

User Guide

SENSE3 Kit



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DEFINITIONS



WARNING: Risk of injury or death.



CAUTION: Risk of damage to objects



IMPORTANT: Important information

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DISCLAIMER

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate, service, or maintain. Always ensure the correct configuration, installation, and connection of the sensor in accordance with these instructions prior to any use.

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AMENDMENT RECORD SHEET

Version Number	Amendment(s)	Amended by	Date
1	New document	S Rickards	29 November 2024
2	Updated for TD Config software	S Rickards	10 June 2025
3	Updated for latest TD Config software	S Rickards	24 September 2025
4	Updated for new product codes in price book	S Rickards	05 February 2026
5	Addition of new cable CAB-GS for use with single sensor	S Rickards	02 July 2026

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1 SENSE3 KIT - INTRODUCTION

1.1 Product overview

SENSE3 is a scalable data monitoring & analysis solution giving you access to both live and historic data using Tan Delta's **TD Online** application.

The standard kit allows up to three **OQS / OQL** sensors to be connected out of the box. However, you can expand the system to include up to 16 Sensors by connecting multiple Gateway Hubs to the SENSE3 standard kit (additional sensors and hubs are sold separately)

Therefore, you can monitor large multi-asset systems where timing of maintenance intervals is crucial. SENSE3 enables data transmission using a variety of methods depending upon location and network availability. These include Cellular, WiFi and Ethernet.

1.2 Kit Contents

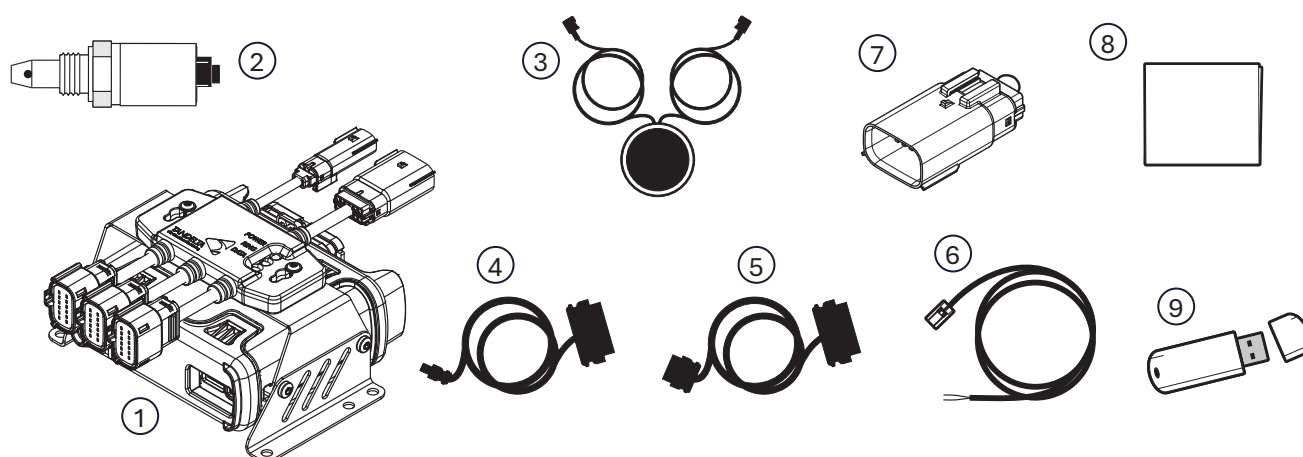


Fig. 1-1 SENSE3 Kit Contents

Check that your kit contains the following items:

What's in the box? Product Code: SENSE3-BS1

Item	Description
1	SENSE3 Unit - Gateway pre-assembled with Gateway Hub and Mounting Kit
2	OQS / OQL Sensor
3	Gateway 4G Antenna
4	Sensor to Hub Cable 5 m (CAB-SH)
5	Gateway Hub to Gateway Cable 0.2 m (CAB-GH)
6	Gateway Hub Power Cable 10 m (CAB-HP)
7	2 x Gateway Hub Continuity Plug (HCP-1)
8	Quick Start Guide
9	USB Stick containing: TD Config Software, Quick Start and Installation Guide videos, User Documentation PDF files.

1.3 About this User Guide

This User Guide provides details on how to configure, install, operate, and maintain the components of the SENSE3 Kit.

2 PRODUCT INFORMATION - TAN DELTA OIL QUALITY GATEWAY (GTW1)

2.1 Introduction

The Tan Delta Oil Quality Gateway (GTW1) is a comprehensive networking device.

The GTW1, coupled with TD Online provides remote visibility for all connected assets.



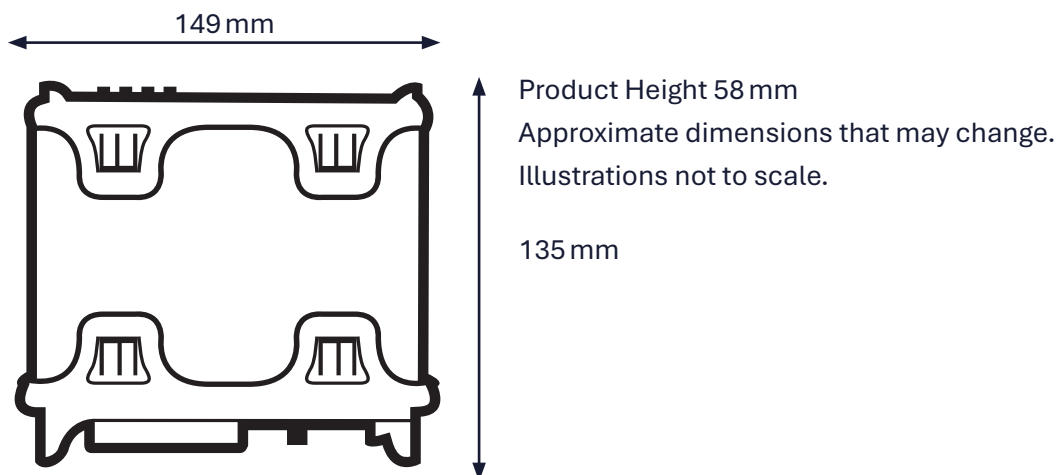
Fig. 2-1 Tan Delta Oil Quality Gateway (GTW1)

2.2 Important Safety Information

Pay attention to the following safety notes:

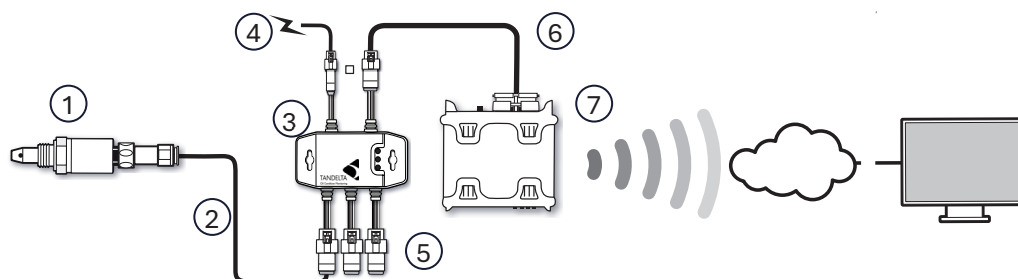
- The Gateway is not IECEx certified.
- Never disassemble, repair or tamper with the Gateway.
- Make sure that the supply voltage is within the specified range.
- Make sure that the load currents do not exceed the rated value.
- Check all the wiring for correct connection before powering the unit.

2.3 Dimensions



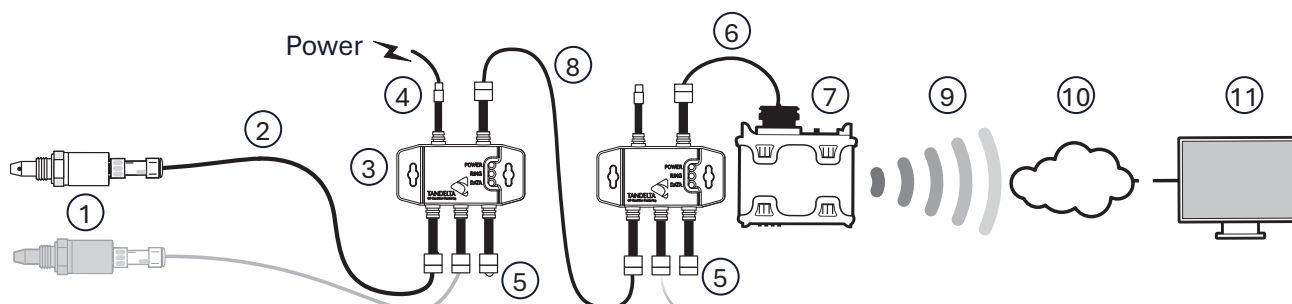
3 SENSE3 KIT - SENSOR CONNECTION OPTIONS

→ 3.1 SENSE3 Kit - Standard kit, as supplied



Item	Description
1	OQS Sensor (Long-nosed version OQL also available)
2	Sensor to Gateway Hub Cable (CAB-SH)
3	Gateway Hub (HUB-1)
4	Gateway Hub Power Cable (CAB-HP)
5	Gateway Hub Continuity Plug (HCP-1) (1 per unpopulated sensor slot)
6	Gateway to Gateway Hub Cable (CAB-GH)
7	Gateway (GTW1)

→ 3.2 Multi-Sensor and Hub System - Typical example



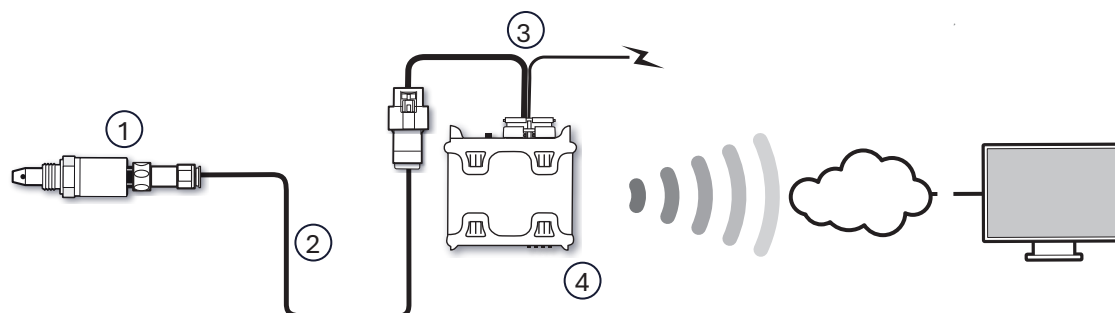
Item	Description
1	OQS Sensor (Long-nosed version OQL also available)
2	Sensor to Gateway Hub Cable (CAB-SH)
3	Gateway Hub (HUB-1)
4	Gateway Hub Power Cable (CAB-HP)
5	Gateway Hub Continuity Plug (HCP-1) (1 per unpopulated sensor slot)
6	Gateway to Gateway Hub Cable (CAB-GH)
7	Gateway (GTW1)
8	Gateway Hub to Gateway Hub Cable (CAB-HH)
9	4G / Wi-Fi / Ethernet
10	Internet
11	TD Online Software Application

Gateway Hubs and Sensors

N° of Gateway Hubs	N° of Sensors Supported
1	3
2	5
3	7
n	2n+1



3.3 Using a single Sensor



Item	Description
1	OQS Sensor (Long-nosed version OQL also available)
2	Sensor to Gateway Hub Cable (CAB-SH)
3	Gateway to Sensor Cable - <i>including connection to power supply</i> (CAB-GS)
4	Gateway (GTW1)

4 SENSOR CONFIGURATION



IMPORTANT:

You must configure the sensor to your specifications using Tan Delta Configuration Software **TD Config**.

TD Config is provided on the Tan Delta USB drive supplied with your Sensor.



NOTE:

The TD Config application **must** be installed on a windows PC or laptop.

TD Config **does not** operate on Mac devices or Chromebook devices.



4.1 Set Up



NOTE:

You will need Administrator privileges on your computer to Install the TD Config application.

Also, when TD Config has installed, we recommend that you connect the Configuration cable to the PC whilst Administrator privileges are still granted, so it will recognise the cable and install any drivers that are needed.

4.1.1 Install the TD Config application onto your PC / Laptop

TD Config is provided on the USB drive supplied with SENSE3 Kit.

Alternatively, it is available for download online at:

<http://oilconditionsoftware.com/installtdconfig>

- 1) Insert the Tan Delta USB drive into a USB port on your computer.
- 2) When prompted, select **Open folder** to view files.
- 3) Launch the **TDConfig_Installer** file and follow the instructions in the setup wizard.
- 4) When prompted, click on **Install**.
When installation is complete, **TD Config** is home page is displayed, as shown in Fig. 4-1.
- 5) Allow the PC/laptop to automatically update drivers, if needed.



NOTE:

If sensors are configured to Modbus/CANbus, you **must** open the software first, and then connect the Sensor.

4.1.3 Connect the OQSx-G2



NOTE:

The order in which you connect the cable and the sensor is important

- 1) First, Insert the USB end of **Cable J** into a USB port on your PC/laptop.
- 2) Then, connect the free end of configuration cable (**CAB-J**) to the OQSx-G2, as shown in Fig. 4-2.
- 3) Once the home screen has loaded, select **Device Configuration** from the options on the home screen.



Fig. 4-2 Setting up a sensor for configuration

(Standard sensor shown)

4.1.4 Select the required configuration

The Device Configuration screen (Fig. 3-3) displays a list of configuration options.

- 1) Select the **SENSE3 - Gateway Kit** option.
The next screen asks how many sensors there are in your system. Click in the required number.

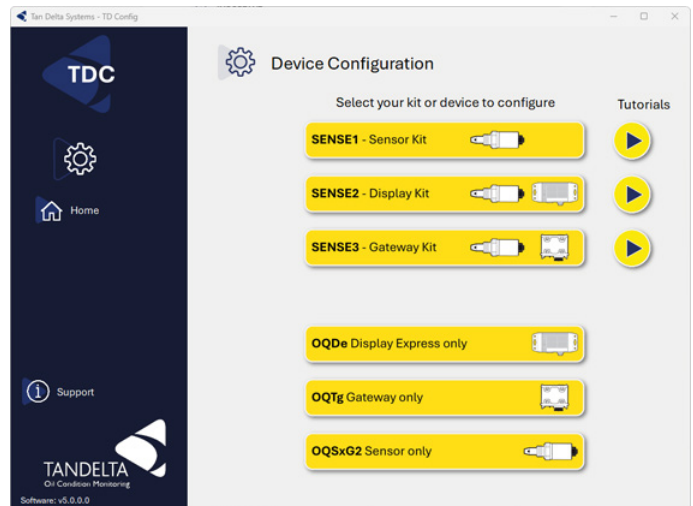


Fig. 4-3 Device Configuration selection screen

The SENSE3 Configuration screen will ask you to select the number of Sensors that are in your system (Fig. 3-4).

- 2) Select the required number, then Click on **Next**.

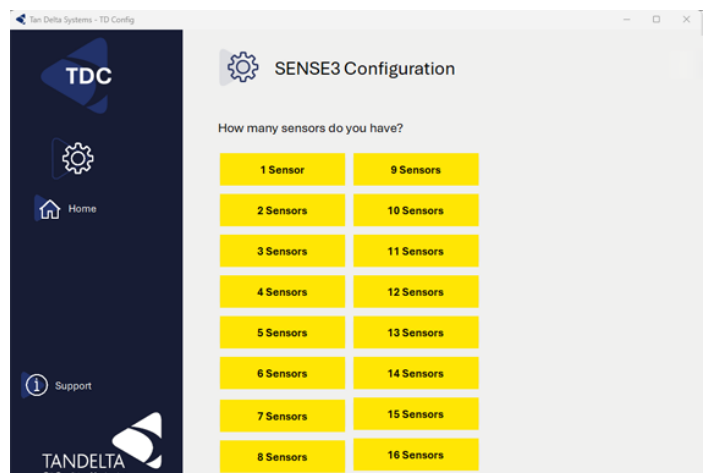


Fig. 4-4 Select number of sensors screen

The SENSE3 Configuration screen will search for a suitable Cable and Sensor.

Once your Sensor is detected, the **Sensor Found** screen is displayed (Fig. 3-4).

- 2) Click on **Next**.

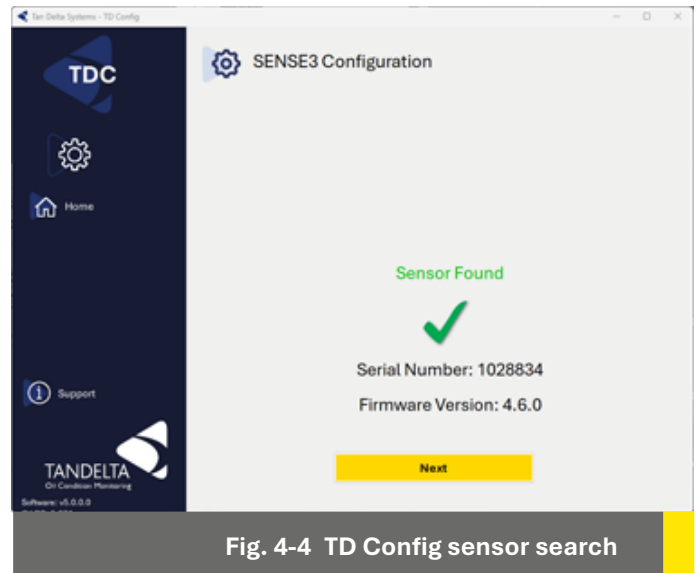


Fig. 4-4 TD Config sensor search

TD Config displays the Oil Database, as shown in Fig. 4-5.



NOTE:

If your oil is not displayed in the database, contact Tan Delta Support.

- 7) You can use the **Custom sensor name** option to give your sensor a name relevant to your application e.g. **Gearbox**.
- 8) You can re-order the list by clicking on the column headings e.g. **Manufacturer**, **Viscosity** etc.
- 9) Select the required oil from the database, then click on **Upload to Sensor**.

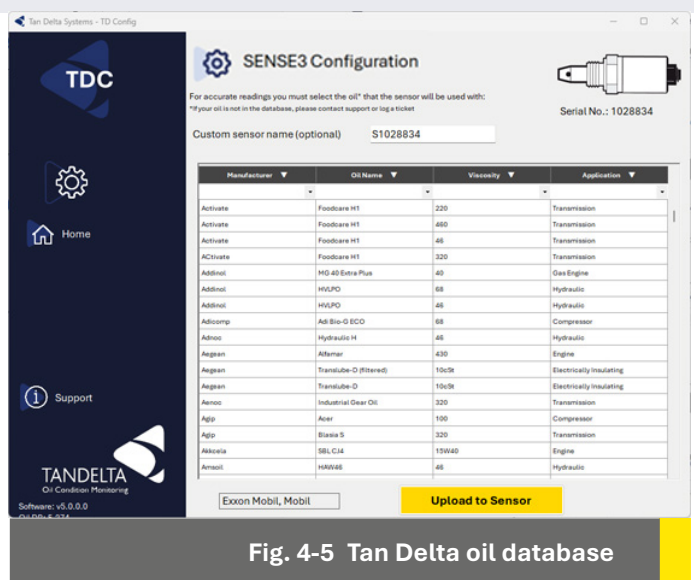


Fig. 4-5 Tan Delta oil database

TD Config will now write the configuration settings to the sensor.

This may take several minutes.

When the configuration is complete, the confirmation screen is displayed, as shown in Fig. 3-6.

Click on **Finish**.

You can now disconnect the sensor.

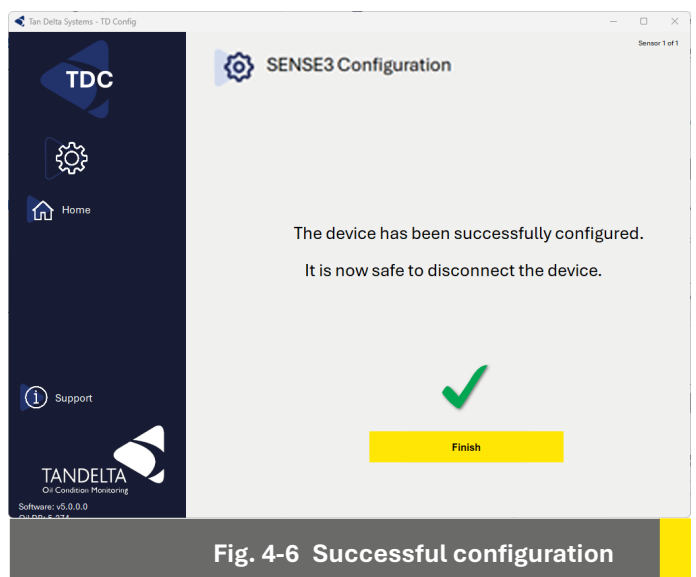


Fig. 4-6 Successful configuration

5 OQS / OQL SENSOR - SUPPORT

Issue	Possible cause	Checks	What to do if the check fails...
No Output from the sensor Analog Outputs	Power Issue?	Make sure that the power supply is 9-30V DC	Make sure sensor earth connection is properly made.
			Contact Tan Delta Support
No Output from the sensor Digital Outputs	Power Issue?	Make sure that the power supply is 9-30V DC	Make sure sensor earth connection is properly made.
			Contact Tan Delta Support
	Communication issue	Check communication with TD Config using Configuration Cable (CAB-J)	Connect in the correct order: TD Config looking for sensor > Connect CAB-J (ID COM port) > Connect Sensor
			Contact Tan Delta Support
	Cable Issue	Check cable connections are correct	Check the cable for damage
			Disconnect the sensor and receiving device / system, check the cable for continuity
			Check the cable for shorts across wire cores
			Contact Tan Delta Support
Sensor analog output implausible	Connection / integration issue	Is the receiving device / system current sensing?	Install a resistor in parallel to the receiver device (not to exceed 250 R)
Sensor output implausible	Oil condition high (above 1200 TDN)	Sensor nose is in air	Immerse sensor nose in oil continually
			Check that the correct oil profile is being used
	Oil Condition extremely high (above 1500 TDN)	Contact Tan Delta Support	
	Oil Condition low (Below 300 TDN)	Oil likely to be very worn or contaminated	Change Oil
	Oil condition extremely low (Below 0 TDN)	Oil likely to be highly contaminated	Change Oil
	Oil condition extremely low (Below -1000 TDN)	Has sensor got an oil profile loaded?	Configure sensor with an oil profile
			Sensor possibly in water or contaminated with metallic particles. Clean sensor and investigate source of contamination
Sensor output unstable (Noisy or unreadable)	Incorrect oil profile being used	Check oil profile is correct	Contact Tan Delta Support
	Air / cavitation	Install sensor where it will be continually immersed in oil with no air bubbles	Contact Tan Delta Support
	Heavy contamination	Replace Oil & investigate the source of the contamination	Contact Tan Delta Support

6 TAN DELTA OIL QUALITY GATEWAY - CONFIGURATION & INSTALLATION



NOTE:

You **MUST** configure the OQS/OQL Sensor for use with the Oil Quality Gateway (GTW-1) **before** configuring the GTW-1.

This is done in TD Config. See the Sensor Configuration section of this User Guide for more information.

TD Config software is provided on the USB stick within the SENSE3 kit.



6.1 Using TD Config

Before you can use the GTW-1, it must be configured to work on the particular network that you have chosen to use.

This is done by writing the configuration settings to a USB stick and uploading them to the device.

- 1) If there is a **TD Config** icon on your device desktop, click on it to open the software.



Alternatively, browse to the folder in which TD Config is installed.

The default location is
C:\Program Files (x86) TD Config

Double-click on **TD Config** to open the software.

- 2) From the TD Config home screen, select **Device Configuration**.

The **Device Configuration** page is displayed as shown in Fig. 6-1.

- 3) Select the **Config GTW-1 Gateway only** option.

A pop-up window is displayed, as shown in Fig. 6-2.

- 4) Make sure that you have a USB memory stick available, and select **Continue**.

The **Gateway Configuration** screen is displayed, as shown in Fig. 4-3.

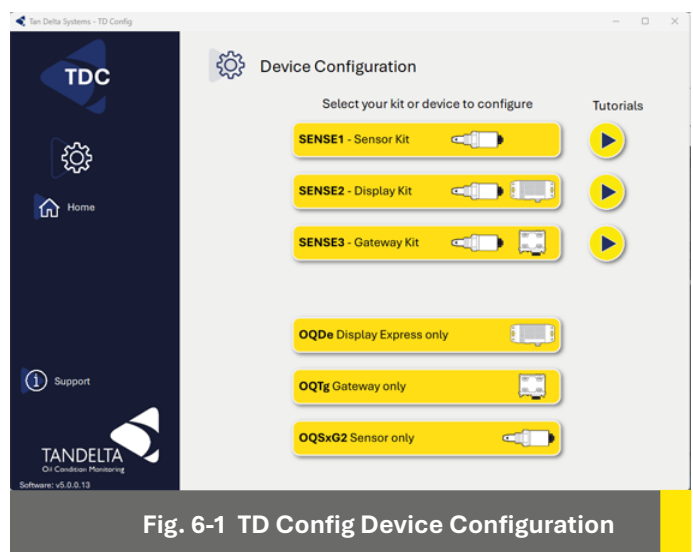


Fig. 6-1 TD Config Device Configuration

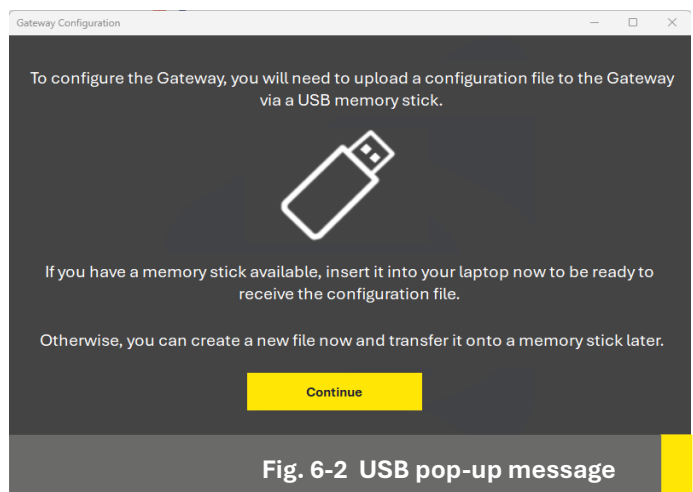


Fig. 6-2 USB pop-up message

6.2 Configuration options

There is a choice of three communication methods for the Gateway:

- LAN (Ethernet)
- WLAN (Wi-Fi)
- GPRS (Mobile Data)

Select the one that applies to your chosen network type.

6.2.1 LAN (Ethernet) configuration

- 1) Refer to Fig. 6-3. For the **IP Selection**, select either **Dynamic (DHCP)** or **Static** – consult with your network administrator to make sure that you select the correct option.

Make sure through your IT provider that the device will be granted access to the Internet through any applicable firewalls or other security protocols.

- 2) If **Static** is selected, enter the **IP Address**, **Subnet Mask** and **Gateway**.
- 3) When you have chosen the required settings, insert your USB drive into your device and select **Save to USB**. Once the file is saved, you can upload it to the Gateway - Refer to Section 6.3.

If you do not have a USB drive, select **Save File** and save the settings to a location on your computer. You can copy these setting to a USB drive when you have one available.

6.2.2 WLAN (Wi-Fi) configuration

- 1) Refer to Fig. 6-4. For the **IP Selection**, select either **Dynamic (DHCP)** or **Static** – consult with your network administrator to make sure that you select the correct option.

Make sure through your IT provider that the device will be granted access to the Internet through any applicable firewalls or other security protocols.

- 2) If **Static** is selected, enter the **IP Address**, **Subnet Mask** and **Gateway**.
- 3) Enter the details following details for the required Wi-Fi network – consult with your network administrator.

- SSID
- Security Type
- Password

- 4) When you have chosen the required settings, insert your USB drive into your device and select **Save to USB**. Once the file is saved, you can upload it to the Gateway - Refer to Section 6.3.

If you do not have a USB drive, select **Save File** and save the settings to a location on your computer. You can copy these setting to a USB drive when you have one available.

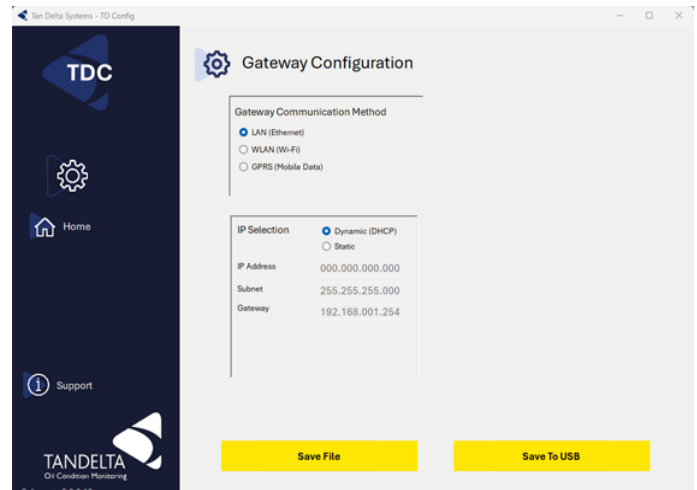


Fig. 6-3 Gateway Configuration - LAN settings

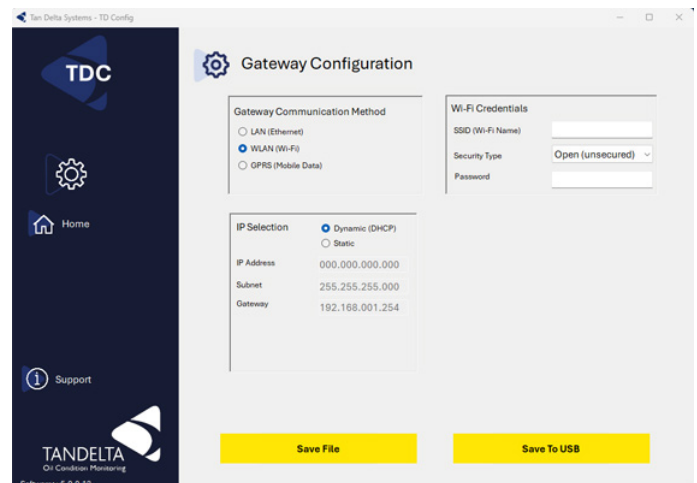


Fig. 6-4 Gateway Configuration - WLAN settings

6.2.3 GPRS (Mobile Data) configuration

When you select the **GPRS (Mobile Data)** option, the settings screen is displayed, as shown in Fig. 6-5.

- 1) Enter the required details in each field on this screen.

All the information for your specific network will be available online, or from your network provider.

- 2) When you have chosen the required settings, insert your USB drive into your device and select **Save to USB**. Once the file is saved, you can upload it to the Gateway - Refer to Section 6.3.

If you do not have a USB drive, select **Save File** and save the settings to a location on your computer. You can copy these setting to a USB drive when you have one available.

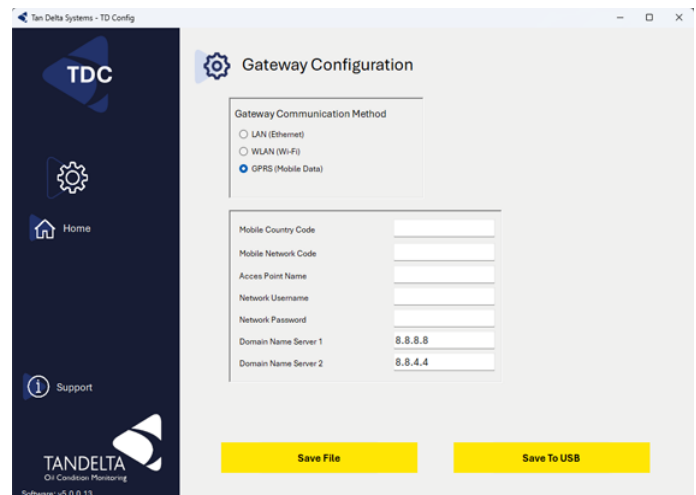


Fig. 6-5 Gateway Configuration - GPRS settings

6.3 Uploading your settings to the GTW-1

- 1) Turn on power to the GTW-1 Gateway.
- 2) Remove the translucent clip-on cover on the front of the GTW-1.



NOTE:

The Gateway device will take a few minutes to start up. A green LED will show once device is operational.

- 3) Make sure you are using the memory stick containing the required network configuration, as set up in Section 6.2.
- 4) Refer to Fig. 6-6. Insert the memory stick into the USB port of the GTW-1.
- 5) Wait for the Red LED to turn on and off again before removing USB memory stick.

Once your network configuration has been loaded, the GTW-1 will reboot.

- 6) Wait for Green LED to turn on – this may take several minutes.

The GTW-1 is now loaded with your network configuration.

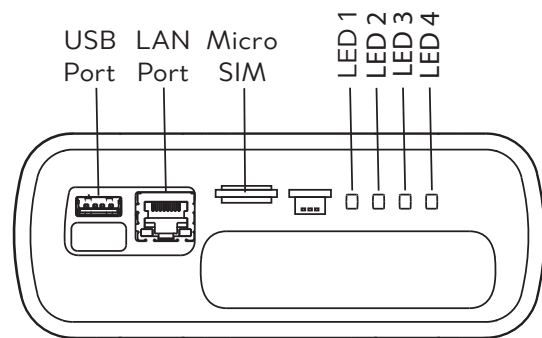


Fig. 6-6 GTW-1 Interface ports and LEDs

6.4 Mounting the GTW-1

The GTW-1 has mounting brackets that allow it to be mounted to any suitable surface.

Refer to the environmental and approvals specifications this User Guide and make sure that the mounting location meets these requirements.

7 OQS/OQL SENSOR INSTALLATION

7.1 Precautions

Read these instructions before installing the oil quality sensor.

The sensor is robust, however it can be damaged by mistreatment.

The following must be noted:

- Install the sensor into the equipment **before** making electrical/wiring connections.
- Make sure that the fittings being used correspond with the sensor thread size
- Tighten to no more than 20 Nm with a 32 mm spanner.
Do not over tighten.
- Do not attempt to screw or tighten the sensor using the body. Always use the “Hex” head with the correct size spanner (32 mm).
- Refer to Fig. 7-1. To prevent vibration having any adverse effects to the cable/ sensor connectors, the cable must either be mounted on the same plane as the sensor, or have a loop fitted to absorb vibration.
- Do not twist the cable relative to the sensor head.
- Keep away from sharp edges which may cut into the cable.
- Do not bend the cable excessively, minimum bend radius = 50 mm (2 inches).
- Where possible, keep the cable away from sources of heat, (such as an engine block), and electrical interfaces.
- Oil pressure must not exceed 70 bar.

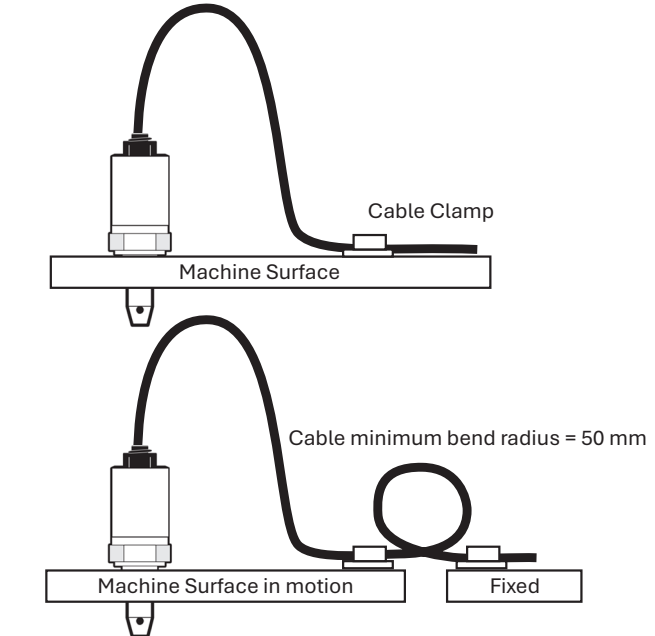


Fig. 7-1 Cable Fitting

7.2 Choosing the Sensor Mounting Location

The performance of the sensor will be enhanced through careful consideration of the mounting location.

Refer to Fig. 7-2.

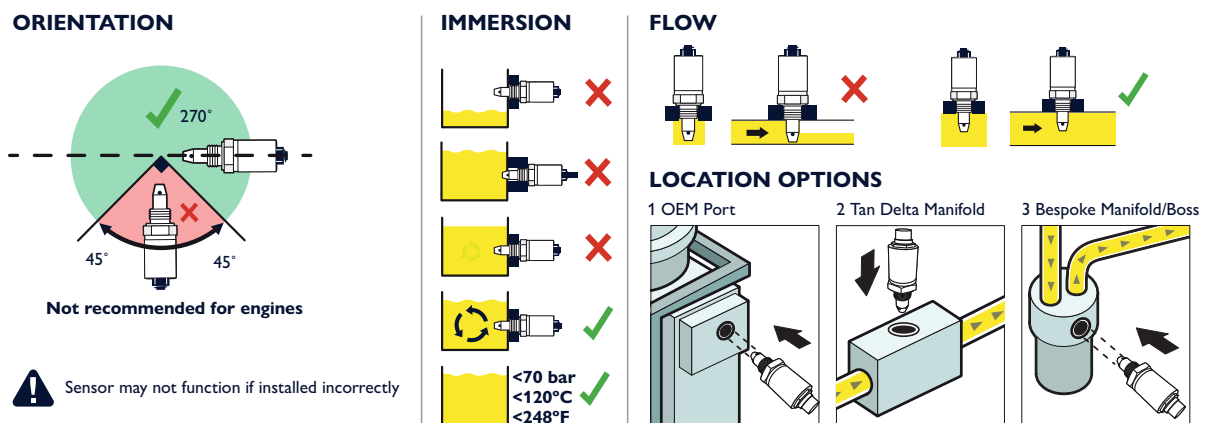


Fig. 7-2 Choosing a mounting location for the Sensor

The following guidelines must be followed.

- The Sensor must, if possible, be mounted in a horizontal position.
- Whenever possible, the sensor **should not** be mounted in the bottom of a sump, as the sensor head may become restricted which will prevent correct operation.
- Dynamic oil flow is necessary: do not mount in places where the oil is likely to stagnate or be static; The oil in the sensor needs to be representative of the whole system.
- The sensor nose must remain immersed in the oil at all times.
- When the oil quality sensor is mounted in a pipeline, make sure that the sensor will not restrict flow.
- For maximum performance when mounting the oil quality sensor in a lubrication system, make sure that the sensor is located prior to the oil filters, oil coolers etc. This ensures that the oil is representative of the whole system.



7.3 Fitting Method

- Use a 32 mm Torque-adjustable spanner for installation.
- Decide on an appropriate location for the sensor head installation.
- Drain the lubricant sufficiently to allow the sensor to be fitted.
- Install the sensor head into the selected location/position. Torque to 20 Nm, being careful not to over-tighten.
- Route the cable, fixing it with cable ties at appropriate intervals.
- Avoid sharp edges and hot surfaces.
- Connect the sensor to the chosen interface.

8 GTW-1 GATEWAY - UNDERSTANDING DATA

8.1 Dynamic Maintenance Optimisation (DMO)

Dynamic Maintenance Optimisation (DMO) is the method by which the data can be used to optimise the maintenance intervals for the lubricating oil in the application.

Changing the oil at an interval determined by Tan Delta software means you are only changing the oil when you need to, not at a predetermined schedule when the oil may still be in a usable condition.

8.2 TD Online

TD Online is a cloud-based Internet of Things (IoT) solution that uses a Gateway device connected to the Internet to send data from either one or a multiple sensors to a cloud-based viewing platform.

TD Online allows live reading of oil condition and oil temperature.



Fig. 8-1 TD Online Live Readings display

The **TD Online** platform allows you to simply view the data live, or alternatively set alerts and alarms for oil condition from a remote online portal.

Alerts and alarms can be configured to show in the online dashboard or to email relevant personnel to take action.

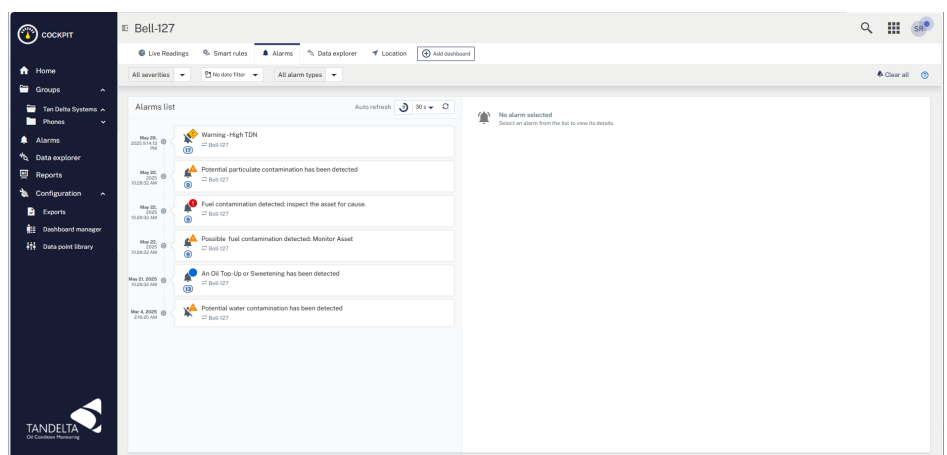


Fig. 8-2 TD Online Online Alerts and Alarms Dashboard

Historic data collected from the sensor and presented on **TD Online** can also be viewed through the Data Explorer menu, including viewing pre-set date ranges or setting a custom period to review.

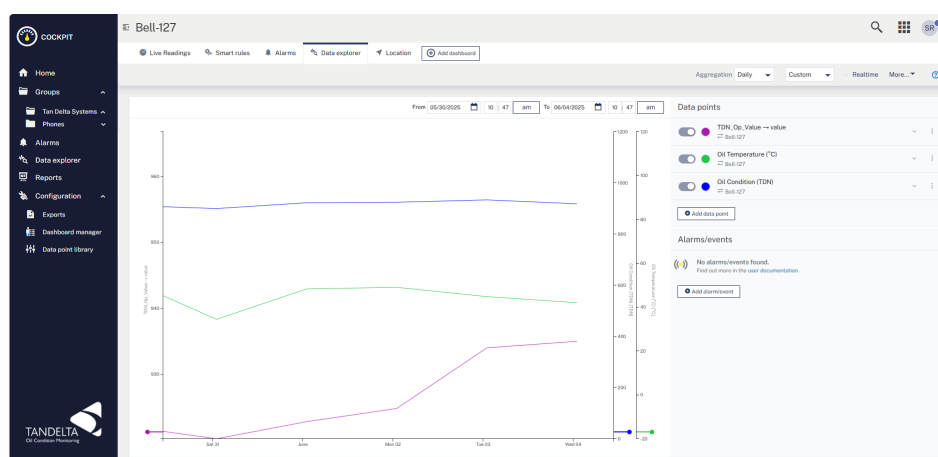


Fig. 8-3 TD Online Data Explorer Menu

8.3 Example good sensor output readings

The graph in Fig. 8-4 shows a classic “sawtooth” representation of an engine in operation, illustrating when oil changes have taken place at checkpoints F, L and R.

The green lettered checkpoints are where oil samples would normally be sent for analysis to ensure oil condition is acceptable.

With the OQS/OQL installed, oil sampling is not required prior to checkpoints F, L and R.

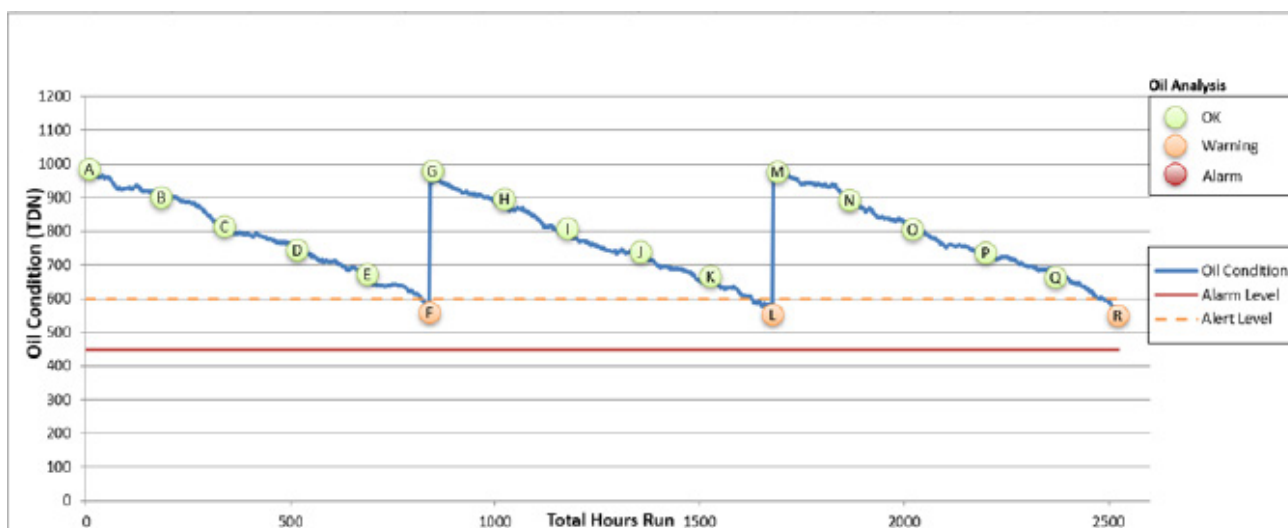


Fig. 8-4 Example sensor output readings

8.4 Implementing DMO in TD Online

TD Online presents oil condition data as the Tan Delta Number (TDN)

Legacy versions of the application presented oil condition as percentage loss factor (%LF) values.

DMO can be reported as an alert on **TD Online** and also via email.

The Cockpit, displayed on logging in, shows the alerts across all assets to which you have access.

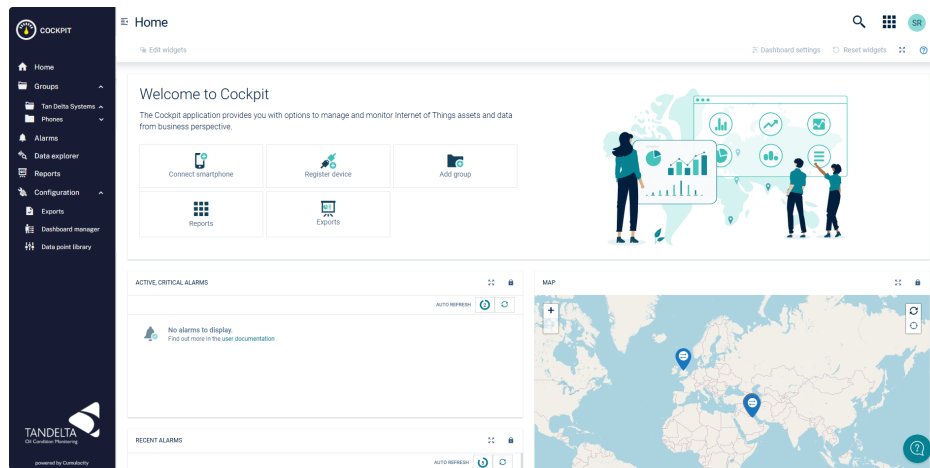


Fig. 8-5 TD Online Alerts

8.4.1 Adding a Smart Rule

- 1) Refer to Fig. 8-6. Click on the **Smart rules** tab.

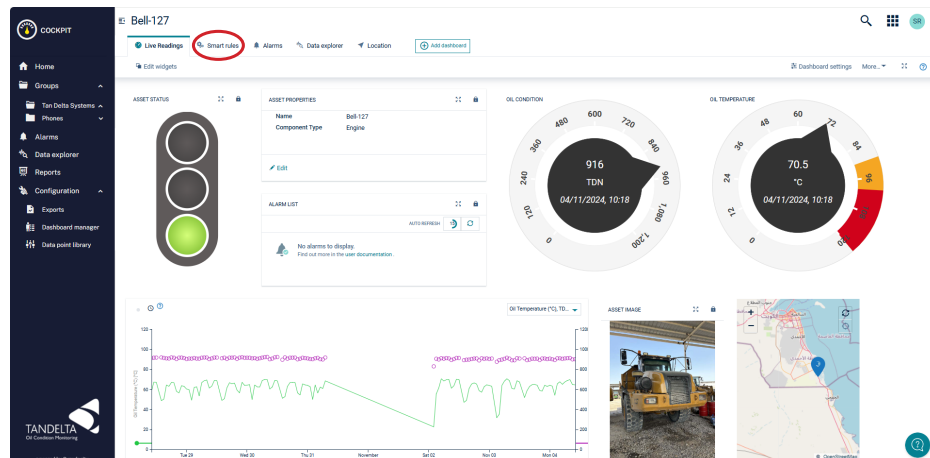
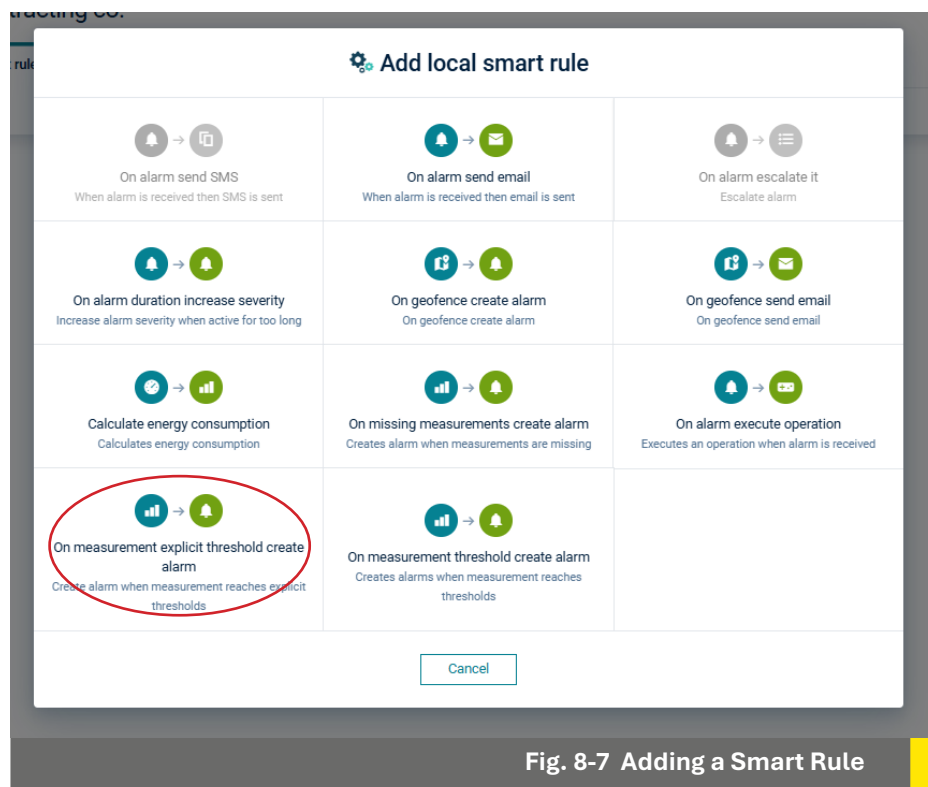


Fig. 8-6 Adding a Smart rule

The **Smart rules** screen displays a list of the smart rules that have been set up for your asset.

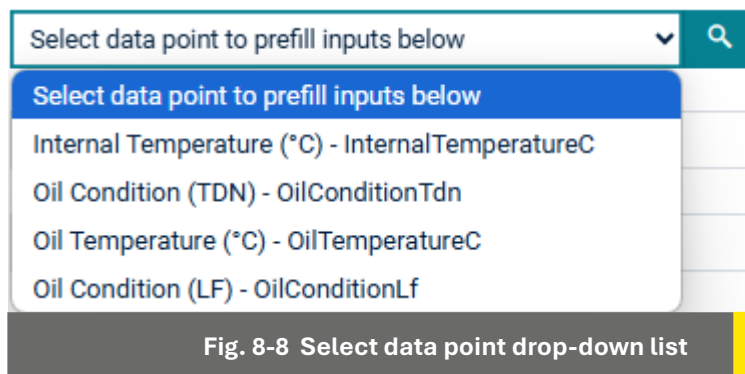
3) Click on **Add smart rule**.

The **Add local smart rule** pop-up window is displayed, as shown in Fig. 8-7.



4) Select **On measurement explicit threshold create alarm**.

5) Click on the **Select data point to prefill inputs below** drop-down list. See Fig. 8-8.



Select the required data point from **Internal Temperature (°C)**, **Oil Condition (TDN)**, **Oil Temperature (°C)** or **Oil Condition (LF)**.

Continued...

Fig. 8-9 shows the data point alarms settings options for Oil Condition (TDN).

- 6) Enter the values that you want to trigger the alarm.
- 7) Click on **Create**.

2 On threshold:

Oil Condition (TDN) - OilConditionTdn

OilReading

OilConditionTdn

0

Default: 90

300

Default: 100

Cancel

Create

Fig. 8-9 Data point alarm threshold settings

The new smart rule will be displayed in the **Smart rules** tab of the TD Online Cockpit, as shown in Fig. 8-10.

COCKPIT

Home

Groups

Tan Delta Systems

Phones

Alarms

Data explorer

Reports

Configuration

Exports

Dashboard manager

Data point library

Tan Delta Systems

Dashboard

Subassets

Smart rules

Alarms

Data explorer

Add dashboard

Display as Auto

Local smart rule

Create alarm when measurement reaches explicit thresholds

On measurement explicit threshold create alarm

Active

Children

All children active

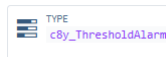
DETAILS

Fig. 8-10 Smart rule displayed in Cockpit view

8.4.2 Setting up an email alert

- 1) To set up an email alert, you will need to know the **Type** details of the alarm.

This is shown on the alarm details on the Alarms screen e.g.

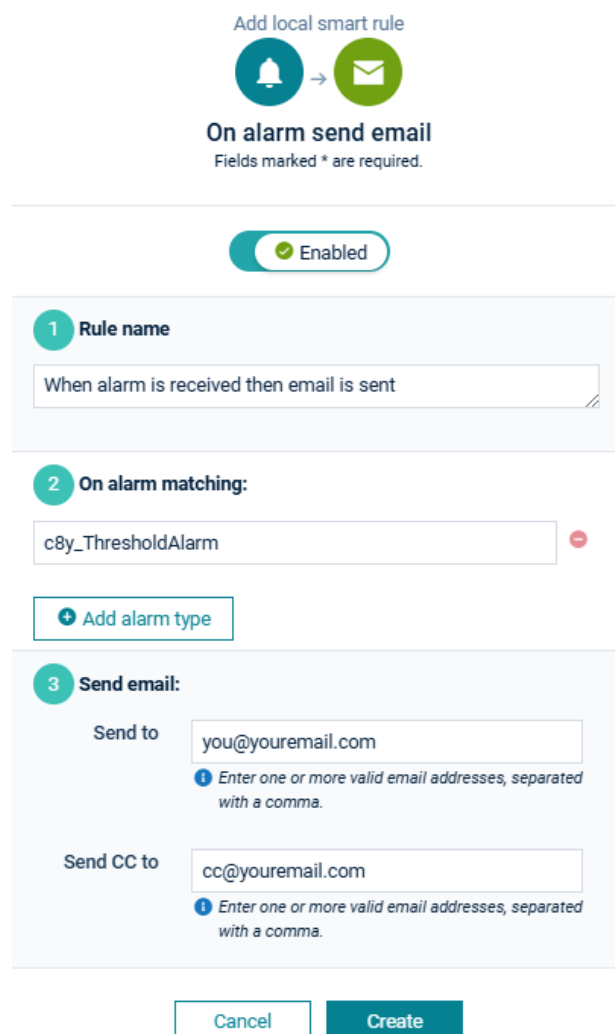


- 2) Click the **Add smart rule** link in the **Smart rules** screen, and select the **On alarm send email** option.

The **On alarm send email** window is displayed, similar to Fig. 8-11.

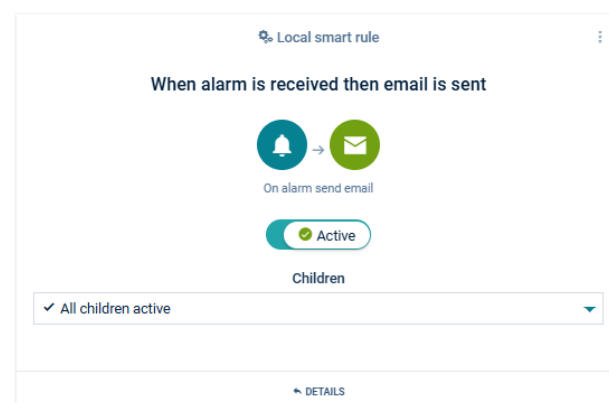
- 3) Enter a **Rule name** for your rule.
- 4) In the **On alarm matching field**, enter the **Type** of the alarm e.g. **c8y_ThresholdAlarm**
- 5) In the **Send email** details, enter the email address for each recipient in the **Send to** field. For multiple email addresses, separate each address with a comma.
- 6) If required, enter the **Send CC to** email address for recipients of a copy of the email.
- 7) When you have entered the required details, click on **Create**.

The new smart rule will be displayed in the **Smart rules** tab of the TD Online Cockpit, as shown in Fig. 7-12.



The screenshot shows the 'Add local smart rule' window. At the top, there's a header 'Add local smart rule' with a bell icon and an envelope icon. Below it, the title is 'On alarm send email' with a note 'Fields marked * are required.' A toggle switch is set to 'Enabled'. The form has three sections: 1. 'Rule name' with a text field containing 'When alarm is received then email is sent'. 2. 'On alarm matching:' with a dropdown menu showing 'c8y_ThresholdAlarm' and a red minus icon. Below this is a button '+ Add alarm type'. 3. 'Send email:' with two text fields: 'Send to' containing 'you@youreemail.com' and 'Send CC to' containing 'cc@youreemail.com'. Both fields have a red information icon and a note: 'Enter one or more valid email addresses, separated with a comma.' At the bottom are 'Cancel' and 'Create' buttons.

Fig. 8-11 Setting an email alert



The screenshot shows the 'Local smart rule' window. At the top, there's a header 'Local smart rule' with a bell icon and an envelope icon. Below it, the title is 'When alarm is received then email is sent'. A toggle switch is set to 'Active'. Below the toggle is a dropdown menu labeled 'Children' with the option 'All children active' selected. At the bottom is a button 'DETAILS'.

Fig. 8-12 Setting an email alert



8.5 Advanced Fault Detection (AFD) & Event Identification and Validation (EIV)

Advanced Fault Detection (AFD) is the identification of potential issues in a piece of machinery that through analysis of the holistic oil condition.

Similarly, **Event Identification and Validation (EIV)** uses the same methodology to track maintenance and other interactions which affect the oil.

Through our in-house analytics, it is possible to identify different faults and events, including degradation of the oil, water ingress, wear metals, TBN decrease and soot increase.

The below list shows the range of alerts which will be triggered in TD Online, and what the implications are for the asset:

7.5.1 Oil Condition Alerts

Sensor in Air

- This can indicate a loss of oil from the asset, a blockage, or incorrect sensor installation.

Oil Approaching End of Life

- Warning to monitor the asset as the oil is approaching its end of life.

Oil At End of Life

- Indicating that the oil is now worn sufficiently to require changing.

7.5.2 Oil Behaviour Alerts

Accelerated Oil Wear

- The oil is showing wear at a faster rate than expected, indicating an issue with the oil or the asset itself.

Water / Coolant Contamination

- Detection of water ingress or coolant leakage into the oil system.

Particulate Contamination

- Detection of particulate contamination (e.g. soot or wear metal) giving early indication of an asset maintenance issue.

Fuel Dilution

- Leakage of fuel into the oil system, indicating an asset problem requiring immediate attention.

7.5.3 Event Detection Alerts

Oil Change

- Detection that an oil change has occurred, to confirm with the maintenance team.

Top Up / Sweetening

- Detection that an oil top-up has occurred, to confirm with the maintenance team.

Incorrect Oil Filled

- Flagging that the incorrect oil has been installed in the system, which doesn't fit the configured oil profile.

9 GTW-1 GATEWAY - SUPPORT

Issue	Possible cause	Checks	What to do if the check fails...
Cannot see any data in TD Online	Power Issue?	Check the Green LED on the Hub	Make sure that the power supply to hub is 9-30V DC
			Make sure that a secure connection is made from cable HP to hub device
			Replace Hub
		Check the Green LED on the Gateway	Allow the Gateway to boot up (5-10 minutes)
			Check the Hub to Gateway Cable
	Internet Issue?	Check the Amber LED on Gateway	If SIM: Is SIM inserted correctly?
			Is 4G antenna connected?
			Is there 4G signal in the area on that network?
			Check SIM configuration
			Check SIM APN details with network provider
			If WiFi: Check WiFi configuration
			Check WiFi network with IT provider (Signal, firewall etc...)
			If LAN: Check the LAN cable to the Gateway
			Check LED activity on the Gateway LAN port
			Check the LAN cable to the switch
			Check the LED activity on the network switch LAN port
			Check the LAN with your IT provider (Internet connection, firewall etc...)
	Sensor Communication Issue?	Check "Ring" LED	Make sure that all connections are made correctly
			Make sure that continuity plugs are installed into all unused hub locations
		Check "Data" LED for a flash once per sensor connected	Check the sensor configuration using TD Config
	If all the above are OK, contact Tan Delta Support		
Cannot see the asset in TD Online	Access rights issue	Check tenancy access with system administrator	Contact Tan Delta Support
Cannot see dashboard in TD Online	Dashboard not present	System administrator can add a new dashboard	Contact Tan Delta Support
Cannot log into TD Online	Incorrect password	Enter email into forgotten password link	Contact Tan Delta Support
	Unauthenticated user	System administrator can add new users	Contact Tan Delta Support
Not receiving alerts from TD Online	Alerts not setup for user	System administrator can edit alerts in TD Online	Contact Tan Delta Support

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