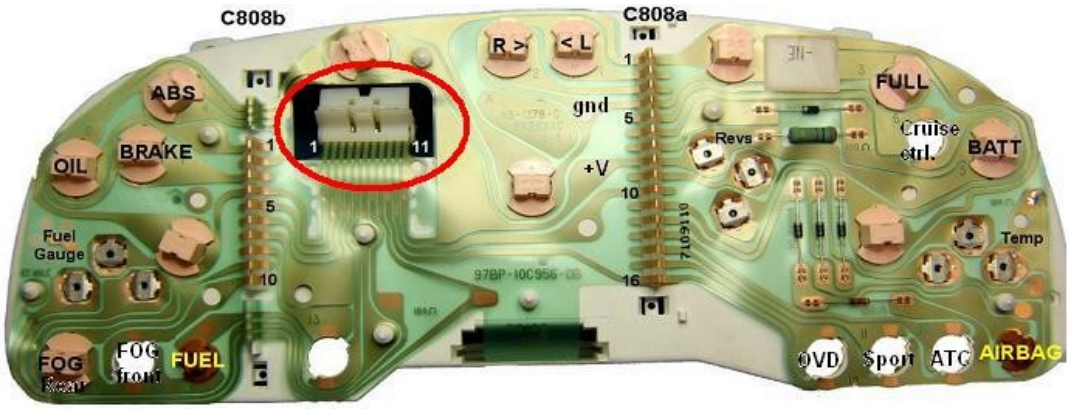
For some time I have had the same problems as described by several users at the Ford Mondeo-forum.

The first time it was recognised, the speedometer just stopped working. After some time it returned back into normal. Simultaneously the low fuel warning light lit for 2 sec.
Later on it was noticed that the fuel gauge did'n work during these outages.
I also realised that it didn't have any negative affect either to the cruise control or the Revs.

When temporary out of order, it was also recognised that the low fuel warning light did not illuminate during the "ignition-on selftest".

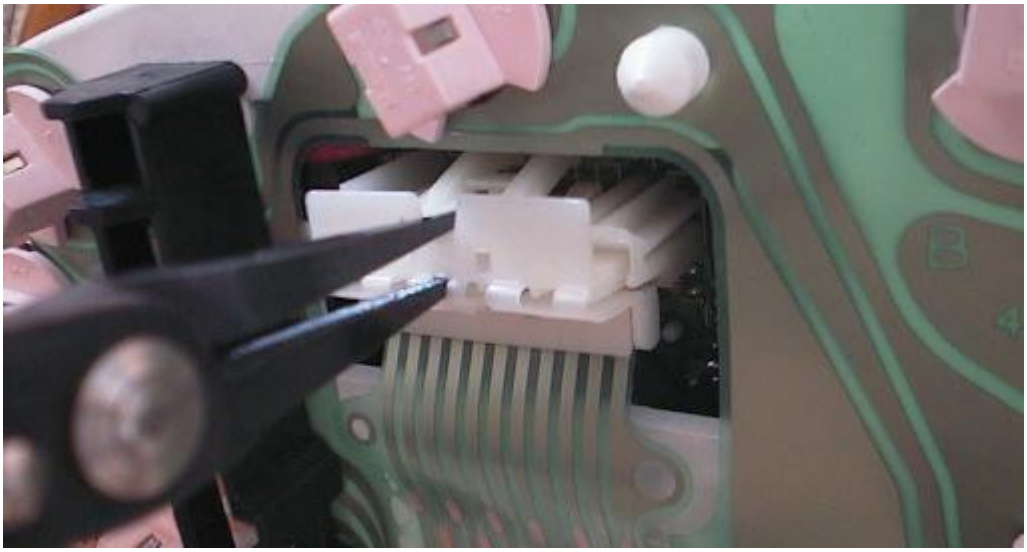
Together with valuable informations in the Forum, I continued the fault findings.
As some others concluded, there had to be a common failure (bad connection) either earth connection or power circuits within the speedometer module, since both the fuel gauge and fuel light are controlled from the there.

With the instrument panel still in place, I found that by slightly press/depress the speedo module connection plug from behind the panel (11pin white plug) the outage of the cirucuits was provoked/simulated.
My first idea was then that there had to be a bad connection with the plug.
I had to take the instrument panel/cluster out of the car.



Ref Andy Tech, Swansea /17/01/06) with some items in addition - Post#827306

With the instument panel removed from the car, the speedo module plug had to be pulled out in order to inspect the connection between the foil and the metal pins.

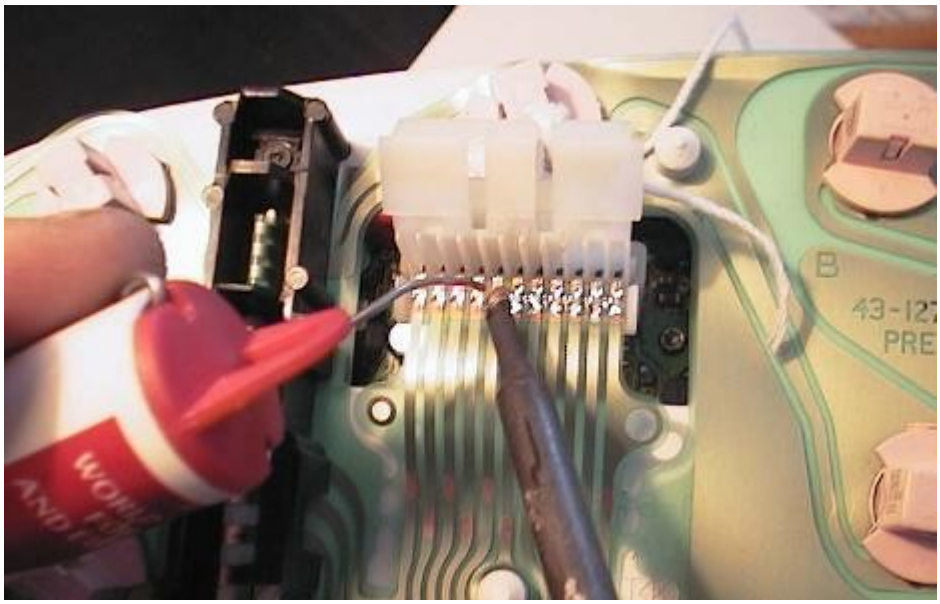


The module plug was "opened up" and arranged in such way that it was possible to solder

all the connection points.
Originally they are not soldered, so I strongly believed that the problem was pin-pointed !!



Soldering of the connection points.
Remember: Be carefull when soldering!! Very narrow foil leads. Be aware of the heat from the soldering tool.



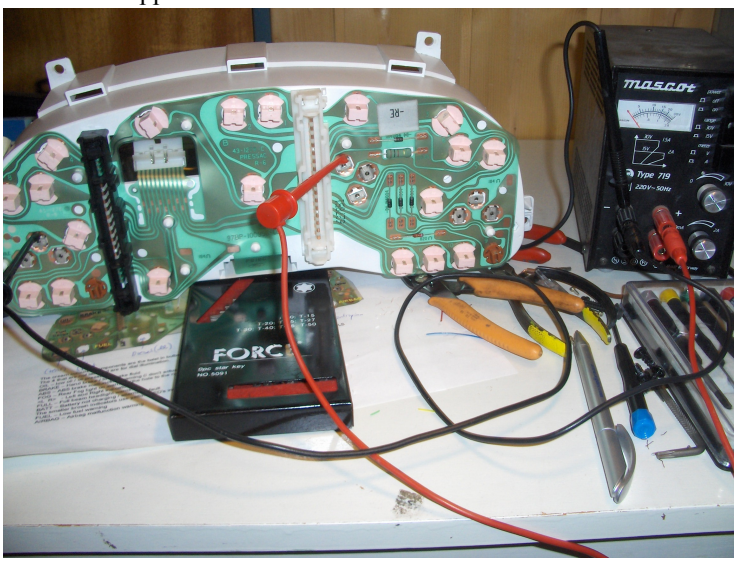
With all points soldered the instrument panel was put back into the car.
All systems worked all right
I felt very happy ! I was now convinced that the cause to the outages was located and fixed.

IT LASTED for several months before the problem arised again in the same way !!

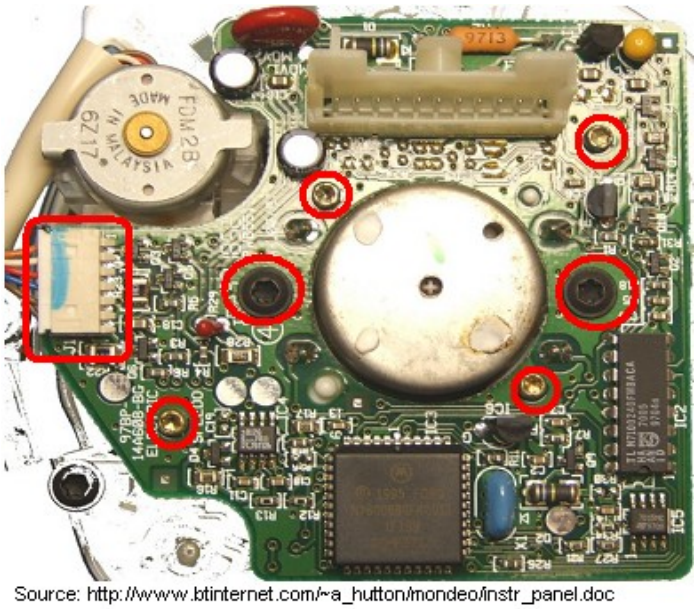
Whitout any spesific reason, the speedometer stopped showing the speed again. After some time it came back into normal (as severeal times before – and linked with the low fuel warning light).
During some ”tests” it looked like having something to do with the temperature inside/behind the instrument cluster. During winter season (Dec-05) I recognised that when starting up with low outside air temperature, the speedo worked normal. After a while with inside temperature raising, the speedo needle fell to zero. When turning the air condition to cold, the needle once again came back to normal. With theese observations I was quite sure that there had to be a bad connection somewhere, maybe with the speedo modul printed circuit board (PCB) since I already had maintained the 11pin connection plug to the speedometer module.

The complete instrument cluster had to be removed again, and the speedometer module was removed from the instrument panel unit.

To be able to simmulate the outage, a test bench facility had to be arranged.
Power was supplied to GND and +12V terminals.

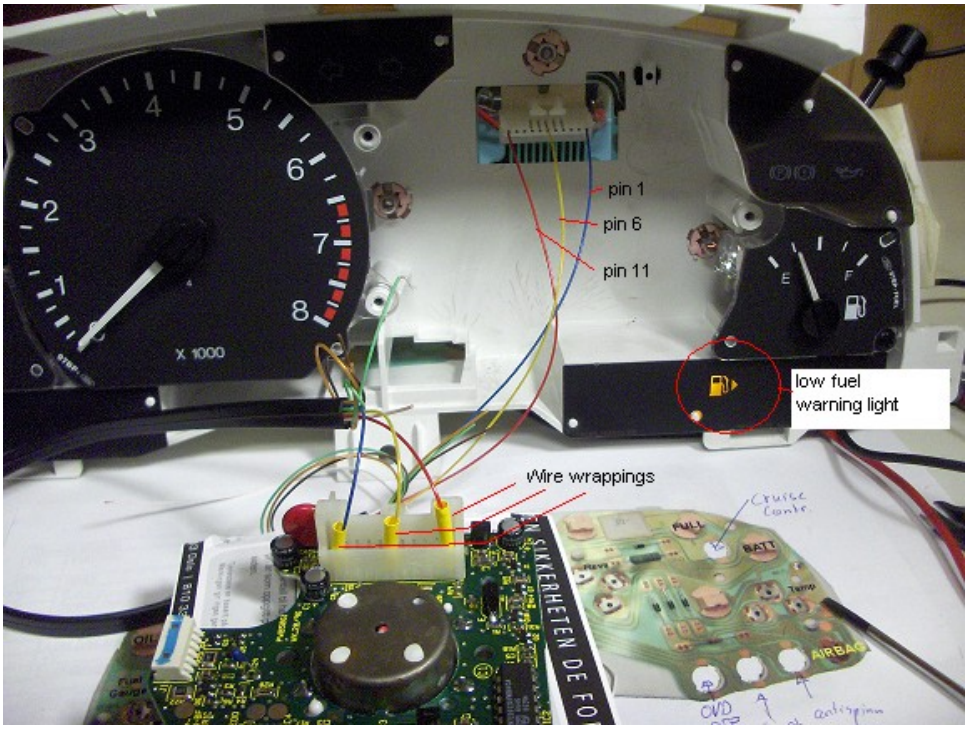


The speedometer needle was then removed from the spindle and the PCB was removed from the rest of the mechanical parts by unscrewing the 6 torx bolts and disconnecting the small connector of the stepper motor.

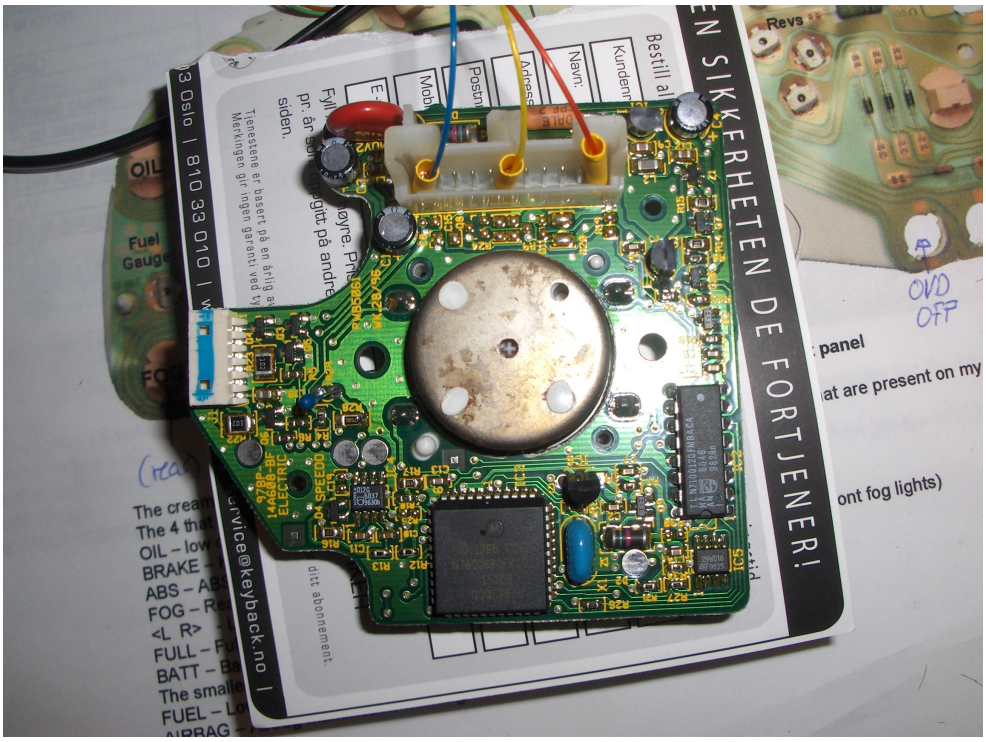


Source: http://www.btinternet.com/~a_hutton/mondeo/instr_panel.doc

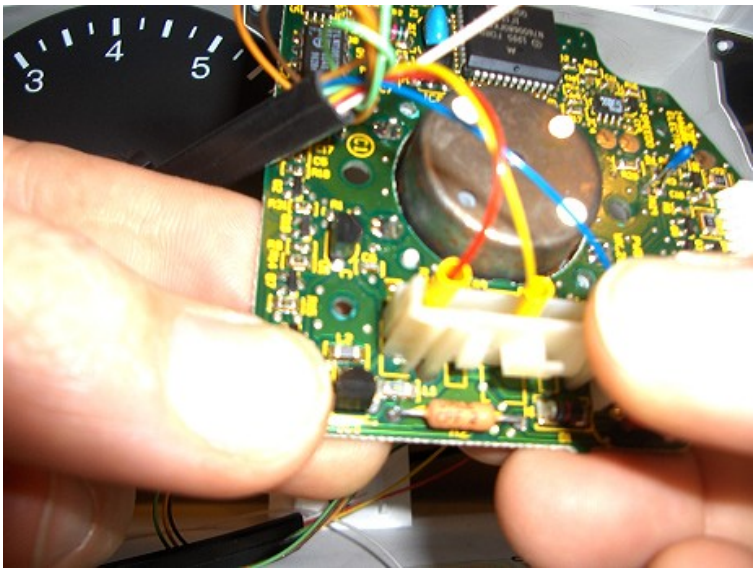
To the connector pins the 3 leads were connected using a wire wrapping tool (pin 1 = blue = GND in, pin 11 = red = +12V in, pin 6 = yellow = low fuel warning LED out).



With this it now would be possible to messure with circuits powered, and simultaneously monitor the typical scenarios with the ”Low fuel warning LED”.

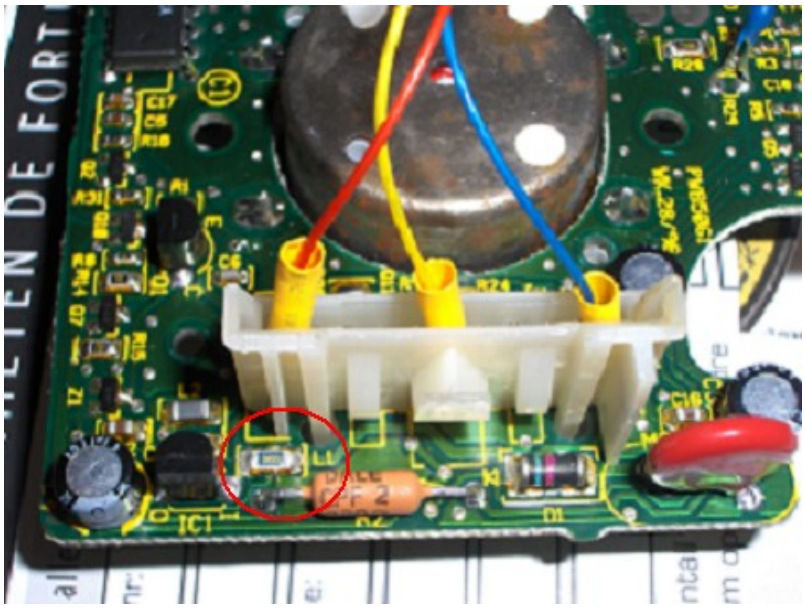


When slightly bending the PCB, I was now able to provoke the fuel warning light

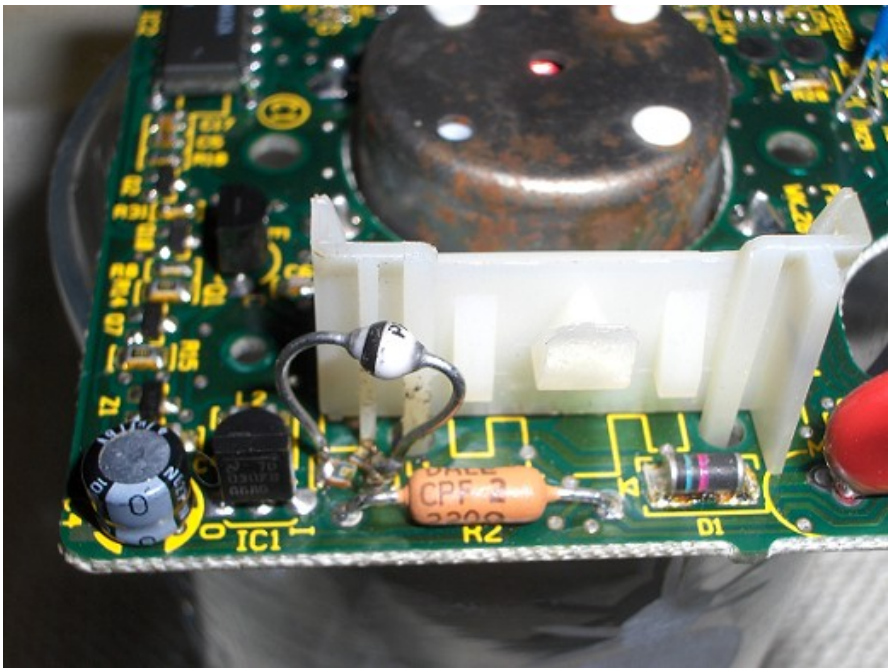


to toggle on and off. This confirmed the idee that there had to be a bad connection somewhere!

During some more close ”investigations” I found the bad connection at the **component L1**.
(this is a surface mounted **Power Choke** (inductor) in serial connection with the power-regulator (IC1), which in turn feeds the +V to another integrated circuit that handles different in/out signals.
I assume that the purpose of using power choke in this circuit, is to filter any fluctuations or small spikes in the supplied +12V power to the power regulator (IC1) which delivers regulated +5V to the integrated circuits.



I was unable to find the correct value (uH or mH) of the choke/inductance
in order to replace the defective part. Because of that I had to find something to fit in instead.
Going through my electronic components surplus, I found something to put in.
I don't really know the value of that part either, but it works ok.
You wold even get it working by strapping across the defective component !



Finally, all parts where refitted and reconnected, and the system has been working without
any problems since that time (i.e. for several months !!)

Hope this might help you too !



1997 Ford Mondea 2,0 Ghia Lux automatic
Norway