

23 FLASH CODE 23 – FUEL TEMP SENSOR HIGH

Section	Page
23.1 DESCRIPTION OF FLASH CODE 23	23-3
23.2 SAE J1587 EQUIVALENT CODE FOR FLASH CODE 23	23-3
23.3 TROUBLESHOOTING FLASH CODE 23	23-3

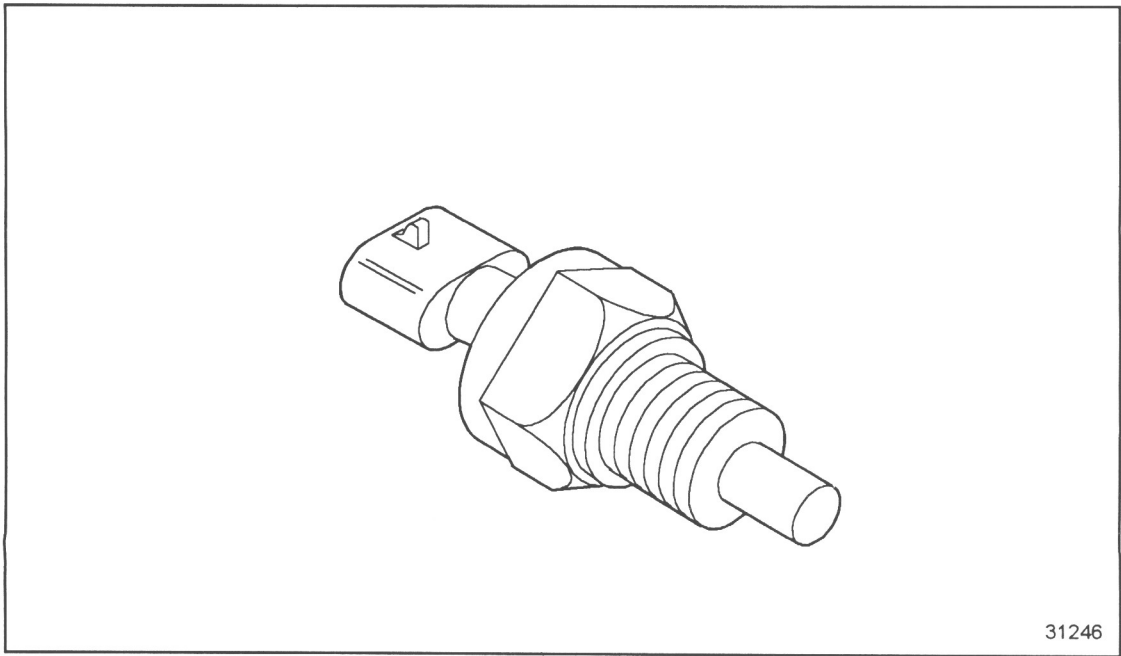


Figure 23-1 Fuel Temperature Sensor

23.1 DESCRIPTION OF FLASH CODE 23

Flash Code 23 indicates that the engine Fuel Temperature Sensor (FTS), see Figure 23-1, input to the ECM has exceeded 95% (normally > 4.75 volts) of the sensor supply voltage.

NOTE:

This code will only be logged during warm engine operation.

This diagnostic condition is typically:

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

23.2 SAE J1587 EQUIVALENT CODE FOR FLASH CODE 23

The SAE J1587 equivalent code for Flash Code 23 is p 174 3, fuel temperature circuit high.

23.3 TROUBLESHOOTING FLASH CODE 23

The following procedure will troubleshoot Flash Code 23.

23.3.1 Sensor Check

Perform the following steps to check the sensor:

1. Turn ignition OFF.
2. Disconnect the FTS connector.
3. Install a jumper wire between sockets A and B of the FTS harness connector. see Figure 23-2.
4. Turn ignition ON.
5. Read active codes.
 - [a] If code 174/4 and any other codes except code 174/3 are logged, refer to section 23.3.2.
 - [b] If any code except 174/4 is logged, refer to section 23.3.4.

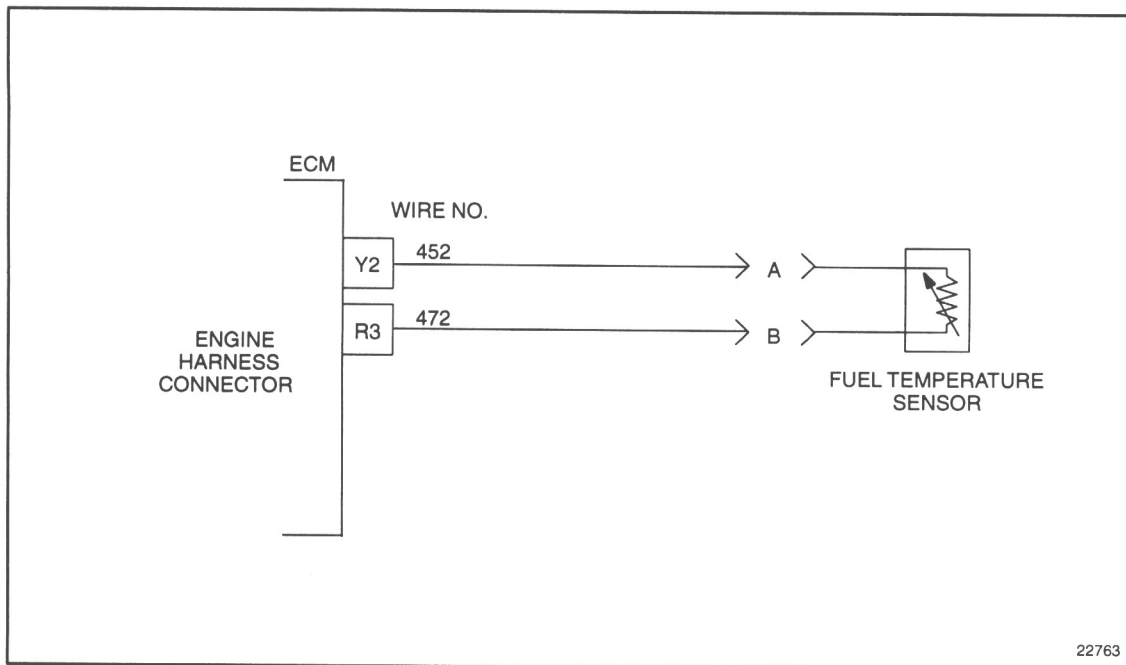


Figure 23-2 Fuel Temperature Sensor

23.3.2 Check for Short to +5 Volt Line

Perform the following steps to check for a short to the +5 volt line.

1. Turn ignition OFF.
2. Remove jumper wire.
3. Disconnect the engine harness connector at the ECM.
4. Measure resistance between sockets R3 and W1 on the engine harness connector. See Figure 23–3.
 - [a] If the measured resistance is greater than 100 Ω or open, refer to section 23.3.3.
 - [b] If the measured resistance is less than or equal to 100 Ω , the signal line #472 is shorted to the engine +5 volt line #416. Repair the short; refer to section 23.3.6.

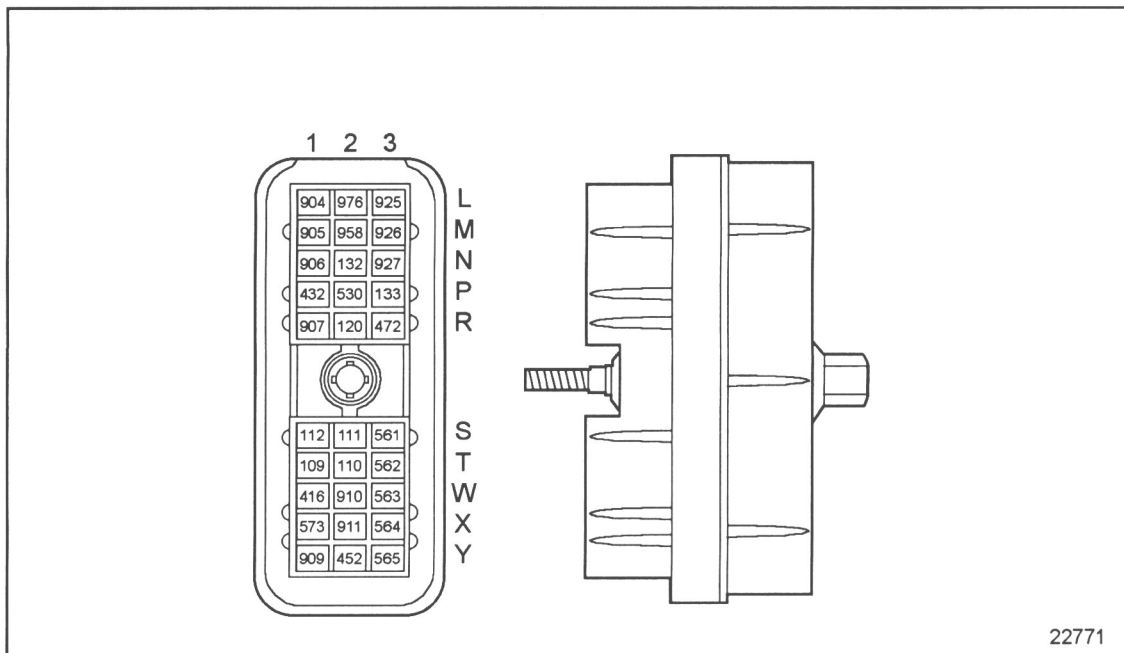


Figure 23–3 ECM Engine Harness Connector

23.3.3 Check Fuel Temperature Sensor Connectors

Perform the following steps to check the FTs connectors:

1. Check terminals at the FTS harness connector (both sensor and harness side) for bent, corroded, and unseated pins or sockets. See Figure 23-4.
 - [a] If terminals and connectors are damaged, repair them. Refer to section 23.3.6.
 - [b] If terminals and connectors are not damaged, replace the FTS. Refer to section 23.3.6.

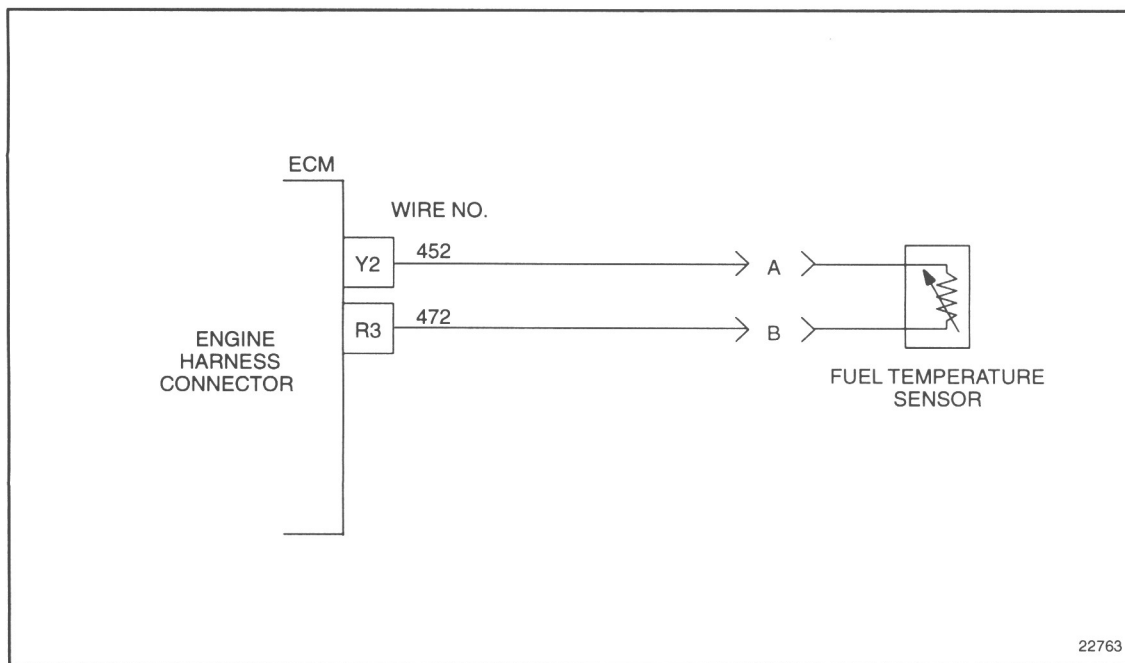


Figure 23-4 Fuel Temperature Sensor

23.3.4 Open Line Check

Perform the following steps to check for an open line.

1. Turn ignition OFF.
2. Disconnect the engine harness connector at the ECM. The jumper wire is still in place at the FTS connector.
3. Measure resistance between sockets R3 and Y2 on the engine harness connector. See Figure 23-5.
 - [a] If the measured resistance is greater than 5 Ω or open, the signal line #472 or return line #452 is open. Repair the open; refer to section 23.3.6.
 - [b] If the measured resistance is less than or equal to 5 Ω , refer to section 23.3.5.

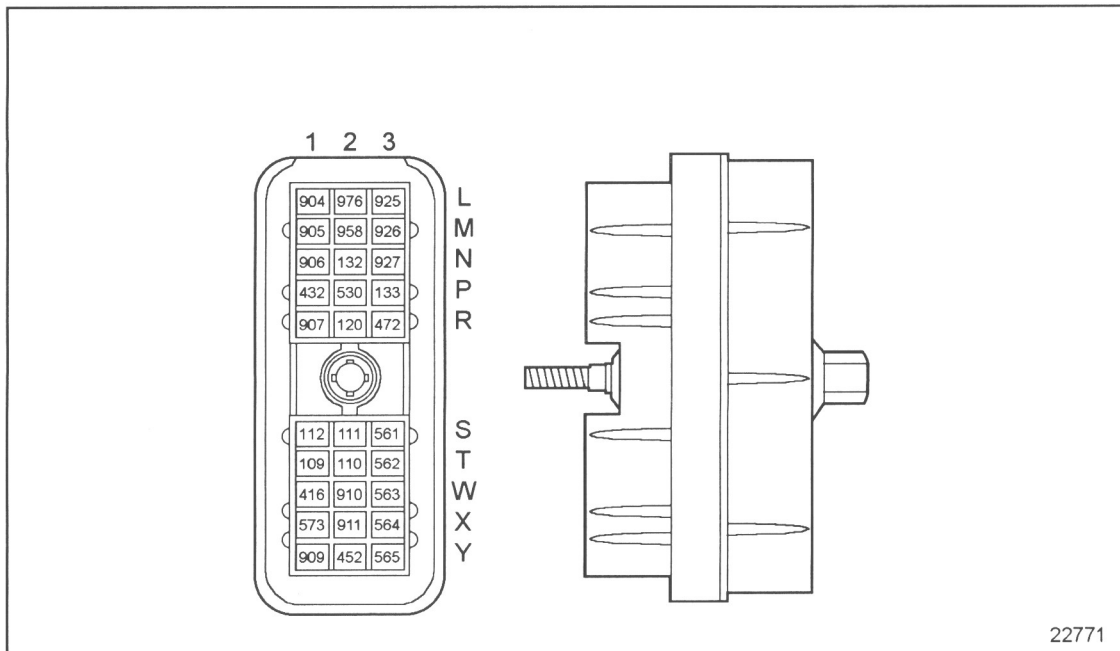


Figure 23-5 ECM Engine Harness Connector

23.3.5 Check ECM Connectors

Perform the following steps to check the ECM connectors:

1. Check terminals at the ECM harness connector (both ECM and harness side) for bent, corroded, and unseated pins or sockets. See Figure 23-6.
 - [a] If terminals and connectors are damaged, repair them. Refer to section 23.3.6.
 - [b] If terminals and connectors are not damaged, install a test ECM. Refer to section 23.3.6.

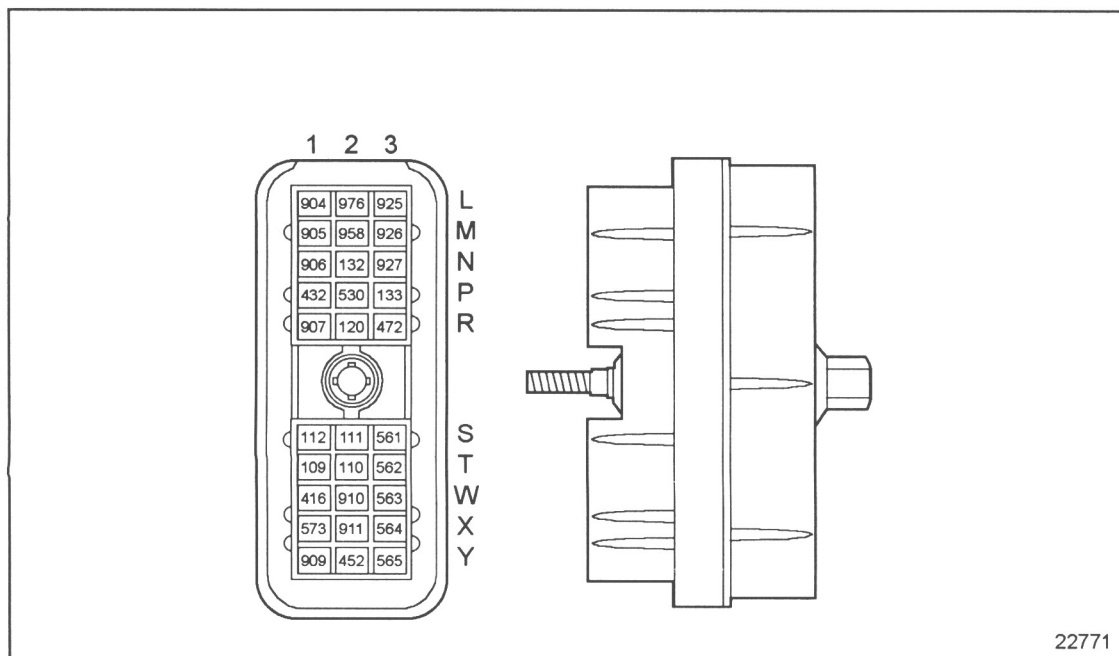


Figure 23-6 ECM Engine Harness Connector

23.3.6 Verify Repairs

Perform the following steps to verify repairs:

1. Turn ignition OFF.
2. Reconnect all connectors.
3. Turn ignition ON.
4. Clear codes with DDR.
5. Start and run the engine for eight minutes.
6. Stop engine.
7. Read codes.
 - [a] If no codes are logged, troubleshooting is complete.
 - [b] If code 174/3 and any other codes are logged, all system diagnostics are complete. Review this section from the first step to find the error. Refer to section 23.3.1.
 - [c] If code 173/4 is not logged, but other codes are logged, refer to section 9.1.

