WebBAT 3.5 User Manual

September 8, 2016

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Section 1 BatRF Webbat System Introduction

WebBAT is an online web application which automates the collection of BatRF Airbat (TPMS) and TracBat (Hubodometer) sensor readings and provides various reports to support fleet management. WebBAT organizes and displays AirBAT and TracBAT sensor information in actionable formats to identify fleet conditions. Information automatically or semi-automatically flows into WebBAT from sensors installed on your vehicles via one of Stemco's three readers. RF transmissions from the sensors, known as "readings", can be acquired via an in cab Tractor Interface Module connected to a PeopleNET g3 on board computer or a BatRF Gate Reader, or with a portable BatRF HandBAT handheld reader. Fleet information can be monitored in real-time or organized into easy to read reports that can be quickly produced at the click of a mouse. WebBAT also supports various exports that be configured to transfer fleet data to other computer systems within your business.

WebBAT enables you to easily assign sensors to vehicles in order to identify which vehicles require attention. After sensors have been assigned to a vehicle or unit, the sensor information is then available for viewing by sensor location on each vehicle.

WebBAT provides the right information at the right time to the right users from any location, thereby delivering measurable improvements through labor savings, maintenance efficiency, and expense reductions.

This manual is organized in the order a new user would normally progress with the Webbat system. A more experienced user can use the table to contents to quickly lookup topics of interest.

Key Terms

Tags: aka Sensors, which are used to measure Distance/Mileage (TracBAT) or Tire Pressure (AirBAT). AirBATs come in the steer, single or dual hose variety. Tags are also referred to as sensors.

Units: aka vehicles or trailers, which sensors can be attached to. Unit types include, but are not limited to Tractors, Trailers, Dollies, Dry Vans, etc.

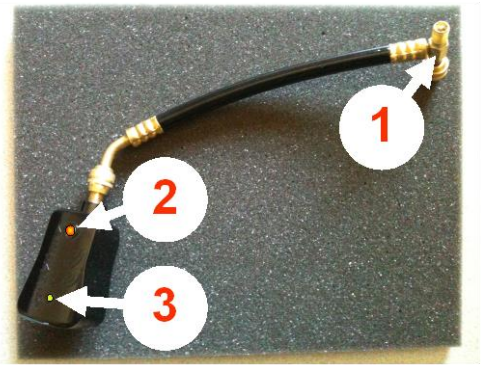
ID: Serial Number that is located on each sensor. They are all unique.

Reading: Each transmission of information sent to WebBAT by each individual sensor at a distinct point in time. Readings can be monitored in real-time, or as a historical record.

Report: A way to view a variety of pertinent information regarding the fleet. Reports can be customized based on a variety of filter data, as well as viewed dynamically as a web page or saved as a local file for later use.

1A) Sensor - AirBAT/RF® - Tire Pressure Monitor (TPM)

The AirBAT tire pressure monitoring sensor with visual LED display provides quick, on-tire pressure identification. When mounted on the wheel end, the AirBAT continually monitors tire pressures with visual alerts to indicate under-inflated tires.

<table>
<tr><td colspan="2"> 
</td><td>SST AirBAT

1) Fill Port – Provides easy access fill point for air chuck when filling the tire.
2) Visual Alert – Flashing red LED indicates under-inflated tires.
3) Health Indicator – Flashing (1/4 second every 5 seconds) green LED indicates AirBAT is operational.</td></tr>
<tr><td> 
</td><td> 
</td><td>1) Visual Alert – Flashing red LED indicates under-inflated tires
2) Fill Port(s) - Provides easy access fill point for air chuck when filling the tire.</td></tr>
<tr><td>Single-Tire AirBAT</td><td>Dual-Tire AirBAT</td><td></td></tr>
</table>

1B) Sensor - TracBAT/RF – Electronic Hubodometer

Electronic mileage sensor with trip and life mileage feature: TracBAT's mileage counting is accurate within +/- 2%. TracBAT is often used to schedule maintenance by mileage activity rather than time.

<table>
<tr><td> 
</td><td>1. Visual Display of Miles traveled.</td></tr>
</table>

1C) Reader – BatRF Tractor Interface Module

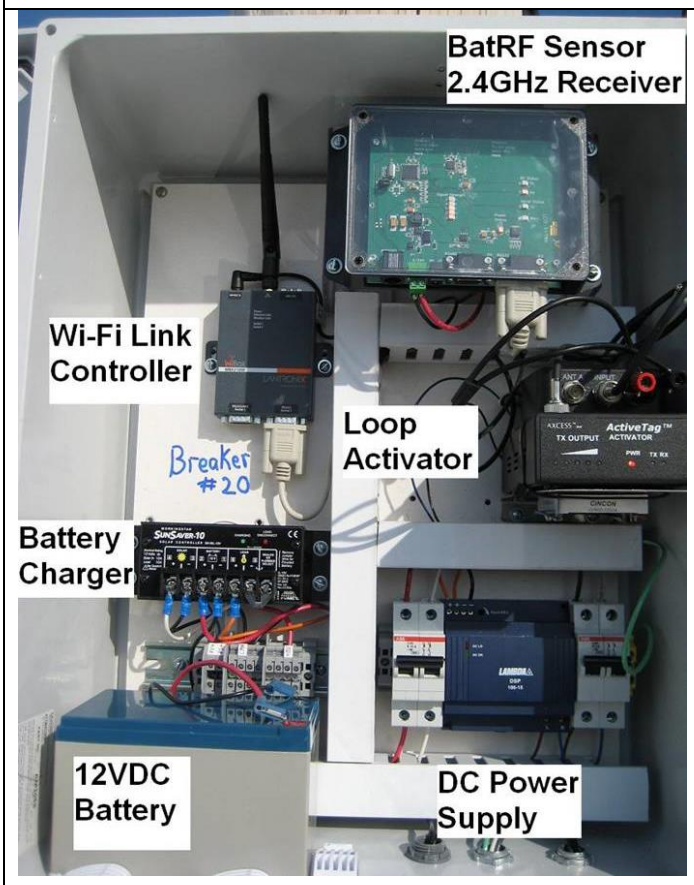
The AirBAT Tractor Interface Module (TIM) is a state of the art wireless receiver designed to keep drivers and maintenance personnel informed of tire issues in order to increase safety and reduce costs. The TIM automatically receives and analyzes tire pressure data from AirBAT sensors and issue alerts when a low tire condition is detected. The TIM notifies the driver via the PeopleNet driver terminal and sends both SMS text and email alerts to the designated recipients with date, time and location information. The TIM interfaces directly with the PeopleNet g3 onboard computer system in order to pass information to the driver terminal and to a PeopleNet network server. Data is then retrieved and acted upon by the BatRF WebBAT application, which manages the alerts and aggregates the data for a given company ID.

The TIM is designed to be easily installed and configured. Once the system is installed and set up, you will begin to experience the benefits of real time tire pressure alert

Once you begin rolling down the road, you will begin to see the benefits of having real time tire pressure alerts via the driver terminal, email or even SMS text messages.

1D) Reader – BatRF Gate Reader

Automatically collects sensor data at selected locations (entry or exit, maintenance facility or fuel island), and downloads to WebBAT information manager for real-time monitoring and analysis.



1E) Reader – BatRF HandBAT Handheld Reader/Download Pod

The HandBat is a handheld reader primarily intended to wirelessly read BatRF TPMS and Mileage sensors and capture fluid (i.e. fuel, oil and coolant) usage information. The information gathered can be viewed on the Handbat (see previous reads) or the data can be downloaded to the WebBAT information manager through a PC and BatRF download pod.

When a **HandBAT** is first picked up the display will normally be turned off. To turn the unit on press any key. If the display contrast appears too dark, or too light, press the **MAIN** function key and then the right or left arrow keys to change the contrast. The right arrow key each time it is pressed will darken the display. The left arrow key each time it is pressed will lighten the display.

1. **Main Menu** – Pressing this key will take you back to the main menu
2. **Help** – Pressing this key will take you to additional information relevant to current screen function and navigation
3. **Back** – Navigates to previous screen
4. **Up Arrow** – Navigates options on individual screens and increases values in numerical fields
5. **Right Arrow** – Navigates to new screens and switches from field names to field values; increases display contrast (Main Menu Only)
6. **Left Arrow** - Navigates to new screens and switches from field names to field values; decreases display contrast (Main Menu Only)
7. **Down Arrow** - Navigates options on individual screens and decreases values in numerical fields
8. **Enter** – Selects highlighted option on Display
9. **Battery status Indicator** – Energy state of internal battery.

Download Pod

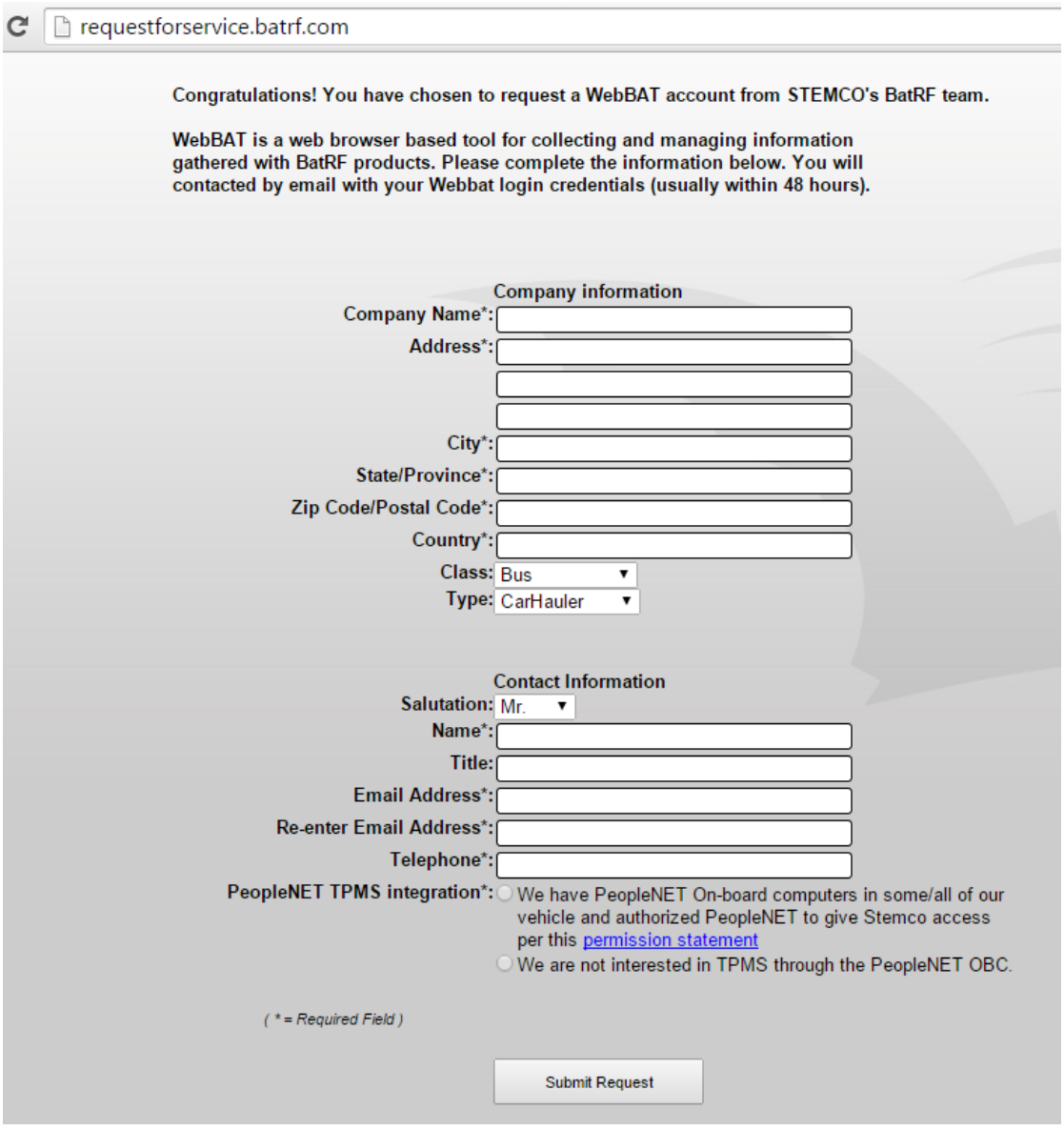
The Active Download Pod plugs into the USB port of a PC and continually monitors the area for signals from an Active HandBAT.

1. **Download Pod –** USB plug

Section 2 Webbat Account Request

To get started a Webbat account must be requested from Stemco. Go to this website

http://requestforservice.batrf.com/



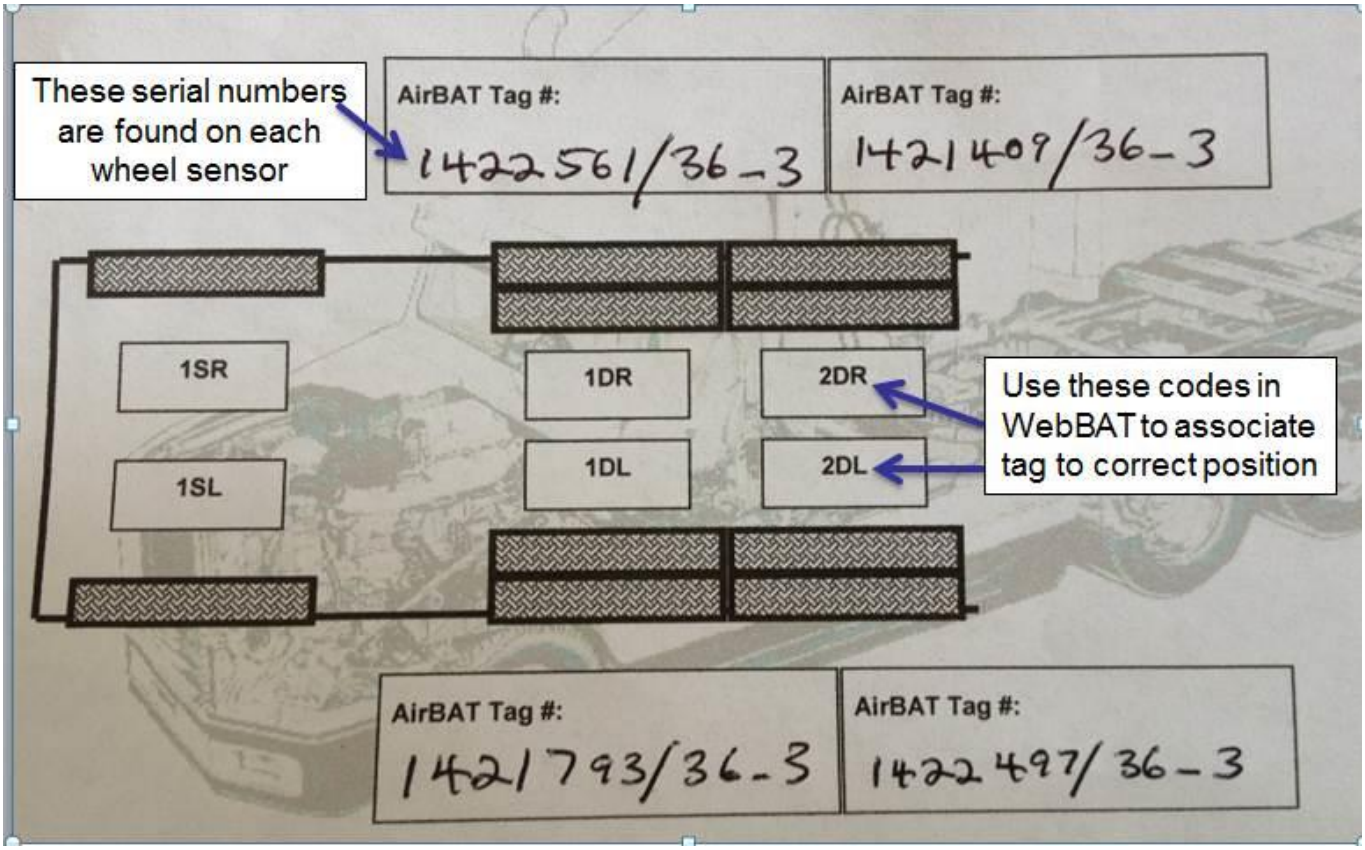
Fill out the requested information and then click the “Submit Request” button.

Stemco will send you an email (normally within two business days) with your login credentials for your WebBAT account.

Section 3 Install and Record Sensor Serial Number

Record the serial number of the sensor, vehicle number, vehicle type and wheel position on the Unit-Tag assignment worksheet shown below and then install the sensor according to the instructions included in the box. Save this worksheet and use it to enter information into Webbat (see section 6 and 7 of this manual).

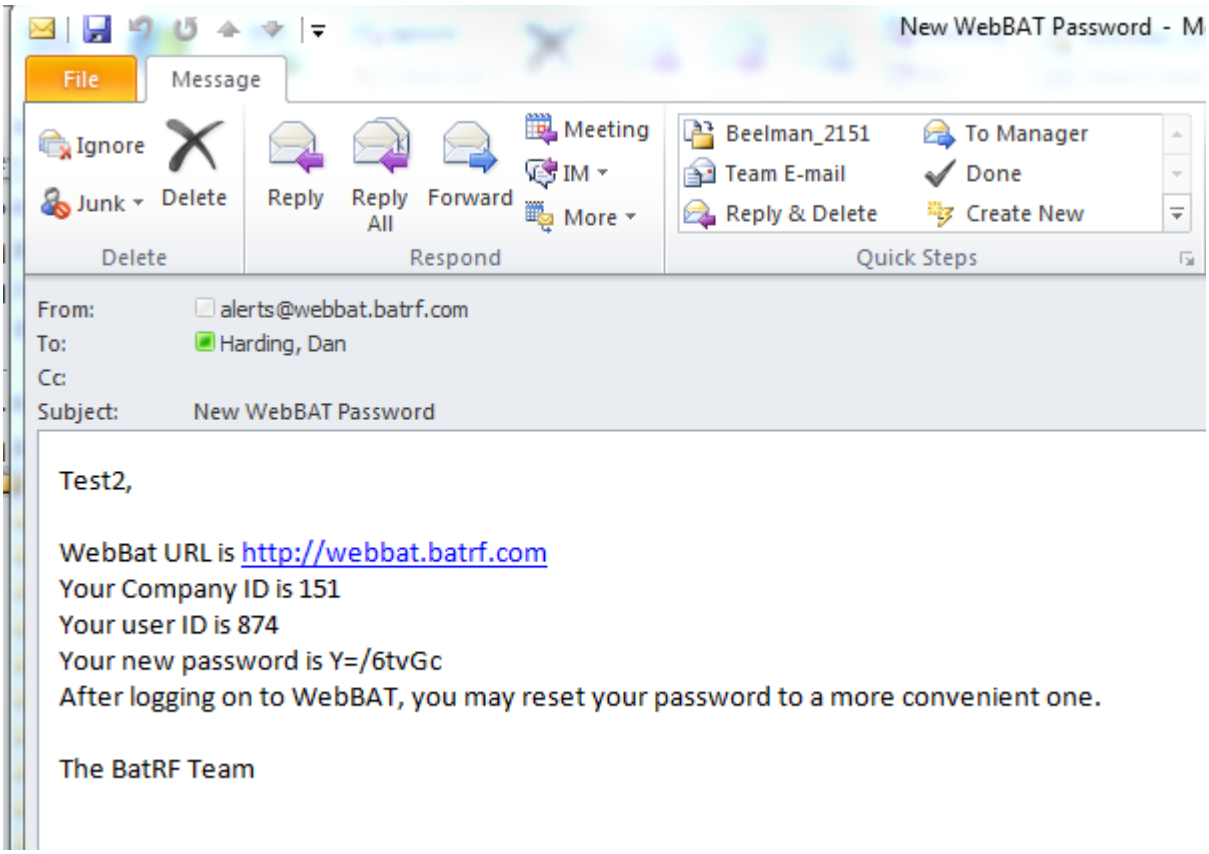
Unit Tag Assignment Worksheet



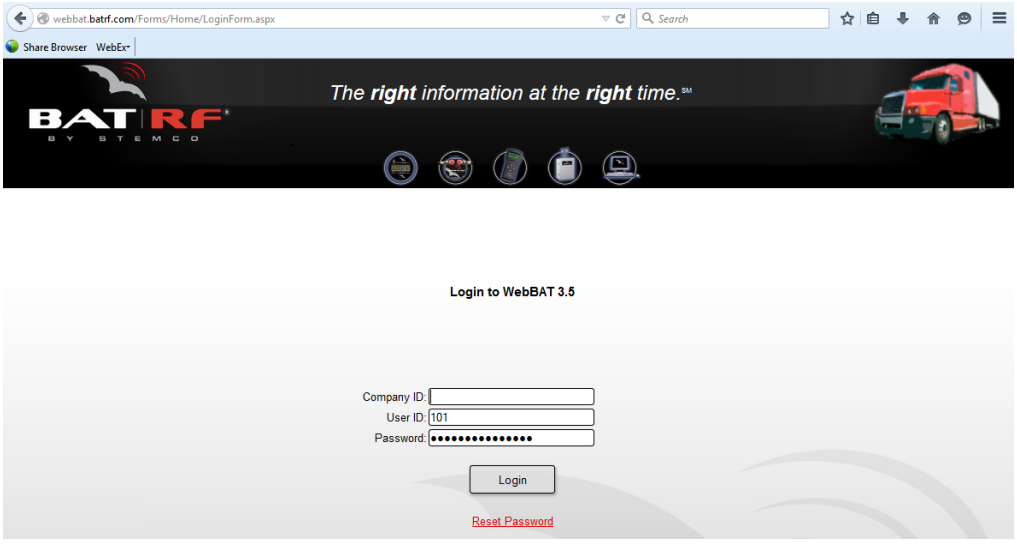
Form available as downloadable .pdf file at http://webbat.batrf.com/Forms/Home/Documentation.aspx

Section 4 Webbat Login

Normally within two business days of requesting an account you will receive an email like the example below from alerts@webbat.batrf.com which contains your login credentials and a link to the login webpage.



Using a web browser go to http://webbat.batrf.com/ and Login using the credentials provided in the email.



Section 5 Entry of Sensor Serial Number(SN) in Webbat

5A) Automatic SN Entry via Tractor Interface Module

Sensors are automatically entered in Webbat as the Tractor Interface Module (TIM) reports them. If freshly installed the tractor must be driven a few miles to bind to the sensors; after bound the TIM will report to Webbat within a few hours (if desired sooner unplug the TIM, wait until the light is solid red, faint red or off and then plug back in; the sensors should be in Webbat within 5 minutes).

5B) Automatic SN Entry via Gate Reader

Sensors are automatically entered into Webbat when the truck drives through the gate past the gate reader.

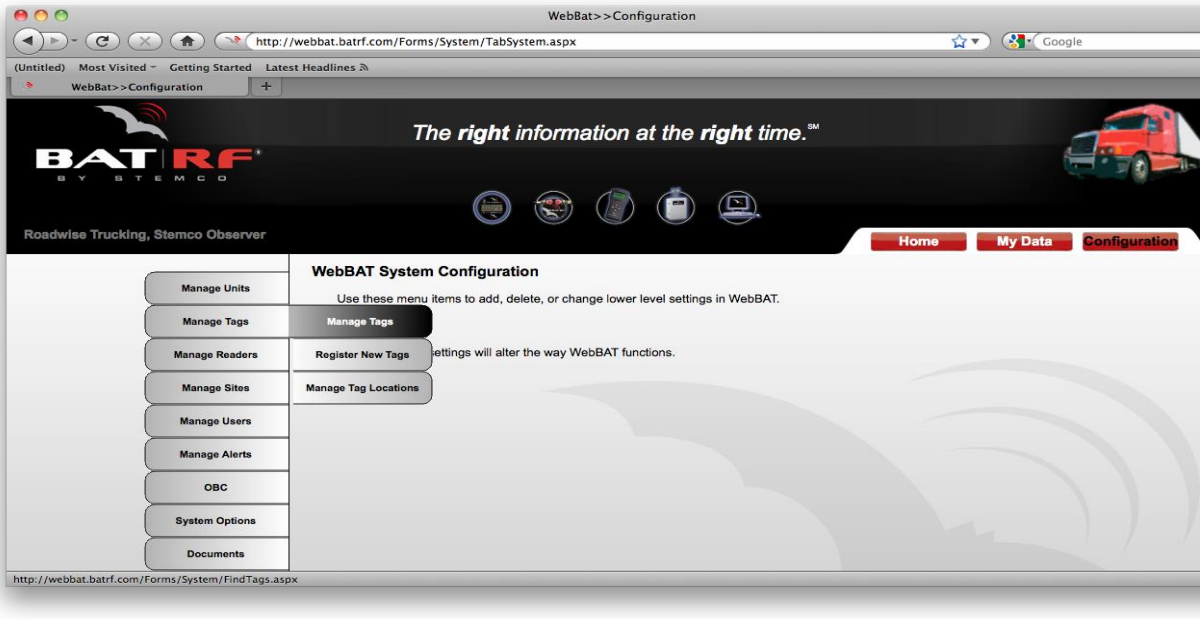
5C) Semi-Automated SN Entry via Handheld Reader/Download pod

Sensors are semi-automatically entered into Webbat when uploaded from a Handbat though the USB download pod.

5D) Manual SN Entry – Manage Tags

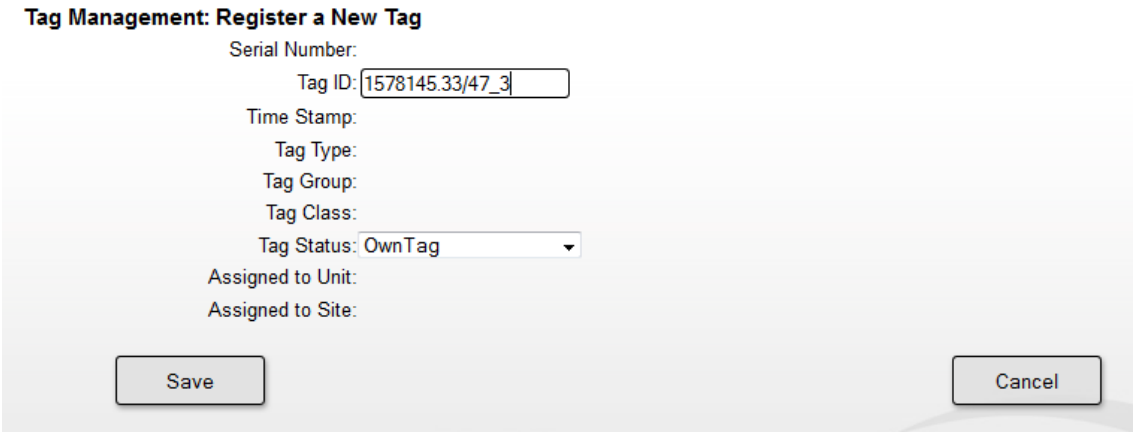
Though not recommended, sensors can be entered manually by following these steps:

1) Click on the **Configuration** Tab on the top-right of the screen
2) Hover over the **Manage Tags** tab on the left of the screen, and click **Register Tags**.



3) To enter a sensor SN in Webbat use the serial number on the sensor label and add in the tag type exactly as shown in the example below:
   Airbat SN Label 1578145/47_3 where tag type = .33
   Enter into Tag ID box in Webbat 1578145.33/47_3 (tag type inserted right before "/")
   Tag Types are .33 = SST Airbat and Single Airbat TPMS Sensor
   .34 = Dual Airbat TPMS Sensor
   .36 = TracBat Mileage Sensor

4) Select the Tag Status from the drop-down menu if known.
5) Click the **Save** button.

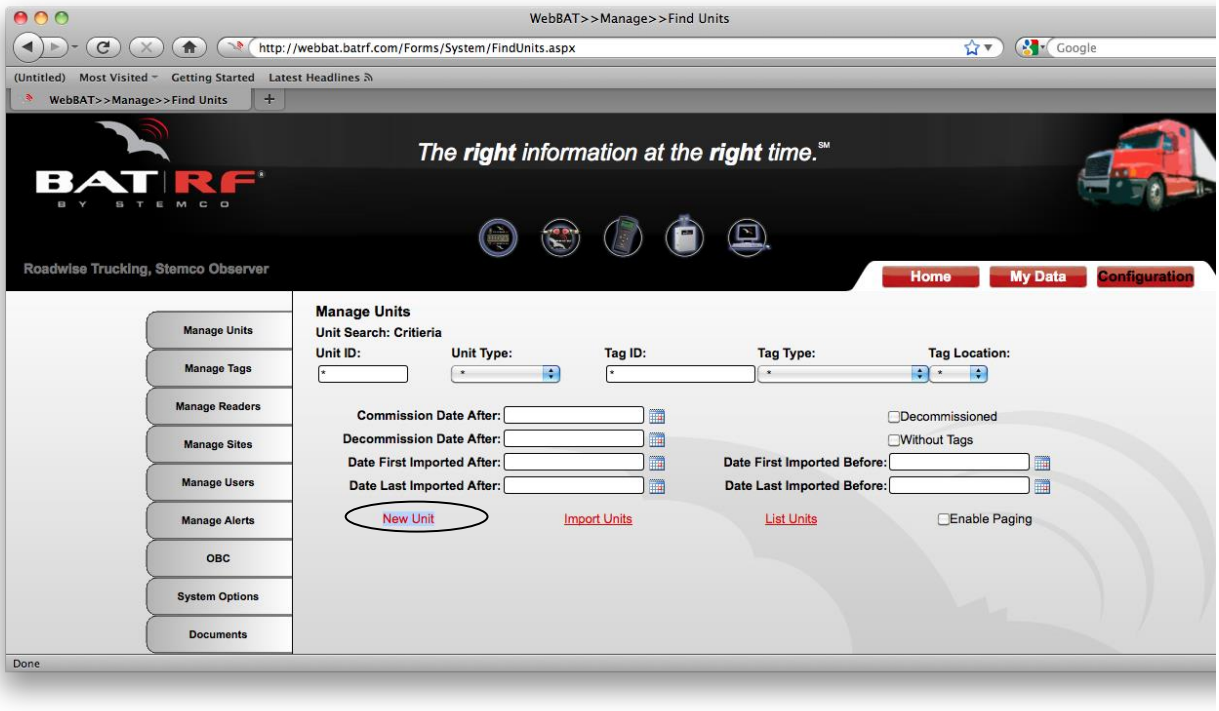


Section 6 Create Units (Vehicles) in Webbat

6A) Creating a New Unit (Vehicle)

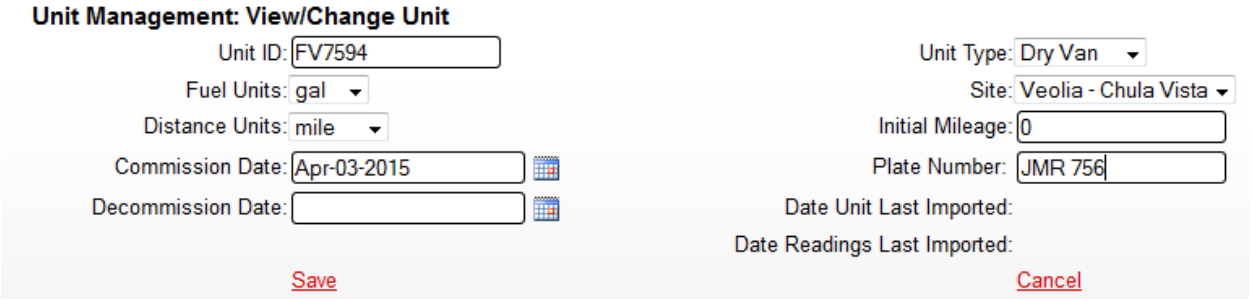
Unit #s must be manually entered in Webbat when using a Gate Reader or Handbat. Tractor #s are automatically entered when using a TIM Reader (trailers must be manually entered).

1) Click on the **Configuration** Tab on the top-right of the screen
2) Hover over the **Manage Units** tab on the left of the screen, and click **Manage Units**
3) Click on the link for **New Unit** at the bottom of the page



4) Enter in the Unit ID, Commission Date, Unit Type, Site (which the Unit is associated with), Initial Mileage, and License Plate Number. Select the appropriate Fuel Units and Distance Units from the drop-down menu. (The drop-down fields and the Unit ID are required fields)

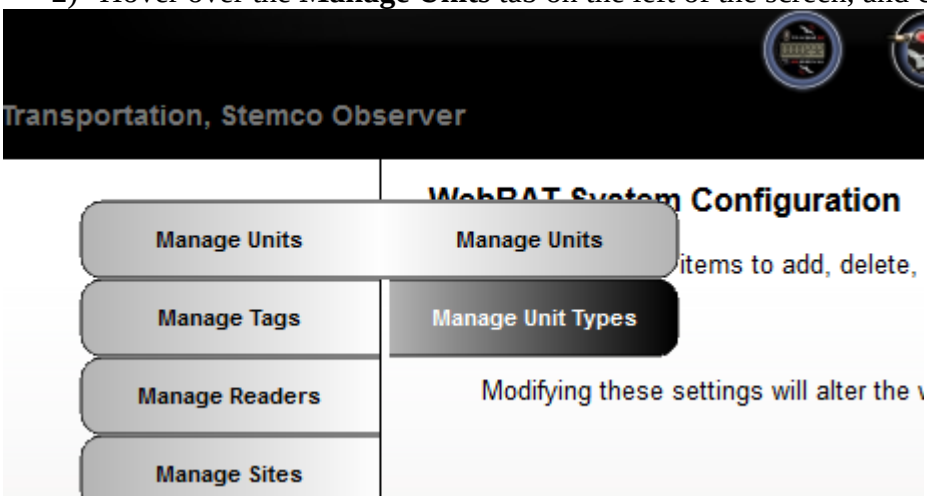
5) **Click the Save link**



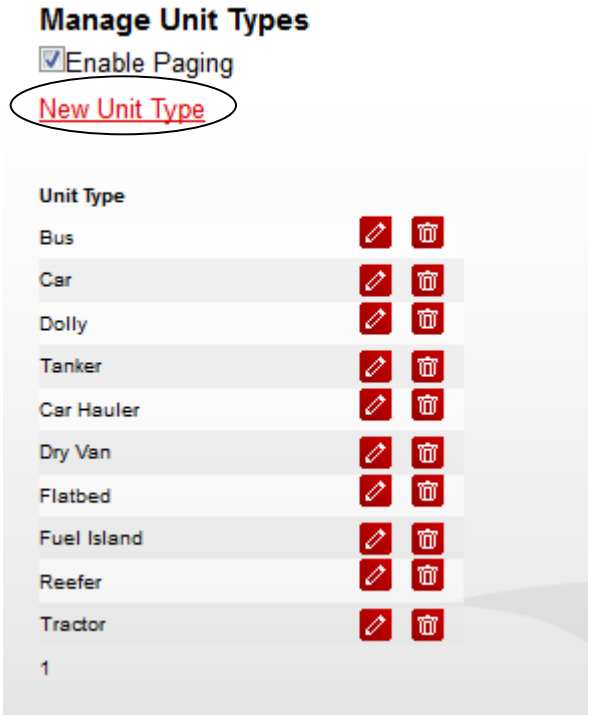
6B) Creating New Unit Types

Webbat comes with basic vehicle types already defined such at Tractor, Dry Van, Flatbed etc. Webbat also allows a user to define custom unit types to match your fleets vehicles.

1) Click on the **Configuration** Tab on the top-right of the screen
2) Hover over the **Manage Units** tab on the left of the screen, and click **Manage Unit Types**



3) Click on the link for **New Unit Type** at the top of the page



4) Enter in the new type of vehicle in the box at the bottom of the list.

5) **Click the Save Icon** 

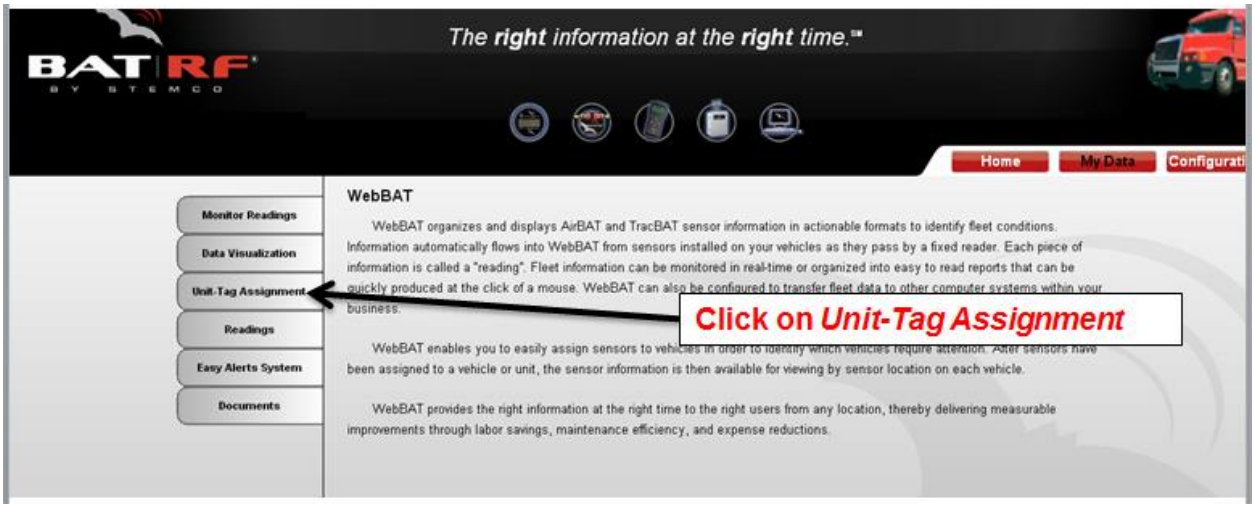
Section 7 Assign/Remove Sensor Serial Numbers to/from Units

7A) Assigning Sensors to Units

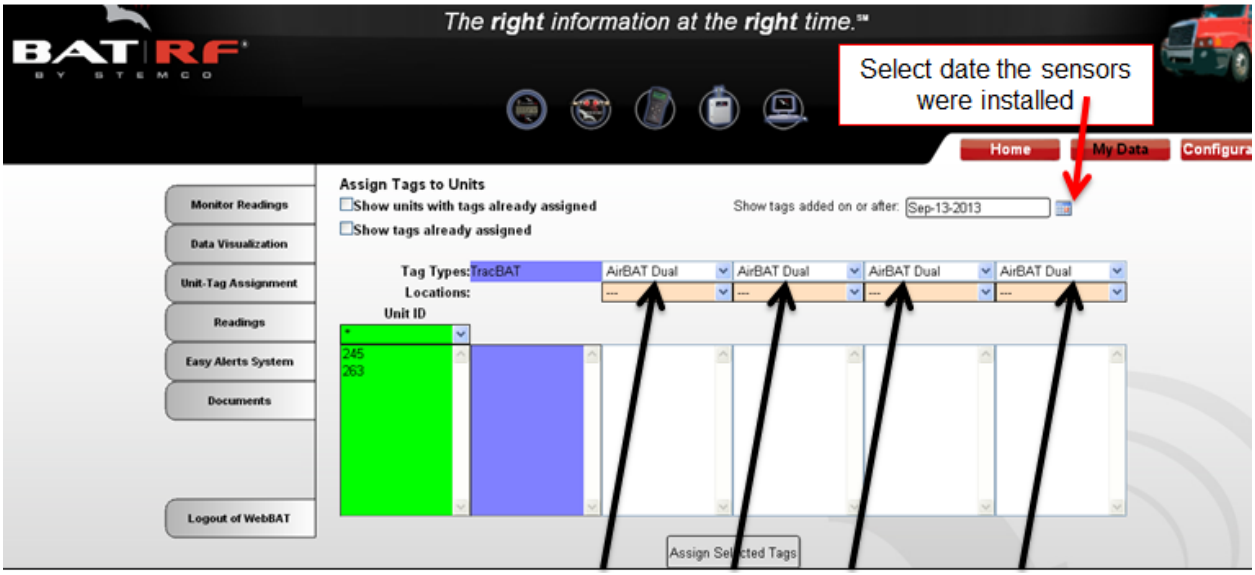
After registering Tag and Unit ID's, the user may wish to associate certain tags to a particular unit. This allows for easy delineation of which devices are connected to which vehicles. For TIM reader customers assignment must be done if wheel position reporting is desired in the email alerts; additionally assignment must be done for trailer mounted Airbats if trailer # is desired in the email alerts (without assignment the alert will be reported using the tractor # pulling the trailer mounted Airbat).

1) Click on the **My Data** tab on the top-right of the screen

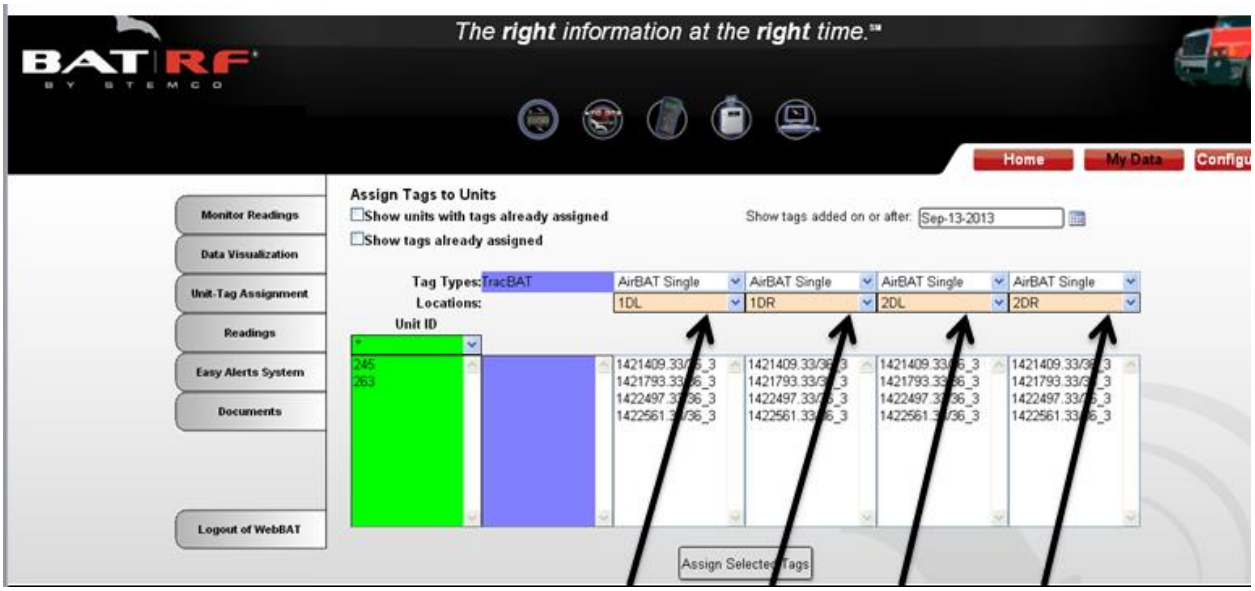
2) Click on the **Unit-Tag Assignment** tab on the left of the screen



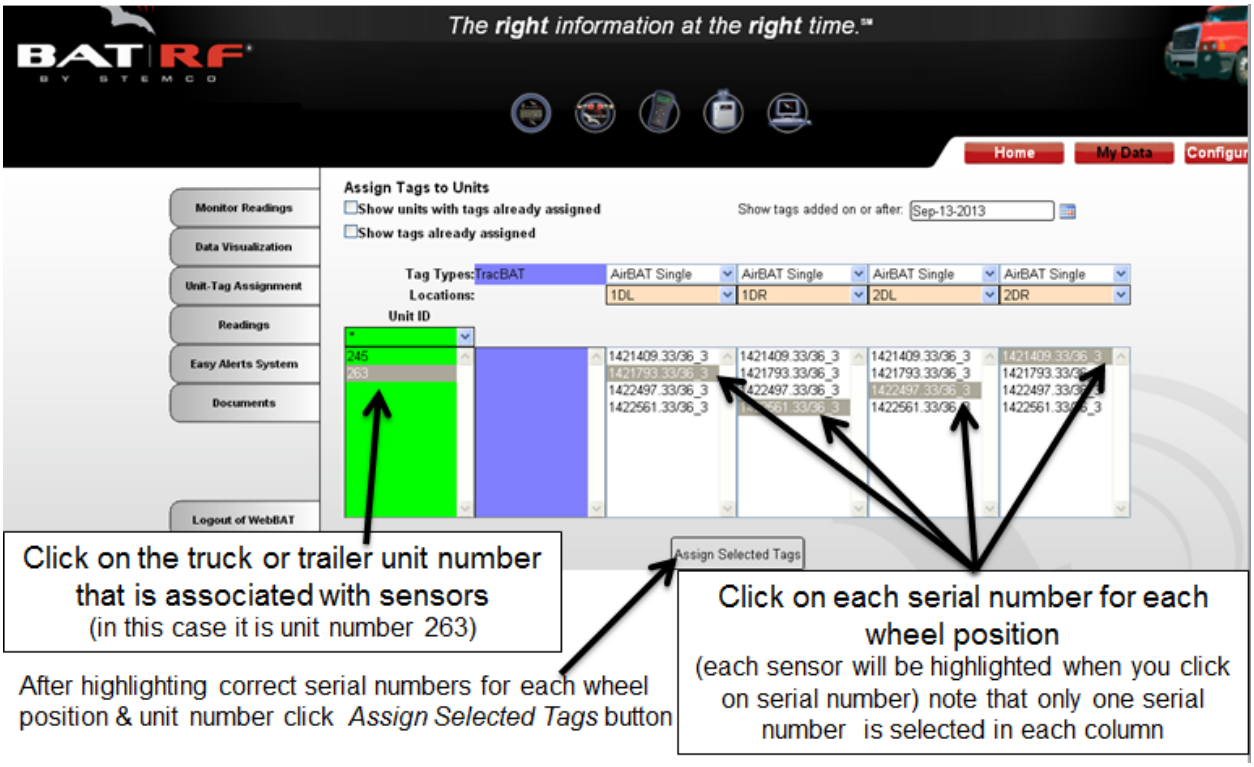
3) Set the date for “Show tags added on or after:” to prior to the first date the sensor could have entered into Webbat (earlier is better even a few years back is fine). Then pick from drop down box if you have dual tires or single wide tires for the sensors that are on your equipment.
Note: The page will automatically reload which causes the sensors to appear in the four columns.



4) Next you need to select from the Location drop down boxes to assign each wheel position**.**
Note: This sample tag assignment is all single wide drive tires.
(1DL = 1st Drive axle Left / 1DR = 1st Drive axle Right / 2DL = 2nd Drive axle Left / 2DR = 2nd Drive axle Right)



5) Select a unit (click to highlight) you wish to assign a tag (or multiple tags) to, and select a tag id from each column. Once all sections are made click on **Assign Selected Tags** Button at the bottom of the screen.



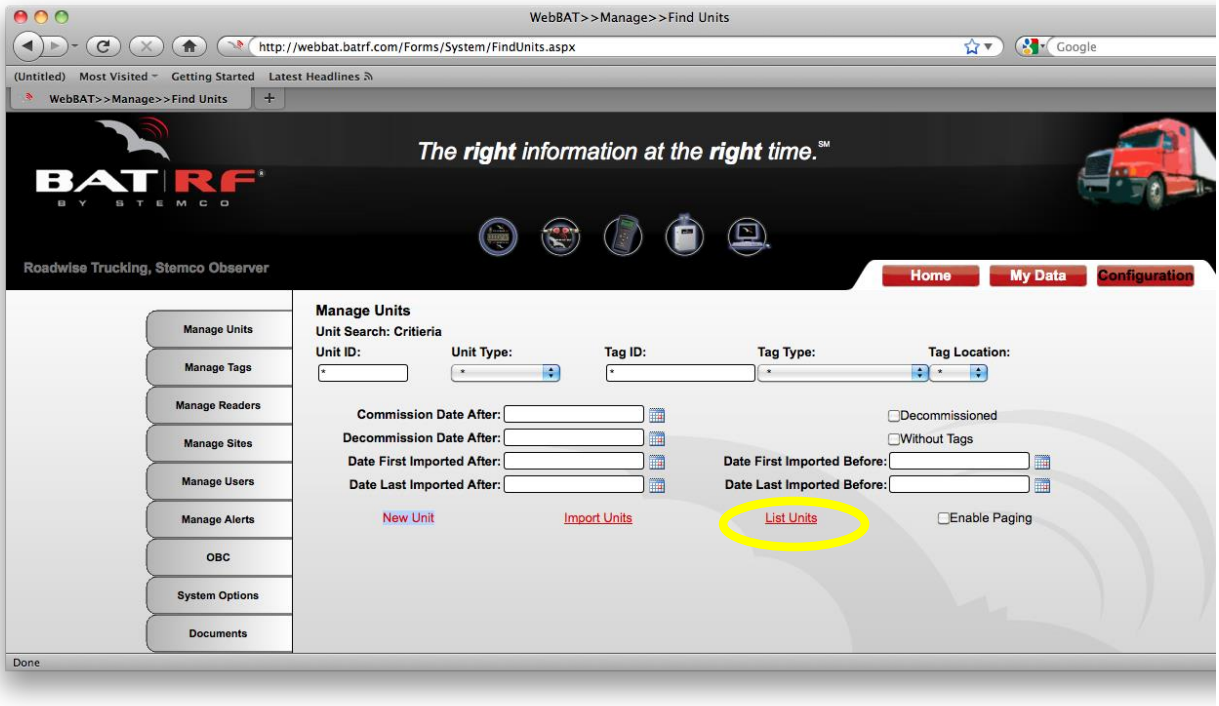
6) After clicking on Assign Selected Tags button you will get a confirmation on the lower left of the screen that says

(Assigned 4 tag(s) successfully)

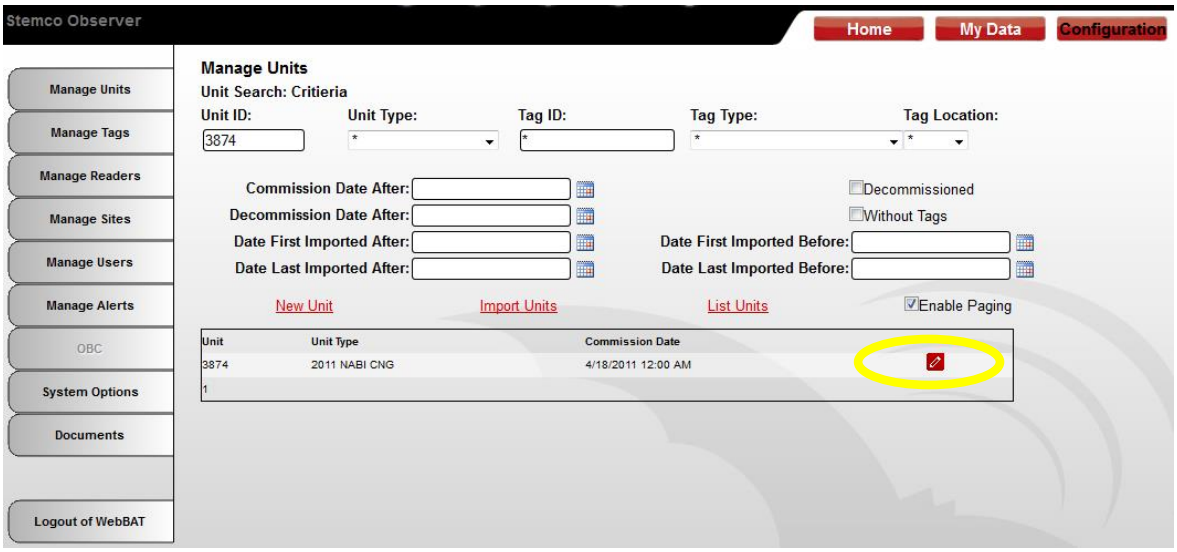
7B) Removing Sensors from Units

When a sensor is physically removed from a vehicle it's assignment to that vehicle should also be removed. Doing so keeps the All Tags Under Management report current and correct (sensors currently assigned are also currently physically installed on the vehicle).

1) Click on the **Configuration** Tab on the top-right of the screen
2) Hover over the **Manage Units** tab on the left of the screen, and click **Manage Units**
3) Type in the Unit ID(vehicle #) and then Click the **List Units** link at the bottom of the page

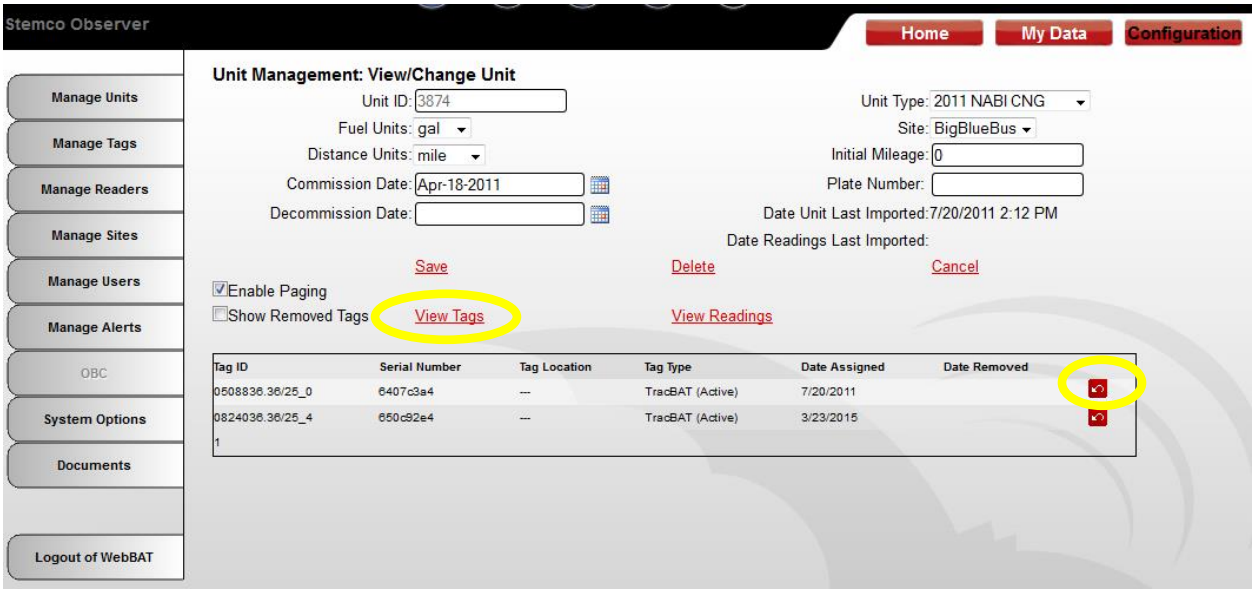


4) Click the edit icon on the right on the same row as the unit #.

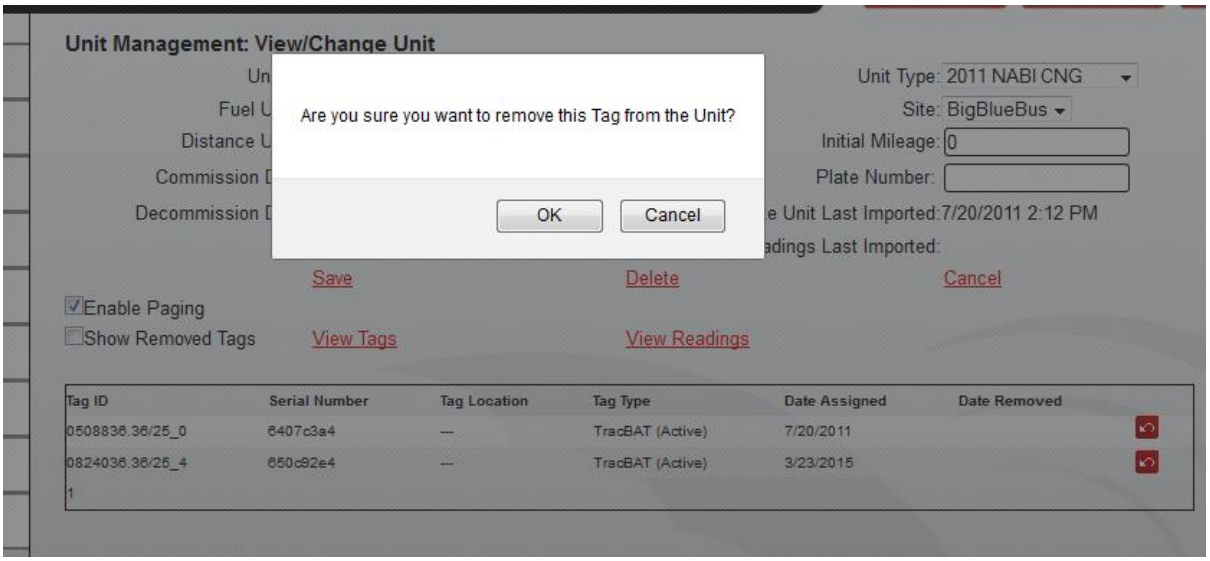


5) On the Unit Management Screen; Click the **View Tags** link to cause the assignment table to appear. This table shows all the tags that are currently assigned to this unit id.

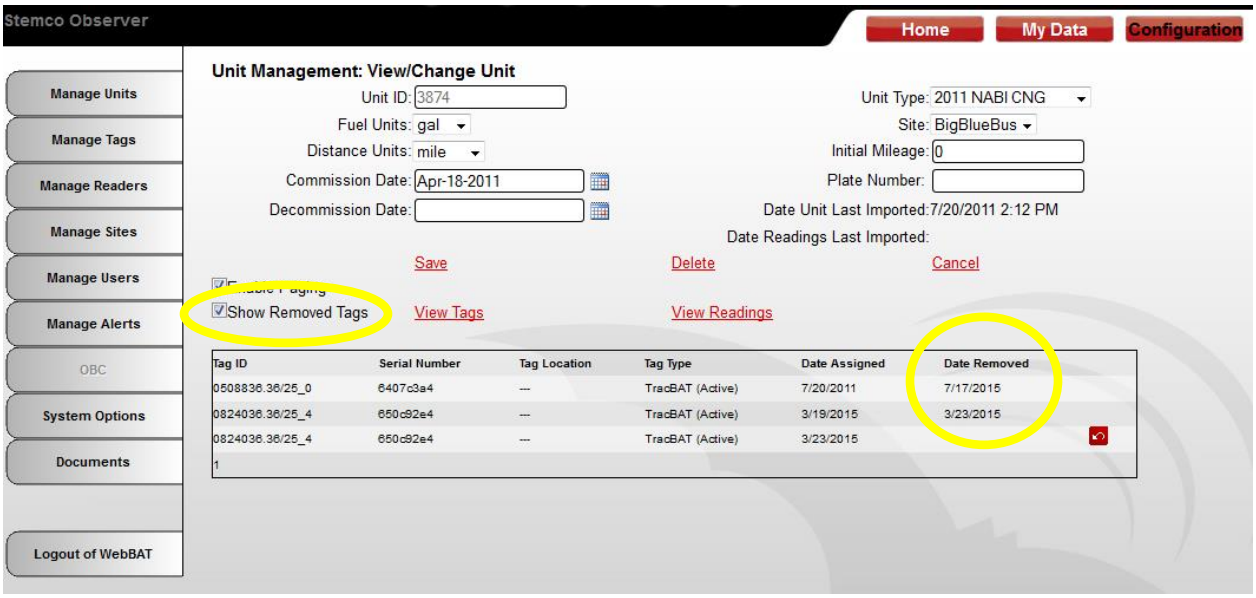
6) Click the Remove Icon



7) Select "OK" to confirm the removal of the assignment of this sensor to this vehicle. NOTE - The sensor readings history is still maintained, just the assignment to that vehicle is removed.



By default the assignment table only shows the sensor that is currently assigned; however; you can see the full assignment history including the removed sensors by selecting the **Show Removed Tags** check box and then clicking the View Tags link.



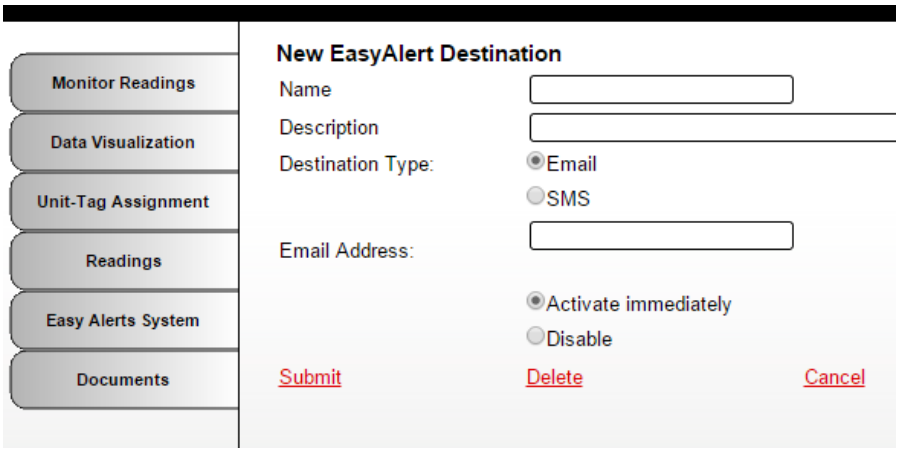
Section 8 Email Alerts

Real time email alerts are a powerful useful tool in managing a fleet. To receive alerts, the destination email address must first be setup and activated(confirmed), then

8A) Email Address/SMS Destinations Setup

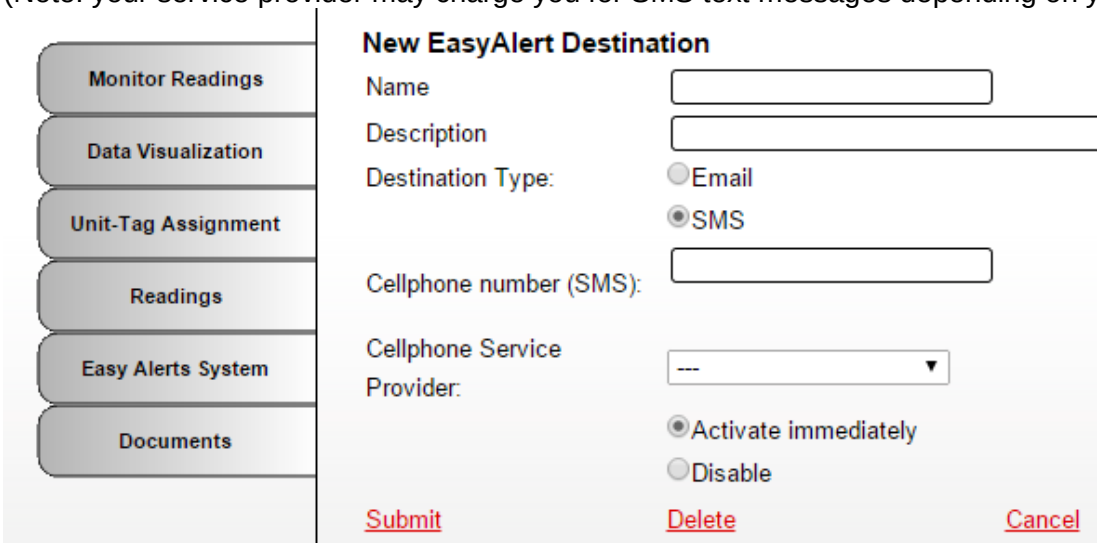
To setup a new email address or SMS destination:

1) Click on the **My Data** Tab on the top-right of the screen
2) Hover over the **Easy Alerts System** tab on the left of the screen, and click **EasyAlert Destinations**
3) On the **Manage EasyAlert Destinations** screen click on the Add Destination link
4) On the **New EasyAlert Destinations** screen enter your **Name, Description** and **E-mail** address. The name used must be unique and can't identically match another name already on the destination list. The description is usually the persons job title but is an optional field.



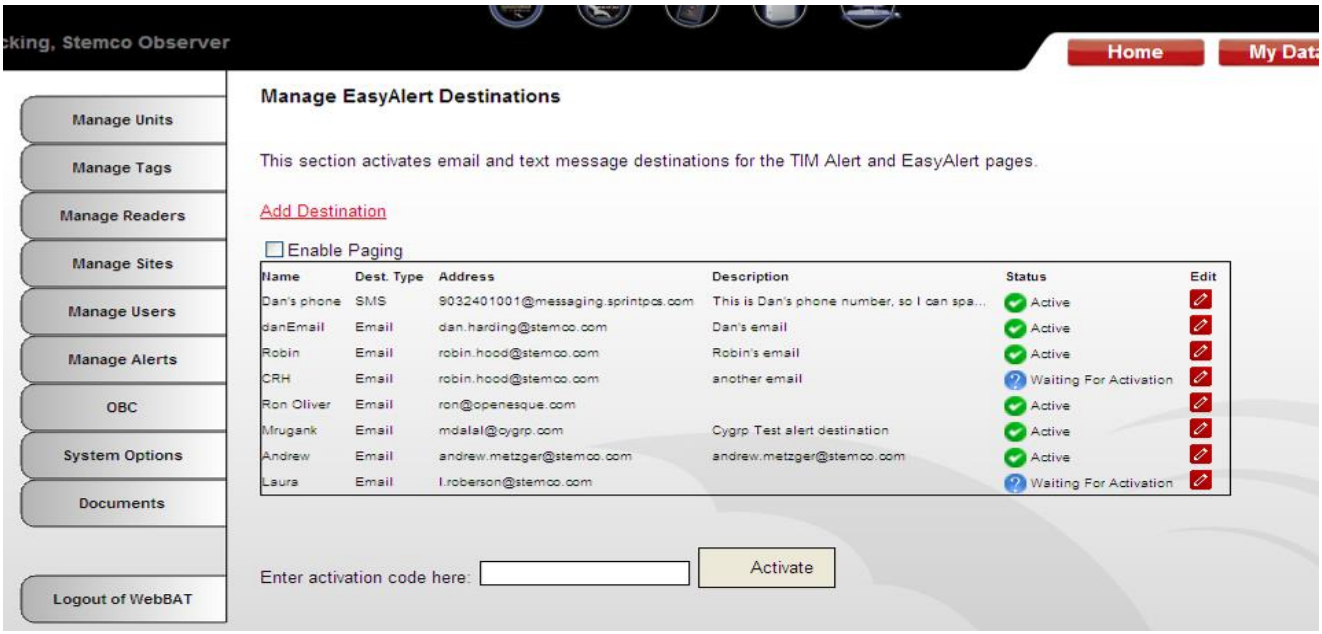
5) If SMS messages are preferred, under **Destination Type** select the **SMS** radio button.

6) Enter the **Cellphone number (SMS)** and select your **Cellphone Service Provider**
(Note: your service provider may charge you for SMS text messages depending on your plan)

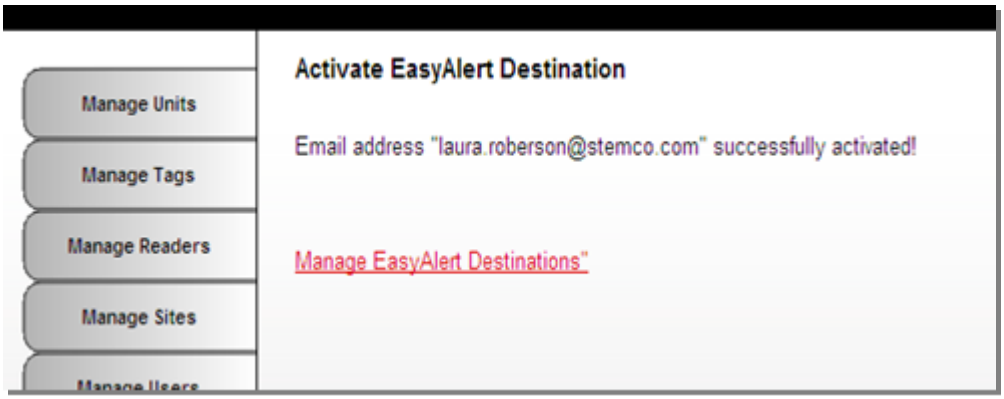


7) Select Submit

8) Once you have received your Activation E-mail like the *EXAMPLE* below, you can click the link to confirm your email address or enter the Activation Code in the box shown below and click **"Activate".**
Note - SMS text messages users must use the **Enter activation code here** box to activate.



9) Once the link is clicked or the code is entered in the box and you click "**Activate**", the following screen appears:



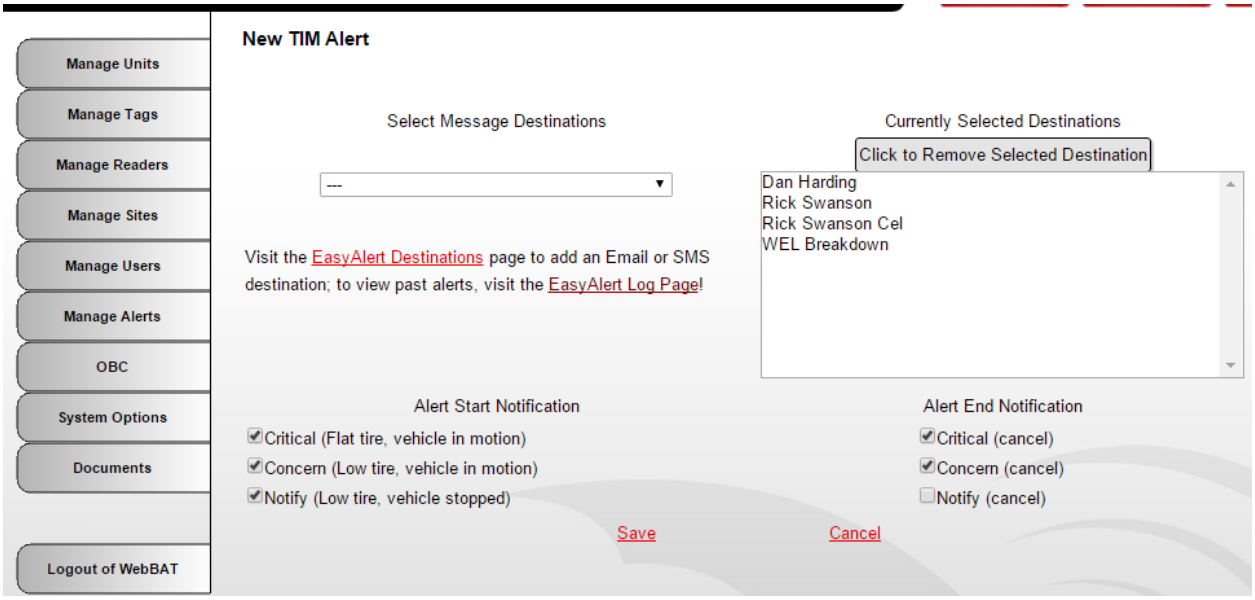
Sample Activation Email:

```
Subject: Activation Code   from donotreply@batrf.com

This email contains the activation code for this address.

To finish linking this account, click or copy and paste this link into your browser:
http://nextgen.batrf.com/Forms/System/EasyAlertDestination.aspx?activate=123F5SZN&conum=151

Or, enter this code in the Alert Destination Activation screen: 123F5SZN
```

8B) TPMS Email Alert Setup – Tractor Interface Module ONLY

To add the activated email address to the distribution list for the alerts:

1) Click on the **Configuration** Tab on the top-right of the screen
2) Hover over the **OBC** tab on the left of the screen, and click **ManageTIM Alerts**
3) On the **New TIM Alert** screen find your name on **Select Message Destination** pull down list and click on it and your name will automatically be displayed in the **Currently Selected Destinations** box on the right (this is the list of who will receive email alerts).
   Note your destination email address must be activated (confirmed) to appear in the pull down list.
4) To modify Alert Start/End Notifications you can check or uncheck boxes near bottom of page.
5) You will need to click the Save link when finished to receive TPMS email alerts like the sample shown on the next page.



Recommendation – Fleets that generally rely on the drivers to fill the tires normally uncheck the notify level alerts (as the driver responds to the in cab alert). This will reduce the overall amount of email alerts but has no effect on the in cab alerts.

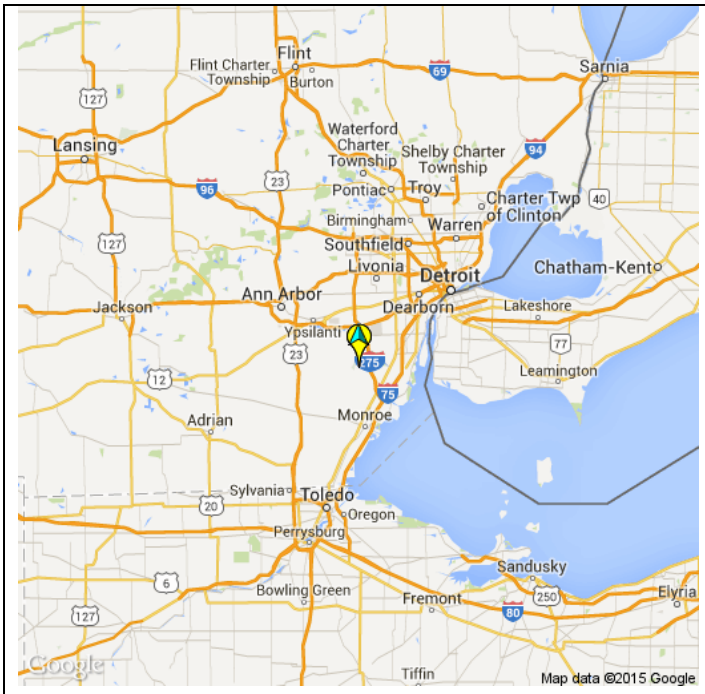
Sample E-mail Alert

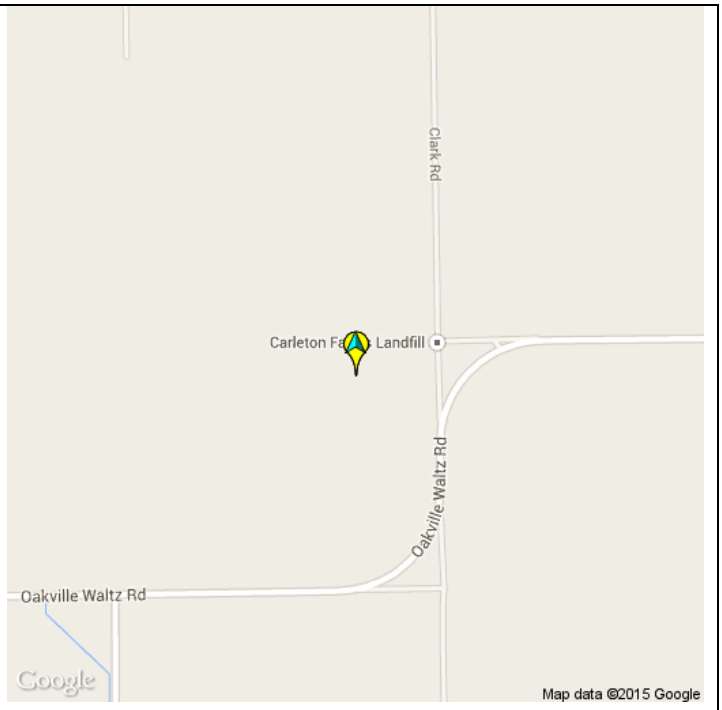
From: AlertsSystem@batrf.com [mailto:AlertsSystem@batrf.com]
Subject: BatRF Concern TPMS Alert for Vehicle #188385

Tire Pressure 104 PSI
Low Pressure Limit <= 105 PSI

Vehicle Information
Vehicle ID 188385 Type: Tractor
Wheel Position Left Axle #3 Trailer Outer
Vehicle Speed 39 MPH Heading N 2deg W

Vehicle Location





Detailed Information

Sensor Info - SN 1889889.33/14_4 | Temperature 68 Deg. F | Tire Outer/Single
Read Date/Time Stamp 2015-04-16 03:22:10 (Eastern Standard Time)
GPS Info - Latitude 42.0927488N degrees | Longitude 83.4233344W degrees
Tracking Info - ReadingID 393888.2 | Reader SN 2D01E5EE | CompanyId: 3477

webbat.batrf.com

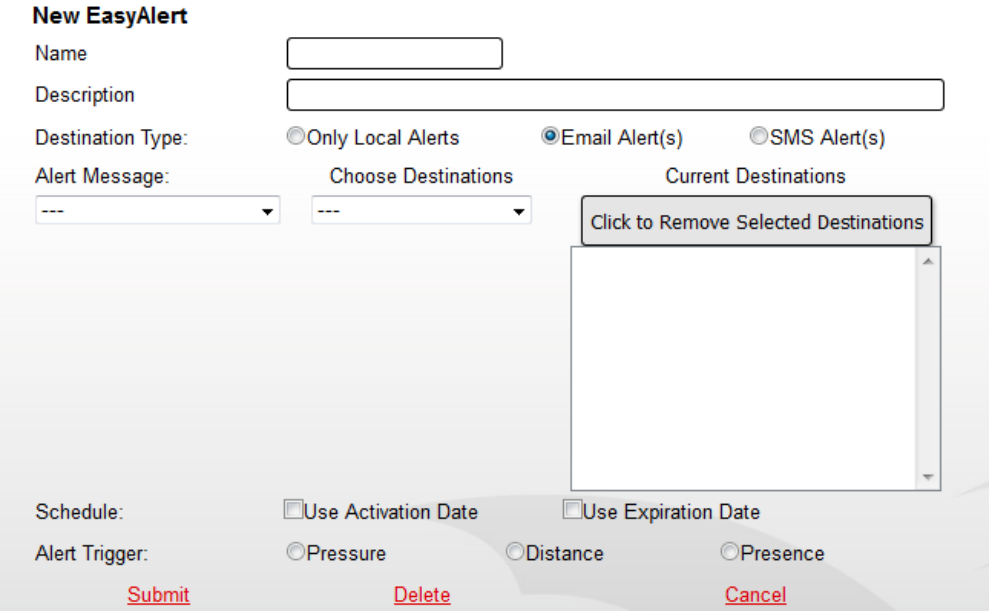
8C) Distance/Presence/Air Pressure Email Alert Setup–Gate Reader ONLY

The email alerts can be setup for gate reader systems to trigger by:

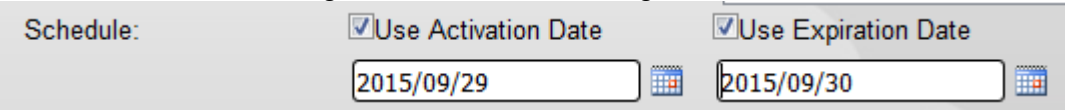
1) Distance alert - vehicle crossing a gate that has exceeded a distance alert threshold (automated reminder to perform mileage based maintenance on this vehicle).
2) Gate crossing alert – notification that a vehicle has arrived at a specific yard.
3) TPMS Alerts – vehicle crossing a gate that has a low pressure reading from an Airbat.

To create a new EasyAlert follow these steps.

1) Click on the **My Data** Tab on the top-right of the screen
2) Hover over the left tab menu **Easy Alert Systems** and then click on **EasyAlerts**
3) Click on the New EasyAlert link to open up the new EasyAlert page.



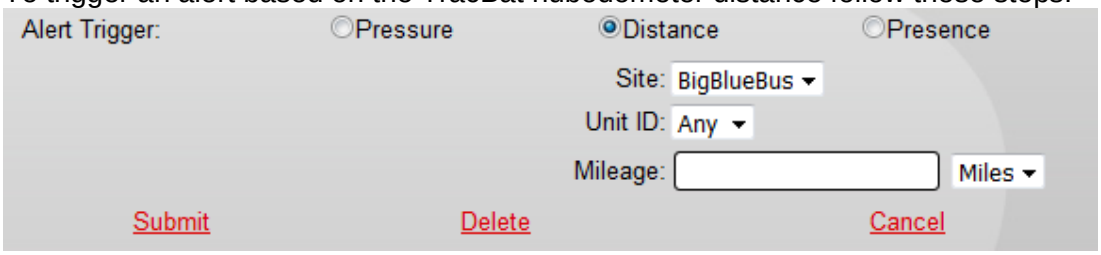
Name – A short identifier; some use a person's name who set up the alert or a vehicle #.
Description – A longer identifier; usually a label stating what the trigger is like "Bus 1300 > 10,000 Miles" or "Bus 1301 has arrived at home base"
Destination Type – Only Local Alerts means it will appear in the alert log (refer to section 8D) but will not be emailed to anyone. Email Alert means the alert will be delivered to one or more people via email. SMS Alert means the message will be delivered via text message (Depending on your cell phone plan terms you may have to pay charges from your provider for the text messages).
Alert Message – Template to use for the information to be delivered. Most companies just use one template but customization is permitted.
Choose Destinations – Email addresses that have been setup and activated (refer to section 8A) can be selected by clicking on the " ▼ " pull down list and then selecting one or more names for the alert to be sent to.
Current Destinations – List of people that an alert will be sent to.
Schedule – Activation Date is if you don't want the alert to be active until a future date. Expiration date is when the alert will no longer cause an alert to be generated.



Alert Trigger – Refer to Sections 8C1, 8C2 and 8C3 for more information.

8C1) Distance Email Alerts

To trigger an alert based on the TracBat hubodometer distance follow these steps:



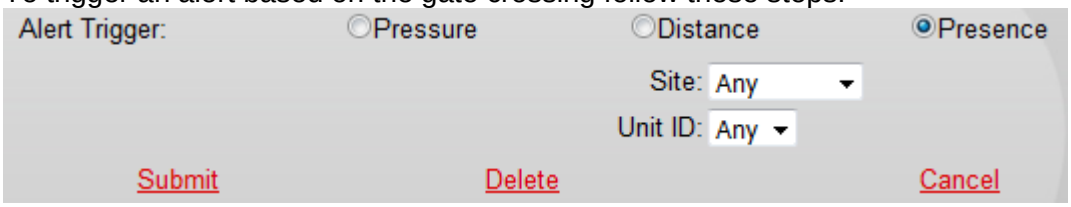
4) Choose **Distance** for the Alert Trigger and additional filter criteria will appear.

Site – Choose Any if you want to be alerted at any gate crossing or pick a single site from the pull down list if you only want an alert when the vehicle crosses that sites gate.
Unit ID – Select a unit you want to target or choose Any for all vehicles in your fleet that are TracBat sensor equipped.
Mileage - Input the numeric value of the TracBat that you want the alert to trigger at. Select the distance units (Miles or Km) Note this value defaults to the system default (so you won't normally need to adjust it).

5) You will need to click the Submit link when finished to save the alert.

8C2) Presence Email Alerts

To trigger an alert based on the gate crossing follow these steps:

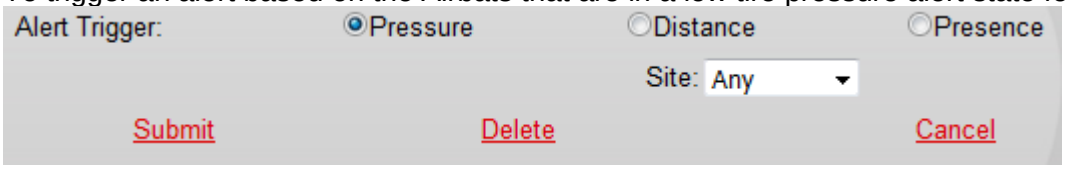


4) Choose **Presence** for the Alert Trigger and additional filter criteria will appear.

5) You will need to click the Submit link when finished to save the alert.

8C3) Pressure Email Alerts

To trigger an alert based on the Airbats that are in a low tire pressure alert state follow these steps:



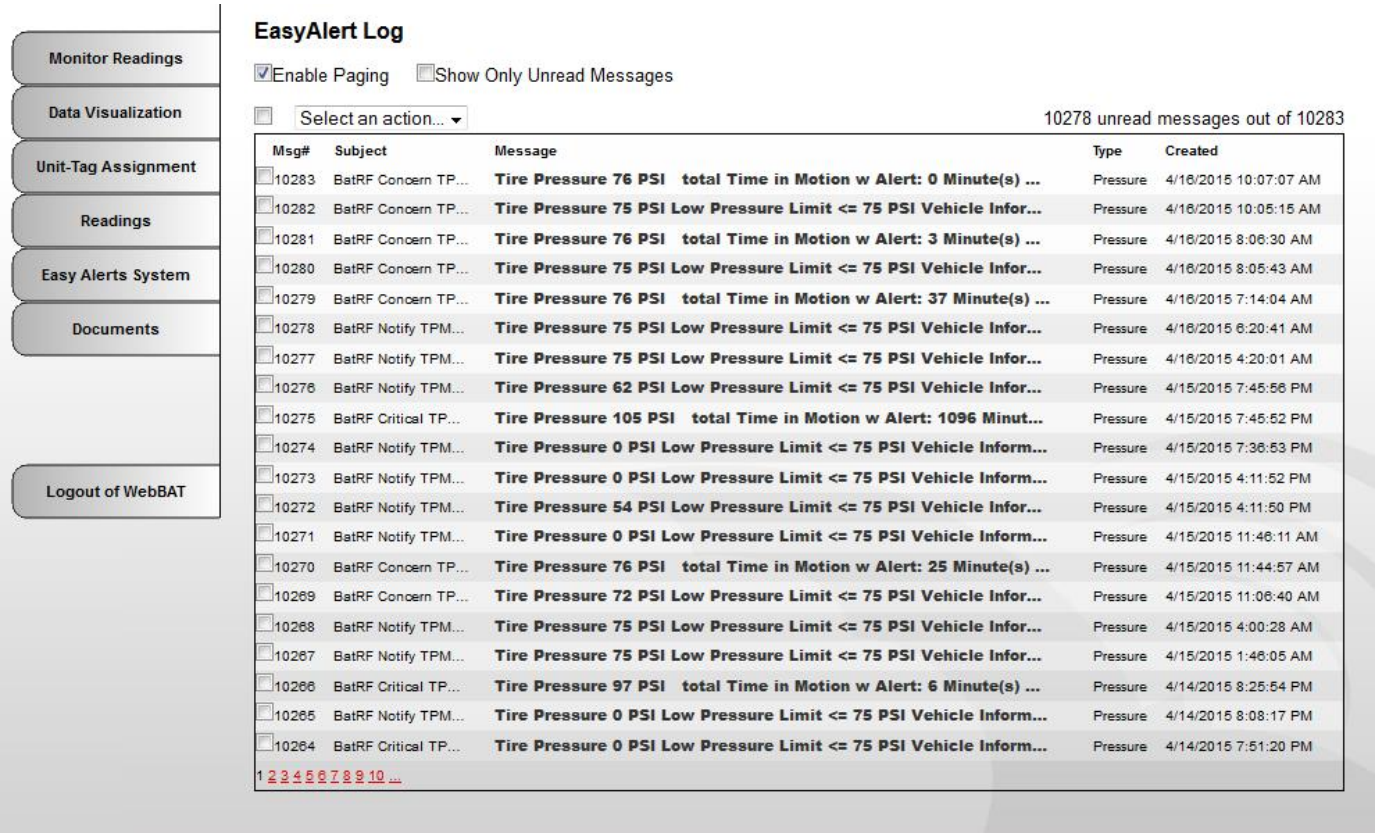
4) Choose **Pressure** for the Alert Trigger and additional filter criteria will appear.

5) You will need to click the Submit link when finished to save the alert.

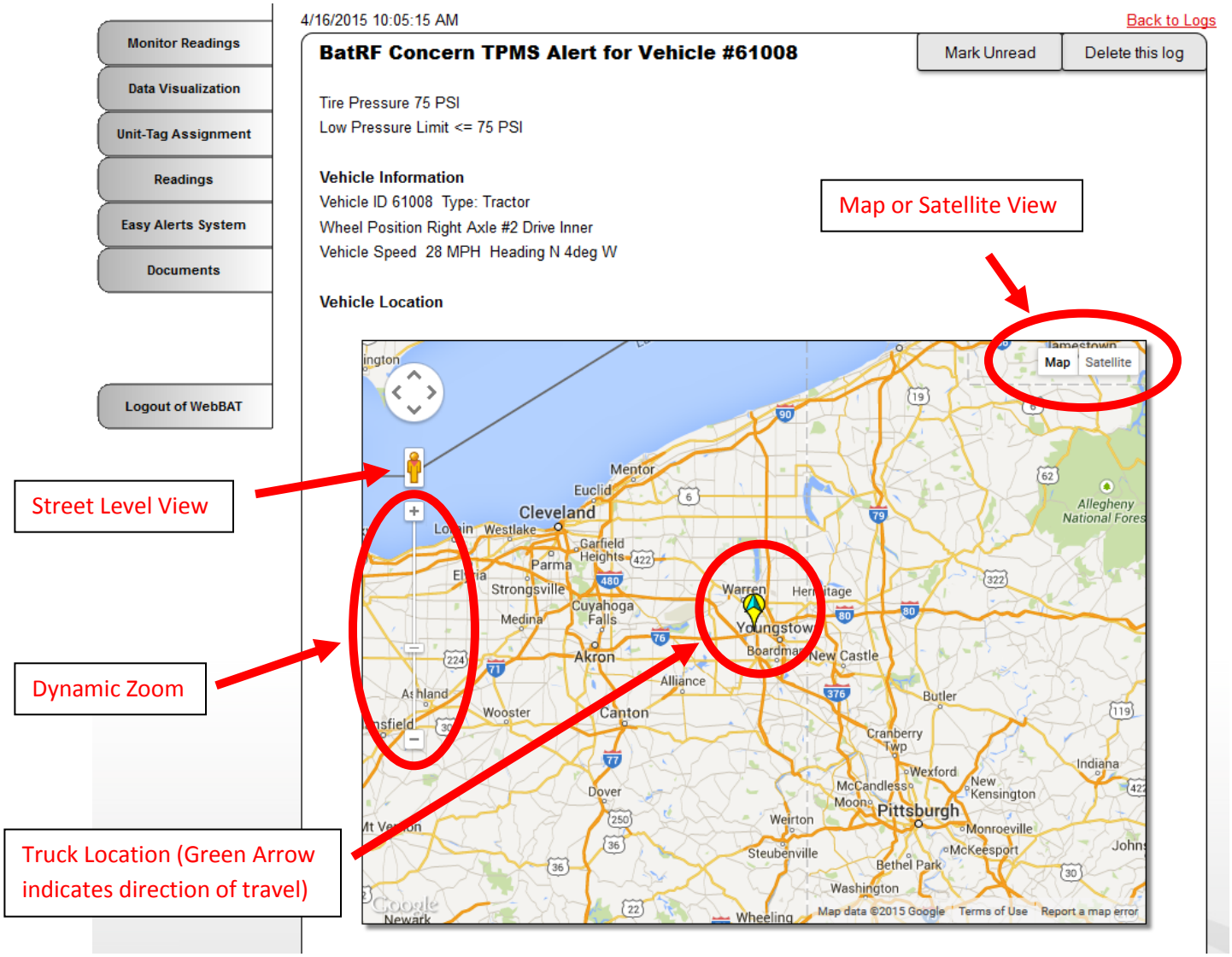
8D) Alerts Log (TIM & Gate Reader)

The alerts log contains a copy of all the alerts issued for at least the last 120 days (TIMs) or 2 years (Gate Reader).

1) Click on the **My Data** Tab on the top-right of the screen
2) Hover over the **Easy Alerts System** tab on the left of the screen, and click **View EasyAlerts Logs**
3) To view an email alert click on the alert in the Subject column



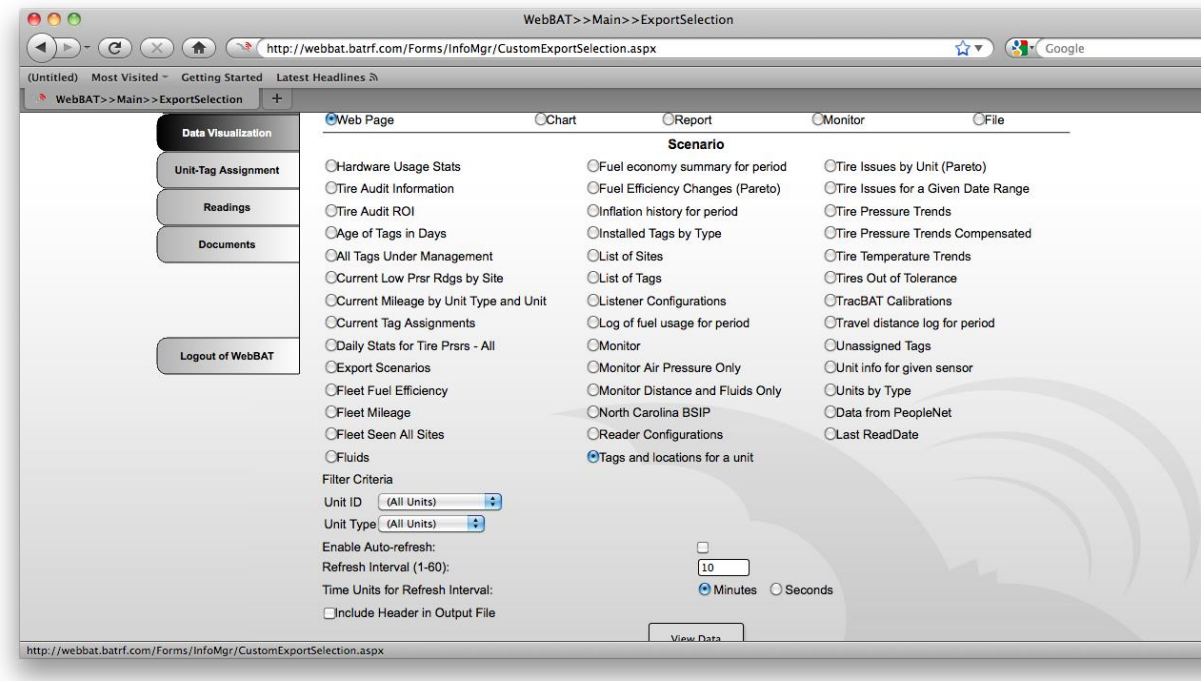
The alerts show the trucks location and direction of travel (as indicated by the green arrow) on the google map. The map can be zoomed in or out using the dynamic zoom control slider. The view can be the normal map view or a satellite image. On satellite view the street level view can be utilized to view the scenery from the ground level.



Section 9 Reports, Charts and Exports

WebBAT includes a variety of reports, charts & exports designed to assist with fleet management tasks. Most reports can be viewed as a web page, PDF document, or downloadable file. To access the reports:

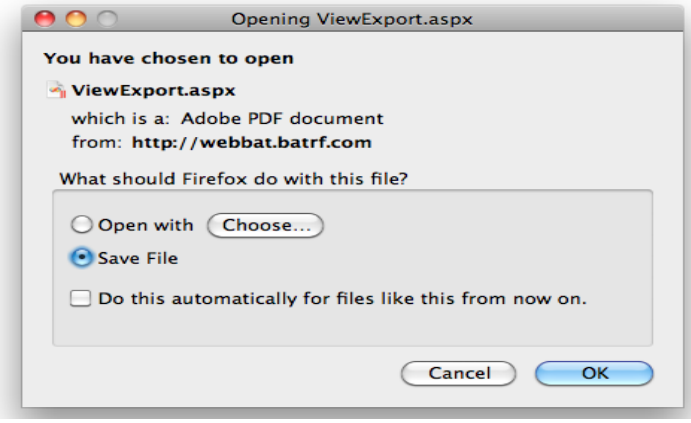
1) Click on the **My Data** tab on the top-right of the screen
2) Click on the **Data Visualization** tab on the left of the screen
3) Select the appropriate report scenario and scenario type



4) Fill-in the appropriate filter data
5) Use the checkbox to tell the report if it should auto-refresh and if so, at what interval (Note: This option is not available for PDF documents and file exports)
6) Click on the **View Data** button

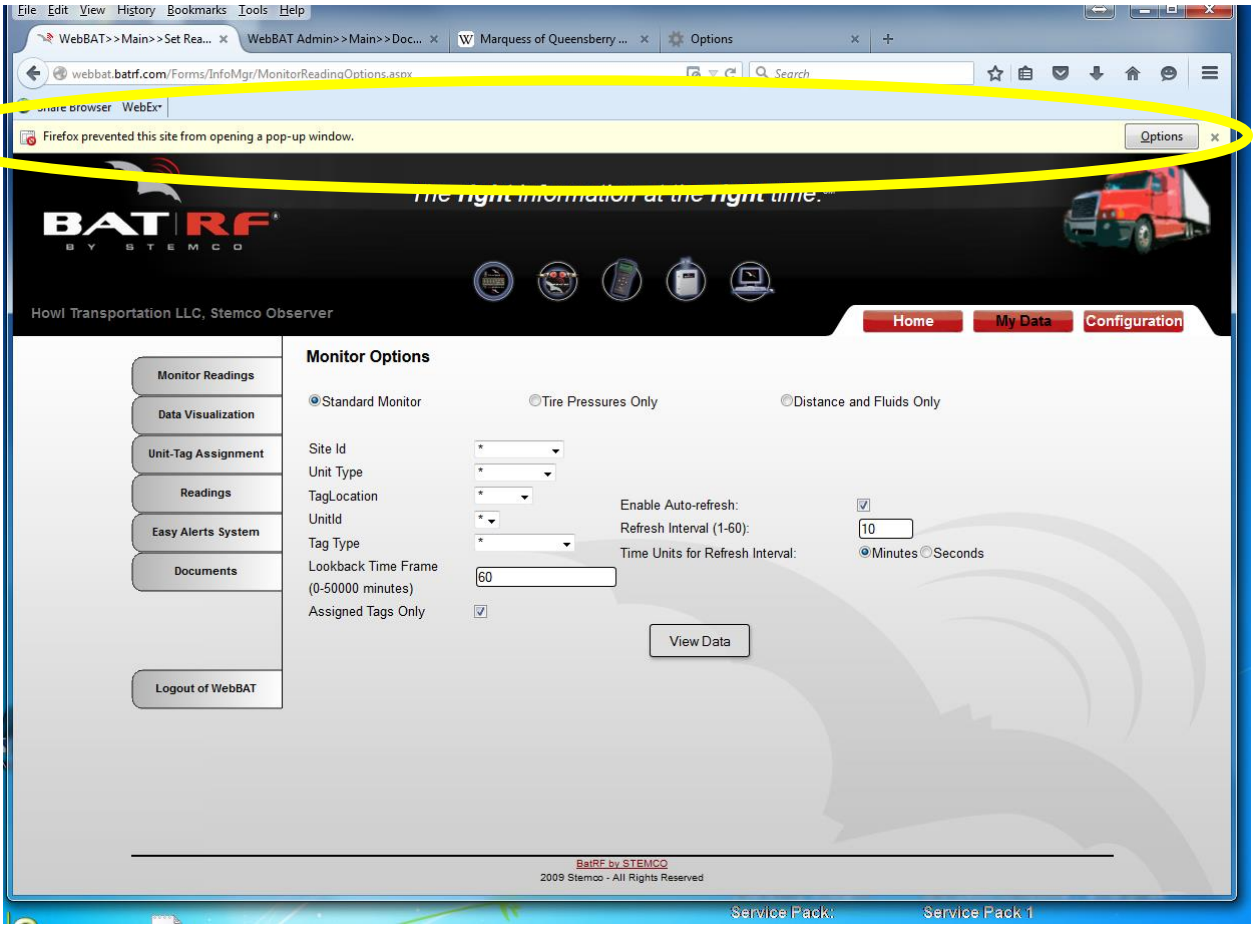
Additional step for PDF documents and file exports:

7) A dialog box will appear asking whether the user wishes to open a temporary copy or save the requested report. Select as desired and click OK.



Handling Pop Up Windows in the Web Brower

8) If clicking the **View Data** button appears to cause nothing to happen; most likely the Pop Up Window blocker is preventing the web browser to open a new window. Select options and then Always Allow popups from Webbat.batrf.com. You will need to select **View Data** again to get the pop up to properly load.



Error Message

9) If clicking the **View Data** button causes the following error message,

(The criteria you selected did not return any results. Please check your selections and try again)

It means that there are not records that match the filter criteria selected. Often, this occurs because there are no readings in the time period defined for the report (widen the time window and run the report again). Alternatively, if this is a new installation this error message may appear because it doesn't yet have any readings.

9A) Data Visualization – Monitor –Monitor Air Pressure Only

Purpose - This report shows the pressure readings sorted time shown in descending chronological order. This report is good at reviewing historical readings to see when low pressure events occurred and checking to see that system information is current.

Report Example

MonitorAirBAT 11-Feb-2015 09:46:43 Underlying data is current.

*The **right** information at the **right** time.™*

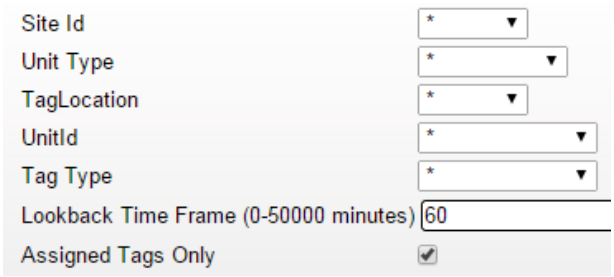
BAT | RF BY STEMCO

an EnPro Industries company

Monitor AirBAT

UnitId	TagLocation	InrPresr	OtrPresr	Lowlimitset	LifeMileage	Presence	SiteId	TagId	ReadDate
51008	---	95	89	75	---	[in]	WelCo	2398434.34/17_4	2015-02-11 09:44:04
51008	---	85	87	75	---	[in]	WelCo	2396770.34/17_4	2015-02-11 09:44:03
51008	---	85	86	75	---	[in]	WelCo	2399586.34/17_4	2015-02-11 09:44:03
51008	---	87	87	75	---	[in]	WelCo	2404642.34/17_4	2015-02-11 09:44:02
41047	---	---	76	75	---	[in]	WelCo	1688738.34/12_3	2015-02-11 09:43:25
51005	---	---	---	---	---	[in]	WelCo	2410082.34/17_4	2015-02-11 09:40:51
51005	---	93	94	75	---	[in]	WelCo	2415714.34/17_4	2015-02-11 09:40:49
51005	---	95	96	75	---	[in]	WelCo	2411362.34/17_4	2015-02-11 09:40:49
51005	---	95	96	75	---	[in]	WelCo	2415906.34/17_4	2015-02-11 09:40:32
51031	---	86	88	75	---	[in]	WelCo	2384290.34/16_4	2015-02-11 09:36:13
51031	---	86	88	75	---	[in]	WelCo	2388962.34/16_4	2015-02-11 09:36:13
51031	---	86	87	75	---	[in]	WelCo	2386338.34/16_4	2015-02-11 09:36:13
51031	---	86	86	75	---	[in]	WelCo	2385826.34/16_4	2015-02-11 09:36:12
51072	---	112	107	75	---	[in]	WelCo	2416738.34/17_4	2015-02-11 09:30:05
51072	---	108	105	75	---	[in]	WelCo	2405154.34/17_4	2015-02-11 09:30:04
51072	---	106	105	75	---	[in]	WelCo	2416482.34/17_4	2015-02-11 09:30:03
51072	---	111	108	75	---	[in]	WelCo	2413026.34/17_4	2015-02-11 09:30:03
51092	---	97	94	75	---	[in]	WelCo	2386530.34/16_4	2015-02-11 09:29:40

Filter Criteria



Site Id – Vehicle # or "All Units"
Unit Type – Vehicle Type (Tractor, Trailer etc).
Tag Location – Wheel position on the vehicle.
Unit ID – Vehicle # or "All Units".
Tag Type – Filter by sensor type (Dual Airbat, Single Airbat etc)
Loopback Time Frame – How many minutes back in time from the present to display.
Assigned Tags Only – Uncheck for debug to see Listener Service reporting.

NOTE – Also available under the Monitor Readings tab or the File radio button as a downloaded .csv file which can be directly imported into an Excel Spreadsheet.

9B) Data Visualization – Report –Tire Pressures for Period

Purpose - This report shows the pressure readings sorted by vehicle number and then Airbat sensor (same wheel position) shown in descending chronological order. This report is good at reviewing historical readings to see when low pressure events occurred. It also shows the correlation between pressure increases due to rising ambient temperature and vehicle movement.

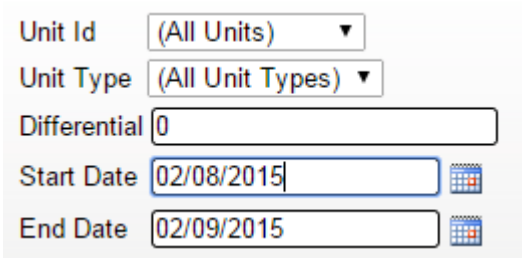
Report Example

*The **right** information at the **right** time*SM

Tire Pressures for Period

UnitID	UnitType	Inner (PSI)	Outer (PSI)	Diff (PSI)	Low Point	AirTemp (degF)	VehSpd (mph)	Location	ReadDate
41007	Tractor								
	Low Pressure	88	74	14	75	28	0	2DR	2015-02-09 17:05:36
		91	77	14	75	50	1	2DR	2015-02-09 14:05:34
		89	76	13	75	34	9	2DR	2015-02-09 12:35:38
		93	78	15	75	37	0	2DR	2015-02-09 10:58:03
	Low Pressure	88	74	14	75	28	9	2DR	2015-02-09 09:50:06
	Low Pressure	89	74	15	75	28	0	2DR	2015-02-09 08:18:18
		---	77	---	75	30	16	2DR	2015-02-09 07:31:58
	Low Pressure	---	75	---	75	28	27	2DR	2015-02-09 07:25:56
	Low Pressure	88	74	14	75	28	0	2DR	2015-02-09 06:47:28
	Low Pressure	88	74	14	75	28	0	2DR	2015-02-09 05:37:04
	Low Pressure	88	74	14	75	30	0	2DR	2015-02-09 02:37:00
	Low Pressure	89	75	14	75	32	0	2DR	2015-02-08 23:36:56
	Low Pressure	89	75	14	75	34	0	2DR	2015-02-08 20:36:57
		87	85	2	75	28	0	1DL	2015-02-09 17:05:36
		91	90	1	75	54	1	1DL	2015-02-09 14:05:35
		89	88	1	75	36	9	1DL	2015-02-09 12:35:36
		92	90	2	75	37	0	1DL	2015-02-09 10:58:02
		87	86	1	75	32	9	1DL	2015-02-09 09:50:08
		87	87	0	75	34	0	1DL	2015-02-09 08:18:17
		87	86	1	75	30	0	1DL	2015-02-09 06:47:28
		88	86	2	75	30	0	1DL	2015-02-09 05:37:04
		88	86	2	75	32	0	1DL	2015-02-09 02:37:00
		88	86	2	75	34	0	1DL	2015-02-08 23:36:56
		89	88	1	75	36	0	1DL	2015-02-08 20:36:55

Filter Criteria



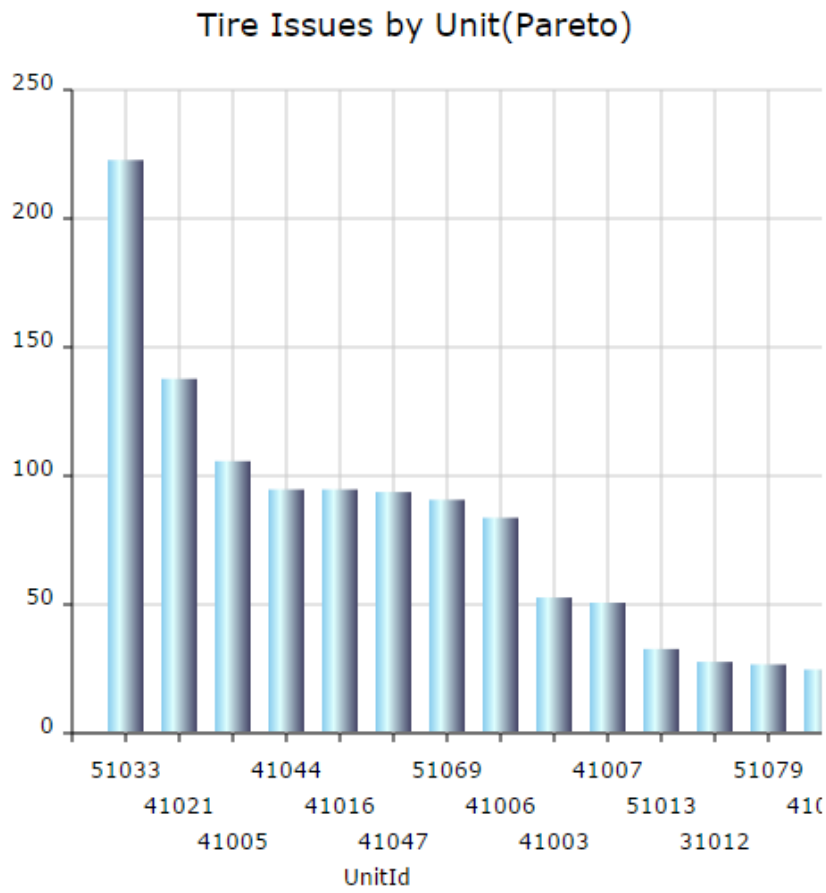
Unit Id – Vehicle # or "All Units"
Unit Type – Vehicle Type (Tractor, Trailer etc).
Differential – Minimum pressure difference between dual tires to accept reading in report (normally set to zero).
Start Date – First Date of included readings.
End Date – Final Date of included readings.

9C) Data Visualization – Chart – Tire Issues by Unit (Pareto)

Purpose - This chart shows the number of low pressure tire readings (not alerts) per vehicle from a user selectable date to the present date. This chart is very good at identify the vehicles whose tire(s) are most in need of attention (inflate and/or repair/replace) for maintenance and for many fleets it identifies the vehicles whose drivers are most commonly ignoring TPMS alerts.

Chart Example

TireIssuesByUnit **10-Feb-2015 14:43:10** **Underlying data is current.**



Filter Criteria

Read Since 01/11/2015

Read Since - Filters readings so only those from the Read Since Date to the present date are used to construct the chart (Defaults to the last month of readings).

9D) Data Visualization – Report – All Tags Under Management

Purpose - This report lists all the tags that are being managed in the Webbat system. This report can be sorted by Unit ID, Tag ID or Serial Number. This report is helpful for verifying that unit-tag assignments have been made for each vehicle.

Report Example

TagId	*SerialNumber*	*TagType*	*UnitId*	*UnitType*	*TagLocation*
1410658.34/42_2	A8958662	AirBAT Dual (Active)	31010	Tractor	1DR
1412194.34/42_2	A8958C62	AirBAT Dual (Active)	31010	Tractor	2DR
1418018.34/43_2	AC95A322	AirBAT Dual (Active)	31010	Tractor	1DL
1419746.34/43_2	AC95A9E2	AirBAT Dual (Active)	31010	Tractor	2DR
0054190.46/44_2	B080D3AE	TIM	31011	Tractor	---
2387746.34/16_4	41246F22	AirBAT Dual (Active)	31011	Tractor	1DR
2389154.34/16_4	412474A2	AirBAT Dual (Active)	31011	Tractor	2DL
2665698.34/40_4	A128ACE2	AirBAT Dual (Active)	31011	Tractor	1DL
2666082.34/40_4	A128AE62	AirBAT Dual (Active)	31011	Tractor	2DR
0053870.46/44_2	B080D26E	TIM	31012	Tractor	---
1458594.34/48_2	C09641A2	AirBAT Dual (Active)	31012	Tractor	2DR
1459106.34/48_2	C09643A2	AirBAT Dual (Active)	31012	Tractor	1DL
1540962.34/50_2	C8978362	AirBAT Dual (Active)	31012	Tractor	1DR
2664354.34/40_4	A128A7A2	AirBAT Dual (Active)	31012	Tractor	2DL
0054894.46/44_2	B080D66E	TIM	31013	Tractor	---
1482978.34/49_2	C496A0E2	AirBAT Dual (Active)	31013	Tractor	1DR
1483234.34/49_2	C496A1E2	AirBAT Dual (Active)	31013	Tractor	2DL
1483938.34/49_2	C496A4A2	AirBAT Dual (Active)	31013	Tractor	2DR
1484194.34/49_2	C496A5A2	AirBAT Dual (Active)	31013	Tractor	1DL
0054446.46/44_2	B080D4AE	TIM	31014	Tractor	---

Filter Criteria

Order By – Sorts the Information in the Output by Unit ID, Tag ID or Serial Number.

Section 10 Configuration Menus & Edit Readings

10A) Manage Sites

This configuration menu is used to add physical sites (typically different shop locations within the same company) to Webbat. This is primarily beneficial to track vehicles that normally are maintained by one shop and thus is most commonly utilized with a gate reader system but could be used with a Tractor Interface Module or Handbat system as well.

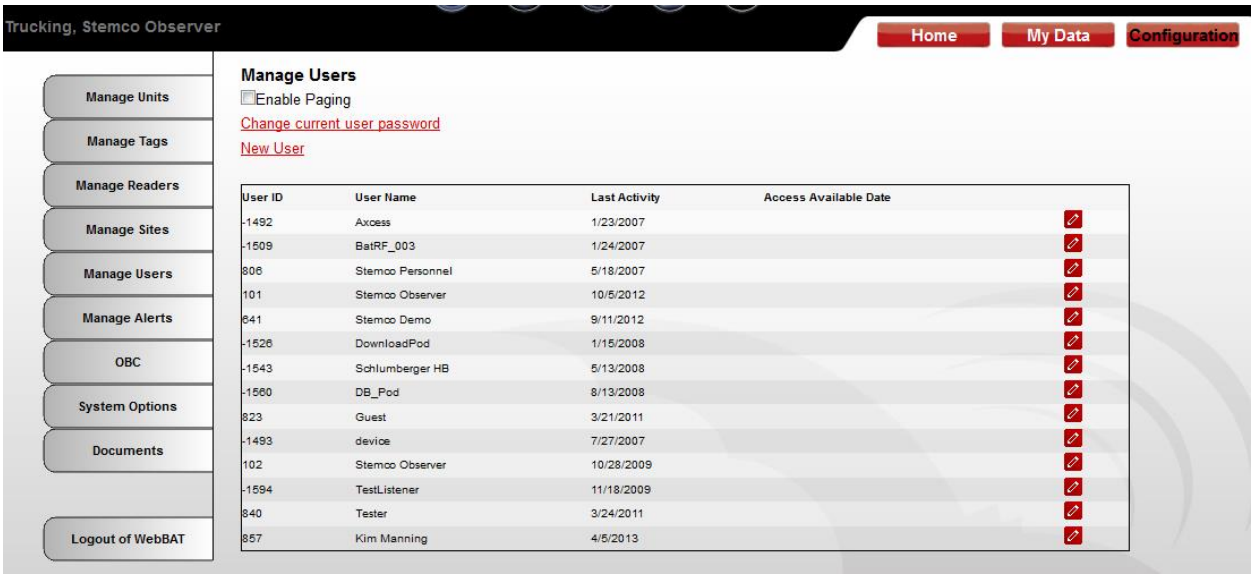
10B) Manage Users

Webbat allows multiple users to have their own login credentials.

10B1) Add a new user

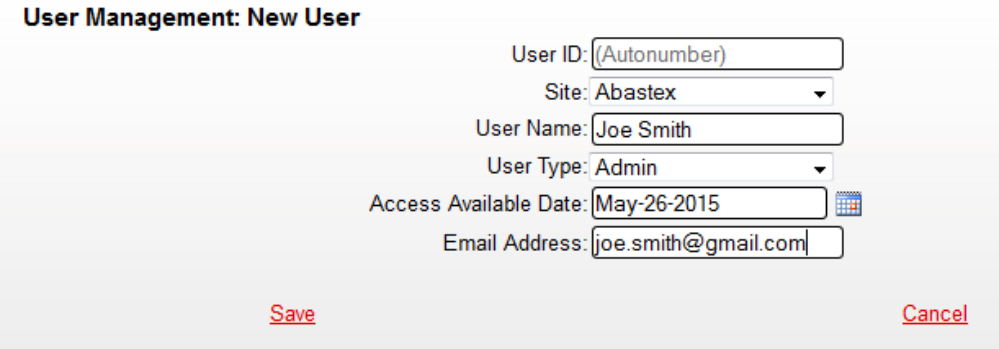
Follow these simple steps to add a new user.

1) Click on the **Configuration** Tab on the top-right of the screen
2) Click on **Manger Users** on the left hand menu
3) Click on the **New User** Link shown in red



4) Select the **Site** from the pull down list.

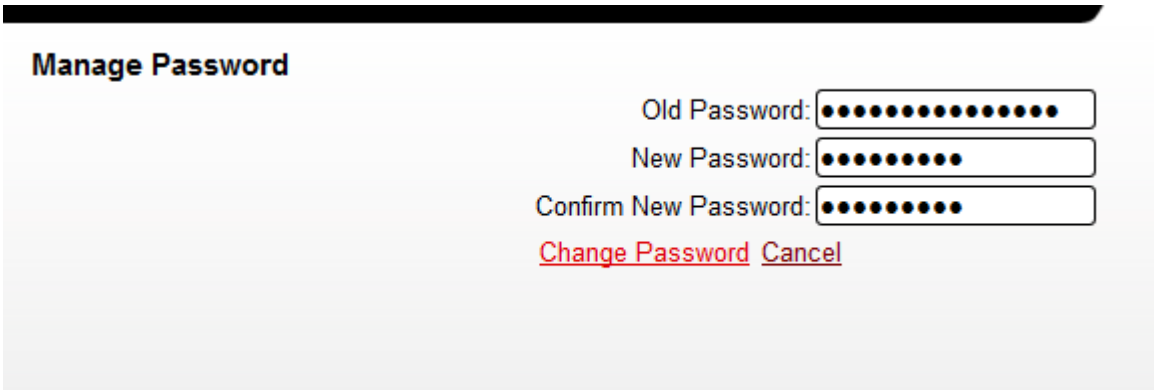
5) Enter the **User's Name**
6) Select the **User Type** from the pull down list (Admin – full access including edits; Device/Program – Machine to machine interface account; Power User – Some edit capability; User – Read Only, can't make any changes).
7) Select **Access Available Date** (usually today's date).
8) Enter the user's **Email Address**
9) Click on the red **Save** link to add the new user. This will cause an email to be sent to the email address listed with the new users Webbat login credentials (Company ID, User ID, Password).



10B2) Change the logged in users password

As the initial password that is automatically generated is difficult to remember, most users change their password. Follow these simple steps to change the logged in user's password.

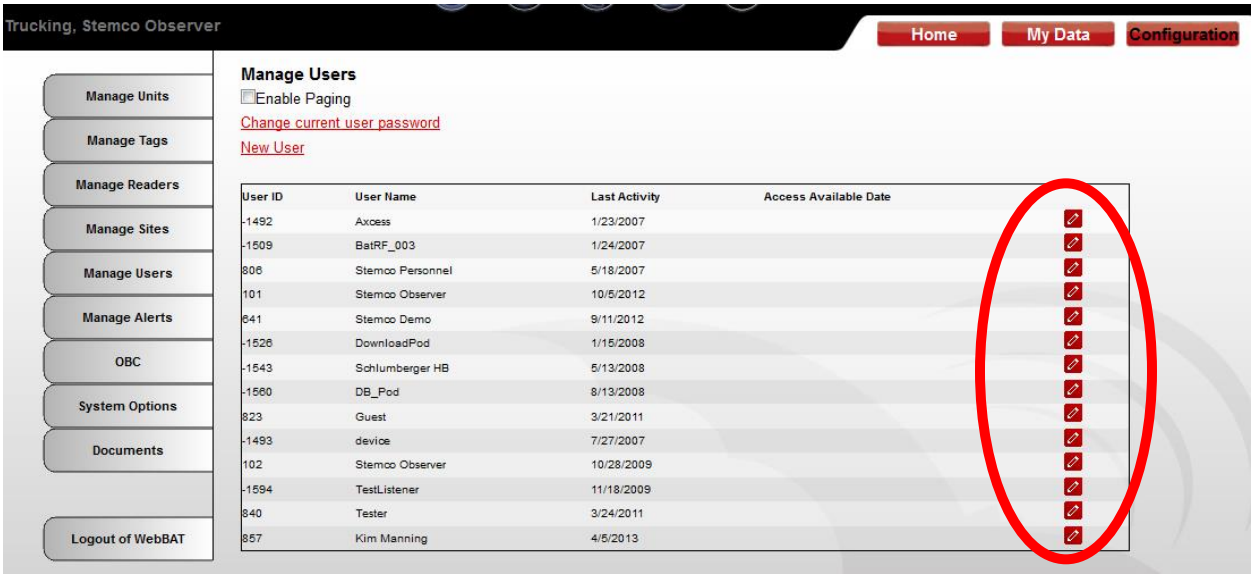
1) Click on the **Configuration** Tab on the top-right of the screen
2) Hover over **Manger Users** on the left hand menu (which causes the Change Password menu to appear); slide the pointer to the right and click on **Change Password**
3) Enter the **New Password** and the **Confirm New Password** and click on the **Change Password** to save. The system may automatically log you out; you can log back in with the newly created password.



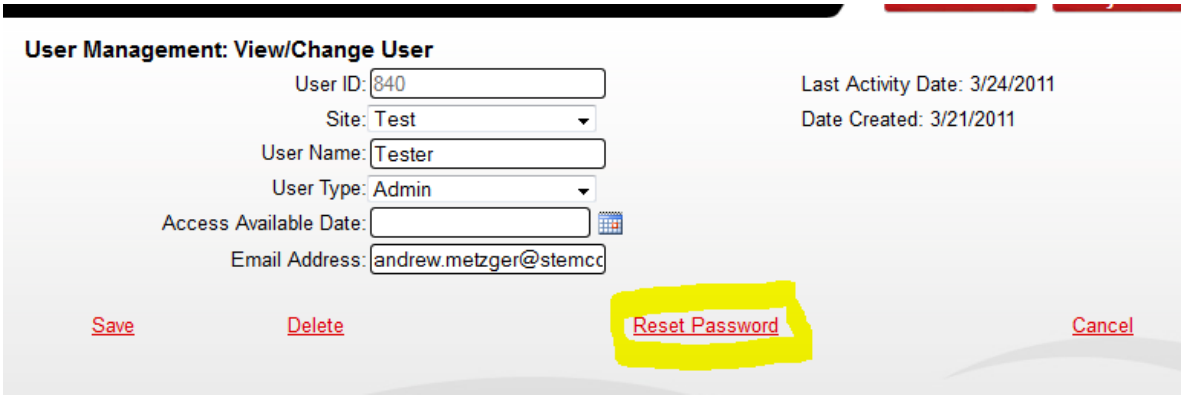
10B3) Reset any users password/Delete User – Admin level user only

As an admin level user you can reset a password for a user that has misplaced theirs or delete an account for an employee that no longer works at your company. Follow these simple steps to reset any users password.

1) Click on the **Configuration** Tab on the top-right of the screen
2) Click on the **Manger Users** Tab on the left hand menu
3) Select the Pencil looking icon on the right hand side of the table.



4) Click on the Pencil looking icon on the row next to the name desired to reset.
5) Select **Reset Password**
6) Select the **Delete** Red link to remove this users login account from Webbat permanently. Caution – Do not delete machine accounts (user ids that are a negative number)

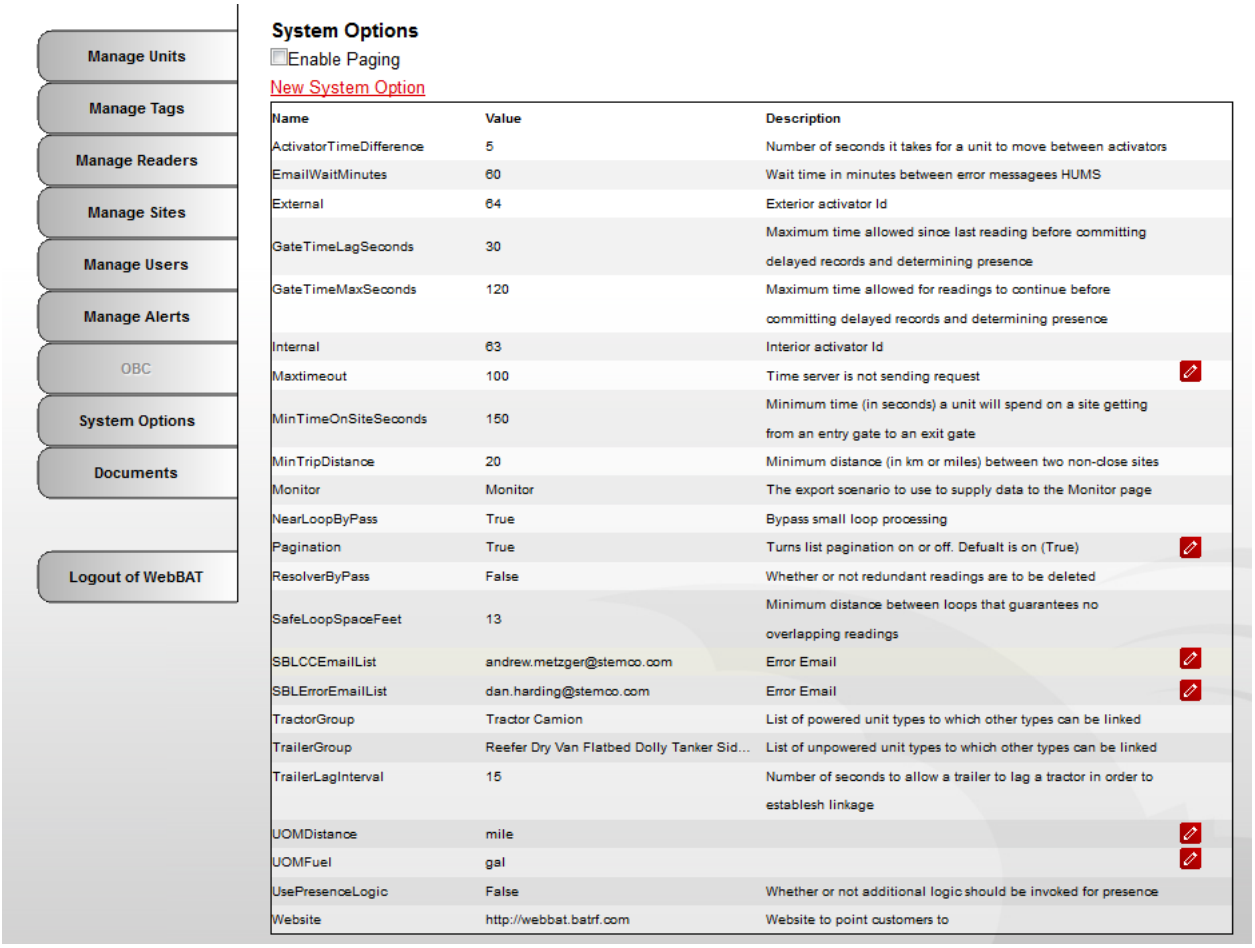


10C) Manage Alerts

This menu was created for future functionality that is currently not operational.

10D) System Options

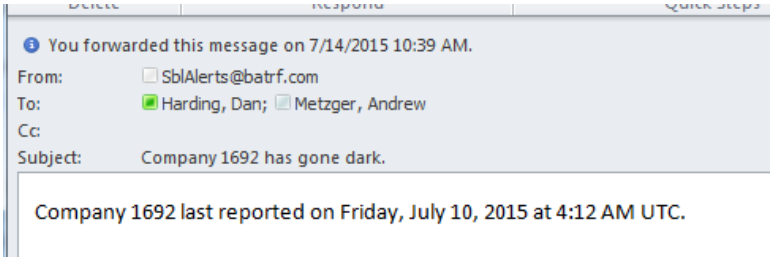
This menu controls internal functions and parameters. Edits should not be made to anything shown under this menu unless directed to do so by Stemco personnel. Some of the key parameters are explained below.



Name	Value	Description
ActivatorTimeDifference	5	Number of seconds it takes for a unit to move between activators
EmailWaitMinutes	60	Wait time in minutes between error messagees HUMS
External	64	Exterior activator Id
GateTimeLagSeconds	30	Maximum time allowed since last reading before committing delayed records and determining presence
GateTimeMaxSeconds	120	Maximum time allowed for readings to continue before committing delayed records and determining presence
Internal	63	Interior activator Id
Maxtimeout	100	Time server is not sending request
MinTimeOnSiteSeconds	150	Minimum time (in seconds) a unit will spend on a site getting from an entry gate to an exit gate
MinTripDistance	20	Minimum distance (in km or miles) between two non-close sites
Monitor	Monitor	The export scenario to use to supply data to the Monitor page
NearLoopByPass	True	Bypass small loop processing
Pagination	True	Turns list pagination on or off. Defualt is on (True)
ResolverByPass	False	Whether or not redundant readings are to be deleted
SafeLoopSpaceFeet	13	Minimum distance between loops that guarantees no overlapping readings
SBLCCEmailList	andrew.metzger@stemco.com	Error Email
SBLErrorEmailList	dan.harding@stemco.com	Error Email
TractorGroup	Tractor Camion	List of powered unit types to which other types can be linked
TrailerGroup	Reefer Dry Van Flatbed Dolly Tanker Sid...	List of unpowered unit types to which other types can be linked
TrailerLagInterval	15	Number of seconds to allow a trailer to lag a tractor in order to establesh linkage
UOMDistance	mile	
UOMFuel	gal	
UsePresenceLogic	False	Whether or not additional logic should be invoked for presence
Website	http://webbat.batrf.com	Website to point customers to

Internal, External – These parameters apply to gate readers ONLY. The values should be set to match the actual loop ID value as transmitted by the activator in the gate reader itself. Internal is intended to mean the loop that is physically closest to the customers internal yard and external is the loop that is physically closest to the public street.

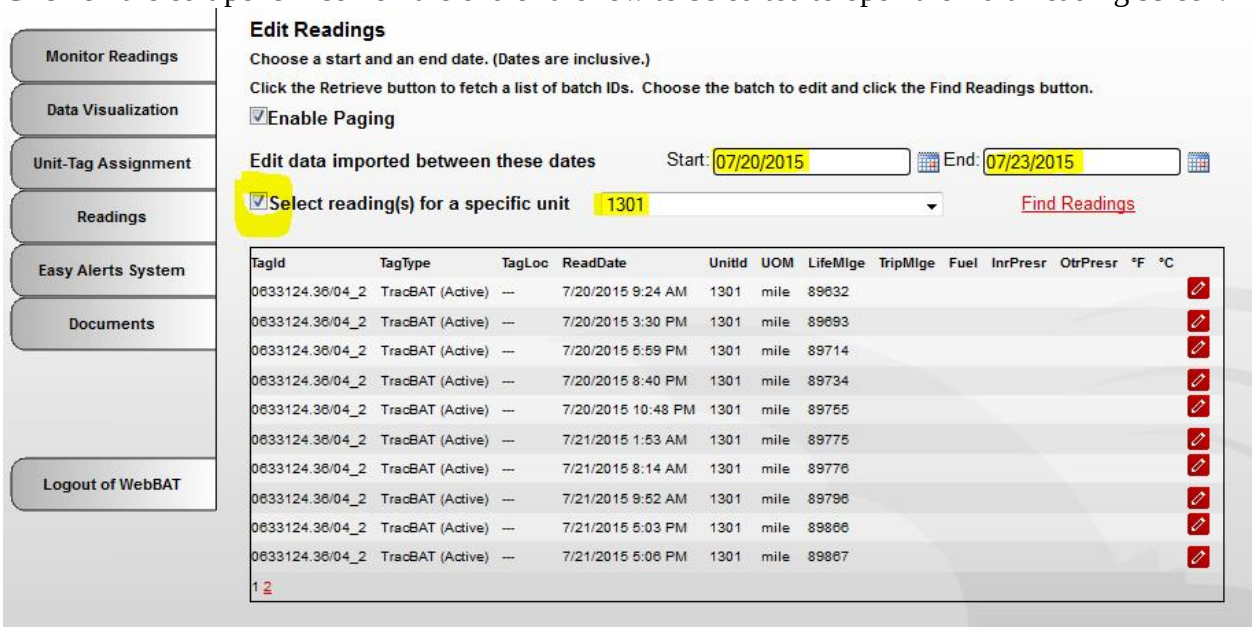
Maxtimeout, SBLCCEmailList, SBLErrorEmailList – Webbat includes an automated record data flow monitoring capability to detect outages in data flow and send an email to notify of an outage. The Maxtimeout is the trigger time in hours to send an email (difference between last record timestamp and the current server time). The two SBL parameters are the email distribution list recipients. Emails look like this



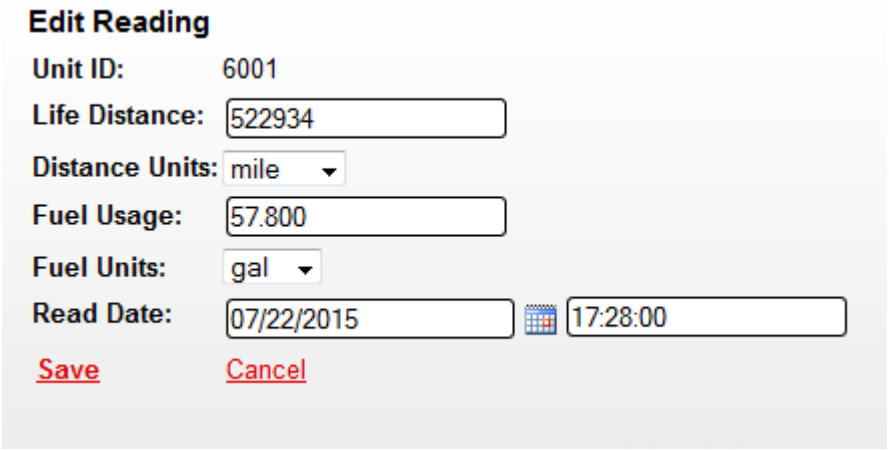
10E) Readings – Enter, Edit & Delete

Occasionally, data entry errors are made in the Handbat and are uploaded to Webbat. In this case, Webbat provides a method to modify or delete the readings to correct any data entry errors.

1) Click on the **My Data** tab on the top-right of the screen
2) Mouse over the **Readings** left menu and then click on **Edit Readings**
3) Select the **Start** and **End** date, Check the box for **Select readings for a specific unit**, pick the Unit id from the pull down list and then click Find Readings
   NOTE – Choose one vehicle over a shorter time span to allow the search and display to occur quickly (searching the entire fleet over a long time period will cause a timeout error with no results displayed).
4) Click on the edit pencil icon on the end of the row to be edited to open the Edit Reading screen.

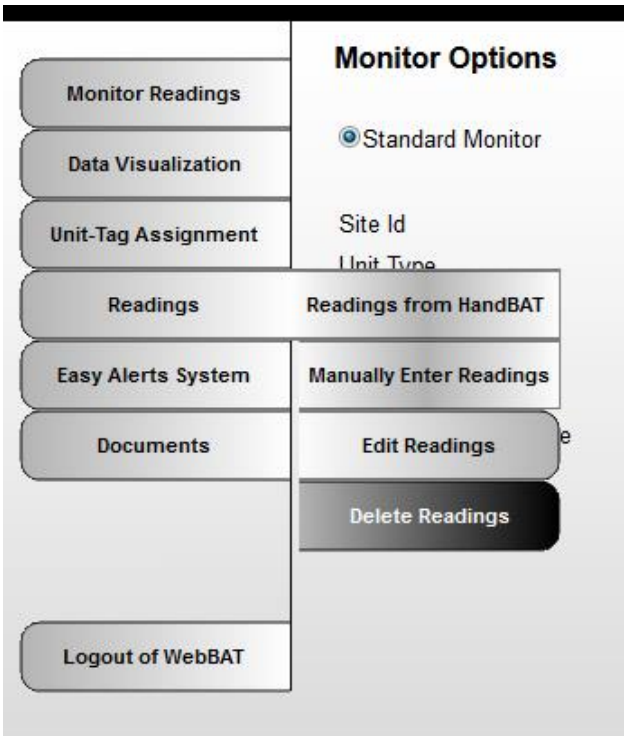


5) Modify the reading parameter that requires adjustment and click the Save link. This change will be saved in the database and REPLACE the values that were previously present for that record.

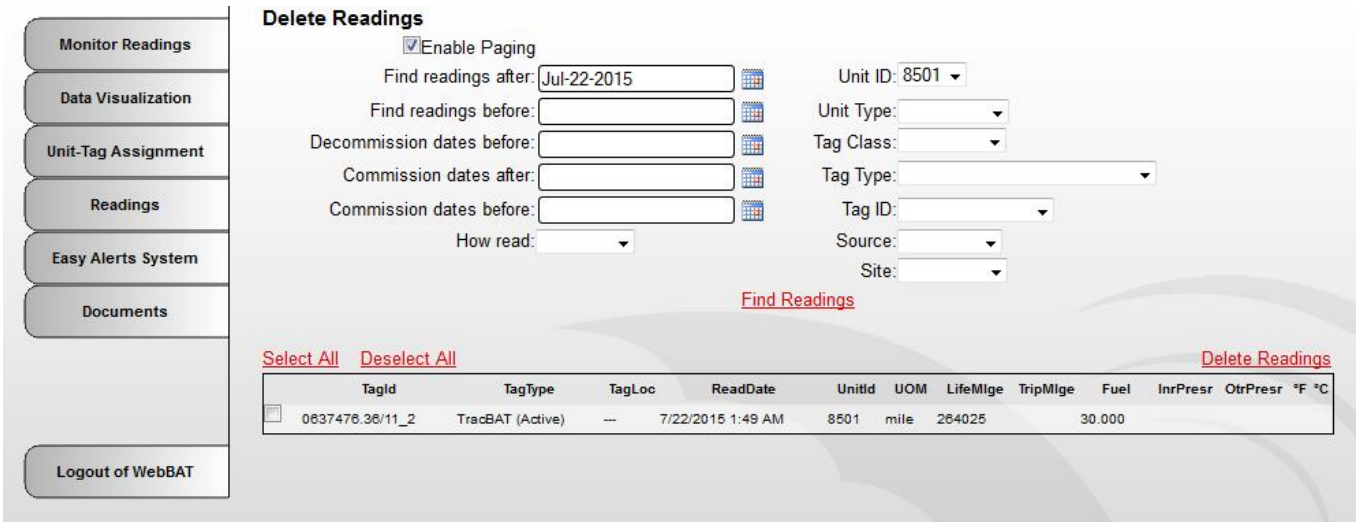


To delete a reading follow these steps.

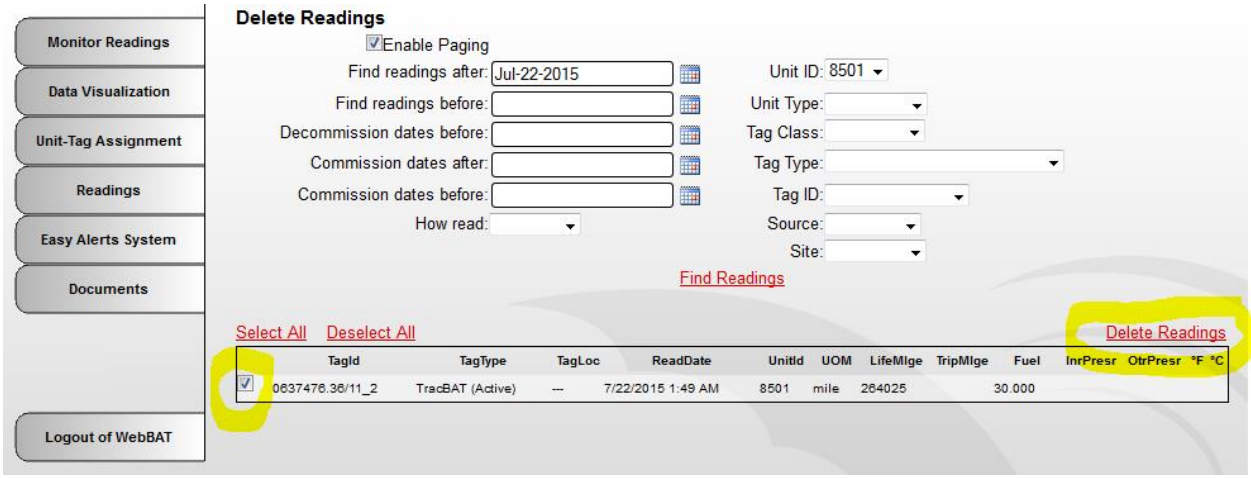
1) Click on the **My Data** tab on the top-right of the screen
2) Mouse over the **Readings** left menu and then click on **Delete Readings**



3) Select the **Find Readings After** date, pick the Unit id from the pull down list and then click Find Readings
NOTE – Choose one vehicle over a shorter time span to allow the search and display to occur quickly (searching the entire fleet over a long time period will cause a timeout error with no results displayed).



4) To permanently delete a record select the check box at the left side of the record you wish to delete and then click on the Delete Readings link.



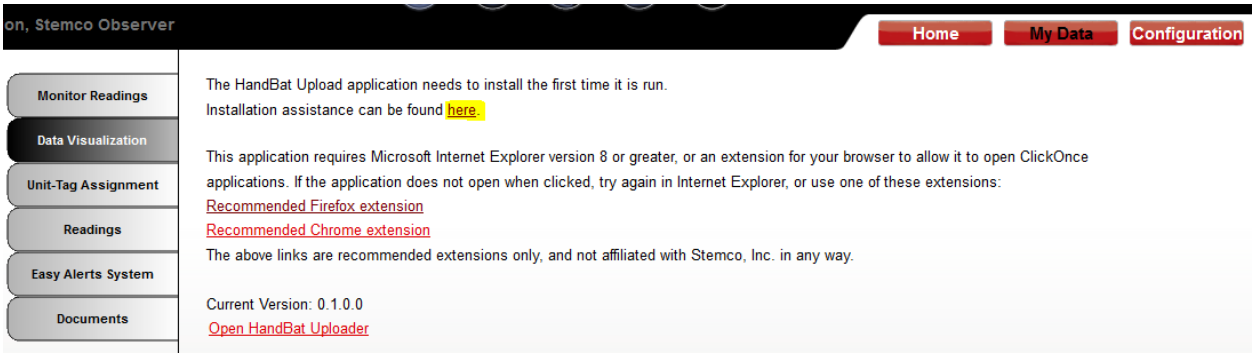
Section 11 Handbat/Download POD Uploads to Webbat

The Active Download Pod plugs into the USB port of a PC and continually monitors the area for signals from an Active HandBAT

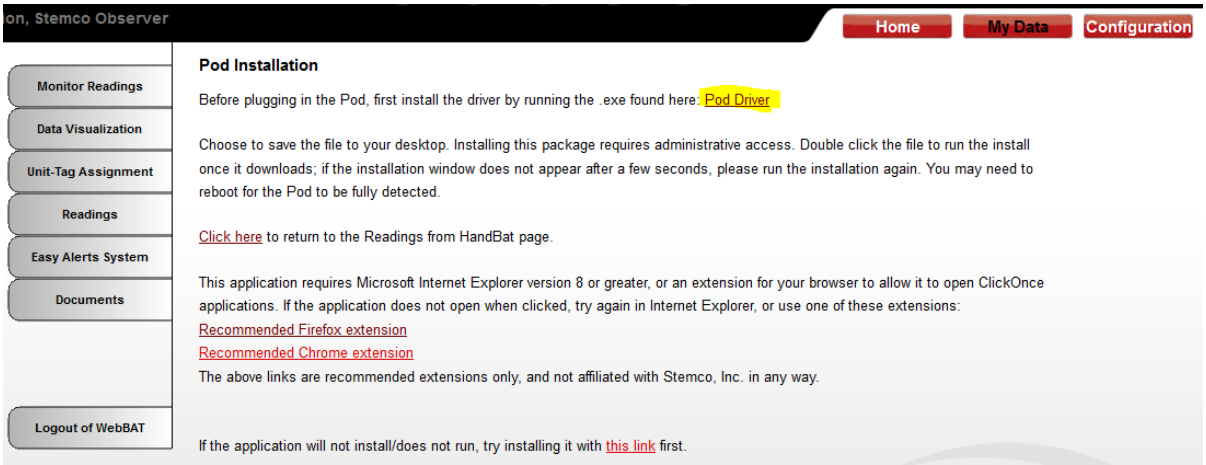
	1. **Download Pod –** USB plug

11A) Download Pod Driver Installation

The Windows POD driver must be installed before it is used for the first time. Install per the instructions on the Web site found at **My Data/Readings/Readings from HandBat**. Click the "here" link.

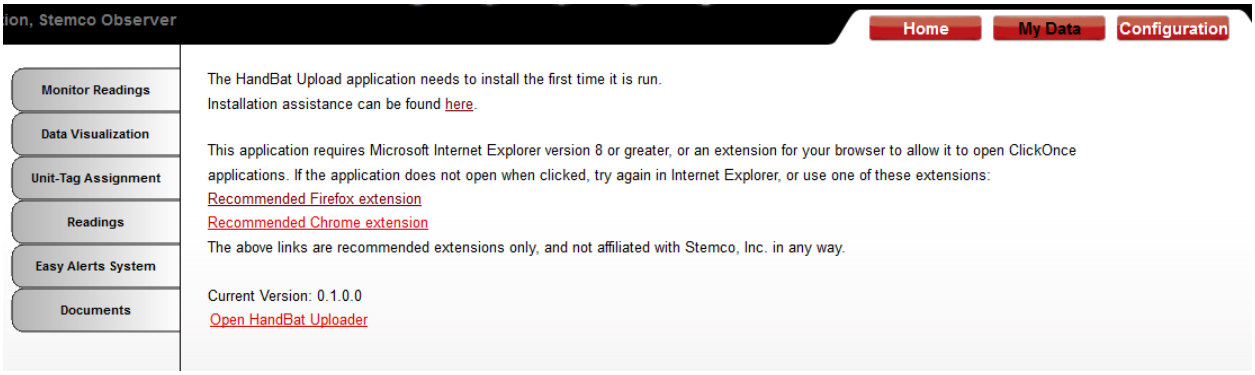


Click the "Pod Driver" link to download the driver. Save the file and then run it to install it.



11B) Firefox/Chrome Web browser Add On Extension Installation

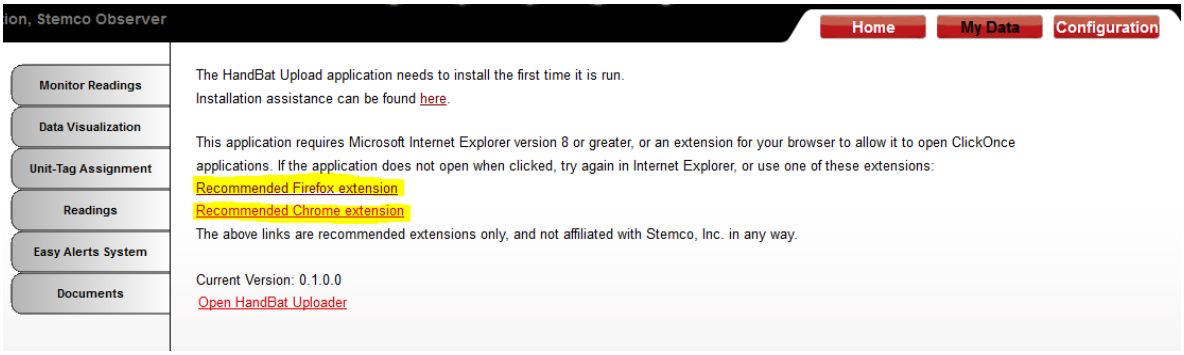
Customer's that utilize the BatRF's data manager (WebBat) can download the readings in the Handheld unit via a download pod. The pod driver must have been installed (see Section 11A) before proceeding with these instructions for how to upload the readings from the HandBat to Webbat.
In Webbat select **My Data/Readings/Readings from HandBat**



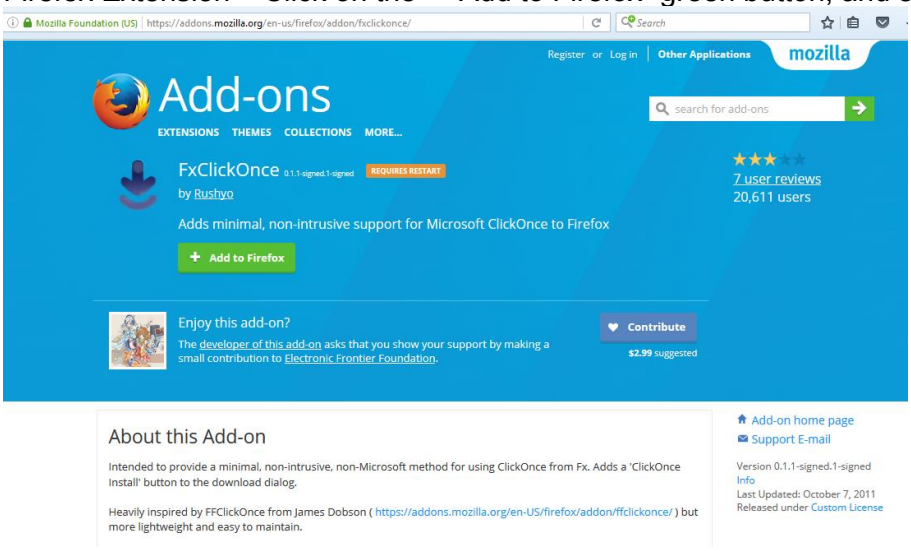
If this is the first time to perform an upload and you are using either FireFox or Chrome web browsers an extension must be added to your web browser.
(NOTE – Microsoft's Internet Explorer doesn't need any extension added)

Adding an Extension to Firefox or Chrome Web Browsers

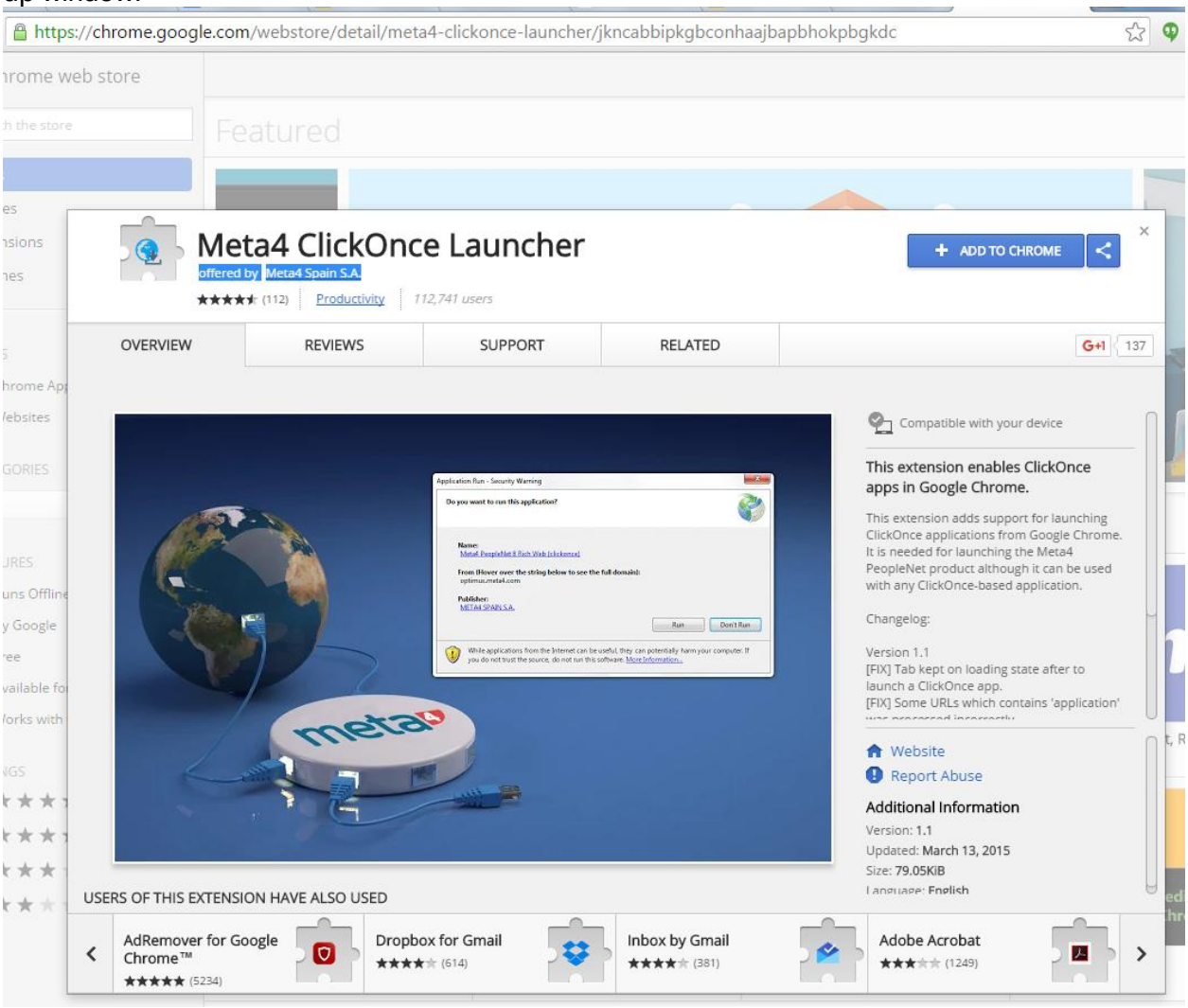
Click the **Recommended Firefox extension** link or **Recommended Chrome extension** depending on which web browser is in use.



Firefox Extension – Click on the "+ Add to Firefox" green button, and select "Install" on the pop up window.



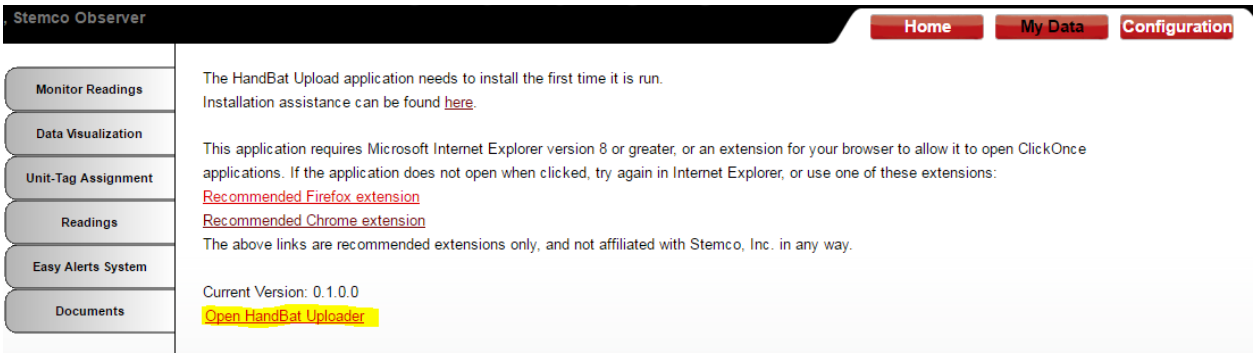
Chrome Extension – Click on the “+ Add to Chrome” blue button, and select “Add Extension” on the pop up window.



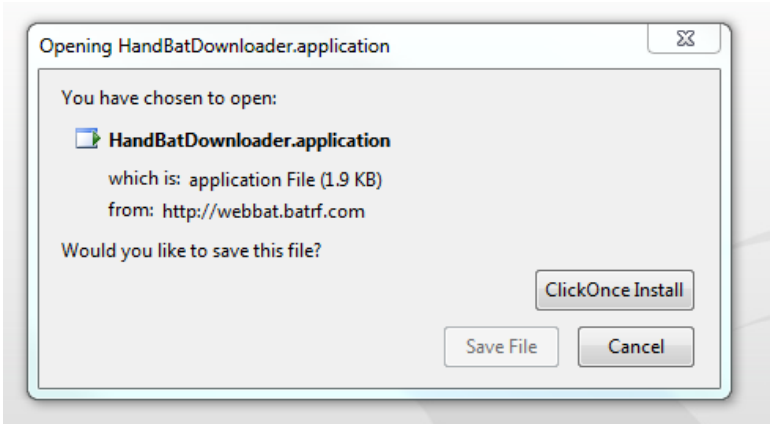
11C) Handbat/Download POD Upload Readings to Webbat

Once you have completed the initial one time installation instructions in Section 11A and 11B the system is now ready for handbat readings to be uploaded to Webbat.

- Plug in the the download pod into a USB port on the PC
- Under **My Data/Readings/Readings from Handbat** click on the **Open Handbat Uploader** link.



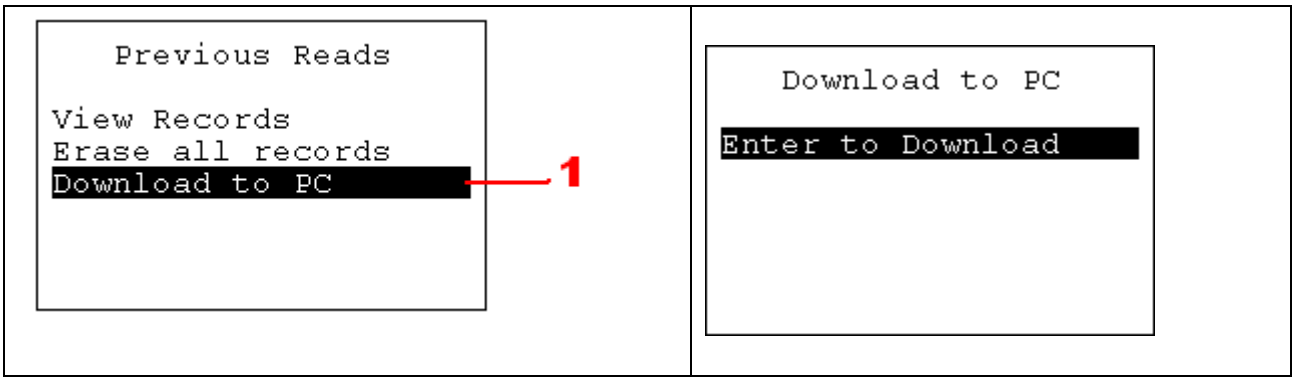
Firefox – Select “ClickOnce Install”



A popup box will appear , select the site from the pull down list that you want the readings to be upload to.

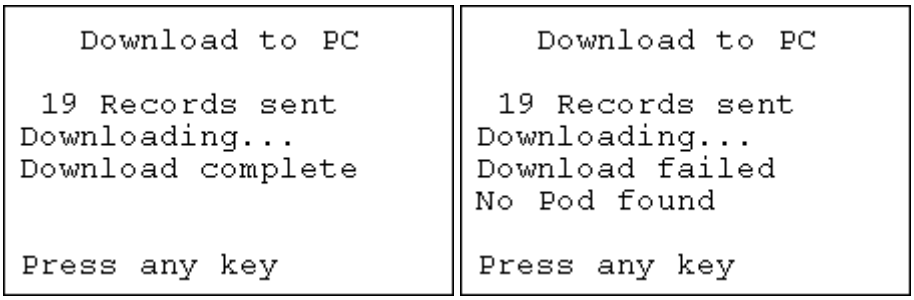
Once you have selected a site you should see a message that says “Pod is ready.” Now use the instructions below on the Handbat to upload the readings.

Using the Handbat, use the arrows to highlight **Previous Reads** on the main menu and then press **Enter**.

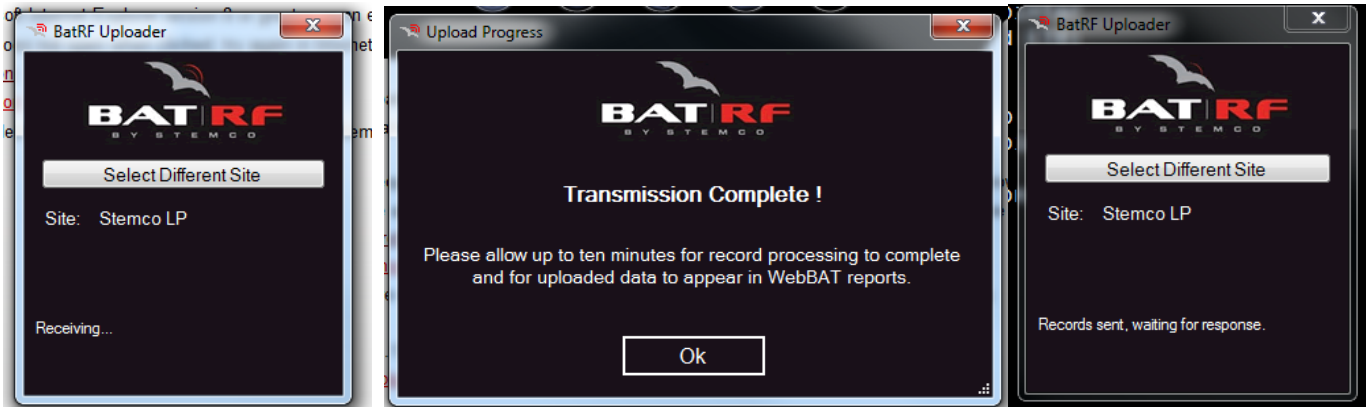


You will be given a prompt to **Enter to Download** as shown in the screen above.

To begin the download make sure you are in range of a wireless download pod connected to a PC then press **Enter**. The following screen will be shown.



If for some reason the download fails a message will be given to diagnose the problem. The following is an example of one of the diagnostic messages. This message reflects that the download pod cannot be found.



The status of "Receiving" is shown for several seconds and then a second popup window appears when the transmission to Webbat is complete. Click on the "Ok" button. The records upload time is usually less than a minute with a few minutes after that required for the storage in the appropriate database tables. The HandBAT date/time is synchronized to the PC clock on each download to keep records synchronized to local time.

Section 12 Frequently Asked Questions

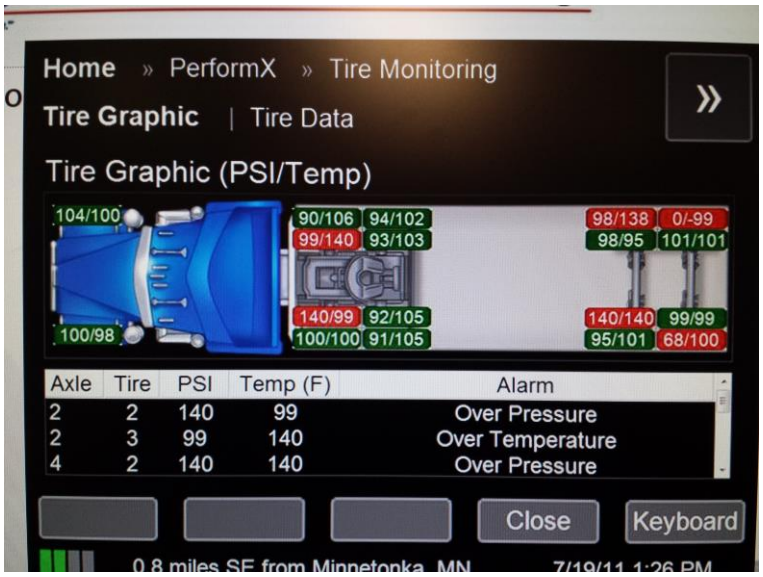
12A) What is the best method to verify all vehicle have tags assigned?

Run the **All Tags Under Management** report with the sort criteria set to **Order List by** *Unit Id.*

TagId	SerialNumber	TagType	UnitId	UnitType	TagLocation
1410658.34/42_2	A8958662	AirBAT Dual (Active)	31010	Tractor	1DR
1412194.34/42_2	A8958C62	AirBAT Dual (Active)	31010	Tractor	2DR
1418018.34/43_2	AC95A322	AirBAT Dual (Active)	31010	Tractor	1DL
1419746.34/43_2	AC95A9E2	AirBAT Dual (Active)	31010	Tractor	2DR
0054190.46/44_2	B080D3AE	TIM	31011	Tractor	---
2387746.34/16_4	41246F22	AirBAT Dual (Active)	31011	Tractor	1DR
2389154.34/16_4	412474A2	AirBAT Dual (Active)	31011	Tractor	2DL
2665698.34/40_4	A128ACE2	AirBAT Dual (Active)	31011	Tractor	1DL
2666082.34/40_4	A128AE62	AirBAT Dual (Active)	31011	Tractor	2DR
0053870.46/44_2	B080D26E	TIM	31012	Tractor	---
1458594.34/48_2	C09641A2	AirBAT Dual (Active)	31012	Tractor	2DR
1459106.34/48_2	C09643A2	AirBAT Dual (Active)	31012	Tractor	1DL
1540962.34/50_2	C8978362	AirBAT Dual (Active)	31012	Tractor	1DR
2664354.34/40_4	A128A7A2	AirBAT Dual (Active)	31012	Tractor	2DL

12B) Is Stemco's TPMS info shown in cab on the PeopleNET OBC Tire Monitoring Graphic screen?

Stemco's solution does NOT provide readings that are displayed on the PeopleNET On Board Computer (OBC) Tire Monitoring Graphic screen shown below; additionally it does NOT provide readings in PeopleNET's web portal named Fleet Manager (pfm). Instead, Stemco provides a full screen alert when a tire goes low and continues to report the lowest tire pressure on the bottom line of the screen (top line for the legacy classic display); additionally Stemco provides realtime email alerts and historical reports through its web page (Webbat).



12C) I just got an email alert from a truck # that is not in our fleet?

This can occur for one of two reasons:

1) **Truck # used to be in the fleet** - If the truck # used to be in the fleet then the reason is the on board computer was removed from that truck when it was taken out of the fleet and has been reinstalled in another truck but at the time of install the truck # inside the OBC was not reset to the new truck # so it is still reporting in under the old truck #.

2) **Truck # was never in the fleet** – When the OBC are originally installed they report in under a generic set of vehicle #s; if this is not set during the original install then the generic OBC vehicle # is reported instead of the actual truck #.

In either case 1 or 2 the solution is the same. Change the truck # inside the OBC so it will report the correct truck #. Consult the PeopleNET user manual instructions for how to change the vehicle # in the OBC.

12D) I see a TracBat mileage reading of "16777215" which isn't correct; how do I fix that?

This occurs because a factory new TracBat is set to 0 Revs/mile. While in the real world divide by zero is undefined, but in the TracBat the divide by zero case always comes up with the answer 16777215. Normally, we encourage customers to NOT run the TracBat over the gate reader loops (or read with the Handbat and upload) until AFTER they have programmed the Revs/Mileage setting in the TracBat, still from time to time it does happen.

This case is handled as a reading that needs to be deleted from the database. Follow the instructions in section 10E of this manual to delete a reading.