REV 1.01
DATE 25 March 2026

POSSIBLE SENSOR ISSUE DETECTION
WITH MAINTENANCE CASES CREATION

UNIFY TRAINING GUIDE

Customer Use

ANOVA

PROBLEM

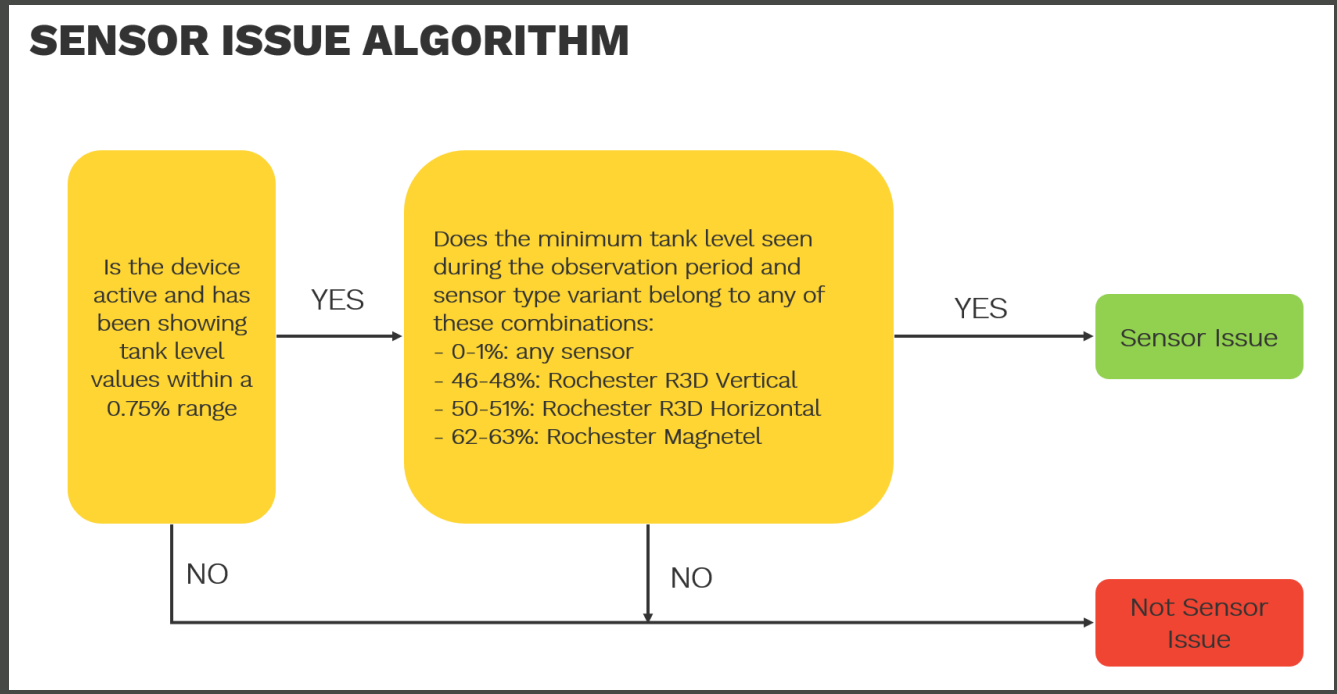
During normal operation, a device may report a consistent tank level over time. This value may be accurate if there is genuinely no-usage, but it may also indicate a potential malfunction. For example, certain device and sensor types report a consistent value of 50% when the sensor is unplugged from the device or dial. Because Unify does not currently flag this condition, users have no reliable way to distinguish potential sensor malfunctions from genuine no-usage, leading to delayed detection and increased run-out risk.

SOLUTION – HOW ARE SENSOR ISSUES DETECTED?

The sensor issue detection model looks at the last 7 days of level data and flags changes of less or equal than 0.75%. This model does not account for seasonality, unlike the Stuck Gauge model. The following use cases are monitored by sensor type:

- Level constant at 0% - Any sensor
- Level constant at 48% - Rochester R3D Vertical variants
- Level constant at 50% - Rochester R3D Horizontal variants
- Level constant at 62% - Magnetel variants

At a high level, the algorithm to identify possible sensor issues works as follows:

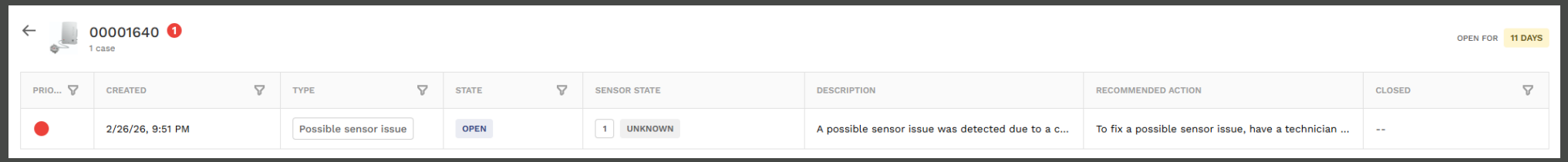


OUTCOME

Possible sensor malfunctions are now detected earlier and more consistently by monitoring sustained, low variance tank level readings across multiple sensor types. This reduces ambiguity between true no-usage scenarios and device or sensor issues, enabling teams to proactively identify and address data quality problems and improving overall confidence in reported tank levels.

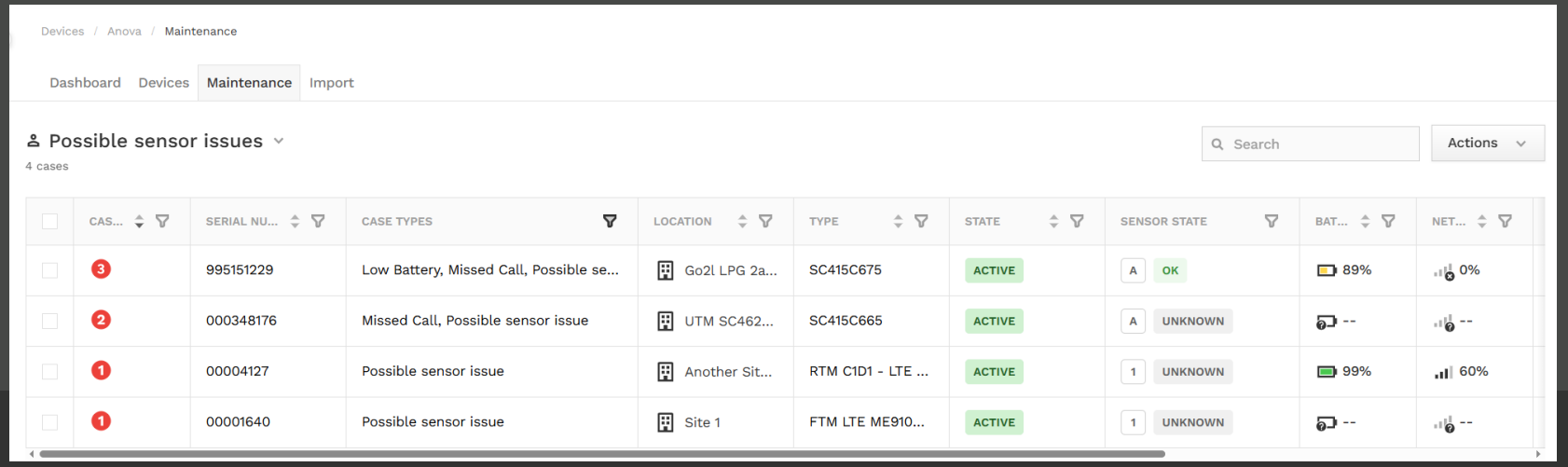
WORKFLOW – CASE CREATION

When a Possible Sensor Issue is flagged, a new Maintenance Case is created. The case is assigned a Medium priority and labeled with the case type ‘Possible Sensor Issue’. The priority is increased to High if the case remains open for five days and the identified trend persists. The case is automatically closed once the issue is resolved or when a subsequent reading reports a normal value.



REPORTS

Built in reports list all open cases for a tenant. Users can also create custom reports filtered to Possible Sensor Issues only. Reports can be downloaded or scheduled for distribution.



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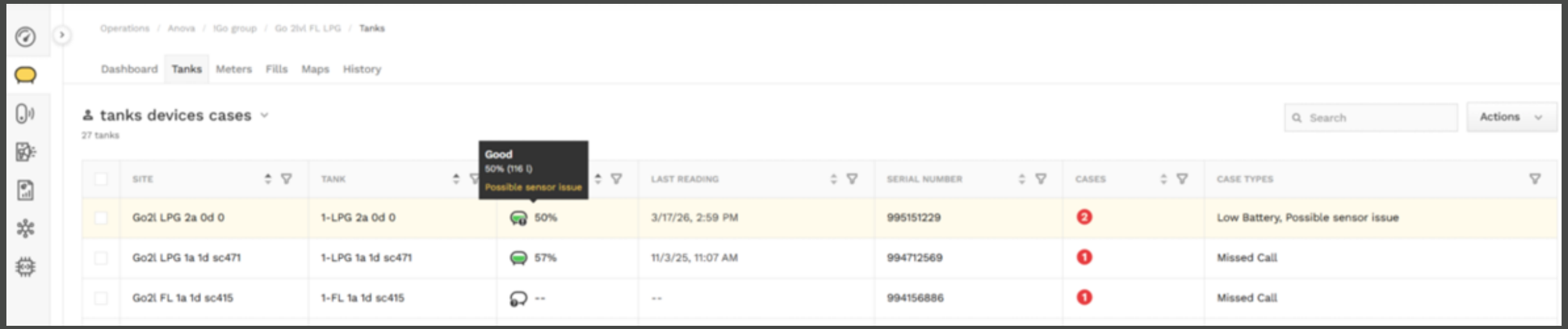
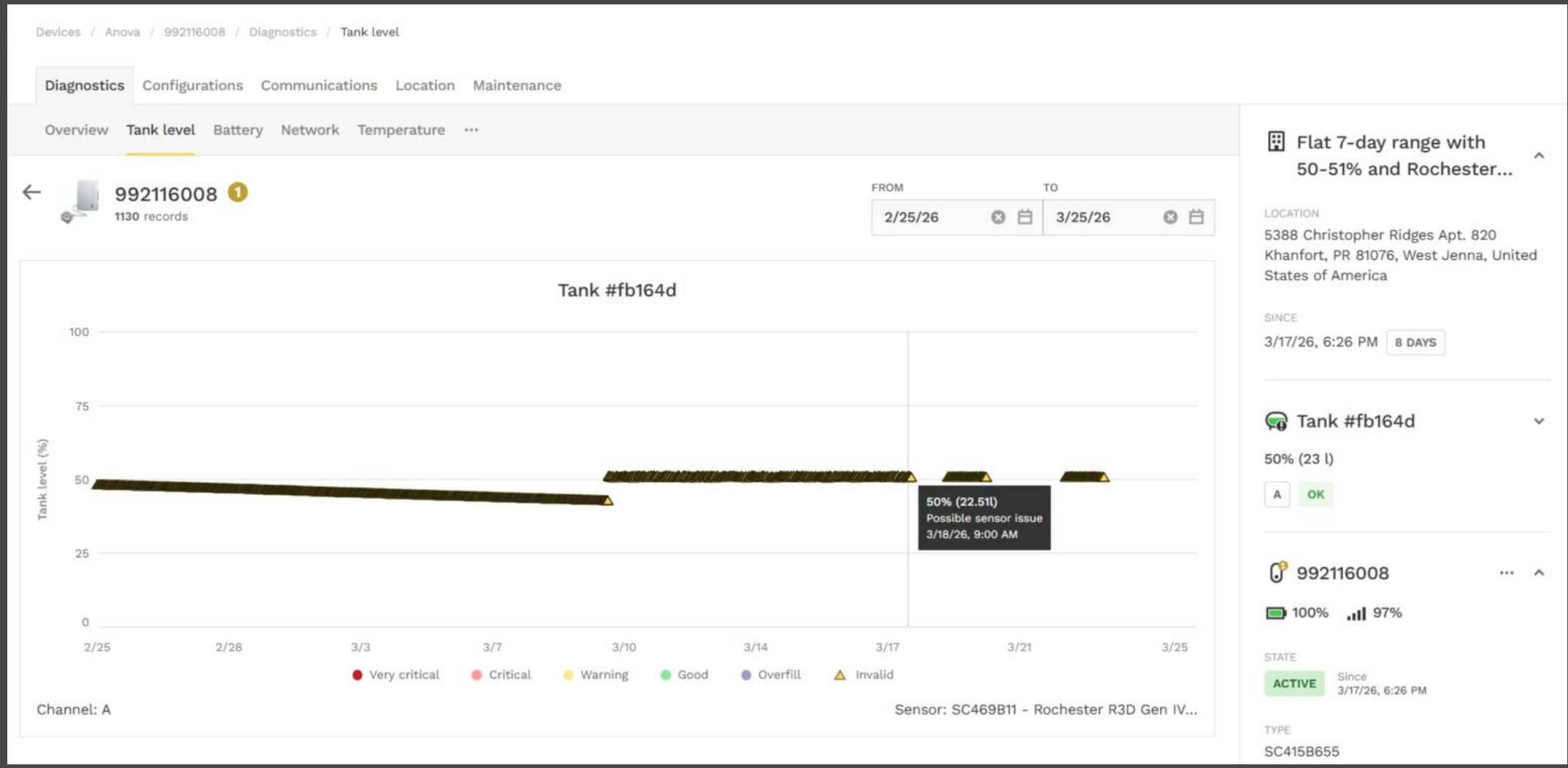
TANK LEVEL ICON

When a tank is allocated to a device with an open Possible Sensor Issue, the tank level icon is displayed with an “!” indicator. This visual cue conveys that the tank telemetry may require further review.



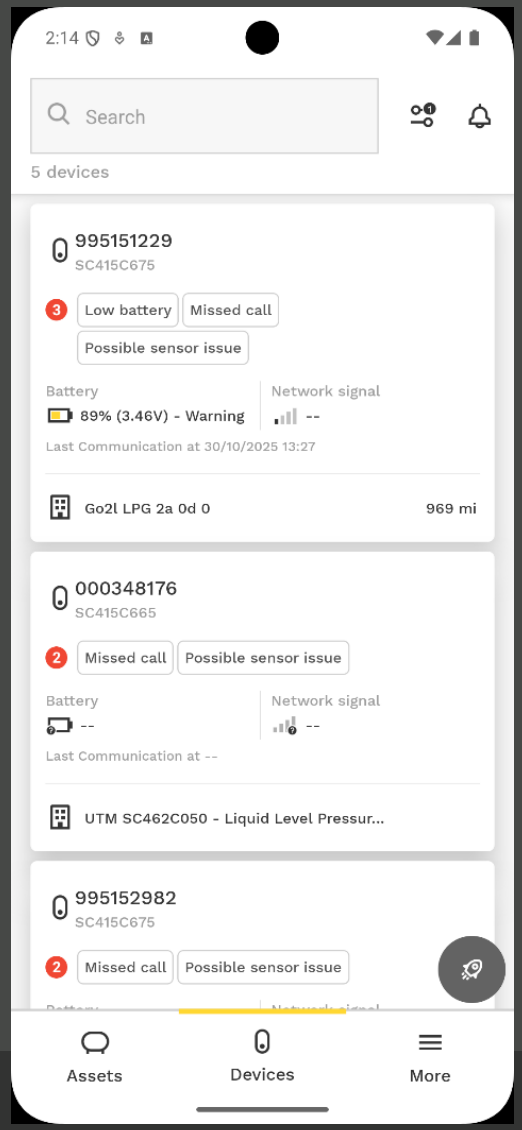
DEVICE DETAILS

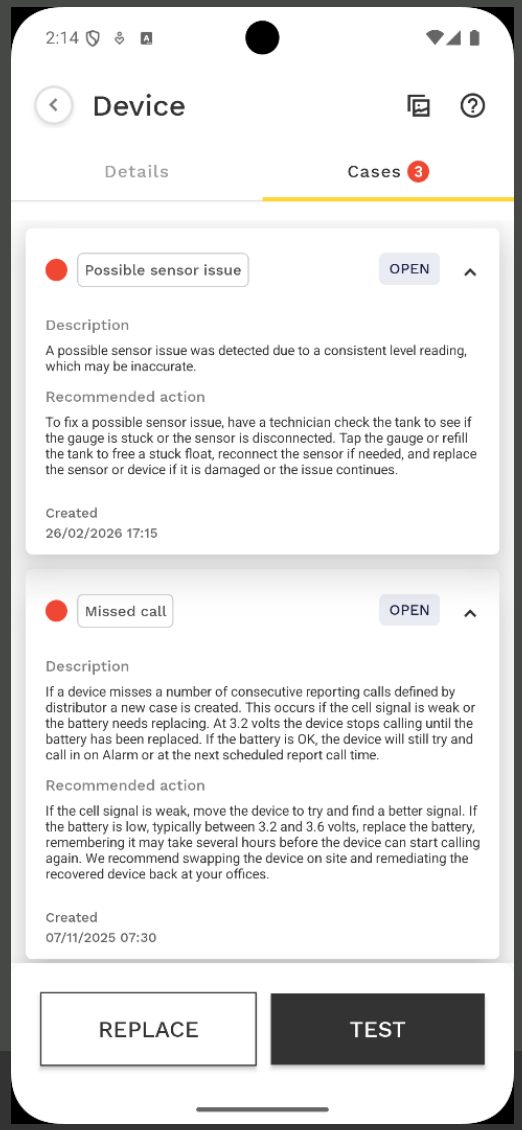
When a device has an open **Possible Sensor Issue**, the tank level chart displays subsequent readings with a **yellow triangle** indicator. This highlights that the reported reading may be inaccurate or impacted by a sensor issue.

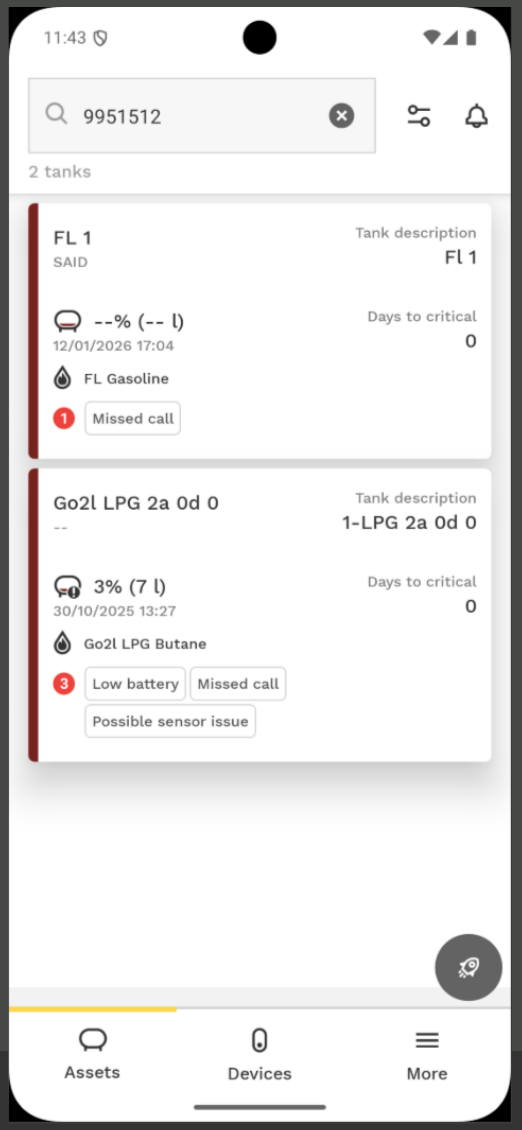


ANOVA GO

This new case type is also available in **Anova Go** and functions in the same way as existing case types within the application. When a tank is allocated to a device with an open **Possible Sensor Issue**, the tank level icon is displayed with an **"!"** indicator. This visual cue conveys that the tank telemetry may require further review.







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HOW TO ENABLE

Please reach out to Customer Success Team:

- Contact support@anova.com

NEED FURTHER INFORMATON OR HAVE FEEDBACK:

Please reach out to Customer Success Team to discuss at: support@anova.com

FAQ:

How does a Possible Sensor Issue differ from a Stuck Gauge?

The Stuck Gauge detection model flags any consistently reported value. The **Possible Sensor Issue** model specifically detects recurring values of 0%, 48%, 50%, and 62%.

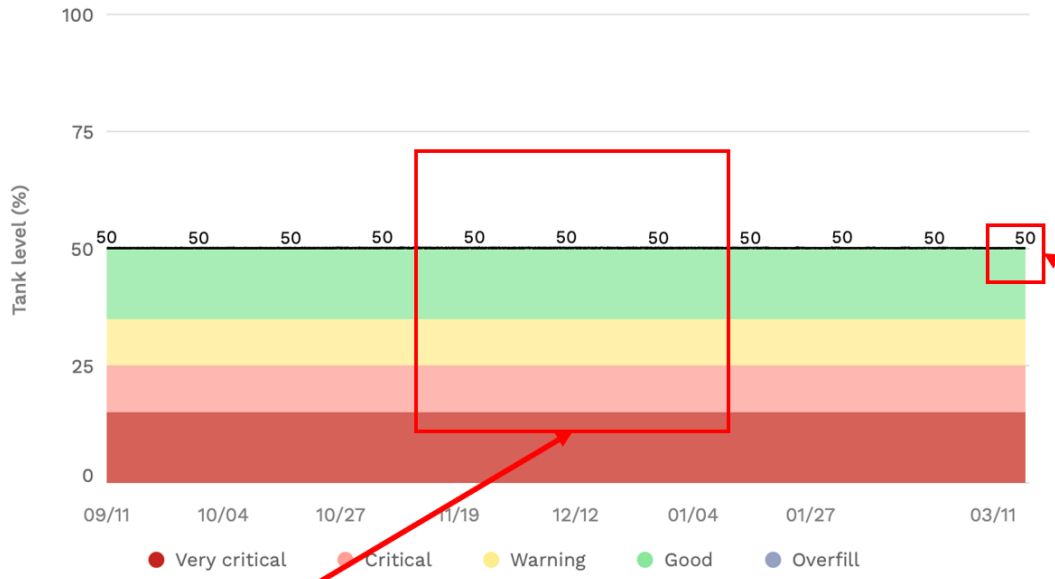
The Possible Sensor Issue model runs before Stuck Gauge. If it flags a device with a Possible Sensor Issue, that device is excluded from the Stuck Gauge analysis.

Read more about the Stuck Gauge topic in our Knowledge Base: https://support.anova.com/hc/en-us/articles/48823734742419-Unify-Devices-Menu-Stuck-Gauge-Detection-with-Maintenance-Cases-Creation

EXAMPLES OF POSSIBLE SENSOR ISSUES IN UNIFY: (*SAMPLE DATA – IN TEST ENVIRONMENT*)

EXAMPLE 1:

DEVICE HISTORICAL PATTERN:
UNCLEAR, FLAT AT 50%, SENSOR R3D HORIZONTAL -> SENSOR ISSUE



Unclear or intermittent consumption pattern

Sensor type known to cause device to show 50-51% level when unplugged

✓ Sensor Issue

Flat consumption for the last 7 days

EXAMPLES OF POSSIBLE SENSOR ISSUES IN UNIFY: (*SAMPLE DATA – IN TEST ENVIRONMENT*)

EXAMPLE 2:

DEVICE HISTORICAL PATTERN:
UNCLEAR, FLAT AT 62%, SENSOR MAGNETEL -> SENSOR ISSUE

✓ Sensor Issue

Flat consumption for the last 7 days

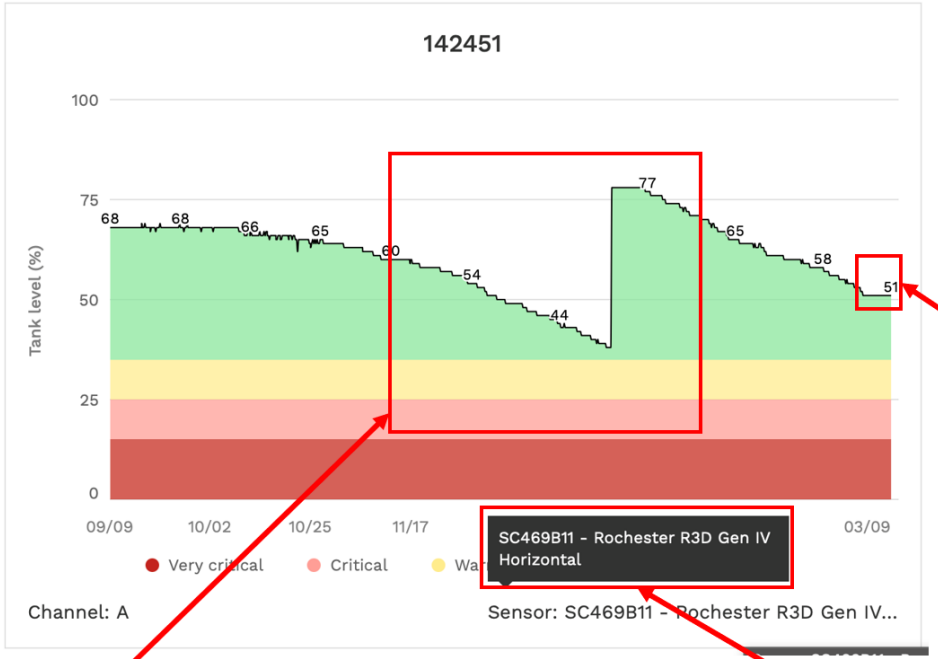
Unclear or intermittent consumption pattern

Sensor type known to cause device to show 62-63% level when unplugged

EXAMPLES OF POSSIBLE SENSOR ISSUES IN UNIFY: (*SAMPLE DATA – IN TEST ENVIRONMENT*)

EXAMPLE 3: A device that might have been flagged as Stuck Gauge is now flagged as a Sensor Issue, based on the sensor type and reported value

DEVICE HISTORICAL PATTERN: ANNUAL SEASONAL, IN PEAK SEASON, FLAT AT 51% -> SENSOR ISSUE



✓ Sensor Issue

✗ Not Stuck Gauge

Flat consumption for the last 7 days, during supposed peak season

Consecutive high consumption months -> detected peak season Nov-Feb

Sensor type known to cause device to show 50-51% level when unplugged

THANK YOU

support@anova.com

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