

MULTIPLEX DIAGNOSTICS

Overview

By following the Jaguar five-step Diagnostic Strategy, outlined on pages 2.4 and 2.5, and applying knowledge of the Jaguar multiplexing systems, a multiplex controlled circuit fault can often be easier to diagnose than a fault in a more conventionally controlled circuit.

A number of methods are available to test for problems that may occur. The test methods chosen depend on the vehicle symptoms, the physical layout of the circuits, and the accessibility of test points.

Testing a Multiplex Problem

WDS functions as a diagnostic aid and a DVOM. Each time WDS runs a multiplex component diagnostic routine it automatically tests multiplex circuit integrity to determine if the circuit is capable of communicating a data message. WDS will most often help you to pinpoint the cause of the failure. Because WDS diagnostics are software driven, its efficiency in any diagnostic mode depends on the design of the software that it uses. Most WDS diagnostic modes are excellent. However, a technician with knowledge of the system being tested, an Electrical Guide and a DVOM, can often diagnose a problem as efficiently as the WDS diagnostic function.

Multiplex Symptoms Analysis

Any action controlled through a multiplex system requires the following:

- An input to a module on the multiplex system
- A data message transmitted by a module on the multiplex system
- A data message received by a module on the multiplex system
- An output to a function

The symptoms of a particular multiplex failure cannot always be accurately predicted. Symptoms that may seem unrelated to the failure can occur depending on the state of the modules and the data being transmitted at the time of the failure. It is important to concentrate on the primary failure symptoms to help isolate the fault. Carefully observe the symptoms while performing functional tests. If the symptoms appear to change while testing, perform a “hard reset” of the control modules. A “hard reset” clears any “false” symptoms that might result from testing. Also, perform a “hard reset” after a repair is completed. Then, perform functional tests of the original failed function to verify the repair. Finally, perform a functional test of related functions, looking for any remaining symptoms.

Hard Reset Instructions

A “hard reset” restores the control modules to their default conditions assuring that network communications are synchronized.

XJ vehicles

- Disconnect the negative cable of the battery for at least 60 seconds
- Reconnect the Battery negative cable

XK vehicles

- Open one window fully or open a door
- Disconnect the negative cable of the battery for at least 60 seconds
- Reconnect the Battery negative cable
- Reset the window position memory for the passenger and driver door windows