

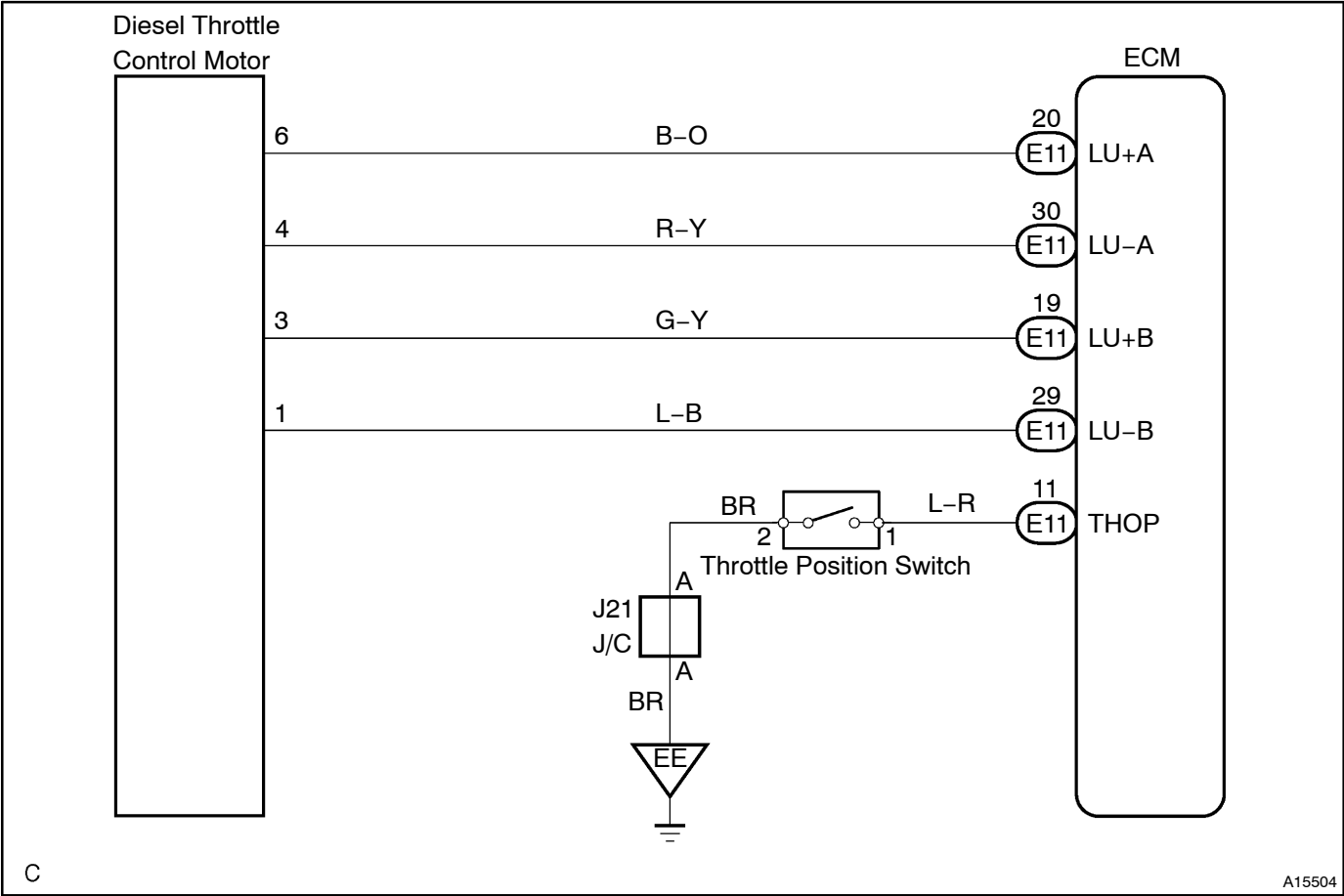
DTC	15	THROTTLE CONTROL MOTOR CIRCUIT MALFUNCTION
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CIRCUIT DESCRIPTION

Throttle control motor is operated by the ECM and it opens and closes the throttle valve. The fully opening of the throttle valve is detected by the throttle fully open position switch which is mounted on the throttle body. If this DTC is stored, the ECM shuts down the power for the throttle control motor.

DTC No.	DTC Detection Condition	Trouble Area
15	Open or short in throttle control motor circuit	<ul style="list-style-type: none">• Open or short in throttle control motor circuit• Throttle control motor• Throttle valve• Throttle drive gear• Diesel throttle body• ECM
	Open or short in throttle full switch circuit	

WIRING DIAGRAM



C

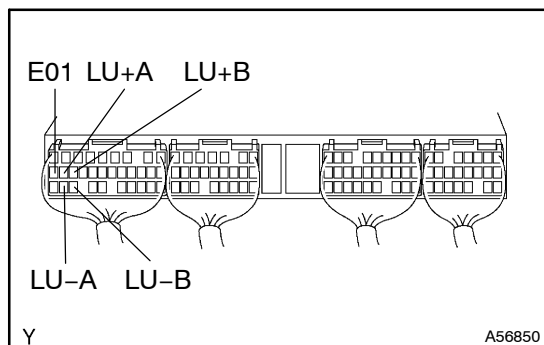
A15504

INSPECTION PROCEDURE

HINT:

Read freeze frame data using hand-held tester, as freeze frame records the engine conditions when a malfunction is detected. When troubleshooting, it is useful for determining whether the vehicle was running or stopped, the engine was warmed up or not, etc. at the time of the malfunction.

1 INSPECT ECM(THROTTLE CONTROL MOTOR CIRCUIT)

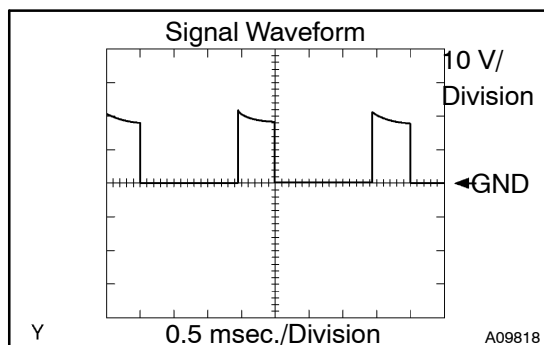


(a) Check the output waveform.

Item	Contents
Terminal	LU+A, LU-A, LU+B, LU-B ↔ E01
Equipment set	10 V/DIV, 0.5 ms/DIV
Condition	During engine racing

HINT:

The correct waveforms are as shown.

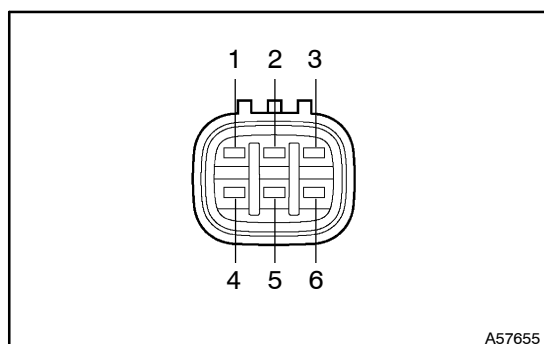


OK

CHECK AND REPLACE ECM

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2 INSPECT INTAKE SHUTTER ASSY (CHECK RESISTANCE OF THROTTLE CONTROL MOTOR)



- Disconnect the throttle control motor connector.
- Measure the resistance between terminals 1, 3 and 2 of the throttle control motor.

Resistance:

18 – 22 Ω at 20°C (68°F)

- Measure the resistance between terminals 4, 6 and 5 of the throttle control motor.

Resistance:

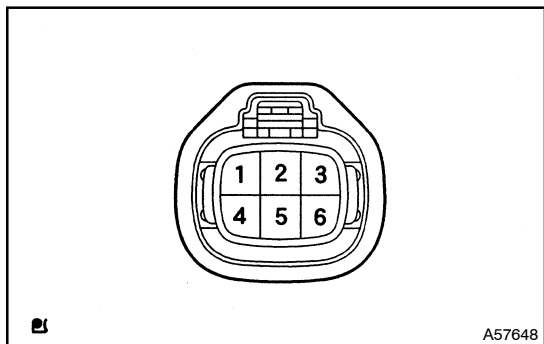
18 – 22 Ω at 20°C (68°F)

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REPLACE INTAKE SHUTTER ASSY

OK

3 CHECK HARNESS AND CONNECTOR(THROTTLE CONTROL MOTOR-ECM)



- (a) Disconnect the throttle control motor connector.
- (b) Disconnect the ECM E11 connector.
- (c) Check for open between the terminals 6 of the throttle control motor harness side connector and LU+A of the ECM E11 connector.

Resistance: 1 Ω or less

- (d) Check for open between the terminals 4 of the throttle control motor harness side connector and LU-A of the ECM E11 connector.

Resistance: 1 Ω or less

- (e) Check for open between the terminals 3 of the throttle control motor harness side connector and LU+B of the ECM E11 connector.

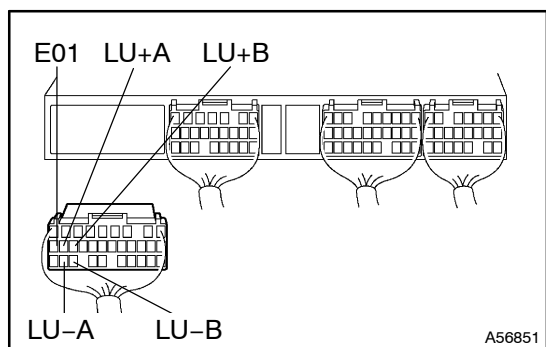
Resistance: 1 Ω or less

- (f) Check for open between the terminals 1 of the throttle control motor harness side connector and LU-B of the ECM E11 connector.

Resistance: 1 Ω or less

- (g) Check for short between the terminals LU+A, LU-A, LU+B, LU-B and E01 of the ECM E11 connector.

Resistance: 1 M Ω or more



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**REPAIR OR REPLACE
HARNESS AND CONNECTOR**

OK

CHECK AND REPLACE ECM