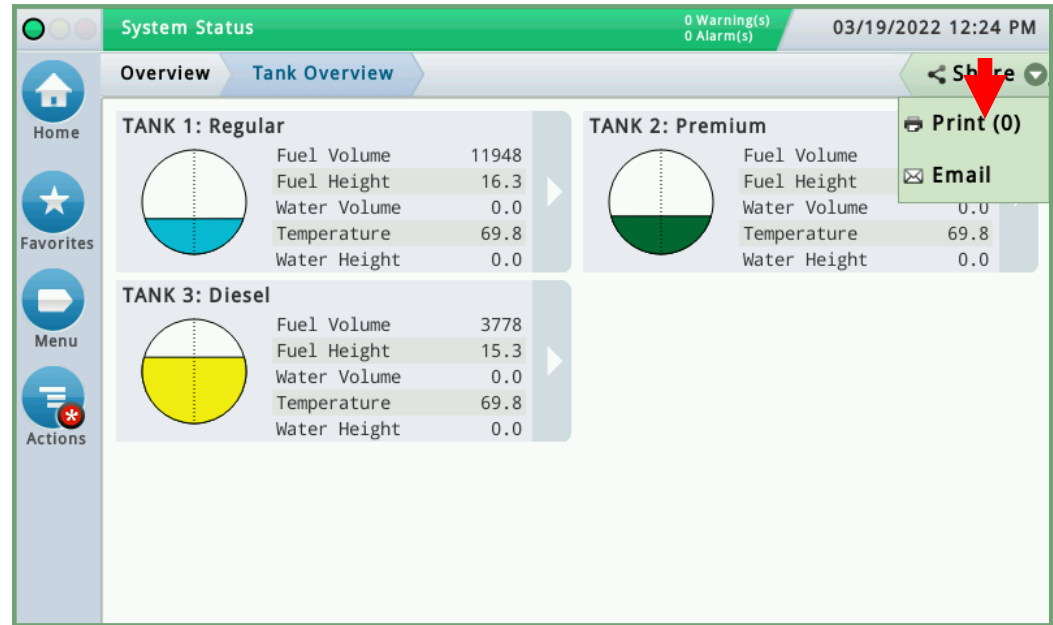
# TLS-450 PLUS Overview - Touchscreen

- Share
  - Prints at console
  - Email



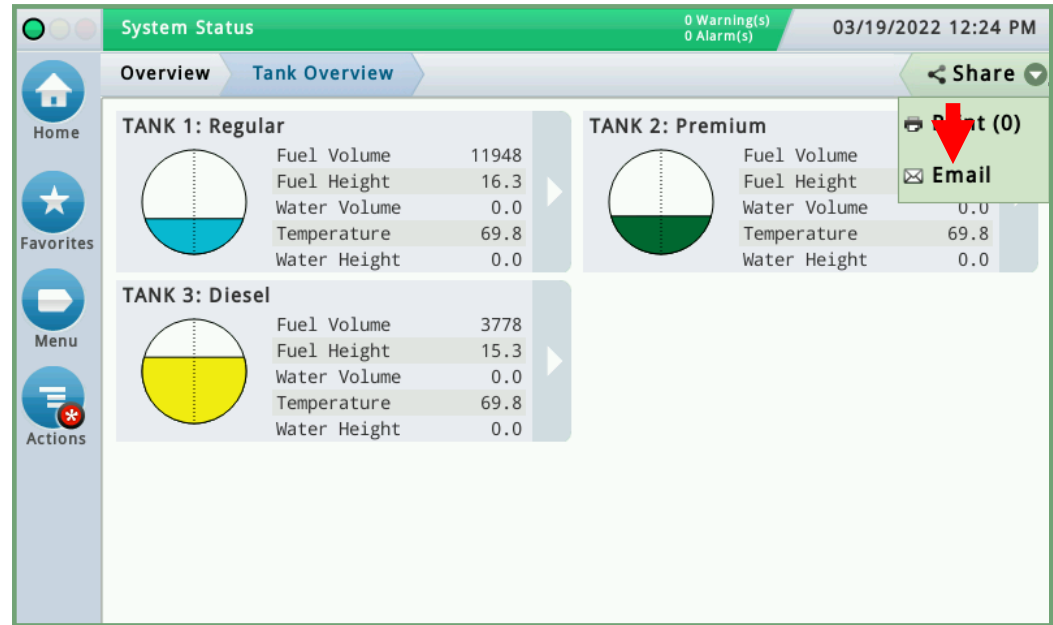
# TLS-450 PLUS Overview - Touchscreen

- Share
  - Prints at console

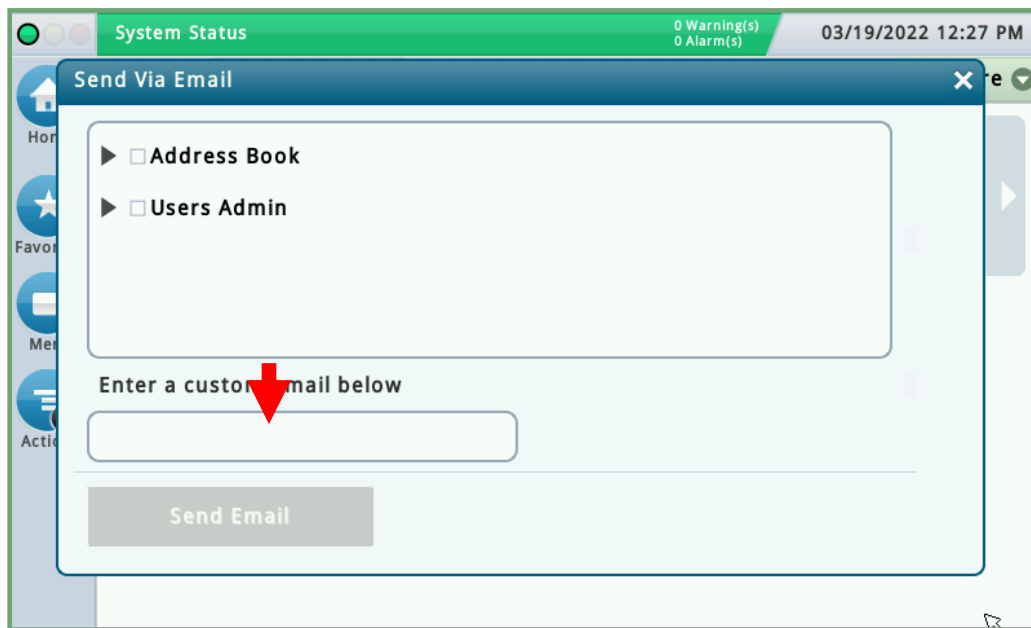


# TLS-450 PLUS Overview - Touchscreen

- Share
  - Email

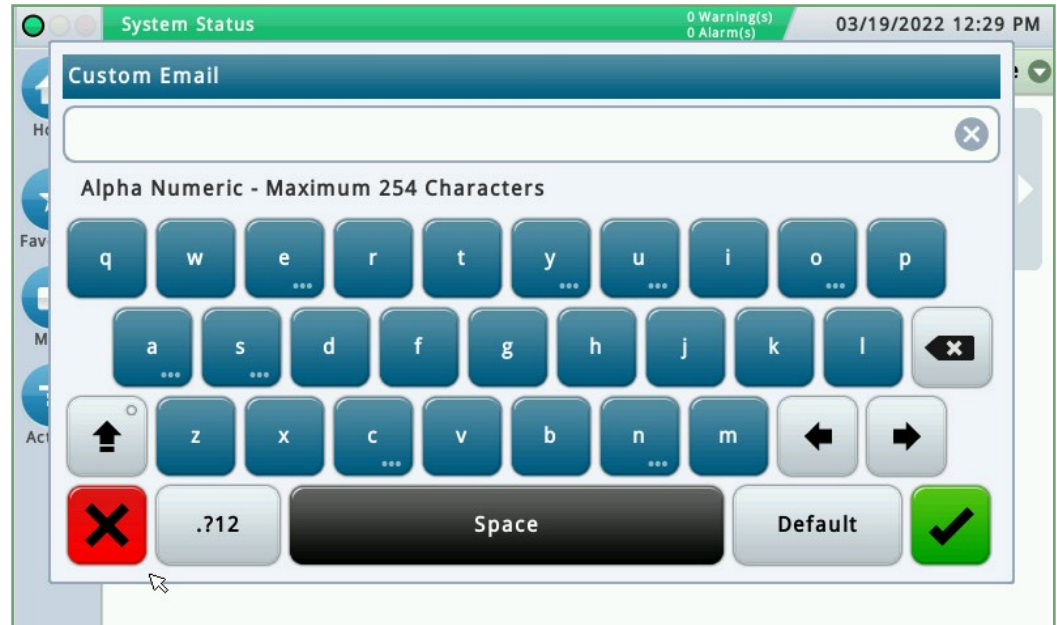


# TLS-450 PLUS Overview - Touchscreen

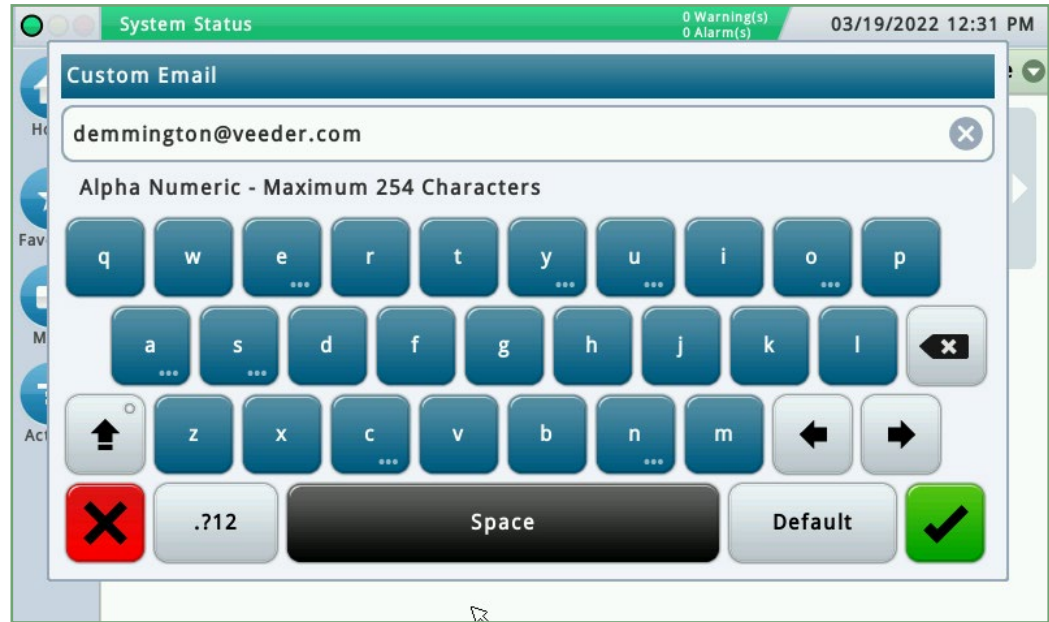




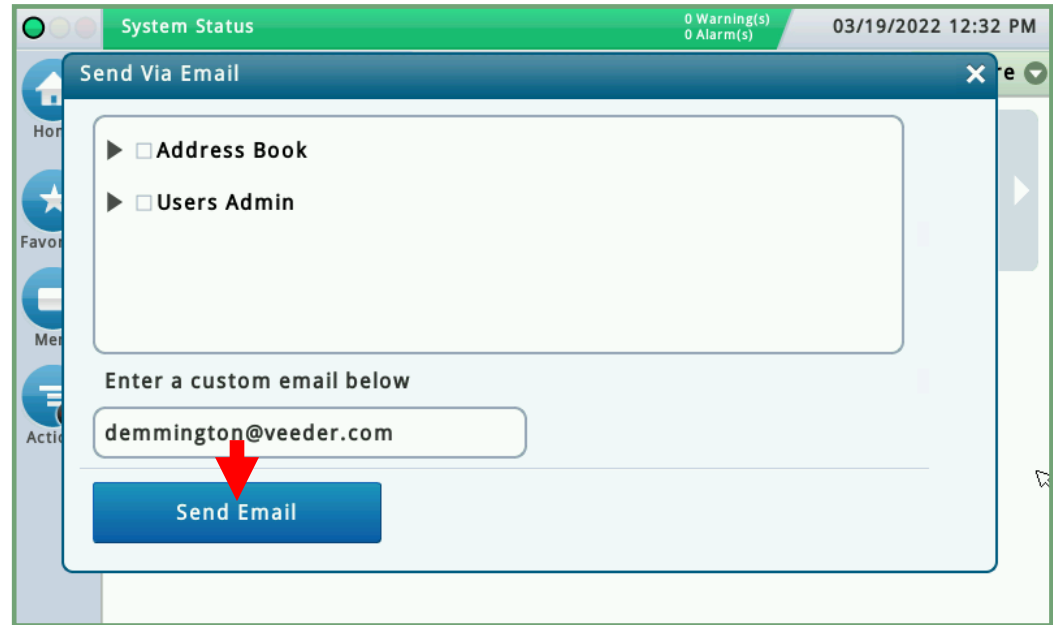
# TLS-450 PLUS Overview - Touchscreen



# TLS-450 PLUS Overview - Touchscreen





# TLS-450 PLUS Overview - Touchscreen








# TLS-450 PLUS Overview - Touchscreen

- Share
  - Email example:

[EXTERNAL] TLS-4 Share Email

tls105new <TLS-4@tls105new.localdomain>  
To  Emmington, David




8:26 AM

Retention Policy

Junk Email (30 days)

Expires 4/22/2022

 This item will expire in 30 days. To keep this item longer apply a different Retention Policy.

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

MAR 23, 2022 8:26 AM

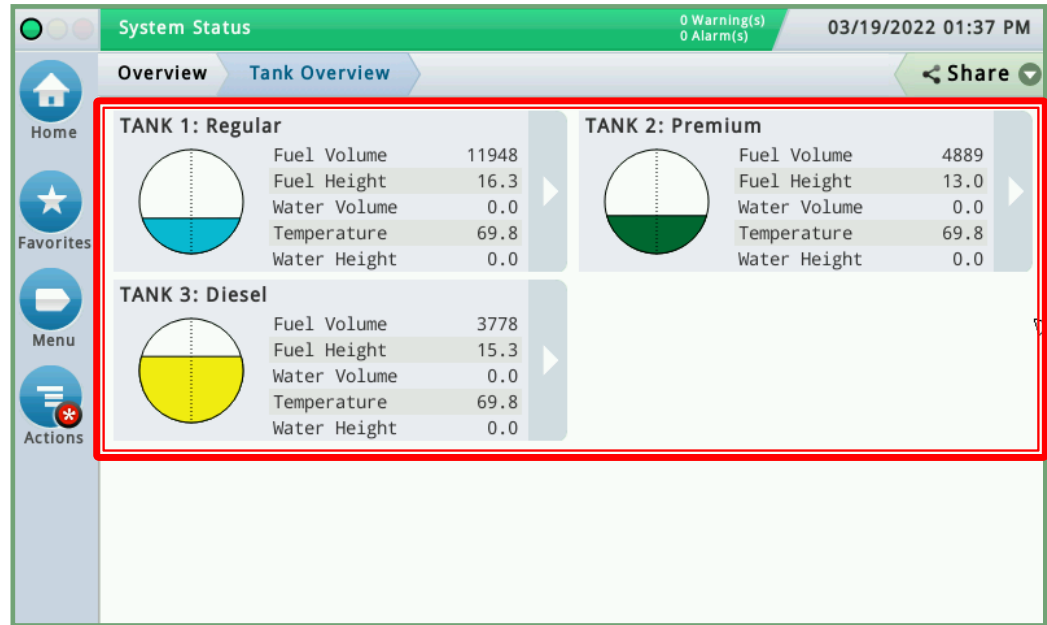
TLS\_450 UST  
VEEDER ROOT TEST LAB  
COTATI BETA SITE  
COTATI CALIFORNIA

Active Alarm Report

#	Label	Alarm Description	Active
Clear			
T	2 91 PREMIUM	DELIVERY NEEDED ISD GROSS PRES WARN	03/23/22 8:15A 03/20/22 11:56P

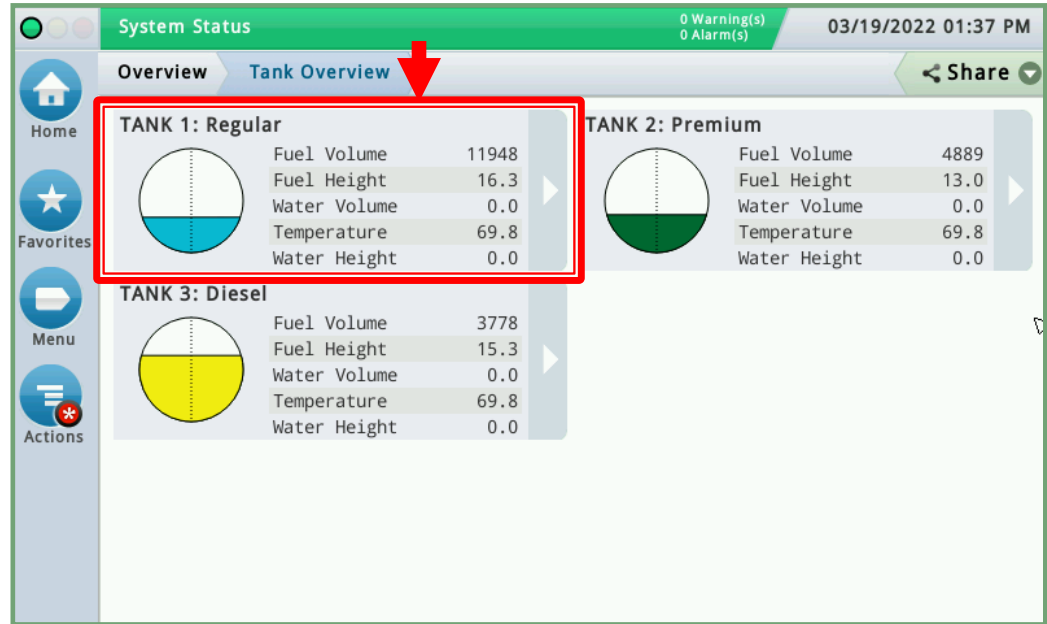
# TLS-450 PLUS Overview - Touchscreen

- For all tanks, Tank Overview screen displays
  - ✓ Fuel volume and height
  - ✓ Ullage
  - ✓ Temperature
  - ✓ Water height



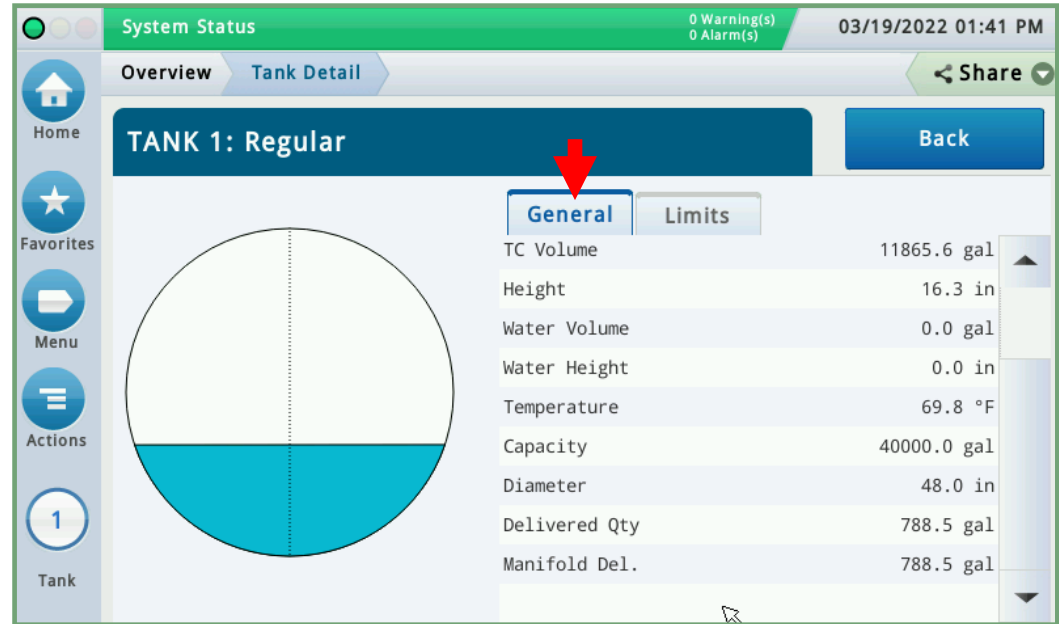
# TLS-450 PLUS Overview - Touchscreen

- Tank Overview screen allows selection of one tank



# TLS-450 PLUS Overview - Touchscreen

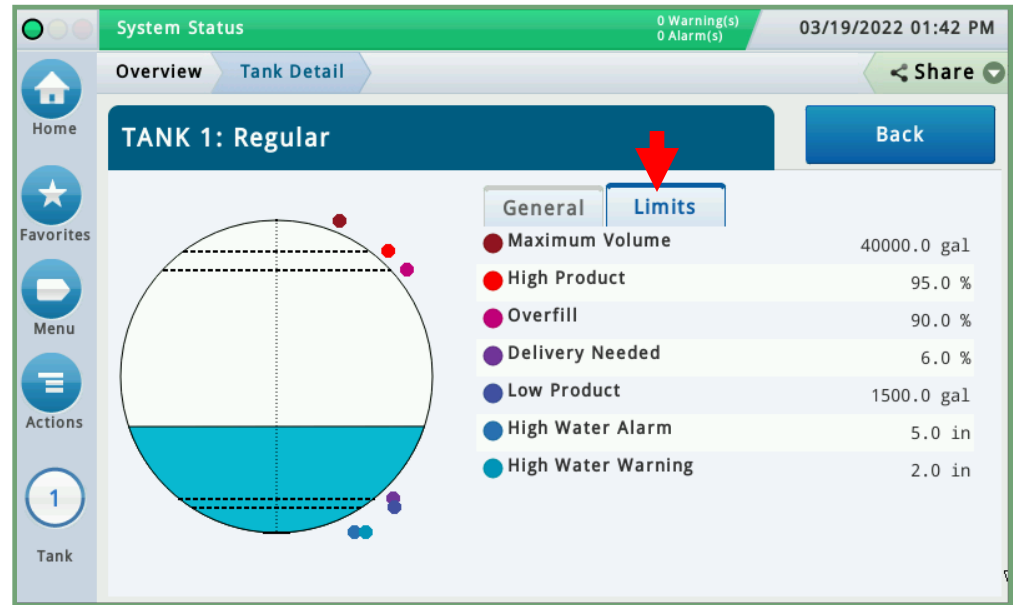
- “General” individual tank selection displays additional tank info





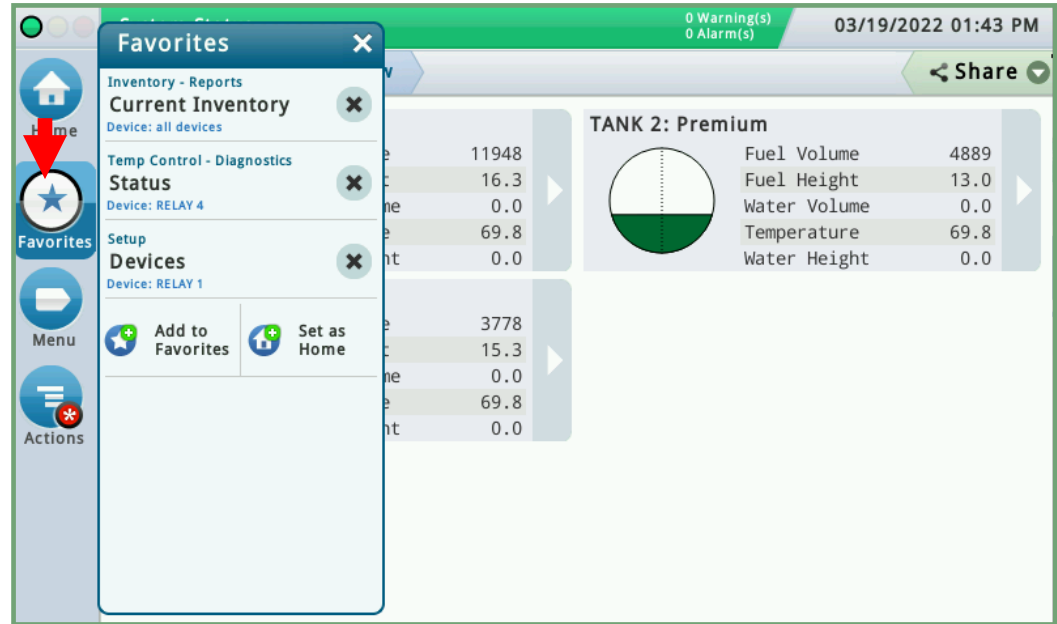
# TLS-450 PLUS Overview - Touchscreen

- Color coded “Limits” tank info displays programmed tank limits that will initiate warning or alarm



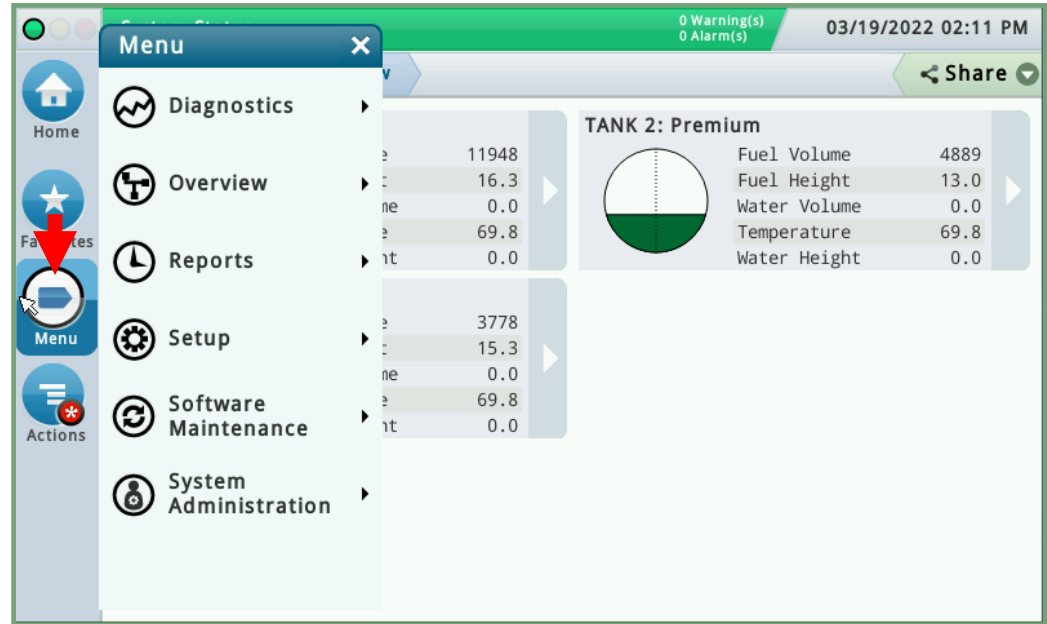
# TLS-450 PLUS Overview - Touchscreen

- Favorites stores commonly used screens for quick access
- Similar to links in web browser
- Stores up to six Favorite screens



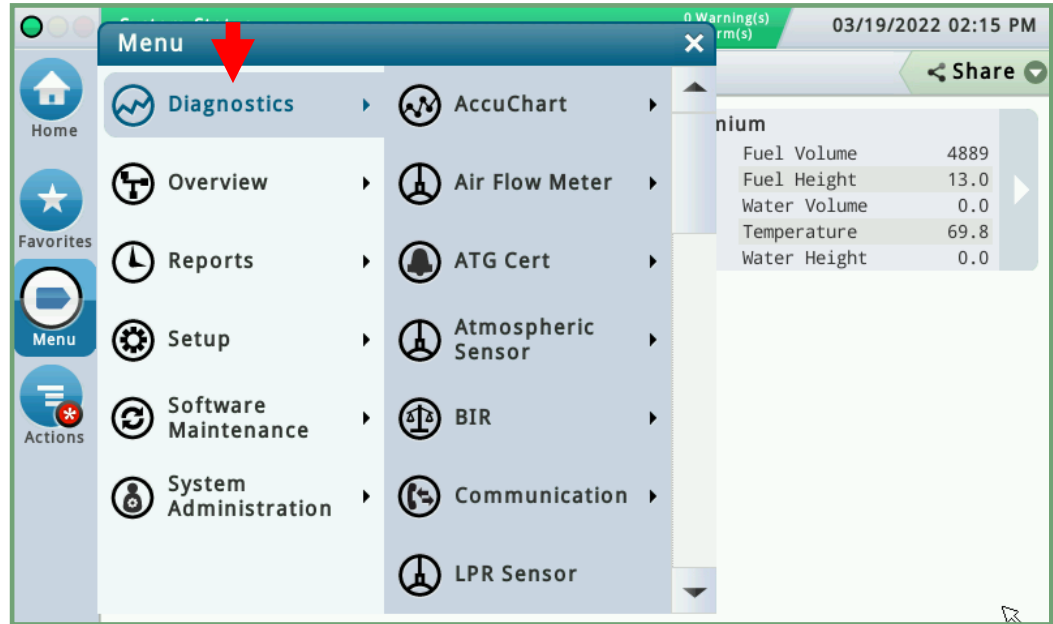
# TLS-450 PLUS Overview - Touchscreen

- Menu selection provides access to:
  - ✓ System Setup Menus
  - ✓ Reports
  - ✓ Diagnostics
  - ✓ System Admin



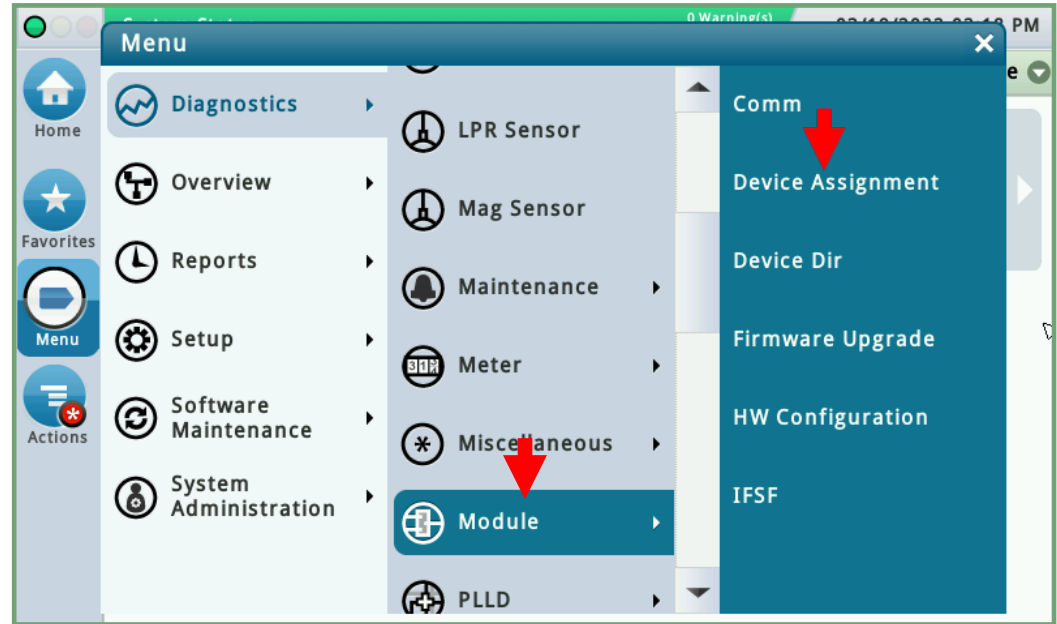
# TLS-450 PLUS Overview - Touchscreen

- Diagnostics selection provides access to diagnostic overviews for:
  - ✓ Probes
  - ✓ Modules
  - ✓ Sensors
  - ✓ Relays and Inputs



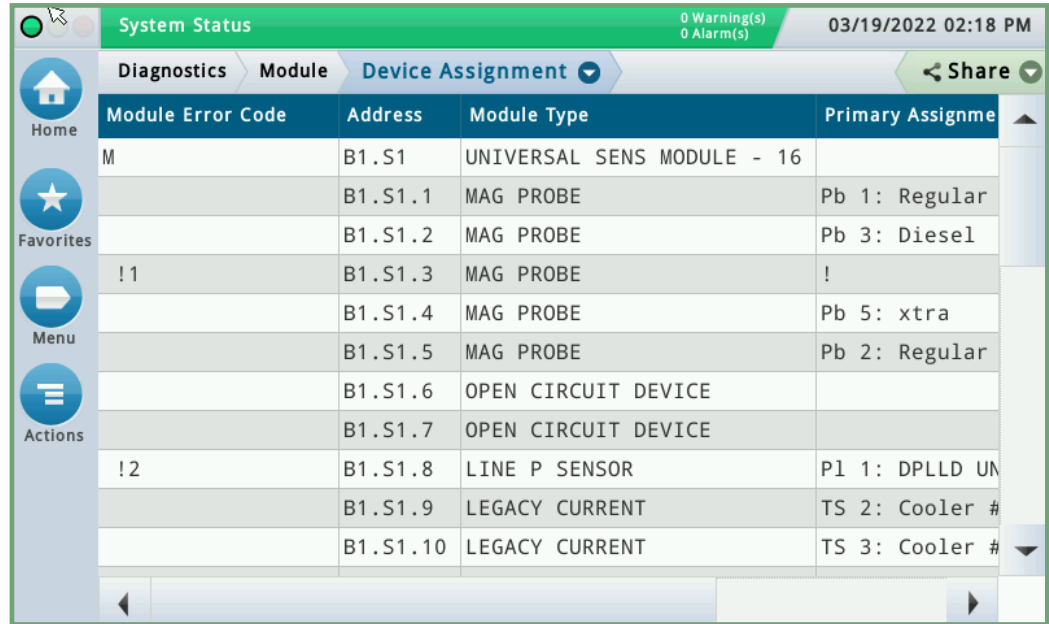
# TLS-450 PLUS Overview - Touchscreen

- Diagnostics example:
  - ✓ Select Module
  - ✓ Select Device Assignment



# TLS-450 PLUS Overview - Touchscreen

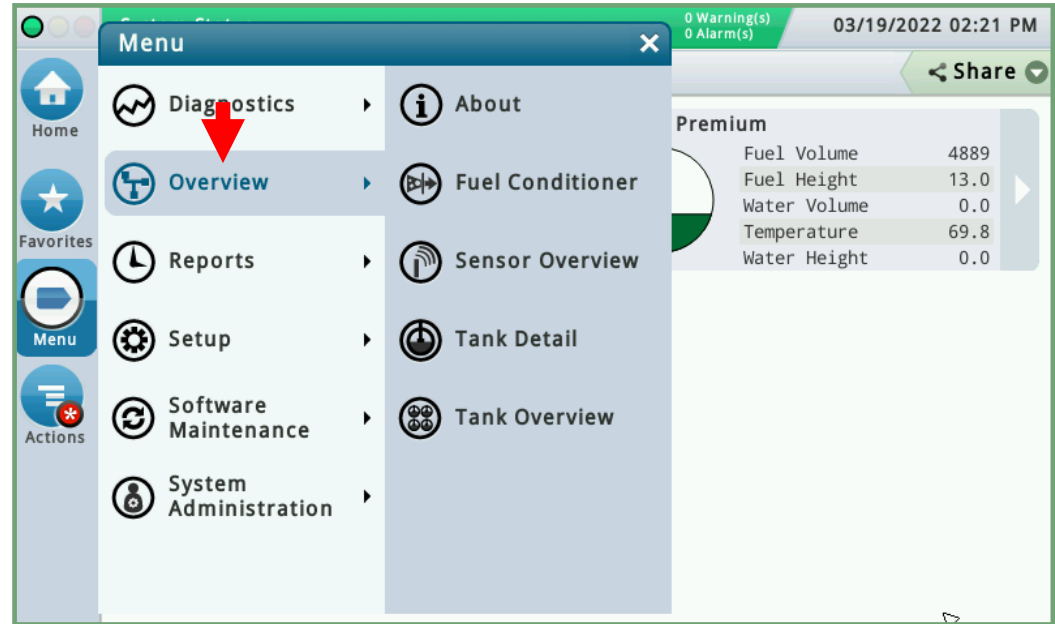
- Device Assignment example:



Module Error Code	Address	Module Type	Primary Assignme
M	B1.S1	UNIVERSAL SENS MODULE - 16	
	B1.S1.1	MAG PROBE	Pb 1: Regular
	B1.S1.2	MAG PROBE	Pb 3: Diesel
!1	B1.S1.3	MAG PROBE	!
	B1.S1.4	MAG PROBE	Pb 5: xtra
	B1.S1.5	MAG PROBE	Pb 2: Regular
	B1.S1.6	OPEN CIRCUIT DEVICE	
	B1.S1.7	OPEN CIRCUIT DEVICE	
!2	B1.S1.8	LINE P SENSOR	Pl 1: DPLLD UN
	B1.S1.9	LEGACY CURRENT	TS 2: Cooler #
	B1.S1.10	LEGACY CURRENT	TS 3: Cooler #

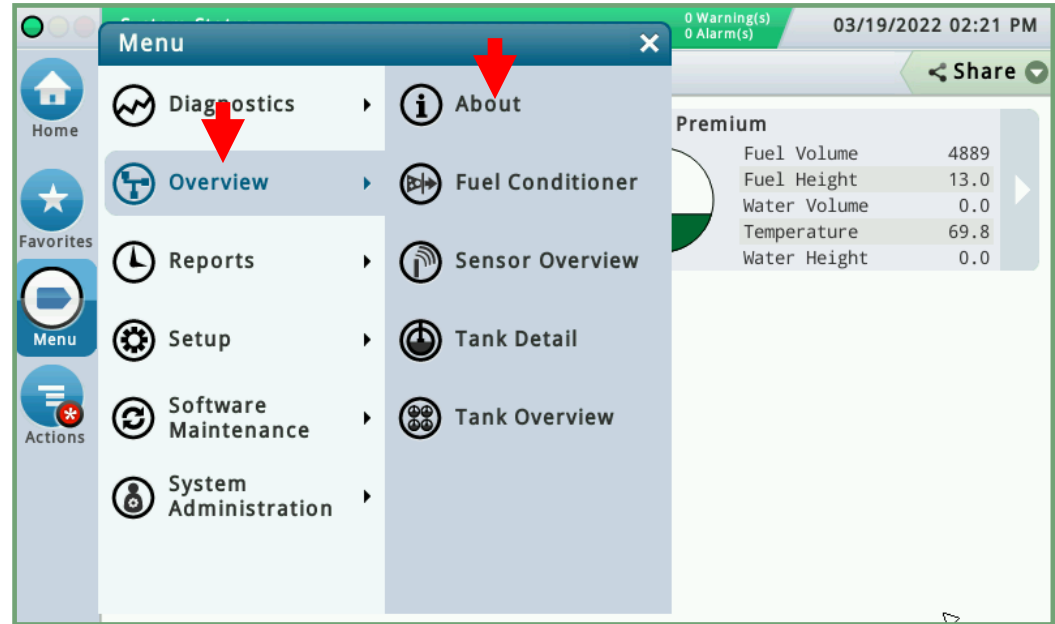
# TLS-450 PLUS Overview - Touchscreen

- Overview Selection – provides general overview information



# TLS-450 PLUS Overview - Touchscreen

- Overview - About





# TLS-450 PLUS Overview - Touchscreen

- Overview – About Selection provides console information:
- ✓ Series
- ✓ Software Version
- ✓ Installed Hardware info
- ✓ Installed Features

The screenshot displays the 'System Status' interface on a touchscreen. At the top, a green header bar shows 'System Status', '0 Warning(s)', '0 Alarm(s)', and the date/time '03/19/2022 02:22 PM'. Below this, a navigation bar includes 'Overview' (selected) and 'About'. A 'Share' button is on the right. The main content area shows console information: 'Console Series # 8600' and 'Software Version #009.W.233.39.r0'. It also displays 'Created May 27 2021 20:17:51'. A table lists hardware components with their descriptions and values. Below the table, a section titled 'Installed Features' lists various system capabilities.

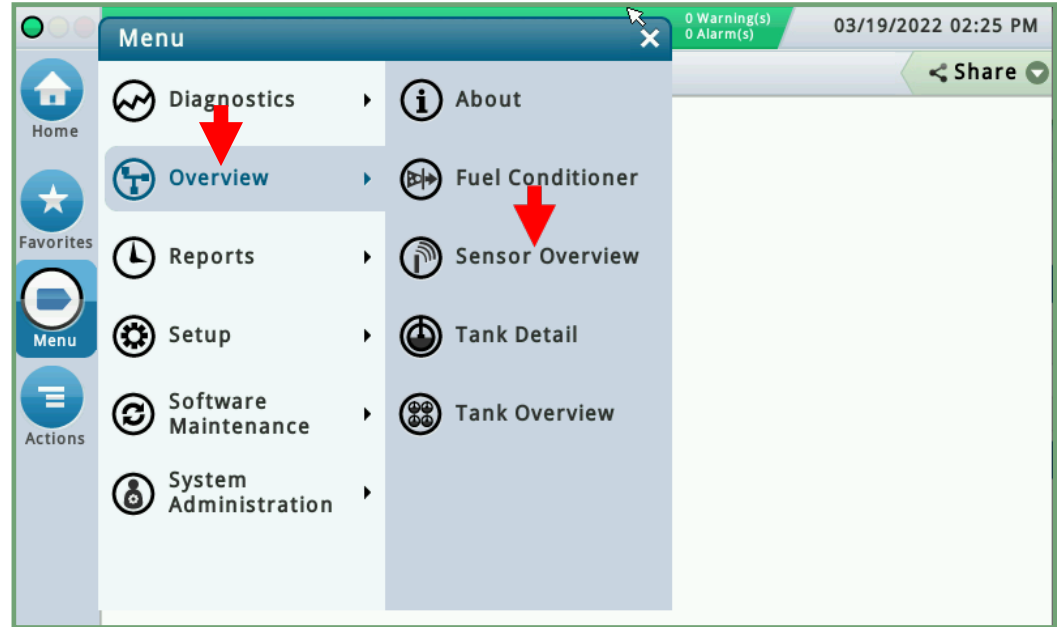
Hardware Description	Value
CPU S/N	15090099
CPU Board Type	Type 32
iButton S/N	000004680d830b
UNIVERSAL SENS MODULE (B1.S1) S/N	15090129

**Installed Features**

- ATG Functionality
- DataLogger Functionality
- Email Notification
- Custom On-Board Help
- Custom Alarms
- Web Enabled
- Extended Storage L2
- Business Inventory Reconciliation

# TLS-450 PLUS Overview - Touchscreen

➤ Sensor - Overview



# TLS-450 PLUS Overview - Touchscreen

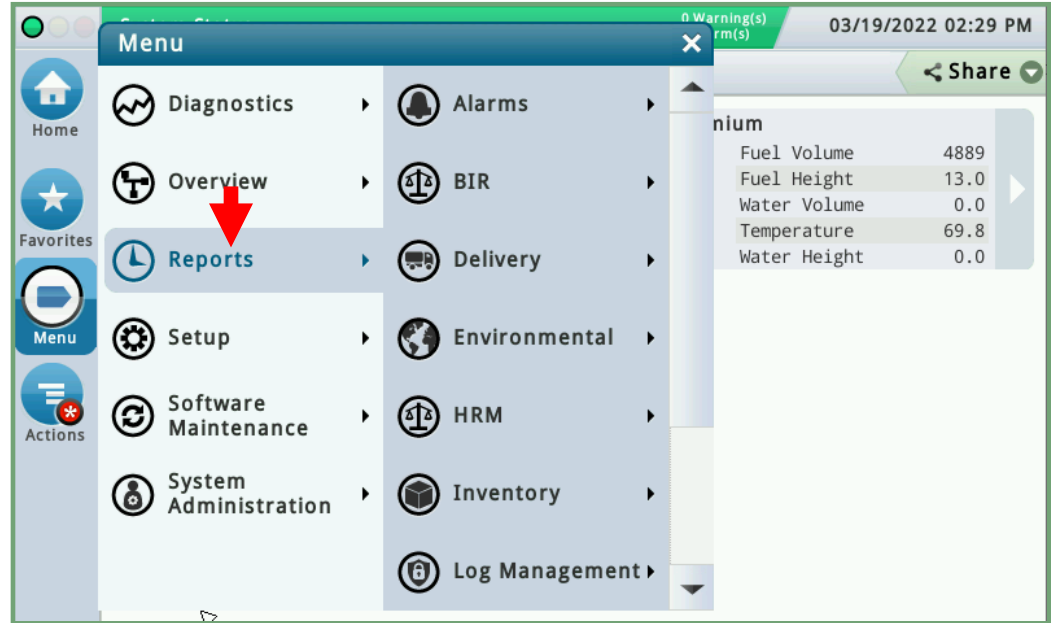
- Sensor Overview example:

The screenshot shows the 'Sensor Overview' screen of the TLS-450 PLUS system. The top status bar indicates 'System Status' with '0 Warning(s)' and '0 Alarm(s)', and the date/time is '03/19/2022 02:26 PM'. The left sidebar contains navigation icons for Home, Favorites, Menu, and Actions. The main area displays six liquid sensors in a 3x2 grid:

Sensor ID	Sensor Name	Status	Model	Category
LIQUID SENSOR 1	87 STP SUMP	NORMAL	Tri-State(Single Float)	STP Sump
LIQUID SENSOR 2	91 STP SUMP	NORMAL	Tri-State(Single Float)	STP Sump
LIQUID SENSOR 3	DIESEL SUMP	NORMAL	Tri-State(Single Float)	STP Sump
LIQUID SENSOR 4	87 ANNULAR	NORMAL	Tri-State(Single Float)	Annular Space
LIQUID SENSOR 5	91 ANNULAR	NORMAL	Tri-State(Single Float)	
LIQUID SENSOR 6	DIESEL ANNULAR	NORMAL	Tri-State(Single Float)	

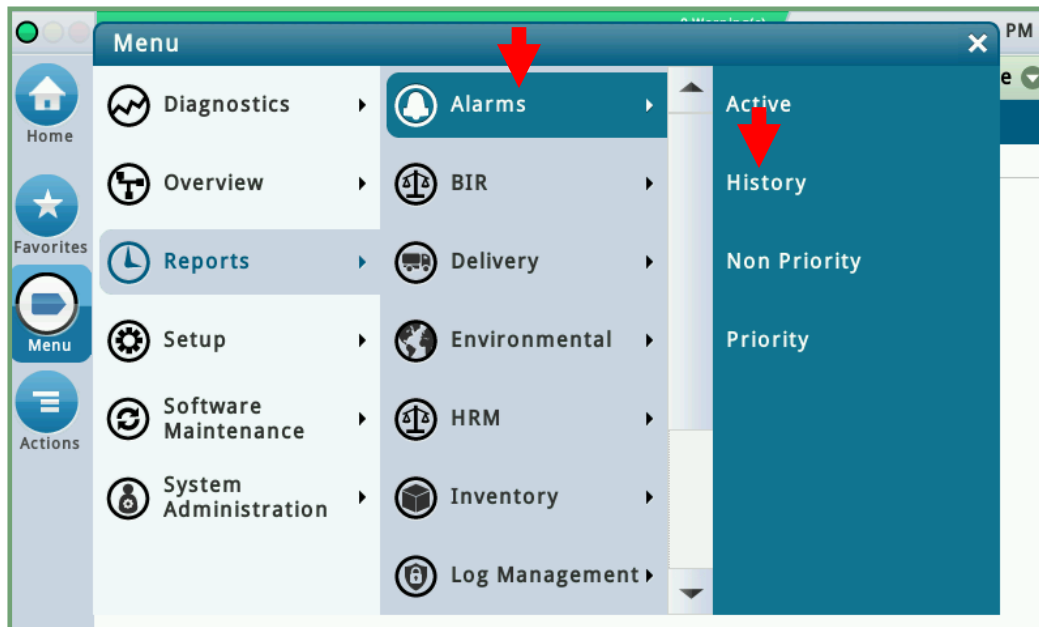
# TLS-450 PLUS Overview - Touchscreen

- Reports selection provides access to report overviews for:
  - ✓ Alarms
  - ✓ Deliveries
  - ✓ Environmental
  - ✓ Inventory
  - ✓ More



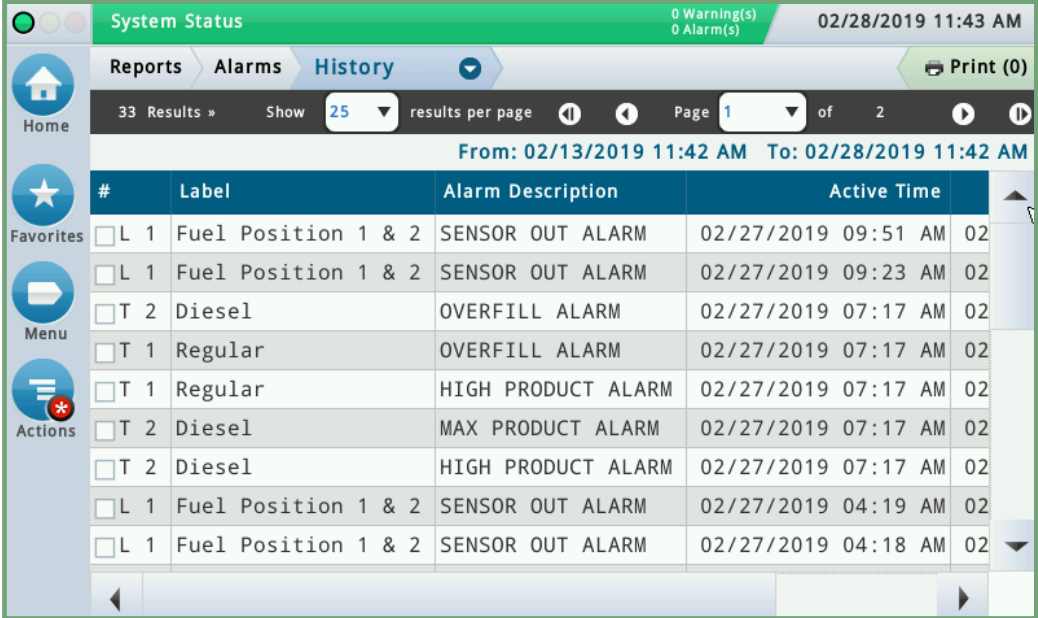
# TLS-450 PLUS Overview - Touchscreen

- Reports – Alarm selection provides access to report overviews for:
  - ✓ Active Alarms
  - ✓ Alarm History
  - ✓ Non Priority Alarms
  - ✓ Priority Alarms



# TLS-450 PLUS Overview - Touchscreen

- Alarm History Report provides overview of all connected device alarm history:
  - ✓ Stores alarm history for 3 years



The screenshot displays the 'System Status' interface on a touchscreen. At the top, it shows '0 Warning(s)' and '0 Alarm(s)' along with the date and time '02/28/2019 11:43 AM'. Below this is a navigation bar with 'Reports', 'Alarms', and 'History' tabs, with 'History' being the active tab. A 'Print (0)' button is also visible. The main area shows '33 Results' and a 'Show 25 results per page' dropdown. The date range is set from '02/13/2019 11:42 AM' to '02/28/2019 11:42 AM'. A table lists the alarm history with columns for '#', 'Label', 'Alarm Description', and 'Active Time'. The table contains 12 rows of data, including 'Fuel Position 1 & 2' and 'Diesel' sensors, with descriptions like 'SENSOR OUT ALARM' and 'OVERFILL ALARM'. A left sidebar contains icons for 'Home', 'Favorites', 'Menu', and 'Actions'.

#	Label	Alarm Description	Active Time
<input type="checkbox"/> L 1	Fuel Position 1 & 2	SENSOR OUT ALARM	02/27/2019 09:51 AM 02
<input type="checkbox"/> L 1	Fuel Position 1 & 2	SENSOR OUT ALARM	02/27/2019 09:23 AM 02
<input type="checkbox"/> T 2	Diesel	OVERFILL ALARM	02/27/2019 07:17 AM 02
<input type="checkbox"/> T 1	Regular	OVERFILL ALARM	02/27/2019 07:17 AM 02
<input type="checkbox"/> T 1	Regular	HIGH PRODUCT ALARM	02/27/2019 07:17 AM 02
<input type="checkbox"/> T 2	Diesel	MAX PRODUCT ALARM	02/27/2019 07:17 AM 02
<input type="checkbox"/> T 2	Diesel	HIGH PRODUCT ALARM	02/27/2019 07:17 AM 02
<input type="checkbox"/> L 1	Fuel Position 1 & 2	SENSOR OUT ALARM	02/27/2019 04:19 AM 02
<input type="checkbox"/> L 1	Fuel Position 1 & 2	SENSOR OUT ALARM	02/27/2019 04:18 AM 02

# TLS-450PLUS Overview - Touchscreen

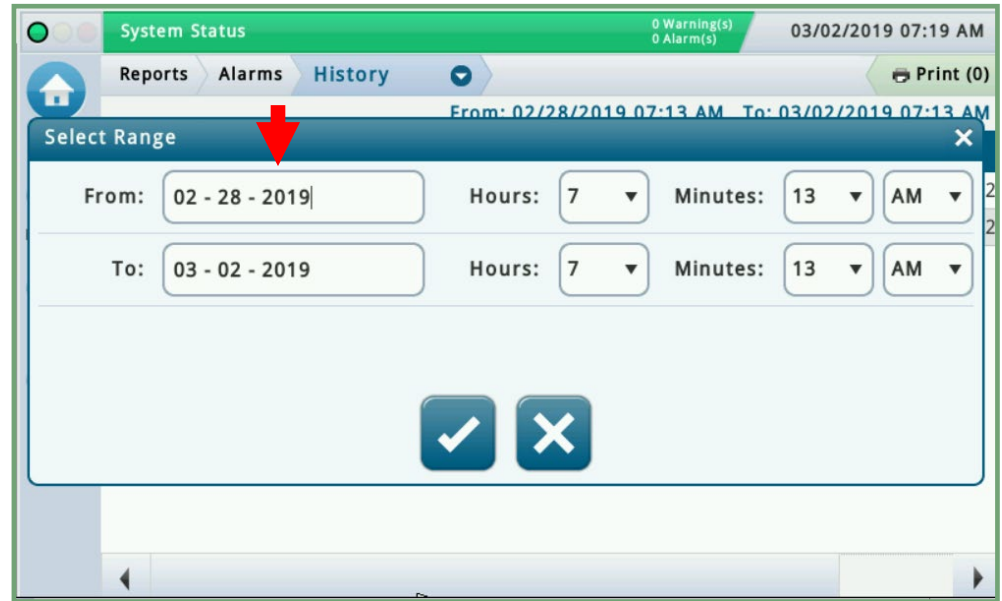
- Select Range provides date/time filter

The screenshot displays the TLS-450PLUS touchscreen interface. On the left is a vertical sidebar with icons for Home, Favorites, Menu, and Actions. The 'Actions' menu is open, showing options: Alarm Help, Select Range (highlighted with a red arrow), and Help. The main display area shows a status bar at the top with '0 Warning(s)', '0 Alarm(s)', and the date/time '02/28/2019 11:44 AM'. Below this is a 'Print (0)' button and a 'results per page' dropdown. A date range filter is set to 'From: 02/13/2019 11:42 AM To: 02/28/2019 11:42 AM'. The main content is a table of alarm events.

	Alarm Description	Active Time	
& 2	SENSOR OUT ALARM	02/27/2019 09:51 AM	02
& 2	SENSOR OUT ALARM	02/27/2019 09:23 AM	02
	OVERFILL ALARM	02/27/2019 07:17 AM	02
	OVERFILL ALARM	02/27/2019 07:17 AM	02
	HIGH PRODUCT ALARM	02/27/2019 07:17 AM	02
	MAX PRODUCT ALARM	02/27/2019 07:17 AM	02
	HIGH PRODUCT ALARM	02/27/2019 07:17 AM	02
& 2	SENSOR OUT ALARM	02/27/2019 04:19 AM	02
& 2	SENSOR OUT ALARM	02/27/2019 04:18 AM	02

# TLS-450PLUS Overview - Touchscreen

- Select date:



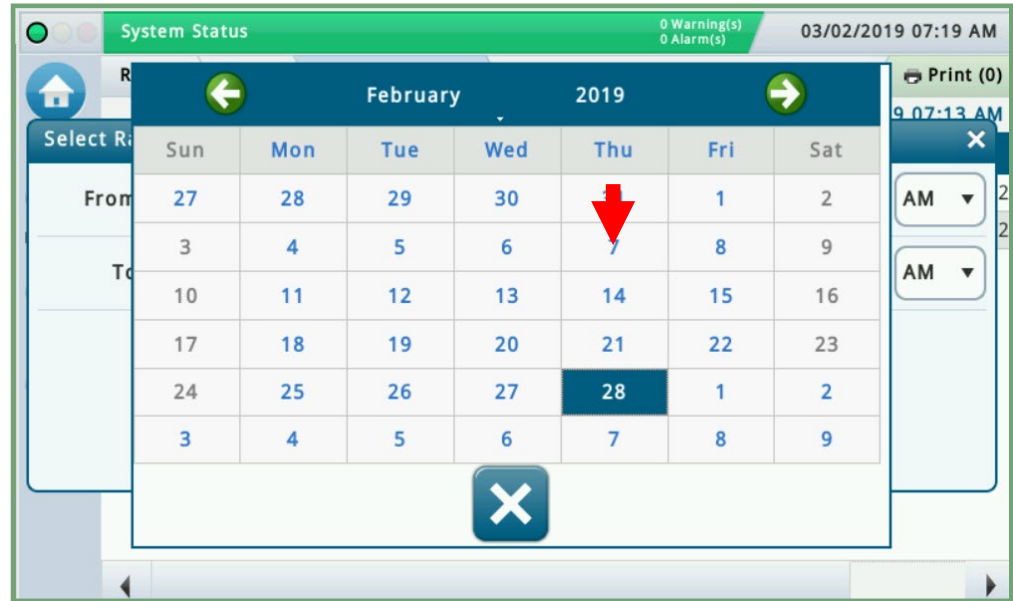
The screenshot displays the 'System Status' interface on a touchscreen. At the top, a green bar shows 'System Status', '0 Warning(s)', '0 Alarm(s)', and the date/time '03/02/2019 07:19 AM'. Below this is a navigation bar with 'Reports', 'Alarms', and 'History' tabs. A red arrow points to the 'History' tab. A 'Select Range' dialog box is open, showing date and time selection fields. The 'From' field is set to '02 - 28 - 2019' and the 'To' field is set to '03 - 02 - 2019'. Both fields have dropdown menus for 'Hours' (set to 7) and 'Minutes' (set to 13), and a dropdown for 'AM/PM' (set to AM). At the bottom of the dialog box are two buttons: a checkmark button and a close button (X).

Field	Value
From:	02 - 28 - 2019
To:	03 - 02 - 2019
Hours:	7
Minutes:	13
AM/PM:	AM



# TLS-450PLUS Overview - Touchscreen

- Select Range provides date/time filter



# TLS-450PLUS Overview - Touchscreen

- Select time:

The screenshot displays the TLS-450PLUS touchscreen interface. At the top, a green status bar shows 'System Status', '0 Warning(s)', '0 Alarm(s)', and the date/time '03/02/2019 07:19 AM'. Below this is a navigation bar with 'Reports', 'Alarms', and 'History' tabs, along with a 'Print (0)' button. A 'Select Range' dialog box is open, featuring input fields for 'From' and 'To' dates, and dropdown menus for 'Hours', 'Minutes', and 'AM/PM'. The 'From' date is '02 - 28 - 2019' and the 'To' date is '03 - 02 - 2019'. Both are set to 7:13 AM. At the bottom of the dialog are 'Confirm' (checkmark) and 'Cancel' (X) buttons. The background shows a scrollable area with some data, partially obscured by the dialog box.

System Status 0 Warning(s) 0 Alarm(s) 03/02/2019 07:19 AM

Reports Alarms History Print (0)

From: 02/28/2019 07:13 AM To: 03/02/2019 07:13 AM

Select Range

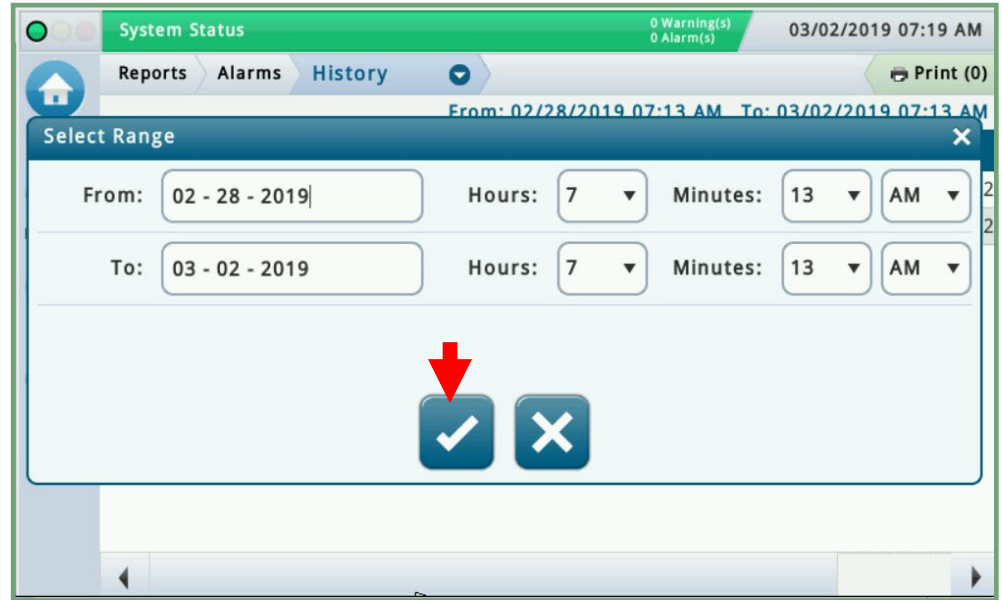
From: 02 - 28 - 2019 Hours: 7 Minutes: 13 AM

To: 03 - 02 - 2019 Hours: 7 Minutes: 13 AM

Confirm Cancel

# TLS-450PLUS Overview - Touchscreen

➤ Confirm:

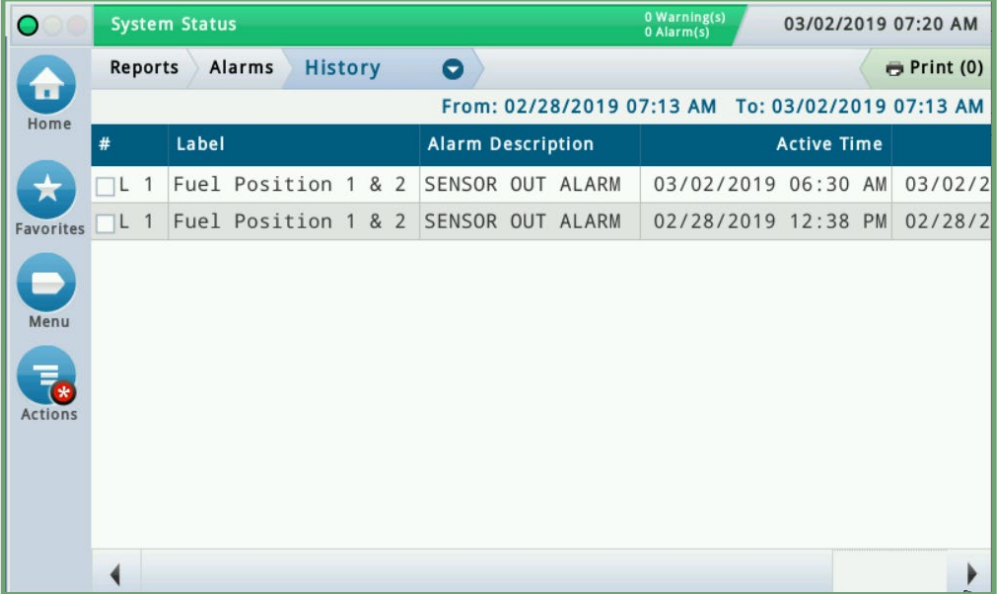


The screenshot displays the 'System Status' window of the TLS-450PLUS touchscreen interface. The top status bar shows '0 Warning(s)' and '0 Alarm(s)' along with the date and time '03/02/2019 07:19 AM'. Below this, a navigation bar includes 'Reports', 'Alarms', and 'History' tabs, with a 'Print (0)' button on the right. A 'Select Range' dialog box is open, allowing users to specify a time range. The 'From' field is set to '02 - 28 - 2019' and the 'To' field is set to '03 - 02 - 2019'. Both fields have associated 'Hours' (7) and 'Minutes' (13) dropdown menus, as well as an 'AM' or 'PM' selector. A red arrow points to the 'Confirm' button, which is a blue square with a white checkmark, located next to a blue square with a white 'X' for cancellation.

Field	Value	Hours	Minutes	Time
From:	02 - 28 - 2019	7	13	AM
To:	03 - 02 - 2019	7	13	AM

# TLS-450PLUS Overview - Touchscreen

➤ Filtered results:



System Status 0 Warning(s) 0 Alarm(s) 03/02/2019 07:20 AM

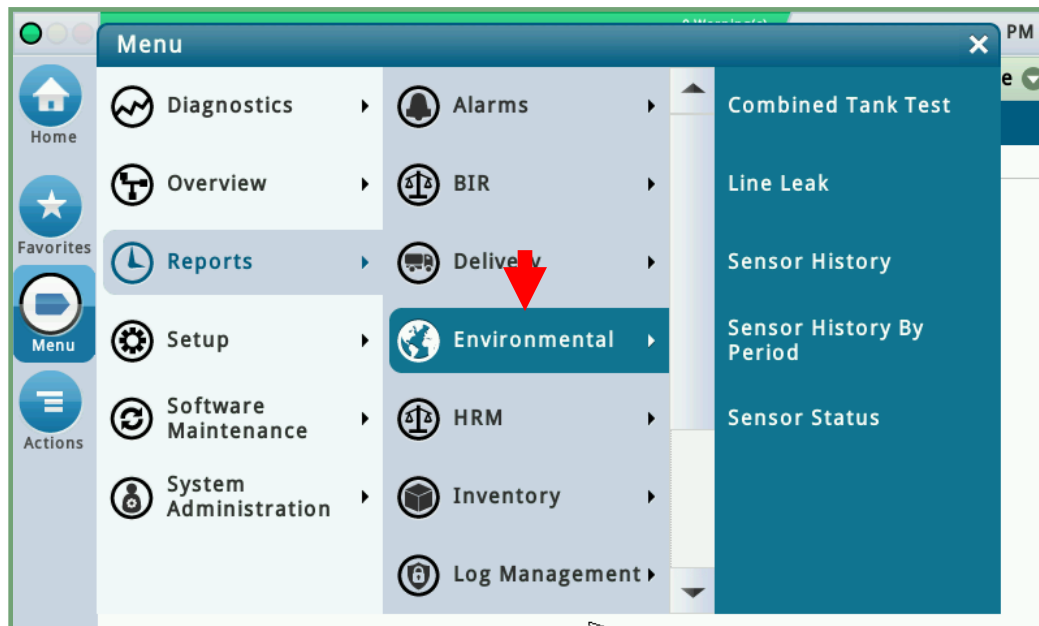
Reports Alarms History Print (0)

From: 02/28/2019 07:13 AM To: 03/02/2019 07:13 AM

#	Label	Alarm Description	Active Time	
<input type="checkbox"/> L 1	Fuel Position 1 & 2	SENSOR OUT ALARM	03/02/2019 06:30 AM	03/02/2
<input type="checkbox"/> L 1	Fuel Position 1 & 2	SENSOR OUT ALARM	02/28/2019 12:38 PM	02/28/2

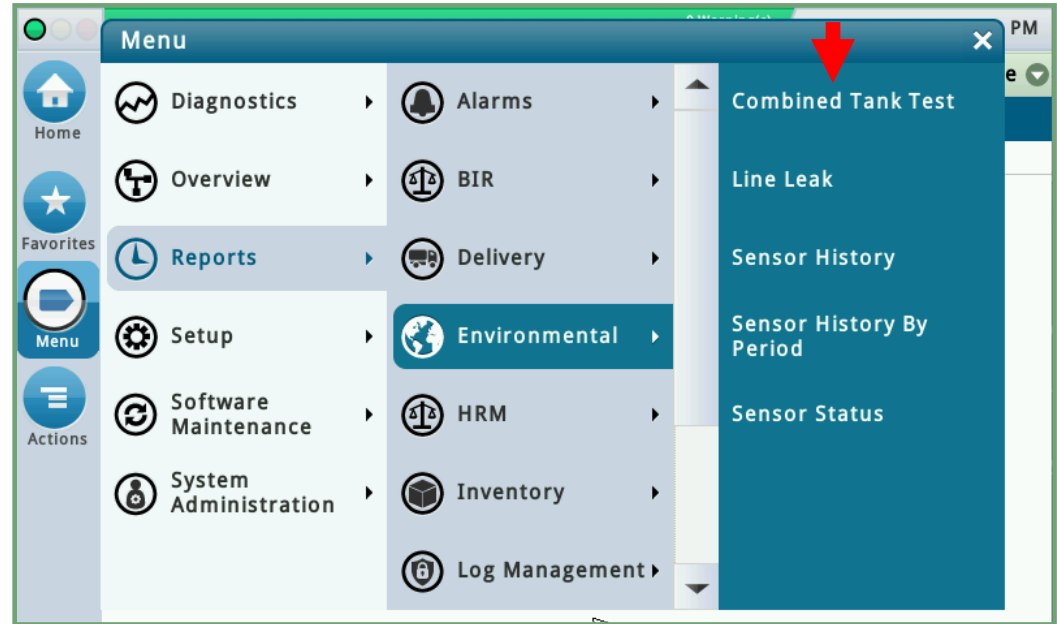
# TLS-450 PLUS Overview - Touchscreen

- Environmental selection provides:
- ✓ Tank test results
- ✓ Line Leak test results
- ✓ Sensor History
- ✓ Sensor Status



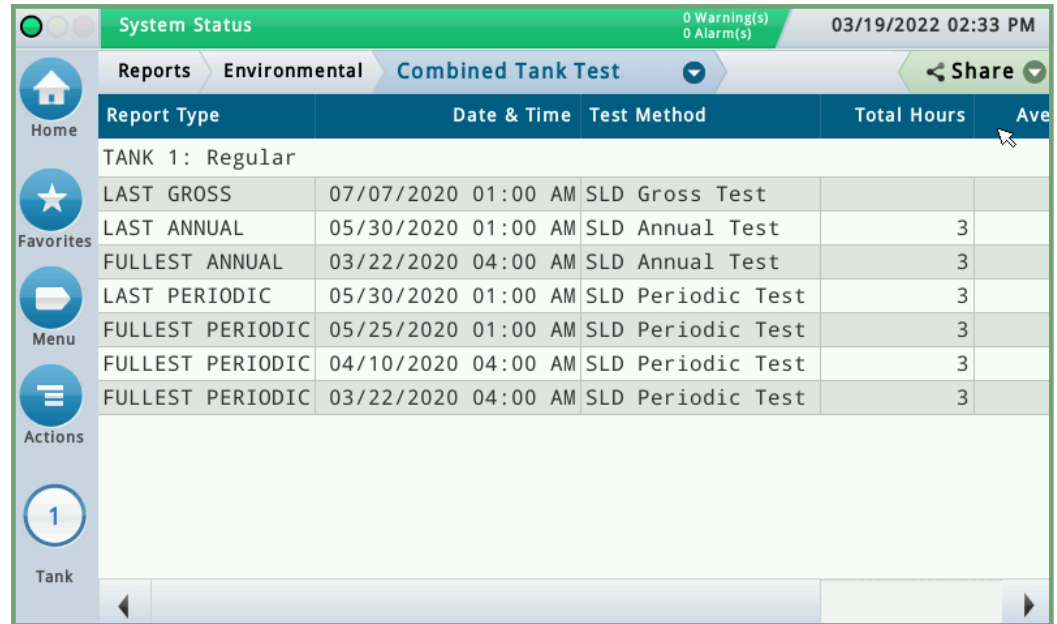
# TLS-450 PLUS Overview - Touchscreen

- Environmental selection provides:
- ✓ Tank test results
- ✓ Line Leak test results
- ✓ Sensor History
- ✓ Sensor Status



# TLS-450 PLUS Overview - Touchscreen

- Tank Test results:



The screenshot displays the 'System Status' interface on a touchscreen. At the top, a green bar shows 'System Status', '0 Warning(s)', '0 Alarm(s)', and the date/time '03/19/2022 02:33 PM'. Below this, a navigation bar includes 'Reports', 'Environmental', and 'Combined Tank Test' (selected). A 'Share' button is on the right. A sidebar on the left contains icons for Home, Favorites, Menu, Actions, and Tank (labeled '1'). The main area shows a table of test results for 'TANK 1: Regular'.

Report Type	Date & Time	Test Method	Total Hours	Ave
TANK 1: Regular				
LAST GROSS	07/07/2020 01:00 AM	SLD Gross Test		
LAST ANNUAL	05/30/2020 01:00 AM	SLD Annual Test	3	
FULLEST ANNUAL	03/22/2020 04:00 AM	SLD Annual Test	3	
LAST PERIODIC	05/30/2020 01:00 AM	SLD Periodic Test	3	
FULLEST PERIODIC	05/25/2020 01:00 AM	SLD Periodic Test	3	
FULLEST PERIODIC	04/10/2020 04:00 AM	SLD Periodic Test	3	
FULLEST PERIODIC	03/22/2020 04:00 AM	SLD Periodic Test	3	

# TLS-450 PLUS Overview - Touchscreen





# TLS-450PLUS Overview - Touchscreen

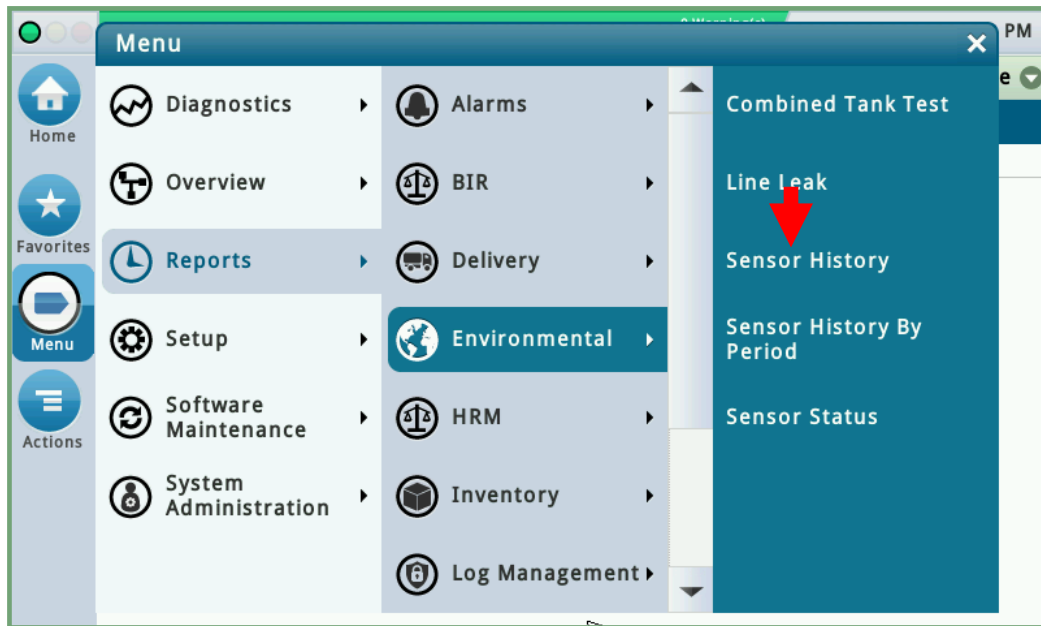
- Line Test results:

The screenshot displays the 'Line Leak' section of the TLS-450PLUS touchscreen interface. The top status bar shows 'System Status' with '0 Warning(s)' and '0 Alarm(s)', and the date/time '02/28/2019 11:49 AM'. The navigation bar includes 'Reports', 'Environmental', and 'Line Leak'. A 'Print (0)' button is visible. The left sidebar contains icons for Home, Favorites, Menu, Actions, and No LINE. The main area shows a table for 'Line 1: Unleaded' with columns for Test Type, Date / Time, Test Method, Gross Test Previous 24Hs, and Gross Test Since M. The table lists various test results including Last Gross, Last Periodic, Last Annual, First Periodic, and First Annual, all performed using the PLLD method. A section for 'Line 2:' is also visible but currently empty.

Test Type	Date / Time	Test Method	Gross Test Previous 24Hs	Gross Test Since M
Line 1: Unleaded				
Gross		PLLD		
Last Gross	09/15/2018 08:11 PM	PLLD Gross Test		
Last Periodic	09/13/2018 08:33 AM	PLLD Periodic Test		
Last Annual	09/06/2018 05:05 AM	PLLD Annual Test		
First Periodic	09/01/2018 08:58 AM	PLLD Periodic Test		
First Annual	09/06/2018 05:05 AM	PLLD Annual Test		
Line 2:				
Gross		PLLD		

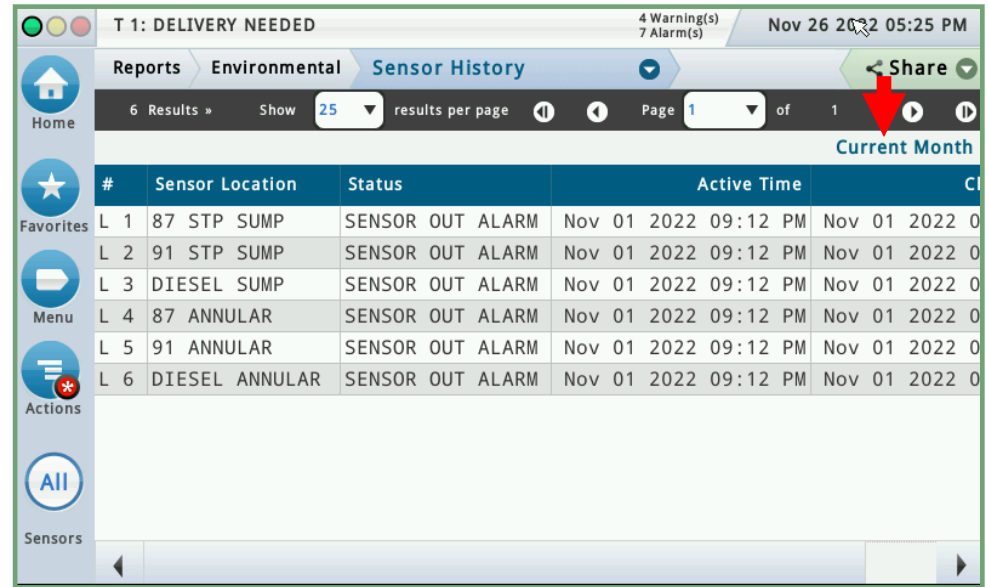
# TLS-450 PLUS Overview - Touchscreen

## ➤ Sensor History



# TLS-450 PLUS Overview - Touchscreen

- Sensor History – Current Month

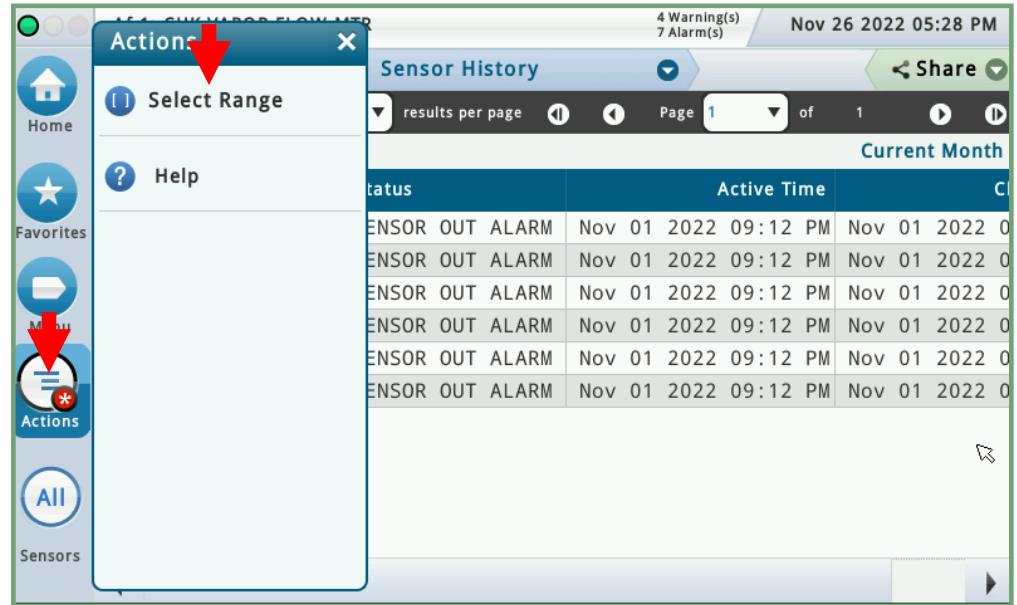


The screenshot displays the TLS-450 PLUS touchscreen interface. At the top, a status bar shows 'T 1: DELIVERY NEEDED', '4 Warning(s) 7 Alarm(s)', and the date/time 'Nov 26 2022 05:25 PM'. Below this, a navigation bar includes 'Reports', 'Environmental', and 'Sensor History' (selected). A 'Share' button is visible on the right. The main area shows '6 Results' and a table of sensor data for the 'Current Month'. The table has columns for '#', 'Sensor Location', 'Status', 'Active Time', and 'CI'. A red arrow points to the 'Share' button.

#	Sensor Location	Status	Active Time	CI
L 1	87 STP SUMP	SENSOR OUT ALARM	Nov 01 2022 09:12 PM	Nov 01 2022 0
L 2	91 STP SUMP	SENSOR OUT ALARM	Nov 01 2022 09:12 PM	Nov 01 2022 0
L 3	DIESEL SUMP	SENSOR OUT ALARM	Nov 01 2022 09:12 PM	Nov 01 2022 0
L 4	87 ANNULAR	SENSOR OUT ALARM	Nov 01 2022 09:12 PM	Nov 01 2022 0
L 5	91 ANNULAR	SENSOR OUT ALARM	Nov 01 2022 09:12 PM	Nov 01 2022 0
L 6	DIESEL ANNULAR	SENSOR OUT ALARM	Nov 01 2022 09:12 PM	Nov 01 2022 0

# TLS-450 PLUS Overview - Touchscreen

- Results can be filtered



# TLS-450 PLUS Overview - Touchscreen

The screenshot displays the TLS-450 PLUS touchscreen interface. At the top, a status bar shows 'T 1: DELIVERY NEEDED', '4 Warning(s)', '7 Alarm(s)', and the date/time 'Nov 26 2022 05:33 PM'. Below this, a navigation bar includes 'Reports', 'Environmental', and 'Sensor History'. A 'Share' button is on the right. A table shows '6 Results' with a 'Show 25 results per page' dropdown and 'Page 1 of 1'. A 'Select Range' dialog box is open, showing 'Period: Month' and 'Range: Previous' with 'OK' and 'Cancel' buttons. The background table lists sensor data with columns for #, Sensor Loc, and Time.

#	Sensor Loc	Time
L 1	87 STP S	:12 PM Nov 01 2022 0
L 2	91 STP S	:12 PM Nov 01 2022 0
L 3	DIESEL S	:12 PM Nov 01 2022 0
L 4	87 ANNUL	:12 PM Nov 01 2022 0
L 5	91 ANNUL	:12 PM Nov 01 2022 0
L 6	DIESEL A	:12 PM Nov 01 2022 0

# TLS-450 PLUS Overview - Touchscreen

The screenshot displays the TLS-450 PLUS touchscreen interface. At the top, a status bar shows 'T 1: DELIVERY NEEDED', '4 Warning(s)', '7 Alarm(s)', and the date/time 'Nov 26 2022 05:32 PM'. Below this, a navigation bar includes 'Reports', 'Environmental', and 'Sensor History' (selected). A 'Share' button is on the right. A secondary bar shows '6 Results', 'Show 25 results per page', and 'Page 1 of 1'. A 'Current Month' label is on the right. A 'Select Range' dialog box is open, showing 'Period: Month' and 'Range: Current'. A red arrow points to the 'Previous' option in the range dropdown. The background shows a table with sensor data.

#	Sensor Loc	Time	CI
L 1	87 STP S	:12 PM Nov 01 2022 0	
L 2	91 STP S	:12 PM Nov 01 2022 0	
L 3	DIESEL S	:12 PM Nov 01 2022 0	
L 4	87 ANNUL	:12 PM Nov 01 2022 0	
L 5	91 ANNUL	:12 PM Nov 01 2022 0	
L 6	DIESEL A	:12 PM Nov 01 2022 0	

# TLS-450 PLUS Overview - Touchscreen

T 2: DELIVERY NEEDED 4 Warning(s) 7 Alarm(s) Nov 26 2022 05:35 PM

Reports Environmental **Sensor History** Share

6 Results » Show 25 results per page Page 1 of 1

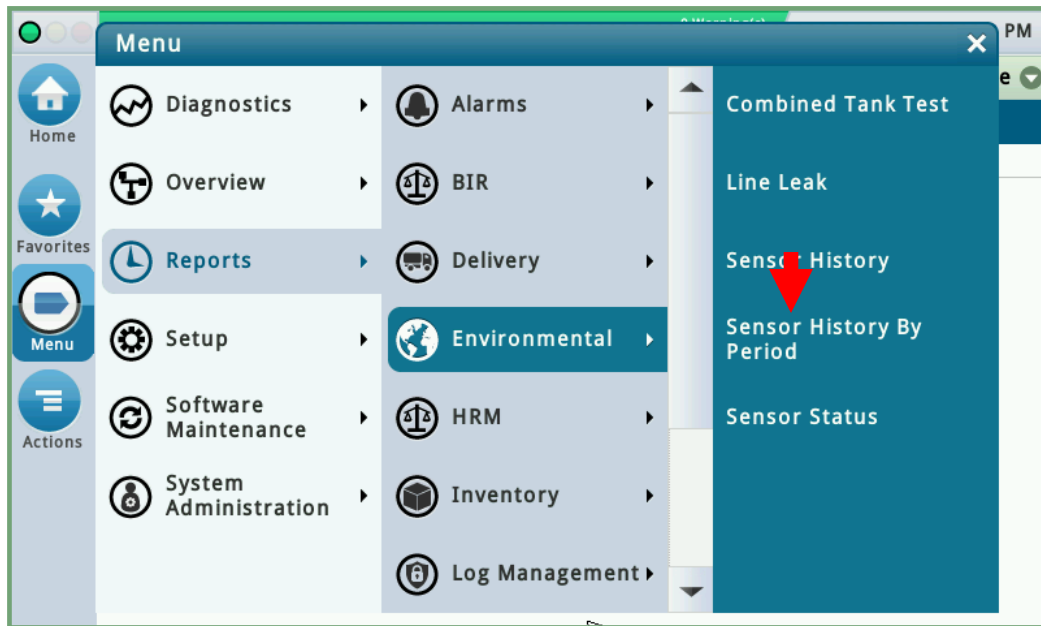
Previous Month

#	Sensor Location	Status	Active Time	Clear Time
L 1	87 STP SUMP	NORMAL		
L 2	91 STP SUMP	NORMAL		
L 3	DIESEL SUMP	NORMAL		
L 4	87 ANNULAR	NORMAL		
L 5	91 ANNULAR	NORMAL		
L 6	DIESEL ANNULAR	NORMAL		

Home Favorites Menu Actions Sensors

# TLS-450 PLUS Overview - Touchscreen

- Sensor History by Period





# TLS-450 PLUS Overview - Touchscreen

- Sensor History by Period
  - Defaults to Previous 12 Months
  - Results can be filtered

0 Warning(s)  
0 Alarm(s) 03/19/2022 02:38 PM

Sensor History By Period

results per page Page 1 of 1

Previous 12 Months

Label	Date/Time	Status
unleaded	03/01/2022 12:00 AM	NORMAL
unleaded	02/01/2022 12:00 AM	NORMAL
unleaded	01/01/2022 12:00 AM	NORMAL
unleaded	12/01/2021 12:00 AM	NORMAL
unleaded	11/01/2021 12:00 AM	NORMAL
MAG Sump-Unleaded	11/01/2021 12:00 AM	-----
unleaded	10/01/2021 12:00 AM	NORMAL
MAG Sump-Unleaded	10/01/2021 12:00 AM	NORMAL
unleaded	09/01/2021 12:00 AM	NORMAL
MAG Sump-Unleaded	09/01/2021 12:00 AM	NORMAL
unleaded	08/04/2021 11:15 AM	NORMAL
MAG Sump-Unleaded	08/04/2021 11:14 AM	NORMAL

# TLS-450 PLUS Overview - Touchscreen

The screenshot displays the TLS-450 PLUS touchscreen interface. At the top, a green status bar shows 'System Status', '0 Warning(s)', '0 Alarm(s)', and the date/time '03/19/2022 02:39 PM'. Below this, a navigation bar includes 'Reports', 'Environmental', and 'Sensor History By Period'. A sidebar on the left contains icons for Home, Favorites, Menu, Actions, and All. The main area shows a list of months from March 2022 to September 2021. A 'Select Range' dialog box is open, allowing selection of the period (BY MONTH), range (Previous N Months), and number of months (12). A table titled 'Previous 12 Months' is visible on the right, showing sensor data with columns for time and status.

Previous 12 Months	
	Status
:00 AM	NORMAL
:00 AM	NORMAL
:00 AM	NORMAL
:00 AM	NORMAL
:00 AM	NORMAL
:00 AM	-----
:00 AM	NORMAL
:00 AM	NORMAL
:00 AM	NORMAL
:00 AM	NORMAL
:00 AM	NORMAL
:00 AM	NORMAL

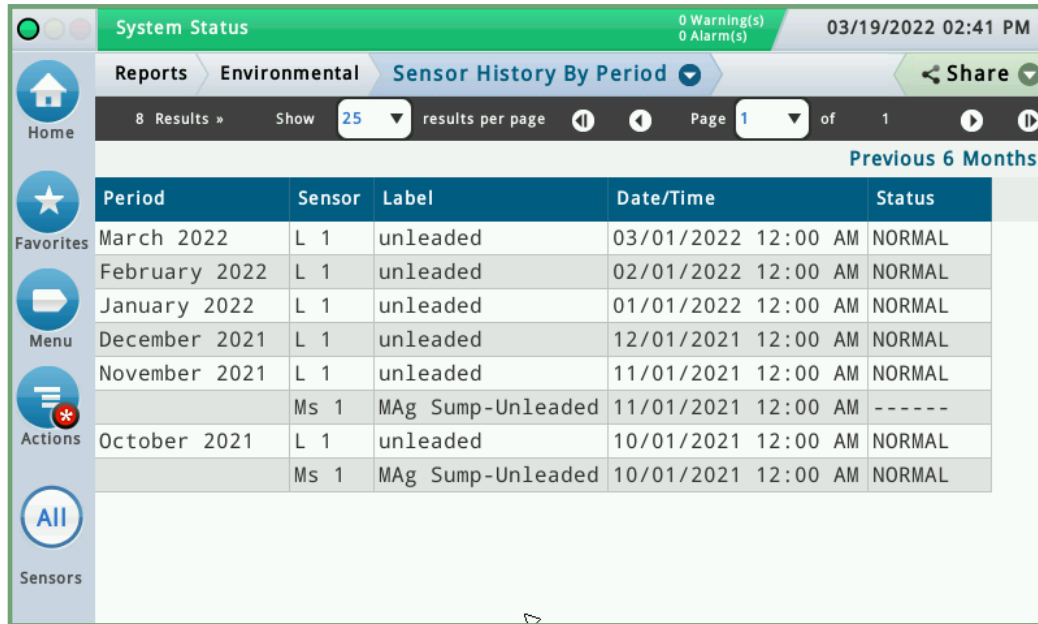
Sensor History	
Period	Status
March 2022	unleaded
February 2022	unleaded
January 2022	unleaded
December 2021	unleaded
November 2021	unleaded
October 2021	unleaded
September 2021	unleaded
August 2021	unleaded

# TLS-450 PLUS Overview - Touchscreen



# TLS-450 PLUS Overview - Touchscreen

- Sensor History by Period
  - Filtered results



System Status 0 Warning(s) 0 Alarm(s) 03/19/2022 02:41 PM

Reports Environmental Sensor History By Period Share

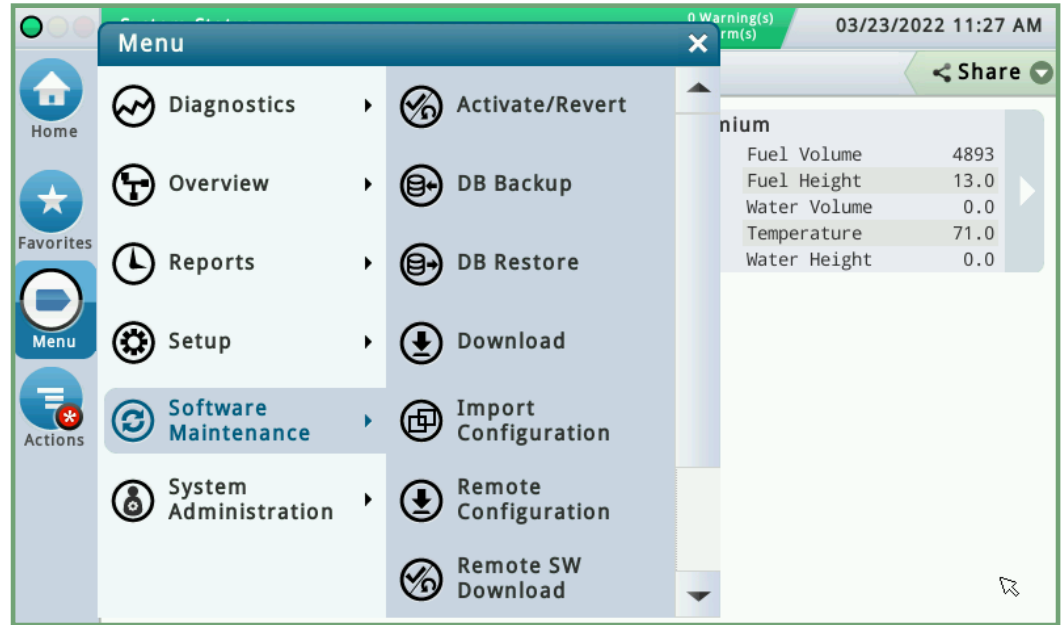
8 Results Show 25 results per page Page 1 of 1

Previous 6 Months

Period	Sensor	Label	Date/Time	Status
March 2022	L 1	unleaded	03/01/2022 12:00 AM	NORMAL
February 2022	L 1	unleaded	02/01/2022 12:00 AM	NORMAL
January 2022	L 1	unleaded	01/01/2022 12:00 AM	NORMAL
December 2021	L 1	unleaded	12/01/2021 12:00 AM	NORMAL
November 2021	L 1	unleaded	11/01/2021 12:00 AM	NORMAL
	Ms 1	MAG Sump-Unleaded	11/01/2021 12:00 AM	-----
October 2021	L 1	unleaded	10/01/2021 12:00 AM	NORMAL
	Ms 1	MAG Sump-Unleaded	10/01/2021 12:00 AM	NORMAL

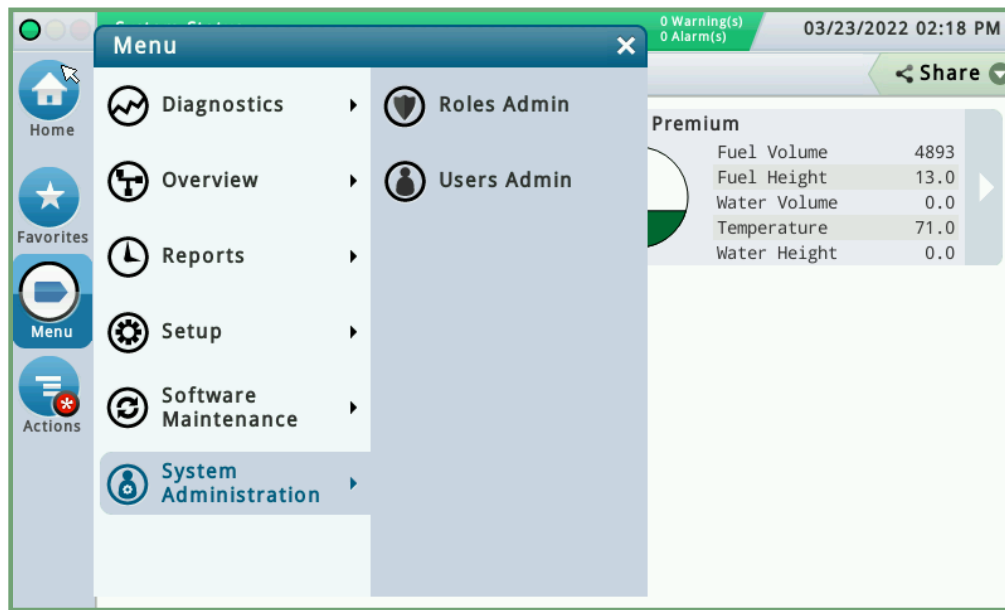
# TLS-450 PLUS Overview - Touchscreen

## ➤ Software Maintenance



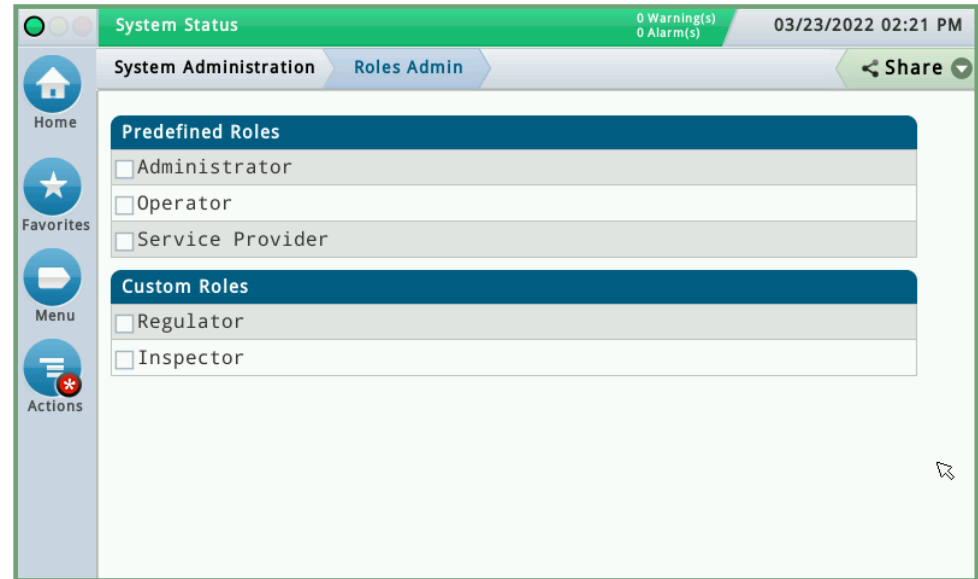
# TLS-450 PLUS Overview - Touchscreen

- System Administrator
  - ✓ Establish access roles and permissions



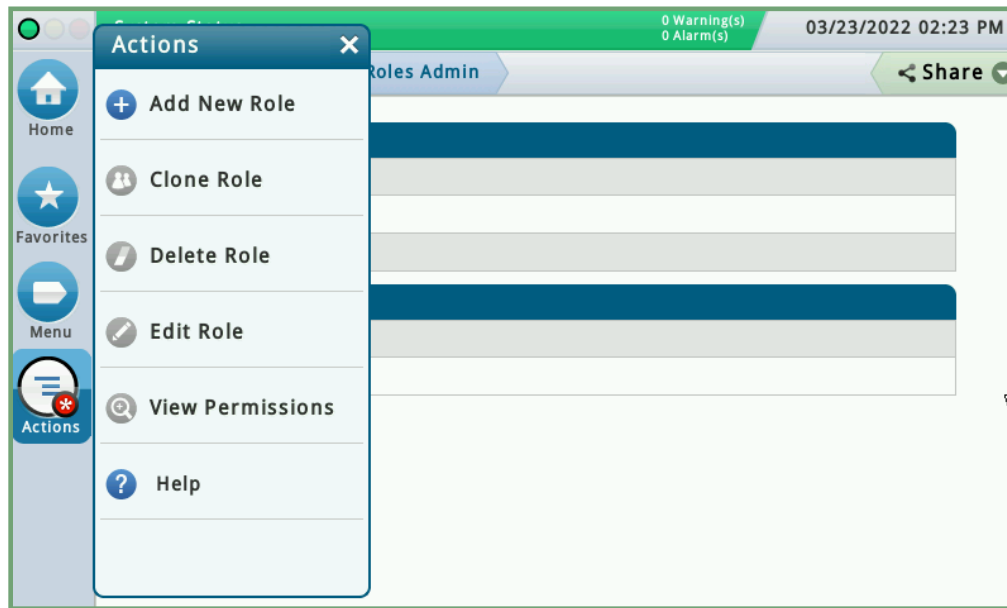
# TLS-450 PLUS Overview - Touchscreen

- Roles
  - ✓ Predefined
  - ✓ Custom



# TLS-450 PLUS Overview - Touchscreen

- Roles
  - ✓ Add/Delete Roles
  - ✓ Define Permissions





# TLS-450 PLUS Overview - Touchscreen

## ➤ Define Role Access

System Status 0 Warning(s) 0 Alarm(s) 03/23/2022 02:28 PM

Add New Role

Role

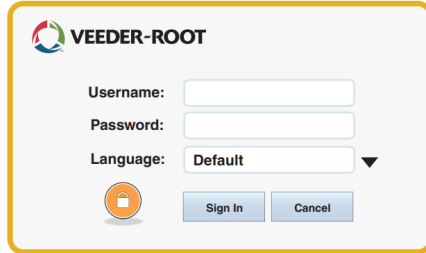
Is Regulator ☒ Yes ☐ No \*

Screen	Not Granted	View	Edit/Perform
▶ Diagnostics	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
▶ Reports	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
▶ Setup	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
▶ System Status	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
▶ System Admin	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

✓ ✕

# TLS-450 PLUS Overview - Touchscreen

## ➤ Role Access




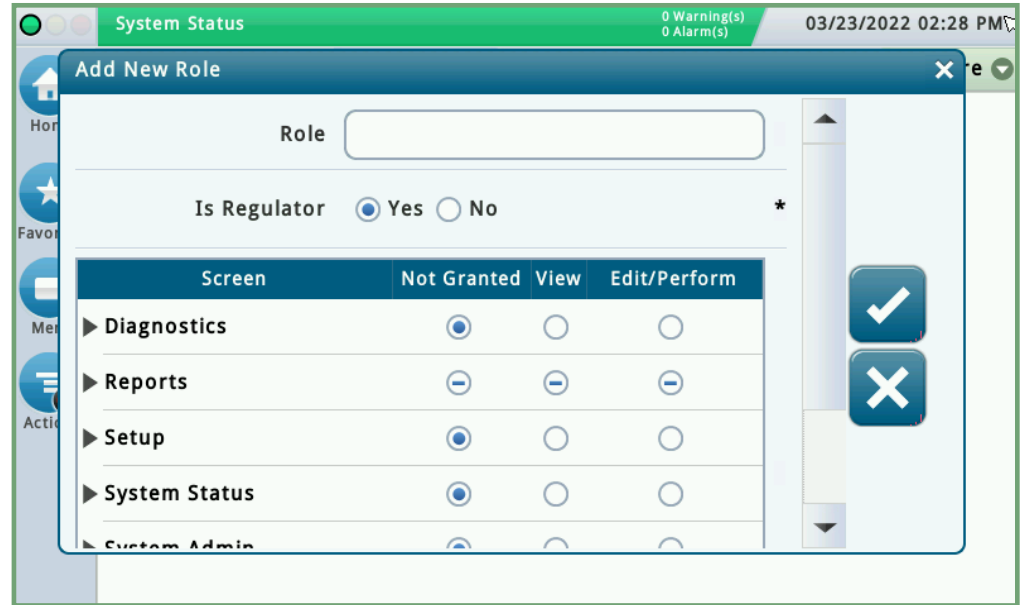
VEEDER-ROOT

Username:

Password:

Language:  ▼





System Status 0 Warning(s) 0 Alarm(s) 03/23/2022 02:28 PM

Add New Role

Role

Is Regulator ☒ Yes ☐ No \*

Screen	Not Granted	View	Edit/Perform
▶ Diagnostics	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
▶ Reports	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
▶ Setup	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
▶ System Status	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
▶ System Admin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

☒ ☐

# TLS-450 PLUS Setup Tape Examples

```
SYSTEM SETUP
-----
NOV 19, 2018 12:37 PM

SYSTEM UNITS
U.S.
SYSTEM LANGUAGE
ENGLISH
SYSTEM DATE/TIME FORMAT
MON DD YYYY HH:MM:SS xM

UNITED PACIFIC 7237
4047 S SHINGLE RD
SHINGLE SPRINGS CA
530-676-1083

SHIFT TIME 1 : 3:30 AM
SHIFT TIME 2 : DISABLED
SHIFT TIME 3 : DISABLED
SHIFT TIME 4 : DISABLED

TANK PER TST NEEDED WRN
DISABLED
TANK ANN TST NEEDED WRN
DISABLED

LINE RE-ENABLE METHOD
PASS LINE TEST

LINE PER TST NEEDED WRN
DISABLED
LINE ANN TST NEEDED WRN
DISABLED

PRINT TC VOLUMES
ENABLED
```

```
MAR 9, 2022 3:07 PM

UNITED PACIFIC 5426
COTATI CA. 94931
707-664-8104

*** DISPLAY SETUP - LANGUAGE AND UNITS ***
-----
SYSTEM LANGUAGE: ENGLISH
SYSTEM UNITS: US

*** SYSTEM DATE AND TIME ***
-----
DATE AND TIME: MAR 09, 2022 15:07
TIME ZONE: (UTC -08:00) US/Pacific
NTP STATUS: DISABLED
NTP SERVER ADDRESS: pool.ntp.org

*** DISPLAY SETUP - DATE AND TIME FORMAT ***
-----
DATE FORMAT: mon_dd_yyyy
DATE SEPARATOR: /
TIME FORMAT: 12-hour xM

*** DISPLAY SETUP - NUMBER FORMAT ***
-----
DECIMAL SEPARATOR: .
THOUSANDS SEPARATOR: None

*** HEADERS SETUP ***
-----
HEADER 1: UNITED PACIFIC 5426
HEADER 2:
HEADER 3: COTATI CA. 94931
HEADER 4: 707-664-8104
FAX NAME:
FAX NUMBER:

*** SYSTEM SETUP - ALARM FILTERING ***
-----
ALARM FILTERING: DISABLED

*** COMMUNICATION SETUP - HOSTNAME ***
-----
SYSTEM HOSTNAME: Cotati
```

# TLS-450 PLUS Setup Tape Examples

```

LIQUID SENSOR SETUP
- - - - -
L 1:UDC 1-2
TRI-STATE (SINGLE FLOAT)
CATEGORY : DISPENSER PAN

L 2:BRINE 1-2 UDC
TRI-STATE (SINGLE FLOAT)
CATEGORY : OTHER SENSORS

L 3:UDC 3-4
TRI-STATE (SINGLE FLOAT)
CATEGORY : DISPENSER PAN

L 4:BRINE 3-4 UDC
TRI-STATE (SINGLE FLOAT)
CATEGORY : OTHER SENSORS

L 5:UDC 5-6
TRI-STATE (SINGLE FLOAT)
CATEGORY : DISPENSER PAN

L 6:BRINE 5-6 UDC
TRI-STATE (SINGLE FLOAT)
CATEGORY : OTHER SENSORS

L 7:UDC 7-8
TRI-STATE (SINGLE FLOAT)
CATEGORY : DISPENSER PAN

L 8:BRINE 7-8 UDC
TRI-STATE (SINGLE FLOAT)
CATEGORY : OTHER SENSORS

L 9:UDC 9-10
TRI-STATE (SINGLE FLOAT)
CATEGORY : DISPENSER PAN

L 10:BRINE 9-10 UDC
TRI-STATE (SINGLE FLOAT)
CATEGORY : OTHER SENSORS

L 11:UDC 11-12
TRI-STATE (SINGLE FLOAT)
CATEGORY : DISPENSER PAN

L 12:BRINE 11-12 UDC
TRI-STATE (SINGLE FLOAT)
CATEGORY : OTHER SENSORS

L 13:87 STP SUMP
TRI-STATE (SINGLE FLOAT)
CATEGORY : STP SUMP

L 14:BRINE 87 STP SUMP
TRI-STATE (SINGLE FLOAT)
CATEGORY : OTHER SENSORS
    
```

```

*** DEVICE SETUP - LIQUID SENSOR ***
- - - - -
CONFIGURED: --- LIQUID SENSOR 1 ---
LABEL:      ENABLED
ADDRESS:    87 STP SUMP
MODEL:      B1.S4.4
CATEGORY:   Tri-State(Single Float)

CONFIGURED: --- LIQUID SENSOR 2 ---
LABEL:      ENABLED
ADDRESS:    91 STP SUMP
MODEL:      B1.S4.5
CATEGORY:   Tri-State(Single Float)

CONFIGURED: --- LIQUID SENSOR 3 ---
LABEL:      ENABLED
ADDRESS:    DIESEL STP
MODEL:      B1.S4.6
CATEGORY:   Tri-State(Single Float)

CONFIGURED: --- LIQUID SENSOR 4 ---
LABEL:      ENABLED
ADDRESS:    87 ANNULAR
MODEL:      B1.S4.7
CATEGORY:   Tri-State(Single Float)

CONFIGURED: --- LIQUID SENSOR 5 ---
LABEL:      ENABLED
ADDRESS:    91 ANNULAR
MODEL:      B1.S4.8
CATEGORY:   Tri-State(Single Float)

CONFIGURED: --- LIQUID SENSOR 6 ---
LABEL:      ENABLED
ADDRESS:    DIESEL ANNULAR
MODEL:      B1.S4.9
CATEGORY:   Tri-State(Single Float)

CONFIGURED: --- LIQUID SENSOR 7 ---
LABEL:      ENABLED
ADDRESS:    87 FILL SUMP
MODEL:      B1.S4.10
CATEGORY:   Tri-State(Single Float)

CONFIGURED: --- LIQUID SENSOR 8 ---
LABEL:      ENABLED
ADDRESS:    91 FTLL SUMP
MODEL:      B1.S4.11
CATEGORY:   Tri-State(Single Float)
    
```

```

--- LIQUID SENSOR 9 ---
CONFIGURED: ENABLED
LABEL:      DIESEL FILL SUMP
ADDRESS:    B1.S4.12
MODEL:      Tri-State(Single Float)
CATEGORY:   Spill Bucket

--- LIQUID SENSOR 10 ---
CONFIGURED: ENABLED
LABEL:      1-2 DISP
ADDRESS:    B2.S3.9
MODEL:      Tri-State(Single Float)
CATEGORY:   Dispenser Pan

--- LIQUID SENSOR 11 ---
CONFIGURED: ENABLED
LABEL:      3-4 DISP
ADDRESS:    B2.S3.10
MODEL:      Tri-State(Single Float)
CATEGORY:   Dispenser Pan

--- LIQUID SENSOR 12 ---
CONFIGURED: ENABLED
LABEL:      5-6 DISP
ADDRESS:    B2.S3.11
MODEL:      Tri-State(Single Float)
CATEGORY:   Dispenser Pan

--- LIQUID SENSOR 13 ---
CONFIGURED: ENABLED
LABEL:      7-8 DISP
ADDRESS:    B2.S3.12
MODEL:      Tri-State(Single Float)
CATEGORY:   Dispenser Pan

--- LIQUID SENSOR 14 ---
CONFIGURED: ENABLED
LABEL:      9-10 DISP
ADDRESS:    B2.S3.13
MODEL:      Tri-State(Single Float)
CATEGORY:   Dispenser Pan

--- LIQUID SENSOR 15 ---
CONFIGURED: ENABLED
LABEL:      11-12 DISP
ADDRESS:    B2.S3.14
MODEL:      Tri-State(Single Float)
CATEGORY:   Dispenser Pan

--- LIQUID SENSOR 16 ---
CONFIGURED: ENABLED
LABEL:      VENT BOX
ADDRESS:    B1.S4.13
MODEL:      Tri-State(Single Float)
CATEGORY:   Containment Sump
    
```

# TLS-450 PLUS Setup Tape Examples

## IN-TANK SETUP

```
T 1:UNLEADED 87
PRODUCT CODE      : 1
THERMAL COEFF      : 0.000700
TANK DIAMETER      : 118.35
TANK PROFILE       : 20 PTS
FULL VOL          : 19782
112.4 INCH VOL    : 19436
106.5 INCH VOL    : 18820
100.6 INCH VOL    : 18026
94.7 INCH VOL     : 17095
88.8 INCH VOL     : 16056
82.8 INCH VOL     : 14908
76.9 INCH VOL     : 13691
71.0 INCH VOL     : 12452
65.1 INCH VOL     : 11182
59.2 INCH VOL     : 9897
53.3 INCH VOL     : 8612
47.3 INCH VOL     : 7315
41.4 INCH VOL     : 6052
35.5 INCH VOL     : 4863
29.6 INCH VOL     : 3741
23.7 INCH VOL     : 2703
17.8 INCH VOL     : 1774
11.8 INCH VOL     : 964
5.9 INCH VOL      : 341
```

```
FLOAT SIZE: 4.0 IN. PS
WATER MINIMUM : 0.000
```

```
WATER WARNING : 1.0
HIGH WATER LIMIT: 2.0
WATER ALARM FILTER: LOW
```

```
MAX OR LABEL
VOLUME : 19782

HIGH PRODUCT
% MAX : 95.0
(GALLONS) : 18793

OVERFILL LIMIT
% MAX : 90.0
(GALLONS) : 17804

DELIVERY LIMIT
% MAX : 10.0
(GALLONS) : 1978

LOW PRODUCT
VOLUME : 850

LEAK ALARM LIMIT: 99
SUDDEN LOSS LIMIT: 99
TANK TILT : 0.00
PROBE OFFSET : 0.00
```

```
SIPHON MANIFOLDED TANKS
T#: NONE
LINE MANIFOLDED TANKS
T#: NONE
```

## \*\*\* TANK SETUP - GENERAL SETUP \*\*\*

```
--- TANK 1 ---
CONFIGURED:      ENABLED
LABEL:           87 UNLEADED
PRODUCT CODE:    1
PROBE NUMBER:    Pb 1: Probe 87
PROBE OFFSET:    0.00 INCHES
FULL VOLUME:     15068 GALLONS
DIAMETER:        127.5 INCHES
TILT:            3.40 INCHES
THERMAL COEFFICIENT: 0.000700
METER DATA PRESENT: DISABLED
DELIVERY DELAY:  1 MINUTES
GROSS TEST FAIL: ALARMS ENABLED
PERIODIC TEST FAIL: ALARMS ENABLED
ANNUAL TEST FAIL: ALARMS DISABLED
GOST VOLUME CORRECTION: DISABLED
```

```
--- TANK 2 ---
CONFIGURED:      ENABLED
LABEL:           91 PREMIUM
PRODUCT CODE:    2
PROBE NUMBER:    Pb 2: Probe 91
PROBE OFFSET:    0.00 INCHES
FULL VOLUME:     15068 GALLONS
DIAMETER:        127.5 INCHES
TILT:            4.00 INCHES
THERMAL COEFFICIENT: 0.000700
METER DATA PRESENT: DTSANI FD
DELIVERY DELAY:  1 MINUTES
GROSS TEST FAIL: ALARMS ENABLED
PERIODIC TEST FAIL: ALARMS ENABLED
ANNUAL TEST FAIL: ALARMS DISABLED
GOST VOLUME CORRECTION: DISABLED
```

```
--- TANK 3 ---
CONFIGURED:      ENABLED
LABEL:           D1SEEL
PRODUCT CODE:    3
PROBE NUMBER:    Pb 3: Probe Diesel
PROBE OFFSET:    0.00 INCHES
FULL VOLUME:     15068 GALLONS
DIAMETER:        127.5 INCHES
TILT:            0.00 INCHES
THERMAL COEFFICIENT: 0.000450
METER DATA PRESENT: DISABLED
DELIVERY DELAY:  1 MINUTES
GROSS TEST FAIL: ALARMS ENABLED
PERIODIC TEST FAIL: ALARMS ENABLED
ANNUAL TEST FAIL: ALARMS DISABLED
GOST VOLUME CORRECTION: DISABLED
```

## \*\*\* TANK SETUP - LIMITS \*\*\*

```
--- TANK 1 ---
MAX VOLUME:      15068 GALLONS
HIGH PRODUCT:    95%
DELIVERY OVERFILL: 90%
DELIVERY LIMIT:  15%
LOW PRODUCT:     850 GALLONS
HIGH WATER WARNING: 1.00 INCHES
HIGH WATER ALARM: 2.00 INCHES
WATER ALARM FILTER LEVEL: LOW
LEAK ALARM LIMIT: 99 GALLONS
SUDDEN LOSS LIMIT: 100 GALLONS
FUEL LOW TEMP LIMIT: -58.000 DEG F
FUEL HIGH TEMP LIMIT: 140.000 DEG F
```

```
--- TANK 2 ---
MAX VOLUME:      15068 GALLONS
HIGH PRODUCT:    95%
DELIVERY OVERFILL: 90%
DELIVERY LIMIT:  15%
LOW PRODUCT:     850 GALLONS
HIGH WATER WARNING: 1.00 INCHES
HIGH WATER ALARM: 2.00 INCHES
WATER ALARM FILTER LEVEL: LOW
LEAK ALARM LIMIT: 99 GALLONS
SUDDEN LOSS LIMIT: 100 GALLONS
FUEL LOW TEMP LIMIT: -58.000 DEG F
FUEL HIGH TEMP LIMIT: 140.000 DEG F
```

```
--- TANK 3 ---
MAX VOLUME:      15068 GALLONS
HIGH PRODUCT:    95%
DELIVERY OVERFILL: 90%
DELIVERY LIMIT:  15%
LOW PRODUCT:     850 GALLONS
HIGH WATER WARNING: 1.00 INCHES
HIGH WATER ALARM: 2.00 INCHES
WATER ALARM FILTER LEVEL: LOW
LEAK ALARM LIMIT: 99 GALLONS
SUDDEN LOSS LIMIT: 100 GALLONS
FUEL LOW TEMP LIMIT: -58.000 DEG F
FUEL HIGH TEMP LIMIT: 140.000 DEG F
```

# TLS-450 PLUS Setup Tape Examples

## PRESSURE LINE LEAK SETUP

Q 1:EC 87 LINE  
TYP:2.0/3.0IN FIBERGLASS  
2.0IN DIA LEN: 300 FEET  
3.0IN DIA LEN: 0 FEET  
SHUTDOWN RATE: 3.0 GPH  
LOW PRESSURE SHUTOFF:NO  
LOW PRESSURE : 0 PSI  
T 1:UNLEADED R  
DISPENSE MODE:  
STANDARD  
SENSOR: NON-VENTED  
PRESSURE OFFSET: 0.0PSI  
MECHANICAL BLENDER: NO

Q 2:EC PREMIUM  
TYP:2.0/3.0IN FIBERGLASS  
2.0IN DIA LEN: 300 FEET  
3.0IN DIA LEN: 0 FEET  
SHUTDOWN RATE: 3.0 GPH  
LOW PRESSURE SHUTOFF:NO  
LOW PRESSURE : 0 PSI  
T 2:UL PREMIUM  
DISPENSE MODE:  
STANDARD  
SENSOR: NON-VENTED  
PRESSURE OFFSET: 0.0PSI  
MECHANICAL BLENDER: NO

Q 3:DIESEL 2  
TYP:2.0/3.0IN FIBERGLASS  
2.0IN DIA LEN: 150 FEET  
3.0IN DIA LEN: 0 FEET  
SHUTDOWN RATE: 3.0 GPH  
LOW PRESSURE SHUTOFF:NO  
LOW PRESSURE : 0 PSI  
T 3:DIESEL No.  
DISPENSE MODE:  
STANDARD  
SENSOR: NON-VENTED  
PRESSURE OFFSET: 0.0PSI  
MECHANICAL BLENDER: NO

## \*\*\* PUMPS AND LINES - PLD \*\*\*

--- LINE 1 ---  
CONFIGURED: ENABLED  
CONTROLLING PUMP: Pn 1: 87 Pump  
PIPE TYPE: 2/3 inch Fiberglass  
2.0 DIAMETER LENGTH: 245.00 FEET  
3.0 DIAMETER LENGTH: 0.00 FEET  
THERMAL COEFFICIENT: 0.000700  
0.2 GPH LINE LEAK: DISABLED  
0.1 GPH LINE LEAK: DISABLED  
SHUTDOWN RATE: 3.0 GAL/HR  
LOW PRESSURE SHUTOFF: DISABLED  
LOW PRESSURE ALARM LIMIT: 0 psi  
CONTINUOUS HANDLE TIMEOUT: 16 HOURS  
FUEL OUT LIMIT: 10.00 INCHES  
ALTITUDE PRESSURE OFFSET: 0.00 psi  
PUMP COMM CONTROL RELAY: NOT ASSIGNED

--- LINE 2 ---  
CONFIGURED: ENABLED  
CONTROLLING PUMP: Pn 2: 91 Pump  
PIPE TYPE: 2/3 inch Fiberglass  
2.0 DIAMETER LENGTH: 255.00 FEET  
3.0 DIAMETER LENGTH: 0.00 FEET  
THERMAL COEFFICIENT: 0.000700  
0.2 GPH LINE LEAK: DISABLED  
0.1 GPH LINE LEAK: DISABLED  
SHUTDOWN RATE: 3.0 GAL/HR  
LOW PRESSURE SHUTOFF: DISABLED  
LOW PRESSURE ALARM LIMIT: 0 psi  
CONTINUOUS HANDLE TIMEOUT: 16 HOURS  
FUEL OUT LIMIT: 10.00 INCHES  
ALTITUDE PRESSURE OFFSET: 0.00 psi  
PUMP COMM CONTROL RELAY: NOT ASSIGNED

--- LINE 3 ---  
CONFIGURED: ENABLED  
CONTROLLING PUMP: Pn 3: Diesel Pump  
PIPE TYPE: 2/3 inch Fiberglass  
2.0 DIAMETER LENGTH: 180.00 FEET  
3.0 DIAMETER LENGTH: 0.00 FEET  
THERMAL COEFFICIENT: 0.000450  
0.2 GPH LINE LEAK: DISABLED  
0.1 GPH LINE LEAK: DISABLED  
SHUTDOWN RATE: 3.0 GAL/HR  
LOW PRESSURE SHUTOFF: DISABLED  
LOW PRESSURE ALARM LIMIT: 0 psi  
CONTINUOUS HANDLE TIMEOUT: 16 HOURS  
FUEL OUT LIMIT: 10.00 INCHES  
ALTITUDE PRESSURE OFFSET: 0.00 psi  
PUMP COMM CONTROL RELAY: NOT ASSIGNED

## \*\*\* PUMPS AND LINES - ALL LINES \*\*\*

RESTART ON ALARM CLEAR: DISABLED  
LINE LOCKOUT SCHEDULE: Disabled

## \*\*\* PUMPS AND LINES - ALL PLD \*\*\*

LINE RE-ENABLE METHOD: PASS LINE TEST  
PERIODIC TEST WARNINGS: DISABLED  
DAYS BEFORE PERIODIC WARNING: 25  
DAYS BEFORE PERIODIC ALARM: 30  
ANNUAL TEST WARNINGS: DISABLED  
DAYS BEFORE ANNUAL WARNING: 355  
DAYS BEFORE ANNUAL ALARM: 365  
PRECISION TEST DELAY: 12 HOURS

# TLS-4xx – Status in CA

- All TLS-4xx leak detection devices and methods are listed on SWRCB's LG-113
- TLS-4xx sites installed CA (non-ISD)
- TLS-450PLUS In Station Diagnostics (ISD) test sites are sealed for CARB certifications for EVR Phase II vapor recovery systems:
  - ✓ Balance (Veeder-Root Carbon Canister)
  - ✓ Balance (Healy CAS)
  - ✓ Assist (Healy CAS)
  - ✓ Balance (VST)
  - ✓ Balance (Hirt)



# Combo TLS Installations in CA





# TLS-350 End of Sale

- Veeder-Root has announced TLS-350 End-of-Sale
- Effective December 31, 2021
- California exception
- Spare parts supported for five years or when spare parts are no longer available
- TLS-450PLUS ISD certification will initiate similar End-of-Sale program for TLS-350 in CA
- TLS-300 End-of-Sale was December 31, 2020



## End of Sale Notification

TLS-350 Series ATG Systems

### Overview

#### ATG Series 8470, 8482 and 8485

Veeder-Root is committed to providing the highest quality products and services to our customers. As the world leaders in technology development fueling systems, we view product End of Sale (EOS) as part of the natural cycle that drives technology evolution. Therefore, we are obsoleting our legacy 8470 and 8482 Series TLS-350 ATG systems **effective December 31, 2021**.

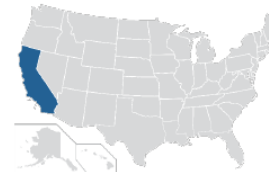
These systems have reached the point in their sales cycle where manufacturing the products is no longer feasible due to obsoleted components and increased costs for older technologies.



### Targeted Market

#### North America – EXCEPTION CALIFORNIA

Veeder-Root will continue to produce TLS-350 systems to meet the EVR/ISD requirements during the testing and approval process for the TLS-450PLUS to meet CARB requirements for VR-202Z, VR-203Z, and VR-204Z. During this period distributors may continue to order necessary systems and spare parts to ensure customers continue to meet the state requirements.



North America, Exception  
California

### Transition Details

#### Product Transition Information

We recommend customers transition to the Veeder-Root TLS-450PLUS consoles for their tank monitoring needs. See the Product Transition Information section for more information.

#### Purchase Orders for TLS-350 Spare Parts

Veeder-Root will support spare parts for 5 years from the Last Time Buy Dates, or when spare parts are no longer available, whichever comes first.

Please contact Customer Service at [neworders@veeder.com](mailto:neworders@veeder.com).

# Software Update Demo



# Any Questions?

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