Lagondaforum: Fuel senders

Fuel senders

Written by davidbracey at May 16, 2020 2:39 pm

I've finally decided to sort out my fuel gauge as it hasn't ever worked since I've owned the car. Before I tackled the LG45 I thought I'd have a go at my 1.5 litre Aston as it's got the same problem.

The cable between sender and gauge is fine. The gauge moves from empty to full when I disconnect from the sender and connect to earth, which tells me that works. The sender measures a range of 0 - 60 Ohms when I move the float but the windings in the gauge are a bit 'scratchy' so I suspect it's past it.

Questions

1.Is the 0 - 60 Ohm range I am reading likely to be correct for the car? Seems like an odd range to me.
2.Is there a way I can check the correct range for the gauge?
3.If 0 - 60 Ohm is correct, are replacements available?

Thanks for any help that can be provided.

David

Re: Fuel senders

Written by h14 at May 17, 2020 9:39 am

Hi David,

I believe the sender in my Riley RMB has an 85 ohm resistance, so 60 sounds fine. Reading your detailed findings, the gauge works, and I think you're saying that when the float is moved, you get a reading traversing from 0 - 60 ohms. If that's the case. I suspect your problem is a poor connection between the sender unit and earth.

On my V12, I see a secondary wire has been added from the sender unit to the tank body, so it's not a rare problem! Indeed, as tanks are flexibly mounted via non-conducting materials, ie rubber and canvas, the actual earth path is primarily via the copper petrol feed pipes. If they've been replaced by plastic, there's your problem.

In all cases the best resolution is to run an earth wire from the body of the sender (or of course earth terminal if it has one) to the chassis. If like my V12, there are plenty of screws into the chassis, for example holding clips for the loom, and petrol piping, that a terminal could be fixed to. Ideally, clean the chassis to bright steel and place the terminal first, before re-attaching the screw, washer & clip.

Laurence

Re: Fuel senders

Written by davidbracey at May 17, 2020 1:14 pm

Hi Laurence,

Absolutely correct about the earth. I discovered this myself and was just logging on to post about it. Thanks all the same.

Best wishes,

David

Re: Fuel senders

Written by h14 at May 18, 2020 9:25 am

You're welcome, glad you got it sorted.

Laurence

Re: Fuel senders

Written by davidbracey at May 18, 2020 9:37 am

It seems that basic auto-electrics is quite baffling for a lot of amateur mechanics but a few simple skills with a multi-meter would be invaluable. I don't think I have ever seen any guides or articles in the club mag that members might find useful.

Re: Fuel senders

Written by h14 at May 19, 2020 9:01 am

Agreed. Part of the problem I suspect is that it's not "mechanical". Whilst that is correct, the reality is that many electrical problems turn out to be mechanical; a loose or dirty terminal, a broken wire, a sticking brush, etc. But there is still a perception that electrics are a black art, when really, most issues can be resolved just using common sense.

As you say, using a multimeter opens up an easier route to diagnosis. One thing I learnt from the instructions was how to measure voltage drop, simply by setting to the low voltage scale and connecting the clips to the two sides of a connection ... I know I was surprised to see the needle move in a situation where I would have thought that impossible!

Laurence

Re: Fuel senders

Written by davidbracey at May 19, 2020 11:48 am

My electrical engineering manager at work insists that 99% of electrical problems are mechanical. Not wrong.

Re: Fuel senders

Written by Julian at Jun 03, 2020 12:02 pm

That's funny David,

There is an old workshop saying that reads, "90% of carburettor problems are electrical" meaning Ignition.

Seems like two worlds oppose

Jules

Re: Fuel senders

Written by davidbracey at Jun 03, 2020 4:43 pm

I've often thought that if fuel injection had been invented first and then the carburettor second we'd all think it was a fantastic improvement!

Re: Fuel senders

Written by Julian at Jun 18, 2020 1:34 pm

I hate bloody fuel injection! Carbs are "wonderfuel" things! Especialy simple SUs

Even easier when they are supplying Methanol in GPM
