

DTC	B2602	KEY UNLOCK WARNING SWITCH CIRCUIT MALFUNCTION
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CIRCUIT DESCRIPTION

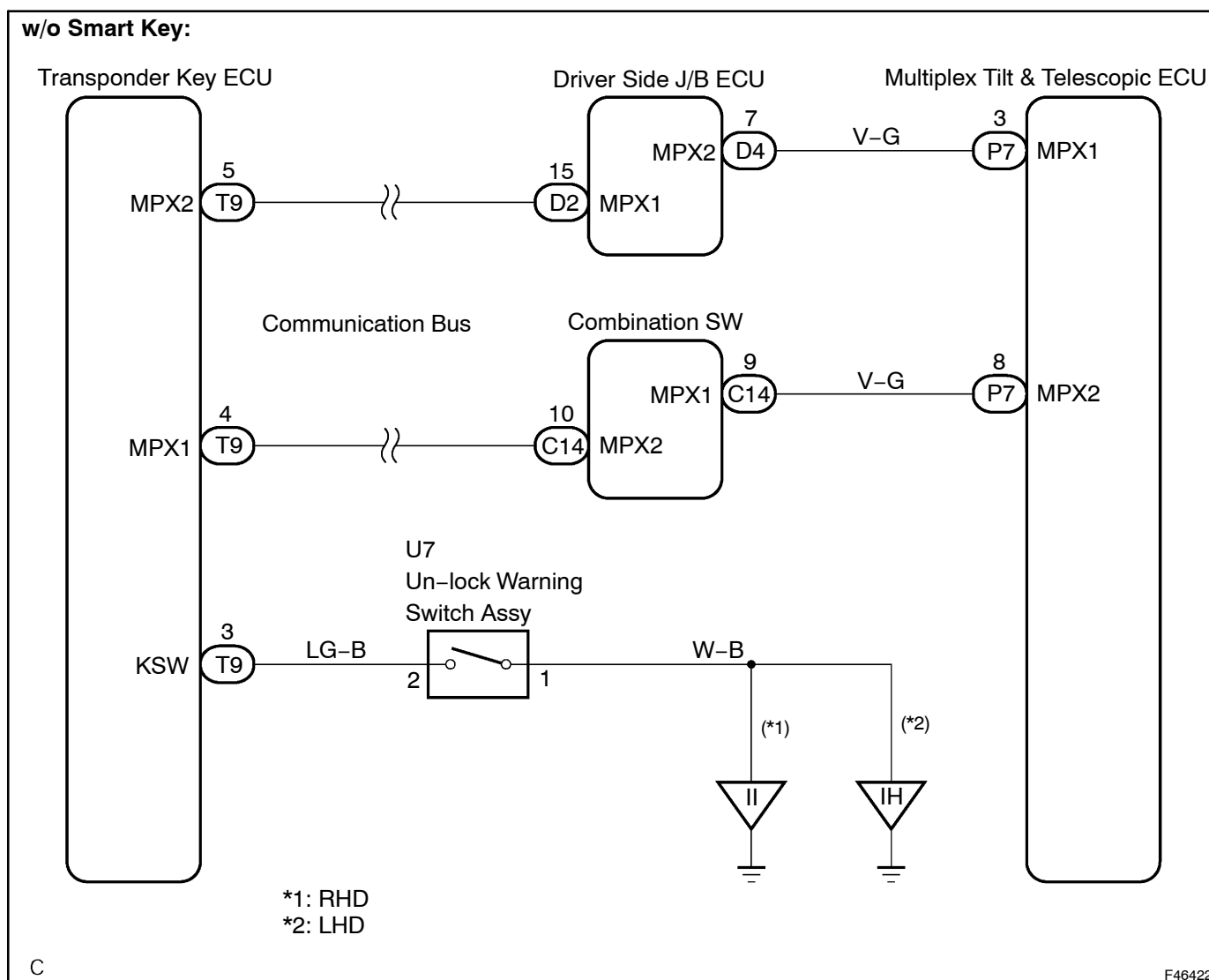
A signal (ON or OFF) is sent from the transponder key ECU*¹ (steering lock ECU*²) to the multiplex tilt & telescopic ECU via the communication bus when the ignition key is inserted into the key cylinder. The multiplex tilt & telescopic ECU uses this signal to operate the auto away or auto return function.

DTC No.	Detection Item	Trouble Area
B2602	A signal (OFF) is sent to the multiplex tilt & telescopic ECU when the ignition switch is turned to the ON position.	• Un-lock warning switch assy • Un-lock warning switch circuit • Transponder key ECU*¹ (Steering lock ECU*²) • Multiplex tilt & telescopic ECU

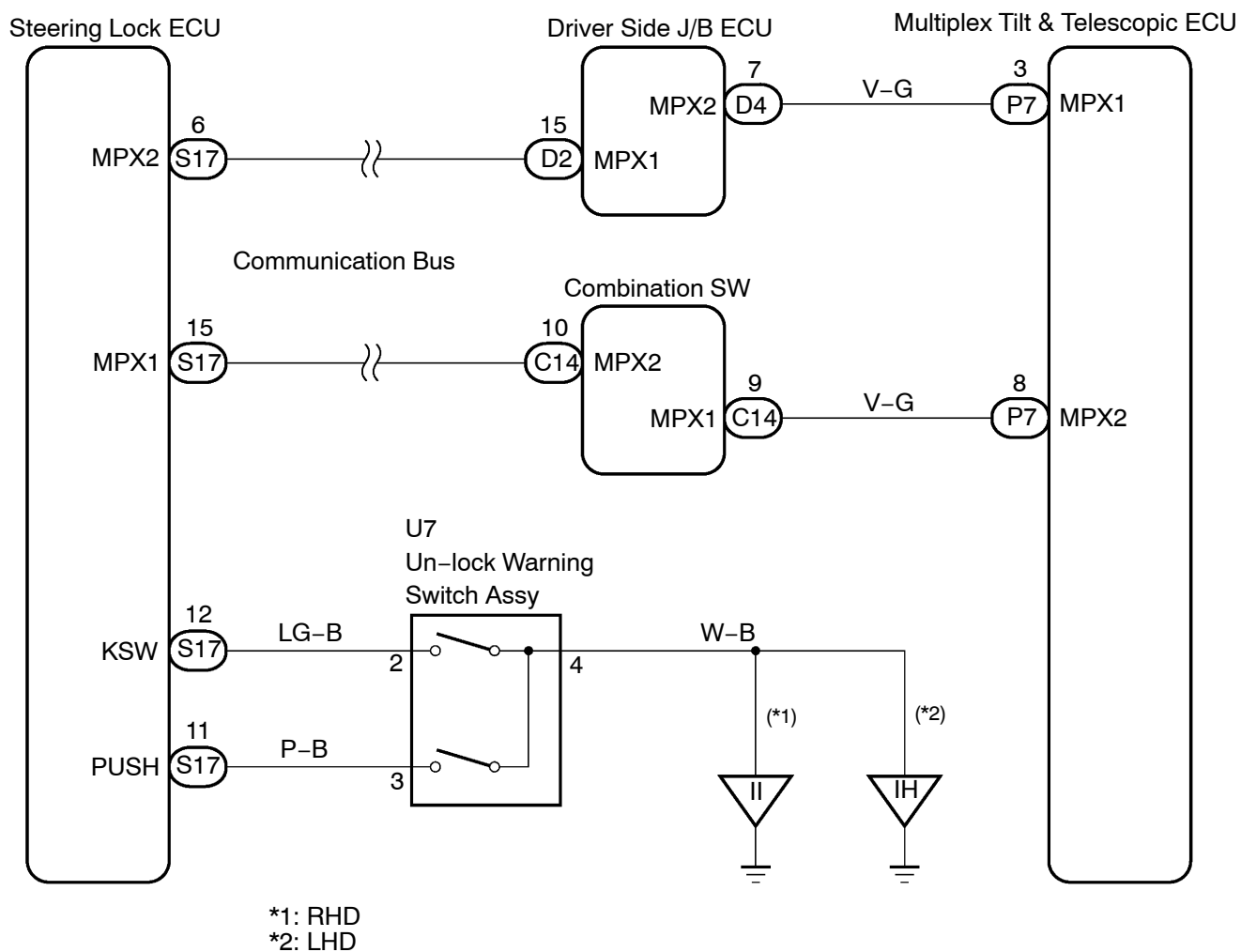
*1: w/o Smart key

*2: w/ Smart key

WIRING DIAGRAM



w/ Smart Key:



INSPECTION PROCEDURE

1 READ VALUE ON INTELLIGENT TESTER II

- (a) Connect the intelligent tester II to the DLC3.
- (b) Turn the ignition switch to the ON position and turn the intelligent tester II on.
- (c) Select "Key Switch/MPX" from the DATA LIST.
- (d) Check the signal communication state of the un-lock warning switch on the tester screen.

Item	Measurement Item/ Range (Display)	Normal Condition	Diagnostic Note
Key Switch/MPX	Communication state of un-lock warning switch/ON or OFF	ON: Communication is normal OFF: Communication is interrupted	–

OK: "ON" is displayed.

OK

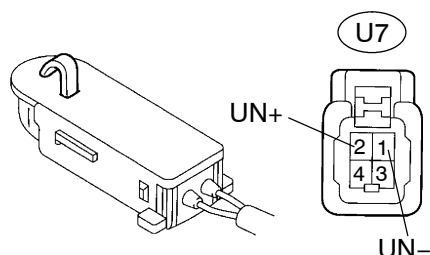
REPLACE MULTIPLEX TILT & TELESCOPIC ECU (SEE PAGE 50-26)

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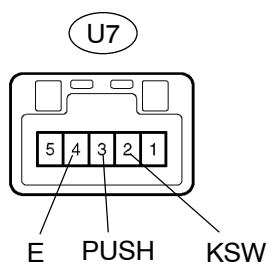
2 INSPECT UN-LOCK WARNING SWITCH ASSY

w/o Smart key:

OFF
↑
ON



w/ Smart key:



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- (a) Disconnect the un-lock warning switch assy connector.
- (b) Measure the resistance according to the value(s) in the table below.

Standard:

w/o Smart key:

Tester Connection	Condition	Specified Condition
U7-2 (UN+) – U7-1 (UN-)	Un-lock warning switch OFF (Ignition key is removed)	10 kΩ or higher
U7-2 (UN+) – U7-1 (UN-)	Un-lock warning switch ON (Ignition key is inserted)	Below 1 Ω

w/ Smart key:

Tester Connection	Condition	Specified Condition
U7-2 (KSW) – U7-4 (E)	Un-lock warning switch OFF (Ignition key is removed)	10 kΩ or higher
U7-2 (KSW) – U7-4 (E)	Un-lock warning switch ON (Ignition key is inserted)	Below 1 Ω
U7-3 (PUSH) – U7-4 (E)	Un-lock warning switch OFF (Push switch is OFF)	10 kΩ or higher
U7-3 (PUSH) – U7-4 (E)	Un-lock warning switch ON (Push switch is ON)	Below 1 Ω

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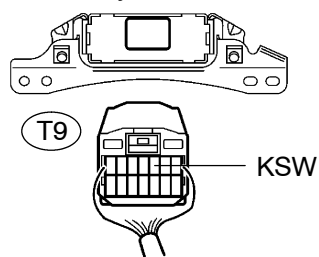
REPLACE UN-LOCK WARNING SWITCH ASSY (SEE PAGE 19-6)

OK

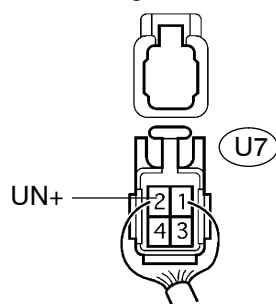
3 CHECK HARNESS AND CONNECTOR(TRANSPONDER KEY ECU (STEERING LOCK ECU) – UN-LOCK WARNING SWITCH ASSY)

w/o Smart Key:

Transponder Key ECU:



Un-lock Warning Switch Assy:



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- w/o Smart key:
Disconnect the transponder key ECU connector.
- w/ Smart key:
Disconnect the steering lock ECU connector.
- Measure the resistance according to the value(s) in the table below.

Standard:

w/o Smart key:

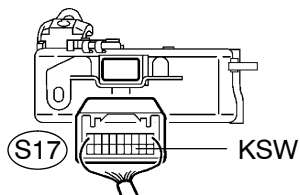
Tester Connection	Condition	Specified Condition
T9-3 (KSW) – U7-2 (UN+)	Always	Below 1 Ω
T9-3 (KSW) – Body ground	Always	10 k Ω or higher

w/ Smart key:

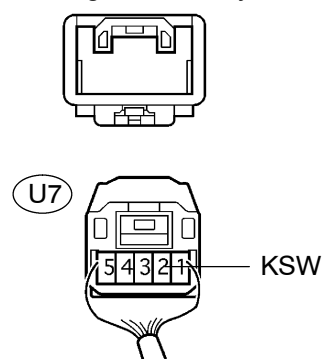
Tester Connection	Condition	Specified Condition
S17-12 (KSW) – U7-2 (KSW)	Always	Below 1 Ω
S17-12 (KSW) – Body ground	Always	10 k Ω or higher

w/ Smart Key:

Steering Lock ECU:



Un-lock Warning Switch Assy:



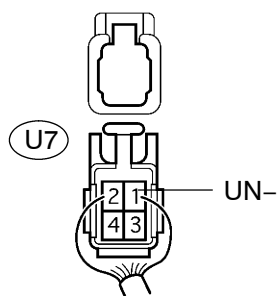
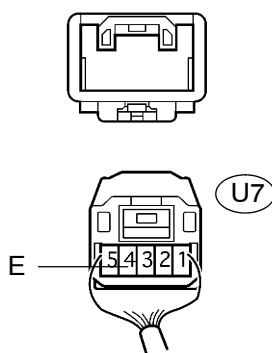
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REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

4 CHECK HARNESS AND CONNECTOR(UN-LOCK WARNING SWITCH ASSY – BODY GROUND)**w/o Smart Key:****w/ Smart Key:**

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

Standard:**w/o Smart key:**

Tester Connection	Condition	Specified Condition
U7-1 (UN-) – Body ground	Always	Below 1 Ω

w/ Smart key:

Tester Connection	Condition	Specified Condition
U7-4 (E) – Body ground	Always	Below 1 Ω

NG**REPAIR OR REPLACE HARNESS OR CONNECTOR****OK****REPLACE TRANSPONDER KEY ECU OR STEERING LOCK ECU****HINT:**

w/o Smart key: Transponder key ECU

w/ Smart key: Steering lock ECU