

## The diagnostic process; what to expect from NUTS & VOLTS

Installing parts then finding the cause of your vehicle's fault(s) is NOT the mission of NUTS & VOLTS. The starting point is your description of the symptoms your vehicle exhibits. The symptom must be verified by the technician who will then connect to your vehicle communication link and perform a system scan for diagnostic trouble codes and parameter data. A visual inspection will be performed for obvious issues before moving on and an initial road test if related to your concern.

On review of the scan information, factory technical service bulletins may apply to your vehicle based on the Vehicle identification number and the date it was built. If a fix is suggested through a bulletin then the recommended procedure is performed and a verification of the repair ensues through a road test. If no fix is recommended then a diagnosis is performed based on the diagnostic trouble codes and parameter data from your vehicle.

Now that diagnostic trouble codes (DTC's) are known, data is gathered. This data includes past repair history, open factory recalls, description and operation details of the affected system and testing of the wiring and components related to the system. A factory trouble chart often called a pinpoint test is followed. The pinpoint test is a logical process of elimination procedure involving measurements and data acquisition.

Pinpoint testing ends with isolating the component or circuitry failure. Now it is time to repair the circuit or replace the malfunctioning component. After repairs, DTCs are erased and applicable system resets performed. A software update of the affected system's computer may be necessary. A repair verification road test is performed.

A note on repair verification: after a repair and resets, the computer(s) do not necessarily identify that a fault may exist. In the case of your power train computer (module) faults are detected when a monitor cycle is run. The computer may not run certain monitors for several miles or even days. With the equipment and information available to the technician, The technician will attempt to recreate the conditions necessary for the computer to run the diagnostic monitor and verify the monitor has completed which is a solid indication the repair is complete.