TOYOTA SERVICE BULLETIN

Group: 04 No.: 10 Date: Jun, 13

Landcruiser VDJ200

Corrections to Repair Manual RM19U2E

Please ensure these pages are distributed to all relevant staff for their information; and a copy made available for future reference, with the above repair manual.

Section	Title	Paragraph
1VD-FTV ENGINE CONTROL	ECD SYSTEM (w/o DPF)	DIAGNOSTIC TROUBLE CODE CHART (2011/09 - 2012/01)
		DIAGNOSTIC TROUBLE CODE CHART (2012/01 -)
		P0069 (2011/09 - 2012/01)
		P0069 (2012/01 -)

The revised pages listed above are attached.
(The corrected parts are indicated by arrows.)

This Bulletin does not cause the Flat Rate Manual to be changed.

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8. Monitor the engine speed (Engine Speed of Cyl #1 to #8, Av Engine Speed of All Cyl) displayed on the tester.
   HINT:
   At first, the tester's display will show the engine speed measurement of each cylinder to be extremely high. After approximately 10 seconds of engine cranking, the engine speed measurement of each cylinder will change to the actual engine speed.
   NOTICE:
   - **After the Active Test Check the Cylinder Compression is turned on, it will automatically turn off after 255 seconds.**
   - **When the Check the Cylinder Compression test is off and the engine is cranked, the engine will start.**
   - **If the Check the Cylinder Compression test needs to be performed after it is turned on and performed once, press EXIT to return to the Active Test menu screen. Then perform the Check the Cylinder Compression test again.**
   - **Use a fully-charged battery.**

ES

DIAGNOSTIC TROUBLE CODE CHART

(2011/09-2012/01)
HINT:
Parameters listed in the chart may be different than your readings depending on the type of instrument and other factors.
If any DTCs are output during a check mode DTC check, check the circuit for the DTCs listed in the table below. For details of each DTC, refer to the page indicated.

ECD system

DTC Code	Detection Item	MIL	Memory	See page
P0046	Turbocharger / Supercharger Boost Control Solenoid Circuit Range / Performance	Comes on	DTC stored	ES-140
P0047	Turbocharger/ Supercharger Boost Control "A" Circuit Low	Comes on	DTC stored	ES-140
P0048	Turbocharger/ Supercharger Boost Control "A" Circuit High	Comes on	DTC stored	ES-140
P004B	Turbocharger/ Supercharger Boost Control Solenoid "B" Circuit Range/ Performance	Comes on	DTC stored	ES-140
P004C	Turbocharger/ Supercharger Boost Control Solenoid "B" Circuit Low	Comes on	DTC stored	ES-140
P004D	Turbocharger/ Supercharger Boost Control Solenoid "B" Circuit High	Comes on	DTC stored	ES-140
P0069 [Corrected]	Manifold Absolute Pressure - Barometric Pressure Correlation	Comes on	DTC stored	ES-206

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DTC Code	Detection Item	MIL	Memory	See page
P0069 [Corrected]	Manifold Absolute Pressure - Barometric Pressure Correlation	Comes on	DTC stored	ES-208
P0087	Fuel Rail / System Pressure - Too Low	Comes on	DTC stored	ES-163
P0088	Fuel Rail / System Pressure - Too High	Comes on	DTC stored	ES-175
P0093	Fuel System Leak Detected - Large Leak	Comes on	DTC stored	ES-186
P00AF	Turbocharger/ Supercharger Boost Control "A" Module Performance	Comes on	DTC stored	ES-199
P00B0	Turbocharger/ Supercharger Boost Control "B" Module Performance	Comes on	DTC stored	ES-199
P0100	Mass or Volume Air Flow Circuit	Comes on	DTC stored	ES-219
P0101	Mass or Volume Air Flow Circuit Range / Performance Problem	Comes on	DTC stored	ES-231
P0102	Mass or Volume Air Flow Circuit Low Input	Comes on	DTC stored	ES-219
P0103	Mass or Volume Air Flow Circuit High Input	Comes on	DTC stored	ES-219
P0105	Manifold Absolute Pressure / Barometric Pressure Circuit	Comes on	DTC stored	ES-240
P0106	Manifold Absolute Pressure / Barometric Pressure Circuit Range / Performance Problem	Comes on	DTC stored	ES-248
P0107	Manifold Absolute Pressure / Barometric Pressure Circuit Low Input	Comes on	DTC stored	ES-240
P0108	Manifold Absolute Pressure / Barometric Pressure Circuit High Input	Comes on	DTC stored	ES-240
P0110	Intake Air Temperature Circuit	Comes on	DTC stored	ES-258
P0112	Intake Air Temperature Circuit Low Input	Comes on	DTC stored	ES-258
P0113	Intake Air Temperature Circuit High Input	Comes on	DTC stored	ES-258
P0115	Engine Coolant Temperature Circuit	Comes on	DTC stored	ES-273
P0116	Engine Coolant Temperature Circuit Range / Performance Problem	Comes on	DTC stored	ES-283
P0117	Engine Coolant Temperature Circuit Low Input	Comes on	DTC stored	ES-273
P0118	Engine Coolant Temperature Circuit High Input	Comes on	DTC stored	ES-273
P0122	Throttle / Pedal Position Sensor / Switch "A" Circuit Low Input	Comes on	DTC stored	ES-293

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DTC	P0069	Manifold Absolute Pressure - Barometric Pressure Correlation (2011/09-2012/01)

DESCRIPTION

To detect atmospheric pressure, the atmospheric pressure sensor built into the ECM is used in the common rail system. Following the changes in the atmospheric pressure, the ECM corrects the fuel injection volume, timing and duration, and adjusts the common rail internal fuel pressure to optimize combustion. [Corrected]

P0069

DTC Detection Drive Pattern	DTC Detection Condition	Trouble Area
1 second elapses after ignition switch turned from off to ON (starter remains off)	After the ignition switch is turned to ON, the difference between the atmospheric pressure sensor output and manifold absolute pressure sensor output exceeds the range of +/-8 kPa for 0.5 seconds.	• Manifold absolute pressure sensor • ECM

[Corrected]

ES

Related Data List

DTC No.	Data List
P0069	• Atmosphere Pressure • MAP

HINT:

- Turn the ignition switch to ON and check the Atmosphere Pressure and MAP items in the Data List. If the atmospheric pressure displayed on the tester differs greatly from the actual atmospheric pressure (standard: 101 kPa), the sensor (atmospheric pressure sensor or manifold absolute pressure sensor) is malfunctioning.
- If DTC P0069 is stored, the following symptoms may appear:
  - Misfire
  - Combustion noise
  - Black smoke
  - White smoke
  - Lack of power

INSPECTION PROCEDURE

NOTICE:

After replacing the ECM, the new ECM needs registration (See page ES-34) and initialization (See page ES-60).

HINT:

Read freeze frame data using the intelligent tester. Freeze frame data records the engine condition when malfunctions are detected. When troubleshooting, freeze frame data can help determine if the vehicle was moving or stationary, if the engine was warmed up or not, and other data from the time the malfunction occurred.

1	CHECK OTHER DTC OUTPUT (IN ADDITION TO DTC P0069)

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch to ON and turn the tester on.
(c) Enter the following menus: Powertrain / Engine / DTC.
(d) Read the DTCs.

Result

Result	Proceed to
P0069 is output	A
P0069 and other DTCs are output	B

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HINT:
If codes other than P0069 are output, perform troubleshooting for those DTCs first.

[Corrected]

B → **GO TO DTC CHART (See page ES-131)**

A

2	**INSPECT MANIFOLD ABSOLUTE PRESSURE SENSOR**

HINT:
Before inspecting the manifold absolute pressure sensor, perform a wire harness inspection and if there are any problems with the wire harness, repair or replace it.

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch to ON.
(c) Turn the intelligent tester on.
(d) Enter the following menus: Powertrain / Engine / Data List / MAP.
(e) Read the value.
OK:
Same value as the actual atmospheric pressure.

NG → **REPLACE MANIFOLD ABSOLUTE PRESSURE SENSOR (See page)**

OK → See 1VD-FTV ENGINE CONTROL - MANIFOLD ABSOLUTE PRESSURE SENSOR - REMOVAL

3	**CONFIRM WHETHER MALFUNCTION HAS BEEN SUCCESSFULLY REPAIRED**

(a) Connect the intelligent tester to the DLC3.
(b) Clear the DTC (See page See*1).
(c) Turn the ignition switch off.
(d) Turn the ignition switch to ON for 1 second.
(e) Enter the following menus: Powertrain / Engine / DTC.
(f) Read the DTCs.

Result

Result	Proceed to
P0069 is output	A
No DTC is output	B

B → **END**

A

REPLACE ECM (See page)

See 1VD-FTV ENGINE CONTROL - ECM - REMOVAL (2011/09 - 2012/01)

See*1: 1VD-FTV ENGINE CONTROL - ECD SYSTEM (w/o DPF) - DTC CHECK / CLEAR (2011/09 - 2012/01)

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To detect atmospheric pressure, the atmospheric pressure sensor built into the ECM is used in the common rail system. Following the changes in the atmospheric pressure, the ECM corrects the fuel injection volume, timing and duration, and adjusts the common rail internal fuel pressure to optimize combustion. [Corrected]

P0069

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[Corrected]

ES

Related Data List

DTC No.	Data List
P0069	• Atmosphere Pressure • MAP

HINT:

- Turn the ignition switch to ON and check the Atmosphere Pressure and MAP items in the Data List. If the atmospheric pressure displayed on the tester differs greatly from the actual atmospheric pressure (standard: 101 kPa), the sensor (atmospheric pressure sensor or manifold absolute pressure sensor) is malfunctioning.
- If DTC P0069 is stored, the following symptoms may appear:
  - Misfire
  - Combustion noise
  - Black smoke
  - White smoke
  - Lack of power

INSPECTION PROCEDURE

NOTICE:

After replacing the ECM, the new ECM needs registration (See page ES-47) and initialization (See page ES-60).

HINT:

Read freeze frame data using the intelligent tester. Freeze frame data records the engine condition when malfunctions are detected. When troubleshooting, freeze frame data can help determine if the vehicle was moving or stationary, if the engine was warmed up or not, and other data from the time the malfunction occurred.

1	CHECK OTHER DTC OUTPUT (IN ADDITION TO DTC P0069)

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch to ON and turn the tester on.
(c) Enter the following menus: Powertrain / Engine / DTC.
(d) Read the DTCs.

Result

Result	Proceed to
P0069 is output	A
P0069 and other DTCs are output	B

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HINT:
If codes other than P0069 are output, perform troubleshooting for those DTCs first.

B → GO TO DTC CHART (See page ES-135)

[Corrected]

A

2	INSPECT MANIFOLD ABSOLUTE PRESSURE SENSOR

HINT:
Before inspecting the manifold absolute pressure sensor, perform a wire harness inspection and if there are any problems with the wire harness, repair or replace it.

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch to ON.
(c) Turn the intelligent tester on.
(d) Enter the following menus: Powertrain / Engine / Data List / MAP.
(e) Read the value.
OK:
Same value as the actual atmospheric pressure.

NG → **REPLACE MANIFOLD ABSOLUTE PRESSURE SENSOR (See page)**

OK → See 1VD-FTV ENGINE CONTROL - MANIFOLD ABSOLUTE PRESSURE SENSOR - REMOVAL

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(e) Enter the following menus: Powertrain / Engine / DTC.
(f) Read the DTCs.

Result

Result	Proceed to
P0069 is output	A
No DTC is output	B

B → **END**

A → **REPLACE ECM (See page)**

See 1VD-FTV ENGINE CONTROL - ECM - REMOVAL (2012/01 -)

See*1: 1VD-FTV ENGINE CONTROL - ECD SYSTEM (w/o DPF) - DTC CHECK / CLEAR (2012/01 -)

ES

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