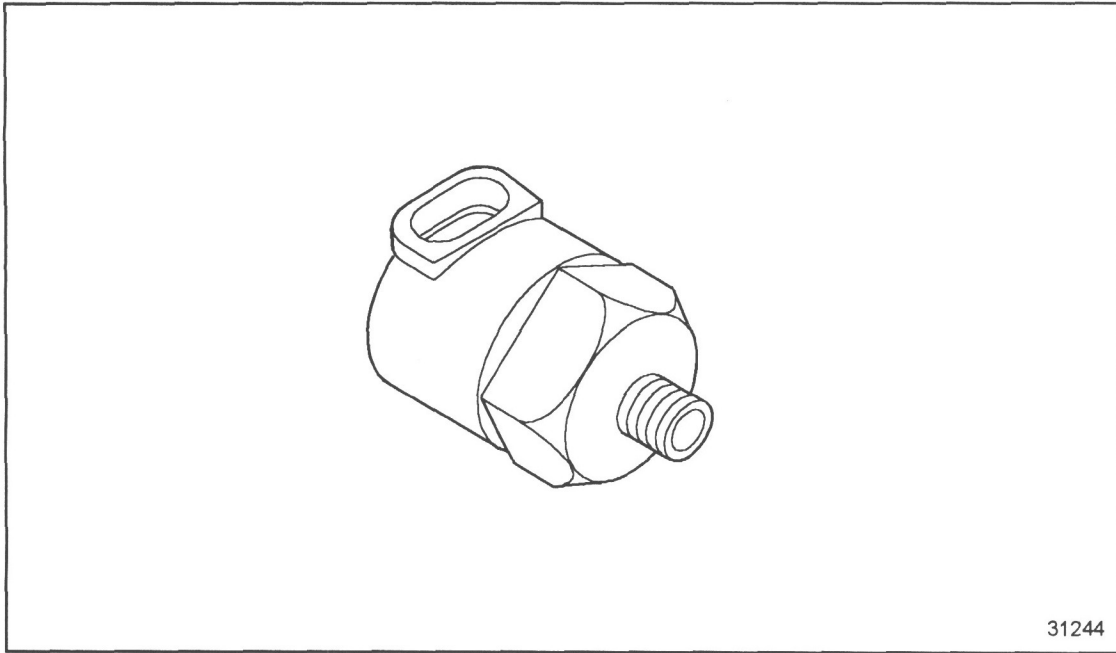


# 35 FLASH CODE 35 – OPS HIGH

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**Figure 35-1 Oil Pressure Sensor**

### 35.1 DESCRIPTION OF FLASH CODE 35

Flash Code 35 indicates that the engine Oil Pressure Sensor (OPS), see Figure 35-1, input to the ECM has exceeded 95% (normally > 4.75 volts) of the sensor supply voltage.

This diagnostic condition is typically:

- Open sensor return circuit
- Sensor signal circuit is shorted to the sensor +5 volt supply
- Failed/damaged sensor

### 35.2 SAE J1587 EQUIVALENT CODE FOR FLASH CODE 35

The SAE J1587 equivalent code for Flash Code 35 is p 100 3, oil pressure circuit high.

**NOTE:**

Code 35 is logged if oil pressure is high, engine is warm, and engine is at idle.

### 35.3 TROUBLESHOOTING FLASH CODE 35

The following procedure will troubleshoot Flash Code 35.

### 35.3.1 Multiple Code Check

Perform the following steps to check for multiple codes.

1. Turn vehicle ignition switch ON.
2. Plug the diagnostic data reader (DDR) into the diagnostic data link (DDL).
3. Turn vehicle ignition to OFF.
4. Read active codes.
  - [a] If code 100/3 and no other codes were logged, refer to section 35.3.2.
  - [b] If flash code 100/3 and any of the following codes were logged: 73/3 or 4, 94/3 or 4, 100/4, 101/3 or 4, 102/3 or 4, 110/3 or 4, 174/3 or 4, 175/3 or 4, refer to section 90.1.

### 35.3.2 Sensor Check

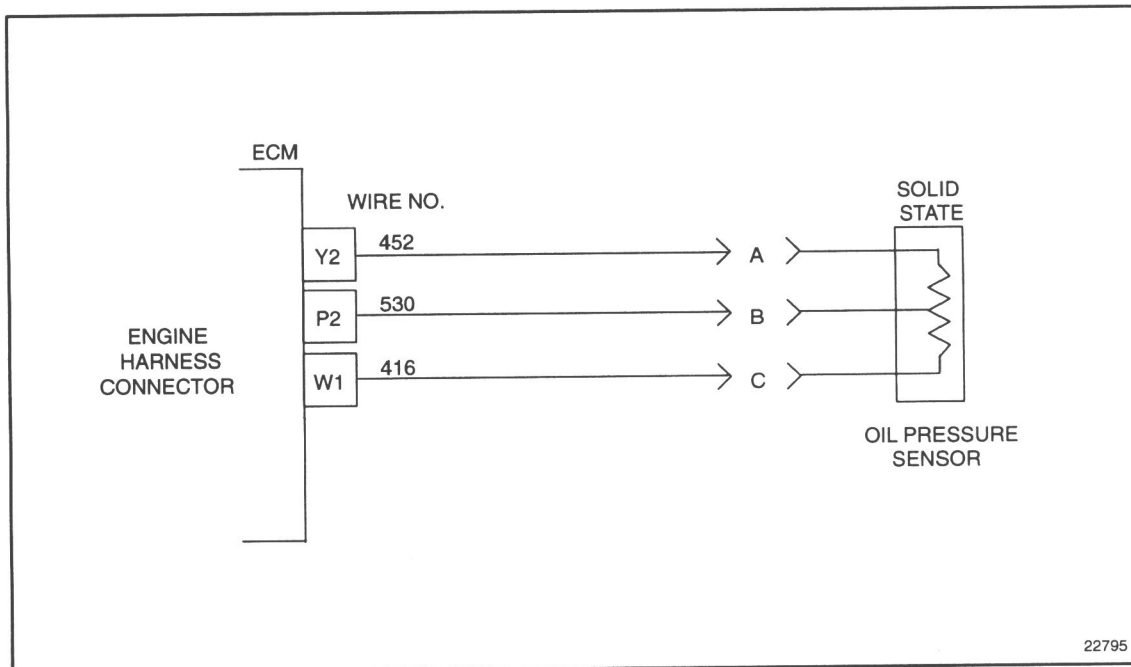
Perform the following steps to check the sensor.

1. Turn ignition switch OFF.
2. Disconnect OPS connector.
3. Turn ignition ON.
4. Start and run the engine.
5. Select engine temperature (COOLANT TEMP or OIL TEMP) on the DDR.
6. Warm up engine until engine temperature reading is greater than 60°C (140°F).
7. After warm-up, let engine run at idle.
8. Read active codes.
  - [a] If active code 100/3 and any other codes were logged, refer to section 35.3.5.
  - [b] If code 100/4 and any other codes except 100/3 were logged, refer to section 35.3.3.

### 35.3.3 Return Circuit Check

Perform the following steps to check the return circuit.

1. Turn vehicle ignition OFF.
2. Disconnect the engine harness connector at the ECM.
3. Install a jumper wire between pin A and pin B of the OPS harness connector. See Figure 35-2.
4. Measure resistance between sockets P2 and Y2 on the engine harness connector.
  - [a] If resistance measurement is less than or equal to 5  $\Omega$ , refer to section 35.3.4.
  - [b] If resistance measurement is greater than 5  $\Omega$ , the return line (#452) is open. Repair the open and refer to section 35.3.8.



**Figure 35-2 Engine Harness Connector to Oil Pressure Sensor**

### 35.3.4 Check Oil Pressure Sensor Connectors

Perform the following steps to check the OPS connectors.

1. Check terminals at the OPS connectors (both the sensor and harness side) for damage: bent, corroded and unseated pins or sockets.
  - [a] If the terminals and connectors are damaged, repair them and refer to section 35.3.8.
  - [b] If the terminals and connectors are not damaged, replace the OPS. Refer to section 35.3.8.

### 35.3.5 Check for Signal Short to 5 Volt

Perform the following steps to check for signal open.

1. Turn vehicle ignition OFF.
2. Disconnect the engine harness connector at the ECM.
3. Measure resistance between sockets P2 and W1 on the engine harness connector. See Figure 35-3.
  - [a] If the resistance measurement is less than or equal to 100  $\Omega$ , the signal line (#530) is shorted to the engine +5 volt line (#416). Repair the short and refer to section 35.3.8.
  - [b] If the resistance measurement is greater than 100  $\Omega$ , or open, refer to section 35.3.6.

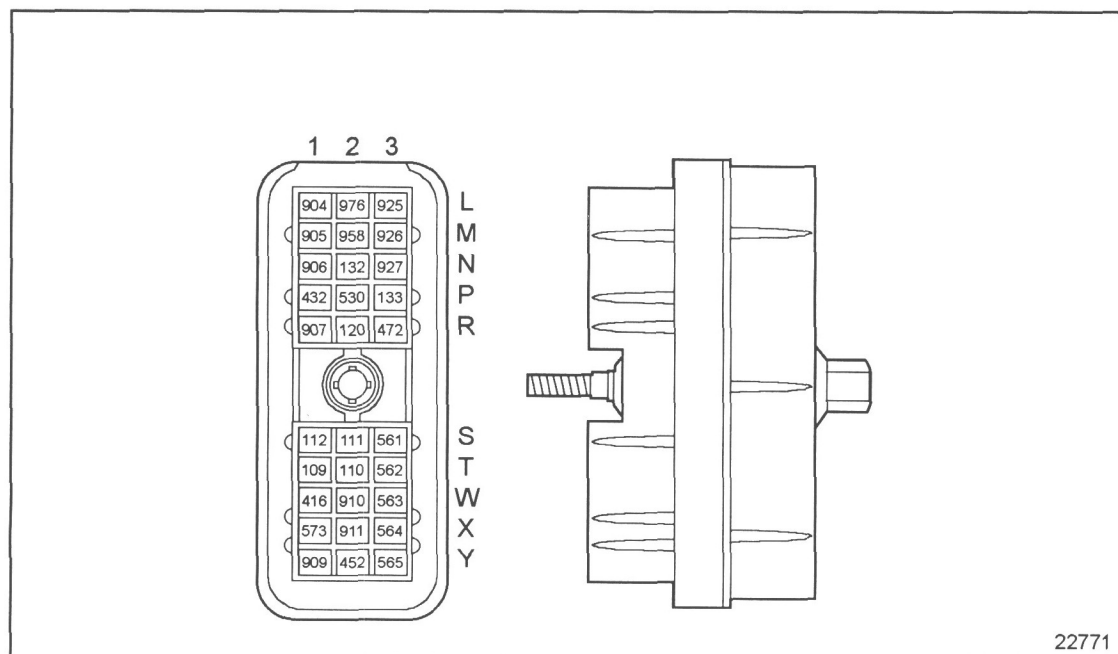


Figure 35-3 ECM Engine Harness Connector

### 35.3.6 Check for Short to Battery (+)

Perform the following steps to check for a short to battery (+).

1. Remove both fuses to the ECM.
2. Disconnect the vehicle harness and 5-way power connectors at the ECM. See Figure 35-4.
3. Measure resistance between socket P2 on the engine harness connector and socket B3 of the vehicle harness connector, and between P2 and the 5-way power harness sockets A and C.
  - [a] If resistance measurement is greater than 100  $\Omega$ , or open, refer to section 35.3.7.
  - [b] If resistance measurement is less than or equal to 100  $\Omega$ , a short exists between sockets where less than 100  $\Omega$  resistance was read. Repair short and reinsert fuses. Refer to section 35.3.8.

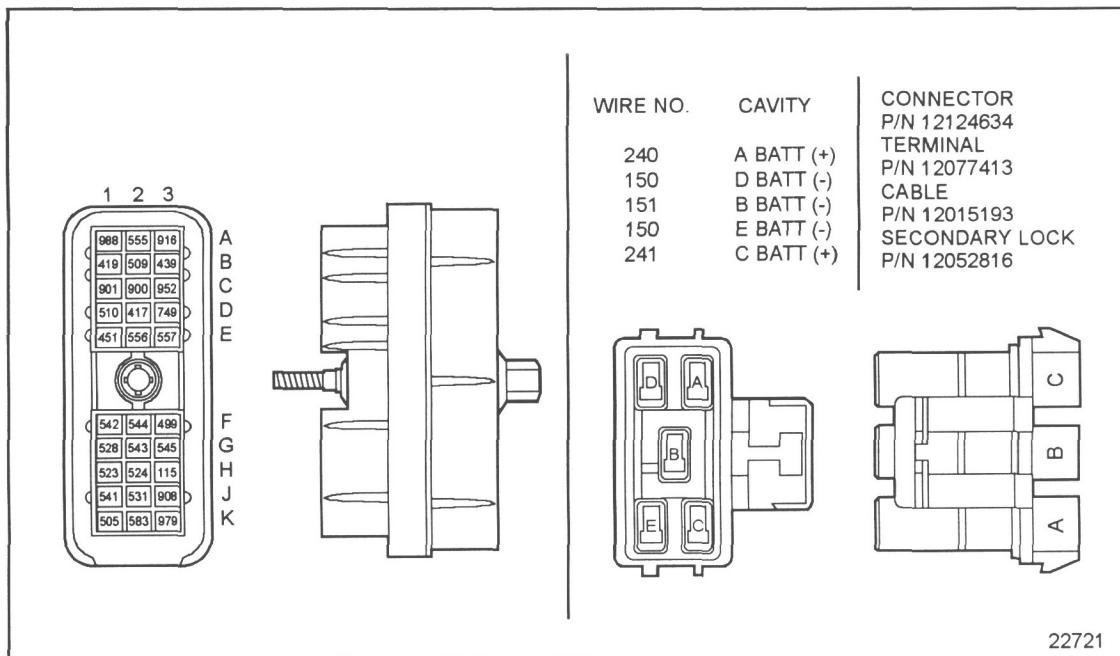


Figure 35-4 ECM Vehicle Interface Harness Connector

### 35.3.7 Check ECM Connector

Perform the following steps to check the ECM connector:

1. Inspect the terminals at the ECM connector (ECM and harness side) for damage: bent, corroded, and unseated pins or sockets.
  - [a] If the terminals and connector are damaged, repair both and refer to section 35.3.8.
  - [b] If the terminals and connector are not damaged, refer to section 35.3.4.

### 35.3.8 Verify Repairs

Perform the following steps to verify repairs:

1. Turn ignition switch OFF.
2. Reconnect all connectors.
3. Turn ignition ON.
4. Clear codes.
5. Start and run the engine for one minute.
6. Stop engine.
7. Check codes with DDR.
  - [a] If no codes are logged, no further troubleshooting is required.
  - [b] If code 100/3 is not logged, but other codes are logged, refer to section 9.1.
  - [c] If code 100/3 is logged, all system diagnostics are complete. Contact Detroit Diesel Technical Service.