



Installation Instructions

TEK – 603
Eco-Oil-Monitor for Oil or Water



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1 Introduction

The TEK-603 Eco-Oil Monitor is used to measure the content of your heating oil or water tank, display the consumption, days until empty, cost and the environmental impact. Please follow the installation instructions before fitting to the tank.

2 Contents of Package



Transmitter/Display



Display Unit



Adapter Kit



Mounting Screws



Power Supply/Cable



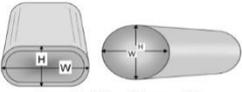
Weather Seal

3 Determine the shape of your Tank

Select the tank type that is closest in shape to your tank from the pictures in the table below and complete the chart.

The capacity on the tank should not be noted.

- Determine the dimensions of your tank either from manufacturer's data for the tank or physically measuring to complete the chart.
- You only need to note the dimensions indicated on the chart shown below.
- For bunded tanks, the information required is for the internal tank only, where the transmitter will be located.
- To determine the tank height, measure from the top of the tank, i.e. where the transmitter will be positioned, to the bottom of the tank (N.B. of the internal tank in a bunded tank).
- Determine the capacity of the tank from the manufacturer's data for the brimful and/or nominal capacity.

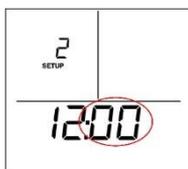
Your tank dimension chart	Tank type	Height (H) cms/ins	Width (W) cms/ins	Brimful Capacity (Ltrs/Gls)	Nominal Capacity (Ltrs/Gls)
 <p>Type A - Rectangular/ cylindrical vertical</p>			N/A		
 <p>Type B - (H >= W) Oval/ cylindrical horizontal</p>					
 <p>Type C - (W > H) Lo profile</p>					

4 Setting up your Monitor

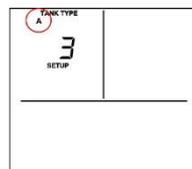
On first power, your monitor will automatically display its SETUP mode – it will show SETUP 1. One or more segments of the display may be flashing. Flashing segments are circled in RED in the diagrams. Please follow the steps below to store the settings to configure your monitor. If you make a mistake and store an incorrect value, simply press ENTER repeatedly until you return to the same SETUP number and then select the correct value and press **ENTER** to store.



SETUP 1–Setting the time (hrs)
Adjust the hour displayed using \wedge/\vee . Press **ENTER** to save.



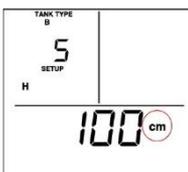
SETUP 2–Setting the time (mins)
Adjust minutes displayed using \wedge/\vee . Press **ENTER** to save.



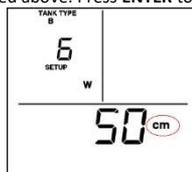
SETUP 3–Setting the tank type
Select tank type i.e. A, B, or C, using \wedge/\vee to match the type noted above. Press **ENTER** to save.



SETUP 4–Setting the tank capacity (ltr/Gal) Refer to the chart above for nominal capacity and adjust the amount in liters/gallons displayed using \wedge/\vee . Press **ENTER** to save.



SETUP 5–Setting the tank height (cm/in) Refer to the chart above for tank height and adjust the amount in cm/in displayed using \wedge/\vee . Press **ENTER** to save. Not that if Tank Type “A” was selected, SETUP 6 will be skipped.

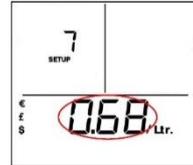


SETUP 6 (Type B&C tanks only) – Setting the tank width (cm/in) Refer to the tank chart above for the width and adjust the amount in cm/in displayed using \wedge/\vee . Press **ENTER** to save.

If you cannot select the correct dimensions of your tank, confirm that you have selected the correct tank type.

SETUP 7-Setting the fuel cost per liter/gallon.

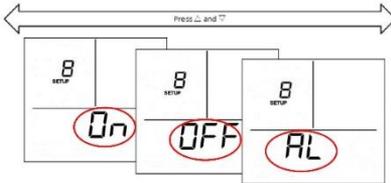
Adjust the amount displayed using ^/∇. Press ENTER to save.
(You may need to consult your last oil bill or your oil supplier)



SETUP 8-Setting the low-level Audible Alarm

Alarm on: The monitor will sound an audible beep when the fuel level falls to below 5% of useable fuel remaining.

Alarm off: Disengages the alarm.



For further information please refer to the product manual.

Select **AL ON/OFF** using ^/∇. When the display shows your preferred setting press **ENTER** to save.

SETUP should now be complete. Press **SETUP** to exit and progress to STEP 3.

On exiting SETUP mode the monitor temporarily displays 'CALC'.



N.B. If at any stage you exist SETUP mode for any reason, simple hold SETUP for 3 seconds to begin again.

5 Matching the Transmitter to the Monitor



Image 1: 'Lrn' mode



Image 2: Alignment Pin

The monitor must be in LEARN mode which can be entered in one of two ways:

A) Pressing SETUP after completing step 4 above.

B) Disconnecting and reconnecting the power
When in LEARN mode the display shows 'Lrn' in the main display area (see image1). LEARN mode will last for 2 minutes during which time you must 'match/pair' the transmitter to the monitor.



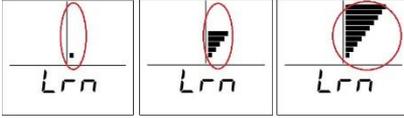
Image 3: Correct positioning



Image 4: Alignment

To match/pair the units: Note the location of the alignment pin on the right hand side of the base of the monitor (see Image 2 – this applies to versions A and B transmitters only). Using the screw hole of the Transmitter, slot it onto the pin as shown in Image 3.

Continue to hold the transmitter and monitor together



The display of the Transmitter should be facing the same direction as the Monitor's display as shown in Image 4.

When located properly, the bars in the bar graph display of both the monitor and the transmitter will flash and begin to increase in synch together rising from one bar to ten bars. A continuous audible beep and flashing LED on the monitor will also indicate the matching is in progress.

Continue to hold the units in place until all 10 bars are flashing. The monitor will make a loud beep and the Red LED on the transmitter (version A only) will flash. They are now matched and should be separated immediately.

Following the 'matching/pairing' the transmitter will send data continuously to the monitor for approximately 10 minutes. Each time the monitor receives a reading, it will make a clocking noise and the LED on the monitor will blink (this is 'fast' mode for the transmitter).

During this time, confirm that the matching procedure was successful by slowly raising and lowering the transmitter over a flat surface and observing that the display in the monitor changes. 'Fast' mode will stop after 10 minutes. **The transmitter is now ready to fit onto the tank and should be fitted whilst in 'Fast' mode.**

You should now proceed immediately to STEP 6 and fit the transmitter to your tank. If it is not fitted within 10 minutes, the monitor may display an error or an incorrect reading. It may then take up to 2 hours before the correct tank level information is displayed on the monitor screen.

5 Installing the Transmitter on the Tank

The procedure is the same for fitting to both old and new tanks. For bunded tanks ensure that the transmitter is located on top of the inner tank.

For Tank with pre-drilled 30/32 mm hole

- Remove cap from hole and insert the transmitter, ensuring the weather seal is securely in place
- Ensure the transmitter is vertical on top of the tank
- Tighten on to the tank using the 2 stainless steel 19mm long self-tapping screws supplied. Do not use longer screws. Do not over-tighten.

For Tank without pre-drilled holes

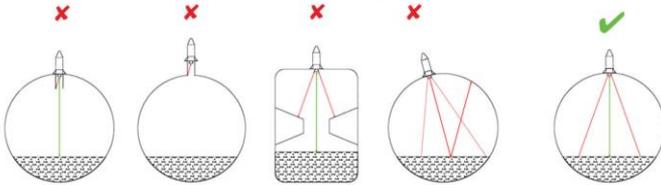
- If tank is not pre-drilled, then using a 30/32mm (1 ¼ in) hole saw, drill hole in top of the tank in a suitable area where you can fit the transmitter with ease and in an area that the transmitter can see the tank contents. Position so that there are no internal obstructions, (i.e. ribs, stays, side of tank, internal equipment) that may interfere with the ultrasonic signal.
- Use Installation Help diagram below to ensure suitable fitting.
- Ensure the transmitter is vertical on top of the tank, perpendicular to the liquid surface in the tank.
- Tighten on to the tank using the 2 stainless steel 19mm/1in long self-tapping screws supplied. **Do not use longer screws. Do not over-tighten.**

Installation Help:

Do not insert a tube or any other object.

Avoid obstacles such as windows or stays within the tank

The transmitter must be mounted vertical



Check the monitor display two hours after mounting the transmitter and verify that your monitor display shows the tank level in the bar graph area and the oil volume information in the main display area. If this is not the case consult the 'Troubleshooting' section of the User Manual.

N.B. The bar graph display on the transmitter (only if TEK-687 transmitter is used) and monitor may not be the same. The transmitter display indicates the top 1m/3ft of the tank while the monitor bar graph displays the oil level relative to the overall tank height.

6 (Optionally) Perform only if there was a delay in installing the transmitter on the Tank

This step only needs to be completed if there was a gap of more than an hour between completing Step 4 and Step 5. This step is otherwise completed as part of Step 4. When your transmitter is installed and has been confirmed as working,

reset the usage calculations by pressing **SETUP** for 3 seconds to enter the SETUP mode and then press **ENTER** repeatedly until SETUP 9 is shown.

The segments at the bottom of the display will be flashing. Press the ENTER key for 5 seconds. The screen will temporarily show 'CALC' and then returns to showing SETUP 1 – Setting the time (hrs). Press SETUP to leave SETUP mode.

Setup of the TEK-603 ECO-Oil Monitor is now complete and it will now begin to monitor and track your oil consumption on a day-to-day and week-to-week basis. On the 'Days to Empty' CURRENT information screen, '---' will be displayed for 1 week until an average based on the consumption is calculated.



Also consult the online video:



Warranty Registration

Please register your product for warranty at:

<https://www.tankmonitoring.net/warranty-registration.html>



Support

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