

- Follow Service Information testing directions when using jumper wires to avoid component or harness damage due to incorrect jumper connections.
- Never repair a circuit by adding a new wire in parallel to the old one (overlaying the circuit) without fully understanding what caused the circuit to fail. Always find, examine, and repair the fault to correct the root cause and to repair any adjacent wiring that has been damaged.

Checking Modules

- Generally, module failure rate is very low and therefore replacement modules usually do not resolve the root cause. Incorrect replacement of a module is often the result of inadequate testing.
 - Understand the correct module function.
 - Make sure programmable parameters are set correctly for the function in question (Refer to MODULE CONFIGURATION for more information).
 - Resolve DTCs first - as directed by Diagnostic Routines.
 - Test all inputs, both hard-wired and networked.
 - Test outputs (see "Checking module switching circuits" below).
 - Check applicable TSBs for module software changes (flash programming).
- Checking module switching circuits.
 - Using the scan tool module-output command function (for example, IDS Output State Control) to activate components is a fast way to confirm an output is capable of being switched on by the module. Testing that reveals normal module-output function confirms the need to analyze the module inputs.
 - Don't apply ground or power directly to module-switched components with jumper wires (unless directed by a Service Information procedure), as the component could be damaged by a direct connection to ground/power.

DESCRIPTION AND OPERATION > DIESEL FUEL SYSTEM HEALTH AND SAFETY PRECAUTIONS

 **WARNING:** Vehicles with scheduled remote start technology may start at any time. Make sure the scheduled remote start system is disabled when servicing or working in close proximity to rotating engine parts. Failure to follow this instruction may result in serious personal injury.

 **WARNING:** Do not work on the fuel system until the pressure has been released and the engine has cooled. Fuel in the high-pressure fuel system is hot and under very high pressure. High-pressure fuel may cause cuts and contact with hot fuel may cause burns. Failure to follow these instructions may result in serious personal injury.