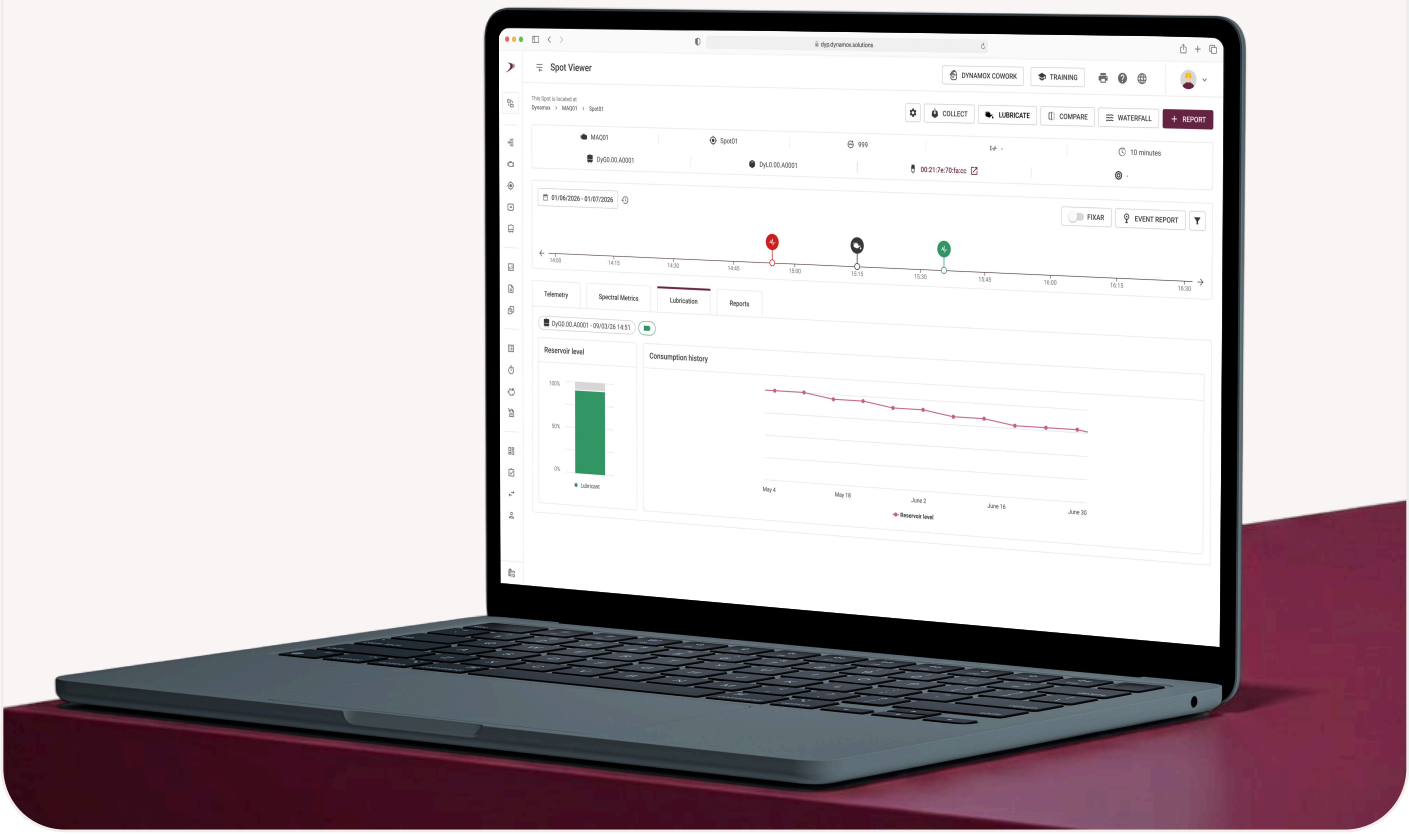
Dynamox

USER MANUAL

Digitalization of Lubrication Actuators on the Dynamox Solution



Dynamox_s.a | Dynamox | Dynamox.net

Index

1 First steps 3

2 About the perma STAR VARIO Bluetooth 4

3 Prerequisites 5

4 Configuration in perma CONNECT 6

4.1 Accessing perma CONNECT 6

4.2 Initial system configuration 7

5 System list export 10

6 Open a ticket with Dynamox support 11

7 Associate perma STAR VARIO Bluetooth 12

7.1 Locating the Spot in the Asset Tree 12

7.2 Associating the device to the Spot 13

8 View and operate on the Dynamox Platform 17

8.1 Identification in the Spot Viewer 17

8.2 Requesting on-demand lubrication 21

9 Additional resources 23

1 First steps

This document describes the integration process for the perma STAR VARIO Bluetooth (a single-point automatic lubrication system manufactured by perma-tec) with the Dynamox Platform.

Unlike Dynamox sensors, the perma STAR VARIO Bluetooth is initially configured and operated through the manufacturer's own perma CONNECT app/platform. Integration with the Dynamox Platform makes it possible to view, in one place, lubrication data (reservoir level, consumption history, and connectivity) alongside the other monitoring devices installed on the same asset, while also enabling on-demand lubrication requests.

The following chapters present the prerequisites, step-by-step configuration in perma CONNECT, the process for exporting and sending data to Dynamox support, and how to associate and view the device in the Dynamox Platform.

For information related to errors or configuration, contact Perma at **www.perma-tec.com**↗

2 About the perma STAR VARIO Bluetooth

The perma STAR VARIO Bluetooth is a single-point automatic lubrication system used to lubricate bearings, slide guides, open gears, chains, shafts, and other points that require periodic lubrication.

The system operates fully automatically, regardless of temperature and pressure, dispensing lubricant precisely according to the configured interval. It consists of an electromechanical drive, a 60, 120, 250, or 500 cm³ lubricant cartridge (LC), and a battery pack.

The Bluetooth version enables remote configuration and monitoring through the manufacturer's perma CONNECT app/platform.

> For detailed information on physical installation, mounting types, lubrication point preparation, and pressure testing, refer to the Installation Guide and Operating Manual for the perma STAR VARIO Bluetooth provided by perma-tec.

3 Prerequisites

Before starting the integration, make sure you have:

- a perma STAR VARIO Bluetooth already physically installed at the lubrication point, according to the perma-tec installation manual: **https://www.permausa.com/lubrication-systems/single-point-lubrication-systems/perma-star-vario**↗;
- a perma CONNECT user account (app or web version);
- access to the Dynamox Platform, with the workspace and Asset Tree already structured, including the destination Spot(s) already created;
- a Bluetooth-enabled smartphone or tablet to connect to and configure the perma STAR VARIO;
- a DynaGateway IoT(-S)/LTE(-S) to communicate between the perma device and the Dynamox Platform firmware.

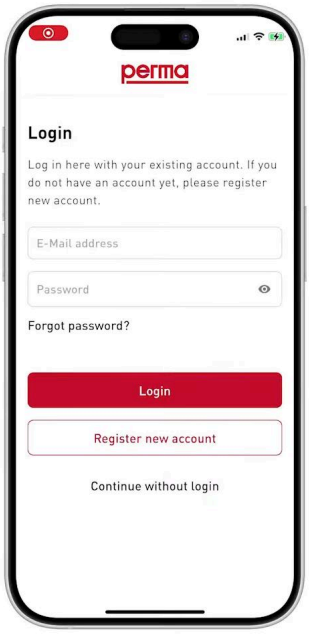
4 Configuration in perma CONNECT

4.1 Accessing perma CONNECT

Download and install the perma CONNECT app from the appropriate store (Android: Google Play Store; iOS: App Store – requires Android 7.0 or later / iOS 12 or later), or access the web version at **perma-connect.com**↗. Create a perma CONNECT user account on the website or in the app.

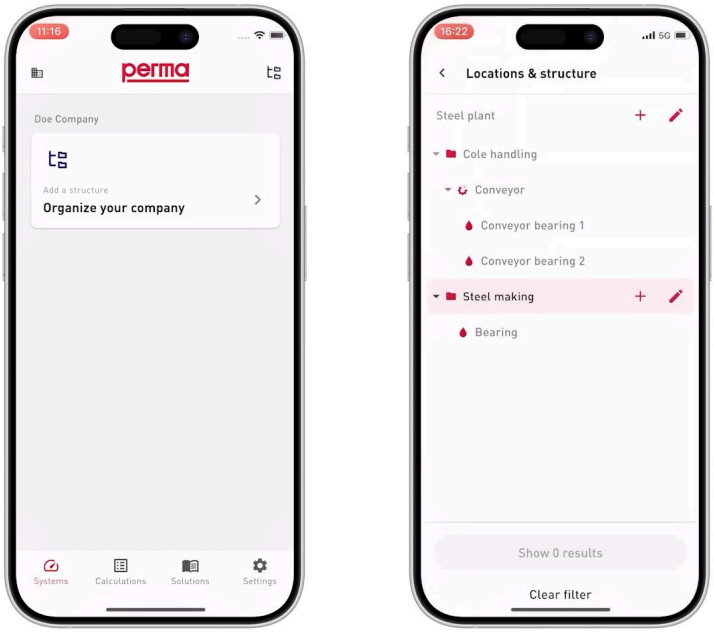
Open perma CONNECT and sign in with the credentials you created.

> The perma STAR VARIO Bluetooth communicates using Bluetooth Low Energy (BLE), with a range of up to 30 m. For remote configuration, keep the smartphone or tablet within this distance of the device.

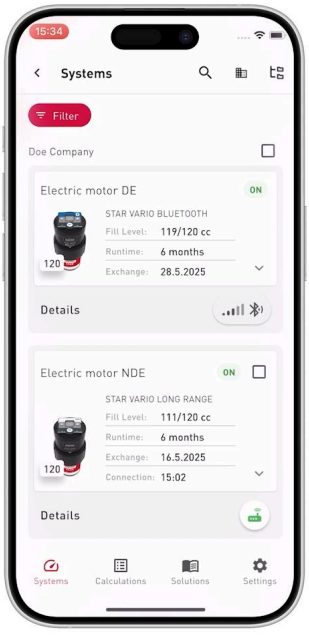


4.2 Initial system configuration

The Asset Tree structure must be created in advance and the device associated with the desired point (we recommend using the same naming and order as the structure created in the Dynamox Platform).

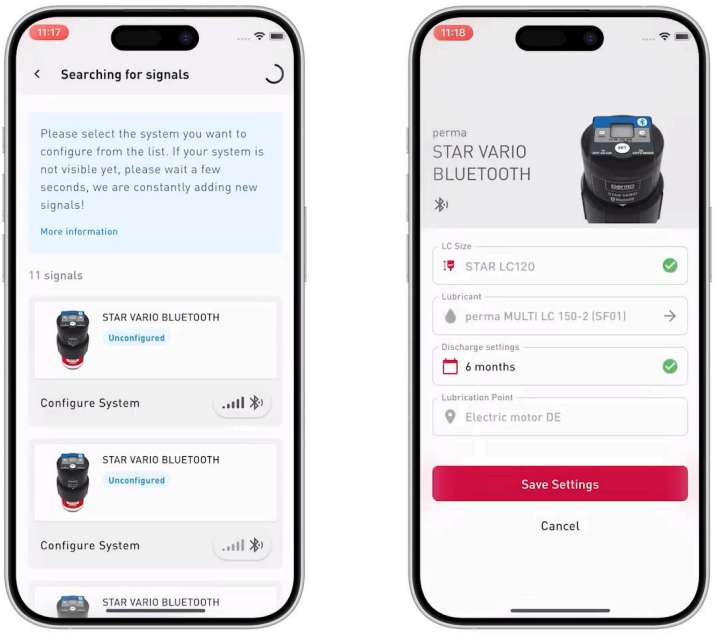


In the **Overview** of perma CONNECT, you can quickly check, for each registered system, whether a Bluetooth connection is available (device within range) and whether the system is on or off.

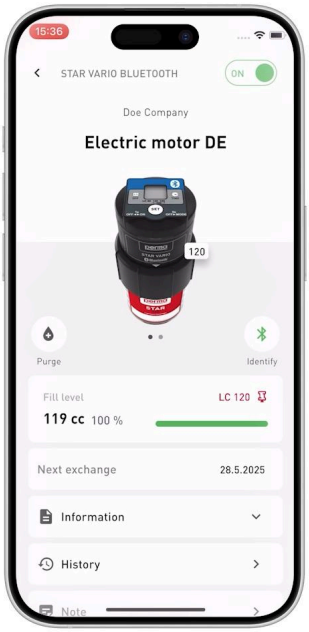


For the initial configuration, select the desired system in the **Overview** and, on the **Details** screen, enter:

- volume = LC cartridge size (60, 120, 250, or 500 cm³);
- lubricant type;
- dispensing period = lubricant discharge interval;
- lubrication point.



While still on the **Details**, perma CONNECT allows you to turn the system on or off remotely, locate the system, trigger an additional discharge (purge), view system information and history, add notes, and upload an image of the monitored point.



The LC cartridge size and dispensing period can also be configured directly on the device display using the **SET** button (press and hold for 5 seconds). Refer to the perma-tec Operating Manual for complete step-by-step instructions for this physical configuration.

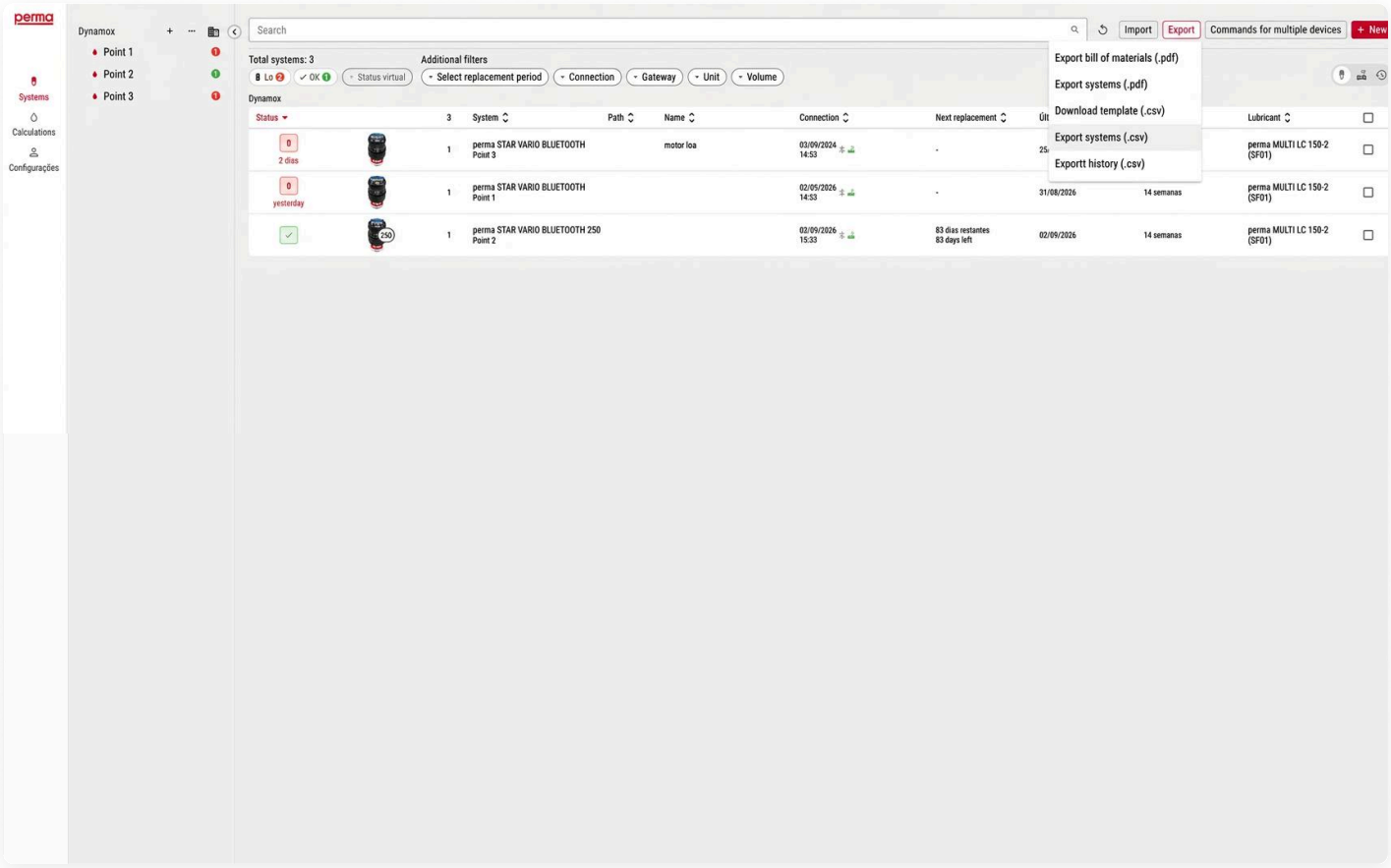


If the actuator is configured with a new LC cartridge or lubricant, it must be updated to the latest configuration.

5 System list export

After configuring the devices in perma CONNECT, export the system list to enable association in the Dynamox Platform.

On the **Systems** screen in perma CONNECT, click **Export** in the upper-right corner and select **Export systems (.csv)**.



The generated .csv file contains identification data for each registered perma STAR VARIO Bluetooth, including each device's Bluetooth (MAC) address (used by Dynamox support to register the device on the platform).

6 Open a ticket with Dynamox support

With the exported .csv file, email Dynamox support at **support@dynamox.net**↗, attaching the exported file.

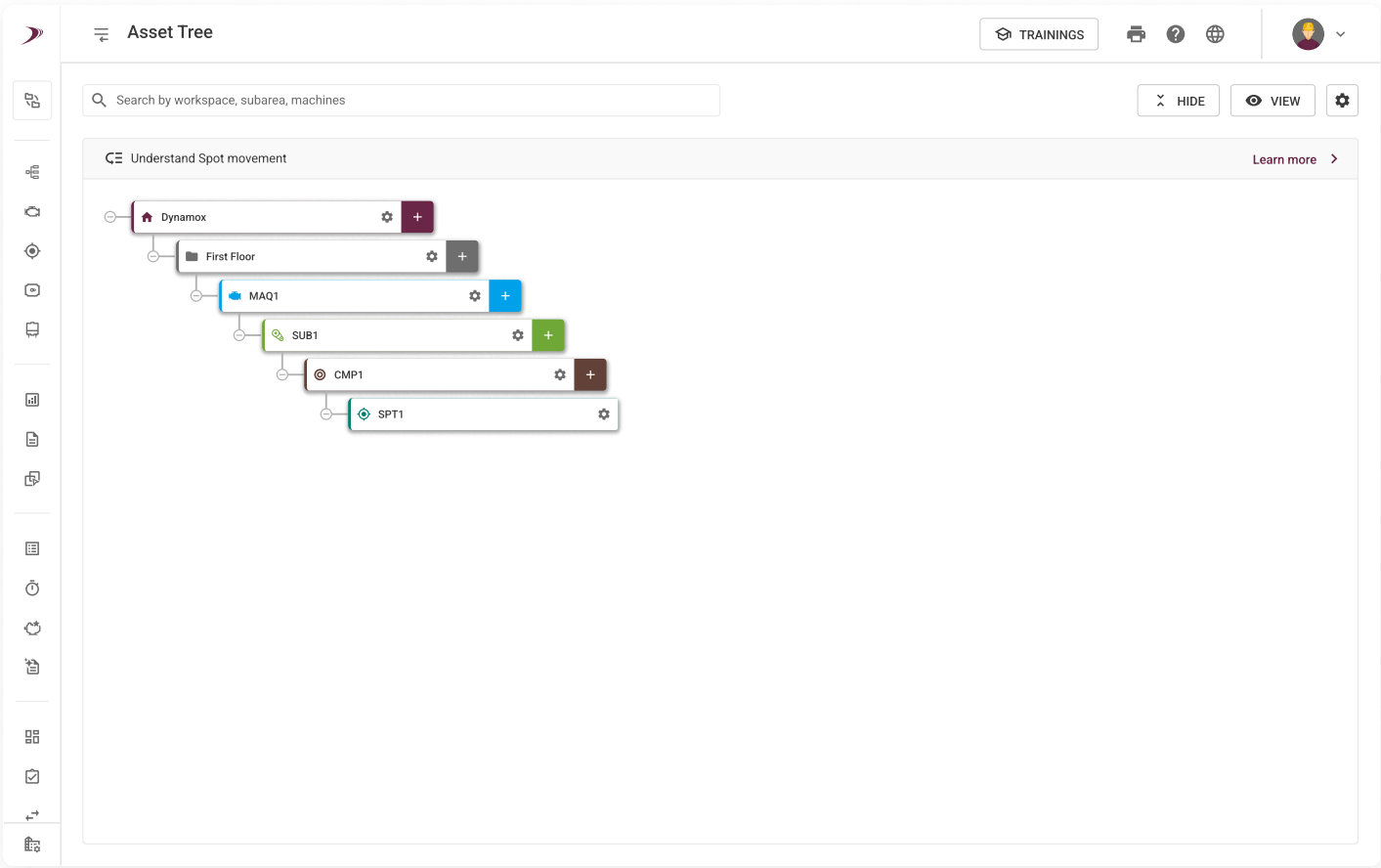
The Dynamox support team will use this data to register the devices on the platform. After support confirms the registration, the devices will be available for association in the Dynamox Platform, as described in the next chapter.

7 Associate perma STAR VARIO Bluetooth

7.1 Locating the Spot in the Asset Tree

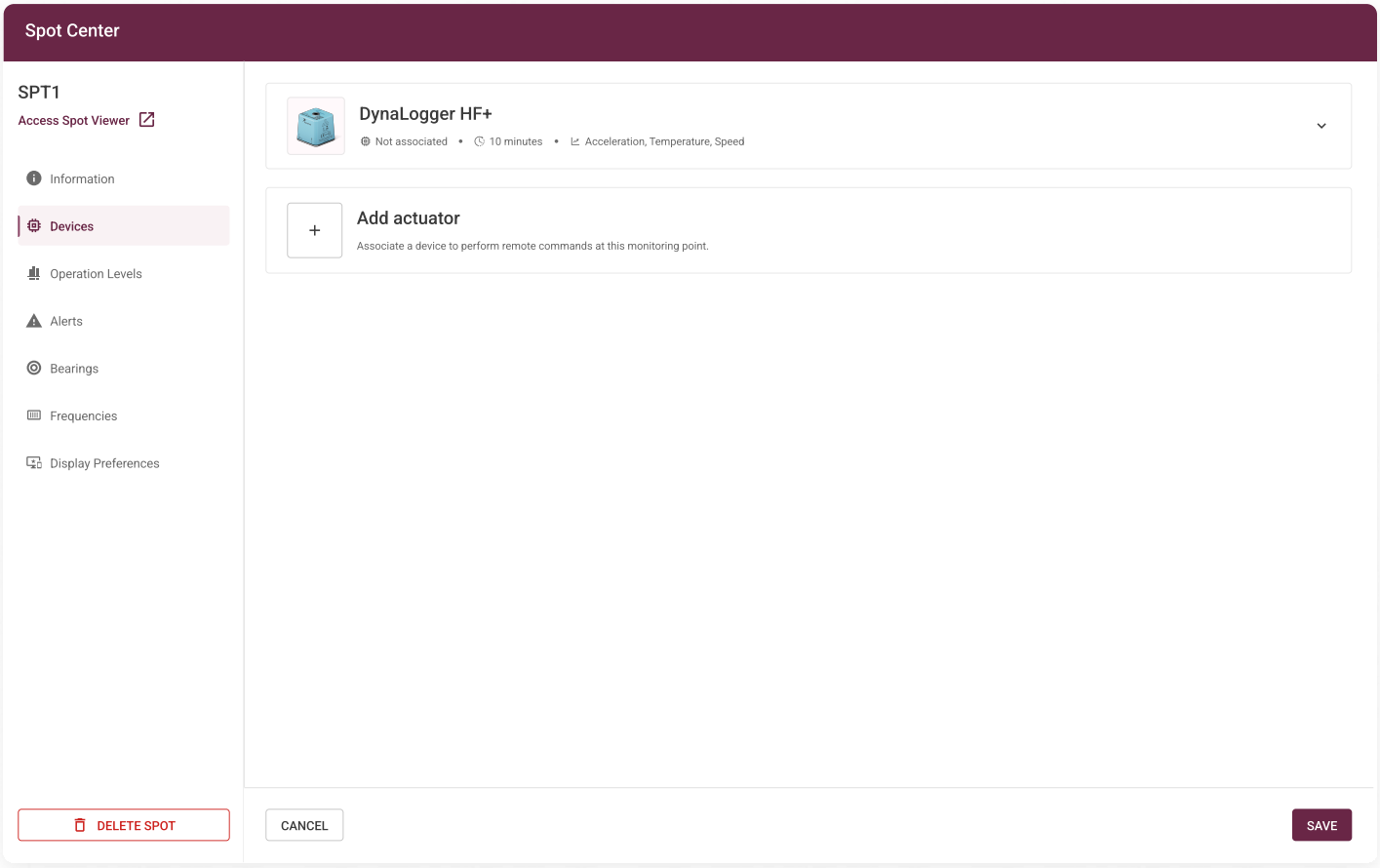
Open the Dynamox Platform and, in the **Asset Tree**, navigate to the Spot where the perma STAR VARIO Bluetooth will be associated.

Click the desired Spot or create a new one to access the **Spot Center**.



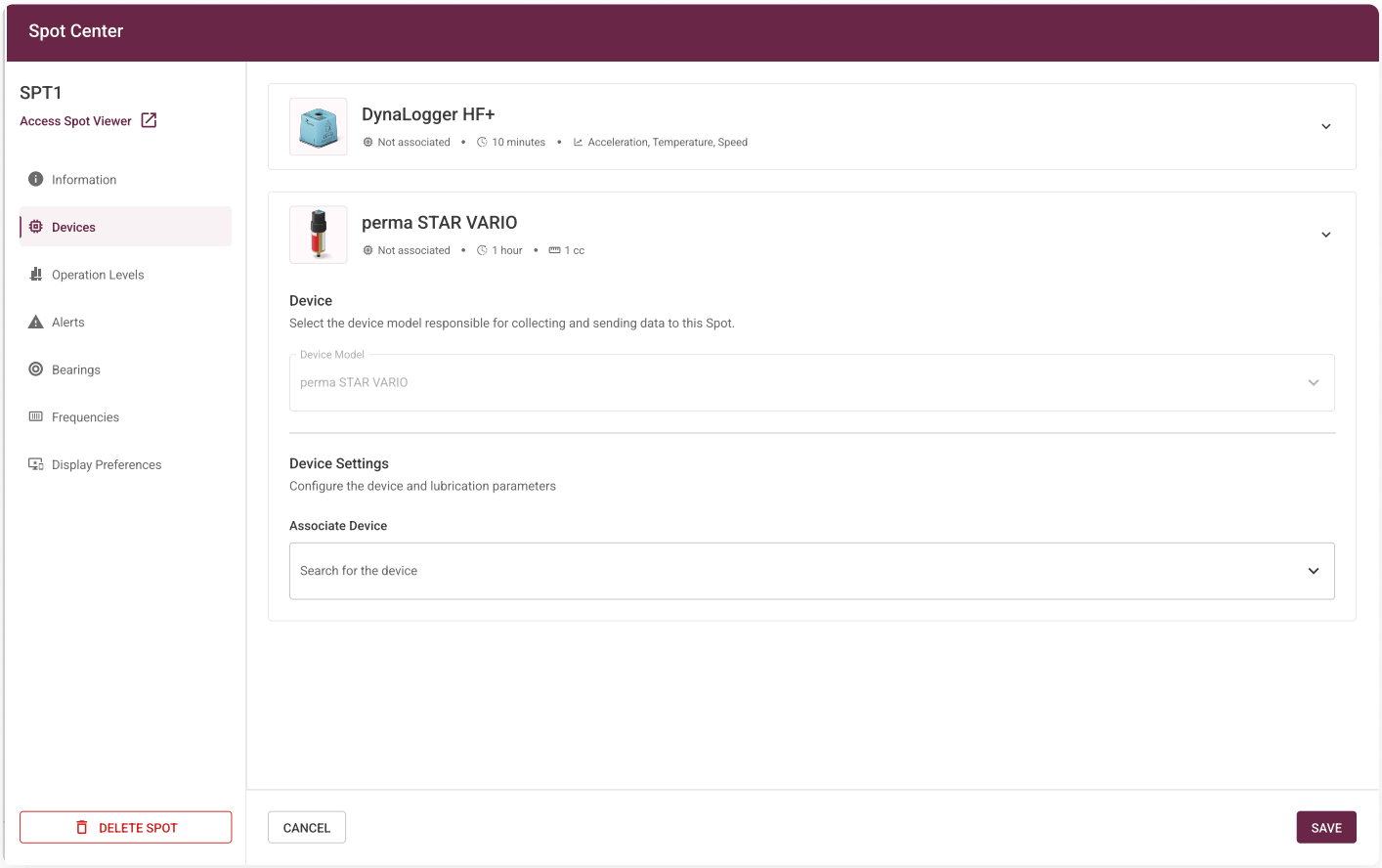
7.2 Associating the device to the Spot

In the **Spot Center**, open the **Devices** tab. If the Spot already has another associated data collection device (for example, a DynaLogger), it will appear at the top of the list.

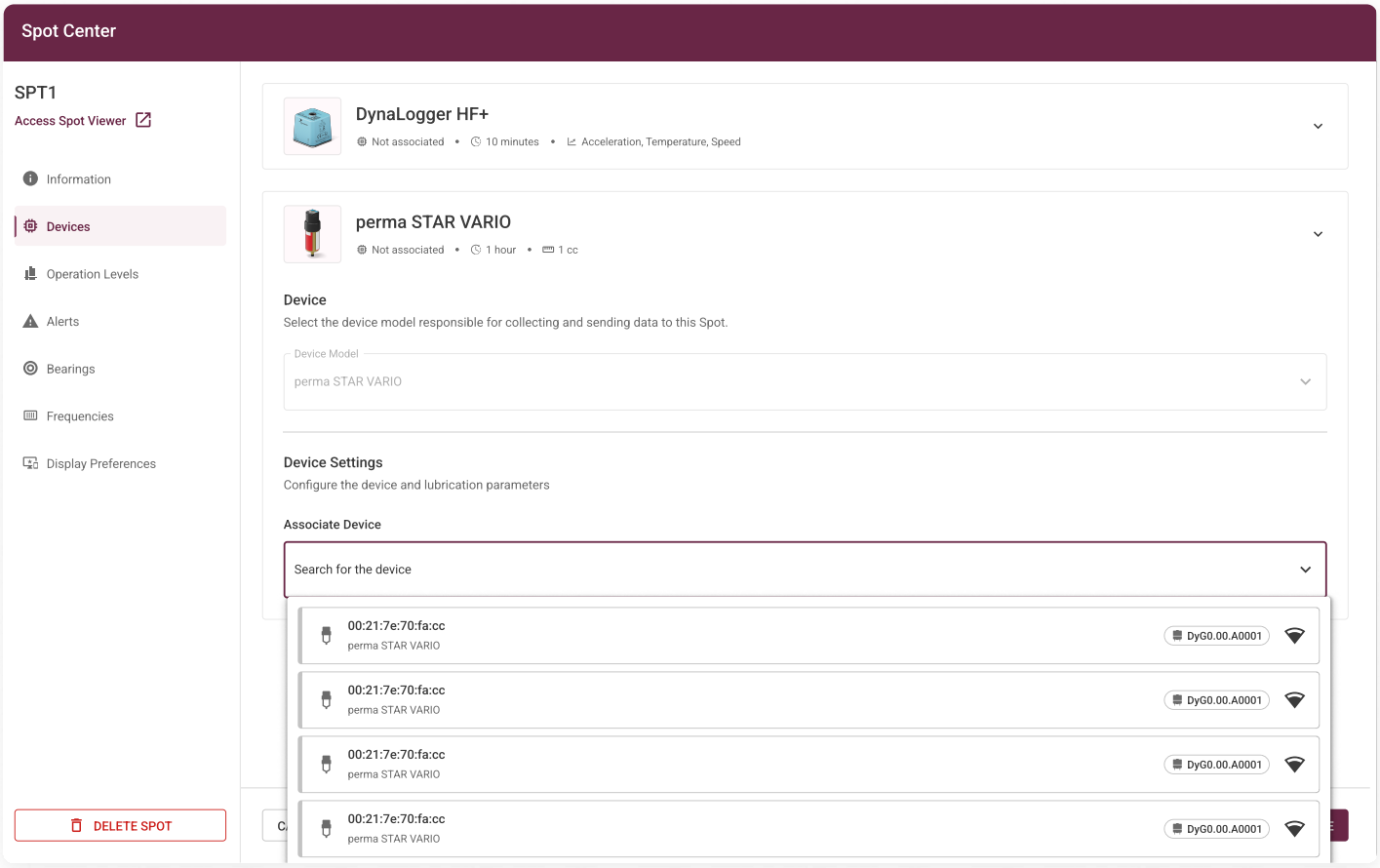


Click **Add actuator** to associate a device capable of executing remote commands at the monitoring point. This is how the perma STAR VARIO Bluetooth is recognized by the platform: not only as a sensor that sends data, but as an actuator that can also receive commands, such as on-demand lubrication (Section 8.2).

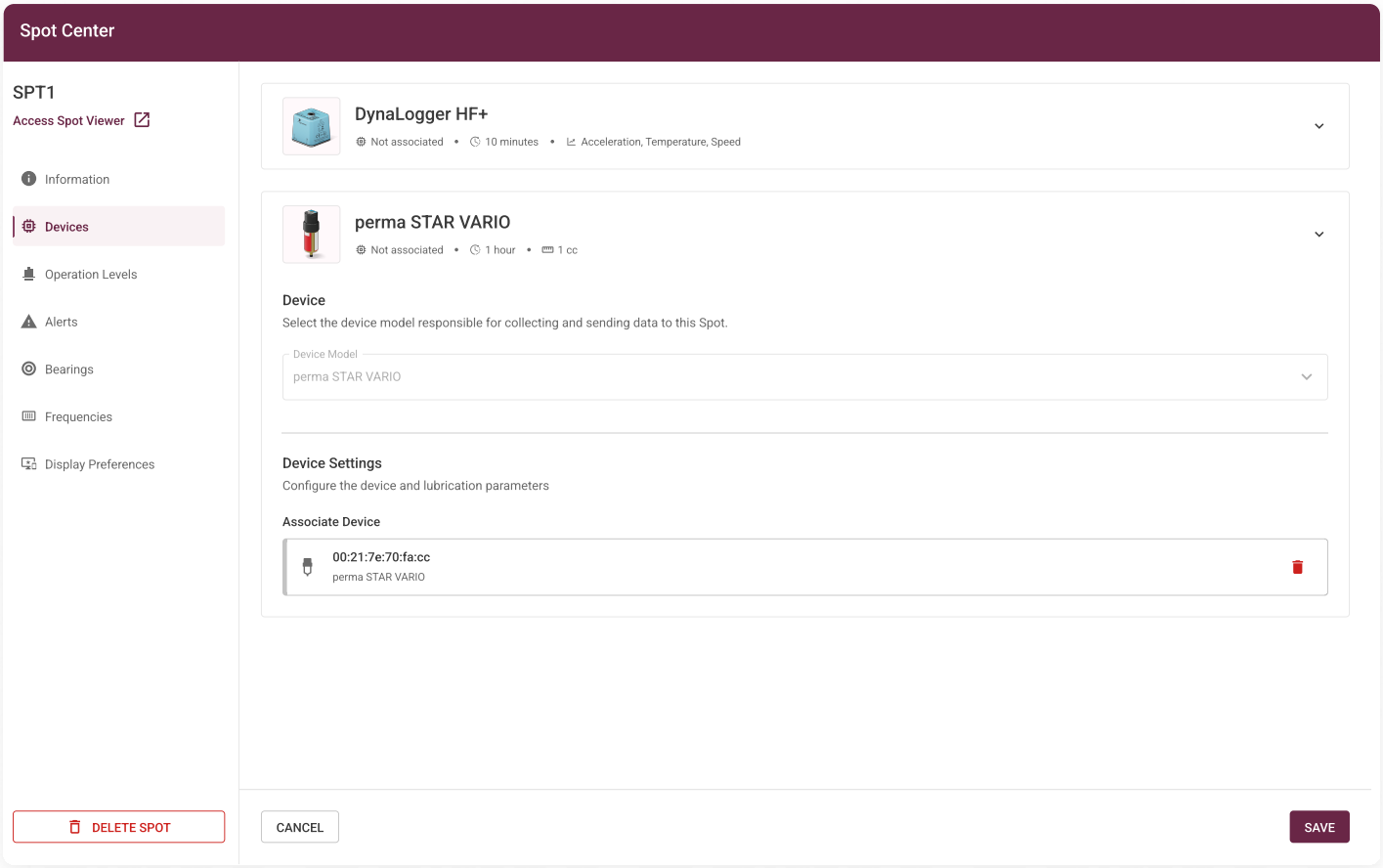
Under **Device Model**, select perma STAR VARIO.



In **Associate Device**, click **Search for device**. A list of perma STAR VARIO Bluetooth devices identified by their Bluetooth (MAC) address will appear. These devices were previously registered by Dynamox support using the file exported in the previous chapter.



Select the device corresponding to the monitoring point and click **Save**.



Unlike other sensors (such as the Dynamox Lens or DynaLogger), the perma STAR VARIO Bluetooth does not need to be added to the collection schedule of a specific DynaGateway. The device automatically communicates with the DynaGateway that has the strongest available signal within range.

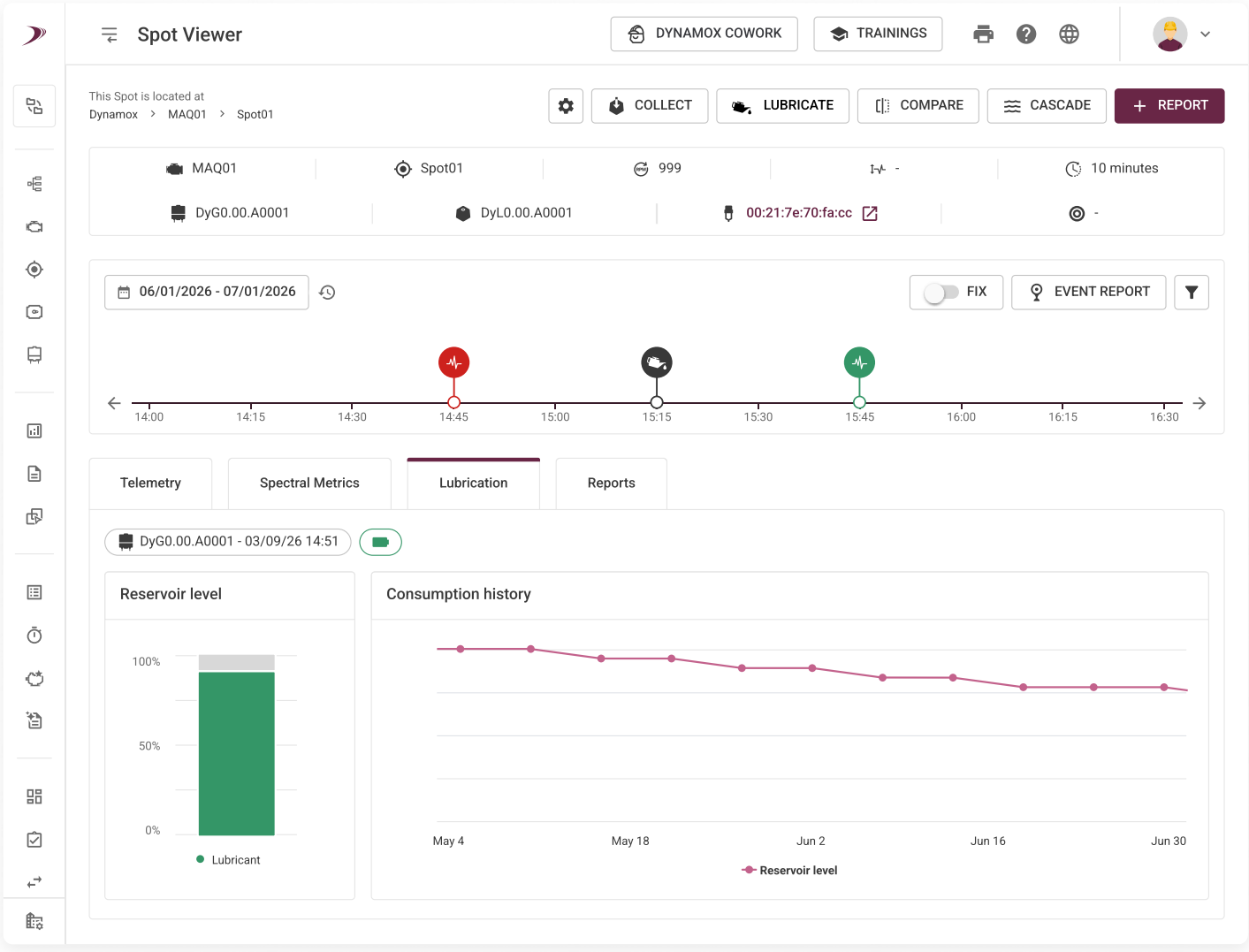
8 View and operate on the Dynamox Platform

8.1 Identification in the Spot Viewer

Once associated, the perma STAR VARIO Bluetooth is identified in the Spot Viewer header by its Bluetooth (MAC) address, alongside the other devices associated with the same Spot (DynaGateway, DynaLogger, etc.). Lubrication events appear on the Spot timeline with their own icon, alongside collection and image events.

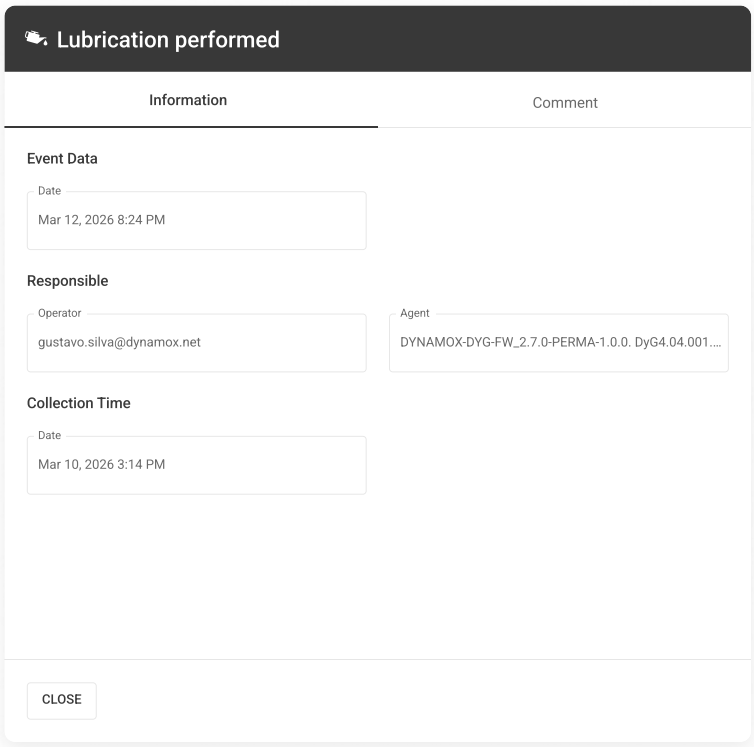
The **Lubrication** tab is available in the Spot Viewer, next to the Telemetry, Spectral Metrics, and Reports tabs, and displays:

- battery status and date/time of the last connection;
- reservoir level (percentage of lubricant remaining in the cartridge);
- consumption history (change in reservoir level over time).

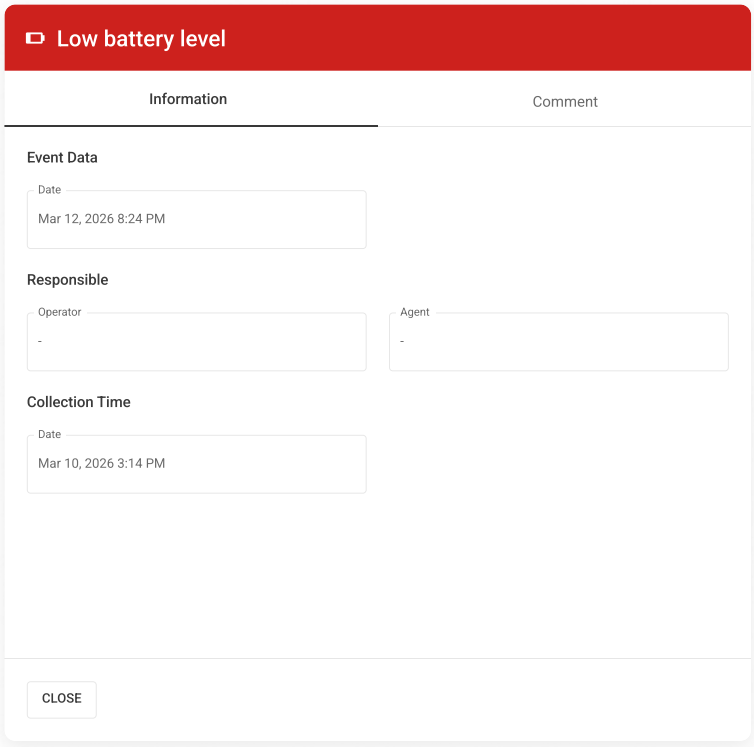


Each event is represented by a colored circle on the timeline. Clicking the circle opens a window with the event details: the Information tab shows the event date, the people responsible (operator and agent who reported the information), and the collection time, while the Comment tab lets you record notes about the event.

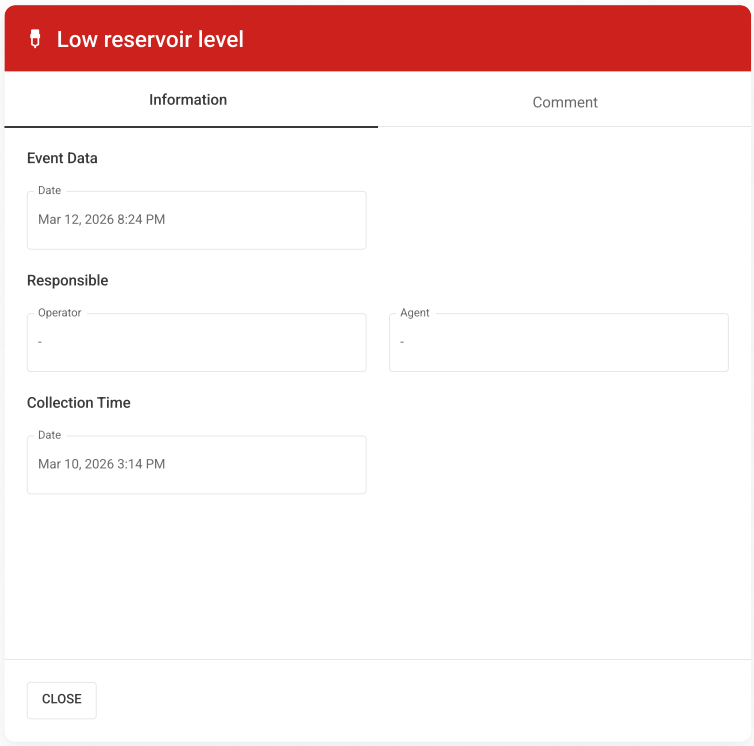
- **Lubrication completed:** the lubricant discharge was successfully executed and reported. The Operator and Agent fields identify the DynaGateway that mediated communication with the actuator.



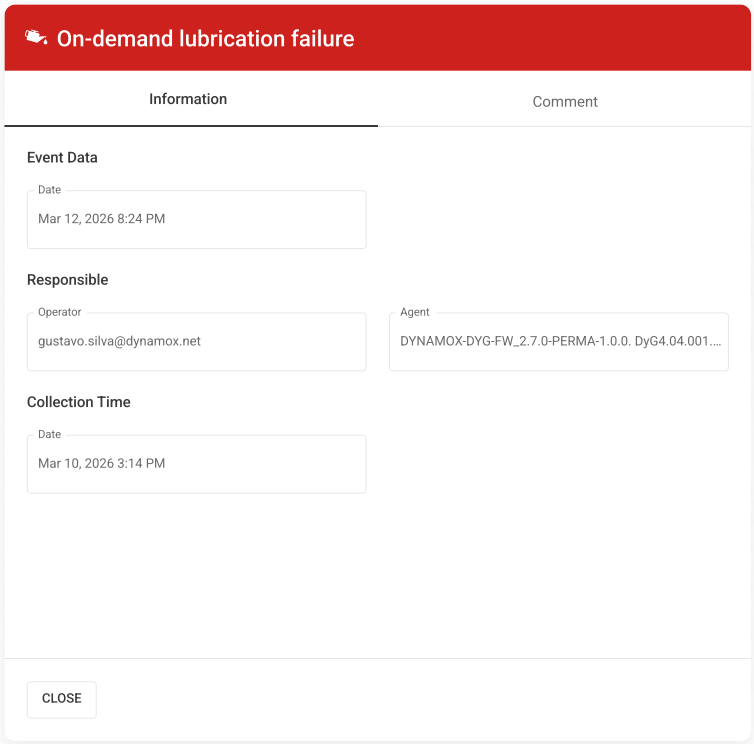
- **Low battery level:** the perma STAR VARIO battery has reached the minimum threshold and must be replaced. Because the alert is generated by the device itself, the responsible-party fields are not populated.



- **Low reservoir level:** the lubricant cartridge is nearly empty and must be replaced so that upcoming lubrication cycles can be completed.



- **On-demand lubrication failure:** the request sent by the Dynamox Platform was not completed by the actuator. The Operator and Agent fields identify the DynaGateway that sent the command, making it possible to investigate communication with the device.

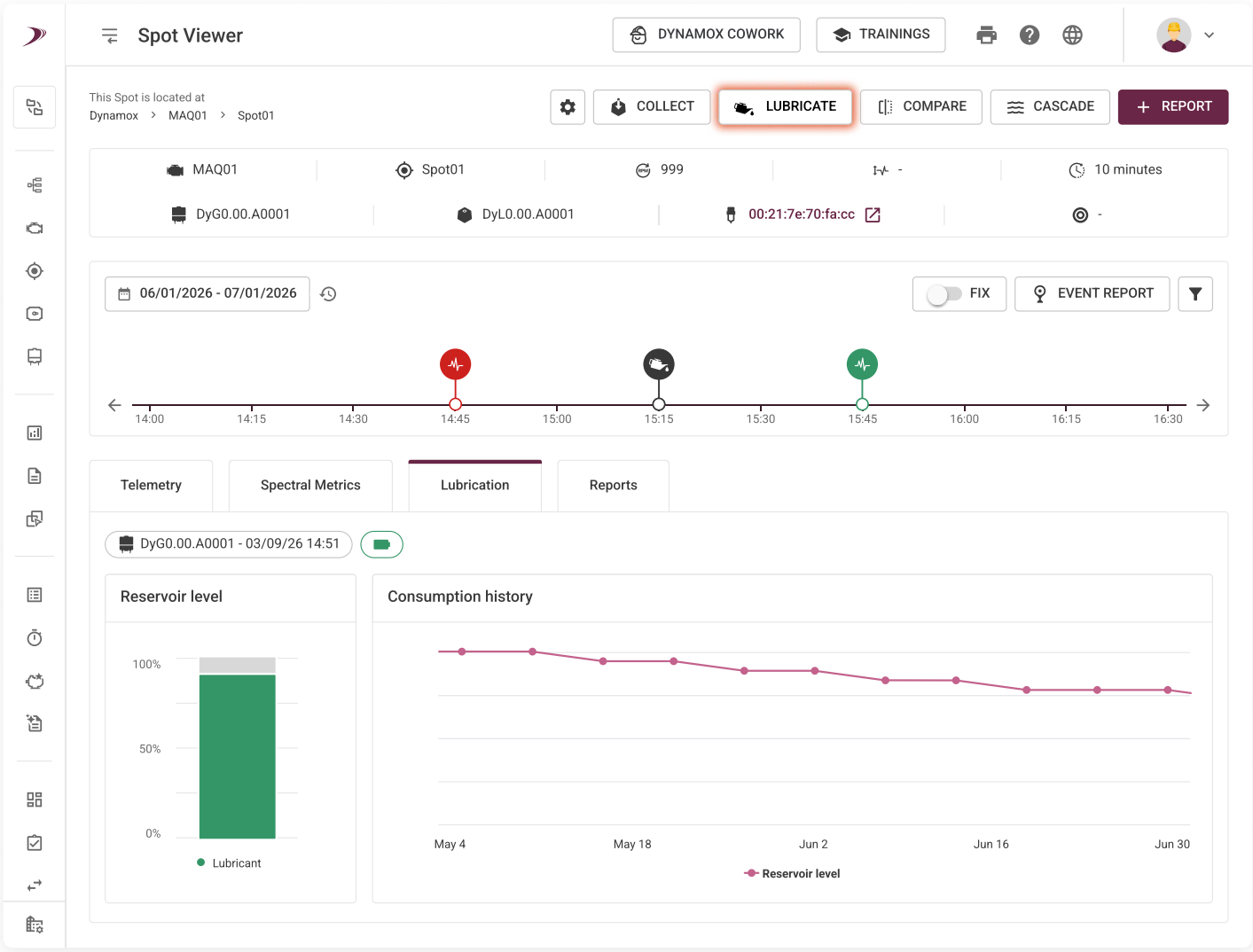


8.2 Requesting on-demand lubrication

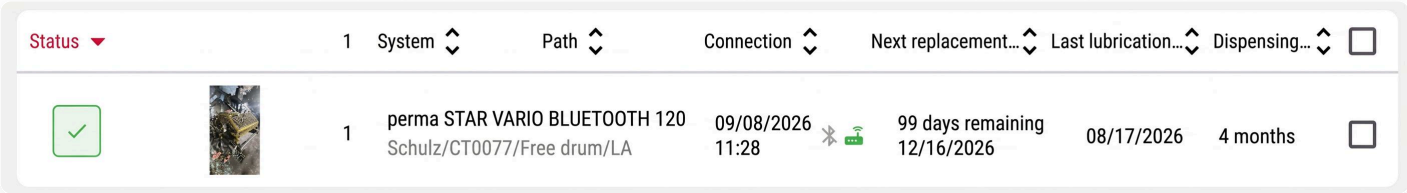
The **Lubricate** button in the Spot Viewer header allows you to request an on-demand lubricant discharge from the actuator associated with the Spot directly through the Dynamox Platform, without opening perma CONNECT or waiting for the programmed cycle.

When activated, the platform records the request and forwards it to the actuator during the next communication through the DynaGateway. Once the discharge is complete, the event appears on the timeline with the operator, agent (DynaGateway), and collection time.

Each on-demand lubrication request follows the device settings configured in the perma CONNECT platform. In some cases, more than one activation may be required to dispense the desired amount.

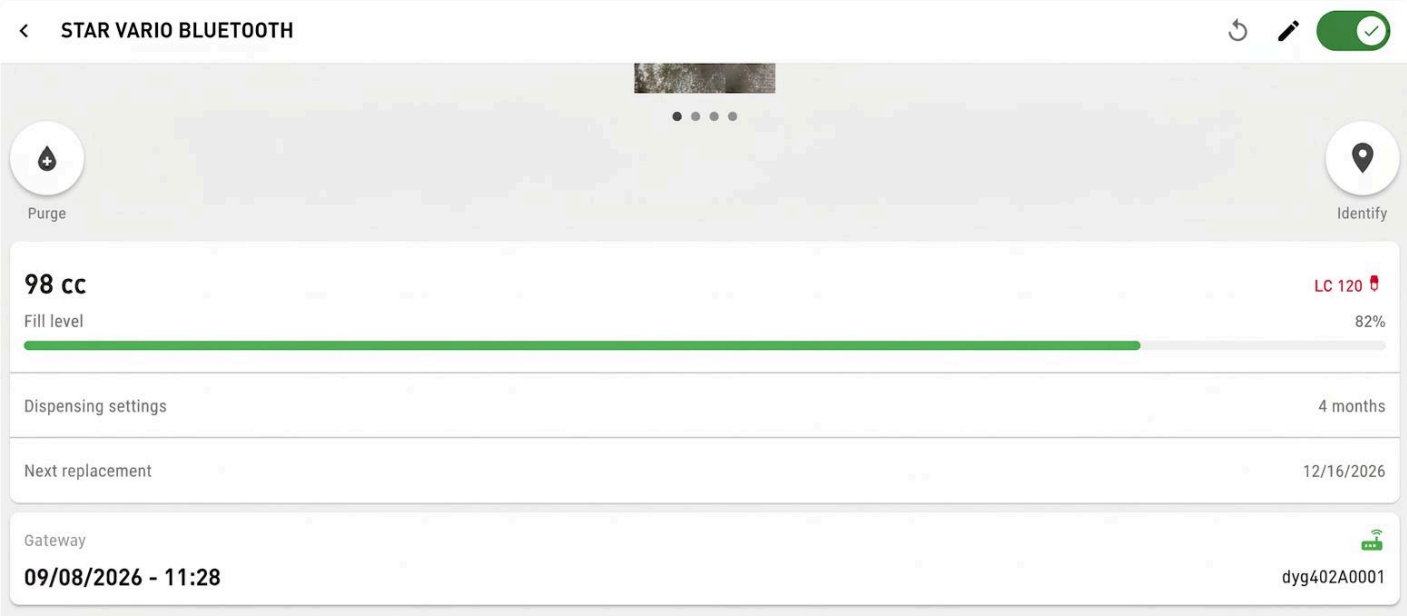


On the perma CONNECT platform, each actuator appears as a row in the system list, where the settings that govern its operation are defined and reviewed. The row shows the operating status, system model, lubrication point path, date and time of the last connection with Bluetooth and Gateway indicators, the next cartridge replacement with the number of days remaining, the date of the last replacement, and the configured dispensing period, which determines the volume released with each activation.



On the actuator screen, the **Purge** button sends a lubricant discharge request. When activated, the command is sent to the perma STAR VARIO and the purge is performed at the lubrication point. Below it, the cartridge volume and fill level, dispensing settings, and expected date of the next replacement are displayed.

The **Gateway** section indicates the last DynaGateway that sent data from that actuator, along with the date and time of the communication and the equipment identifier (useful for confirming whether the actuator is within network reach).



9 Additional resources

For questions about physical installation, mounting, or operation of the device directly through the display or perma CONNECT app, refer to the perma-tec documentation (Installation Guide and Operating Manual for the perma STAR VARIO Bluetooth) or contact perma-tec support.

For questions about device registration, association, or data display in the Dynamox Platform, contact us by email at **support@dynamox.net** or by phone at **+55 48 3024-5858**.

© 2026, Dynamox® is a registered trademark. All rights reserved.

The contents of this publication are presented for information purposes only. Every care has been taken to ensure the validity of the information contained in this publication, but no liability can be assumed for any loss or damage whether direct, indirect or arising from the use of the information contained herein. We reserve the right to modify or improve the specifications of our products at any time without prior notice.

Manual Digitalization of Lubrication Actuators in Dynamox Solution - Version 1 - September 2026 - en - Public Document

CERTIFIED ISO 9001

CERTIFIED ISO 27001

CERTIFIED ISO 27017

CERTIFIED ISO 27018

CERTIFIED ISO 27701

Get in touch:
www.dynamox.net/contact-us