

NAVnet

touch **TZ2** & *touch* **TZ3**

Manual Fuel Management

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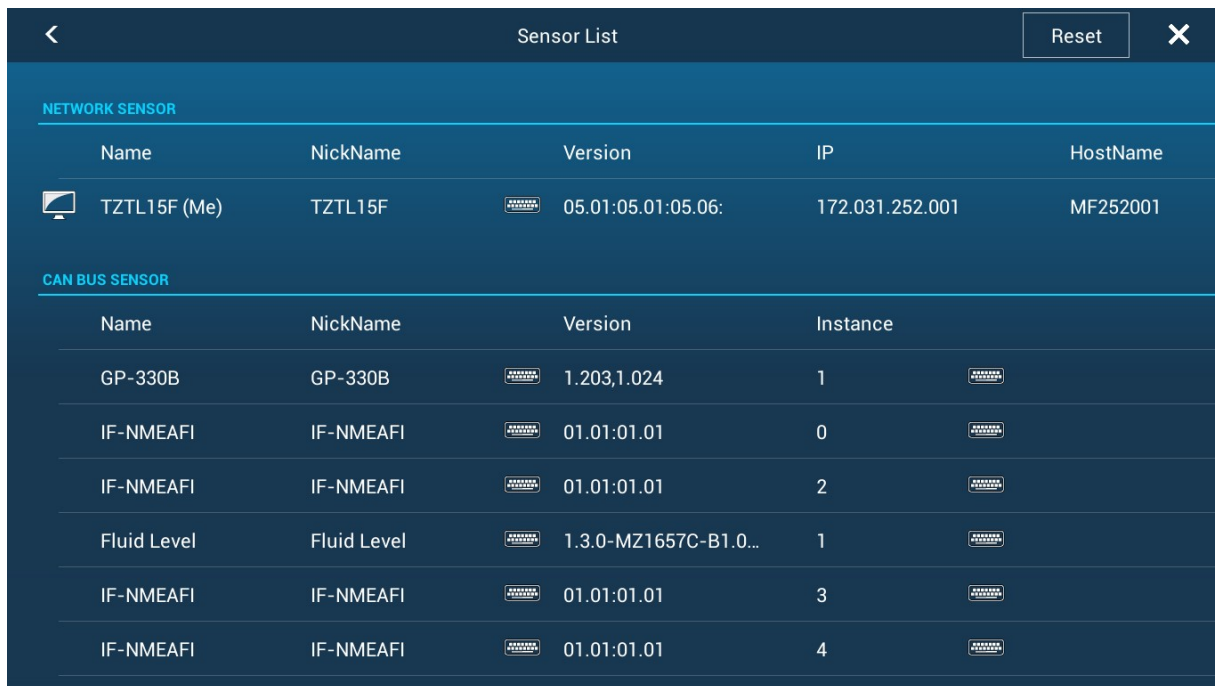
Introduction:

The TZT2/TZT3 can display a large amount of data via NMEA2000 and Tank and Fuel data has always been an important part. Some vessels have multiple tanks, so keeping track of them all is critical.



Tank level information has been available on the Data Box and Instrument page by receiving the NMEA2000 PGN: 127505 – Fluid Level and PGN: 127489 – Fuel Rate. This document describes how to Setup the Manual Fuel Management function and how to adjust and display Manual Tank configuration and display.













Tanks and Sensors:

In most applications, each tank will have its own, dedicated NMEA2000 Tank Level Sensor tied directly to the N2K Bus. Each sensor has its own device instance number and TZT2 can easily determine “Who’s who”. In other applications, Analog Tank Sensors may be in use. One of the best options to utilize these is the Furuno **IF-NMEAFI** Analog Data converter in order to connect them to the backbone. This allows each analog tank sensor to appear on the N2K bus and be configured individually. The **IF-NMEAFI** converter is assigned its own Device Instance Number within the TZT2/TZT3 software. One converter would be instance “0” for example and the rest would be instance 1, 2, 3, 4, etc. These can also be nicknamed in the system. An example of this is shown below:



The screenshot shows a 'Sensor List' window with a 'Reset' button and a close icon. It is divided into two sections: 'NETWORK SENSOR' and 'CAN BUS SENSOR'.

NETWORK SENSOR					
Name	NickName	Version	IP	HostName	
 TZTL15F (Me)	TZTL15F	 05.01:05.01:05.06:	172.031.252.001	MF252001	

CAN BUS SENSOR					
Name	NickName	Version	Instance		
GP-330B	GP-330B	 1.203,1.024	1		
IF-NMEAFI	IF-NMEAFI	 01.01:01.01	0		
IF-NMEAFI	IF-NMEAFI	 01.01:01.01	2		
Fluid Level	Fluid Level	 1.3.0-MZ1657C-B1.0...	1		
IF-NMEAFI	IF-NMEAFI	 01.01:01.01	3		
IF-NMEAFI	IF-NMEAFI	 01.01:01.01	4		

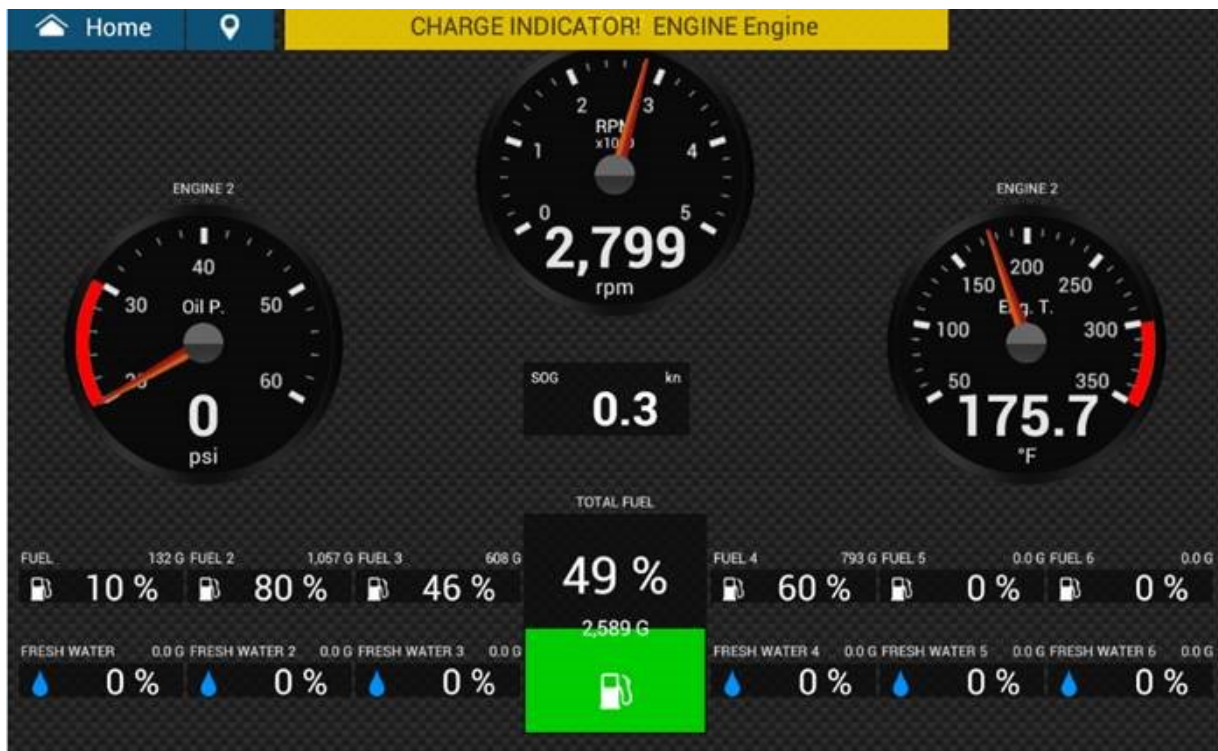
Manual Fuel Management Initial Setup:

To get started, we first must set the basic parameters for the Fuel Management function.

- 1) You will need to set the total Fuel Capacity of the Vessel. For this example, we will use 100 gal.
- 2) Go to HOME, SETTINGS and INITIAL SETUP. Scroll down to “Manual Fuel Management”
- 3) Enter the total fuel capacity.
- 4) At this point, the “Manual Fuel Mgt” ON/OFF slider is now available. Turn this ON.
- 5) A warning message will appear. Select OK to continue.

Displaying Manual Tank Level:

The TZT2/TZT3 can display up to six (6) tanks for each of the three fluid types (Fuel, Fresh and Black Water). The levels can be displayed as individual tanks, but you can also have an overall total for fuel. For example, one could setup a graphic instrument page showing six (6) Fuel tanks, six (6) Fresh water tanks along with engine displays as shown in the example below:



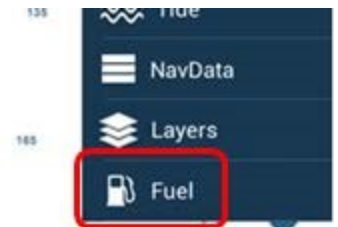
Managing Fuel Tank Level Manually:

Once the Manual Fuel Management is turned on, you are ready to manage the tank level manually every time the tank is refilled. As an example, the fuel tank capacity is 100 G as being set in **Section 2**, and 50.0 G (50%) is remaining as shown at right.



After refilling the fuel tank, the tank level should be manually adjusted to show the latest level.

- 1) Swipe the screen from the right edge to the left, the fuel management option is available as shown at right.
- 2) Select **[Fuel]**.



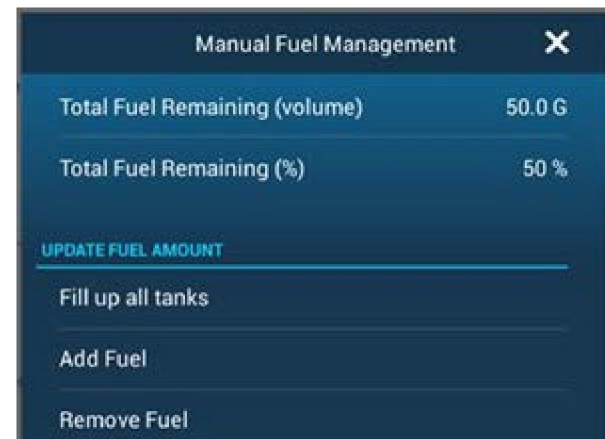
The Manual Fuel Management window will appear. The remaining fuel is shown in volume and percentage (%).

[Fill up all tanks]

When the fuel tank is refilled to full, select this option. The level indication will be back to [100%].

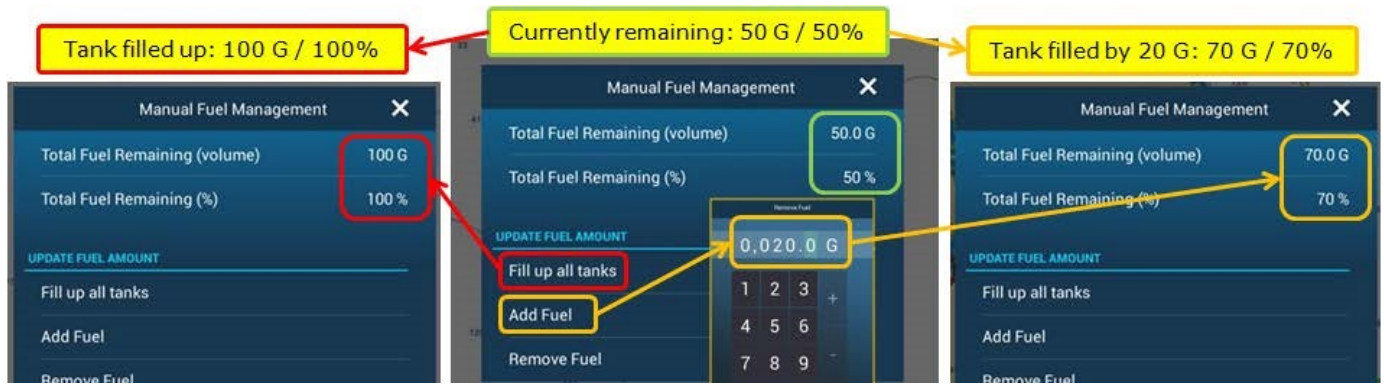
[Add Fuel]

When the fuel is refilled by certain volume, enter the refilled volume. In the example below, 20 gallons are refilled. After entering [20 G], the level indication will be [70 G] / [70%].



[Remove Fuel]

If you happen to manually enter too much volume, you may enter the volume to be reduced, so that the level indication will be adjusted.



Note:

The [Low Fuel Alarm] will be generated when the Manual Fuel Management is turned off. Restart the TZTL12F/15F to clear the alarm.

Fuel and Engine Data Display Chart:

Below is a chart showing all possible Engine and Fuel Data information that can be displayed on the TZ Touch 2 and TZ Touch 3 with the Current Software Versions.

Display Item	TZT3 V1.05		TZT2 V7	
	Instrument	NAV Box	Instrument	NAV Box
Engine Speed (RPM)	✓	✓	✓	✓
Engine Boost Pressure	✓	✓	✓	✓
Engine Trim Tilt	✓	✓	✓	✓
Engine Oil Pressure	✓	✓	✓	✓
Engine Oil Temp	✓	✓	✓	✓
Engine Temp	✓	✓	✓	✓
Alternator Potential	✓	✓	✓	✓
Total Engine Hour	✓	✓	✓	✓
Engine Coolant Pressure	✓	✓	✓	✓
Fuel Pressure	✓	✓	✓	✓
Engine Load	✓	✓	✓	✓
Fuel Rate	✓	✓	✓	✓
Fuel Economy	✓	✓	✓	✓
Fuel Economy Average	✓	✓	✓	✓
Fuel Consumption	✓	✓	✓	✓
Transmission Oil Pressure	✓	✓	✓	✓
Transmission Oil Temperature	✓	✓	✓	✓
Transmission Gear Indicator	N/A	N/A	N/A	N/A
Fuel Used	N/A	N/A	N/A	N/A
Trim Tabs	N/A	N/A	N/A	N/A
Tank Level	✓	✓	✓	✓
Available Fuel	Total and/or Selected Tank	Total and/or Selected Tank	Total and/or Selected Tank	Total and/or Selected Tank
FTTE (Fuel Time to Empty) or TTG Fuel (Time to Go with Fuel)	✓	✓	✓	✓
FDTE (Fuel Distance to Empty) or DTG Fuel (Distance to Go with Fuel)	✓	✓	✓	✓
Battery Voltage	✓	✓	✓	✓
Battery Current	✓	✓	✓	✓
CZone Compatibility	✓	N/A	✓	N/A
Notes	Up to four engines and six tank gauges are available.		Up to four engine and six tank gauges are available.	

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