



Models: all Swiss Army, Years: All
Remark: read the italic chapter below!

Let's start this page with the description of the fully functional system first as it's a bit different then what you have in modern cars!

At the time the Pinz was designed European fuel gauges naturally showed full when the tank was full. As you have probably seen on your Pinz fuel gauge the opposite side doesn't say empty (which would be L = Leer in German) but R (for reserve). The usual way to define this point was the amount of gas the vehicle would need to run another 100 km or ~62 miles. For the Pinz this is equivalent to about 5-6 gallons.

If your Pinz fuel gauge shows this behavior (full at full and R at 5-6g, the fuel tank has a nominal capacity of 19.8g) you are perfectly fine and can stop reading. Well, except maybe for the last paragraph.....

It seems that the engineers at Steyr-Puch were quite good in mechanical design but had some "electrical deficiencies". For the return of the sender signal they relied on the ground connection of the tank, just four bolts which hold the tank. As these connections corrode over time the return path increases resistance over time and the fuel gauge will no longer show full. Sure, you can take the bolts out, clean the area and bolt the tank back in but sooner or later you will have the same problem again. A much better fix is to add a ground return. Open the plate which covers the sender (it's on the right side of the bed, just in front of the seats). Take a 16-22AWG wire, crimp a ring lug on one end and mount it under one of the screws which hold the sender. A tip: to weather proof the wire-lug connection paint it with "liquid tape" and shrink some shrink-tube over it while the liquid tape isn't cured.

Then route the wire parallel to the the active sender wire to the dashboard and connect it to a ground connection there (best at the fuel gauge). Your gauge will show full when it's full!

Another advantage of this additional wire is that it provides a reliable ground connection for the tank too. If you have a lousy or no ground connection on your tank (and this can happen with only 4 rusted bolts!) sparks can be generated when you fill it up at the gas station and I'm sure that you know that fuel fumes and sparks don't match that well.....

Caution: some Swiss Pinz' seem to have replacement senders which go deeper into the tank. In this case the tank is empty when the gauge shows R. In this case you might think about using the 1/4" connector which goes to a switch in the sender. An "idiot light" mounted on the dash would give you some advance warning....

If your gauge doesn't work despite the above improvement here an electrical way to test the components:
"Non-destructive" test to check which component is the culprit if the fuel gauge is off:

- Disconnect the battery.
- Take the fuel gauge out.
- Connect the ground side to battery minus then the plus and use a resistor with ~47-82 Ohms from the sensor pin to ground. You got a reaging? Gauge is ok (if you have a collection from 10 to 170 Ohms you can even see how the gauge reacts)....
- Now take an Ohm-Meter (any analog or digital variety) set to a range where it can measure 200 Ohms. Measure between the two wires going to the instrument. Read something between 10 and 170 Ohms? Sender is fine (reading depends on how full your tank is).
- If not: measure directly at the sender via the "port" in the bed. Measure somewhere between 10 and 170 Ohms? Sender is ok but wires are dead.
- If so, measure between the ground wire (instrument) and chassis ground. Measure only a few Ohms? Great, ground wire is ok.
- Now the trickiest part: connect one lead of your Ohm-meter to the sender, the other one to the sensor wire at the instrument and I bet in this case you have infinite or very high Ohms as the wire is broken or connections are corroded (unless it failed in one of the previous tests).....

contributed by Jürgen Schöpf