

TO ALL,

We are trying to replace the fuel strip in a K1200s with a float sensor like installed in the K1300s to permanently fix the unreliable fuel strip. I make no guarantees that this will work for you, do any modifications at your own risk. I do not endorse any products. Products mentioned here are just the products that I used.

What you will need:

1. A K1300S float type sensor (pic 1).
2. A later type black plastic filler tube/flange (pic 2) If you have an earlier model with a metal filler tube/flange (pic 3) you will have a little welding to do.
3. An OBDII blue tooth scan tool (OBDIIILink MX from scantool.net \$59.95) and a OBDII to BMW 10 pin plug adapter (from Amazon \$14.95)
4. A couple of very small crimp style clamps for overflow hose.
5. The Motoscan app from google play for android and from Apple for the iphone. The app is free but is a demonstrator app. You will have to upgrade to the Ultimate version to do this fix \$59 or so.

Procedure:

1. Remove the gas tank body work, the battery cover (disconnect the battery), the tank center piece, the gas cap. Pull the filler tube/flange up and out and remove the fuel strip from the bracket. Remove the overflow hose by cutting the clamp. Set the black plastic filler tube/flange aside. Remove the gas tank by removing the spool bolts at the back and work the tank up and back enough to get your hand between the tank and the battery to disconnect the two electrical connections, the overflow hose, and be very careful the fuel line. Press the chrome retainer in and wiggle the hose connector out.
2. With the tank on the floor or work bench remove the large retaining ring to remove the fuel pump assembly (pic 4). Remember the overflow hose is connected to the assembly and the filler tube/flange. Unplug the fuel strip from the assembly on the inside tank side and discard. Take the fuel strip retaining ring off the black plastic filler tube/flange and attach the K1300S float sensor bracket back onto the black plastic filler tube/flange with the sending unit aimed towards the rear of the bike. The overflow hole should be exactly to the left looking forward on the bike (similar to the metal one shown in pic 5). Use a couple of fairing bolts to hold the flange temporarily in place.
3. Plug the float sensor into the plug on the fuel pump assembly where the fuel strip was plugged in. The plug only fits one way. Make sure you bend and route the overflow hose towards the left inside of the tank away from the float, very important Finish inserting the pump assembly making sure to line up the large tab on the bottom with its matching place in the gasket. Reinstall the large retaining ring. Install the gas tank sitting it in place and leaving enough room

to get you hand in between the tank and the battery and plug the two electrical connectors back in, hook up the overflow hose, and put some die-electric grease on the gas hose o-ring and wiggle it into place. Finish setting the gas tank in and install the spool bolts at the back.

4. Now move to the left side of the bike at the module and work the plug out by pulling down on the retaining slide (pic 6). You will just have to figure this out, it's hard to described. Now pry off the back of the plug. It slides out away from the wires. Next pry up the plastic tabs a little (red arrow pic 7) and work the plug locking slide toward the back and off. Now remove the short white plug at the top end of the plug. Then remove the longer white pin from the back of the plug (Pic 8). Now press with some force the white electrical and the black electrical plug out of the main plug housing (pic 9). Cut the zip tie. Find the empty Pin position 21 in the black plug and empty pin position 37 in the white plug (pic 10). There is a plastic plug in these positions that you will have to work out by using a paper clip and pushing it out backwards (pic 12 & 13). NOW THE IMPORTANT PART! Using a pick push down on the pin's open slot to release it. Push out Pin 34 with green/red stripe wire in the white plug and insert it into pin position 21 in the black plug. Then push out pin 35 with brown/blue stripe wire in the white plug and insert into pin position 37 also in the white plug (pic 11). Now put it all back together. Push the white plug and black plug back into the main plug hosing until they click. Insert the longer white plug into the back and the short white plug into the front. Push the locking slide back into the grooves and pass the locking tabs until they click. Now slide the plug back back into the grooves and push until it clicks. Install a new zip tie. Plug the plug assembly back into the module.

5. Take the OBDIIlink MX and plug into the adapter cable and hook up to the plug under the seat in the tail section. A green light comes on. First blue tooth pare the device to your phone. Start the Motoscan app and up on the left check settings for communications and that you are connected. Pick K bikes, then K40 (K1200s & K1300s). Move down to "Central Chassis Electronics (ZFE)" section. There is a place that allows fuel strip calibration. However, we are looking for the place to change the setting from fuel strip to potentiometer.

Choose "Coding" at the bottom of the screen.

Then under "Thermocouples FLS" you will see "foliengeber" with a down arrow.

Pick the arrow and you will see "potentiometer".

This is where you change to potentiometer. Foliengeber is German roughly translated to fuel strip. Select Code to make the change. Backup once and look for fuel strip to disable it if shows up.

Close the app.

6. Now with the coat hanger wire with a hook, fish for the float rod and gently pull up the float as if gas was in the tank (pic 20). Turn on the bike and wait about a minute or so and you should see some bars, the blinking fuel will be off and the yellow triangle gone (pic 19). Turn the key off and lower the float a little. Turn the bike on again and check that the gauge bars change in number and fuel and yellow triangle is off (pic 21). Yeah Baby!

Now how accurate the gauge is depends on if the float rod was bent during handling. You can always adjust it by bending the rod a little. Also my owners manual says that when the gauge shows empty there is 1.1 gallon of gas left in the tank. I plan on adding the 1.1 gallon and check what my gauge shows.

Thanks to Mattis_r for schematics and Rtzx9r for his help.

Good Luck!
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