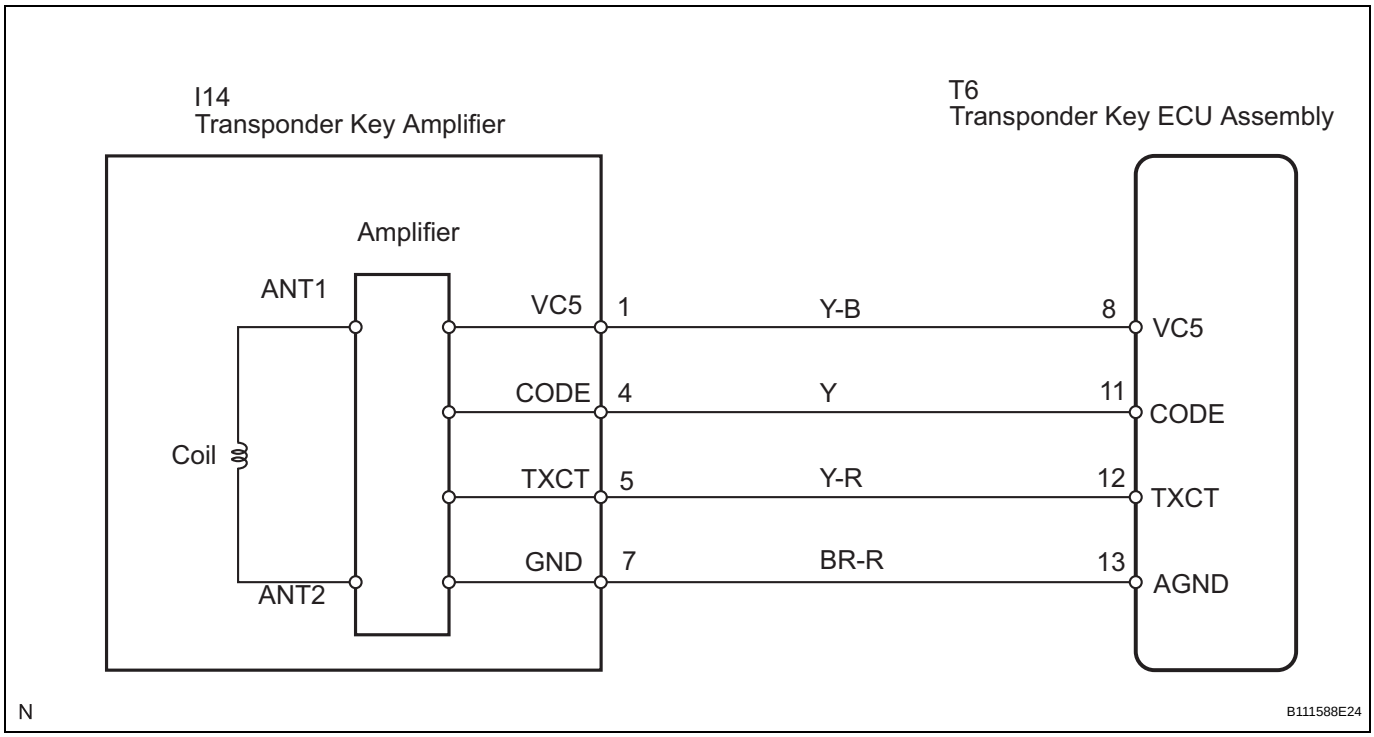
DTC	B2784	Antenna Coil Open / Short

DESCRIPTION

The transponder key coil is built into the transponder key amplifier and receives a key code signal from the transponder chip in the key. This signal is amplified by the amplifier, and output to the transponder key ECU.

DTC No.	DTC Detection Condition	Trouble Area
B2784	Antenna coil open/short	• Transponder key amplifier • Wire harness • Transponder key ECU assembly

WIRING DIAGRAM



INSPECTION PROCEDURE

1	READ VALUE OF INTELLIGENT TESTER

(a) Connect the intelligent tester (with CAN VIM) to the DLC3.
(b) Turn the ignition switch on and turn the intelligent tester main switch on.
(c) Select ANTENNA COIL in the DATA LIST and read the value displayed on the intelligent tester.

Transponder key ECU:

Item	Measurement Item/Display (Range)	Normal Condition	Diagnostic Note
ANTENNA COIL	Antenna coil condition /NORMAL or FAIL	NORMAL: Antenna coil is normal. FAIL: Antenna coil is malfunctioning.	-

OK:
NORMAL (Antenna coil is normal) appears on the screen.

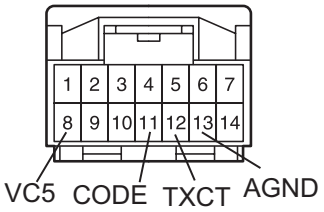
OK → **REPLACE TRANSPONDER KEY ECU ASSEMBLY**

NG

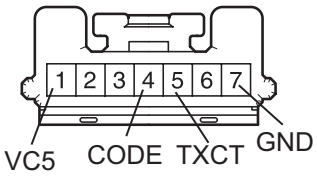
2 CHECK HARNESS AND CONNECTOR (TRANSPONDER KEY ECU ASSEMBLY - TRANSPONDER KEY AMPLIFIER)

Wire Harness Side Connector Front View:

T6 Transponder Key ECU Assembly



I14 Transponder Key Amplifier



P B111591E05

(a) Disconnect the T6 ECU and I14 switch connectors.
(b) Measure the resistance according to the value(s) in the table below.

Resistance

Tester Connection	Specified Condition
T6-8 (VC5) - I14-1 (VC5)	Below 1 Ω
T6-11 (CODE) - I14-4 (CODE)	
T6-12 (TXCT) - I14-5 (TXCT)	
T6-13 (AGND) - I14-7 (GND)	
T6-8 (VC5) - Body ground	10 kΩ or higher
T6-11 (CODE) - Body ground	
T6-12 (TXCT) - Body ground	
T6-13 (AGND) - Body ground	

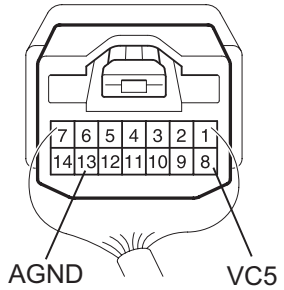
NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

3 INSPECT TRANSPONDER KEY ECU ASSEMBLY

Wire Harness Side Connector Rear View:

T6
Transponder Key ECU Assembly



P B111616E10

(a) Reconnect the T6 ECU and I14 amplifier connectors.
(b) Measure the voltage according to the value(s) in the table below.

Voltage

Tester Connection	Condition	Specified Condition
T6-8 (VC5) - Body ground	No key is in ignition key cylinder	Below 1 V
	Key is in ignition key cylinder	4.6 to 5.4 V

(c) Measure the resistance according to the value(s) in the table below.

Resistance

Tester Connection	Condition	Specified Condition
T6-13 (AGND) - Body ground	Always	Below 1 Ω

NG → REPLACE TRANSPONDER KEY ECU ASSEMBLY

OK

REPLACE TRANSPONDER KEY AMPLIFIER