Application User Guide **DSE Group**

Tennant User Guide

Revision Number 3.18.0

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Introduction

The IRIS portal is a web-based application that allows users to easily monitor the daily activities of their Tennant machines. The platform supports data analysis and real time alerts tracking which can help you better understand machine usage and maintenance needs. Some of the features that you can find within the portal are:

1. Current and Home location of the machine.
2. Detailed information breakdown by hours and minutes about machine usage for the past 6 months.
3. View errors and alerts generated by the machine's sensors, such as machine relocation, low usage, charging errors, technical malfunctions, and machine maintenance.
4. Reports and Exports for data analysis purposes.

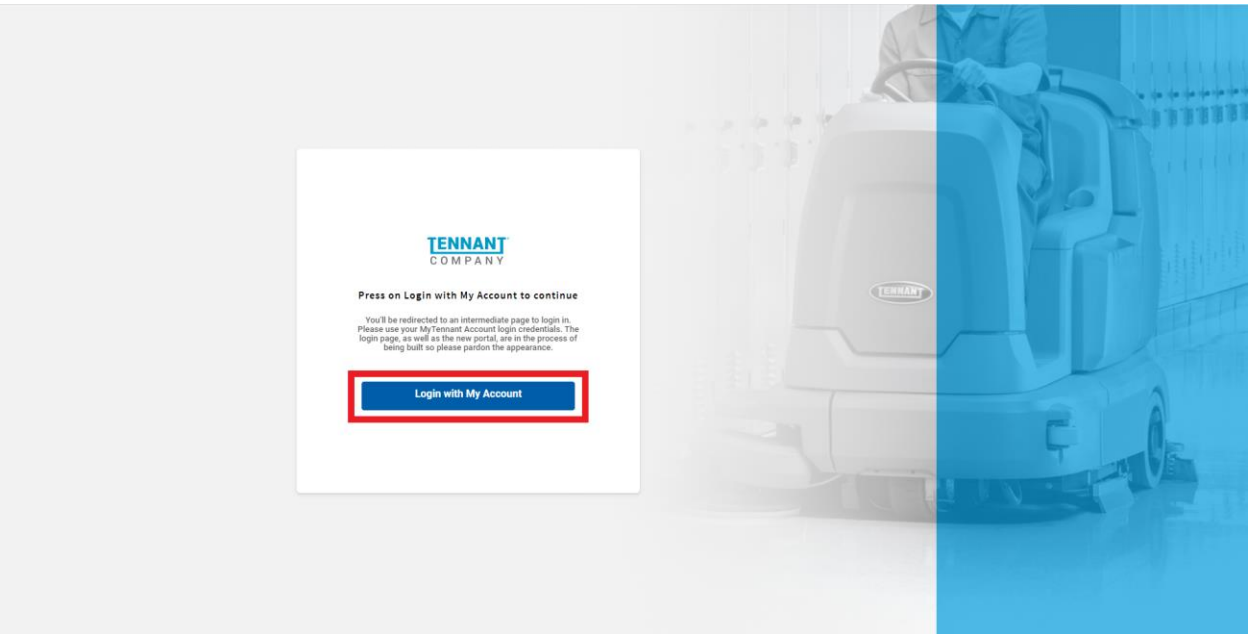
In the following sections, you will find a detailed description of each functionality that will allow you to manage and monitor your machines and drive cleaning performance It will give you complete visibility of your fleet, delivering key performance metrics and intelligent insights. This will empower you to increase efficiency, reduce the cost of cleaning, ensure cleaning consistency, proactively maintain machines, and make informed decisions to drive your cleaning operations forward.

Log in

The user can easily access the new IRIS portal by using

https://iris.tennantco.com/login

Click the **Login with My Account** button to log in.

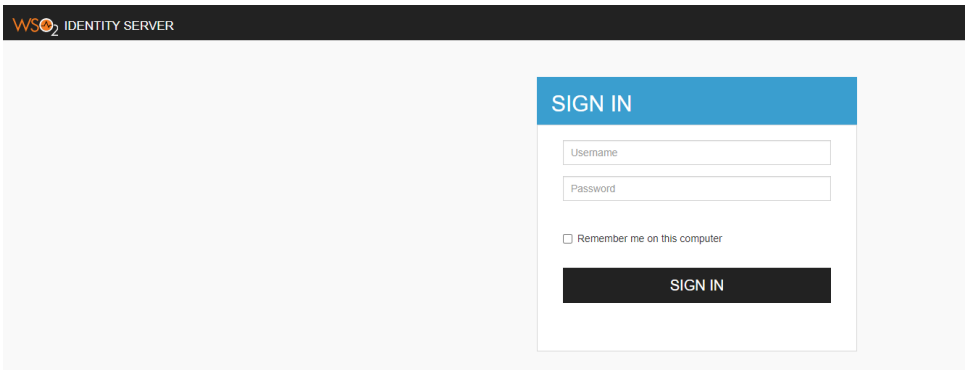


Once the user clicks the button, they will be redirected to the WSO2 Identity Server.

In the fields Username and Password, the user should enter their personal credentials for the portal.

After clicking the **SIGN IN** button the user will successfully enter the IRIS Portal.

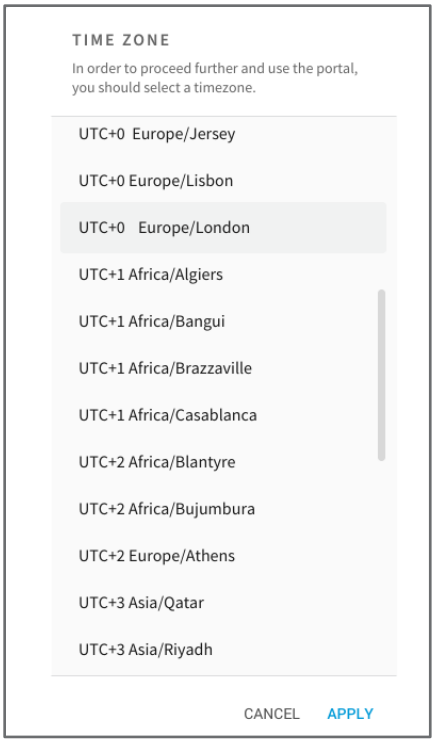
If there is an issue with the username or password, the user should visit MyTennant to reset the credentials or contact Customer Support for further assistance.



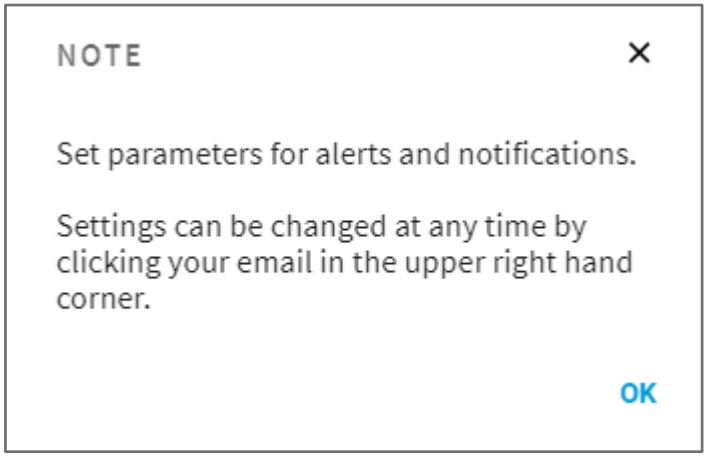
Initial Set up

Once the user is logged into the IRIS portal, they will be asked to choose their preferred Time Zone.

By clicking on the APPLY button, the user sets the Time Zone in which all information will be displayed. This can be changed thereafter through the Settings and Preferences page.



When the user clicks the APPLY button, they will be redirected to the Set Up tab in the Settings and Preferences page and the following pop-up will appear:



It is recommended that the user set preferences for alerts and notifications before exploring the portal to utilize its capabilities fully.

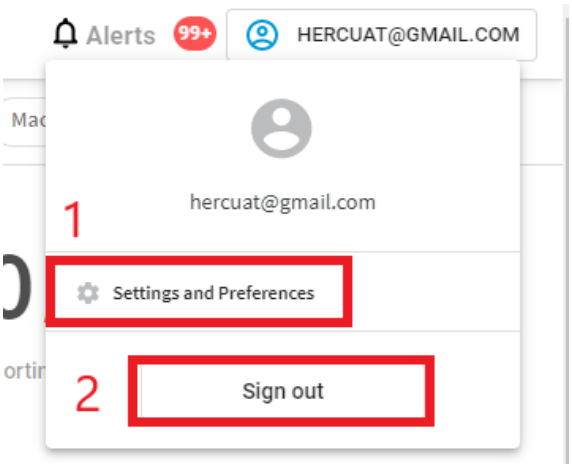
The pop up will be shown only upon the first login. For future logins - the user will be redirected to the Overview page.

Settings and Preferences

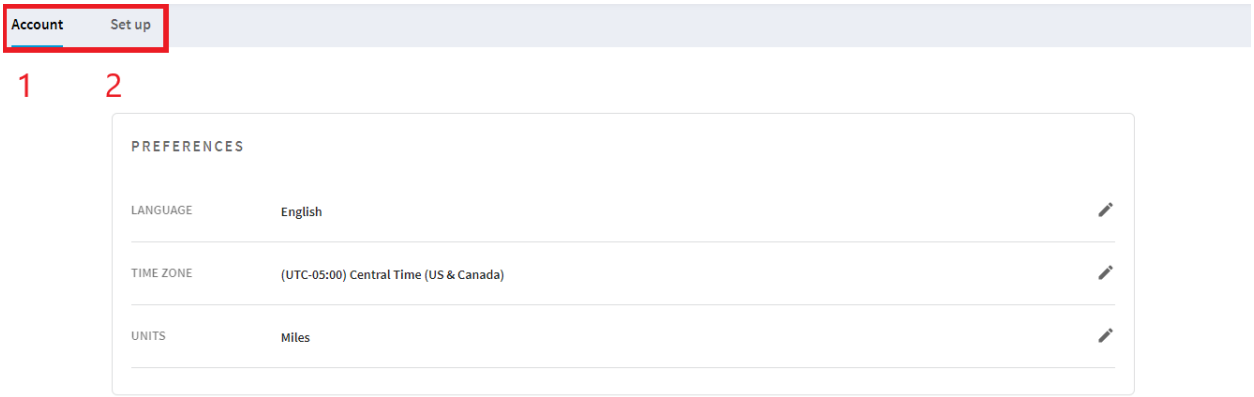
The Settings and Preferences page is where the user can set their preferred Time Zone, Language, and Units. They can also set their preferences for Critical Alerts.

Clicking on the user profile will present the following options:

1. Open user settings and preferences using the **Settings and Preferences button**.
2. Sign out using the **Sign Out** button.



Click on Settings and Preferences to view the following page:



This page contains 2 tabs:

1. **Account** - where the user can set Time and Language preferences.
2. **Set up** - where the user can set Critical Alerts preferences.

Account

The Account tab contains 3 editable fields:

1. **Language** - the user can choose the preferred language for the platform.
    a. By default, it is set to English
    b. Possible options:
        i. English
        ii. French
        iii. German
        iv. Italian
        v. Spanish
2. **Time zone** - the user can choose the preferred time zone that will be used across the platform
3. **Units** - the user can choose the preferred unit of distance that will be used across the platform
    a. Kilometers
    b. Miles

Changes for both fields can be done by pressing the button. Next, the user can either:

1. Apply changes - using the APPLY button.

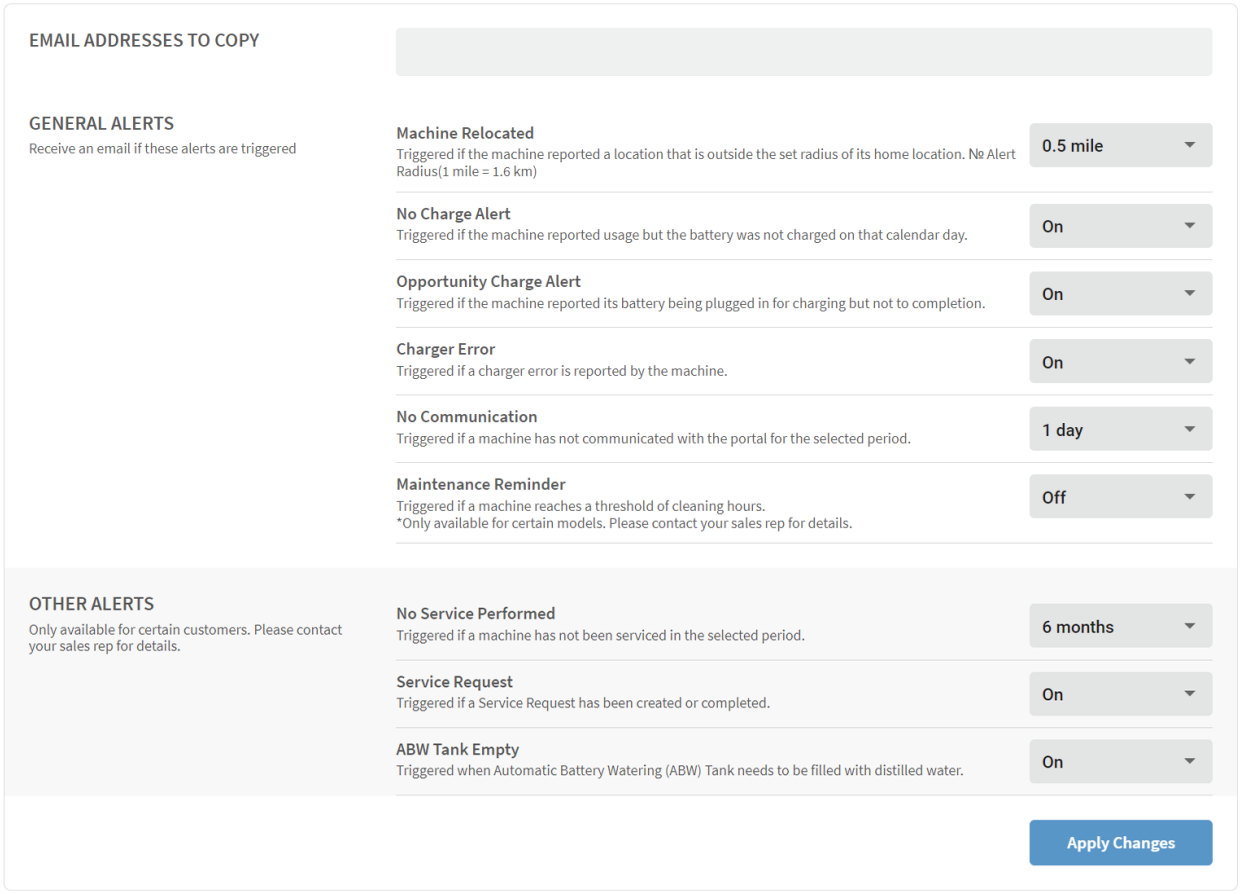
2. Discard changes - using the CANCEL button

Set Up

The Set Up tab is divided into 3 sections: Alerts, Low Usage and Reports.

Alerts section has been further divided into 2 sub-sections: General Alerts and Other Alerts.

Alerts



The Alerts section allows users to subscribe to receive Critical Alerts reports and set their personal preferences. The Alerts section is further divided into sections: General Alerts and Other Alerts. The Other Alerts section is only available for certain customers.

The user can subscribe and provide critical alerts for other people by listing their emails in the "**Email Addresses to Copy**" field.

To get a subscription for Critical Alerts, the user must set a value different from "Off".

The various alerts and their settings are described below.

General Alerts

1. **Machine Relocated** - Triggered if the machine reports a location outside of the set radius of its home location. It can be changed using the drop-down menu on the right, with the following options:
    a. Off - the user won't receive notifications for Machine Relocation

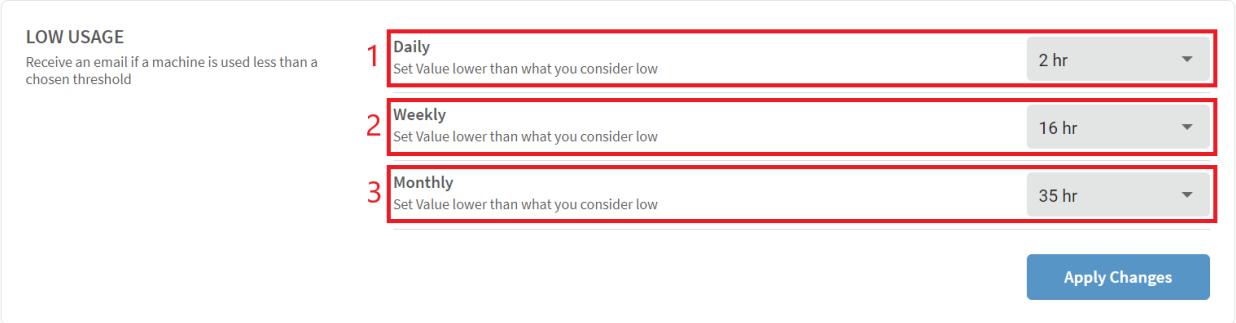
   b. 0.5 mile/km - receive notifications for Machine Relocation only when the machine has been relocated by more than 0.5 miles/km.
   c. 1 mile/km - receive notifications for Machine Relocation only when the machine has been relocated by more than 1 mile/km.
   d. 3 miles/km - receive notifications for Machine Relocation only when the machine has been relocated by more than 3 miles/km.
   e. 10 miles/km - receive notifications for Machine Relocation only when the machine has been relocated by more than 10 miles/km.
2. **No Charge Alerts** - Triggered if the machine reports usage, but the battery was not charged on that calendar day.
3. **Opportunity Charge Alert** - Triggered if the machine reports its battery being plugged in but has not completed charging.
4. **Charger Error** - Triggered if the machine reports a charger error.
5. **No Communication** - Triggered if a machine has not communicated with the portal for the selected period. It can be changed using the drop-down menu on the right, with the following options:
   a. Off - the user won't receive notifications for No Communication
   b. 1 day - receive notifications for No Communication only when the machine did not connect for 1 day.
   c. 3 days - receive notifications for No Communication only when the machine did not connect for 3 consecutive days.
   d. 5 days - receive notifications for No Communication only when the machine did not connect for 5 consecutive days.
   e. 7 days - receive notifications for No Communication only when the machine did not connect for 7 consecutive days.
6. **Maintenance Reminder** - Triggered if a machine reaches a threshold of cleaning hours. Only available for certain models. Please contact your sales rep for details.

Other Alerts

1. **No Service Performed** - Triggered if a machine has not been serviced in the selected period. Only available for certain customers. Please contact your sales rep for details. It can be changed using the drop-down menu on the right, with the following options:
   a. Off - the user won't receive notifications for No Service Performed
   b. 6 months - receive notifications for No Service Performed only when the machine was not serviced for 6 months.
   c. 9 months - receive notifications for No Service Performed only when the machine was not serviced for 9 months.
   d. 12 months - receive notifications for No Service Performed only when the machine was not serviced for 12 months.
2. **Service Request** - Triggered if a Service Request has been created or completed. Only available for certain customers. Please contact your sales rep for details.
3. **ABW Tank Empty** - Triggered when the Automatic Battery Watering (ABW) Tank needs to be filled with distilled water. Only available for certain customers. Please contact your sales rep for details.

button in the Alerts section saves all performed changes for that section. If that button is not pressed, no changes will be made.

Low Usage



The Low Usage section is where the user can set personal preferences for machine usage alerts. Low Usage Alerts are triggered if the machine is used less than the number of hours (defaults to 0 hours) that the user selected.

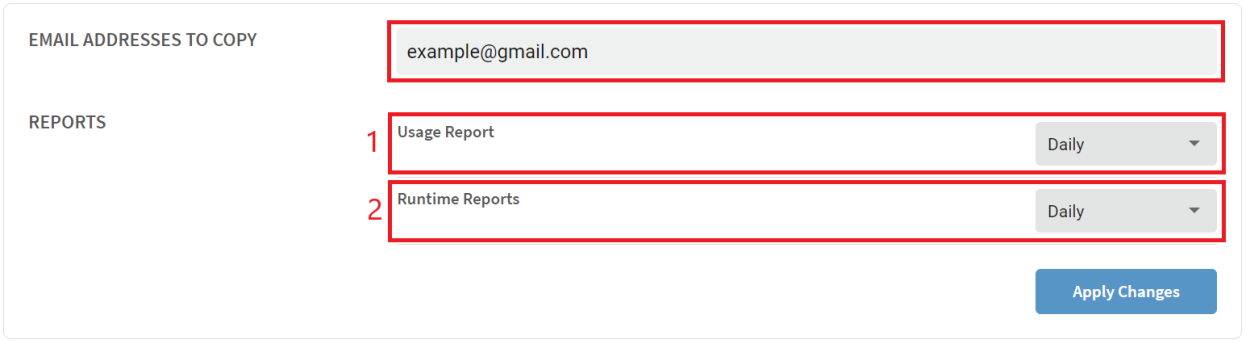
To receive Low Usage Alerts, the user must set a value different from "Off".

1. **Daily -** At the end of each day, an automatic check will be performed tracking the machine's usage. If the usage is less than the defined option, an alert will be generated. The user may select from the following options:
    a. Off - the user won't receive Low Usage Alerts daily.
    b. 0 hr - receive Low Usage Alerts if the machine has not been used during the day.
    c. 0.5 hr - receive Low Usage Alerts if the machine was used for less than 0.5 hours during the day.
    d. 1 hr - receive Low Usage Alerts if the machine was used for less than 1 hour during the day.
    e. 1.5 hr - receive Low Usage Alerts if the machine was used for less than 1.5 hours during the day.
    f. 2 hr - receive Low Usage Alerts if the machine was used for less than 2 hours during the day.
2. **Weekly -** At the end of each week, an automatic check will be performed tracking the machine's usage. If the usage is less than the defined option, an alert will be generated. The user may select from the following options:
    a. Off - the user won't receive Low Usage Alerts weekly.
    b. 0 hr - receive Low Usage Alerts if the machine has not been used during the week.
    c. 4 hr - receive Low Usage Alerts if the machine was used for less than 4 hours during the week.
    d. 8 hr - receive Low Usage Alerts if the machine was used for less than 8 hours during the week.
    e. 12 hr - receive Low Usage Alerts if the machine was used for less than 12 hours during the week.
    f. 16 hr - receive Low Usage Alerts if the machine was used for less than 16 hours during the week.

3. **Monthly -** At the end of each month, an automatic check will be performed tracking the machine's usage. If the usage is less than the defined option, an alert will be generated. The user may select from the following options:
    a. Off - the user won't receive Low Usage Alerts monthly.
    b. 0 hr - receive Low Usage Alerts if the machine has not been used during the month.
    c. 20 hr - receive Low Usage Alerts if the machine was used for less than 20 hours during the month.
    d. 25 hr - receive Low Usage Alerts if the machine was used for less than 25 hours during the month.
    e. 30 hr - receive Low Usage Alerts if the machine was used for less than 30 hours during the month.
    f. 35 hr - receive Low Usage Alerts if the machine was used for less than 35 hours during the month.

Apply Changes **button in the Low Usage section saves all performed changes for that section. If that button is not pressed, no changes will be made.**

Reports



The reports section allows the user to subscribe to receive Run Time and Usage reports by email. Reports offer a static (non-interactive) visual of the Run Time and Usage charts for all machines in the user's fleet.

The user can also subscribe others to receive reports by listing their emails in the **"Email Addresses to Copy"** field.

To get a subscription for the Run Time and Usage reports, the user must set a value different from "Off".

Report Types

1. **Usage Report** - a static visual of the Usage chart, including all machines for the period selected by the user. The user may choose between the following options:
    a. Off - the user won't receive a Usage Report by email.
    b. Daily - receive Usage Report by email every day.
2. **Run Time Report -** a static visual of the Run Time graph, including all machines for the period selected by the user. The user may choose between the following options:
    a. Off - the user won't receive a Run Time Report by email.
    b. Daily - receive a Run Time Report by email every day.
    c. Weekly - receive a Run Time Report by email every week.
    d. Monthly - receive a Run Time Report by email every month.

button in the Alerts section saves all performed changes for that section. If that button is not pressed, no changes will be made.

Quick Reference

In the portal, the user can view information about their assigned machines for the time period of 6 months. The machine information is divided into 5 tabs:

1. **Overview -** contains summary information about assigned machines.
2. **Location -** information related to the machine's current and home locations.
3. **Usage -** information about the machine's daily activities divided by category.
4. **Run Time -** information about Run Time of machines.
5. **Alerts -** information about various machine alerts.

Across the portal, the user can see two types of filters: Time and Machine Subset.

Time filters:

1. **Day** - displays data from today only.
2. **Week** - shows data for the past 7 days starting from today.
3. **Month** - shows data for the past 30 days starting from today.
4. **3 Months** - shows data for the past 90 days starting from today.
5. **6 Months** - shows data for the past 180 days starting from today.

Machine subset filters:

1. **Customer -** represents the name of the facility owner where the machine is located.
2. **Site -** represents the Site with which the machine is associated.
3. **Region -** represents the Region with which the machine is associated.
4. **Model -** represents the Model of that machine.
5. **Machine ID -** equal to the machine's unique Serial Number.
6. **Cleaning Hour Meter -** shows the total number of hours that the machine was cleaning.

Filter functionality

1. All filters **support multiple values filtering** (more than 1 option can be selected).
2. All filters **have a built-in search by text functionality**. After entering two symbols, the search will automatically show the results containing those two symbols.
3. When more than one filter is applied, those on the **left have higher priority to those on the right**. Filter logic is “from left to right”.
    i. **Example 1** If Machine ID is used to filter the data and then the user filters by Customer - the Machine ID will be cleared, and the user will see only the Customer filtered data. From that point, the user can filter again by Machine ID, and then both filters will be applied.
    ii. **Example 2** - If Group is used to filter the data and then the user filters by Customer - the filtering selection would be kept because the filter hierarchy (from left to right) is followed. If the user applies a filter for Type - the Group filter will remain (since it is on the left from Type), but the Customer filter will be deleted (on the right).
4. When using filters on multiple columns, the best approach is to apply them from left to right to follow the filter hierarchy.
5. Use the  button to clear all applied filters.

All tables have the following attributes:

The user can navigate through the list of machines using ‹ › and if a column is sortable, it will be marked with an arrow.

Export information

In The IRIS portal the user can export (download) a CSV file with specific information from selected devices. Each page contains its own parameters, but all share the same process. The user can browse across the portal while the requested exports are loading.

Step 1: Choose the “Export CSV” button from above the info table.

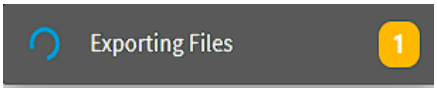
Apply filters beforehand to define which machines to get information from. Otherwise, this will export information for the user’s entire fleet.

Step 2: Choose a category or particular events to export by clicking on the checkboxes. Then press “Start Export”. The requested export starts to generate, and the export modal will minimize.

If the user checks none of the boxes, the default options will be used which include Machine ID, Model, and Production Date.

Step 3: The export modal minimizes to the bottom right corner as a button entitled: “Export files”. The user can click on it to open the Export Overview modal. The number of requested files is displayed in the yellow/orange badge. The export modal is draggable allowing users to move it around the screen for ease of use.

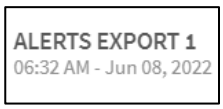
When the export request is in progress, a spinner will appear.

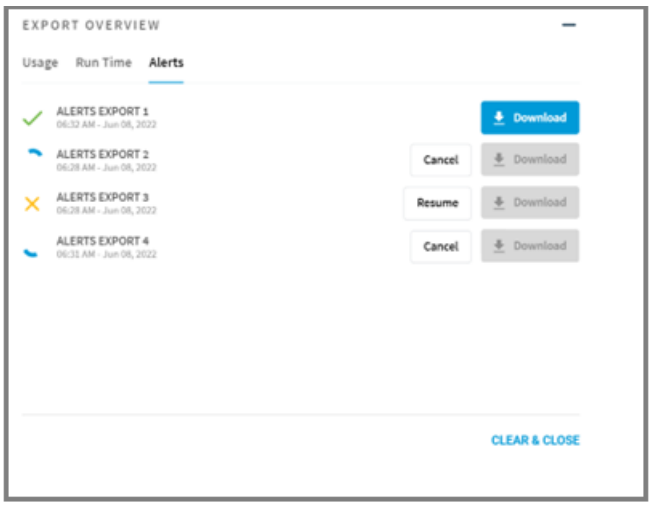


When the requested exports are ready for download, the spinner will disappear.

Step 4: The list of requested exports can be viewed in the opened modal. The modal has tabs to organize the exports

Each requested file is named for the export type and has a date and time based on the user's time zone.





When the requested file is ready for download

- The icon visualizing this state is: ✓
- The  button is active

    - By clicking on it, the user can download the requested file

While the requested file is being generated

- The icon visualizing this state is:
- The  button is inactive

- The  button is active

    - By clicking on it the request file is canceled. It can be resumed, see below

When the user wants to resume a canceled export

- The icon visualizing this state is: ✕

- The  button is inactive
- The button is active
    - By clicking on it the requested export is resumed

When a system error has caused an export to fail

- The icon visualizing this state is: 

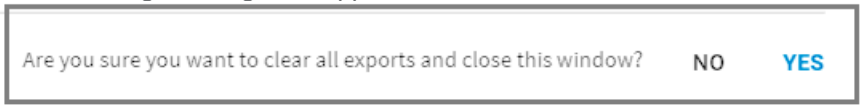
Step 5: Working with the modal

The user can minimize the modal and continue to work across the portal

- The minimize  button is in the top right corner of the export window.

If the user wants to close & clear the requested file(s) for the current session

- The user can click the **CLEAR & CLOSE** button
- The following message will appear:



    - Yes: All requested exports will be cleared, and the modal will close
    - No: The modal will remain open

Exported Files

Key Information:

- The exported file is always in CSV format.
- Each event will be represented by a new row within the export.
- For IC (internal combustion) machines - only one row will be displayed, since only total values are supported for these machines.
- For IC and Gen 1 machines when there is an ec-H20 event, the column Start Date will be empty, with only a “-” (dash).
- If the machines have not reported any events for the selected period of time - the export will appear blank.

If you are viewing CSV files for languages other than English, you may need to follow these steps to ensure the data is displayed correctly:
Open Excel → Go to the Data tab → Choose From Text/CSV → Select File → Click on Import → Ensure the File origin “650001 : Unicode (UTF-8)” is chosen → Click Load

Different types of machines across the portal

Gen 1 machines:

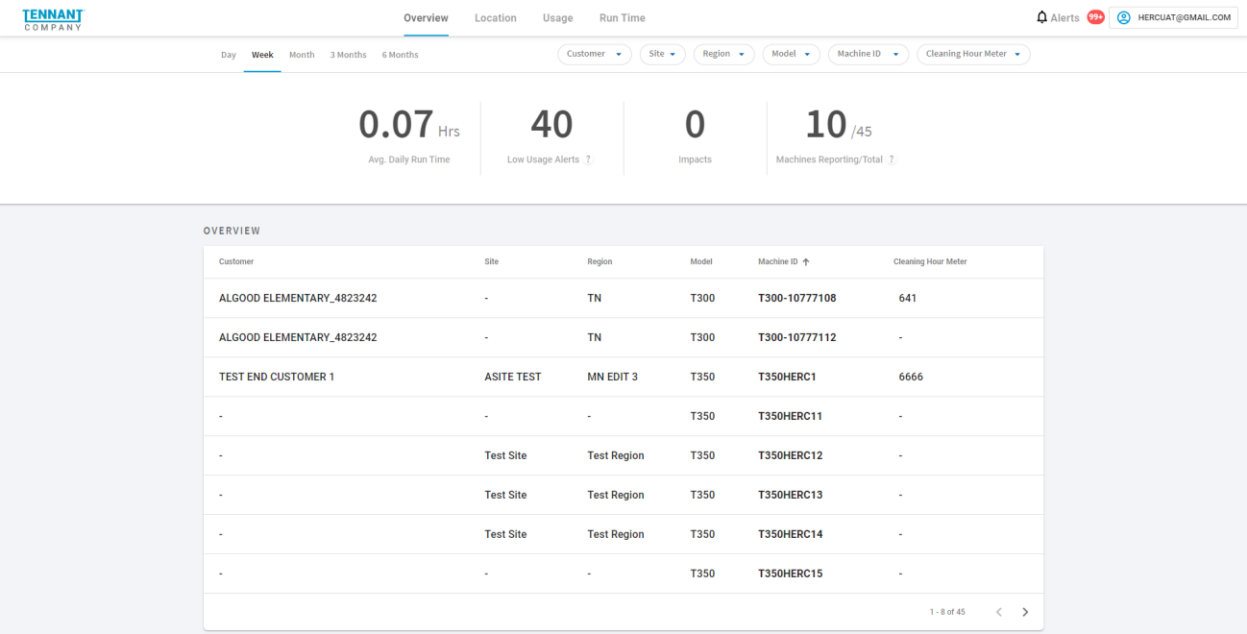
1st generation of Tennant Connect Devices that only communicate with the Iris portal once a day. Devices purchased prior to 2021 most likely fall into this category. These machines provide limited functionality such as location tracking accuracy within 1 mile, limited hour meter tracking, and limited proof of performance data.

Gen 2 machines:

Tennant IoT enabled devices with more features that communicate with the Iris portal up to 4 times a day. They provide enhanced capabilities such as: improved location accuracy to within 60 feet, detailed proof-of-performance reporting, and more accurate hour meter tracking.

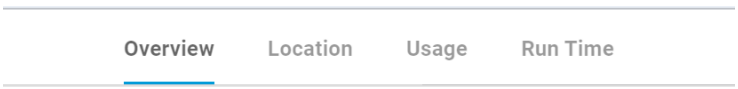
Overview

The Overview is the default page when a user logs in to the IRIS portal. This is the page where the user can get a general overview of their fleet of machines.



Navigation Bar

The user can easily navigate through portal pages using the Navigation bar. A blue line will highlight the current selection.



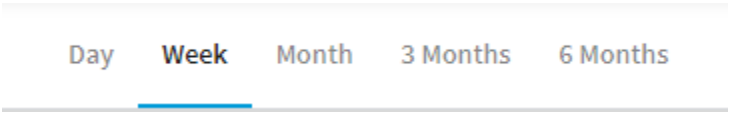
Alerts Notifications

The bell icon and counter represent the number of unread alerts. By clicking on it, the user is redirected to the Alerts page.

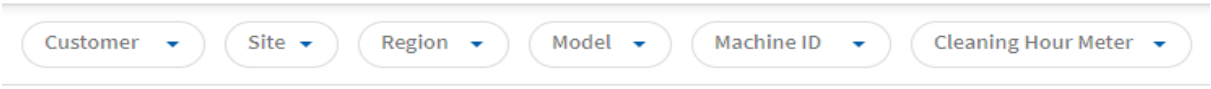
Filters

Filters can be used to drill down to different subsets of data based on time periods and machine parameters.

Use the **Time subset** to filter the data within both the Summary section and Overview table by:



Use the **Machine subset** to filter the data within the Summary section and Overview table by:



All applied Filters (Time and Machines) will affect the Data Summary and the Overview table.

Data Summary

From this section, the user can get summarized information about their machine fleet utilization and status. The data within the summary is structured in 4 different sections:

1. **Avg. Daily Run Time** - represents the average daily run time for the user's machines during the selected period. Clicking on this number will redirect them to the Run Time page with the applied

filters saved. This metric is not available for a single day therefore it will be shown as "-" when the day filter is applied.

2. **Low Usage Alerts** - represents the number of generated daily, weekly, and monthly "Low Usage" alerts for the selected period. Low Usage Alerts are triggered if the machine is used less than the user selected number of hours (defaults to 0 hours). Low Usage alerts are configurable from the Set up tab in Settings and Preferences. Clicking on this number will redirect the user to the Alerts page with the applied filters saved and an added filter for the Alert Type: "Low Usage".

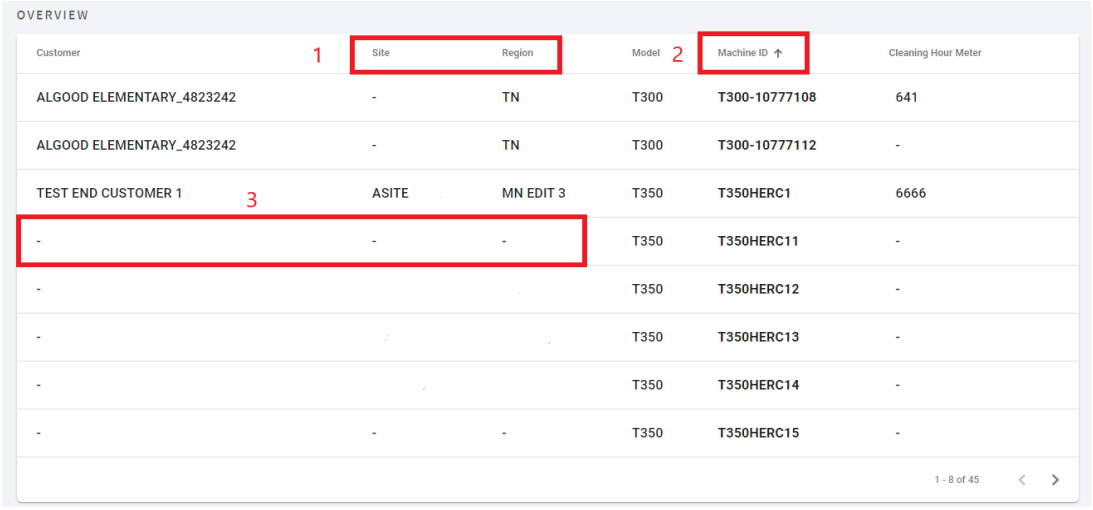
3. **Impacts** - represents the number of reported "Impact Detected" alerts. **Currently it is disabled from the portal but will be coming soon.**

4. **Machine Reporting/Total** - represents the ratio of machines reporting (uploaded data to the portal) at least once in the time period selected (day, week, month, etc.) over the total Iris-enabled machines. Clicking on this number will redirect the user to the Location page with the applied filters saved.

Overview Table

The Overview table contains a list of all machines that the user has access to. Machines are separated into sets of 8 per page, where each row represents a specific machine. Clicking on a row will redirect the user to a Single Machine View with the following information:

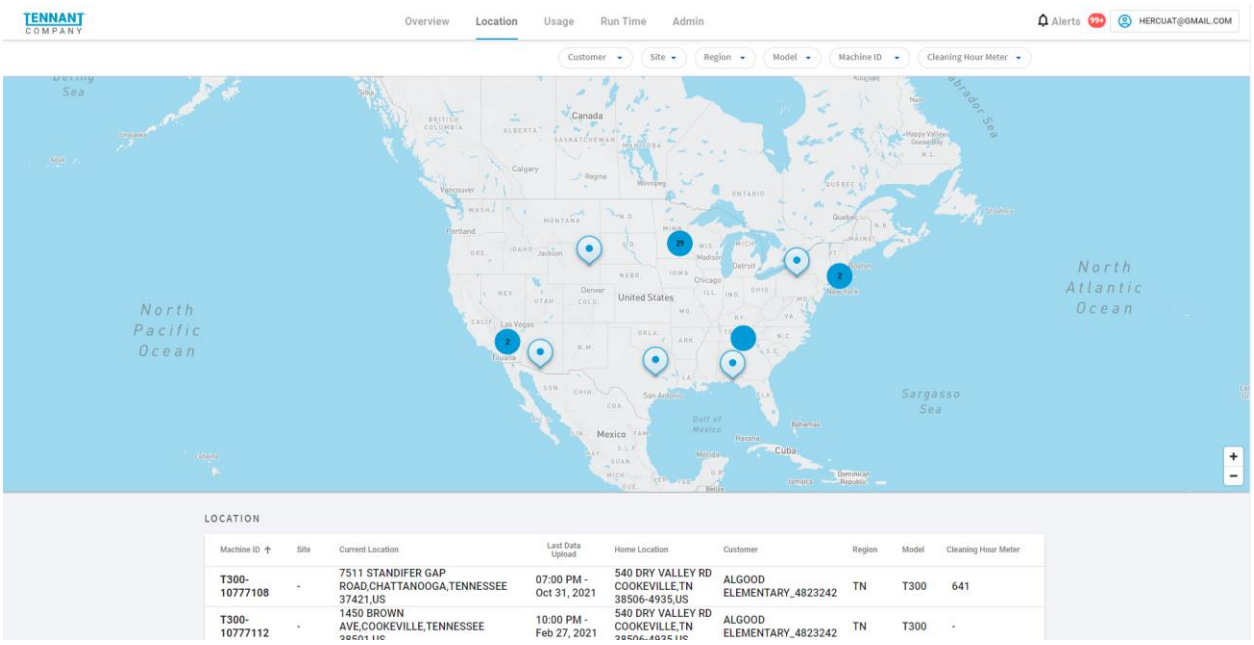
1. **Customer** - represents the name of the facility owner where the machine is located.
2. **Site** - represents the Site with which the machine is associated.
3. **Region** - represents the Region with which the machine is associated.
4. **Model** - represents the Model of that machine.
5. **Machine ID** - equal to the machine's unique Serial Number.
6. **Cleaning Hour Meter** - shows the total number of hours the machine was performing cleaning actions (Scrubbing, Sweeping, Burnishing).



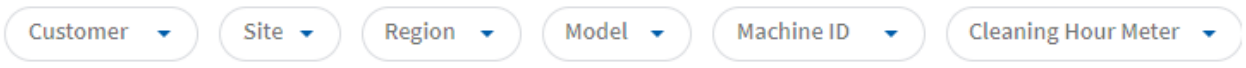
1. **Each machine can only be associated with one Site and Region. Those parameters may be updated by Tennant's support team if needed.**
2. **Each of the columns within the table may be used to sort the list in ascending or descending order. By default, the list is sorted ascending by Machine ID.**
3. **If there is missing data in the table, it would be displayed as "- "**

Location

In the Location tab, the user can get a real time view of the Machine's Location displayed on the Map. More detailed information about their machines is available in the Location table.



Filters

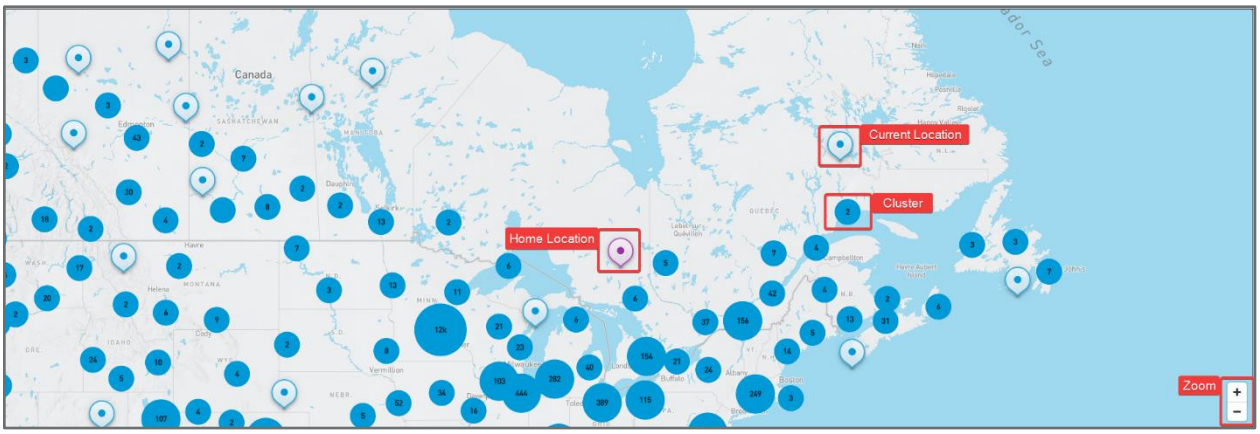


By using the Machine subset, the user may filter the data within the Map and the Location table by:

Filtering is available for both the Map and the data table. Once a filter is applied, it will change the data in both sections.

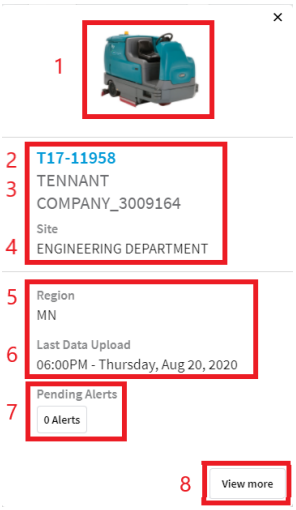
Location Map

From the map, the user can see every machine's current location. For machine's that have not reported a current location yet, their home location will be displayed. The user can navigate through the map by clicking and dragging and can zoom by double clicking on the map or using the built-in "+" and "-" functions in the lower right corner of the map.



Machines that are close to each other will be grouped into clusters. A cluster label will display the number of machines in it. Zooming in on a cluster will divide it into smaller clusters until the user is close enough to see each machine separately. If the user clicks on a certain machine, the map will automatically zoom to that machine's location and will display the following screen:

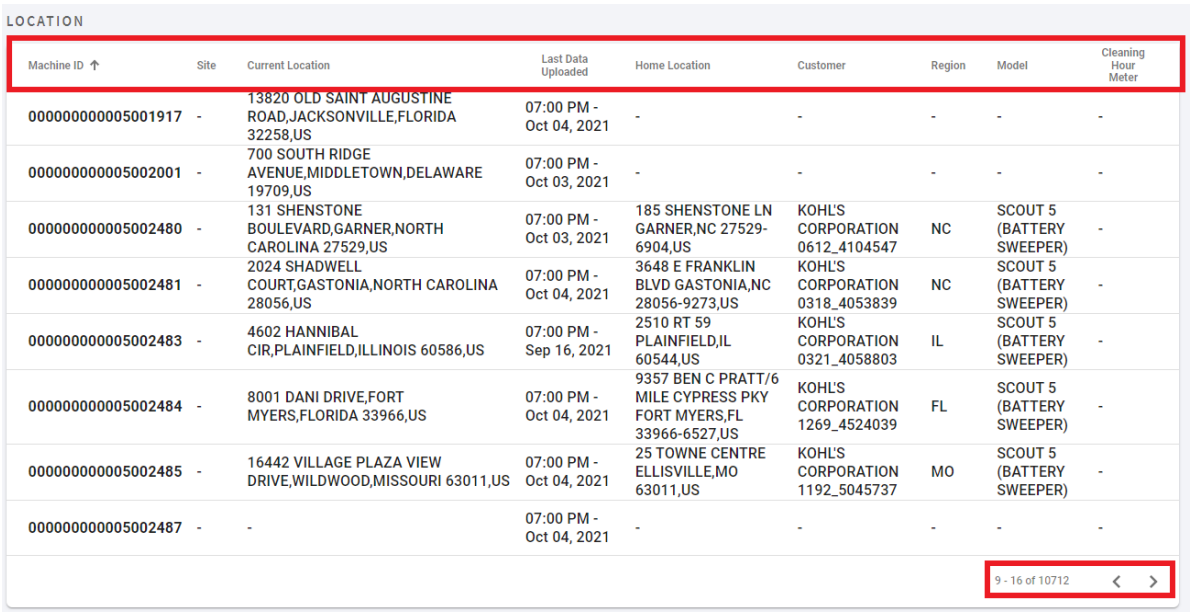
1. **Picture of the machine**
2. **Machine ID**
3. **Customer**
4. **Site**
5. **Region**
6. **Last Data Upload**
7. **"Pending Alerts" button -** Clicking on this will redirect the user to the Alerts Page**.**
8. **"View more" button -** Clicking on this will redirect the user to the Single Machine Page.



Please note that each machine's location is accurate up to 1 mile for Gen 1 machines and 60 feet for Gen 2 machines.

Location Table

From the Location Table the user can see detailed information for the machines within their fleet.


LOCATION

Machine ID	Site	Current Location	Last Data Uploaded	Home Location	Customer	Region	Model	Cleaning Hour Meter
000000000005001917	-	13820 OLD SAINT AUGUSTINE ROAD,JACKSONVILLE,FLORIDA 32258,US	07:00 PM - Oct 04, 2021	-	-	-	-	-
000000000005002001	-	700 SOUTH RIDGE AVENUE,MIDDLETOWN,DELAWARE 19709,US	07:00 PM - Oct 03, 2021	-	-	-	-	-
000000000005002480	-	131 SHENSTONE BOULEVARD,GARNER,NORTH CAROLINA 27529,US	07:00 PM - Oct 03, 2021	185 SHENSTONE LN GARNER,NC 27529-6904,US	KOHL'S CORPORATION 0612_4104547	NC	SCOUT 5 (BATTERY SWEEPER)	-
000000000005002481	-	2024 SHADWELL COURT,GASTONIA,NORTH CAROLINA 28056,US	07:00 PM - Oct 04, 2021	3648 E FRANKLIN BLVD GASTONIA,NC 28056-9273,US	KOHL'S CORPORATION 0318_4053839	NC	SCOUT 5 (BATTERY SWEEPER)	-
000000000005002483	-	4602 HANNIBAL CIR,PLAINFIELD,ILLINOIS 60586,US	07:00 PM - Sep 16, 2021	2510 RT 59 PLAINFIELD,IL 60544,US	KOHL'S CORPORATION 0321_4058803	IL	SCOUT 5 (BATTERY SWEEPER)	-
000000000005002484	-	8001 DANI DRIVE,FORT MYERS,FLORIDA 33966,US	07:00 PM - Oct 04, 2021	9357 BEN C PRATT/6 MILE CYPRESS PKY FORT MYERS,FL 33966-6527,US	KOHL'S CORPORATION 1269_4524039	FL	SCOUT 5 (BATTERY SWEEPER)	-
000000000005002485	-	16442 VILLAGE PLAZA VIEW DRIVE,WILDWOOD,MISSOURI 63011,US	07:00 PM - Oct 04, 2021	25 TOWNE CENTRE ELLISVILLE,MO 63011,US	KOHL'S CORPORATION 1192_5045737	MO	SCOUT 5 (BATTERY SWEEPER)	-
000000000005002487	-	-	07:00 PM - Oct 04, 2021	-	-	-	-	-

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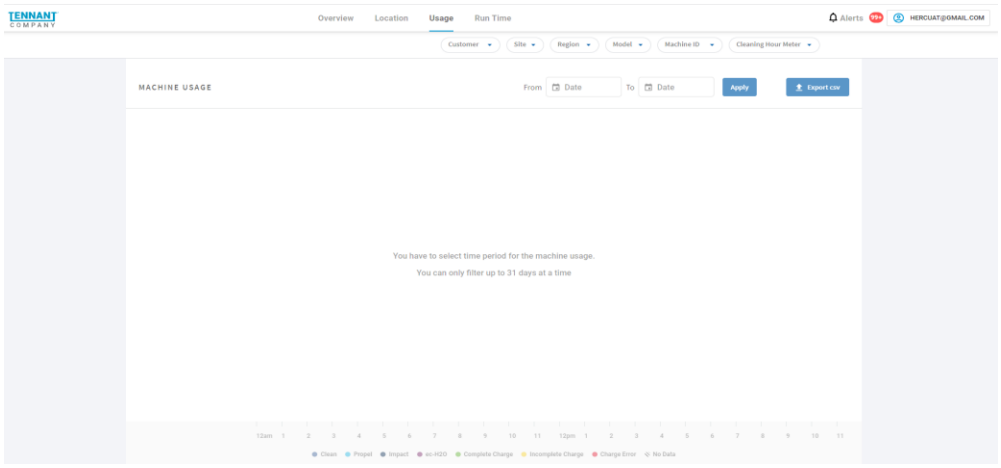
1. **Machine ID** - equal to the machine's unique Serial Number.
2. **Site** - represents the Site with which the machine is associated.
3. **Current Location** - represents the Current Location of the machine.
4. **Last Status Updated** - represents the Time and Date of the last reported data from the machine.
5. **Home Location -** represents the place set as Home Location for the machine.
6. **Customer** - represents the name of the facility owner where the machine is located.
7. **Region** - represents the Region with which the machine is associated.
8. **Model** - represents the Model of that machine.
9. **Cleaning Hour Meter** - shows the total number of hours in which the machine was cleaning.

Each of the columns within the table except "Current Location" and "Home location" may be used to sort the list in ascending or descending order. By default, the list is sorted ascending by Machine ID.

Clicking on a certain row will redirect the user to the machine's Single View.

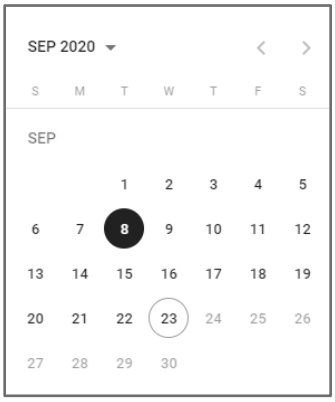
Usage

The Usage tab displays detailed information regarding each event reported by the user's machines. The user can use the filters to narrow down the machines they want to see. They will need to use the date picker to narrow down the desired dates for review before results will display. By default, when the user lands on the Machine Usage page, the table will be blank.



Set time period

When the user clicks on the From Date or To Date a calendar will appear.



1. The circled 23 date displays the current day.
2. The filled 8 date displays the selected day.

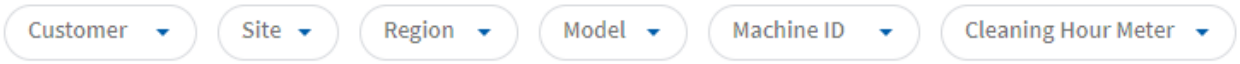
The user has to select the beginning and ending date in order to populate the usage table.

1. The user can select a period from 1 to 31 days.
2. They can clear the selected dates with button.
3. By pressing the Apply button the machine information will be displayed for the selected time period.

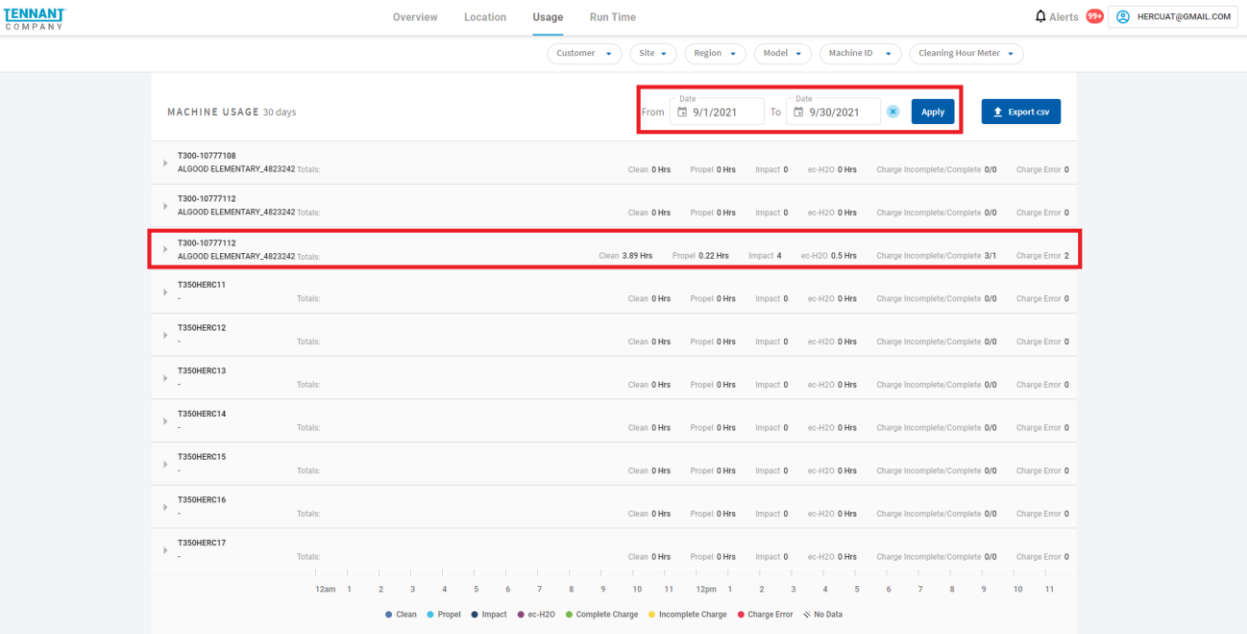
TENNANT COMPANY

Filters

By using the **Machine subset**, the user may filter the data within the Usage table by:



Machine Usage Table



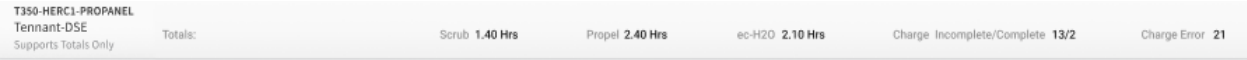
Machine Usage table characteristics:

1. Each row has a title containing the Machine ID and the Customer name.
2. The table is scrollable; the user can scroll up and down the table to see all rows with machine information.
3. The rows can be expanded/collapsed with the arrow (▶) next to the row name.
4. On the right side of each row are data totals for the selected period including:
    a. **Clean -** total number of hours in which the machine was Scrubbing, Sweeping, and/or Burnishing.
    b. **Propel** - total number of hours in which the machine was Propelling.
    c. **ec-H2O** - total number of hours in which the machine was using ec-H2O technology.
    d. **Charge Incomplete/Complete** - number of incomplete chargers on the left and number of complete charges on the right. If the machine was charged longer than a day, the event will be counted only within the day in which the charging stopped.
    e. **Charge Errors** - total number of charging errors that occurred.

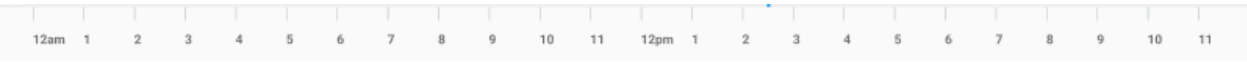
Machine Usage Table - detailed view:

Expanding a single machine will show a detailed breakdown of that machine's events.

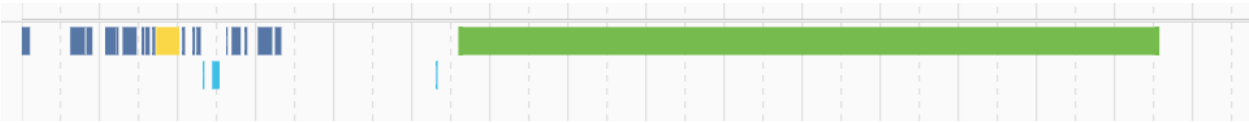
1. The first row of a machine will still show the total characteristics of that machine.



2. Each expanded row represents a single day from the selected period of time.
3. Beneath the date are the total hours which the machine was working (Run) and charging (Charge) for the selected day.
4. On the bottom of the chart, on the horizontal axis, are the hours of the day.



5. Blocks of color are used to represent each event's duration.



6. Beneath the table there is a legend indicating each event's color.

7. If a machine was not able to connect to the internet during a specific day the row will be filled with a grayed-out pattern.
8. If a machine was connected to the internet during a specific day, but no actions were reported, the row will be blank.

Detailed information (row expansion) for IC (internal combustion) machines is not supported. Only total values for IC machines will be display.

Export Machines Usage

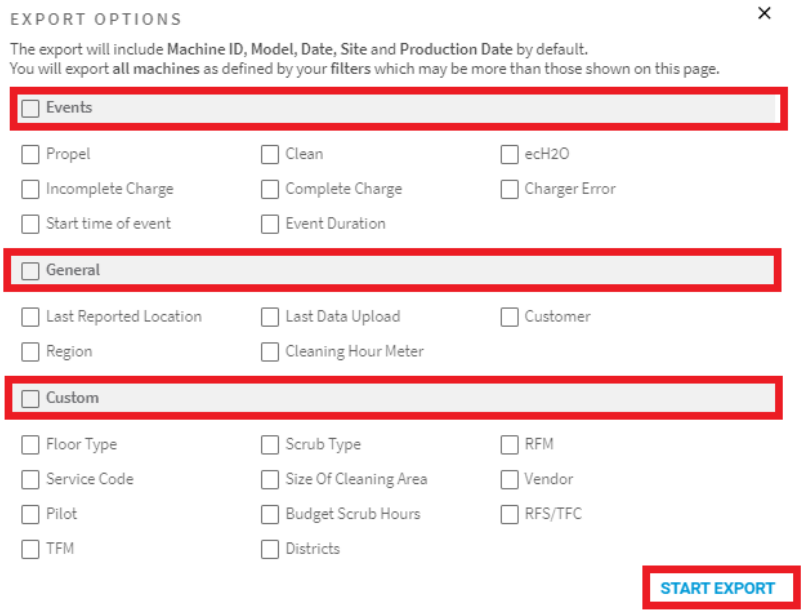
If the user wants to export the machine usage data, they can do so by clicking on the 

button, which is next to the date picker. After clicking on it, the following window will appear:

The user can choose what type of information to export by clicking a category or particular event using checkboxes ☐. The categories are Events, General, and Custom.

The window can be closed by clicking on the **X** in the top right corner.

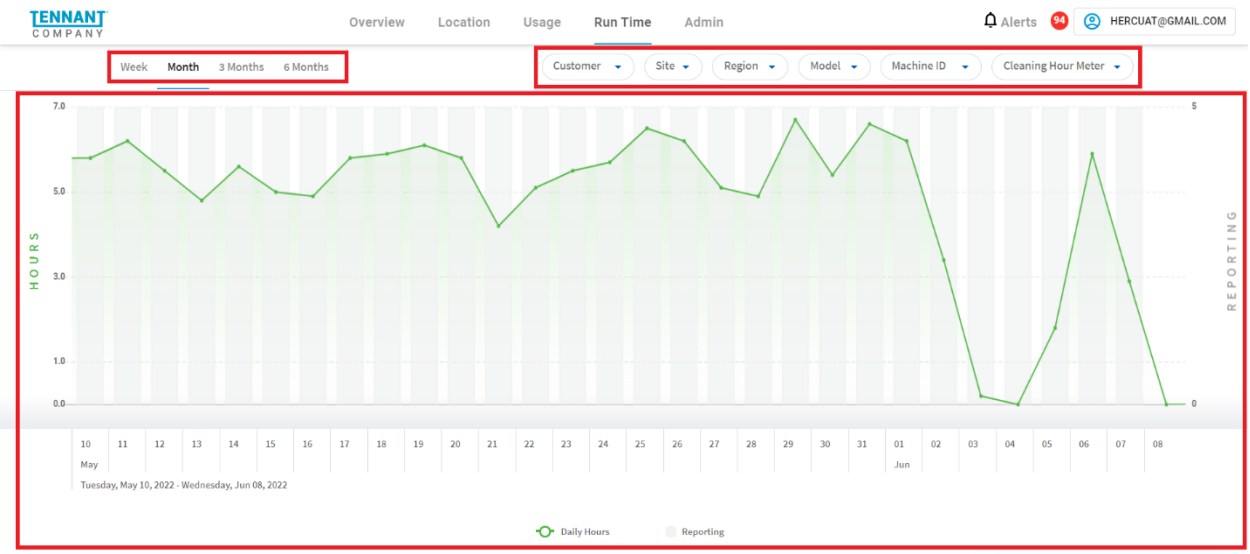
See the Export Information section for more details.



By default, the export includes Machine ID, Model, Date, Site, and Production Date. Refer to the Exported Files section for more information.

Run Time

The Run Time page displays a summary of the fleet's usage with the ability to review historical data going back up to 6 months.

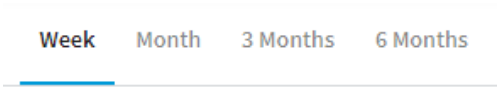


Runtime is the sum of all Propelling, Scrubbing, Burnishing, and Sweeping events associated with the selected machine(s) and time period.

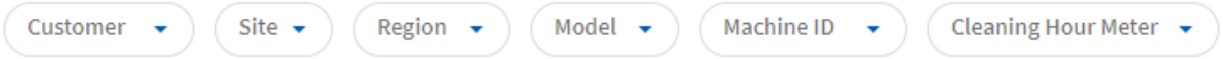
Filters

The user can use filters to drill down to different subsets of data based on time periods and machine parameters.

Use the **Time subset** to filter the data within both the Graph and the Run Time table by:



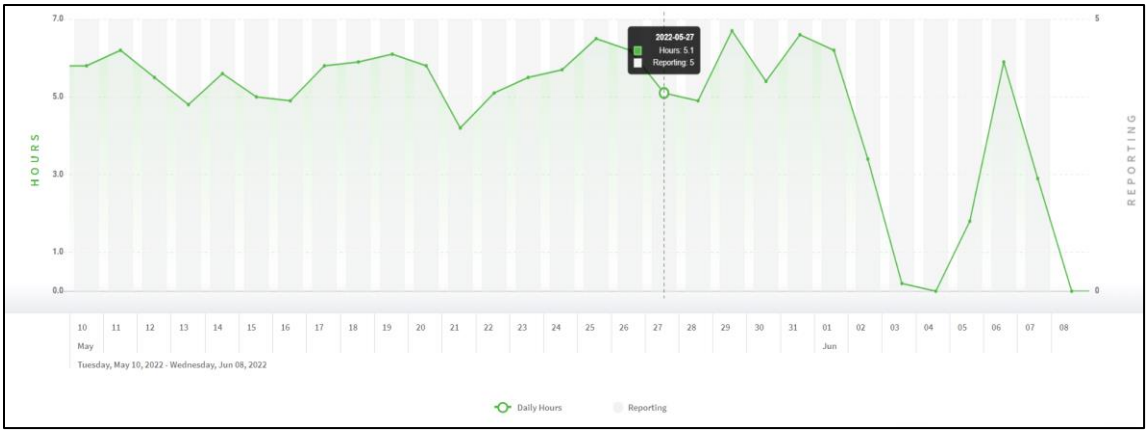
Use the **Machine subset** to filter the data within Summary section and Overview table by:



All applied Filters (Time and Machines) will affect the data within the Graph and the Run Time Table.

Run Time Graph

The Run time graph is a visual representation of the fleet's total utilization (clean time plus propel time) for up to 6 months.



The Run Time graph contains the following characteristics:

1. **HOURS** scale (on the left) associated with the **green graph line** representing the runtime for the selected machines.

2. **REPORTING** scale (on the right) associated with the **gray bar chart** representing the number of machines that reported during the presented period.

3. The horizontal scale on the bottom of the graph represents the period of time the user has chosen.

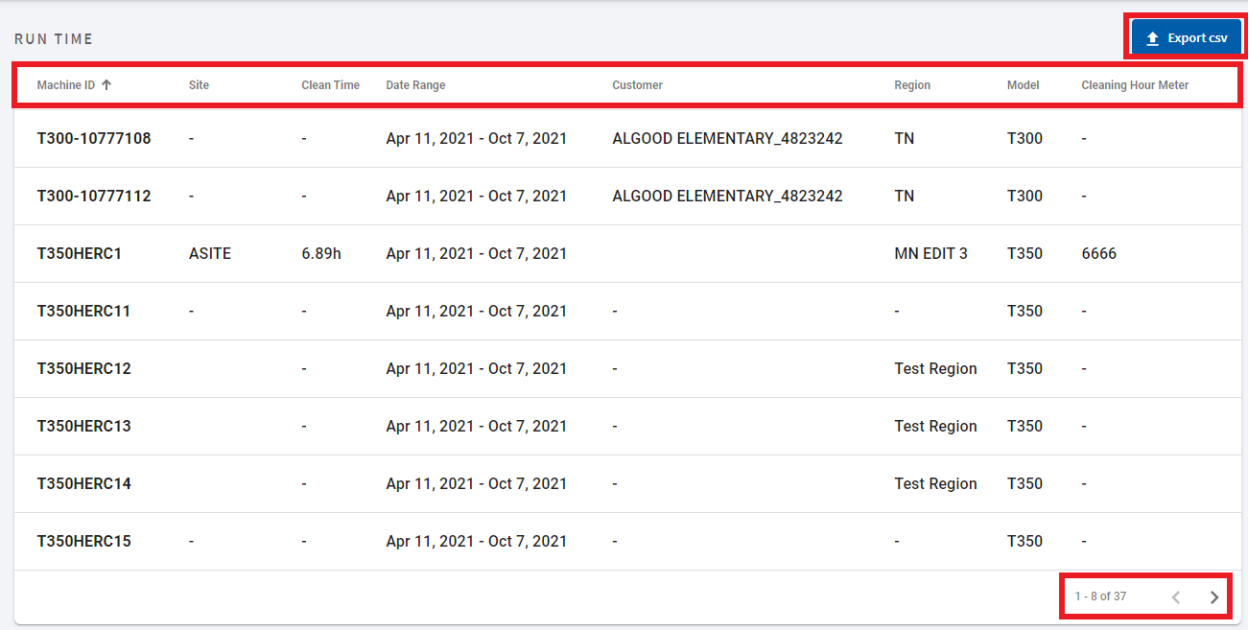
    a. For 3 and 6 month views data is divided into weeks.

    b. For Weekly and Monthly views data is divided into single days.

For further explanation of the Run Time graph skip to an Explanation of zeros in the Run Time graph.

Get details about Runtime and the number of reporting machines by hovering over a particular point on the graph.

Run Time Table



The Run Time table contains the following columns:

1. **Machine ID -** equal to the machine's unique Serial Number.
2. **Site -** represents the Site with which the machine is associated.
3. **Clean Time -** represents the total hours of Scrubbing, Burnishing and Sweeping of the machine for the selected period of time.
4. **Date Range -** represents the period of time that is currently displayed on the graph and in the table.
5. **Customer -** represents the name of the facility owner where the machine is located.
6. **Region -** represents the Region with which the machine is associated.
7. **Model -** represents the Model of that machine.
8. **Cleaning Hour Meter -** shows the total number of hours in which the machine was cleaning.

Each of the columns within the table except "Clean Time" and "Date Range" may be used to sort the list in ascending or descending order. By default, the list is sorted ascending by Machine ID.

Clicking on a certain row will redirect the user to the machine's Single View page.

Export Machine Run Time

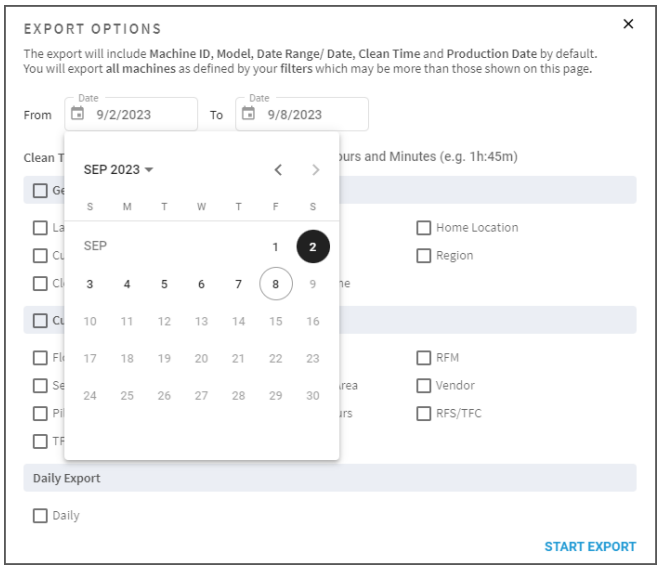
To export the machine's Run Time data, click on the **Export csv** button which is above the table. Clicking on it will open the following window:

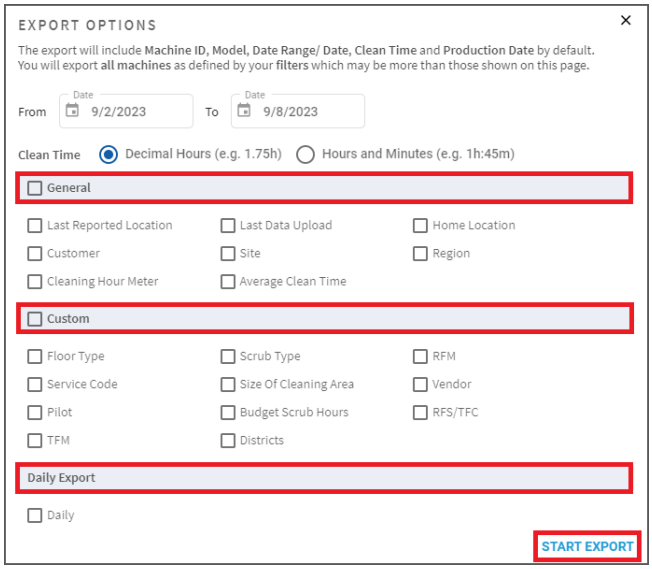
The user can choose a custom period for downloading information about machines. By default, the Time Filter will be prepopulated.

- "**To**" is always the current day
- "**From**" is the date prior to today based on the time period chosen

The user can select dates in the calendar within 6 months from the current day. All dates that are further than 6 months from the current day will be disabled.

Note that the user can change the format of the Clean Time in the export. By default, time is reported in **Decimal Hours (e.g. 1.75)**. It can be changed to **Hours and Minutes (e.g. 1h:45m)**.





Choose what type of information to export by clicking the checkbox next to a category or particular event. The categories are: General, Custom and Daily Export.

The window can be closed by clicking on the **X** in the top right corner. See the Export Information section for more details.

By default, the export includes: Machine ID, Model, Date Range/ Date, Run Time, Clean Time (in Decimal Hours format), and Production Date. Refer to the Exported Files section for more information.

If “Daily” is selected from the Daily Export section, the exported file (example below) will be divided by day for the chosen period of time.

Machine I	Model	Date Range	Clean Tim	Production Da	Site	Cleaning Hour Meter
T350-1094	T350	2023-09-10 - 2	0	5/2/2019	STORE 6165	135
T350-1094	T350	2023-09-10 - 2	0	5/2/2019	STORE 6166	499
T350-1094	T350	2023-09-10 - 2	0	5/2/2019	STORE 6167	249
T350-1094	T350	2023-09-10 - 2	0	5/2/2019	STORE 6168	350
T350-1094	T350	2023-09-10 - 2	0	5/2/2019	STORE 6169	466
T350-1095	T350	2023-09-10 - 2	0	6/25/2019	STORE 6170	178
T350-1095	T350	2023-09-10 - 2	0	6/25/2019	STORE 6171	166
T350-1095	T350	2023-09-10 - 2	0	6/25/2019	STORE 6172	195
T350-1095	T350	2023-09-10 - 2	0	6/25/2019	STORE 6173	177
T350-1095	T350	2023-09-10 - 2	0	6/25/2019	STORE 6174	160

If the Daily option is chosen:

1. If the machine did not communicate with the portal for a given day, the Clean Time cell will show “No Data”.
2. If the machine did communicate with the portal for a given day, but no cleaning was performed the Clean Time cell will show “0” (zero).

Alerts

The Alerts page is where the user can see detailed information regarding all Alerts generated by their machines for the past 6 months. The Alerts section contains several alert categories:

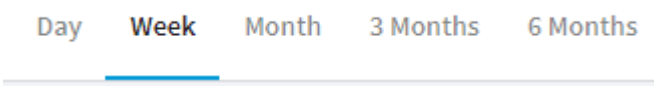
1. **Relocation** - Triggered if the machine reports a location outside of the set radius of its home location. This can be changed in the user preferences.
2. **Low Usage** - Triggered if a machine goes a specified number of consecutive days without reporting any usage data or is reporting 0 hours of daily usage. This can be changed in the user preferences.
3. **Battery Alerts**
    a. **No Charge** - Triggered if the machine reports usage, but the battery was not charged on that calendar day.
    b. **Opportunity Charge Alert**- Triggered if the machine reports its battery being plugged in for charging but not completed.
    c. **Charger Error (Curated DTC)** - Triggered if a Charger Error is reported via a DTC event.
4. **No Communication** - Triggered if a machine has not communicated with the portal for the selected period.

5. **Maintenance Alerts**
    a. **Maintenance Reminder** - Triggered if a machine reaches a threshold of cleaning hours. Only available for certain models. Please contact your sales rep for details.
    b. **No Service Performed** - Triggered if a machine has not been serviced in the selected period. This can be changed in the user preferences. Only available for certain customers. Please contact your sales rep for details.
    c. **Service Request -** Triggered if a Service Request has been created or completed. Only available for certain customers. Please contact your sales rep for details.
    d. **ABW Tank Empty -** Triggered when Automatic Battery Watering (ABW) Tank needs to be filled with distilled water. Only available for certain customers. Please contact your sales rep for details.

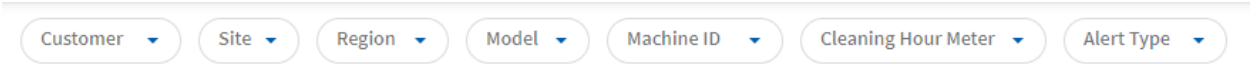
The red circle displays the number of unread alerts.

Filters

Filters can be used to drill down to different subsets of data based on time periods and machine parameters. By using the **Time subset,** the user may filter the data within the Alerts table by:



By using the **Machine subset,** the user may filter the data within Alerts Table by:

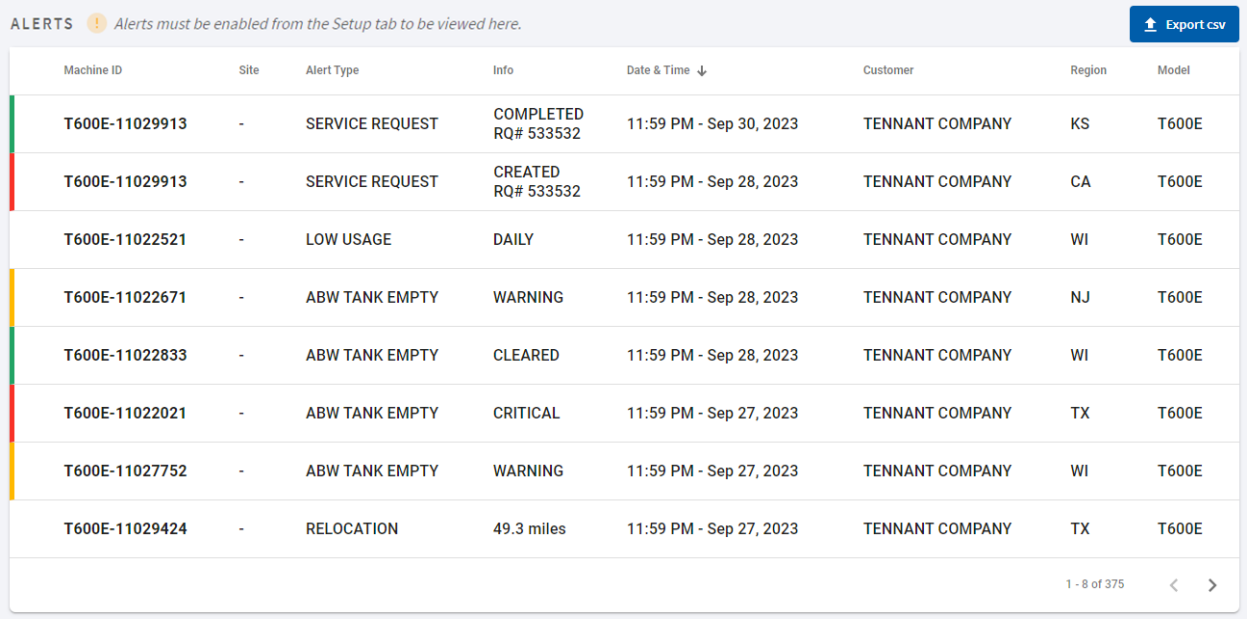


All applied Filters (Time and Machines) will affect the data in the Alerts table.

Alerts table

The Alerts table contains a list of all alerts that are connected with machines that the user has access to. Alerts are separated into sets of 8 per page, where each row represents a specific alert. Date and time is permanently used as secondary sorting. This means that as the user sorts by various columns, they will also see the alerts in chronological order. For example*: The user sorts by region to see all the alerts in a certain area*. The alerts will appear in chronological order by each region. Each row contains the following information:

1. **Status Bar** - the status of some alerts is indicated by a colored bar (see below for more information)
2. **Machine ID** - equal to the machine's unique Serial Number.
3. **Site** - represents the Site with which the machine is associated.
4. **Alert Type** - represents one of the several types of alerts mentioned above.
5. **Info** - represents additional information about the alert:
    a. For Low Usage alert, the info column presents the type of low usage (daily, weekly, monthly).
    b. For DTCs, a Hex code will identify the issue.
    c. For Relocation alerts, the info represents relocation distance in kilometers or miles, depending on the user preferences.
    d. For No Communication alerts, number of days since device last communicated will be displayed
    e. For No Service Performed alerts, when a device has not been serviced in the selected period.
    f. For Service Request alerts, when a device needs servicing or has completed being serviced.
    g. For ABW Tank Empty alerts, when the Automatic Battery Watering (ABW) Tank needs to be filled with distilled water.
6. **Date & Time -** represents the exact date & time when the alert occurred.
7. **Customer** – represents the name of the facility owner where the machine is located.
8. **Region** - represents the Region with which the machine is associated.
9. **Model** - represents the Model of that machine.



Machine ID	Site	Alert Type	Info	Date & Time	Customer	Region	Model
T600E-11029913	-	SERVICE REQUEST	COMPLETED RQ# 533532	11:59 PM - Sep 30, 2023	TENNANT COMPANY	KS	T600E
T600E-11029913	-	SERVICE REQUEST	CREATED RQ# 533532	11:59 PM - Sep 28, 2023	TENNANT COMPANY	CA	T600E
T600E-11022521	-	LOW USAGE	DAILY	11:59 PM - Sep 28, 2023	TENNANT COMPANY	WI	T600E
T600E-11022671	-	ABW TANK EMPTY	WARNING	11:59 PM - Sep 28, 2023	TENNANT COMPANY	NJ	T600E
T600E-11022833	-	ABW TANK EMPTY	CLEARED	11:59 PM - Sep 28, 2023	TENNANT COMPANY	WI	T600E
T600E-11022021	-	ABW TANK EMPTY	CRITICAL	11:59 PM - Sep 27, 2023	TENNANT COMPANY	TX	T600E
T600E-11027752	-	ABW TANK EMPTY	WARNING	11:59 PM - Sep 27, 2023	TENNANT COMPANY	WI	T600E
T600E-11029424	-	RELOCATION	49.3 miles	11:59 PM - Sep 27, 2023	TENNANT COMPANY	TX	T600E

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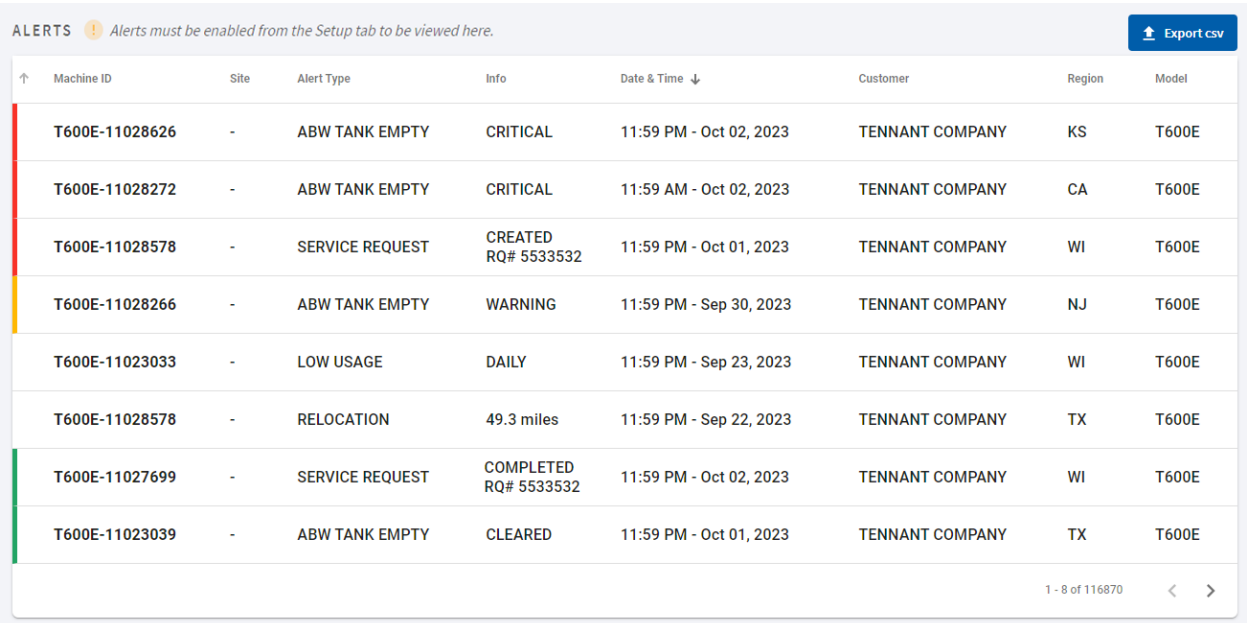
The **Status Bar** displays the status of certain alerts in color. The table can be sorted by status. Click above the status column (to the left of Machine ID) to sort in one of two ways:

1. **Most important to resolved/cleared:**
    a. Red, Orange, White (no status), Green
2. **Resolved/cleared to most important:**
    a. Green, White (no status), Orange, Red

Alerts with no color bar do not have a status.



Machine ID	Site	Alert Type	Info	Date & Time	Customer	Region	Model
T600E-11028626	-	ABW TANK EMPTY	CRITICAL	11:59 PM - Oct 02, 2023	TENNANT COMPANY	KS	T600E
T600E-11028272	-	ABW TANK EMPTY	CRITICAL	11:59 AM - Oct 02, 2023	TENNANT COMPANY	CA	T600E
T600E-11028578	-	SERVICE REQUEST	CREATED RQ# 5533532	11:59 PM - Oct 01, 2023	TENNANT COMPANY	WI	T600E
T600E-11028266	-	ABW TANK EMPTY	WARNING	11:59 PM - Sep 30, 2023	TENNANT COMPANY	NJ	T600E
T600E-11023033	-	LOW USAGE	DAILY	11:59 PM - Sep 23, 2023	TENNANT COMPANY	WI	T600E
T600E-11028578	-	RELOCATION	49.3 miles	11:59 PM - Sep 22, 2023	TENNANT COMPANY	TX	T600E
T600E-11027699	-	SERVICE REQUEST	COMPLETED RQ# 5533532	11:59 PM - Oct 02, 2023	TENNANT COMPANY	WI	T600E
T600E-11023039	-	ABW TANK EMPTY	CLEARED	11:59 PM - Oct 01, 2023	TENNANT COMPANY	TX	T600E

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Below are the alerts which display a status and what type of status each color means:

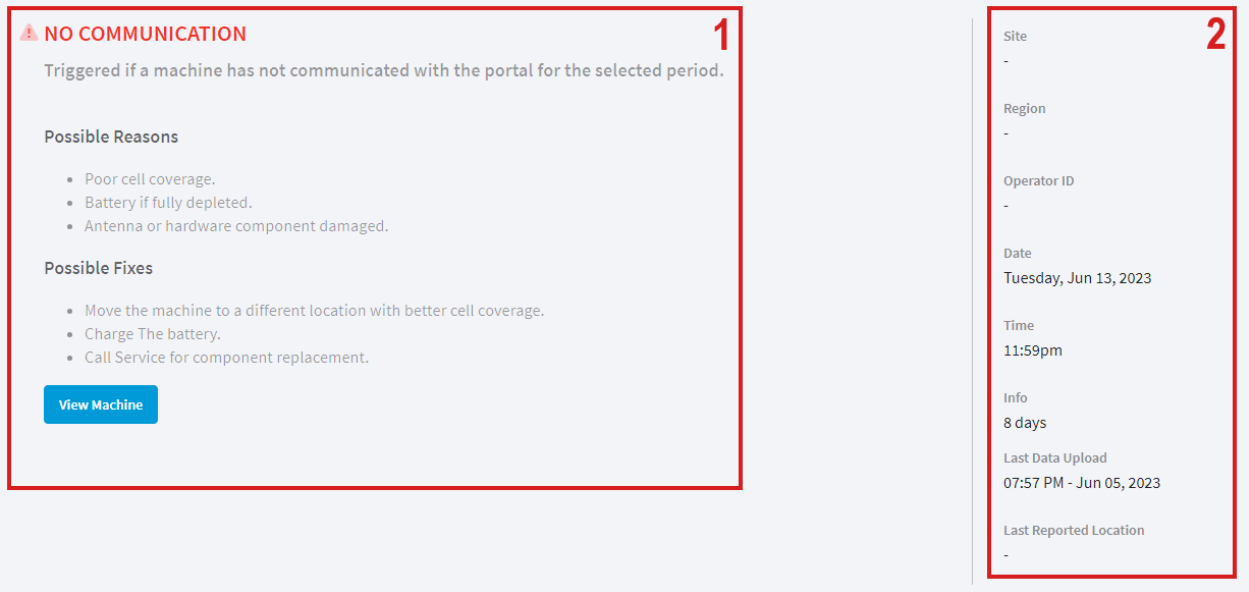
1. **Service Request**
    a. **Red – Created**
        i. The alert indicates a service request has been Created for maintenance or repair of a device.
    b. **Green – Completed**
        i. The alert indicates the service request has been Completed.
2. **ABW Tank Empty**
    a. **Red - Critical**
        i. The alert indicates that the Automatic Battery Watering (ABW) Tank is empty and needs to be filled with distilled water immediately.
    b. **Yellow/Orange - Warning**
        i. The alert indicates that the distilled water level in the Automatic Battery Watering (ABW) Tank is low, it is sent as a reminder to refill the tank.
    c. **Green - Cleared**
        i. The alert has been cleared and is no longer active.

Single Alert Page

Clicking on a single row from the Alerts Table will redirect the user to a Single Notification Page. In this page the user will view detailed information about the alert. The page is divided into two sections: Main Alert Information and Additional Machine Details.

1. Main Alert information includes:

a. **Type of Alert and its description** - names the alert and gives a brief description.
b. **Possible reason** - reasons why the alert may have been triggered.
c. **Possible fixes** - possible ways to resolve the problem.
d. **View Machine button -** by clicking on the button the user will be redirected to the Single Machine Page

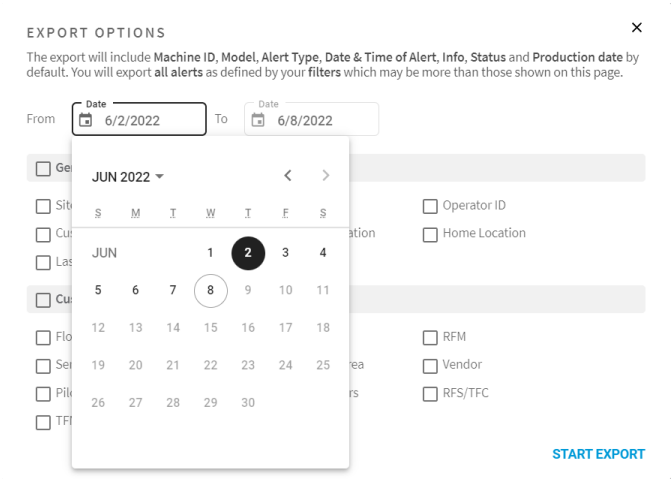


2. Additional Machine Information will include a set of the following:

a. **Site**
b. **Region**
c. **Operator ID**
d. **Date**
e. **Time**
f. **Info**
g. **Status**
h. **Location of Alert**
i. **Home Location**
j. **Last Data Upload**
k. **Last Reported Location**
l. **Date Reported**
m. **Date Completed**
n. **Last Updated**

Export Alerts information

If the user wants to export the data regarding the machine's Alerts Information, they can do so by clicking on the Export CSV button, which is placed above the Alerts table. Clicking on it will open the following window:



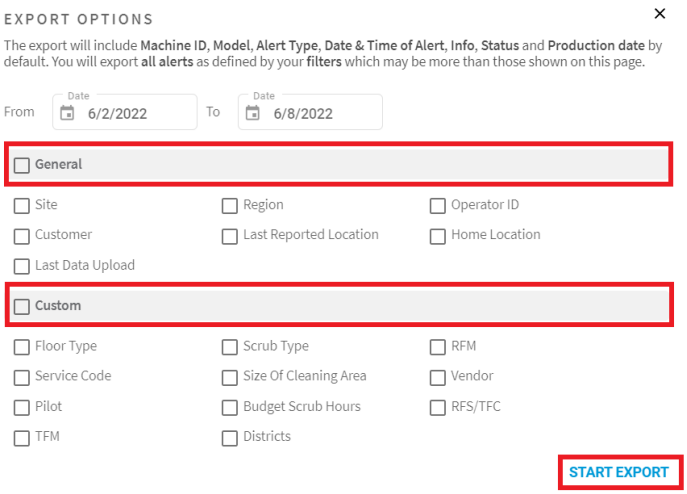
The user can choose a custom period for downloading information about their machines. By default, the Time Filter will be prepopulated.

- "**To**" is always the current day.
- "**From**" is the date prior to today based on the time period chosen.

The user can select dates in the calendar within 6 months from the current day. All dates that are further than 6 months from the current day will be disabled.

The user can choose what type of information to export by clicking a category or particular event using checkboxes ☐. The categories are: General and Custom.

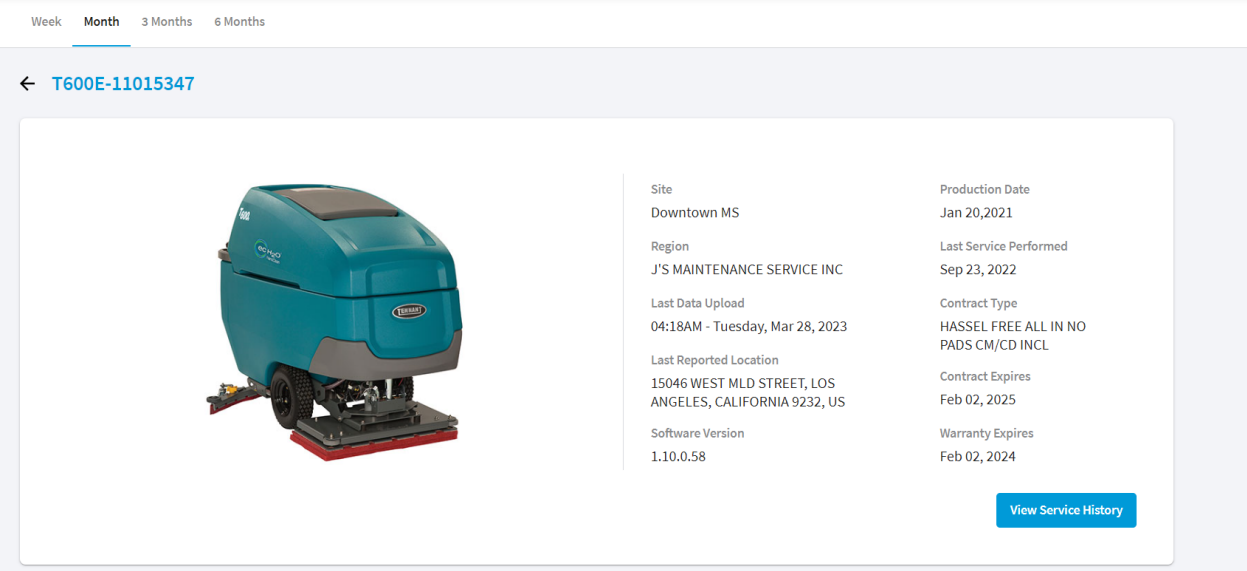
The window can be closed by clicking on the **X** in the top right corner.



See the _ section for more details.

By default, the export includes: Machine ID, Model, Date Range/ Date, Run Time, Clean Time (in Decimal Hours format), and Production Date. Refer to the Exported Files section for more information.

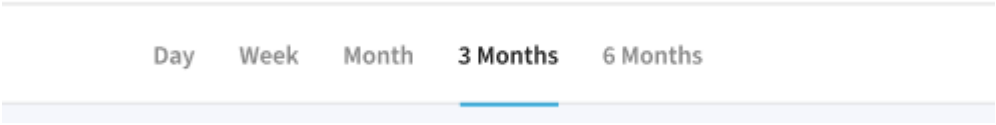
Single Machine Page



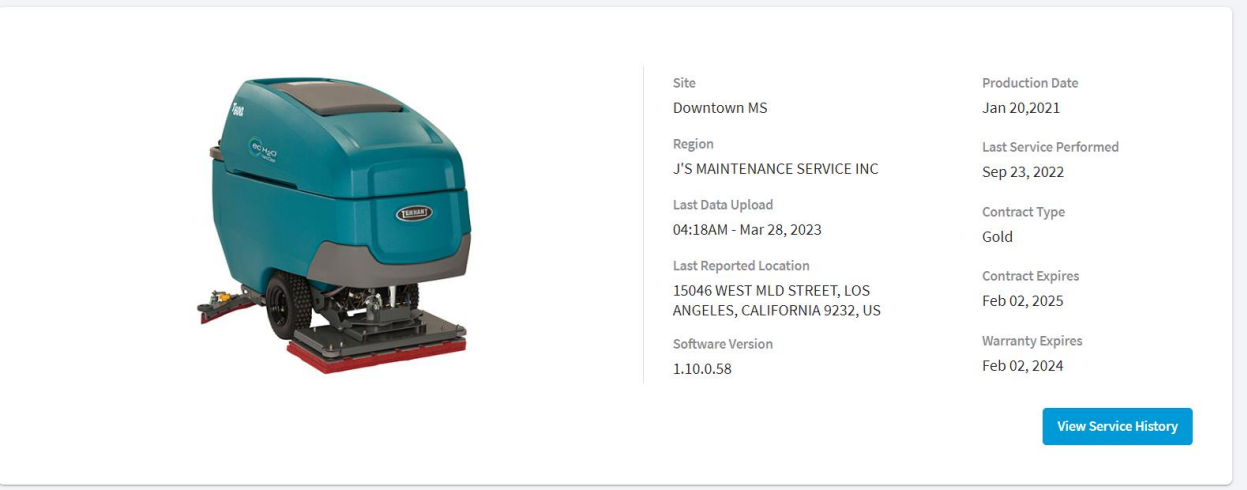
The Single Machine View is where the user can see detailed information regarding the selected machine: The user can click the back arrow to get back to the previous window.

Filters

By using the Time subset, the user may filter the data in the Data Summary and Run Time graph:



Machine Information



The machine information sections contain the following fields:

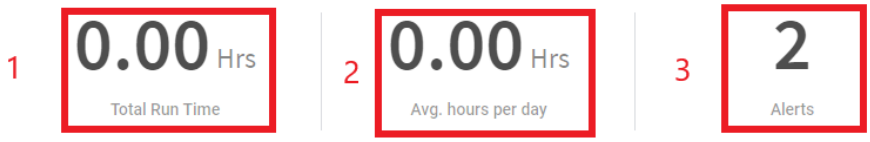
1. **Machine Picture -** picture of the Machine Model.
2. **Site -** represents the Site with which the machine is associated.
3. **Region -** represents the Region with which the machine is associated.
4. **Last Data Upload -** represents the Time and Date of the last reported data from the machine.
5. **Last Reported Location -** by default, the Current location will be displayed in this field, but if the current location is not available - the Home location will be displayed.
6. **Software Version** – represents the software version of the machine.
7. **Production Date** – represents the date machine is produced.
8. **Last Service Performed** – represents the date that machine was last serviced.
9. **Contract Type –** represents the contract type with which the machine is associated
    a. Silver
    b. Gold
    c. Platinum
10. **Contract Expires** – represents the date that Contract of the machine expires.
11. **Warranty Expires** – represents the date that Warranty of the machine expires.
12. **View Service History Button** – opens Service History page for the machine.

View Service History button is only visible for

- **users that are assigned to the machine.**
- **Machine Model T600E**

Data Summary

Data Summary section contains the following fields



1. **Total Run Time -** total hours of Propelling, Scrubbing, Burnishing and Sweeping of the machine for the selected period of time (up to yesterday).
2. **Avg. hours per day -** total run time divided by number of days in the selected period.
3. **Alerts -** number of alerts for the selected period of time (up to the current moment).

Run Time Graph

The Run time graph is a visual representation of the machine's total utilization (clean time plus propel time) for up to 6 months.

Explanation for zeros on the Run Time graph

If there are zero hours and the machine is not reporting this means the machine is not able to report.

There are two possible reasons for this:

- Poor cell coverage – In this case try moving the machine to a different location with better cell coverage.
- The battery is dead and needs to be charged.

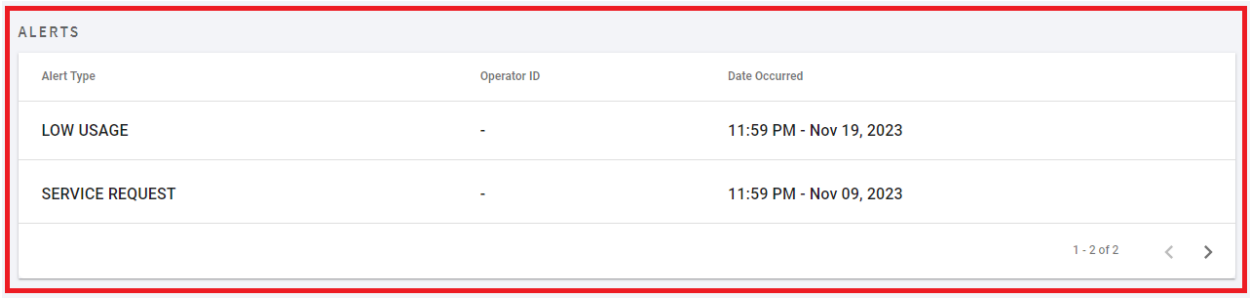
Once the machine comes back online, it will report cleaning hours (if there are any) from previous days. This will show as cleaning hours but no machines reporting on give day. (1)

If there is a machine reporting but no cleaning hours, this is an indication that the machine was not used on that day. (2)

Alerts table

This table provides information for every Alert generated by the user's machine for the selected period.

- **Alert Type -** represents the Type of the Alert
- **Operator ID -** Identifier of the user that was using the machine when the alert was generated
- **Date Occurred -** represents the Date and Time when the error occurred



The Alerts counter, although placed in the Data summary, is updated with data from today, unlike the other counters in the summary section which are updated with data up to yesterday.