Kuga and Ranger communication issues

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Customers often put the technician under pressure to complete the diagnostics in an unreasonable time scale. Some will want to wait with the vehicle, others need their vehicle and cannot leave it. This can often lead to short cuts in our diagnostic process, in an effort to save time. This often leads to misdiagnosis, and wasted time.

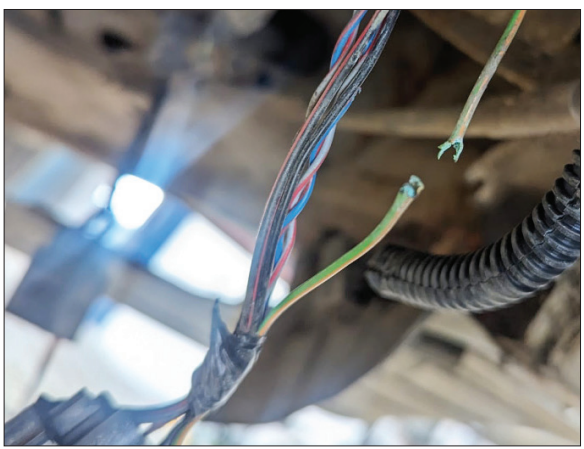
Two such cases recently came into the Autobiz Technical Helpline. Both could have been avoided, saving time and on money for the customer.

The first case was a 2013 Ford Kuga, with permanent AWD, that had a transfer module communication issue. The first mistake was to look up known cases for the Haldex module online. They have known issues, and repairers have repair plans in place for these modules when they come across them. A quick test for power, ground and CAN signals at the module was completed and nothing was found to be wrong.

Even though the technician had tested the Haldex module and found no issues, it was removed and sent for repair, at the customer's request. When refitted, the fault remained.

The diagnosis began again, this time following our know processes. Load testing power and ground connections proved the issue almost immediately.

In the initial testing, the power supply was tested with the component unplugged. Loading the circuit showed a voltage drop. Tracing the loom back revealed a badly damaged wire connected to the Haldex module.



All this wasted time, and repair costs, instead of a simple load test. Time taken is time saved in the long run. Don't let customers dictate your test process.

The second case was a Ford Ranger with an AdBlue countdown message showing a limited mileage to a non-start. A diagnostic scan showed the fault P20EE - SCR NOx Catalyst Efficiency Below Threshold (Bank 1).

Live data showed that the rear Nitrogen Oxide sensor was not communicating. The technician was under pressure to diagnose this quickly, so the 4 wires to the rear NOX sensor were checked and had battery voltage, ground and 2 high speed CAN lines. A new sensor was fitted, with no resulting communication to the sensor.

The diagnosis began again. This time, there was more detailed testing of the signals with the sensor connected and at operating temperature. This time the supply voltage was less than 2 volts. The wiring diagram shows a fuse suppling the sensor. That fuse was checked, and found to be good.

Opening the loom from the sensor revealed badly corroded wiring. A load test in the beginning would have identified this and saved the cost of an unnecessary component, and time saved.