

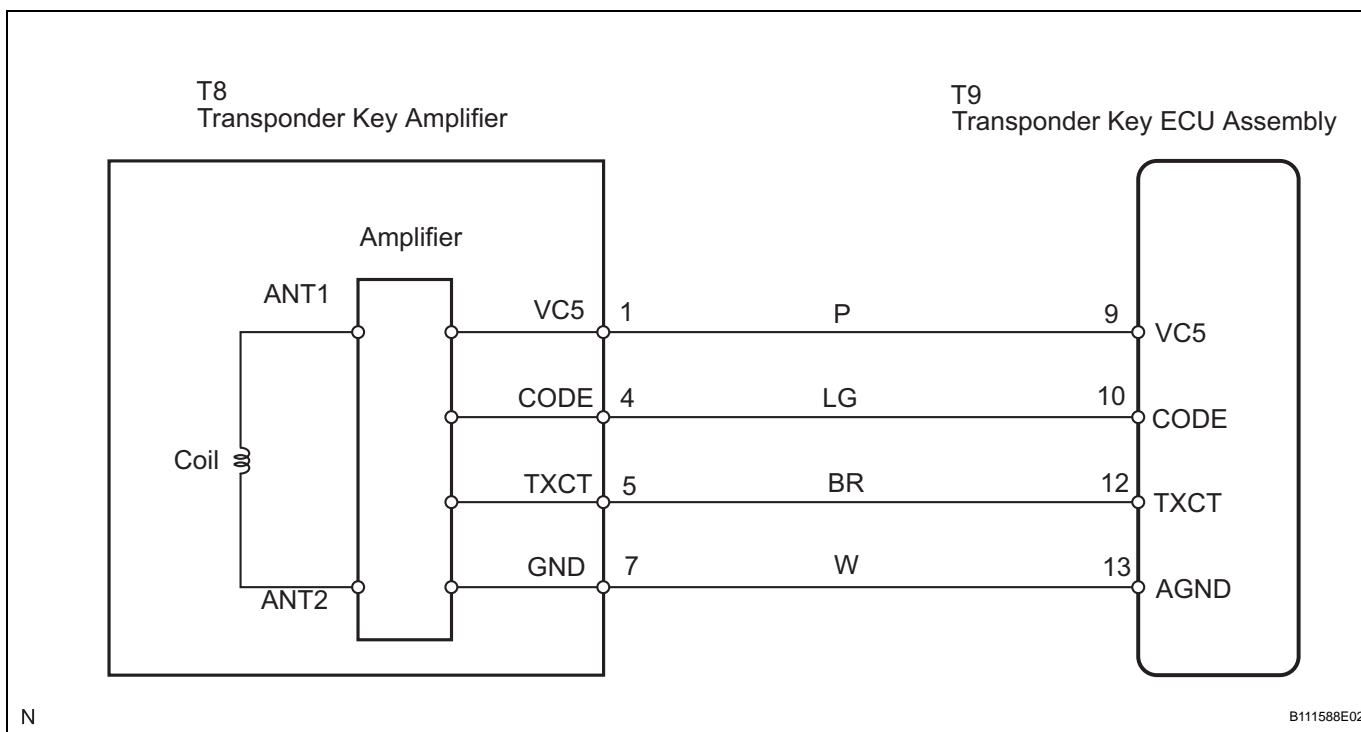
| | | |
|------------|--------------|----------------------------------|
| DTC | B2784 | Antenna Coil Open / Short |
|------------|--------------|----------------------------------|

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 | <ul style="list-style-type: none"> Transponder key amplifier Wire harness Transponder key ECU assembly |

WIRING DIAGRAM



| | |
|---|---|
| 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.

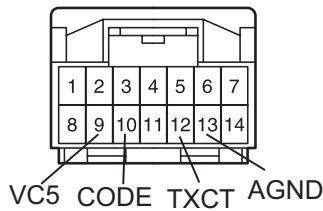
OK → **REPLACE TRANSPONDER KEY ECU ASSEMBLY**

NG

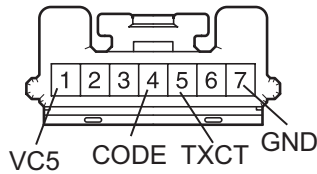
2 CHECK HARNESS AND CONNECTOR (TRANSPONDER KEY ECU ASSEMBLY - TRANSPONDER KEY AMPLIFIER)

Wire Harness Side Connector Front View:

T9 Transponder Key ECU Assembly



T8 Transponder Key Amplifier



P B111591E01

- (a) Disconnect the T9 ECU and T8 switch connectors.
- (b) Measure the resistance according to the value(s) in the table below.

Resistance

| Tester Connection | Specified Condition |
|----------------------------|---------------------|
| T9-9 (VC5) - T8-1 (VC5) | Below 1 Ω |
| T9-10 (CODE) - T8-4 (CODE) | |
| T9-12 (TXCT) - T8-5 (TXCT) | |
| T9-13 (AGND) - T8-7 (GND) | |
| T9-9 (VC5) - Body ground | 10 kΩ or higher |
| T9-10 (CODE) - Body ground | |
| T9-12 (TXCT) - Body ground | |
| T9-13 (AGND) - Body ground | |

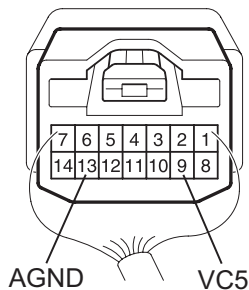
NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

3 INSPECT TRANSPONDER KEY ECU ASSEMBLY

Wire Harness Side Connector Rear View:

T9 Transponder Key ECU Assembly



P B111616E04

- (a) Reconnect the T9 ECU and T8 amplifier connectors.
- (b) Measure the voltage according to the value(s) in the table below.

Voltage

| Tester Connection | Condition | Specified Condition |
|--------------------------|------------------------------------|---------------------|
| T9-9 (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 |
|----------------------------|-----------|---------------------|
| T9-13 (AGND) - Body ground | Always | Below 1 Ω |

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REPLACE TRANSPONDER KEY ECU
ASSEMBLY

OK

REPLACE TRANSPONDER KEY AMPLIFIER