

Incorrect fault diagnosis due to damaged wiring

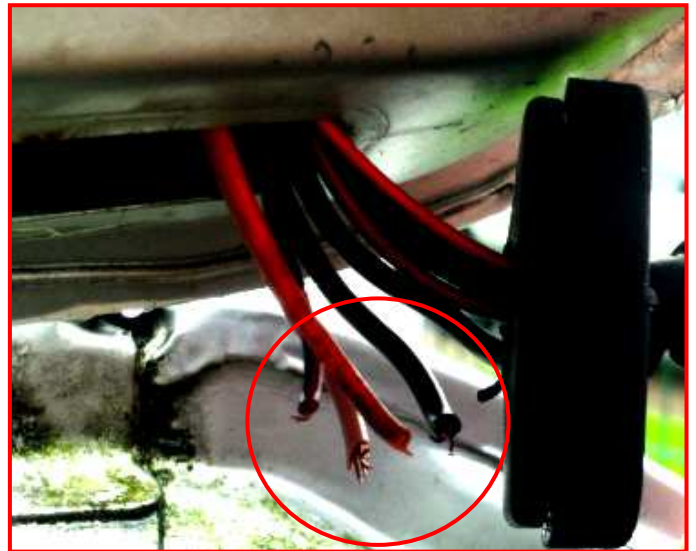
Valeo service has received a number of wiper motors and central locking systems returned under warranty with a the fault being recorded as intermittent operation or not working.

After analysis of the returned parts, where no fault has been found, further investigation has revealed an issue with the vehicles wiring.

As a vehicle gets older the wiring becomes brittle and the insulation hardens. When the wiring passes through different sections of the body (body shell to boot or door for example) the wiring is flexed and bent.

On a vehicle where the wiring has become brittle this flexing will cause a break in the circuit and will result in the part being fitted to either work intermittently or not at all. This is where an incorrect diagnosis of 'failed part' occurs.

If the plastic covering has hardened through age, the wire will no longer be sufficiently insulated and will come into contact and short circuit with either a metal section of the vehicles body or contact another exposed wire in the area. This will produce either an intermittent fault with the part, part not working or an erratic fault with an adjacent part, boot central locking not working but rear wiper motor working even when switch has not been operated for example.



Wiring has become brittle due to flexing in boot aperture

If a part is misdiagnosed as faulty and a replacement is fitted, the issue will still be evident so will result in lost time and money from replacing a non-faulty part.

When replacing an electronic part that is showing signs of a non mechanical fault the wiring feed must be checked first to ensure power is not interrupted by another issue on the vehicle.