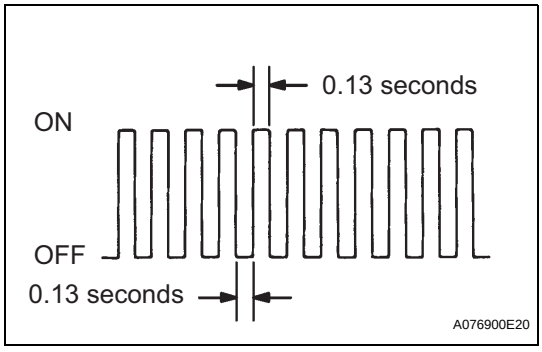
CHECK MODE PROCEDURE

HINT:
Intelligent tester only:
Compared to normal mode, check mode is more sensitive to malfunctions. Therefore, check mode can detect the malfunctions that cannot be detected by normal mode.
NOTICE:
All the stored DTCs and freeze frame data are erased if: 1) the ECM is changed from normal mode to check mode or vice versa; or 2) the ignition switch is turned off or turned to the ACC position from the ON position while in check mode.
Before changing modes, always check and make a note of any DTCs and freeze frame data.

1. CHECK MODE PROCEDURE (Using an intelligent tester)

(a) Check and ensure the following conditions:
(1) Battery voltage 12 V or more
(2) Throttle valve fully closed
(3) The shift lever in the P or N position
(4) A/C switched OFF
(b) Turn the ignition switch off.
(c) Connect an intelligent tester to the DLC3.
(d) Turn the ignition switch to the ON position.
(e) Turn the tester ON.
(f) Select the following menu items: DIAGNOSIS / ENHANCED OBD II / CHECK MODE.
(g) Switch the ECM from normal mode to check mode.
(h) Make sure that the MIL flashes as shown in the illustration.
(i) Start the engine.
(j) Make sure that the MIL goes off.
(k) Simulate the conditions of the malfunction described by the customer.
(l) Check for DTCs and freeze frame data using the tester.



FAIL-SAFE CHART

If any of the following DTCs are set, the ECM enters fail-safe mode to allow the vehicle to be driven temporarily.

DTCs	Components	Fail-Safe Operations	Fail-Safe Deactivation Conditions
P0031, P0032, P0051 and P0052	Air-Fuel Ratio (A/F) Sensor Heater	ECM turns off A/F sensor heater	Ignition switch off
P0037, P0038, P0057 and P0058	Heated Oxygen (HO2) Sensor Heater	ECM turns off HO2 sensor heater	Ignition switch off
P0100, P0102 and P0103	Mass Air Flow (MAF) Meter	ECM calculates ignition timing according to engine speed and throttle valve position	Pass condition detected
P0110, P0112 and P0113	Intake Air Temperature (IAT) Sensor	ECM estimates IAT to be 20°C (68°F)	Pass condition detected
P0115, P0117 and P0118	Engine Coolant Temperature (ECT) Sensor	ECM estimates ECT to be 80°C (176°F)	Pass condition detected
P0120, P0121, P0122, P0123, P0220, P0222, P0223, P0604, P0606, P0607, P0657, P2102, P2103, P2111, P2112, P2118, P2119 and P2135	Electronic Throttle Control System (ETCS)	ECM cuts off throttle actuator current and throttle valve returned to 6.5° throttle position by return spring ECM then adjusts engine output by controlling fuel injection (intermittent fuel-cut) and ignition timing in accordance with accelerator pedal opening angle, to allow vehicle to continue at minimal speed*1	Pass condition detected and then ignition switch turned off
P0300, P0301, P0302, P0303, P0304, P0305 and P0306*2	• Fuel injector • Electronic Throttle Control System (ETCS)	When misfire occurs, fuel cut is performed for catalyst overheat malfunction prevention • During normal load and normal engine speed (MIL is blinking) - Fuel cut is performed on malfunctioning cylinder • During high load and high engine speed (MIL is blinking) - Throttle valve opening angle control is performed - All cylinder fuel cut or malfunction cylinder fuel cut	Pass condition detected and then ignition switch turned OFF
P0327, P0328, P0332 and P0333	Knock Sensor	ECM sets ignition timing to maximum retard	Ignition switch off
P0351 to P0356	Igniter	ECM cuts fuel	Pass condition detected
P2120, P2121, P2122, P2123, P2125, P2127, P2128 and P2138	Accelerator Pedal Position (APP) Sensor	APP sensor has 2 sensor circuits: Main and Sub If either of circuits malfunctions, ECM controls engine using the other circuit If both of circuits malfunction, ECM regards accelerator pedal as being released. As a result, throttle valve is closed and engine idles	Pass condition detected and then ignition switch turned off

HINT:

- *1: The vehicle can be driven slowly when the accelerator pedal is depressed firmly and slowly. If the accelerator pedal is depressed quickly, the vehicle may speed up and slow down erratically.
- *2: Misfire related fail-safe operations occur when catalyst overheat malfunctions occur.

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