
Tim Stock

A Renault Scenic with multiple system faults

This 2008 Renault Scenic was initially brought to a garage because the electric windows were not working on the front passenger door and both rear doors.

As the garage had a donor vehicle available, and having previous experience of this model, they replaced all three window control modules.

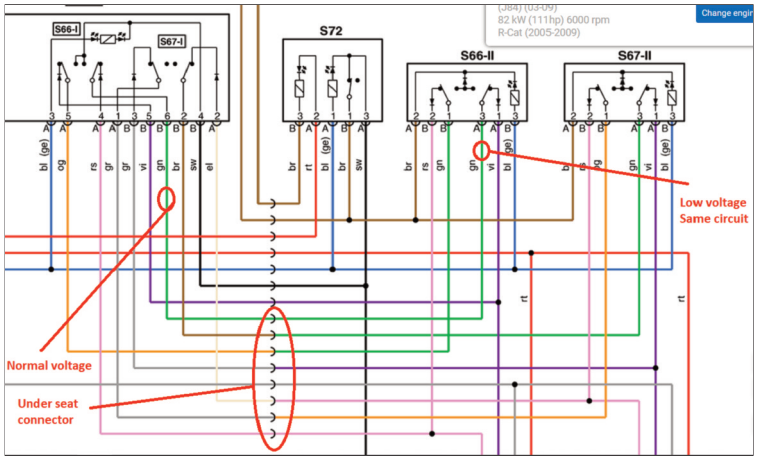
This did fix the front passenger door window, but the fault still remained with both rear windows. So some pinpoint testing was needed on the rear doors wiring. The helpline was called to give some test procedures and diagrams to resolve the problem.

While testing the rear window switch circuits, unusually low voltage readings where found on several circuits. On tracing these back on the wiring diagram to the drivers door master window switch, the voltage readings where as expected normal battery voltage. But these circuits, according to the wiring diagram, passed through connection points somewhere in the loom.

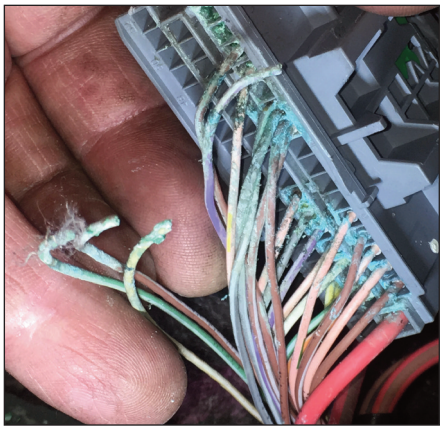
Tracing the loom back, they found that all of the rear door wiring passed under the passenger seat. They had found the fault area for both rear window failures. Major corrosion of the multiplug under the passenger seat and damage to multiple circuits from previous water ingress was evident.

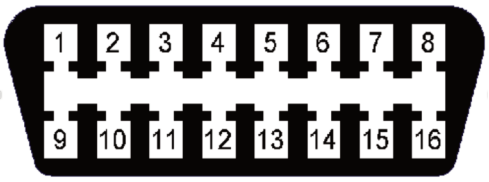
Interestingly, the customer did not mention any other issues with the vehicle. But the parking brake system was also showing errors on the initial scan and vehicle check. The parking brake system also passed through the corroded connection block. So the repair was made to the connector and loom under the front passenger seat, and multiple faults were cured from one single failure point.

It is always worthwhile completing a full scan and initial vehicle assessment prior to any work being undertaken.



The wiring diagram identified the connector that affected wiring passed through


Heavily corroded wiring in the connector was the cause of the multiple faults



Normal resistance between terminals 6 & 14 on the OBD connector is 60 ohms

Ford S-Max won't crank over or communicate

A 2012 Ford S-Max with a 2.0 TDi UFWA engine was causing a garage problems when it would not start. They called the helpline for assistance diagnosing the dual problems of it not cranking over and a lack of system communication to the vehicle. Additionally, the instrument cluster lights would not come on.

The helpline was called to assist with this non-start that also had no system communication from the vehicle to a scan tool. It would not crank over and no instrument cluster lights would come on.

The first step was to check the CAN network, commonly known as the physical layer, as the scan tool would not find any system on a global scan. We asked for a resistance on the CAN physical network.

The first step was to check the resistance between terminals 6 and 14 of the Diagnostic connector, the most readily available test point. We would expect 60 Ohms on a good/functioning system. Instead, we found a confusing situation, fluctuating resistance around 590 ohms.

Normally, you would expect to measure an open circuit, short circuit, 120 ohms or 60 ohms, depending on where in the system the fault was located.

This did not seem correct, so we asked for a meter check, only to find the Ohms meter was faulty. We started the test again with a new meter, and measured a stable 119 Ohms, indicating an open circuit in one of the CAN High or Low lines.

From previous experience, we have seen the power steering control module affecting the CAN network. The steering control module was unplugged, and the network resistance rechecked. It had returned to 62 Ohms and the system now powered up and the vehicle communicated. And it started with only a missing module for the power steering system.

One call to the helpline and this quick and simple physical layer resistance test saved the technician many hours of searching for the problem.