

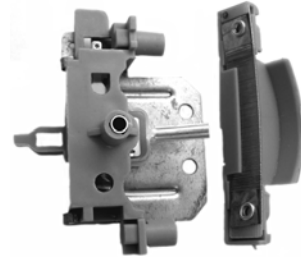
FineLine Fuel Level Sensor

Superior Sensor Quality

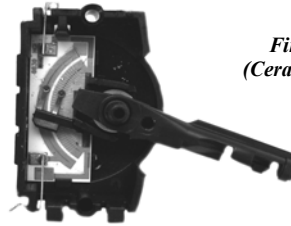
The fuel level sensor is part of the sending unit that is installed directly in the gas tank. It is connected to a float arm which moves to the fuel level. This motion causes the rotation of a (set of) contact (s) within the resistor, and indicates to you how much fuel is in the tank.

There are 2 main types of fuel level sensors (resistors):

- **Wire Wound** - a nickel and chrome wire wound on a base insulated strip. Expected life span is 10,000 - 300,000 cycles. The control of resistance values is difficult as the wire stretched around the strip may become loose and will give an inaccurate reading.
- **Thick Ceramic Baked** - a resistive ink line track is silk screened onto a ceramic board and baked for cohesiveness, providing a long life (over 4 million cycles on FineLine Sensors) and consistency.

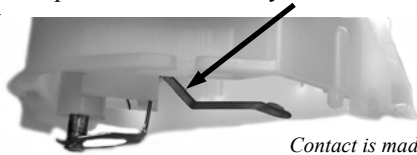


*Competitor's
(Ceramic Baked)*

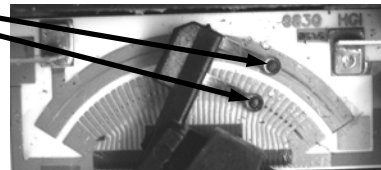


*FineLine's
(Ceramic Baked)*

Due to corrosive conditions within the fuel tank, normal materials used in most resistors would be unstable. For this reason, the FineLine fuel level sensor is made using the highest quality materials. On FineLine's ceramic baked resistors, there are 2 contact points to the resistor track for a more accurate reading. On competitor's there is only 1 contact.



*Contact is made of a
copper, non-noble metal.*



*Dual contacts are
made from Paliney
6, a noble metal
more expensive
than gold.*

FineLine uses a harder, more conductive ink before baking to prevent wear to the track, and FineLine also changed to a better material for the contact that slides on the track to prevent wear to the track's ink. The actual tip that touches the track must be small enough to minimize the number of conductors (tracks) touched, but large enough to avoid risk of contact between tracks.

The early wear out of a fuel level sensor, especially the card and components, is a major concern. The introduction of the ceramic baked resistor card to our FineLine units eliminated most of the defects prevalent with wire wound resistors.

