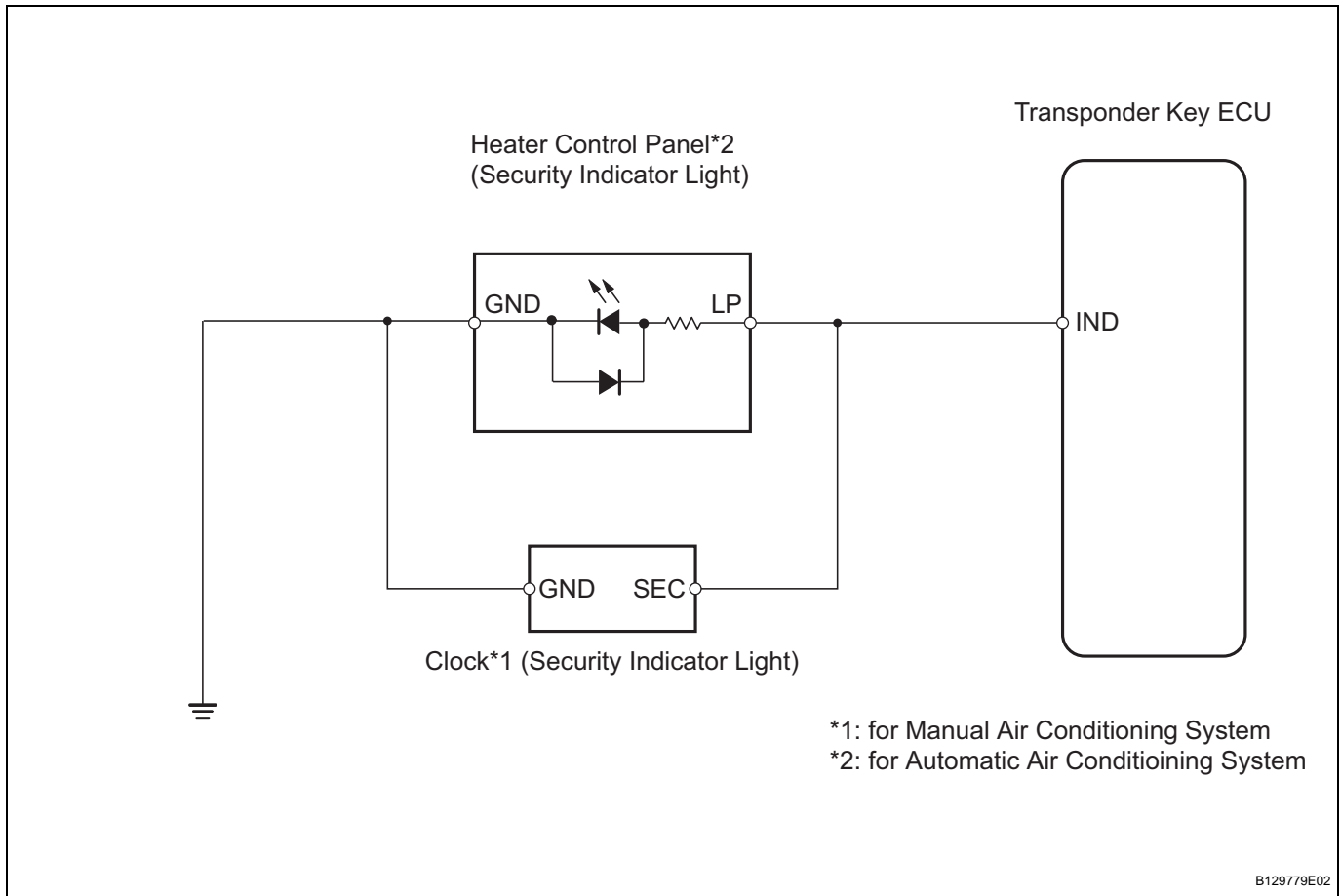


## Security Indicator Light Circuit

### DESCRIPTION

When the transponder key is registered, the transponder key ECU indicates the key registration condition by lighting up, blinking or turning off the security indicator.

### WIRING DIAGRAM



### INSPECTION PROCEDURE

#### 1 PERFORM ACTIVE TEST BY INTELLIGENT TESTER (SECURITY INDICATOR LIGHT)

- (a) Select the ACTIVE TEST, use the intelligent tester (with CAN VIM) to generate a command, and then check that the security indicator light operation is normal.

#### Transponder key ECU:

| Item           | Normal Condition                        | Diagnostic Note |
|----------------|---|-----------------|
| SECURITY INDIC | Security indicator light turns ON / OFF | -               |

OK:

Security indicator light turns ON / OFF.

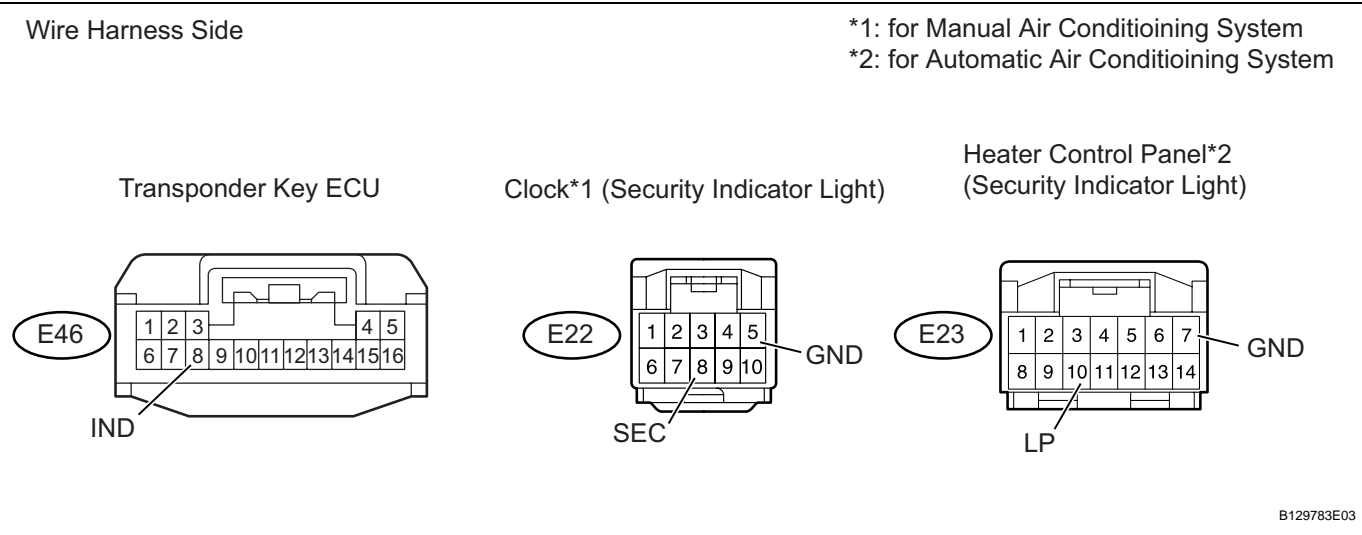
OK

Go to step 3

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2

CHECK WIRE HARNESS (TRANSPONDER KEY ECU - SECURITY INDICATOR LIGHT)



- (a) Disconnect the E46 ECU connector.
- (b) Disconnect the E22\*1 or E23\*2 light connector.
- (c) Measure the resistance of the wire harness side connectors.

HINT:  
\*1: for Manual air conditioning system  
\*2: for Automatic air conditioning system

**Standard resistance:**  
**for Manual Air Conditioning System**

| Tester Connection                        | Specified Condition |
|--|---------------------|
| E46-8 (IND) - E22-8 (SEC)                | Below 1 Ω           |
| E22-5 (GND) - Body ground                |                     |
| E46-8 (IND) or E22-8 (SEC) - Body ground | 10 kΩ or higher     |

**for Automatic Air Conditioning System**

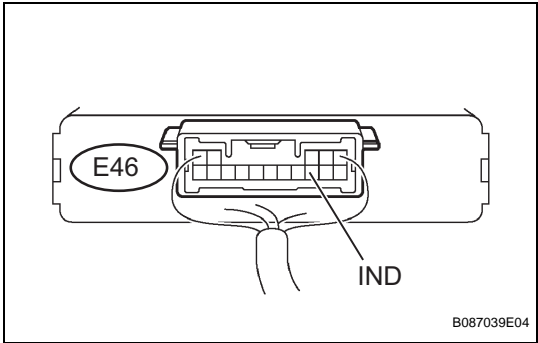
| Tester Connection                        | Specified Condition |
|--|---------------------|
| E46-8 (IND) - E23-10 (LP)                | Below 1 Ω           |
| E23-7 (GND) - Body ground                |                     |
| E46-8 (IND) or E23-10 (LP) - Body ground | 10 kΩ or higher     |

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REPAIR OR REPLACE HARNESS AND CONNECTOR

OK

**3 INSPECT TRANSPONDER KEY ECU (OUTPUT)**



(a) Remove the transponder key ECU with its connectors still connected.

(b) Measure the voltage of the ECU.

**Standard voltage**

| Tester Condition          | Condition                        | Specified Condition                         |
|---------------------------|----------------------------------|---|
| E46-8 (IND) - Body ground | Engine immobiliser system is set | 10 to 14 V and below 1 V output alternately |

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**REPLACE TRANSPONDER KEY ECU**

**OK**

**REPLACE CLOCK SUB-ASSEMBLY (for MANUAL AIR CONDITIONING SYSTEM), HEATER CONTROL PANEL (for AUTOMATIC AIR CONDITIONING SYSTEM)**