

Volkswagen Touareg with an out of synch CAN

The problem vehicle was a 2009 Volkswagen Touareg 3.0 TDi (Engine code CASA). The customer complaint was this vehicle was having multiple system failures, based on the instrument cluster warning lights having

random activation.

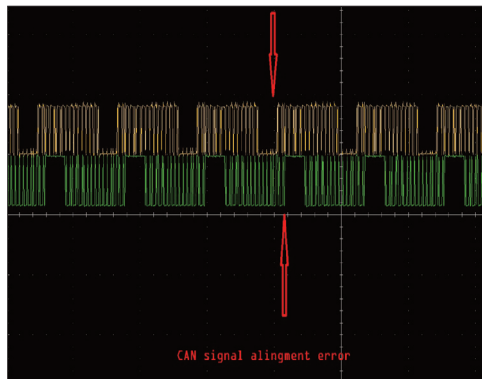
The AC control panel was switching on and off intermittently. If the front windows where operated, the front and rear windscreen wipers would come on. When reversing and the Park Distance Control (PDC) system came active, the wipers would not work. There was no communications to the Central electronics module to investigate the issue.

The first steps the Technician decided to take was to scope the CAN network at the J533 Module (Central electronics)

A CAN topology was checked to see how these modules where connected.

The scope trace indicated a very unusual misalignment in the High-speed network signals. The CAN High and Low signals should mirror each other. On this VW, there was a time shift between the 2 buses.

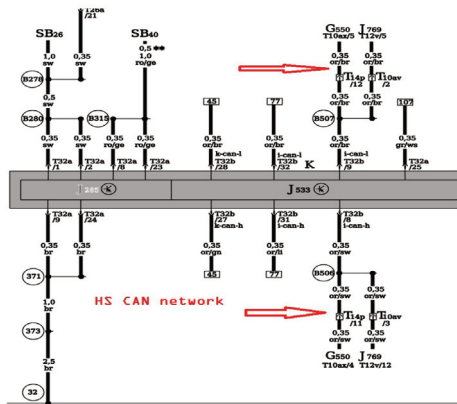
The next task was to remove each node on the effected network while monitoring the



A scope trace showed the CAN High (Yellow) and Low (Green) were out of synch

scope signal activity.

Finally, after demounting multiple modules, it was found that the O/S rear door had a major effect on the signal integrity. And with this door module offline, all systems returned to working normally and communication to the J533 was restored.



A wiring diagram was used to see how the affected modules were connected