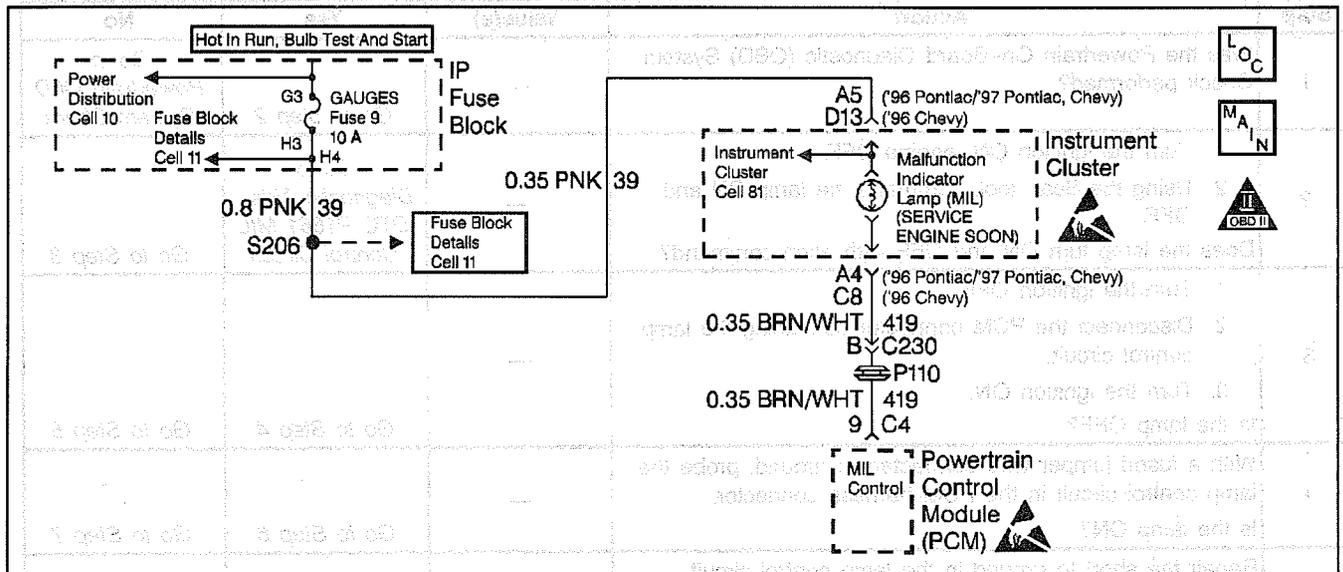


DTC P1661 MIL Control Circuit



21630

Circuit Description

Ignition voltage is supplied directly to the Malfunction Indicator Lamp. The PCM controls the lamp by grounding the control circuit via an internal switch called a driver. The primary function of the driver is to supply the ground for the component being controlled. Each driver has a fault line which is monitored by the PCM. When the PCM is commanding a component ON, the voltage of the control circuit should be low (near 0 volts). When the PCM is commanding the control circuit to a component OFF, the voltage potential of the circuit should be high (near battery voltage). If the fault detection circuit senses a voltage other than what is expected, the fault line status will change causing the DTC to set.

Conditions for Setting the DTC

- Engine speed greater than 600 RPM.
- The PCM detects that the commanded state of the driver and the actual state of the control circuit do not match.
- Condition must be present for a minimum of 5 seconds.

Action Taken When the DTC Sets

- The PCM will turn the Malfunction Indicator Lamp (MIL) driver ON when the diagnostic runs and fails. If the MIL circuit becomes operational, the MIL will be 'ON'. Regardless of whether the MIL actually illuminates or not, DTC P1661 will be stored in the PCM memory.
- The PCM will record operating conditions at the time the diagnostic fails. This information will be stored in the Freeze Frame and/or Failure Records.

Conditions for Clearing the MIL/DTC

- The PCM will turn the MIL OFF after three consecutive drive trips that the diagnostic runs and does not fail.

- A last test failed (Current DTC) will clear when the diagnostic runs and does not fail.
- A History DTC will clear after forty consecutive warm-up cycles, if no failures are reported by this or any other emission related diagnostic.
- PCM battery voltage is interrupted.
- Using a Scan tool.

Diagnostic Aids

- If the ignition feed circuit is suspected of being open, check if other bulbs on that circuit illuminate.
- Using Freeze Frame and/or Failure Records data may aid in locating an intermittent condition. If the DTC cannot be duplicated, the information included in the Freeze Frame and/or Failure Records data can be useful in determining how many miles since the DTC set. The Fail Counter and Pass Counter can also be used to determine how many ignition cycles the diagnostic reported a pass and/or a fail. Operate vehicle within the same freeze frame conditions (RPM, load, vehicle speed, temperature etc.) that were noted. This will isolate when the DTC failed.

Test Description

- Number(s) below refer to step numbers on the diagnostic table.
2. Be sure that both the ON and the OFF states are commanded. Repeat the commands as necessary.
 8. If no trouble is found in the control circuit or the connection at the PCM, the PCM may be faulty, however, this is an extremely unlikely failure.