

# AVALON – CAMRY/SOLARA – ECHO – SIENNA (1994 – 2009)

| Model                           | Year    | Engine identification | System |
|---------------------------------|---------|-----------------------|--------|
| Avalon 3.0/3.5                  | 1995-09 | 1 MZ-FE/2GR-FE        | SFI    |
| Camry/Camry Solara 2.4L         | 2002-07 | 2AZ-FE                | SFI    |
| Camry/Camry Solara 3.0/3.3/3.5L | 1994-09 | 1 MZ-FE/3MZ-FE/2GR-FE | SFI    |
| Echo 1.5L                       | 2000-05 | 1 NZ-FE               | SFI    |
| Sienna 3.0/3.3L                 | 1998-06 | 1 MZ-FE/3ZM-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-11 code | Fault location | Probable cause |
|-------------|----------------|----------------|
|             |                |                |

|               |                                                                     |                                                                     |
|---------------|---------------------------------------------------------------------|---------------------------------------------------------------------|
| PO, P2,<br>UO | Refer to OBD-11 trouble code tables                                 | –                                                                   |
| 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                                                   |

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|-------|---------------------------------------------------------------------|----------------------------------------|
| 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 – Sienna - +2000/Solara 3.0L | 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      |
| P1335 | Crankshaft position (CKP) sensor – no signal                        | Wiring, CKP sensor, starter motor, 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                      |

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|-------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 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                                         |
| P1500 | 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                                             |
| P157Q | 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                                                                    |
| 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 – malfunction                            | Wiring, throttle control module, ECM                                           |
| P1631 | Controller area network (CAN) data bus-communication malfunction | Wiring, ASS/traction control module, ECM                                       |
| P1633 | Throttle actuator control (TAC) system – malfunction             | ECM                                                                            |

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|-------|--------------------------------------------------------------------------------------|----------------------------------------------|
| P1645 | Body control module (BCM) – malfunction                                              | BCM, 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               |
| P1690 | Oil control valve/variable valve timing – malfunction                                | Wiring, oil control valve, ECM               |
| P1692 | Variable valve timing – malfunction                                                  | Wiring, valve timing sensor, ECM             |
| P1693 | Variable valve timing – malfunction                                                  | Wiring, valve timing sensor, ECM             |
| P1700 | Output shaft speed (OSS) sensor                                                      | Wiring, OSS sensor, ECM                      |
| P1705 | AT – direct clutch speed sensor                                                      | Wiring, direct clutch speed sensor, ECM      |
| P1715 | Rear wheel speed sensor(s)- malfunction                                              | Wiring, rear wheel speed sensor(s), ECM      |
| P1725 | Input shaft speed (ISS) sensor/turbine shaft speed (TSS) sensor- circuit malfunction | Wiring, ISS sensor, TSS sensor, ECM          |
| P1730 | Intermediate shaft speed sensor- AT                                                  | Wiring, intermediate shaft speed sensor, ECM |
| P1755 | Torque converter clutch (TCC) solenoid – circuit malfunction                         | Wiring, torque converter, TCC solenoid, ECM  |
| P1760 | AT – pressure control shift solenoid                                                 | Wiring, shift solenoid, ECM                  |

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|-------|----------------------------------------------------------------------------------------|-----------------------------------------|
| P1765 | AT – pressure control shift solenoid                                                   | Wiring, shift solenoid, ECM             |
| P1770 | Differential lock solenoid – circuit malfunction                                       | Wiring, differential lock solenoid, ECM |
| P1780 | Park/neutral position (PNP) switch/transmission range (TR) sensor- circuit malfunction | Wiring, PNP switchfTR sensor, ECM       |
| P1781 | Shift lever switch – malfunction                                                       | Wiring, shift lever switch, ECM         |
| P1790 | Shift/timing solenoid                                                                  | Wiring, shift/timing solenoid, ECM      |
| P1810 | CAN data bus malfunction – malfunction                                                 | Wiring                                  |
| P1815 | Shift control solenoid – malfunction                                                   | Wiring, shift control solenoid, ECM     |
| P1818 | Shift control solenoid – circuit malfunction                                           | Wiring, shift control solenoid, ECM     |
| 82785 | Ignition switch ON – malfunction                                                       | Immobilizer system                      |
| 82786 | Ignition switch OFF – malfunction                                                      | Immobilizer system                      |
| 82795 | Unrecognized key code                                                                  | Immobilizer system                      |
| 82796 | Immobilizer system – no communication                                                  | Immobilizer system                      |
| 82797 | Communication – malfunction 1                                                          | Immobilizer system                      |
| 82798 | Communication – malfunction 2                                                          | Immobilizer system                      |
| 82799 | Immobilizer- malfunction                                                               | Wiring, immobilizer system, ECM         |