

4RUNNER – FJ CRUISER – HIGHLANDER – RAV4 – T100 PICKUP – TACOMA – TUNDRA PICKUP (1995 – 2009)

Model	Year	Engine identification	System
4Runner 3.4L	1996-02	5VZ·FE	SFI
4Runner 4.0L	2003-05	1GR·FE	SFI
FJ Cruiser 4.0L	2007·09	1GR·FE	SFI
Highlander 2.4L	2001·03	2AZ·FE	SFI
Highlander 3.0/3.3L	2001-06	1 MZ·FE/3MZ·FE	SFI
RAV4 2.0/2.4L	2002-09	1AZ·FE/2AR·FE/2AZ·FE	SFI
RAV4 3.5L	2006-09	2GR·FE	SFI
T100 Pickup 3.4L	1995-98	5VZ·FE	SFI
Tacoma 3.4/4.0L	1995-09	1 GR·FE/5VZ·FE	SFI
Tundra Pickup 3.4/4.0L	2000-09	1 GR·FE/5VZ·FE	SFI

General information

- Engine control module (ECM) incorporates self-diagnosis function.
- Malfunction indicator lamp (MIL) will illuminate if certain faults are recorded.
- ECM operates in backup mode if sensors fail, to enable vehicle to be driven to workshop.

Accessing

- Trouble codes can be displayed by using a Scan Tool connected to the data link connector (DLC) 1.

Erasing

- After the faults have been rectified, trouble codes can be erased by using a Scan Tool connected to the data link connector (DLC) or as follows:
- Ensure ignition switched OFF.
- Disconnect battery ground cable for 60 seconds minimum.
- Reconnect battery ground cable.
- Repeat checking procedure to ensure no data remains in ECM fault memory.

NOTE: Disconnecting battery ground lead will erase trouble codes but may also erase memory from electronic units such as radio.

Trouble code identification

OBD-II code	Fault location	Probable cause
P0, P2,UO	Refer to OBD-11 trouble code tables	–
P101D	Heated oxygen sensor (H02S) 1, bank 1 – heater circuit malfunction – stuck on	ECM
P102D	Heated oxygen sensor (H02S) 2, bank 1 – heater circuit malfunction – stuck on	ECM
P1100	Barometric pressure (BARO) sensor – circuit malfunction	Wiring, BARO sensor, ECM
P1120	Accelerator pedal position (APP) sensor – circuit malfunction	Wiring, APP sensor, ECM
P1121	Accelerator pedal position (APP) sensor – range/performance problem	APP sensor, ECM
P1125	Throttle actuator control (TAC) motor-circuit malfunction	Wiring, TAC motor, ECM
P1126	Throttle actuator control (TAC) clutch – circuit malfunction	Wiring, magnetic clutch, ECM

P1127	Throttle actuator control (TAC) power source – circuit malfunction	Wiring, ECM
P1128	Throttle actuator control (TAC) lock – malfunction	TAC motor, throttle body, ECM
P1129	Throttle actuator control (TAC) system – malfunction	TAC system, ECM
P1130	Heated oxygen sensor (H02S) – LH front – range/performance malfunction	Wiring, H02S, air induction system, fuel pressure, injector(s), ECM
P1133	Heated oxygen sensor (H02S) – LH front – response malfunction	Wiring, H02S, air induction system, fuel pressure, injector(s), ECM
P1135	Heated oxygen sensor (H02S) – LH front – heater circuit malfunction	Wiring, H02S, air induction system, fuel pressure, injector(s), ECM
P1150	Heated oxygen sensor (H02S)- RH front- performance malfunction	Wiring, H02S, ECM
P1153	Heated oxygen sensor (H02S) – RH front – response malfunction	H02S
P1155	Heated oxygen sensor (H02S) – RH front- heater circuit malfunction	Wiring, H02S, ECM
P1300	Ignition control – circuit malfunction – T100/4Runner/4Runner/Tacoma/Tundra	Wiring, ignition module, ECM
P1300	Ignition control – cylinder No.1 – circuit malfunction	Wiring, ignition coil/module, ECM
P1305	Ignition control – cylinder No.2 – circuit malfunction	Wiring, ignition coil/module, ECM

P1310	Ignition control – cylinder No.3 – circuit malfunction	Wiring, ignition coil/module, ECM
P1315	Ignition control – cylinder No.4 – circuit malfunction	Wiring, ignition coil/module, ECM
P1320	Ignition control – cylinder No.5 – circuit malfunction	Wiring, ignition coil/module, ECM
P1325	Ignition control – cylinder No.6 – circuit malfunction	Wiring, ignition coil/module, ECM
P1330	Ignition control- cylinder No.7- circuit malfunction	Wiring, ignition coil/module, ECM
P1335	Crankshaft position (CKP) sensor – no signal	Wiring, CKP sensor, starter motor, ECM
P1340	Camshaft position (CMP) sensor 2, bank 1 – circuit malfunction	Wiring, CMP, mechanical fault, ECM
P1345	Variable valve timing sensor – LH bank – circuit malfunction	Wiring, valve timing sensor, ECM
P1346	Variable, valve timing sensor- LH bank – range/performance problem	Valve timing, ECM
P1349	Variable valve timing system – LH bank – malfunction	Valve timing, oil control valve, valve timing control module, ECM
P1350	Variable valve timing sensor – RH bank – circuit malfunction	Wiring, valve timing sensor, ECM
P1351	Variable valve timing sensor – RH bank – range/performance problem	Valve timing, ECM
P1354	Variable valve timing system – RH bank – malfunction	Valve timing, oil control valve, valve timing control module, ECM

P1400	Throttle position (TP) sensor 2 – circuit malfunction	Wiring, TP sensor, ECM
P1401	Throttle position (TP) sensor 2 – range/performance problem	TP sensor
P1410	Exhaust gas recirculation (EGR) valve position sensor – malfunction	Wiring, EGR valve position sensor, ECM
P1411	Exhaust gas recirculation (EGR) valve position sensor – range/performance problem	EGR valve position sensor
P1440	Secondary air injection (AIR) switching valve, bank 1 – circuit malfunction	Wiring, AIR, ECM
P1441	Secondary air injection (AIR) switching valve, valve stuck open, bank 1 – circuit malfunction	Wiring, AIR, ECM
P1442	Secondary air injection (AIR) switching valve, valve stuck closed, bank 1 – circuit malfunction	Wiring, AIR, vacuum hose, ECM
P1443	Secondary air injection (AIR) switching valve, bank 2 – circuit malfunction	Wiring, AIR, ECM
P1444	Secondary air injection (AIR) switching valve, valve stuck open, bank 2 – circuit malfunction	Wiring, AIR, ECM
P1445	Secondary air injection (AIR) switching valve, valve stuck closed, bank 2- circuit malfunction	Wiring, AIR, vacuum hose, ECM
P1500 0	Voltage transformer – circuit malfunction	Wiring, voltage transformer, ECM
P1500 H	Starter signal – circuit malfunction	Wiring, ignition switch, engine control relay, ECM

P1520	Stop lamp switch – signal malfunction	Wiring, stop lamp switch, ECM
P1550	Electrical load sensor – circuit malfunction	Wiring, electrical load sensor, ECM
P1551	Electrical load sensor, circuit low – circuit malfunction	Wiring, electrical load sensor, ECM
P1552	Electrical load sensor, circuit high – circuit malfunction	Wiring, electrical load sensor, ECM
P1566	Cruise control switch – circuit malfunction	Wiring, cruise control switch, ECM
P1569	Brake system – malfunction	ABS system, ABS control module
P1570	Cruise control laser radar sensor – malfunction	Cruise control laser radar sensor, cruise control module, ECM
P1572	Cruise control laser radar sensor – improper aiming of beam axis	Cruise control laser radar sensor alignment, cruise control laser radar sensor
P1575	Cruise control/skid control warning buzzer – malfunction	Wiring, warning buzzer, ABS control module
P1578	Brake system – malfunction	ABS system, ABS control module
P1600	Engine control module (ECM) -supply voltage	Wiring, ECM
P1602	Battery voltage monitor – malfunction	Wiring, battery, ECM
P1605	Knock control – malfunction	ECM
P1607	Cruise control input processor – malfunction	Wiring, ECM

P1613	Secondary air injection (AIR) – malfunction	Wiring, AIR, ECM
P1614	Secondary air injection (AIR), bank 2 – malfunction	Wiring, AIR, ECM
P1615	CAN data bus, cruise control module – communication error	Wiring, cruise control module, ECM
P1616	CAN data bus, cruise control module – communication error	Wiring, ECM, cruise control module
P1630	Traction control system – communication malfunction	Wiring, throttle control module, ECM
P1631	Traction control system – communication malfunction	Wiring, throttle control module, ECM
P1633	Throttle actuator control (TAC) system- malfunction	ECM
P1645	Body control module – malfunction	Body control module, A/C control module, wiring
P1647	Transmission control module (TCM) – system malfunction	Trouble code(s) stored
P1656	Oil control valve/variable valve timing – LH bank – malfunction	Wiring, oil control valve, ECM
P1663	Oil control valve/variable valve timing – RH bank – malfunction	Wiring, oil control valve, ECM
P1664	Traction control system – malfunction	Wiring, throttle control module, ECM
P1665	Traction control system – malfunction	Wiring, throttle control module, ECM

