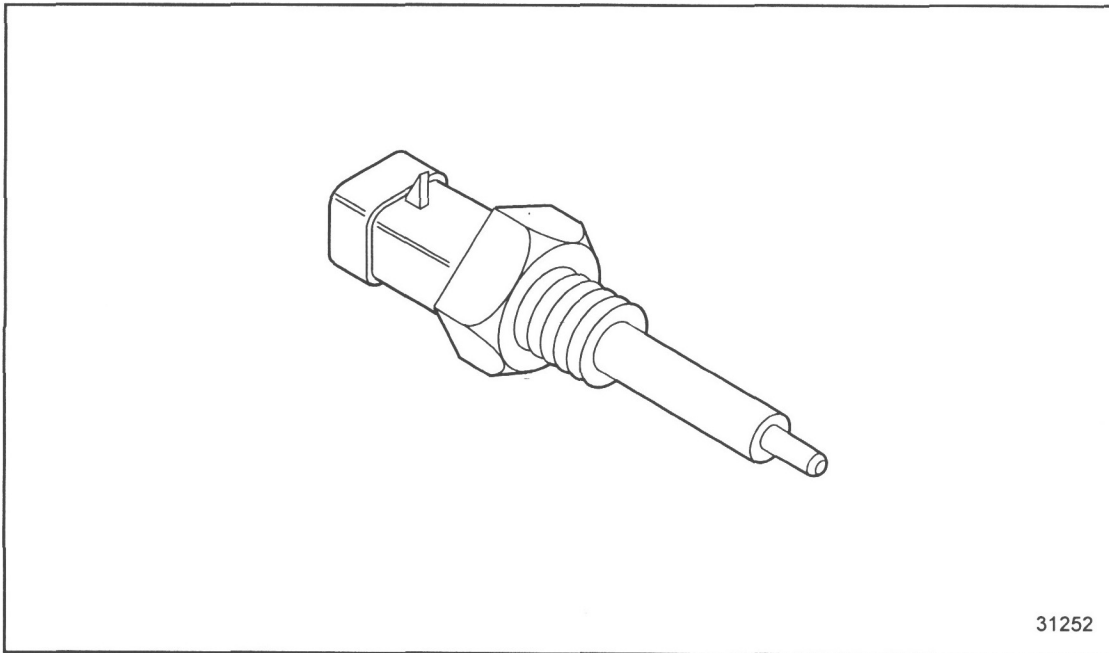


## 43 FLASH CODE 43 – COOLANT LEVEL LOW

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**Figure 43-1 Coolant Level Sensor**

## 43.1 DESCRIPTION OF FLASH CODE 43

Flash Code 43 indicates that the ECM has detected that the engine coolant level has dropped below the recommended safe operating range, see Figure 43-1.

There is a significant difference between the coolant level sensors used in Detroit Diesel Electronic Controls (DDEC) II and DDEC III applications.

- Externally, the sensors physically look the same.
- The sensor used for the DDEC II system has a black colored connector.
- The sensor used for the DDEC III system has an off-white colored connector.

A coolant level module must be used with all coolant level sensors for DDEC II applications. All DDEC III applications, except Volvo, do not require a coolant level module.

## 43.2 SAE J1587 EQUIVALENT CODE FOR FLASH CODE 43

The SAE J1587 equivalent code for Flash Code 43 is p 111 1.

## 43.3 TROUBLESHOOTING FLASH CODE 43

The following procedure will troubleshoot Flash Code 43.

### 43.3.1 Coolant Level Low

Perform the following steps to diagnose the coolant level low.

1. Turn ignition ON; plug in DDR.
2. Read active codes.
  - [a] If code 111-1 is logged, there is an indication of a low coolant level condition. Add coolant to ensure coolant level probe is immersed in coolant.
  - [b] If code 111-1 remains active, refer to section 43.3.2.

### 43.3.2 Replace Coolant Level Sensor

Using the sensor tester may be of assistance. Use Tool J 37164.

#### NOTE:

When replacing the coolant level sensor, the CLS could be an OEM supplied part.

1. Turn ignition OFF; replace CLS.
2. Turn ignition ON.
3. Read active codes.
  - [a] If no codes are logged, troubleshooting is complete.
  - [b] If codes are logged, refer to section 43.3.3.

### 43.3.3 Clean and Check Alternator Grounds

Perform the following steps to check the alternator ground.

1. If the grounds are clean and good, troubleshooting is complete.
2. If the grounds are damaged, repair the ground circuit and verify repairs. Refer to section 43.3.4.

### 43.3.4 Verify Repairs

Perform the following steps to verify repairs

1. Turn ignition OFF.
2. Reconnect all connectors.
3. Turn ignition ON.
4. Clear DDR codes.
5. Start and run the engine for one minute.
6. Stop engine.
7. Check DDR for codes.
  - [a] If no codes are logged, troubleshooting is complete.
  - [b] If code 111/1, and any other codes are logged, refer to section 43.3.1, and repeat the procedure, or contact Detroit Diesel Technical Service.
  - [c] If any code other than 111/1 is logged, refer to section 9.1.