

SMARTLINQ



A **PACCAR** COMPANY



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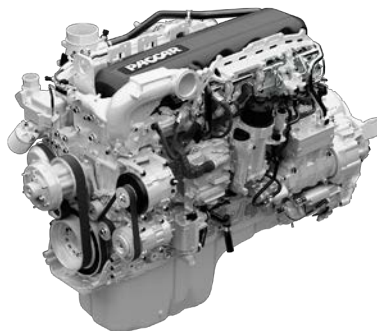
How SmartLINQ Works

SMARTLINQ In-Action



SmartLINQ In-Action

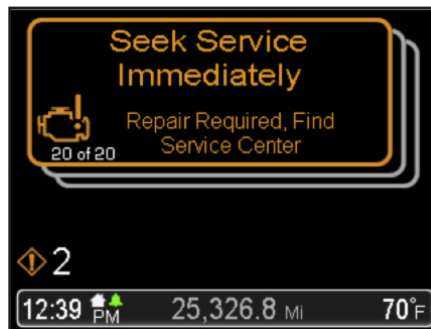
Peterbilt SmartLINQ takes remote diagnostics a giant step forward – it goes beyond diagnostics and driver alerts to provide detailed communication about problems as they occur, recommended actions, and guidance for how to resolve the problem. It enables the vehicle’s Primary Care Provider (The Primary Care Provider may be the truck’s owner, a fleet manager, or designated personnel at a dealership the customer has selected) to monitor a truck’s operation 24/7, regardless of where the truck or the user are located. This facilitates quick communication between the Primary Care Provider and the dealership of choice to develop a service plan. The system was developed to minimize downtime for the customer and expedite truck servicing.



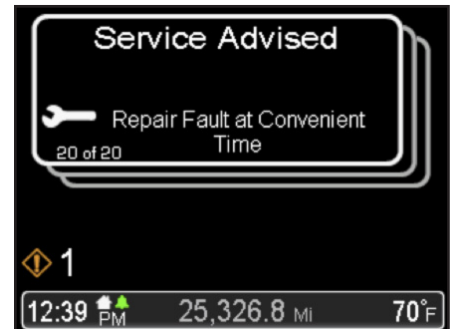
Fault Code Indicators – What the Driver Sees



Stop Engine Immediately



Seek Service Immediately



Service Advised

NOTE: These images only apply to Model 579 and Model 567.

The Peterbilt SmartLINQ communication process starts when an engine or aftertreatment system fault is reported on a SmartLINQ vehicle. The driver will see one of these dash indicators.

Stop Engine Immediately – Stop now, shut down the truck, and call for a tow if necessary. Faults that may call for this action include those that may cause damage to the engine. Examples include: low oil pressure, high oil temperature, and low fuel pressure.

Seek Service Immediately – Conditions such as turbocharger faults, high fuel temperatures, ECU errors, low oil pressure, and aftertreatment faults result in this alert. These faults may lead to a derate situation and/or possible damage to components. Some of these may be emissions-related, meaning the vehicle's emissions are not in compliance with EPA regulations. The appropriate action is to drive the vehicle to a nearby dealership.

Service Advised – Vehicle's engine or aftertreatment system performance is not as expected and while the onboard diagnostics system is monitoring the fault, it is safe to continue delivering the load. Get service at your next opportunity. DEF quality and minor ECU faults are among the codes that may trigger this action.

What Happens When SmartLINQ Takes Action

- SmartLINQ immediately communicates with PACCAR's back office by wirelessly sending detailed data about the event.
- PACCAR's back office system translates the data into userfriendly text and graphics, and generates PACCAR Solutions web portal and email notifications. PACCAR Solutions monitors around 800 fault codes but will only send an email notification for the high priority faults.
- The truck's Primary Care Provider receives the email notification and can go online to PACCAR Solutions to view the web portal content.
- If you are the owner or fleet manager who is the only recipient of the notification, you would then communicate with your preferred dealerships to generate a plan for when, where and how the truck will be serviced.
- At this point, either you or the dealership will contact the driver to provide direction on what to do next based on the severity of the event.
- Using the information from the email notification and/or the PACCAR Solutions content, the dealership begins to troubleshoot and plan for the repair while the truck is en route.

Sample Email Notification

Vehicle Information

- Unit#
- VIN number
- Event#
- Fault Event Location

Fault Information

- Description: Plain English
- Fault Count
- Recommended Action: Stop Now, Service Now, Service Soon or Informational
- Current State: Percent of engine power and potential derate
- Lamps: showing in truck
- Additional Information
- **Notes** for additional information

Troubleshooting Guidance

Possible causes and checks the driver may be able to perform.

Service Centers

The name, address, hours, phone, and distance to three of the closest Peterbilt dealer locations.

Location of Vehicle at Fault Occurrence

Map with location of the truck at time of fault occurrence.

Notes

Informational and safety reminders are located at the end of the document (not shown).

Dear Valued Customer,
The PACCAR diagnostics system has detected an event which triggered this notification.

Vehicle / Location Information ←

Unit #	Pride N' Class
VIN	1XPBDP9X0ED
Event #	MSG-
Fault Event Location	Denton, TX, 76207 United States

Fault Information ←

Fault Description	P151E This fault code indicates the DEF level is at 0%.
Fault Count	1
Recommended Action	Service Now
Current State	40% Engine Power Derate
ATTENTION	This fault may be cleared by filling DEF tank. A key cycle at any time may result in an immediate 5 MPH vehicle speed restriction.
Lamp(s)	Check Engine
Additional Information	DEF level has dropped to 0% volume; fault codes P1519 P151C and P151D may be active. There will be additional faults and progressive decreases in power if this issue continues. Progressive Derate in Engine Power: 5 MPH speed restriction

Troubleshooting Guidance ←

Possible Causes	Driver Check
Low DEF Level in DEF Tank	✓
Malfunctioning DEF level sensor	

Service Centers ←

Based on the approximate location of the vehicle when the fault event occurred, we have identified the following locations that may be able to provide repair and/or service.

Authorized Service/Repair Location	Local Service Hours	Phone	Est. Distance
Rush Truck Center, Fort Worth 1480 NE Loop 820 Fort Worth, TX 76106	07:00AM - 12:00AM Mon Tue Wed Thu Fri 08:00AM - 03:00PM Sat	8177409400 8176256903 8004565229	26.7 Miles
Rush Truck Center, Dallas 515 North Loop 12 Irving, TX 75061	08:00AM - 03:00PM Sat 07:00AM - 11:00PM Mon Tue Wed Thu Fri	4694065200 9727853464 8002567383	30.3 Miles
Rush Peterbilt Truck Center, Ardmore 2100 Cooper Drive Ardmore, OK 73401	07:00AM - 07:00PM Mon Tue Wed Thu Fri 08:00AM - 01:00PM Sat	5802243900 5802240063 8772027571	68.7 Miles

Before scheduling service, it is highly recommended that you contact the service/repair provider to verify parts and service bay availability. If a part is not available, PACCAR Parts distribution centers can ship to most locations within 24 hours.

Location of Vehicle at Fault Occurrence ←

Denton, TX, 76207, United States

PC-MILER 28 Copyright © ALK Technologies 2014

Thank you,
PACCAR's Diagnostic Team.

What to Do After the Email Notification

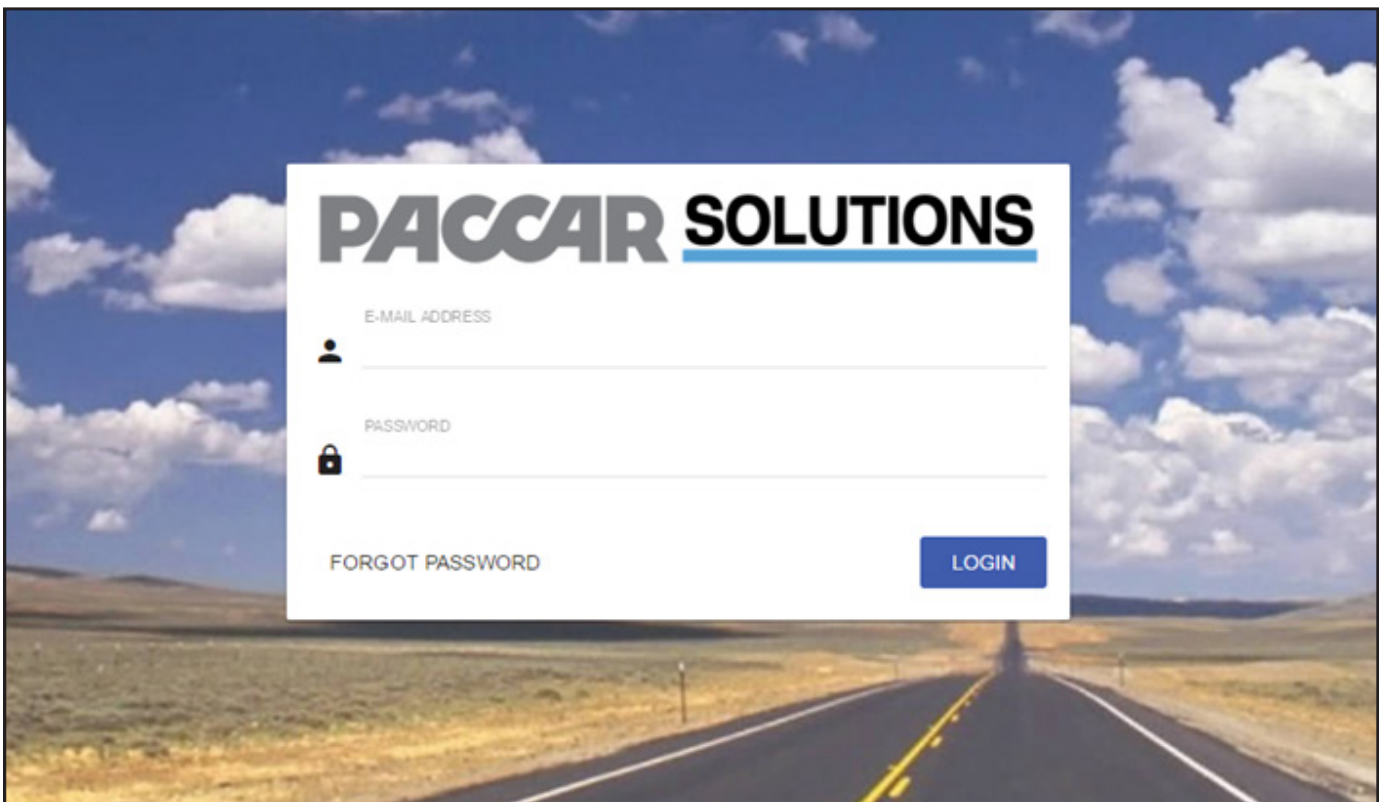
After notification from the system, you can use the information from the email and the PACCAR Solutions web portal to do the following:

1. Identify the location of the vehicle and determine which of the three closest dealerships you want to contact.
2. Research the vehicle fault code details.
3. Have the driver perform any of the checks noted in the email.

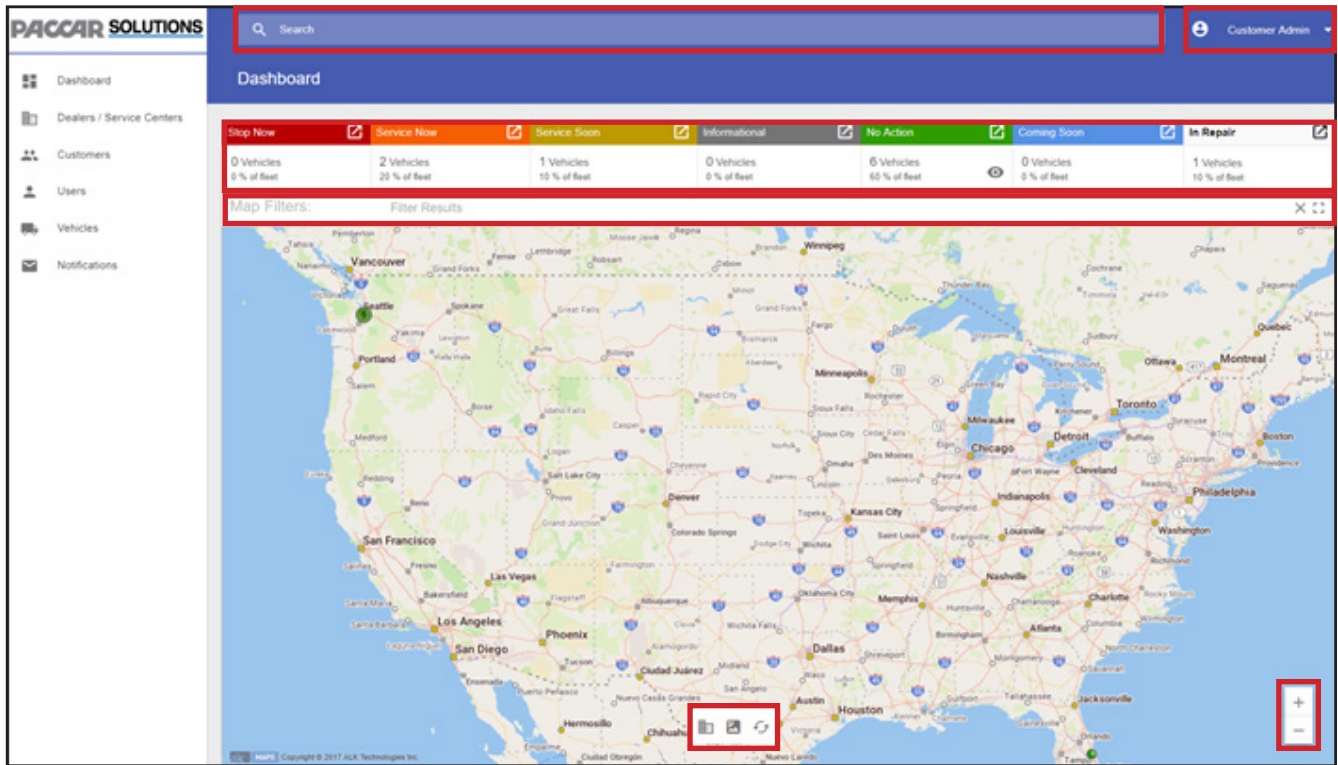
This information better prepares you to work with a dealership to develop a repair estimate, communicate with the driver, and schedule an appointment. The primary benefit for both you and your fleet is that advance planning will make for a faster and more efficient repair.

PACCAR Solutions Portal

The web portal is accessed at www.PACCARSolutions.com. It's a good idea to create a shortcut to the portal on the desktop of computers that will be used to access it. Also make sure that these computers have Internet Explorer 11.0, or an up-to-date version of Google Chrome or Firefox installed. PACCAR Solutions opens to the login screen shown below. Use the email address and password (case sensitive) that you created when you set up your account. If you forget your password, clicking the Forgot password link will send a password reset email to the address you provided. If you are unable to log in, please contact your dealership.



What's on the Dashboard



The portal opens to the Dashboard, which you can think of as the system's home page. The contents of each page may change as you navigate through the portal, but the header remains constant throughout your experience.

The blue **Search** box lets you quickly search all content on the portal. Selecting the **User Options** icon will display a drop down menu where you can change your profile and password. A **Map Filter** tool is available above the map. It allows a user to focus the contents of the portal to customers, vehicles and/or recommendation of interest.

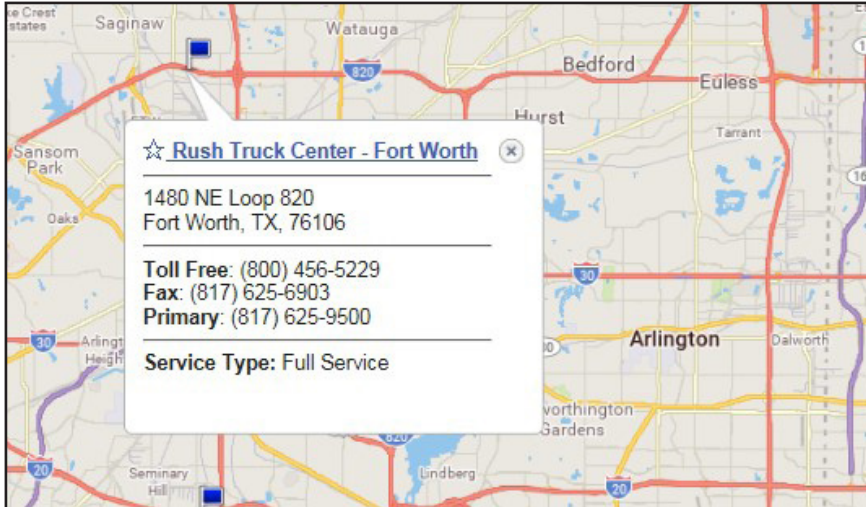
The map has been designed to have a familiar feel to other web-based maps. Use the **Plus and Minus** bar to zoom in and out of the map into the viewing window. You can also grab the map with your mouse and move it. In order to expand the map, press the **Expand** icon.



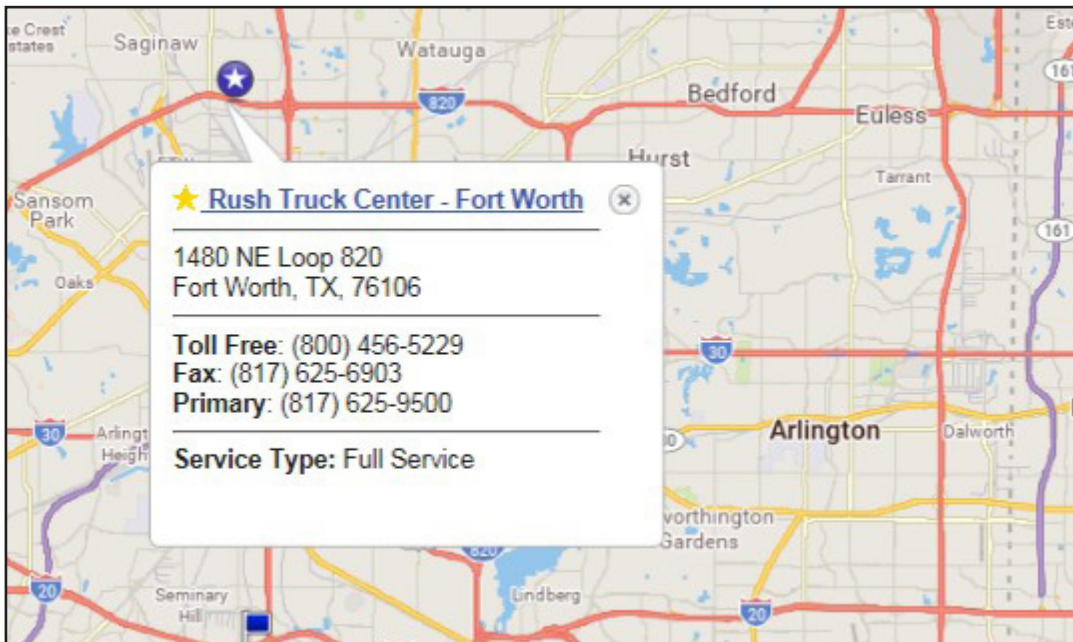
The **Fleet Map** icons are located at the bottom of the map which allow you to manage the fleet map view. The **Building** icon shows PACCAR dealer locations and the **Mountain** icon toggles a satellite layer over the map. Use the **Circling Arrows** icon to refresh the data.

How to Set a Preferred Dealer

Select the **Building** icon from the **Fleet Map's** tool bar to display dealership locations on the fleet map. Dealership locations are indicated by **Flag** icons and Preferred Dealerships are represented by a **Blue Circle** with a **Star**. Select a **Flag** location you wish to set as a Preferred Dealer and a call out box will be displayed. It contains the dealership's contact information and service type.



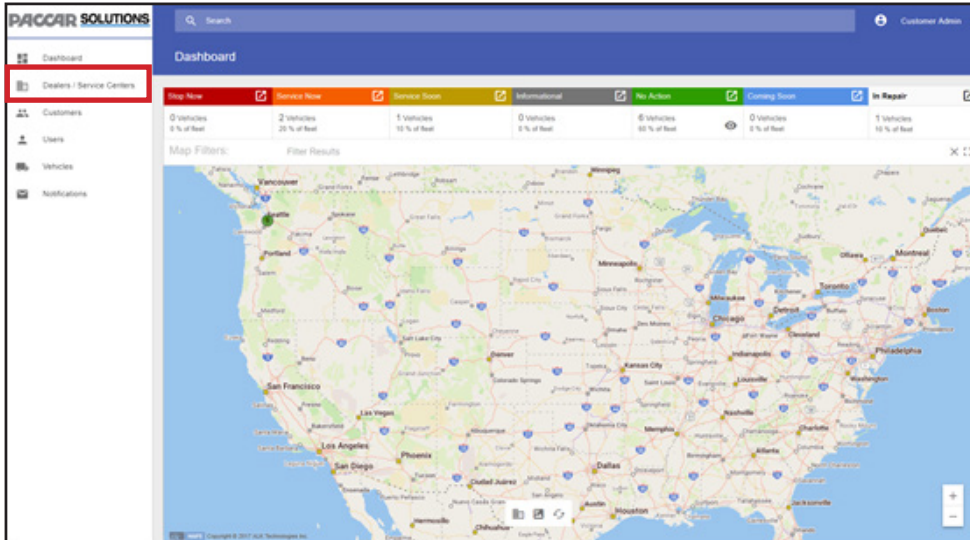
Select the **Star** icon to the left of the dealership name. The **Star** icon will turn yellow when it is selected and the **Flag** icon on the fleet map will change to a **Circle** icon with a **Star** in the middle indicating that it is a preferred dealership location.



Note: Once a dealer location has been given Preferred Dealer status, portal users at that location will have visibility of your fleet. They will also be able to make administrative changes to your account. Please take this into consideration and communicate the change in status with the Dealership.

You can also set a Preferred Dealer by navigating to the Dealer Details of the location you wish to set as a Preferred Dealer

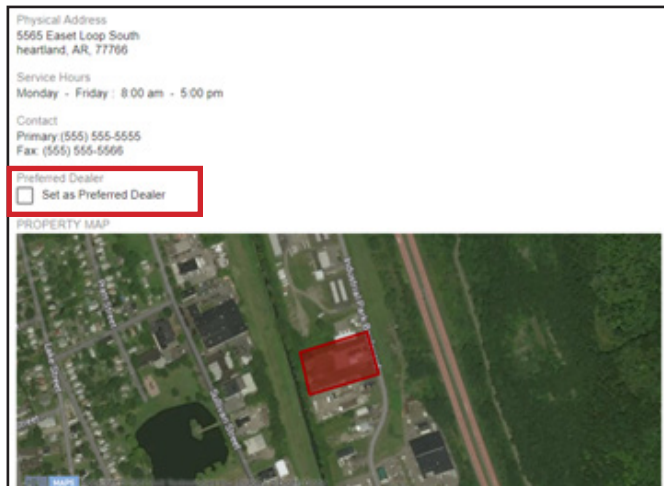
From any page, select **“Dealers/Service Centers”** in the Navigation Menu panel



Select the **“Dealership Hyperlink”**



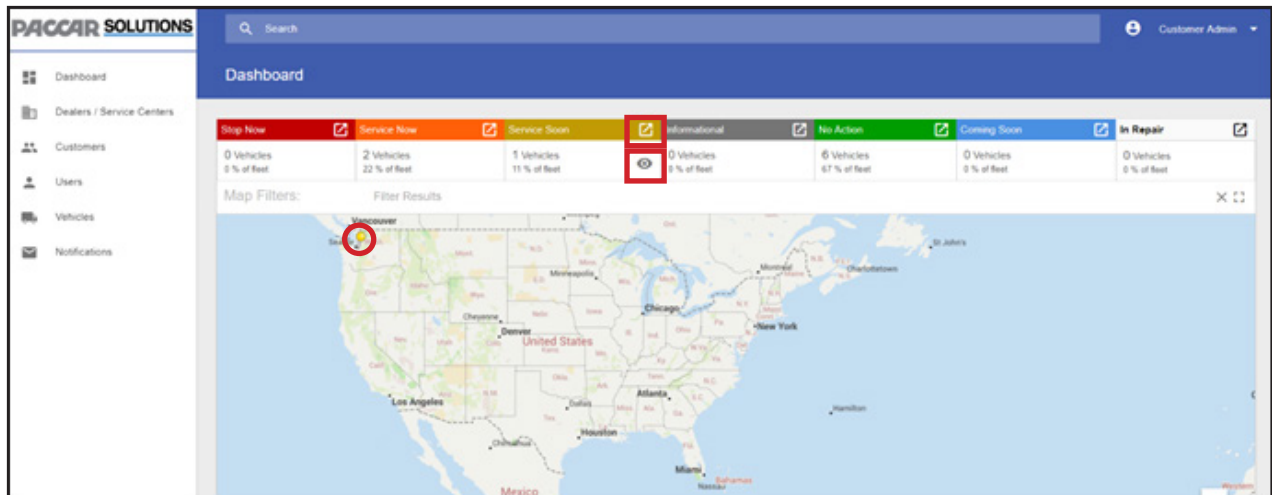
Select the **“Checkbox”** under the Preferred Dealer section



How to Get Vehicle Information

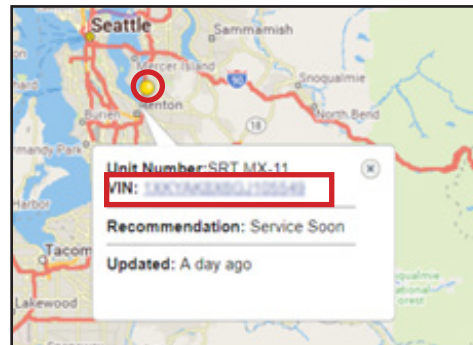
The Fleet Health Tool categorizes your fleet into groups as denoted by “Recommendation”. Each **Recommendation** icon lets the user choose the visibility of chassis in the Fleet Map. The **Eye** icon indicates which pins will appear on the map with the location(s) of the vehicle(s) in that category.

If your vehicles are not showing on the map, please contact your dealership. If your vehicle pin has not moved in over an hour of vehicle run time, there may be a hardware issue on that truck.



Selecting the **Box-and-Arrow** icon for one of the **Recommendation** will display a list (not shown) of only the vehicles in that category.

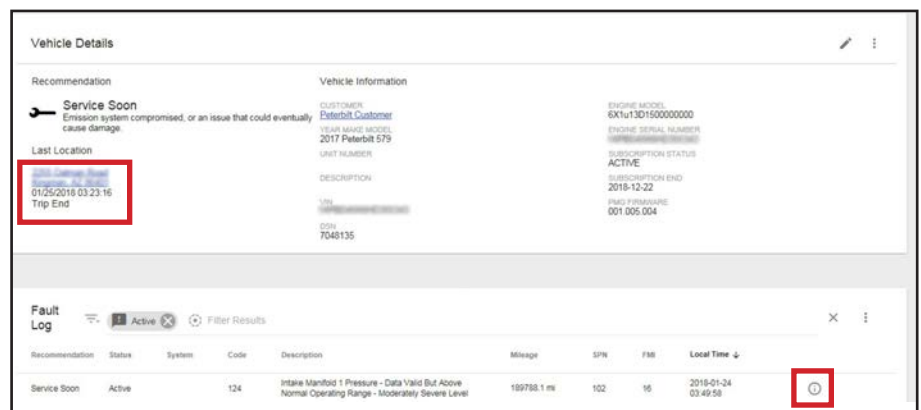
For a more detailed explanation of the vehicle’s health, select a pin on the map. An information box will pop up with the Unit# (if provided), VIN#, Recommendations and Last Update for that vehicle.



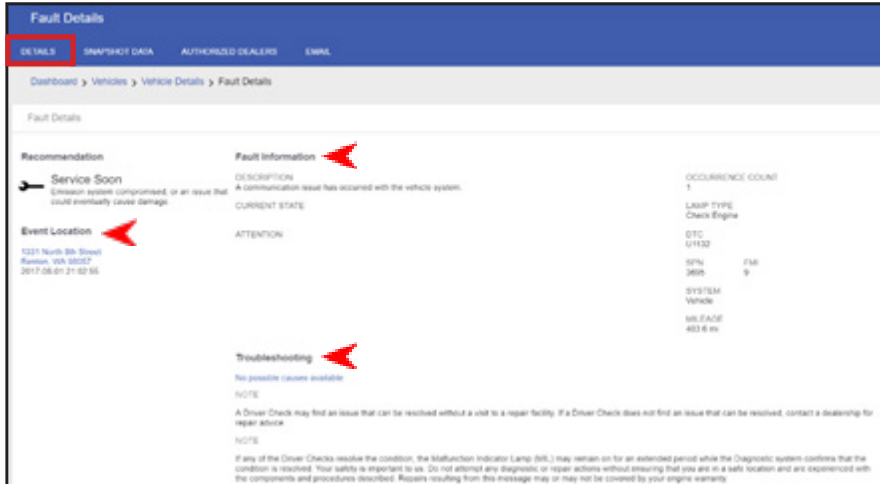
Select the VIN# and the **Recommendation** (Service Now), **Vehicle Information** and **Active Fault Codes** are displayed.

The **Last Location** section includes the address of where the vehicle last updated. If you select the address it pulls up a snapshot of the map and a pin indicating where the vehicle was last located.

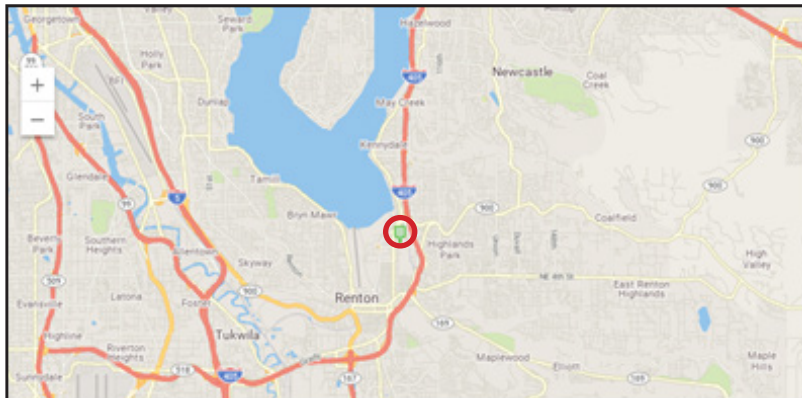
Select the **Information** icon.



The **Details** section expands out to show finer detail about a fault code. Fault Information gives a description of the problem, a fault occurrence count, current state of the engine and any additional information. Troubleshooting Guidance shows the possible causes if available and a check mark will show if there are items the driver can check or perform to possibly avoid a service event.

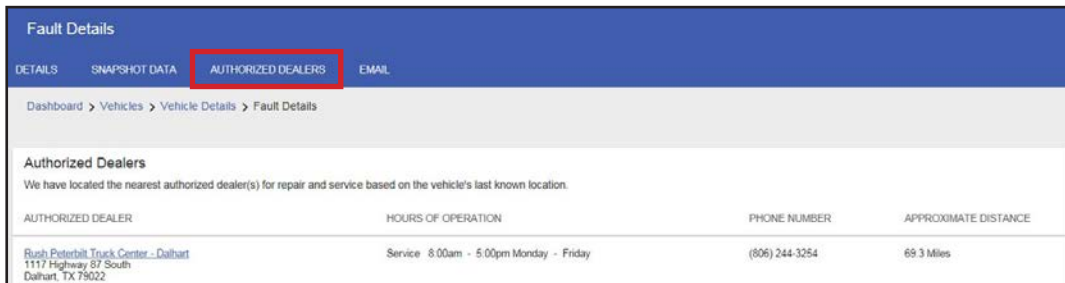


The **Event Location** section includes the address of the where the fault event occurred. If you select the address it pulls up a snapshot of the map and a pin indicating where the vehicle was located at the time the event was reported.



The **Snapshot Data** section displays useful system information about your vehicle. Each event records 70 seconds of data; 60 seconds prior to the event and 10 seconds after.

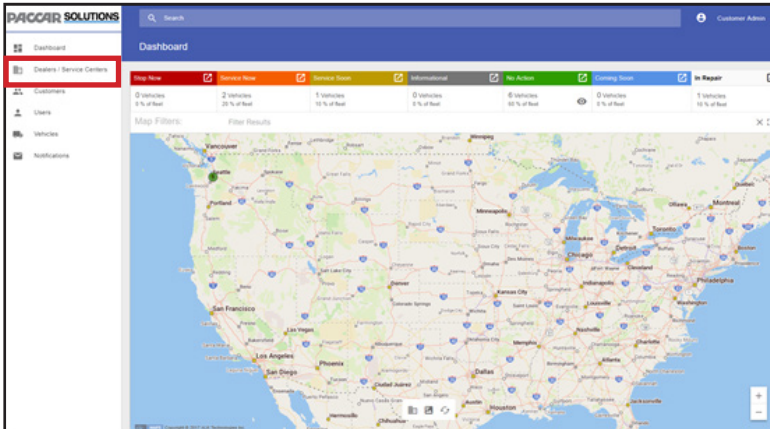
The **Authorized Dealer** for Repair section shows the three nearest authorized dealerships. Contact information, Hours of Operation, Phone Number and Approximate Distance from the vehicle’s location at time of the event are also included.



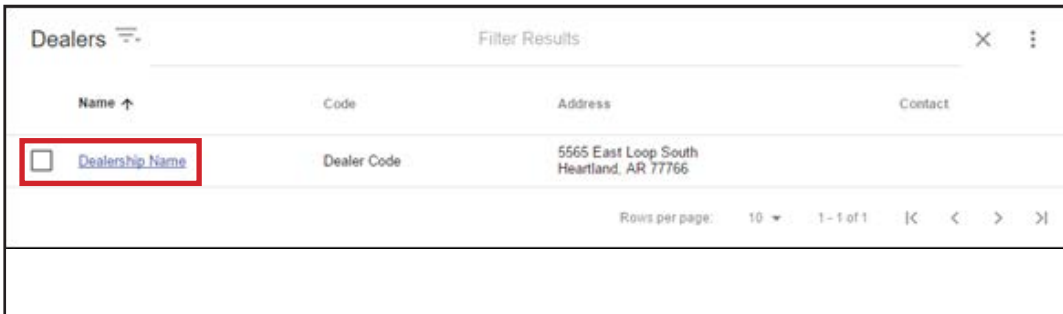
If the fault code generates an email, a record of that email can be found in the **Email** section.

How to Get Dealership Information

From any page, click on **Dealers/Service Centers** in the Navigation Menu panel.



The **Dealers/Service Centers** tab opens and displays an alphabetized list of all Dealerships within the PACCAR Dealer Network. It lists the Name, Dealer Code, Address and Phone/Fax Numbers of the dealerships.



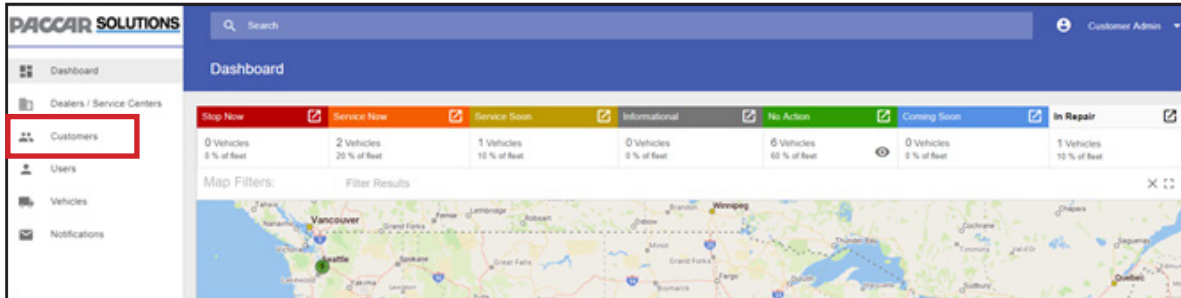
Select the **Dealership Name** and a satellite view map will display with the dealership property highlighted in red. Any vehicles that are on a dealership property will be grouped in the “In Repair” Recommendation of the Fleet Health Tool.



Creating and Managing Vehicle Groups

In the case that your fleet is very large, Vehicle Groups are a powerful tool to quickly filter the vehicles to a more manageable subset. The ability to add and edit Vehicle Groups is limited to the Customer Administrator role.

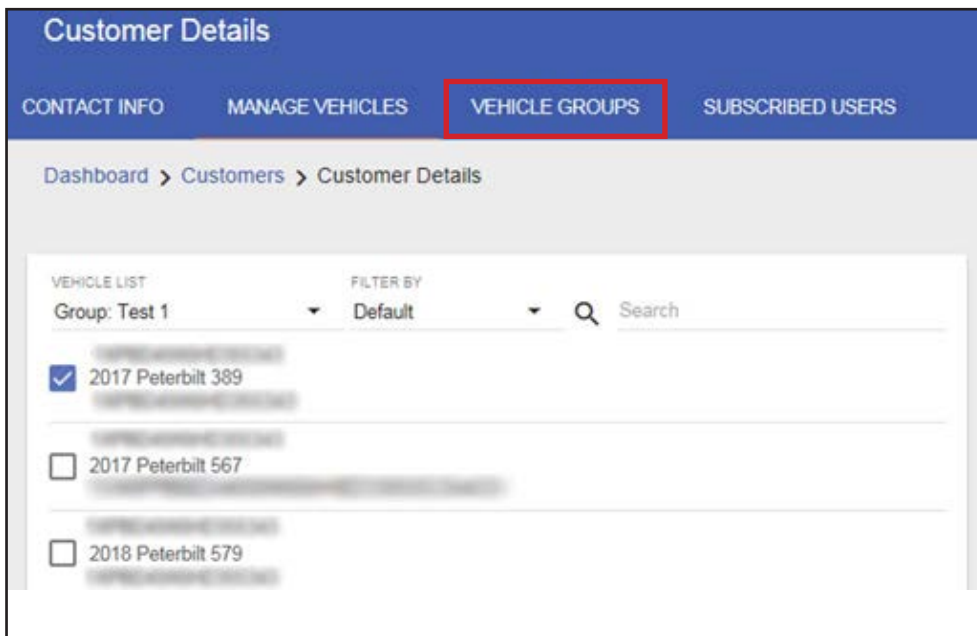
Select the **“Customers”** menu option.



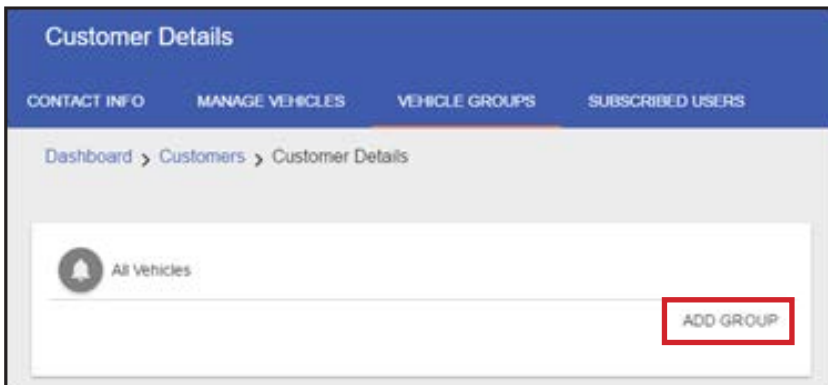
Select the **“Customer Name”**.



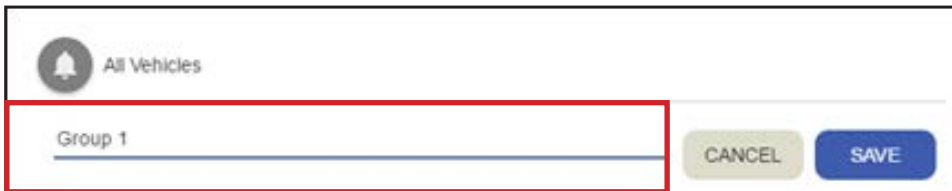
Select the **“Vehicle Groups”** tab.



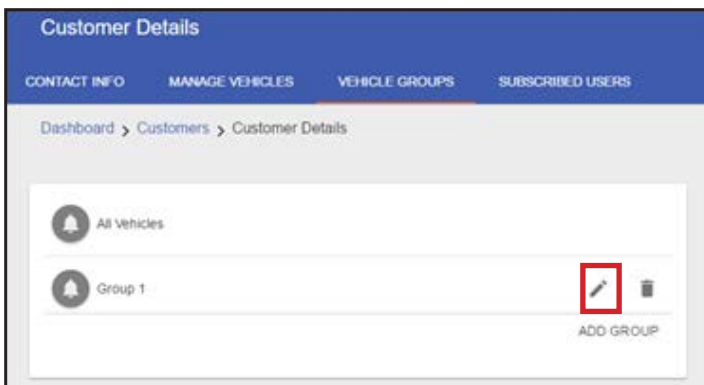
Select **"Add Group"**.



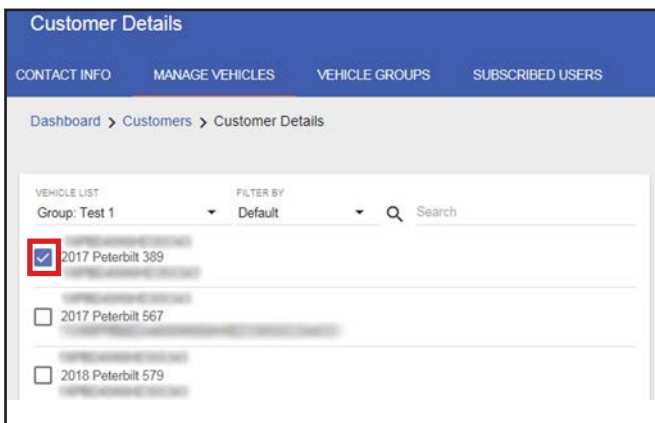
Enter a name for the Vehicle Group you wish to create in the text field and select **"Save"**.



To add or remove trucks into the created group, select the **"Pencil"** icon.



Select the **"Checkbox"** to add or remove the trucks from the group



All changes are saved automatically.

The “**Preferences**” section is optional.

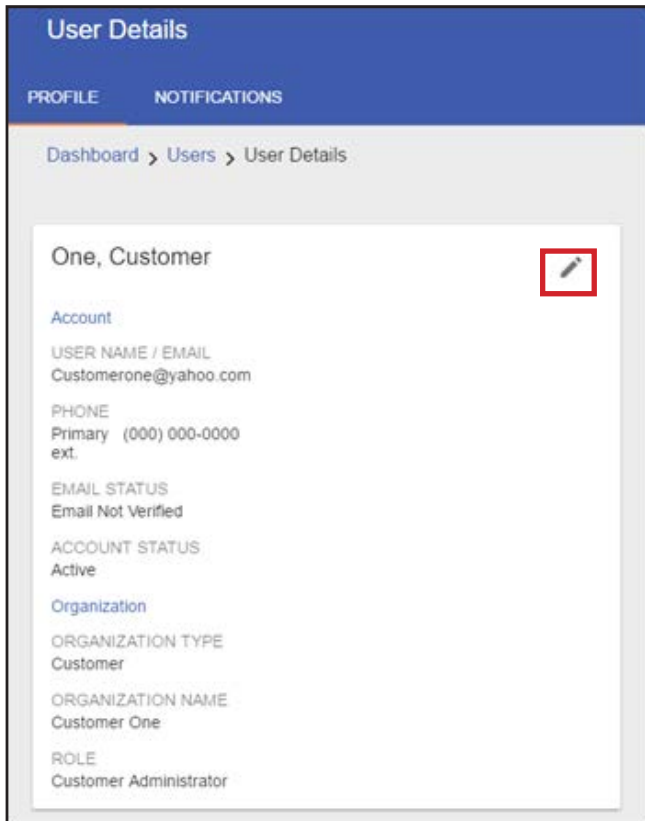
Select the “**User Role**” box for the options to appear.

Select the “**User Role**”.

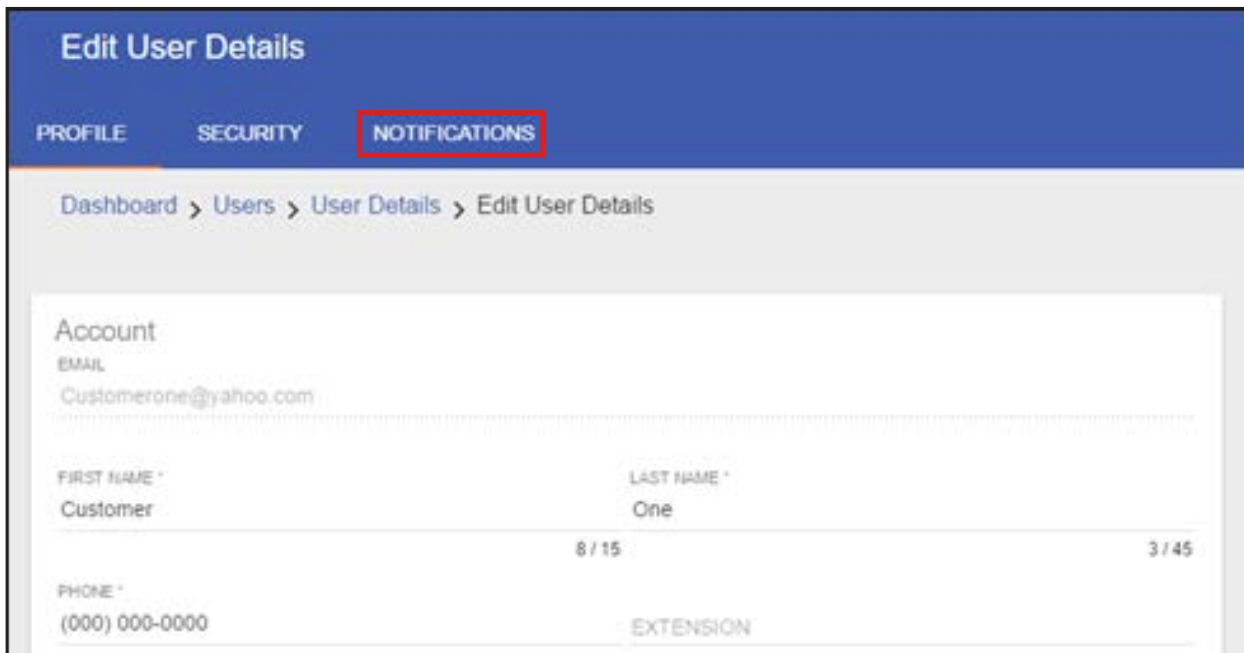
Customer Administrator: Customer Management. This role has read/write access. Its primary role is to manage User Accounts, and Vehicle Groups. It can also subscribe to Vehicle Groups and receive emailed fault notifications.

Customer User: View Only. This role has read only access. It can subscribe to Vehicle Groups and receive emailed fault notifications.

Set the user **"Email Notifications"** by selecting the **"Pencil"** icon.



Select the **"Notifications"** tab.



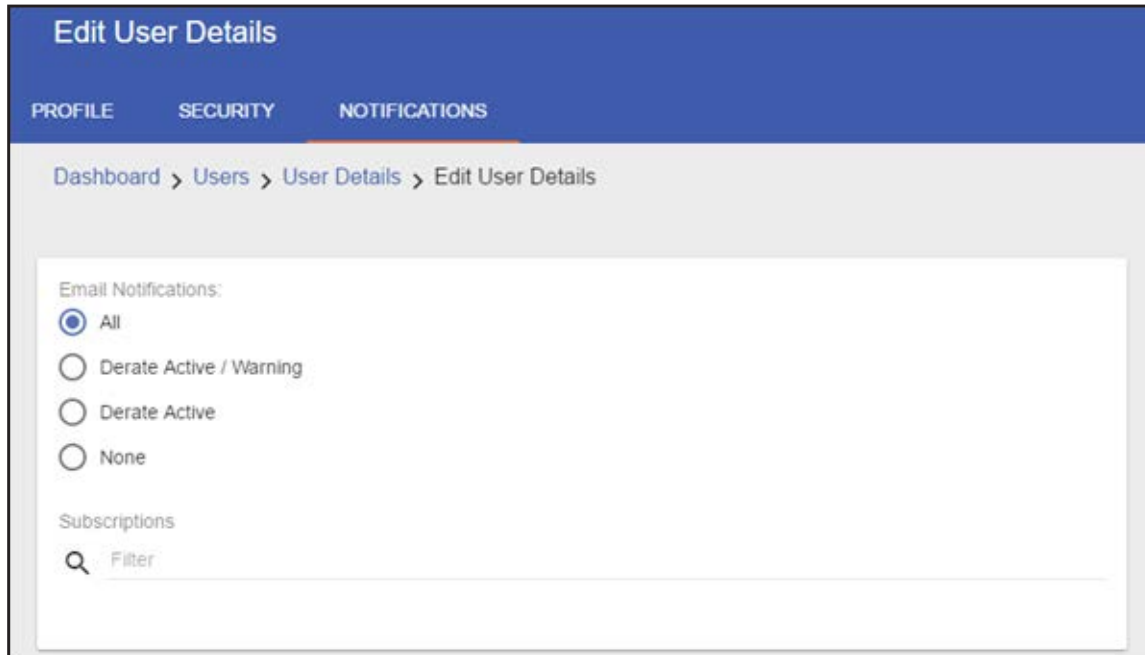
Select the desired setting by choosing the radio button.

All: Email sends every 4 hours with an “Active” fault.

Derate Active/Warning: Email sends every 12 hours with an “Active” fault.

Derate Active: Email sends every 24 hours with an “Active” fault.

None: the user will not receive any fault notification emails.



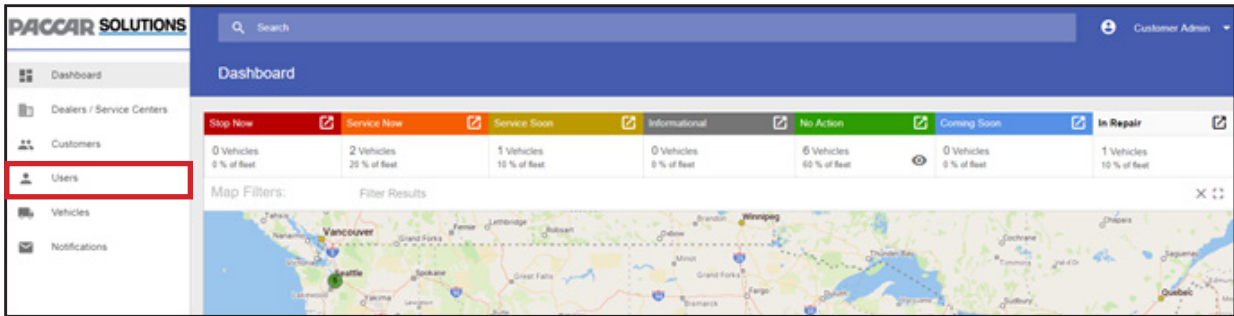
Changes are saved automatically. PACCAR Solutions will send an email to the new user to set-up their password, will expire after 24 hours.

*The password must contain at least 8 characters with at least one uppercase letter, one lowercase letter and one number and/or special character.

How to Edit Users

A Customer User can only edit his/her own profile. Customer Administrators can edit all users including other Administrators.

Navigate to the “**Users**” page from the left Navigation Menu.



Find the account to edit and check the box at the left of their name.

User Name	First Name	Last Name ↑	Organization	Contact	Role	Status
<input type="checkbox"/> customeruser@yahoo.com	Customer	User	Customer	Primary (612) 555-5556	Customer User	Active
<input type="checkbox"/> customeradmin@yahoo.com	Customer	Admin	Customer	Primary (425) 555-5550	Customer Administrator	Active
<input type="checkbox"/> customeradmin2@yahoo.com	Customer	Admin2	Customer	Primary (844) 888-5555	Customer Administrator	Active
<input type="checkbox"/> customeradmin3@yahoo.com	Customer	Admin3	Customer	Primary (425) 555-5552	Customer Administrator	Active

Rows per page: 10 | 1 - 4 of 4

Select the “**Pencil**” icon in the blue ribbon above the user list.

User Name	First Name	Last Name ↑	Organization	Contact	Role	Status
<input checked="" type="checkbox"/> customeruser@yahoo.com	Customer	User	Customer	Primary (612) 555-5556	Customer User	Active
<input type="checkbox"/> customeradmin@yahoo.com	Customer	Admin	Customer	Primary (425) 555-5550	Customer Administrator	Active
<input type="checkbox"/> customeradmin2@yahoo.com	Customer	Admin2	Customer	Primary (844) 888-5555	Customer Administrator	Active
<input type="checkbox"/> customeradmin3@yahoo.com	Customer	Admin3	Customer	Primary (425) 555-5552	Customer Administrator	Active

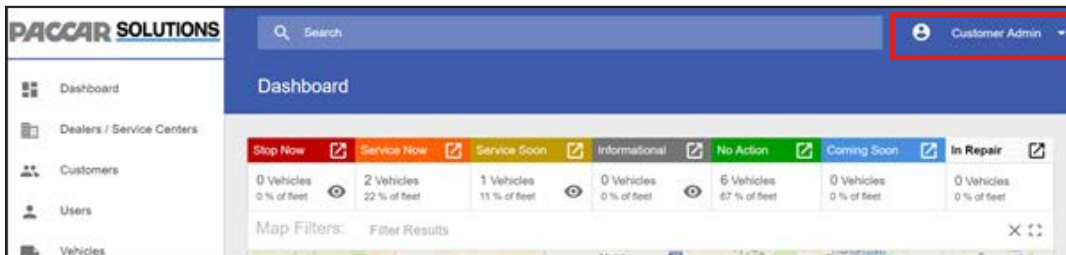
Rows per page: 10 | 1 - 4 of 4

Make the desired modifications and “**Save**”.

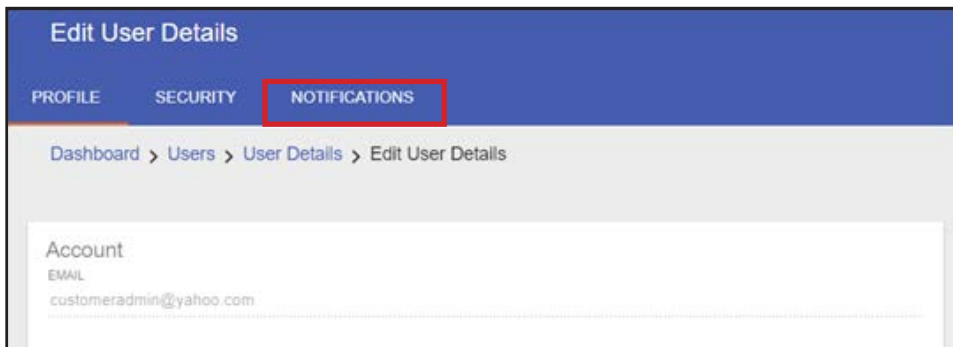
How to Subscribe to Email Notifications

A Customer User can only subscribe to existing Vehicle Groups. Customer Administrators can subscribe to, create, and edit Vehicle Groups.

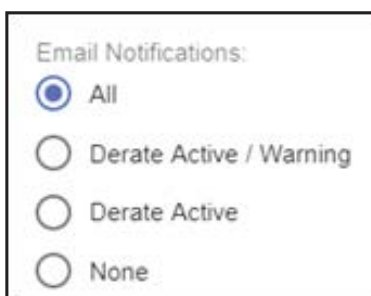
Select the **“User Options”** icon and select **“User Profile”**.



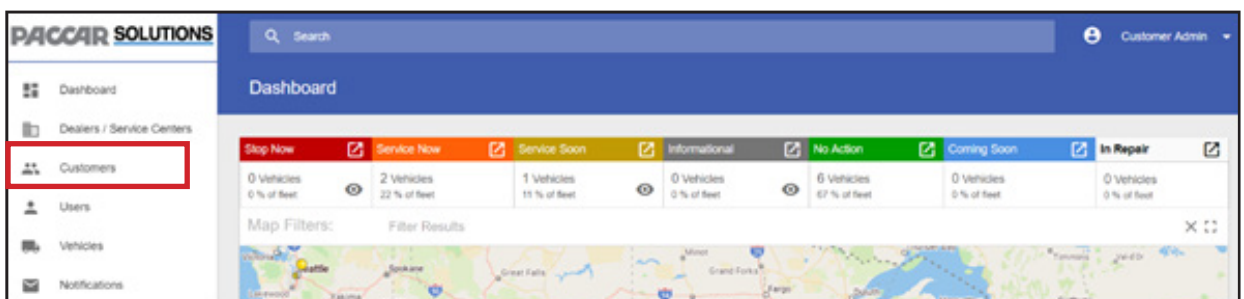
Select the **“Notifications”** tab.



Choose an Email Notifications option greater than “None”. This part of the process lets the user determine the severity of emails that will be transmitted. This can also be thought of as a “filter” to control email volume. Changes are automatically saved. *Reference page 15 for detailed explanation of Email Notification settings.



Select **“Customers”** on the **“Navigation Menu”**.



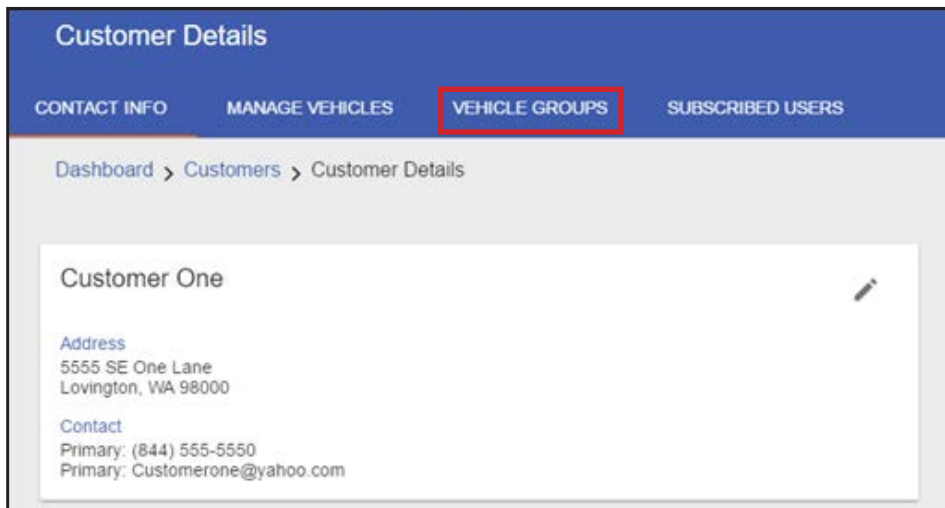
Select your company.



Name ↑	Address	Phone	Email
<input type="checkbox"/> Customer One	5555 SE One Lane Lovington, WA 98000	Primary (844) 555-5550	customerone@yahoo.com

Rows per page: 10 | 1 - 1 of 1


Select the “**Vehicle Groups**” tab.



Customer Details

CONTACT INFO MANAGE VEHICLES **VEHICLE GROUPS** SUBSCRIBED USERS

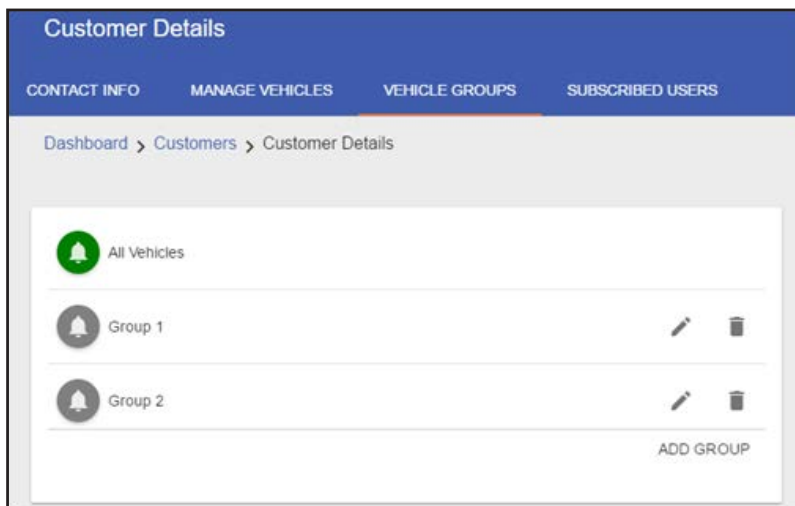
Dashboard > Customers > Customer Details

Customer One 

Address
5555 SE One Lane
Lovington, WA 98000

Contact
Primary: (844) 555-5550
Primary: Customerone@yahoo.com








Subscribe to the desired **Vehicle Groups** by selecting the **Bell** icon. The **Bell** icon will turn green once you are subscribed. Subscribing to “All” allows the user to receive emails from all vehicles in the fleet. Subscribing to a custom **Vehicle Group** limits email to only the chassis defined in that group.



Customer Details

CONTACT INFO MANAGE VEHICLES **VEHICLE GROUPS** SUBSCRIBED USERS

Dashboard > Customers > Customer Details

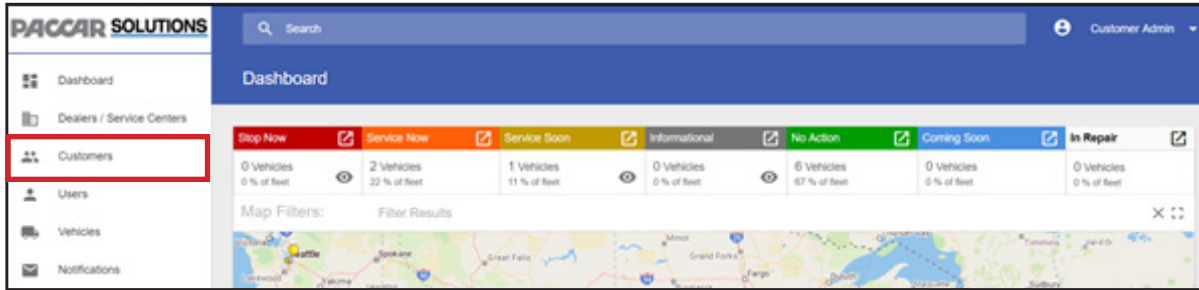
-  All Vehicles
-  Group 1  
-  Group 2  

ADD GROUP

How to Subscribe Other Users to Email Notifications

Customer Administration can subscribe to, create, and edit Vehicle Groups.

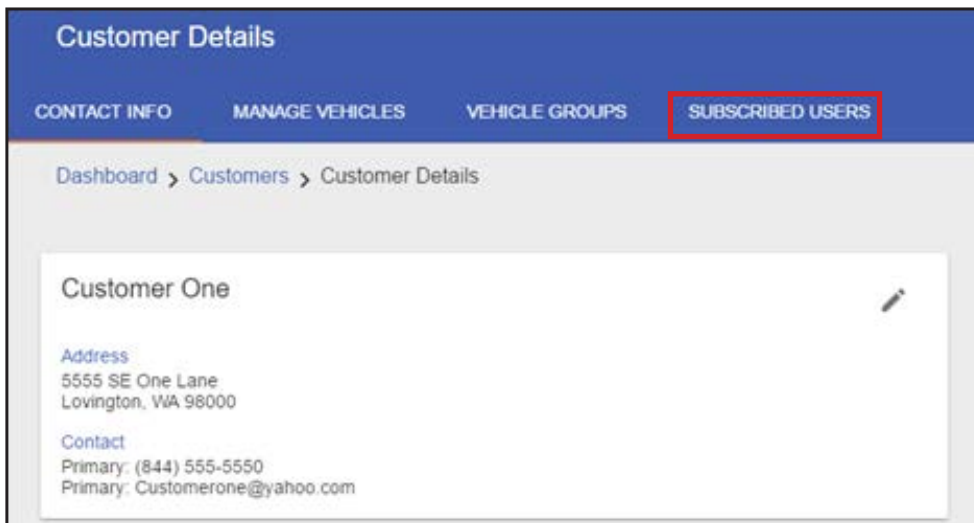
Select **“Customers”** on the **“Navigation Menu”**.



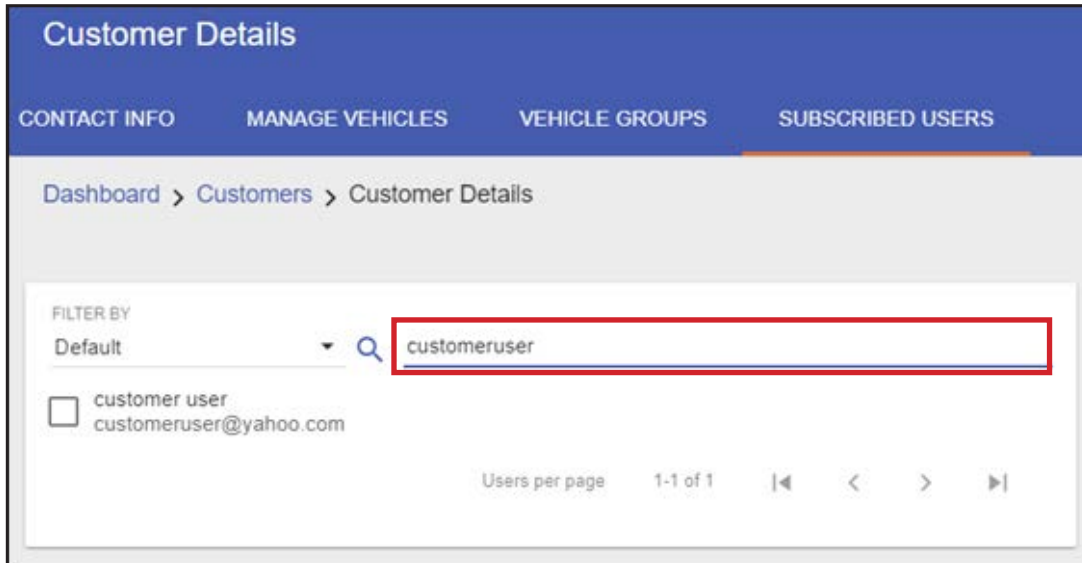
Select your company.



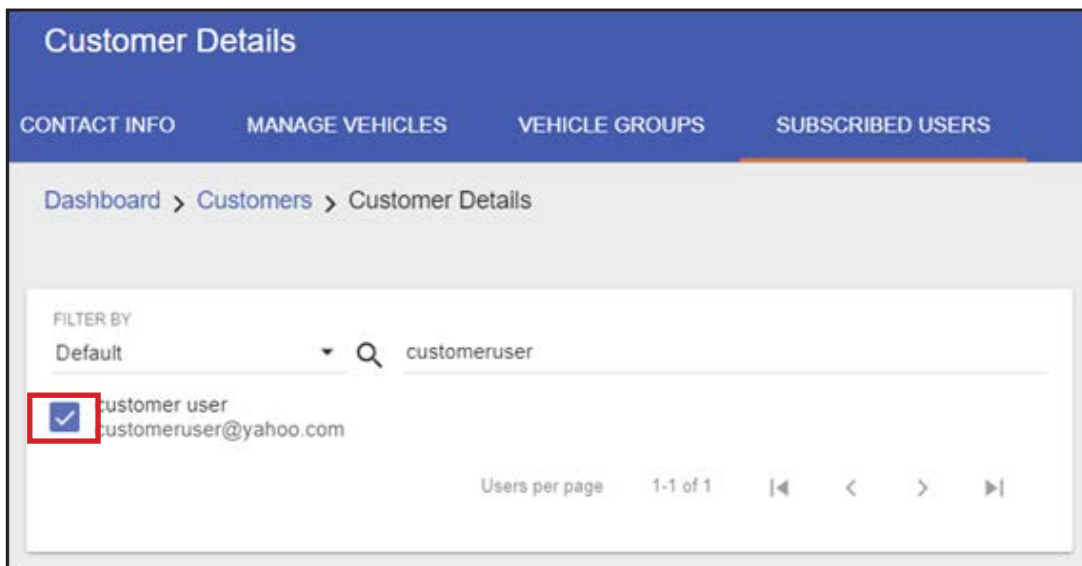
Select the **“Subscribed Users”** tab.



Type the user's email address you would like to subscribe to receive fault notifications for in the search bar.

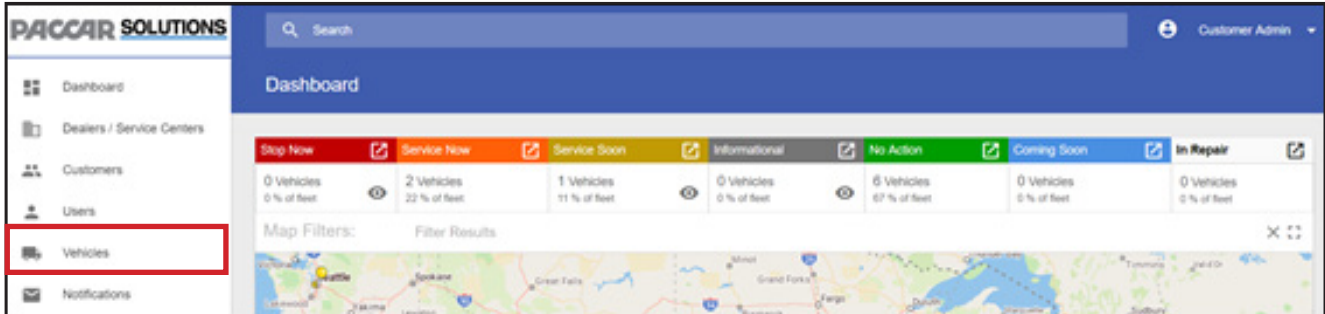


Select the check box next to the user you wish to subscribe



How to Edit Vehicles

Navigate to the **“Vehicles”** page from the left **“Navigation Menu”**.



Select the **“Three Dot”** icon next to the vehicle you wish to edit.

<input type="checkbox"/>	Customer	Unit Number	Recommendation	Year	Make	Model	VIN ↑	DSN	Subscription End	Subscription Status	
<input type="checkbox"/>	Peterbilt Customer	[REDACTED]	No Action	2017	Peterbilt	579	[REDACTED]	7047343	2019-01-23	ACTIVE	⋮
<input type="checkbox"/>	Peterbilt Customer		No Action	2018	Peterbilt	579	[REDACTED]	7070921	2020-01-12	ACTIVE	⋮
<input type="checkbox"/>	Peterbilt Customer		No Action	2017	Peterbilt	579	[REDACTED]	7055234	2020-01-12	ACTIVE	⋮

Select the **“Edit Vehicle”** Option.



You can edit the **“Unit Number”** and **“Description”** fields.

VIN
[REDACTED]

YEAR MAKE MODEL
2017 Peterbilt 579

DSN
7055234

UNIT NUMBER

DESCRIPTION

SUBSCRIPTION START
2018-01-11

SUBSCRIPTION END
2020-01-12

LICENSE STATUS
ACTIVE

PRIMARY DEALER
Golden State Peterbilt - Fresno

“Save” your changes

Frequently Asked Questions

Can I delete a user from PACCAR Solutions?

A User cannot be deleted. A user can be edited and made inactive by unchecking the “Active” box underneath the email notifications section and saving the changes.

How do I edit truck information?

Vehicle information is edited by using the following process. From the left hand menu select the “Vehicles” menu. Select the stacked three-dot icon next to the vehicle in the list and then select “Edit Vehicle”.

Why am I getting so many notifications?

If a user is set up to receive All, Derate Active/Warning, or Derate Active notifications, that user will receive the respective type of notification that is set for all vehicles in the fleet. You can also create Vehicle Groups to limit the number of vehicles you want to receive notifications for.

Why am I not getting more notifications?

A user may choose to only receive Derate Active/Warning and Derate Active notifications. If a user is not receiving the notifications they expect to see, confirm that the user is set up to receive the proper notifications or all notifications.

Who should get notifications?

Anyone in the fleet or at your preferred dealership who would want to know if a truck has a critical fault generated should be set up to receive notifications.

How can email notification settings be changed?

To change the email notification settings for a user, you will need to edit the user in the PACCAR Solutions Portal. The email notification settings are found in the “Notifications” tab of the user information screen.

How are forgotten passwords handled?

If you forget your password, select the Forgot password link on the PACCAR Solutions login page, and the system will send a password reset email to the address you provided.

Why are trucks not visible on the map?

Be sure that the visibility filters have been turned on. If that doesn't solve the issue, contact the selling dealer for that vehicle for further assistance.