

FORD MAVERICK Instruments cluster

Manufactured after 31/03/23

Overview

This dashboard was developed to replace the original Ford MAVERICK dashboard. Its system is all microcontrolled, which allows the speedometer, the tach and the fuel level to be configured to work accurately in the vehicle. The fuel level indicator comes pre-configured, however we recommend using the custom float feature to be able to configure it with the vehicle float, thus guaranteeing a perfect marking. The pointers are powered by stepper motors, which have great precision and a long service life. These movements are restarted whenever the ignition is switched on and off, allowing the panel to completely disconnect its power (battery) after the ignition key is turned off. The great advantage of this feature is that it prevents the battery from discharging and allowing the use of the panel in competition or collection vehicles equipped with a main key.

Features:

Speedometer, total and partial odometer, configurable for any gear ratio and tire diameter. Compatible with Hall Effect speed sensors (square signal).

Tachometer 7000 RPM, Configurable for 4, 6 or 8 cylinder engines.

Water temp. gauges, compatible with the MTE3005 sensor (M10x1,0) with one terminal and also with the MTE4054 sensor (M10x1,0), which has independent grounding (two terminals). Included MTE4054 sensor or equivalent.

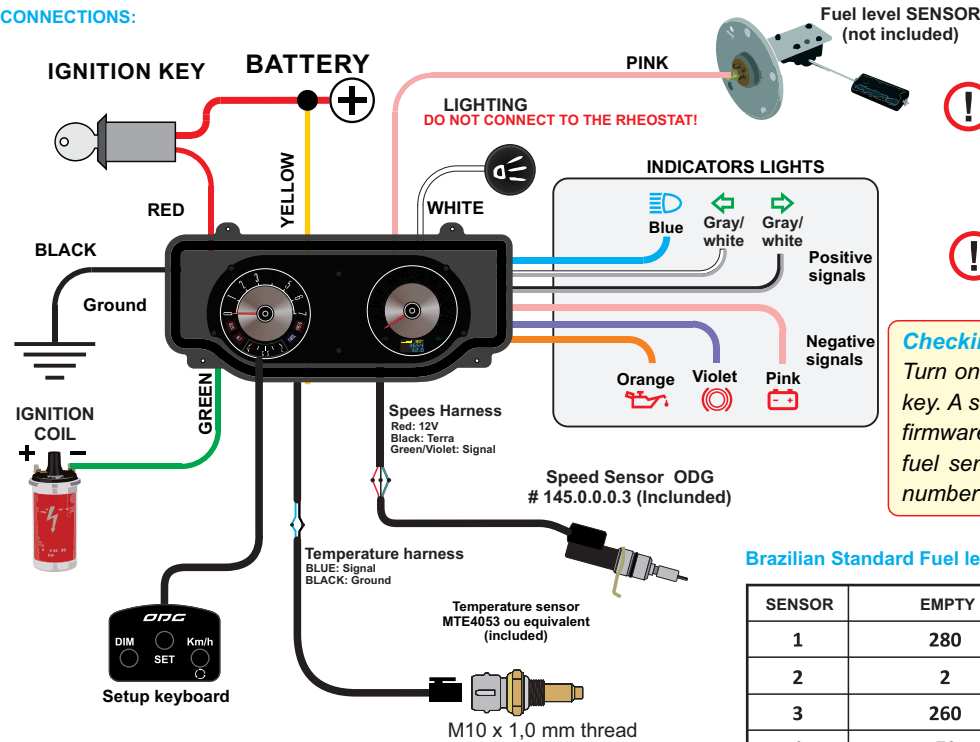
Fuel Level gauges, compatible with some original fuel SENSORS and with adaptations. Fuel level SENSOR not included.

7 color Backlight lighting with bright intensity reduction function (dimmer).

Indicators and alert lights: 6 lights (leds).

Extra function: Activated with fuel tank below 1/8 and deactivated automatically with more than 3/16 tank. Make the pump icon flash on the display and show the distance in miles traveled in the reserve.

CONNECTIONS:



The **YELLOW** cable must be connected to + 12V battery, as it is responsible for maintaining the power supply of the device during the return of the pointers. The dashboard will interrupt the energy consumption after ignition switch off.

The **RED** cable must be connected to the + 12V ignition, which does not switch off when the engine is started.

Checking current settings

Turn on only the lighting key. Then press the **SET** key. A screen with W factor (pulses per 264Ft), the firmware version, the temperature sensor type, the fuel sensor resistance and the engine cylinders number will showed.

Brazilian Standard Fuel level SENSORS resistance (Ohms): TABLE 1

SENSOR	EMPTY	HALF	FULL
1	280	85	40
2	2	46	90
3	260	150	40
4	70	35	6
X	CONFIGURABLE	CONFIGURABLE	CONFIGURABLE

TEMPERATURE TABLE:

TEMP.	MTE 3005	MTE 4054
266 °F	38Ω	88Ω
248 °F	48Ω	110Ω
230 °F	62Ω	140Ω
212 °F	80Ω	179Ω
194 °F	108Ω	233Ω
176 °F	143Ω	307Ω
158 °F	204Ω	411Ω
140 °F	279Ω	560Ω
122 °F	378Ω	778Ω
104 °F	545Ω	1104Ω
77 °F	840Ω	1950Ω

TEMPERATURE INDICATION:

The display has a temperature between 77°F and 266°F. The graphic bar shows the temperature from 122°F and a maximum of 230°F

ESPECIFICIFICATIONS:

Voltage supply:.....9 a 16 Vdc
 Maximum fuel level SENSOR resistance:.....1k ohm
 Compatible temperature SENSOR :.....MTE3005 / MTE4054
 Max current supply:.....450mA (max)
 Stand by supply:.....< 1mA
 Speed sensor:.....Hall effect sensor

Configuration:

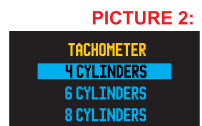
Cylinders number:

With ignition switch off, press and hold **SET** and switch on the ignition. (Do not start the engine).
 Display must show the menu Picture 1:

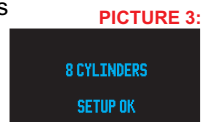


With the **◂** key you can navigate between SPEEDOMETER, FUEL LEVEL, TACHOMETER AND TEMPERATURE.
 Select TACHOMETER and press the **SET** key to confirm.
 The display must show the CYL number menu (Picture 2)

With the **◂** key select the correct number of cylinders of your engine and then press **SET** key to confirm your choice.



The display must show the number of cylinders chosen (Picture 3).
 Then the dashboard will restart.



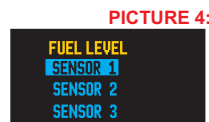
Fuel level indicator:

To display the fuel level, the PINK cable from the main harness must be connected to the vehicle's fuel level SENSOR. After installation the instrument must be configured according to the steps below:

Standards fuel level SENSORS:

If your car has one of the fuel level SENSORS as shown in TABLE 1 on the back of this manual, follow the guidelines below:

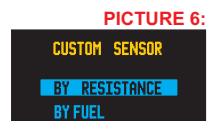
- 1- With the ignition and lighting switch off, press the **SET** key and turn on the ignition (no need to start) and release the key.
- 2- The display will show a menu with some options. Select the **FUEL LEVEL** option.
- 3- Then select your sensor option .



Customized fuel level sensor:

If none of the fuel sensors in TABLE 1 meets, it is possible to configure a custom sensor. This feature allows the use of several different models of fuel level senders and tank size. Configuring a custom sensor can be done in two ways: The first is RESISTANCE, when the resistance value for empty tank, half tank and full tank is already known. The configuration is done by selecting CUSTOM SENSOR (Picture 5) and then BY RESISTANCE (Picture 6)

On the screen (Picture 7), press the **SET** key to increase the value of the highlighted digit, entering the resistance corresponding to the **EMPTY tank**. Press **CONFIRM** to select the next digit to be changed. After that, select CONFIRM and press **SET**.

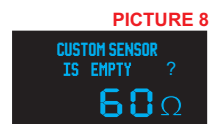


Then enter the resistance corresponding to HALF tank, confirm and finally insert the resistance for FULL tank and confirm. After confirming, the message **SETUP OK** will be displayed.

The second and most accurate way is **BY FUEL**, which must be done with the fuel sender installed in the tank and adding fuel

fuel, saving the resistance for each point (empty, half and full). In this way the indication will be more accurate, regardless of the shape of the tank.

To make the configuration, on the screen (Picture 6) select **BY FUEL**. The screen (Picture 8) will be displayed with the resistance value read. (Image for reference only.) Make sure the tank is empty and confirm by pressing **SET**. Then the screen will be displayed asking for **HALF TANK**, put the amount of fuel for half a tank, wait a few seconds for the stabilization of the resistance and confirm with **SET**. Finally, you will be asked for **FULL TANK**, add fuel until the tank is complete, wait a few seconds for the stabilization of the resistance and confirm with **SET**. After confirming, the message **SETUP OK** will be displayed.

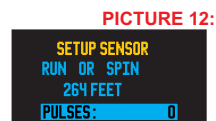
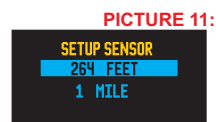
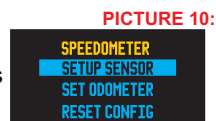


Speed sensor adjust:

For the better accuracy of the speedometer, it is necessary to configure it in the vehicle itself. For this, after installing the panel and the speed sensor, with the ignition key off, press the **SET** key, turn the ignition key, and the main menu will be displayed (Picture 9).

Press the **CONFIRM** key and select **SPEEDOMETER**.

With the **SPEEDOMETER** option highlighted, press the **SET** key to confirm. The display will show the speedometer setup options (Picture 10). Select **SETUP SENSOR** and press **SET**. In the new screen (Picture 11) there are two possible distances to make the setup. This corresponds to witch distance you will be covered for the configuration. Select your choice and confirm pressing **SET**. Now the display (Picture 12) will show the pulses read when you run (or rotate the wheel the equivalent to) the distance choosed.



NOTE: The counter in the blue band should increase as the wheel turns.

This counter indicates the amount of pulses read on the sensor and not the distance covered!!

After covering the selected distance, press **SET** to confirm the setting.

Total odometer - Preloading a mileage value:

It is possible to configure a total miles value. Access the **SPEEDOMETER** option at main menu and then **INITIAL ODOMETER**. (Picture 9 and 10)

A configuration screen (Picture 13) will be displayed. By pressing the **SET** key the value of the highlighted digit is incremented and by pressing **CONFIRM** the next digit is selected. Select **CONFIRM** and press **KM/h** key to save and exit.



Configuration RESET:

To reset the speedometer to the factory settings (500 pulses per 264 feet and odometers clear) select the RESET CONFIG option and confirm (Picture 10).

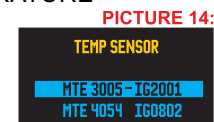
Note: This procedure does not change the other settings.

Resetting the trip odometer:

To reset the trip odometer mileage, at any time during operation, press and hold the **SET** key for 3 seconds..

Selecting the sensor temp. type:

Choose between the two types of possible sensors, rolling the menu shown in Picture 9, select the TEMPERATURE option. The screen in Picture 14 will be displayed with the two options. Make your selection by pressing the key **CONFIRM** and then confirm with the **SET** key.



Selecting the backlight color:

With the ignition key off, press and hold the DIMM key and turn on the headlight key. Once you access the panel, release the DIMM key. By pressing the DIMM key, the panel will change the color. Once the desired color is selected, wait 10 seconds. The panel will flash 3 times indicating that the color has been memorized.

Backlight brightness dimming:

To adjust the intensity of the illumination, anytime the lighting is on, press the DIMM key. The intensity of the illumination will vary between the minimum and maximum while the key is pressed, when releasing the key the configuration is saved. The brightness percentage will be informed on the display.