Basic codes by flashing "Check Engine-light" ("MIL")

1 Normal Condition

2 Air Flow Meter signal

MANIFOLD AND/OR AIRFLOW METER SENSOR circuit

- AIRFLOW METER/circuit
- MANIFOLD PRESSURE SENSOR/circuit

3 Ignition signal

- -NO "IGF" SIGNAL to ECM
- -IGNITER/IGNITER CIRCUIT
- -IGNITER AND IGNITION COIL/circuit

4 Engine Coolant Temperature Sensor signal

- OPEN or SHORT IN WATER TEMP. SENSOR
- WATER TEMPERATURE SENSOR circuit
- WATER TEMPERATURE SENSOR

5 Oxygen Sensor OXYGEN SENSOR SIGNAL/OXYGEN SENSOR HEATER Signal

OPEN OR SHORT IN OXYGEN SENSOR OR OXYGEN SENSOR Signal

6 RPM signal (Crank Angle Pulse) RPM Signal

- NO SIGNAL to ECU FROM DISTRIBUTOR ("Ne" or "G") AFTER ENGINE HAS BEEN CRANKED
- DISTRIBUTOR/circuit
- STARTERSIGNAL circuit
- IGNITER/IGNITER circuit

7 Throttle Position Sensor Signal

- OPEN or SHORT Signal
- TPS SENSOR
- TPS Signal/circuit

8 Intake Air Temperature Sensor Signal

- Open or short INTAKE AIR TEMP. SIGNAL
- INTAKE AIR TEMPERATURE circuit
- INTAKE AIR TEMPERATURE SENSOR

9 Vehicle Speed Sensor Signal

- -NO SPD. SIGNAL FOR SEVERLA SECONDS WHILE VEHICLE IS OPERATED UNDER HEAVY LOAD TPS/MAP/AIR FLOW INPUTS)
- SPEED SENSOR/circuit

10 Starter signal

11 Switch signal LOSS OF POWER SUPPLY TO ECM

- -IGNITION SWITCH/circuit
- -MAIN RELAY/circuit

12 Knock Control Sensor signal

STARTER SIGNAL

- NO "STA" SIGNAL TO ECM UNTIL ENGINE SPEED EXCEEDS 800 RPM
- IGNITION SWITCH/circuit
- 12 RPM signal (G22 for -FSE)
 - NO SIGNAL TO ECM FROM DISTRIBUTOR ("Ne" OR "G") AFTER ENGINE HAS BEEN CRANKED
 - DISTRIBUTOR/circuit
 - STARTERSIGNAL circuit
 - -IGNITER/IGNITER circuit

12 Crankshaft position (CKP) sensor - circuit malfunction (3C-TE)

- 13 Knock Control CPU (ECM)
- 13 RPM signal (NE for -FSE)

SAME AS above but after ENGINE has RUN AT 1,000 - 1,500 RPM

- -DISTRIBUTOR/DISTRIBUTOR circuit
- 13 Fuel injection pump position sensor circuit malfunction (3C-TE)
- 14 Turbocharger Pressure
- 14 Ignition signal
 - No "IG" or "IGF" ignition signal to ECM from ignitior several times in succession (IGT1, IGT4, IGF for FSE)
 - NO "IGF" SIGNAL TO ECM
 - IGNITER/IGNITER circuit
 - IGNITER AND IGNITION COIL/circuit
- 14 (2C-TE) Timing control system malfunction
- 15 Ignition System (IGT2, IGT3, IGF for -FSE)
- 15 (1CD-FTV) Throttle motor circuit malfunction
- 15 Throttle control circuit malfunction
- 16 Faulity in transmission/transaxle ECM (Transmission control signal)
- 17 Engine control module (ECM) -malfunction
- 18 Fuel quantity adjuster -malfunction

19 Acceleration Pedal Position (AAP) Sensor/Switch circuit malfunction (VC, VPA, VPA2, E2 - for FSE, 3C-TE)

21 Oxygen Sensor

OXYGEN SENSOR SIGNAL/OXYGEN SENSOR HEATER SIGNAL

- OPEN or SHORT IN OXYGEN SENSOR OR OXYGEN SENSOR SIGNAL и еще десяток причин...
- 22 Engine Coolant Temperature Sensor signal
 - OPEN OR SHORT IN WATER TEMP. SENSOR SIGNAL
 - WATER TEMPERATURE SENSOR circuit
 - WATER TEMPERATURE SENSOR
- 23 Intake Air Temperature Sensor signal
 - OPEN OR SHORT IN INTAKE AIR TEMP. SIGNAL
 - INTAKE AIR TEMPERATURE circuit
 - INTAKE AIR TEMPERATURE SENSOR
- 24 Intake Air Temperature Sensor signal
 - OPEN OR SHORT IN INTAKE AIR TEMP. SIGNAL
 - INTAKE AIR TEMPERATURE circuit
 - INTAKE AIR TEMPERATURE SENSOR
- 25 Air-Fuel Ratio Lean
 - LEAN SIGNAL SENT TO ECU FROM O2 SENSOR
 - INJECTOR FAULT(S)
 - FUEL PRESSURE
 - OXYGEN SENSOR
 - AIRFLOW METER OR MAP SENSOR
 - IGNITION
- 26 Air-Fuel Ratio Rich
 - SAME AS ABOVE
 - COLD START INJECTOR
- 27 Sub Oxygen Sensor signal
 - SUB OXYGEN SENSOR/HEATER circuit
- 28 No. 2 Oxygen Sensor signal

No.2 OXYGEN SENSOR/OXYGEN SENSOR HEATER

- SAME AS CODE 21
- 29 No. 2 Oxygen Sensor signal
- 31 Air Flow Meter signal or Vacuum Sensor signal circuit
 - AIRFLOW METER/CIRCUIT
 - MANIFOLD PRESSURE SENSOR (MAP) circuit
- 32 Air Flow Meter signal (VANE-TYPE)
 - AIRFLOW METER/circuit
- 32 (Diesel) Malfunction Resistance Signal
- 32 (2C-TE) Module coding plug malfunction
- 32 (1CD-FTV) Injector malfunction
- 33 IAC Valve
 - OPEN OR SHORT IN IDLE AIR CONTROL VALVE Signal CIRCUIT or IDLE AIR CONTROL VALVE or ECM
- 33 Intake manifold air control solenoid -malfunction (3C-TE)
- 34 Turbocharger Pressure signal
 - ABNORMAL TURBOCHARGER PRESSURE
 - TURBO CHARGER
 - AIRFLOW METER/MANIFOLD/TURBOCHARGER PRESSURE Signal
 - INTERCOOLER SYSTEM
- 35 Turbocharger Pressure Sensor
 - TURBOCHARGER PRESSURE SENSOR (Gas.)
- 35 Manifold Absolute Pressure Sensor (Diesel, 3C-TE)
- 35 HAC Sensor signal
 - -OPEN CIRCUIT IN HIGH ALTITUDE COMPENSATOR Signal
- 36 *
- 36 Sensor Combustion Pressure (Toyota Part No. 89468-20020)...
- 39 (Avensis) Fuel temperature sensor circuit
- 39 VVT-i Valve (p1656,p1345,p1349, OCV for -FSE)
- 39 Fuel temperature sensor circuit malfunction (3C-TE)
- 41 Throttle Position Sensor signal
 - OPEN OR SHORT IN TPS Signal
 - TPS Sensor
 - TPS Signal/circuit
- 42 Vehicle Speed Sensor signal
 - NO SPD. Signal for SEVERLA SECONDS WHILE VEHICLE IS OPERATED UNDER HEAVY LOAD (TPS/MAP/AIR FLOW INPUTS)
 - SPEED Signal circuit

43 Starter signal

- NO "STA" Signal TO ECU until ENGINE SPEED exceeds 800 RPM
- IGNITION SWITCH/circuit

45 EGR System malfunction

- VSV EGR
- Temperature Sensor

47 Sub-Throttle Position Sensor

- Open or short circuit in Sub-Throttle position sensor signal
- 47 Throttle position (TP) sensor
- 48 Vacuum Switching Circuit of Air Sw. Valve or Air Pump (EAP) Malfunction
- 49 for D-4 System SFP (PR, VC, E2 for -FSE)
- 51 Switch signal

SWITCH Signal IDL (tps) CONTACTS OFF, NEUTRAL START SWITCH OFF, A/C SWITCH "ON" Signal TO ECM WITH DIAGNOSTIC CHECK CONNECTOR SHORTED

- A/C SWITCH/circuit
- A/C AMPLIFIER
- TPS/CIRCUIT
- NEUTRAL START SWITCH/circuit

52 Knock Sensor signal

- OPEN OR SHORT IN KNOCK SENSOR Signal
- KNOCK SENSOR/circuit

53 Knock Control signal in ECM FAULTY or Engine control module (ECM) knock control – defective (P1605)

54 Inter-cooler ECM signal

Intercooler coolant circulation capacity diminished (fail-safe operation: ignition timing program retarded by 2 degr.)

55 Knock Sensor signal

Open or short circuit in knock sensor signal (Chaser TRD with 2JZ-GTE)

56 Cooling Fan Pressure Sw.

58 SCVP, E2, SCV+, SCV (for -FSE)

59 VVT-i Valve - for FSE)

71 EGR System

EGR VALVE MALFUNCTION

- EXHAUST GAS TEMPEATURE BELOW SPEC. FOR EGR CONTROL
- EGR SYSTEM
- EGR GAS TEMPERATURE SENSOR circuit

72 Fuel Cut Solenoid signal

IGF SIGNAL IS DETECTED FOR 4 CONSECUTIVE IGNITIONS

72 A/C System (A/C Relay Open)

78 (Avensis) Fuel circuit - malfunction

78, 79 Fuel Pump Control signal (S+, E1 for FSE) (P1235

- Fuel Pump Control signal, P1200- Fuel Pump Relay/ECU Malfunction ?)
- Open or Short circuit in fuel Pump Control circuit or Fuel Pump Electronic Control Unit (ECU)

79 D-4

81 TCM Communication

Open in ECT1 circuit between ECM & Transmission Control Module (TCM) for at Least 2 seconds

83 TCM Communication

- Open in ESA1 circuit between ECM & Transmission Control Module (TCM) for 1/2 second after engine idles at least 1/2 second

84 TCM Communication

 Open in ESA2 circuit between ECM & Transmission Control Module (TCM) for 1/2 second after engine idles at least 1/2 second

85 TCM Communication

 Open in ESA3 circuit between ECM & Transmission Control Module (TCM) for 1/2 second after engine idles at least 1/2 second

89 (P1125, 1126, 1127, 1128) read a pulse ETCS-SNOW (Chaser TRD with 2JZ-GTE)

92 D-4 (p1210)

96 (p1600) Engine control module (ECM) -supply

97 D-4 (p1215) EDU Malfunction

97 (Avensis) Injector control module – circuit malfunction

98 D-4

99 (B2799) there is a trouble with immobilizer (for the OBDII -equiped Vechicle)

^{*} for Lexus a 90-94. Abbrevations (Toyota and Lexus a 1990-2000), CPS - Crank Position Sensor...