

DIAGNOSIS AND TESTING (Continued)

Diagnostic Trouble Code 52

Back-Up Power Supply Voltage Boost Fault

Normal Operation

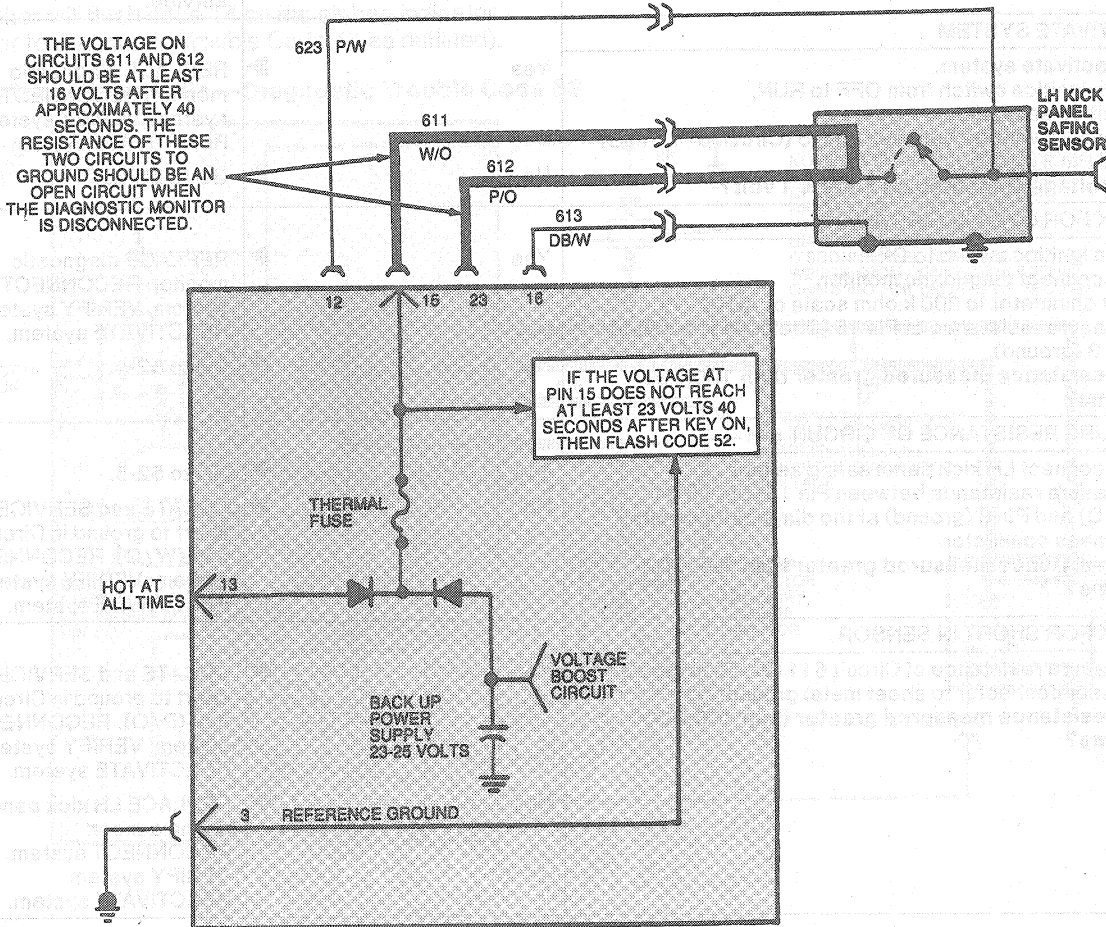
A back up power supply is contained within the diagnostic monitor that consists of a capacitor and a voltage boost circuit. The voltage boost circuit charges the capacitor to approximately 24 volts (± 1 volt) when the ignition switch is turned ON. The back up power supply is connected through a diode to diagnostic monitor Pin 15 (Circuit 611, W/O). The resistance of Circuit 611 to ground is infinite since it is an open circuit. This open circuit allows the capacitor to maintain its higher voltage because there is no discharge path for the capacitor. The diagnostic monitor measures the voltage on the back up power supply capacitor. If the voltage on the capacitor does not reach and maintain a minimum of 23 volts after approximately 45 seconds, the diagnostic monitor will flash code 52 to indicate low voltage in the back up power supply voltage boost circuit.

Possible Causes

Low back up power supply voltage can be caused by:

1. **Resistance on Circuit 611 (W/O) to ground.** Resistance to ground on Circuit 611 (W/O) or Circuit 612 (P/O) will cause the back up power supply capacitor to discharge and the boost circuit will not be able to boost the voltage.
2. **Boost circuit failure within the diagnostic monitor.** If the voltage boost circuit in the diagnostic monitor is damaged it will not be able to raise the back up power supply voltage on the capacitor.

Electrical Schematic—Diagnostic Trouble Code 52



R8071-A