

DTC

B2797

Communication Malfunction No. 1

DESCRIPTION

This DTC is output when a communication error occurs between the transponder key amplifier and transponder key ECU. Some possible reasons for the communication error are: 1) 2 or more ignition keys are positioned too close together, or 2) noise is occurring in the communication line.

DTC No.	DTC Detection Condition	Trouble Area
B2797	Keys are positioned too close to each other, or noise occurred in communication line	<ul style="list-style-type: none">• Key• Wire harness• Transponder key amplifier• Transponder key ECU

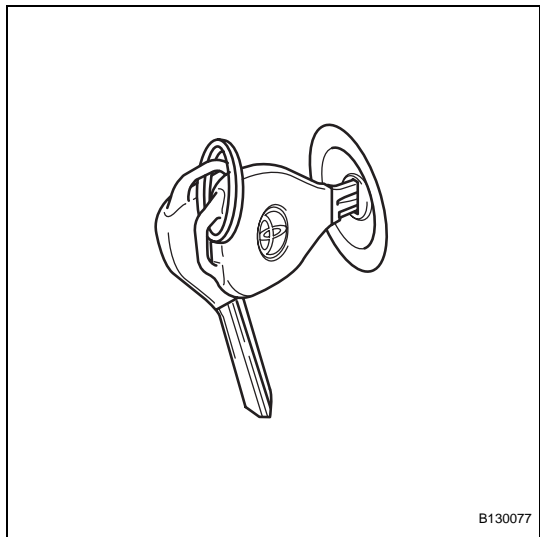
WIRING DIAGRAM



INSPECTION PROCEDURE

1

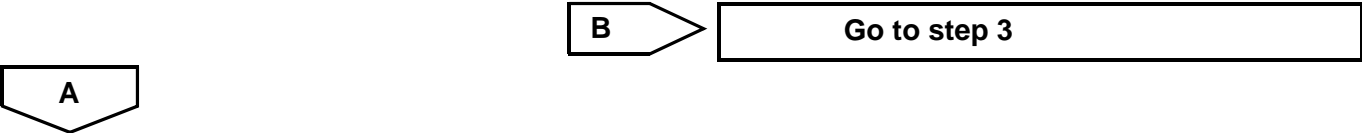
CHECK KEY



- (a) Check if the ignition key being used is near other ignition keys. Also, check if the key ring is in contact with the key grip.

Result:

Result	Proceed to
Key is near other keys and/or key ring is in contact with key grip	A
Key is not near other keys and/or key ring is not in contact with key grip	B

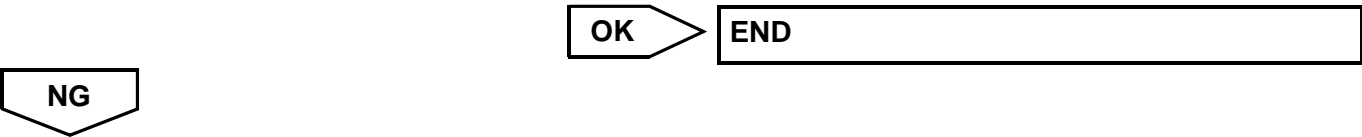


2

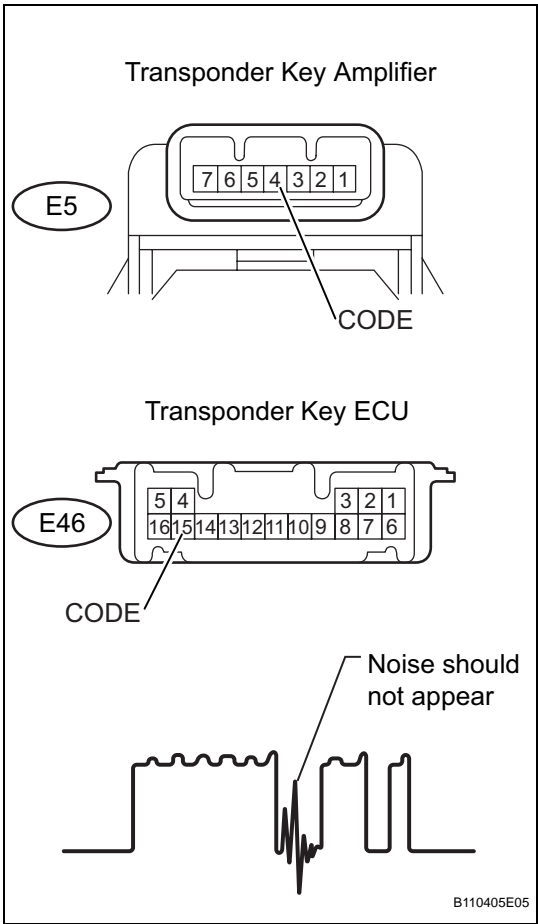
CHECK FOR DTC

- (a) Separate the keys from each other and / or remove the key ring.
(b) Clear the DTC (see page [EI-18](#)).
(c) Insert a key into the ignition key cylinder. Remove it. Repeat for all other keys.
(d) Check that no DTC is output.

OK:
No DTC is output.



3 CHECK TRANSPONDER KEY ECU (NOISE)



- (a) Using an oscilloscope or the intelligent tester, check for noise in the waveform between the terminals of the E5 amplifier connector and E46 ECU connector.

OK:

No noise is present (see illustration).

Tester Connection	Tool Setting	Tool Setting	Specified Condition
E46-15 (CODE) - E5-4 (CODE)	5 V/DIV., 20 msec./DIV.	Key inserted	No noise is present

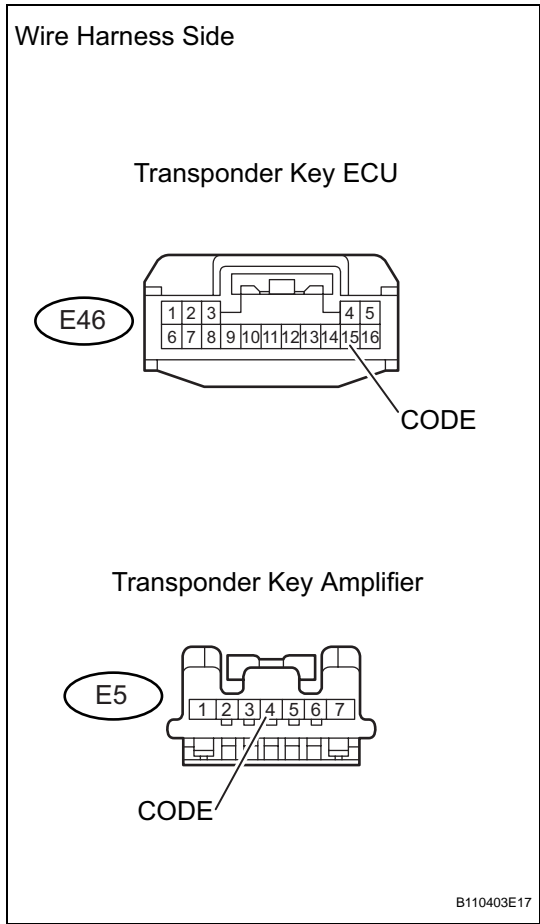
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FIND CAUSE OF NOISE AND REMOVE IT

OK

4

CHECK WIRE HARNESS (TRANSPONDER KEY ECU - TRANSPONDER KEY AMPLIFIER)



- (a) Disconnect the E46 ECU connector.
- (b) Disconnect the E5 amplifier connector.
- (c) Measure the resistance of the wire harness side connectors.

Standard resistance

Tester Connection	Specified Condition
E46-15 (CODE) - E5-4 (CODE)	Below 1 Ω
E46-15 (CODE) or E5-4 (CODE) - Body ground	10 kΩ or higher

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REPAIR OR REPLACE HARNESS AND CONNECTOR

OK

5

CHECK TRANSPONDER KEY AMPLIFIER (OPERATION)

- (a) Temporarily replacing the transponder key amplifier with a new or normally functioning one.
- (b) Check that the engine starts normally.

OK:
Engine starts.

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REPLACE TRANSPONDER KEY ECU

OK

END (TRANSPONDER KEY AMPLIFIER IS DEFECTIVE)