

# Mopeka propane level sensor

Daniel Senie - 28 February 2021

We have been testing the Mopeka propane level sensor on our Travato for a few months, and think it's time to write up our findings. Here is the Amazon link for the device:



<https://www.amazon.com/AP-Products-024-1001-Propane-Indicator/dp/B01C5RQJHS/>

The sensor runs on a CR2032 battery and attaches to the tank with magnets. The sensor element needs to be coated with dielectric grease (provided) when installing. Given the relatively-exposed location of the tank, we were concerned whether the sensor would fall off while driving. So far, it has stayed put. Using a technique similar to that on the water and waste tanks used by Winnebago, the sensor reads fairly accurately the level of propane liquid in the tank.

OK, let's take a moment for a review of how propane and propane tanks work. When you use propane in your stove, heater or (if your RV is so equipped) 3-way fridge, it is a gas. But under pressure, in a storage tank, propane is a liquid. Propane works well as a heating and cooking fuel because it stores as an energy-dense liquid under relatively low pressure. When you get a propane tank filled, it is being filled with liquid propane, or LP. Propane tanks are filled to 80% of their total volume, and not more. This is done to allow surface area where the liquid can state change to gas. The tanks are designed with an over-fill protection device and a bleeder setup, both of which have that same 80% as their limit.

The Mopeka sensor is primarily intended for vertical tanks, especially grill-bottle 20 pound tanks. Setup is simplest for those. It can be set up for the horizontal, built-in tanks found on most motor homes.

For motorhomes and trailers that use a setup with two 20 pound grill bottles, you can get a pair of the sensors and monitor the level of each tank. The sensors come with little feet that make the tank sit taller where needed to ensure clearance for the sensor.

Those of us with built-in tanks in motor homes have a slightly more challenging setup, in that we have to take a measurement of the diameter of the tank, and then fine tune the settings in the app from there. What I recommend is putting in your best guess of the tank size, then go get the tank filled. Once properly filled, tweak the diameter setting in the app until the app tells you the tank is at 100%.

For the Winnebago Travato, and possibly for the Solis, the number I came up with is 14.5 centimeters. You can enter the diameter in inches, but the app seems to default back to centimeters, and calculates the conversion after you enter inches.

A note on accuracy: the sensor reading, just like the dial gauge on the tank and the OnePlace display inside (if you have one) will only be accurate when parked on level ground and not moving. Remember when I said propane is a liquid in the tank? The dial gauge uses a float, not unlike the float in your toilet tank, to determine the level. If you're tilted to one side or the other,

the surface of the liquid will not be level and depending on where the float is located within the tank, the gauge reading will be off. The Mopeka sensor "looks" up through the tank to see how far up the liquid surface is, and so it too will be affected if the RV is not level.

Some thoughts on Mopeka's accessory items: the company sells a display to put inside your RV. This is a set of idiot lights. If you have an RV with a OnePlace or other sensor setup that shows you minimally-useful tank status, the Mopeka display isn't going to be useful. For those with a two-tank setup without sensors provided by your RV manufacturer, the display might be worthwhile. In all cases, you'll get the accurate, percent remaining display using the app on your phone.

Here's the setup for two-tank RVs:

<https://www.amazon.com/AP-Products-1212-13-024-1000-Monitor/dp/B01C5RQI74/>



The company also has a WiFi gateway. We got one to try. It's really not needed. Using just Bluetooth when you're in or near your RV is sufficient.