

Table Of Contents

System Requirements and Specifications for Connectivity	4
WiFi Requirements:	4
Browser Requirements:	5
Other Considerations:	5
WiFi Assessment Help	6
Startup	7
Video Overview	7
Download the Zamboni Connect System App	7
Welcome Email	7
Your First Login	7
Account Settings	8
Account Settings	
Summer Shutdown or Planned Non Operation of machine	
	8
Summer Shutdown or Planned Non Operation of machine	8 9
Summer Shutdown or Planned Non Operation of machine Connecting + Adding/ Removing a WiFi Network	8 9 10
Summer Shutdown or Planned Non Operation of machine Connecting + Adding/ Removing a WiFi Network Adding/Removing Team Members	8
Summer Shutdown or Planned Non Operation of machine Connecting + Adding/ Removing a WiFi Network Adding/Removing Team Members Overview of the Zamboni Connect System Dashboard	8 9 10 10 11
Summer Shutdown or Planned Non Operation of machine Connecting + Adding/ Removing a WiFi Network Adding/Removing Team Members Overview of the Zamboni Connect System Dashboard Quick Reference View:	8
Summer Shutdown or Planned Non Operation of machine Connecting + Adding/ Removing a WiFi Network Adding/Removing Team Members Overview of the Zamboni Connect System Dashboard Quick Reference View: Dashboard View:	
Summer Shutdown or Planned Non Operation of machine	

Reports	20
Adding Other Non-Connected Machines to Your Fleet	22
Support and Contact Information	22

System Requirements And Specifications For Connectivity

WiFi Requirements:

WiFi router with a minimum signal strength of -70 dBm and is compliant with IEEE 802.11 b/g/n. A dedicated router for Zamboni Connect[™] system is recommended. Best location for router installation is in machine storage room, or line of sight to machine storage room or ice pad. Note: as your Zamboni machine resurfaces the ice sheet, it constantly gathers data. At the end of an ice resurfacing session, this data is stored on the Zamboni machine ready to deliver to the Zamboni Connect server in the cloud whenever it is next connected to your facility's network. A WiFi signal in the Zamboni machine room is optimal to enable all data related to the resurfacing to be transmitted to the cloud after each session.

If the WiFi signal is only present while on the ice sheet, partial amounts of data would be sent to the cloud during resurfacing and the last bit of data towards the end of the session would be stored on the Connect module ready to deliver to the cloud whenever it is next in range. Should your WiFi signal be spotty (not have a minimum of -70 dB) you may experience delays between your resurfacing sessions and your machine Connect data appearing in the cloud.

A word of caution regarding use of an open (not password protected) WiFi network for transferring your Connect data up to the cloud: your unencrypted network traffic is clearly visible to everyone in range. Hackers could see your data if you choose to send it across an unencrypted WiFi network.

If your facility periodically changes WiFi passwords, your Connect module will need to have the WiFi password updated in it before the password on your network is changed. Login to your Zamboni Connect Account online, go to your Account Settings and add a network with the same name as your current network with the new password. Once this is complete, there will be two WiFi networks listed with the same name, but different passwords. The old network information will be archived for future reference.

If you move your machine(s) between ice sheets or between facilities, you will need to gather the WiFi network information for each of these variables and enter and save each network in your Account Settings on the web-based application so that the machine(s) can transmit the data to your Zamboni Connect System.

We recommend that you consider the following accessories to ensure a strong signal and consistent communication between your Zamboni Connect System and the web/mobile applications.Recommended Accessories:TP-Link AP500 AC1900 Wireless Gigabit Access Point for Windows 7,8,8.1,10; NETGEAR Nighthawk AC1900 Dual Band WiFi Access Point (EX7000); NETGEAR Nighthawk AC1750 Smart Dual Band WiFi Router (R6700); or any router compatible with 802.11 b/g /n.

Browser Requirements:

For optimum user experience, we recommend the following web browsers, Google Chrome, Firefox, and Safari.

As of 2016, Microsoft no longer provides security updates or technical support for older versions of Internet Explorer. Security updates patch vulnerabilities that may be exploited by malware, helping to keep users and their data safer. As such, we do not recommend you use Internet Explorer to view the Zamboni Connect website.

Other Considerations:

Some documents in the Zamboni Connect System are hosted in the Amazon Cloud Web servers. If your organization has a firewall that blocks Amazon Cloud, you may experience issues when trying to view Service Manuals, Operating Instructions or other documents in Additional Resources.

We recommend talking to your organization's IT professional to get zamboniconnect.com whitelisted for access to these documents.

WiFi Assessment Help

As your Zamboni machine resurfaces your ice sheet, it constantly gathers data. At the end of an ice resurfacing session, this data is stored on the Zamboni Connect module on the machine ready to deliver to the Zamboni Connect server in the cloud whenever it is next connected. Having a WiFi signal in the Zamboni machine room is optimal as it would then be able to send all data related to the resurfacing up to the cloud right after the session. If the WiFi signal is only present while on the last bit of data towards the end of the session would be stored on the Connect module ready to deliver to the cloud whenever it is next in range. Should your WiFi signal be spotty (not have a minimum of -70 dB) you may experience delays between your resurfacing sessions and your machine Connect data appearing in the cloud.

We also want to caution you against using an open (not password protected) WiFi network for transferring your Connect data up to the cloud. Your unencrypted network traffic is then clearly visible to everyone in range. Hackers could see your data if you choose to send it across an unencrypted WiFi network.

Following the steps in the WiFi Assessment document found at the link below will allow you to pinpoint an optimal WiFi network for your Zamboni Connect. **http://zamboni.com/connect-setup**

Dashboard (standard with every new Please take a moment to register so v information.	nect [™] System (purchased option) and Zamboni Connect [™] machine purchase) Users. we can provide you access to your Zamboni machine's
Your Name Full Name	
Your Zamboni Sales Manager / Zamboni Authoria	zed Distributor
Full Name	
If there are "multiple locations", please provide t	lify where the machine with the Zamboni Connect System will be used. he information for the additional facilities.
Please provide the name and address of the fac	

Startup

Video Overview

http://zamboni.com/connect-setup/#video

Download the Zamboni Connect System App

Available in the Android/iOS App Store and at no cost, download the Zamboni Connect System app to your PC/Mac and any tablet or mobile device which you'd like to use to login and display your Zamboni Connect System data.



Welcome Email

At least 30 days in advance of your new machine's arrival, Zamboni Connect system users will receive an email inviting them to login and to set up their preferences and to adjust account settings.

Your First Login

After you receive the welcome email, you can follow the link to login, where you will see this page. It is located at **www.zamboniconnect.com**. This is the same page you would use if you forget your password and need assistance creating a new one.**Note:** Once your machine arrives and the Zamboni Connect onboard module successfully activates, data will be transmitted after its first complete resurfacing procedure.



Account Settings

Upon login, the upper right hand corner of the Zamboni Connect web app features a drop down tab which allows you to change your preferences and to begin adding new team members. Choose your contact preferences for important information and events such as diagnostic trouble codes via text and/or email. Here you can change the language and the format for the presentation of data, including the metric values.

come, Your Name Company Name	~	@ A	ccount Se	ttir	ngs
Account Settings		Prefe	erences		
Logout		0 1	surement Units Metric	0	US Standard
		Defa	ult Language		
		Eng	lish	\$	
		Notif	fications		
			u want to receive no (Warnings)?	otificat	ions for Diagnostic Trouble
		\bigcirc	Email only		
		\bigcirc	Mobile Phone SMS	5 / tex	t only
		0	Both		
		\bigcirc	OFF Temporarily I	Disco	ntinue Notifications

Summer Shutdown or Planned Non Operation of machine

If your facility shuts down for the summer or has a period when the machine will be out of operation / in storage / out of WiFi range, change your notifications to "OFF"Temporarily Discontinue Notifications. When your machine is back in operation again, be sure to turn notifications back on. Please note, even if notifications are "OFF" any DTC alerts or WiFi disconnected alerts will always be present in the app/ website when you login.

Notifications

Do you want to receive notifications for Diagnostic Trouble Codes (Warnings)?

- Email only
- Mobile Phone SMS / text only
- Both
- OFF Temporarily Discontinue Notifications

Connecting + Adding/ Removing a WiFi Network

On the Account Settings page, you can add new networks and archive those which you are no longer using. If you have a password change for your network or if you change networks, we recommend that you update your information in your Account Settings before you change your password or change networks. This is so that your machine can receive this information while it is still connected to your network.

Maintaining connectivity between the ice resurfacing machine module and your network is critical to ensure the data which is collected is available to you via the web and mobile apps.

If you have multiple WiFi networks in your facility(s), use the + button to add all the networks available. Your machine will then connect to whichever network is available to upload data to the website. This is especially useful if you have a machine that is moved between ice pads with different networks at each pad or if you have a machine that is moved between multiple facilities.

Networks			Networks			
Connect Facilit Reference		Connect Facility WiFi Network Reference				
Network Information	ation for Iceland Paramount		Network	Informat	tion for Icel	and Paramount
Required Fields (*)	Network Name *	ł	Required Fields Security * WPA	(*)	Network N	lame *
 ✓ Open WEP WPA WPA Enterprise 	SSID		Password * PSK	٩	0	
+ Save			+ Save			

Should your machine lose connectivity to a WiFi network you will see a notification bar at the top of your screen in your Connect Dashboard. If you have chosen to be notified by email / phone in your Account Settings, you will receive a notification there as well. Machine not connected notifications will only be sent if your machine has been disconnected for over 24 hours.

Warning: This machine has not connected in 1 days, 4 hours, 7 minutes, and 6 seconds.

When your machine gets disconnected, data is not lost. The Connect device installed on your machine will store data for approximately a month before it gets too full. Once the machine is reconnected, it starts to upload all the data it has saved to the web. It may take a while for it to catch up and show up to date data on your Zamboni Connect account online.

Adding/Removing Team Members

To add a team member, access the Account Settings page and scroll down to "Ice Maintenance Team Members".Enter their name and contact information.As the primary (administrative) member, you will have the ability to add and delete team members. You should set your team members up as "secondary" members, unless you wish for them to have administrative powers which include the ability to add/delete team members and to add/change/archive networks. They will receive a "welcome email" as you did and can begin their setup and user experience from that point.

Ice Maintenance Team Members	Steve staack Brandon Moser Deve Paters
📋 🥜 Brandon Moser	🝵 🥒 Doug Peters
📋 🥒 Julian Gardner	Name Email
📋 🥜 Mike Peterson	4
📋 🥒 Paula Coony	User Type Job Title
📋 🥒 Reena Ngauv	\$
🛍 🧪 iTunes Tester	Mobile Phone Facility
📋 🥒 Mohammad Farooqi	Horgan Skating Arena 2
💼 🥒 Steve Staack	Iceland - El Segundo
💼 🥒 Zamboni Company	
Add / Delete Team Members	

Overview Of The Zamboni Connect System Dashboard

The Zamboni Connect System dashboard displays the data collected by your machine or machines. Users with more than one machine will have a "fleet" view which allows you to then display individual machine views. The dashboard view shows the data collected during the most recent resurfacing (light blue bars) and displays it in a comparison to the past week's average (dark blue bars).

The "quick reference view" constantly displays information about your last resurfacing and the machine's hours and the most recent service activity, as well as the machine's serial number and model and location.

Also available for quick reference on your dashboard on the lower half of the screen you'll find any diagnostic trouble codes; a view of the maintenance log; additional resources and contact information for your Zamboni Authorized Distributor and Service providers.

Quick Reference View:



Dashboard View:

	NECT					come, Paula Coony V Zamboni & Co., Inc.	
	MODEL 552AC Stc11593 V Isaland Paramount Paramount, CA	-0	LAST RESU Wednesday 1:27 PW 2018-02-21		MACHINE HOURS	LAST SERVICE 2018 02-12	
	ELECTRIC CONSUMPTION 34 Ah +39.01% vest seesge		:	BATTERY CHARGE START 80.7 END 82 -1.60	.3 v		
BATTERY CHARGE BATTERY TEMPERATURE	BATTERY TEMPERATURE 66 F -32.13% week rearge		1		-02-20		
CHARGE DURATION	ICE MAKING WATER 81 gel +17.90% week mersige		I	SPEED 0.1	1 C C C C C C C C C C C C C C C C C C C		

Individual Modules

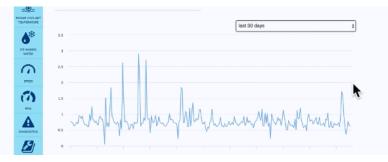
Each of the data points delivers information to its respective module. There are different data points for the electric and fuel powered machines. The individual modules are displayed as a group on the dashboard and you can access detailed graphs and information by positioning the mouse over the three grey dots at the top right of each module or by using the left side vertical navigation bar:

ELECTRIC CONSUMPTION	
34 Ah +39.01% week average	

There you can view a detailed graph showing the past week's data from each resurfacing:

FUEL CONSUMPTION	
2	
MANNA MANA	
	V/
. Manuna	-

Use the "details" button in the drop down menu to see additional data including the option of selecting the past 30, 60 and 90 days' worth of data or exporting raw data as a CSV file.



The data can be sorted in the column format from oldest to newest or newest to oldest. This view displays the trend of each resurfacing and consumption of resources if applicable.

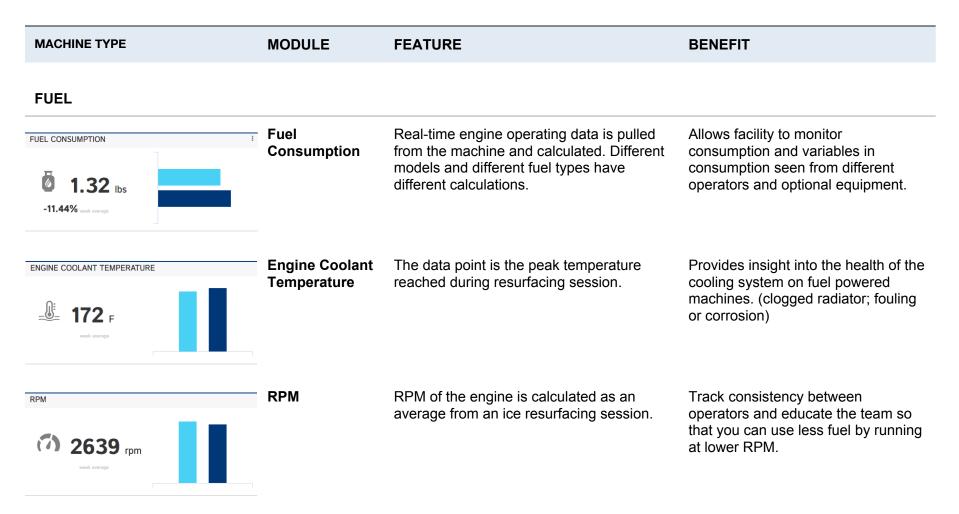
last 7 days		•	DOWNLOAD	CSV
Date 12	Time	Consumption	Trend	
11/6/2017	11:23	1.16	+51.34%	
11/6/2017	14:49	0.63	-18.65%	
11/6/2017	17:07	0.62	-19.78%	
11/6/2017	18:17	1.04	+35.16%	
11/6/2017	19:43	0.70	-8.25%	
11/6/2017	20:27	1.02	+33.64%	
11/6/2017	22:28	0.61	-23.07%	
11/7/2017	00:19	0.72	-5.76%	1
11/7/2017	01:20	0.23	-69.97%	
11/7/2017	08:47	1.01	+33.99%	
11/7/2017	11:02	0.88	+15.64%	
11/7/2017	12:06	0.75	-0.82%	
11/7/2017	14:03	0.73	-2.17%	
11/7/2017	17:02	0.66	-11.78%	
11/7/2017	18:12	0.76	+1.10%	
11/7/2017	19:22	0.90	+19:43%	
11/7/2017	20:34	0.80	+6.27%	
11/7/2017	23:38	0.85	+13.63%	
11/8/2017	00:40	0.64	-14.73%	
11/8/2017	07:33	0.00	+7.07%	
11/8/2017	09:01	1.13	+53.00%	

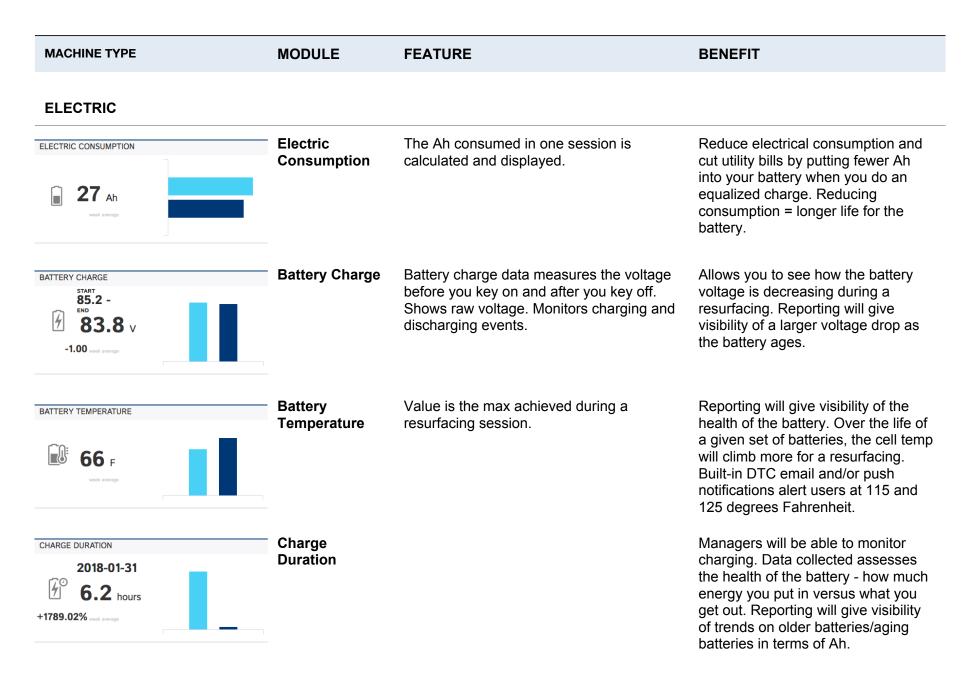
The Diagnostics module displays any DTC information and has the diagnostic trouble code list for each machine model. Diagnostic trouble codes will activate the contact preference(s) of your choice and in addition will be retained on the Diagnostics module page for future reference. The Diagnostics page has a Maintenance Log input box for your team to make notes relating to any of the DTC which have been activated. This information will be retained in the Maintenance Log.

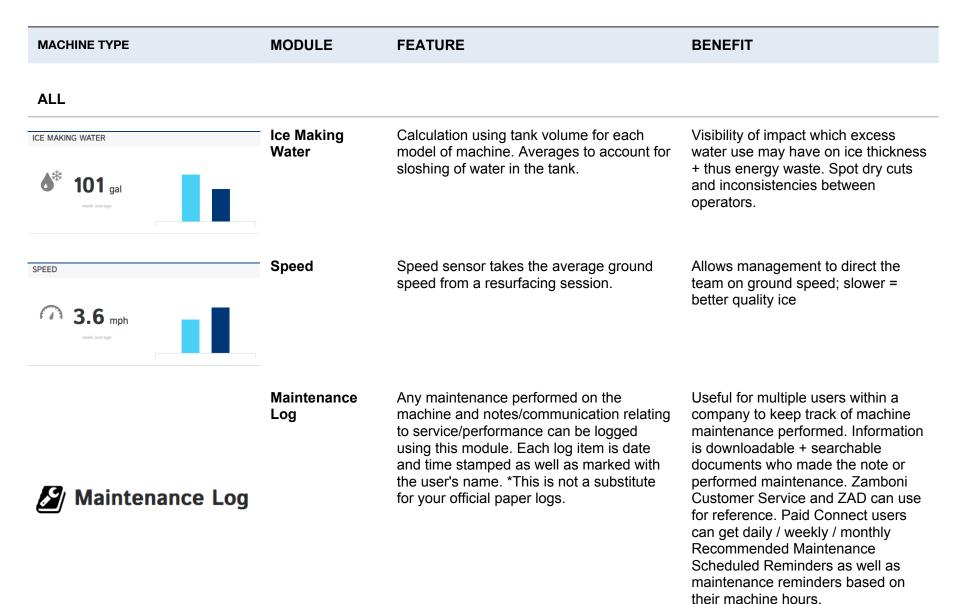
The Maintenance Log section has a digital maintenance log which allows your team to communicate and note service and maintenance performed. Each entry is attributed to the team member entering it and is date and time stamped. This information can be downloaded and even searched.

Daily, weekly and monthly maintenance reminders will be displayed and weekly/monthly reminder dates can be set by you for convenience and to synchronize with and maintain a preexisting maintenance routine. Machine maintenance based on the hours on your machine displays in advance of upcoming interval maintenance. All maintenance reminders can be "muted" and logged by clicking on the box to the left of each reminder. The person performing that action will be associated with the completion of that event.

The Additional Resources section contains important content for your ice resurfacing team. Your machine's service manual; parts list; operating instructions; videos regarding the safe and proper operation of your machine; safety mailing; safety poster; machine specifications as well as the contact information for your Zamboni Authorized Distributor and Service provider are all accessible on this page.







MACHINE TYPE	MODULE	FEATURE	BENEFIT
Diagnostic Trouble Codes	Diagnostic Codes	This module displays any Diagnostic Trouble Codes triggered by the machine.	Allows users to see a list of DTC triggered and date and time stamped. This is useful for troubleshooting. Can be downloaded to view the entire DTC history. Users can look up their DTC in a DTC reference sheet to see more details on any codes that were triggered. DTC alerts are always displayed on the Zamboni Connect website/app and can also be sent to a users' phone / email. Users can change their notification settings on the Account Settings page.
ADDITIONAL RESOURCES	Additional	Users can access all the relevant service	Service manuals, parts lists, and
552 and 552AC Maintenance Schedule Image: Stand Sta	Resources	manuals, parts lists, safety materials and	other safety materials are constantly
S52AC_specs		videos related to their machines in this	updated and the newest version is
CircleCheckList		manual.	auto-populated into the website/app.

Data And Sensors

Data is collected from sensors onboard the machine and that information is transmitted to your web based and mobile applications. The sensors onboard your machine collect data throughout each resurfacing and appropriate values are populated in their respective modules on your dashboard and during all reporting functions.

Maintenance Of The System

The Zamboni Connect System onboard your resurfacer does not require maintenance and it is supported by a very small battery draw from the machine. Take care not to bump or damage the box containing the Zamboni Connect onboard module which is located on the rear of the machine. The box containing the module is water-resistant. The machine should not be left exposed to the sun or extreme temperature for extended periods of time, as this is not the ideal environment for electronics. The web and mobile based applications are available around the clock from any of your compatible devices. There may be occasional maintenance of the Zamboni Connect System and as they become available, updates will automatically be pushed up to the applications, as well as to the module onboard your machine.

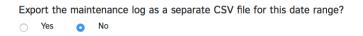
Reports

The data collected by the sensors in your machine provide your web app and mobile app with the information it needs to deliver on-screen graphs and content.

First select the machines for the report. Then select the data points you would like to see in the report.

Cus	stom Reports				Select Data points to export
Choo	se one or more machines				Select Data points to export
	MODEL 546	LAST RESURFACING	MACHINE HOURS	LAST SERVICE	Select All
	SN:10945	Tuesday 1:17 PM 11_MIN		²⁰¹⁸ 06-07	Fuel Consumption
	Iceland - El Segundo El Segundo, CA	2018-07-17	2674		Engine Coolant Temperature
	MODEL	LAST RESURFACING	MACHINE	LAST SERVICE	Electric Consumption
	552AC	тиезday 1:32 рм 10мін		²⁰¹⁸ 06-20	Battery Charge
	SN:11595 O Iceland Paramount	2018-07-17	1114		Battery Temperature
	Paramount, CA				Ice Making Water
					Speed
					RPM
					Charge Duration

Select yes, if you would like to download the maintenance log for the same date range while you export your report.



to

Select the date range for the report

Date Range?

2018-07-17

2018-07-18

If you would like to create a custom report using raw/detailed data, you can do so by selecting "Create an Advanced Report – Export Raw Data".

 Create an Advanced Report – Export Raw Data

This option exports more data points per ice resurfacing session. If you're not sure of this option, skip this question.

When you opt to download a report, you can navigate away from the page and the report will be emailed to you.

Download	×
We are exporting your data. You can choose to wait or if you navigate away from thi we will amail you a link to the exported files. Links will e after 7 days.	
- - - -	
[Close

Please note all reports are exported as CSV (Comma Separated Values files) with date and time in UTC Standard (<u>https://www.timeanddate.com/time/aboututc.html</u>). To convert UTC Standard to your local time zone, use this calculator (<u>https://www.timeanddate.com/worldclock/converter.html?pl=1440</u>).

The report will contain data from each resurfacing within the selected date range and data points.

Sheet 1	time_day_start	time_hms_start	ime_day_end	time_hms_end	model_number	sorial_	number	location		EngineCoolantT Engli	beeqSee	FuelConsumpti IMWater	VehicleSpeed
Table 1	10222017	1:02 AM	10292017	1:10 AM	546	10945	SW1023	Iceland -	- El Seg	77	2657.7	0.021602051	6.4171707557
	10142017	11:44 AM	10142017	11:55 AM	546	10945	SW1623	loeland-	- El Seg	77	2392.4	0.738785012	
	10162017	1:03 AM	10152017	1:14 AM	546	10945	SW1621	loeland-	- El Sog	76	2500	0.729125446	
	10152017	2:18 AM	10152017	2:27 AM	546	10945	SM1623	liceland-	- El Seg	76	2509	0.63698086	
	10152017	9:43 AM	10152017	3:53 AM	548	10945	SW1621	Iceland -	- El Seg	76	2390	0.642501724	
	10162017	5:14 AM	10152017	5:23 AM	546	10945	SM1621	loeland-	E Seg	77	2630.2	0.687858808	
	10152017	6:44 AM	10152017	6:55 AM	546	10945	SW1623	Iceland -	- El Seg	77	2578.5	0.740105511	
	10152017	2:30 AM	10152017	2:40 AM	546	10945	SW1621	lceland-	- El Sec	72	2394	0.099613012	
	10152017	2:48 AM	10152017	4:01 AM	548	10945	SW1023	loeland -	- El Sog	77	2422	0.948197551	
	10152017	4:29 AM	10152017	4:43 AM	548	10945	SW1621	loeland-	- E Sec	77	2443	0.927637844	
	10152017	0:58 AM	10152017	7:11 AM	548	10945	SW1021	Iceland -	- El Sec	76	2459.0	0.858370604	
	10152017	9:55 AM	10152017	10:08 AM	548	10945	SW1621	lceland	E Sec	77	2453.9	0.937079612	
	10162017	12:00 PM	10162017	12:14 PM	5.65	10945	SW1623	Iceland -	- El Sec	77	2508.2	0.780784565	
	10162017	2:16 AM	10162017	2:25 AM	546	10945	SW1621	liceland -	- El Seg	76	2574.4	0.691298374	
	10162017	5:13 AM	10162017	5:21 AM	548	10945	SW1623	Iceland -	- El Sog	77	2649.6	0.000182575	
	10162017	7:01 AM	10162017	7:09 AM	548	10945	SW1621	Iceland -	- El Sec	76	2653.1	0.601092821	
	10102017	7:37 AM	10102017	7:47 AM	546	10945	SW1023	Iceland -	- El Sec	76	2567.4	0.010195200	
	10162017	2.52 AM	10162017	2:43 AM	548	10945	SW1621	Iceland -	- E Sec	77	2753.7	0.98567882	
	10162017	2:44 AM	10162017	2:56 AM	548	10945	SW1621	loeland-	El Seg	79	2734.8	0.788195016	
	10162017	7:22 AM	10162017	7:37 AM	548	10945	SW1621	Iceland -	- El Seg	81	2782.2	1.239343322	
	10162017	9:50 AM	10162017	9:59 AM	548	10945	SW1623	Iceland -	- El Seg	78	2957.7	0.835401963	
	10172017	12:03 PM	10172017	12:11 PM	548	10945	SW1621	loeland -	E Sec	79	2945.8	0.795210752	
	10172017	1:16 AM	10172017	1:24 AM	546	10945	SW1023	lceland-	- El Seg	79	2966.2	0.725872409	
	10172017	2.47 AM	10172017	2:55 AM	548	10945	SW1621	Iceland -	- E Sec	81	2962.9	0.781738834	
	10172017	4:05 AM	10172017	4:12 AM	546	10945	SW1021	loeland	El Soc	78	2028.1	0.68950175	
	10172017	5:54 AM	10172017	5:42 AM	548	10945	SW162	Iceland-	- El Seg	76	2437.3	0.648687148	
Ph. 11-2	10172017	7:32 AM	10172017	7:43 AM	548	10945	SW1021	Iceland -	El Sec	81	2531	0.904202548	
Styles	10172017	3:52 AM	10172017	4:02 AM	548	10045	SW1620	loeland	E Seg	79	2066.6	0.933316741	
Basic	10172017	6:49 AM	10172017	7:01 AM	546	10945	SW1623	Iceland-	E Sec	79	2343.4	0.842240476	
Basic (No Grid)	10172017	7:01 AM	10172017	7:11 AM	548	10945	SW1621	Iceland -	- El Sec	84	2915.7	0.838003243	

Adding Other Non-Connected Machines To Your Fleet

If you have other Zamboni ice resurfacing machines, they can be added to your fleet by the Zamboni account administrator (or your Zamboni Authorized Distributor). The machine(s) model number, serial number and location needs to be provided to the Zamboni account administrator during the setup process and your "freemium experience" for the machine(s) without the Zamboni Connect System onboard will allow you access to the Additional Resources and the Maintenance Log features. All data-related modules and DTC information will remain blank, as there are no sensors and thus no data available for the machine(s). However, this will allow your team to fully utilized the Maintenance Log and to have access to all of the machine safety and operational information.

Support And Contact Information

support@zamboniconnect.com Zamboni Connect Administrator: 519.758.5000