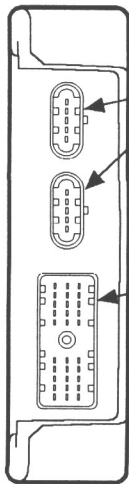


68 FLASH CODE 68 – IDLE VALIDATION FAULT

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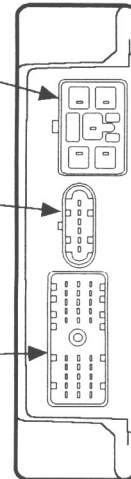
DDEC III / IV ECM
FRONT SIDE



INJECTOR HARNESS
CONNECTORS
(5-PIN)

ENGINE HARNESS
CONNECTOR
(30-PIN)

ENGINE HARNESS
CONNECTIONS
LEFT SIDE



POWER HARNESS
CONNECTOR
(5-PIN)

COMMUNICATION
HARNESS
CONNECTOR
(6-PIN)

VEHICLE INTERFACE
HARNESS
CONNECTOR
(30-PIN)

VEHICLE HARNESS (OEM)
CONNECTIONS
RIGHT SIDE

31184

Figure 68-1 ECM

68.1 DESCRIPTION OF FLASH CODE 68

Flash Code 68 indicates that the ECM, see Figure 68–1, has detected a fault in the idle validation switch (IVS) logic.

68.2 SAE J1587 EQUIVALENT CODE FOR FLASH CODE 68

The SAE J1587 equivalent code for Flash Code 68 is s 230 5 (open circuit) or s 230 6 (short to ground).

NOTE:

230/5 (open) is set when TPS counts are less than 120 and IVS input is opened.

NOTE:

230/6 (short to ground) is set when TPS counts are greater than 282 and IVS input is grounded to battery (–).

68.3 TROUBLESHOOTING FLASH CODE 68

The following procedure will troubleshoot Flash Code 68.

68.3.1 Check for Idle Validation Switch Code

Perform the following steps to check for IVS active code:

1. Turn ignition ON.
2. Plug in DDR.
3. Cycle foot pedal; then read codes.
 - [a] If the IVS code is open (FMI=5), validate the throttle pedal application. Refer to section 68.3.4.
 - [b] If the IVS code is grounded (FMI=6), check the IVS switch. Refer to section 68.3.2.

68.3.2 Check the Idle Validation Switch

Perform the following step to check the idle validation switch:

1. Turn the vehicle ignition switch to the ON position.



CAUTION:

To avoid personal injury, before starting and running the engine, be sure that the vehicle is parked on a level surface and that the wheels are properly blocked.

2. Start and run the engine.

NOTE:

Vehicle need not be moving to perform this check.

3. Plug in DDR.
4. Compare idle validation switch input status (switch light status) with the throttle position sensor counts.
 - [a] If the IVS status is ON with the TPS count being greater than 282, measure for resistance. Refer to section 68.3.3.
 - [b] If the IVS status is OFF with the TPS count being greater than 282, clear inactive codes. No further troubleshooting is required. Refer to section 68.3.7.

68.3.3 Check Resistance Between Idle Validation Switch Contacts

Perform the following steps to measure resistance:

1. Turn vehicle ignition to the ON position. Refer to OEM guidelines.
2. Move TPS so counts are greater than 285.
3. Measure resistance between the ECM input (IVS) at the TPS and battery ground using a volt-ohm meter.
 - [a] If the resistance was less than 100 Ω , the idle validation input/switch is grounded or defective. Contact OEM for repair procedure. Refer to section 68.3.7.
 - [b] If the resistance was greater than 100 Ω , the fault condition no longer exists. No further troubleshooting is required. Refer to section 68.3.7.

68.3.4 Check for Throttle Pedal Application

Perform the following steps to determine which type of TPS is being used:

1. Visually check to determine which throttle pedal has been installed that utilizes the IVS function.
 - [a] If the throttle pedal has an idle validation switch installed, verify TPS count. Refer to section 68.3.5.
 - [b] If the throttle pedal has no idle validation switch installed, update customer calibration using a programming station. Change the settings from idle validation to "No Function" and save changes. Verify repairs. Refer to section 68.3.7.

68.3.5 Determine Throttle Position Sensor Counts / Idle Validation Switch Status

Perform the following steps to determine TPS counts:

1. Turn vehicle ignition to the ON position. Refer to OEM guidelines.



CAUTION:

To avoid personal injury, before starting and running the engine, be sure that the vehicle is parked on a level surface and that the wheels are properly blocked.

2. Plug in DDR.

NOTE:

Vehicle need not be moving to determine TPS counts.

3. Compare idle validation switch status (switch light status) with the throttle position sensor counts.
 - [a] If the IVS input is ON with the TPS count being less than 120, the problem no longer exists. Refer to section 68.3.7.
 - [b] If the IVS input is OFF with the TPS count being less than 120, refer to section 68.3.6.

68.3.6 Check Resistance Between Idle Validation Switch Contacts

Perform the following steps to determine resistance:

1. Turn vehicle ignition switch to the ON position.
2. Measure resistance between the ECM input at the TPS/IVS end of the harness and battery ground.
 - [a] If the resistance is less than 100 Ω , the IVS is defective. Replace the switch. (Contact the OEM for procedure.) Verify repairs. Refer to section 68.3.7.
 - [b] If the resistance is greater than 100 Ω , either the IVS input or #953 wire is open or the IVS is defective. Replace the switch. (Contact the OEM for procedure.) Verify repairs. Refer to section 68.3.7.

68.3.7 Verify Repairs

Perform the following steps to verify repairs:

1. Clear inactive codes.



CAUTION:

To avoid personal injury, before starting and running the engine, be sure that the vehicle is parked on a level surface and that the wheels are properly blocked.

2. Start and run the engine.
3. Depress foot pedal to at least half throttle (> 290 counts).
4. Release foot pedal and allow the engine to idle.
5. Visually observe the check engine light (CEL) and DDR.
 - [a] If the CEL comes on, no further troubleshooting is required.
 - [b] If code 68 is logged, refer to section 68.3.1 to troubleshoot code 68 again.