



CODE 54

FUEL PUMP CIRCUIT (LOW VOLTAGE)

5.7L "Y" SERIES FUEL INJECTION (PORT)

The status of the fuel pump circuit 120 is monitored by the ECM at terminal B2 and is used to compensate fuel delivery based on system voltage. This signal is also used to store a trouble code if the fuel pump relay is defective or fuel pump voltage is lost while the engine is running. There should be about 12 volts on CKT 120 for 2 seconds after the ignition is turned or any time references pulses are being received by the ECM.

Code 54 will set if the voltage at terminal B-2 is less than 2 volts for 1.5 seconds since the last reference pulse was received. This will help in detecting a faulty relay, causing extended crank time and the code will help the diagnosis of an engine that "CRANKS BUT WILL NOT RUN".

If a fault is detected during start-up the "SERVICE ENGINE SOON" light will stay on until the ignition is cycled off. However, if the voltage is detected below 2 volts with the engine running the light will only remain on while the condition exists.

CODE 54**FUEL PUMP CIRCUIT
(LOW VOLTAGE)****5.7L "Y" SERIES
FUEL INJECTION (PORT)**

- IGNITION "OFF" FOR TEN SECONDS.
- IGNITION "ON". LISTEN FOR IN TANK FUEL PUMP.
- PUMP SHOULD RUN FOR 2 SECONDS AFTER IGNITION ON

NOT OK

- IGNITION "OFF".
- REMOVE FUEL PUMP RELAY WITH HARNESS CONNECTED.
- BACK PROBE TERMINAL "A" WITH TEST LIGHT TO GND.
- IGNITION "ON".
- NOTE LIGHT WITHIN 2 SECONDS.

LIGHT "OFF"**LIGHT "ON"**

REPEAT TEST AT REAR BODY CONNECTOR.

LIGHT "OFF"**LIGHT "ON"**

OPEN CKT 120

FAULTY PUMP GND. OR PUMP

- DISCONNECT PUMP RELAY.
- IGNITION "ON" ENGINE STOPPED.
- PROBE HARNESS-CONNECTOR TERMINAL "E" WITH A TEST LIGHT TO GROUND.

LIGHT "ON"**LIGHT "OFF"**

CONNECT A TEST LIGHT BETWEEN HARNESS CONNECTOR TERMINALS "B" AND "E".

REPAIR OPEN CKT 340.

LIGHT "ON"

- CONNECT TEST LIGHT BETWEEN TERMINAL "C" AND GND.
- IGNITION "OFF" FOR 10 SECONDS.
- NOTE TEST LIGHT WITHIN 2 SECONDS AFTER IGN. "ON"

LIGHT "ON"

- FAULTY RELAY.
- IF ORIGINAL SYMPTOM WAS "ENGINE CRANKS BUT WILL NOT RUN" CONTINUE TEST OF OIL PRESSURE SWITCH.
- ENGINE AT NORMAL OPERATING TEMPERATURE.
- OIL PRESSURE NORMAL.
- DISCONNECT FUEL PUMP RELAY. ENGINE SHOULD CONTINUE TO RUN.

OK**NOT OK**

- RECONNECT FUEL PUMP RELAY.
- IGNITION "OFF".
- PROBE FUEL PUMP TEST TERMINAL WITH A TEST LIGHT TO GROUND.

FAULTY OIL PRESSURE SWITCH

LIGHT "OFF"**LIGHT "ON"**

NO TROUBLE FOUND

FAULTY OIL PRESSURE SWITCH

OK

- CLEAR CODES
- START ENGINE AND NOTE "SERVICE ENGINE SOON" LIGHT.

LIGHT "ON"**LIGHT "OFF"**

- GROUND DIAGNOSTIC TERMINAL AND NOTE CODE.

INTERMITTENT CODE. IF NO OTHER CODE STORED, SEE INTERMITTENTS SECTION B

CODE 54**NO CODE 54**

SEE APPLICABLE CHART

- BACK PROBE ECM TERMINAL "B2" WITH A TEST LIGHT TO GROUND.
- IGNITION "OFF" FOR 10 SECONDS
- NOTE LIGHT WITHIN 2 SECONDS AFTER IGNITION "ON".

LIGHT "ON"**LIGHT "OFF"**

FAULTY ECM TERMINAL "B2" OR ECM.

REPAIR OPEN CKT 120 TO ECM TERMINAL "B2".

LIGHT "OFF"

REPAIR OPEN GROUND CKT 450

LIGHT "OFF"

IGNITION "OFF", DISCONNECT ECM A-B CONNECTOR AND CHECK FOR OPEN OR SHORT TO GROUND IN CKT 465.

CKT 465 OK**CKT 465 NOT OK**

CHECK RESISTANCE ACROSS PUMP RELAY PINS OPPOSITE HARNESS CONNECTOR TERMS. "B" AND "C". SHOULD MEASURE 20 OHMS OR MORE.

REPAIR CKT 465. IF CKT WAS SHORTED TO GROUND, RECHECK FOR "LIGHT ON" BETWEEN HARNESS CONN. TERM. "C" AND GROUND WITHIN 2 SECONDS AFTER IGNITION "ON".

OK**NOT OK**

FAULTY A-1 CONN. OR ECM.

REPLACE RELAY AND ECM

LIGHT "OFF"**LIGHT "ON"**

FAULTY ECM TERMINAL "A1" OR ECM.

RECONNECT RELAY

CLEAR CODES AND CONFIRM "CLOSED LOOP" OPERATION AND NO "SERVICE ENGINE SOON" LIGHT.

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