

A 2009 BMW 520D was brought into our work shop with the air bag light on so we connected up the Vedis II and got the following fault

9382 ACSM/MRS : Safety battery terminal

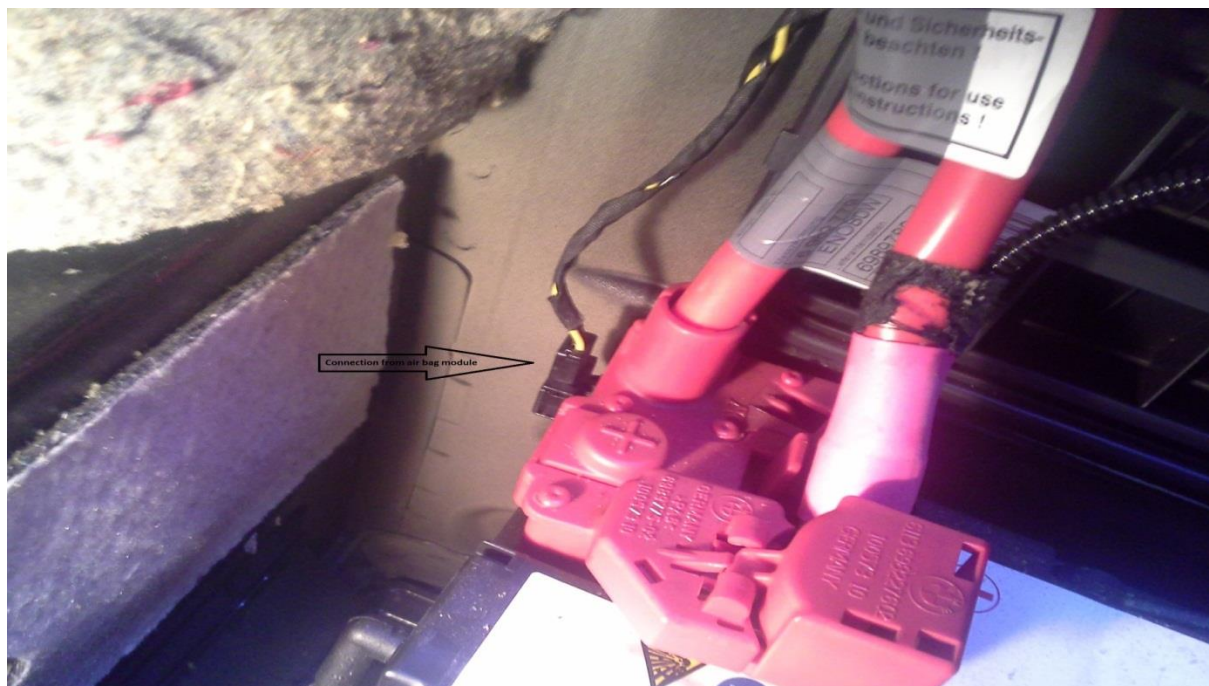
The abbreviations on the screen are BMW abbreviations for the air bag system

ACSM = Crash safety module

MRS = Multiple restraint system



On most modern BMW they have a safety battery terminal



The purpose of this is that in the event of a crash of sufficient severity, the positive connection on the battery terminal is triggered by the air bag module to disconnect the positive terminal to cut the main electrical systems via a pyrotechnic device inside the battery terminal and after this the safety battery terminal must be replaced

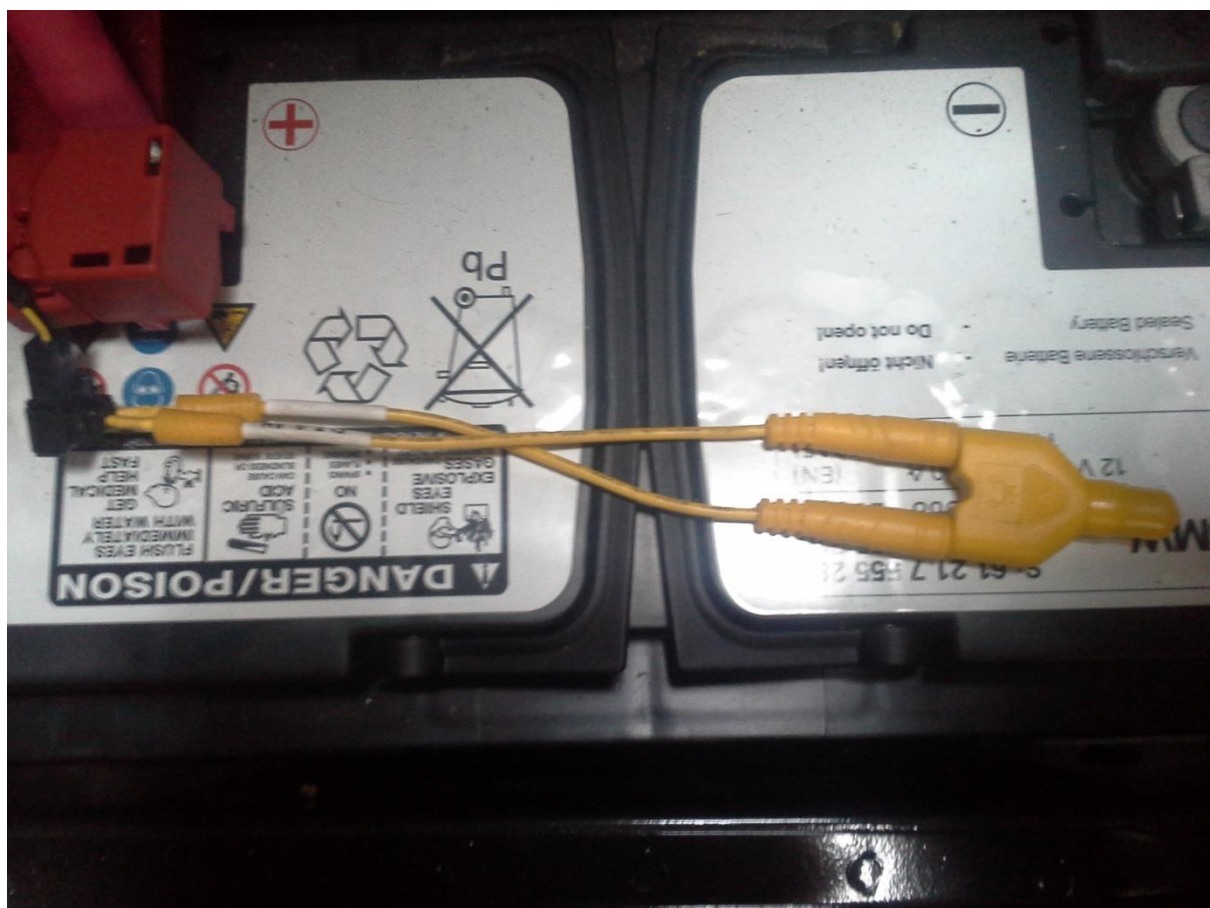
But in this case this car had not been involved in an accident and the lead was not disconnected

So the next step was to see if it was a terminal fault or wiring fault or a module fault

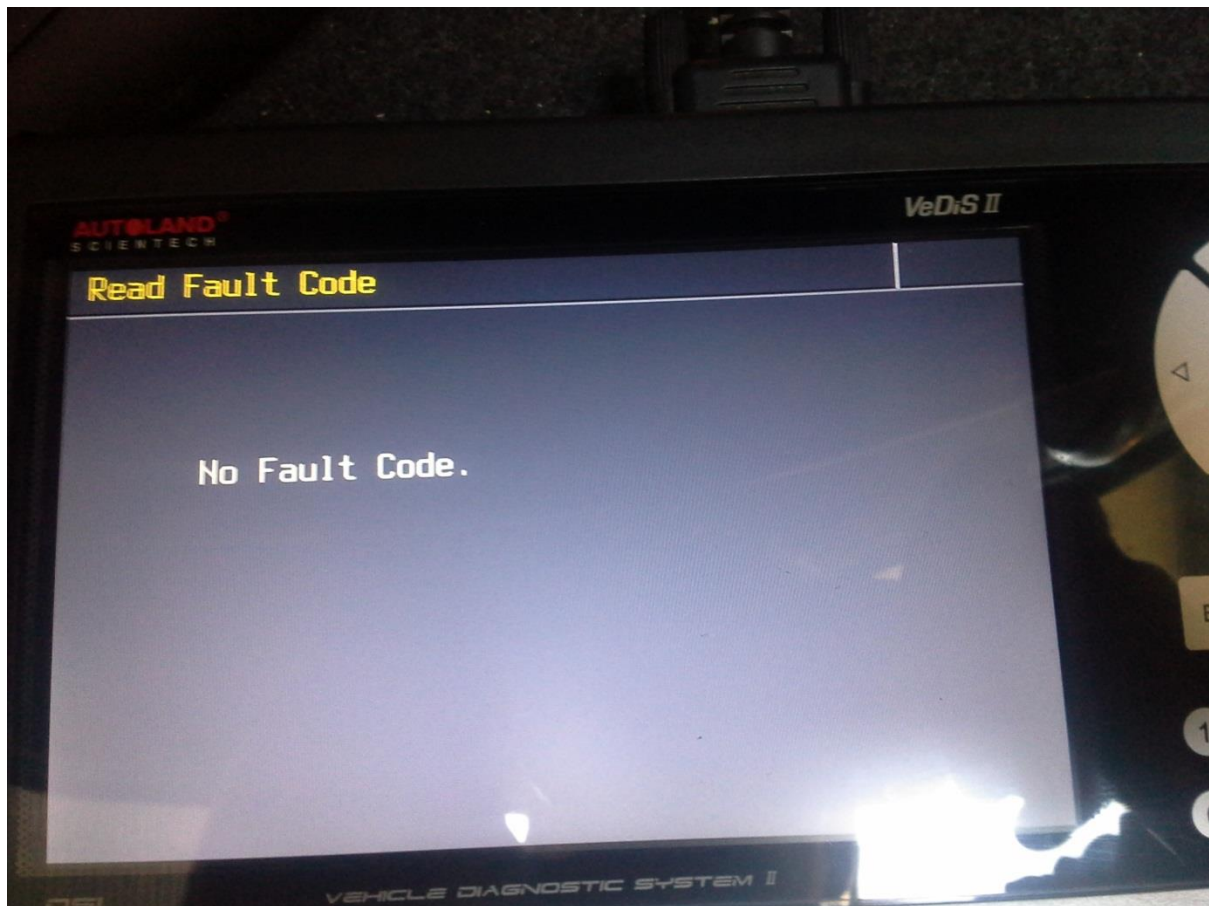
So we checked the connection and sprayed some contact cleaner on it and then tried to clear the fault but no joy

With some research we done previously on these systems we knew the resistance of this should be between 2.2 and 2.8 ohms

So with this information and the aid of connections from the ATA95 test lead set we could simulate the circuit to narrow down the fault



Now with this connected to the loom side we tried to clear the fault and the fault cleared



So now it proved that the wiring back to the control unit was fine and the module was also fine so it had to be the safety battery terminal that was at fault

Now with this information we can be confident that replacing the safety battery terminal will cure the fault

As to why this unit failed is unknown and normally this unit is reliable and should only have to be replaced after it has been triggered in a crash

It could have been damaged during a battery replacement