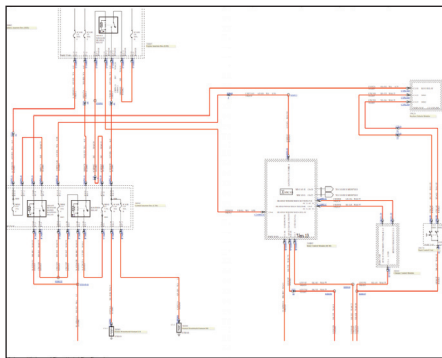


**Wiring diagrams for the heated mirrors and heated windscreen were essential to this diagnosis**



**The diagrams showed what the affected circuits had in common and were supplied by the Helpline**

# Ford heated windscreen and door mirrors issue

It is always this time of year that the Helpline is flooded with heating related issues, especially now that vehicles have been stood still for many months. This is one of those unusual problems that has many technicians confused.

The complaint was that both the heated front screen and the heated mirrors were not working, even though they had no problems when the vehicle was last used. A code scan revealed no issues, so a diagram was the next step to begin the diagnosis.

As expected, the control for the heated screens come via the BCM, which in turn utilizes the medium speed CAN network, for information on when to operate both systems. If any faults are present on the system, the BCM would report these errors. No fault codes were present in any system relating to the screen heaters or the mirror heating. As the customer complaint was also related to the heated mirrors a diagram check was needed for these systems.

The only connection with the mirror issues was that they were also controlled by the medium speed CAN network. Again, no faults were recorded from either door module. Because the windows and door locking systems

worked, we knew that the network was working correctly.

Both the screen and the mirror heating are commanded from the automatic temperature control module, and the module showed data for switch status was working correctly.

As this is a known issue, we had already mentioned the battery condition was important in the correct operation of these systems. The technician had tested the battery and it had passed after a recharge.

But we also asked for the state of health (SOH) and state of charge (SOC) data from the data stream of the vehicle, regardless of the battery test results. As expected, both SOH and SOC showed a battery issue.

After replacing the battery, the heated windscreen and heated mirrors returned to a functioning state. Interestingly, this also has been found to affect the operation of Stop-Start systems, that require a minimum state of charge above 80%.

As more and more demand is placed on modern vehicle electrical systems, it is important to check both state of health and state of charge of the battery before any electrical diagnostic process is performed.