

Last Modified: 11-27-2007		1.6 C
Service Category: Power Source/Network	Section: Networking	
Model Year: 2008	Model: LX570	Doc ID: RM000002MXM00FX
Title: NETWORKING: CAN COMMUNICATION SYSTEM: DESCRIPTION (2008 LX570)		

DTC	U1002 (CAN MS BUS)	Lost Communication with Gateway Module (Main body ECU)
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DESCRIPTION

If 2 or more DTCs are output during the DTC check, one side of the CAN branch wire may be open (one side of the CANH [branch wire]/CANL [branch wire] of the ECU and/or sensor is open).

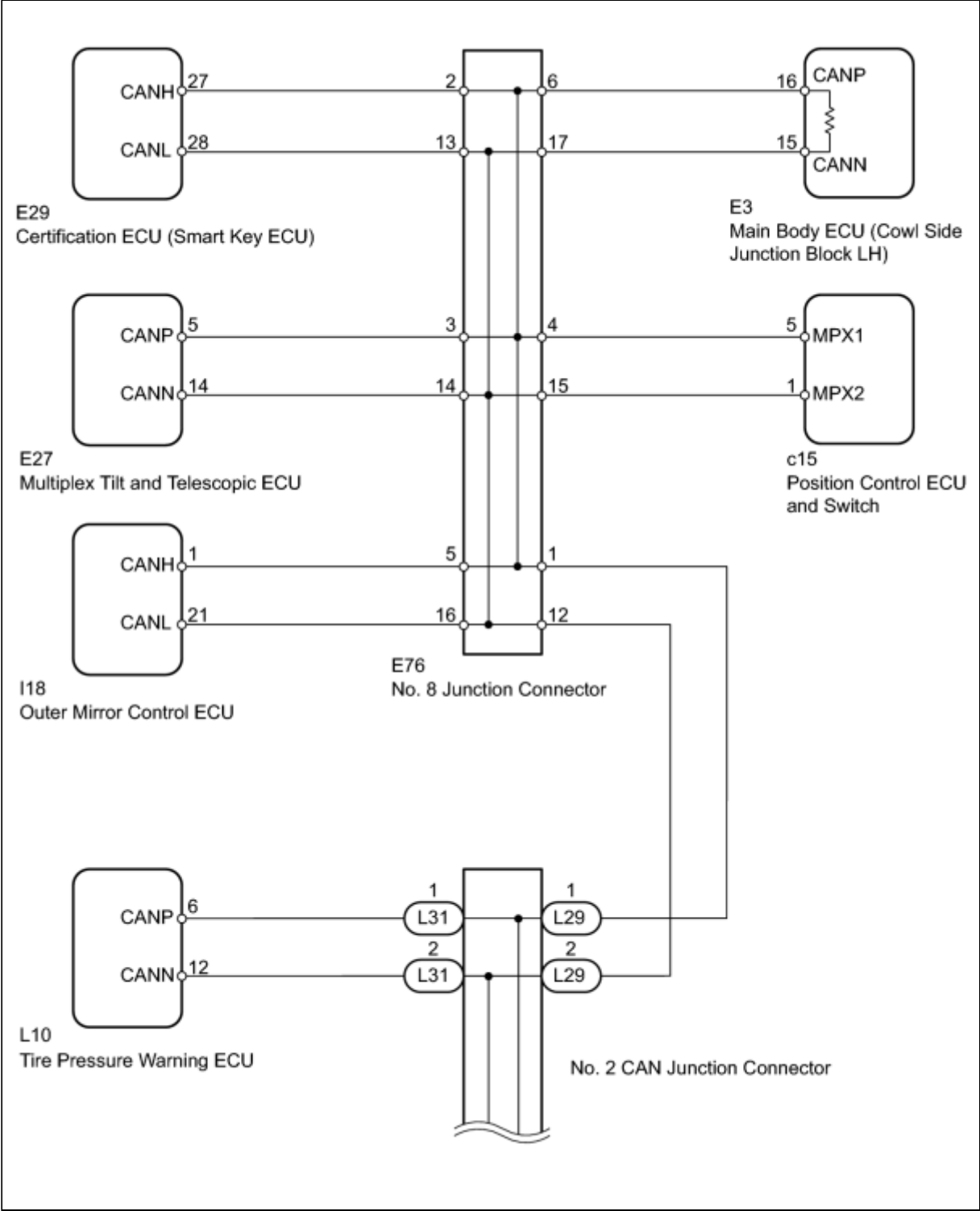
DTC CODE	DTC DETECTION CONDITION	TROUBLE AREA
U1002 (CAN MS BUS)	Lost communication with the gateway module (main body ECU).	• MS bus circuit • Certification ECU (smart key ECU assembly) branch wire or connector • Position control ECU and switch branch wire or connector • Outer mirror control ECU branch wire or connector • Multiplex tilt and telescopic ECU branch wire or connector • Tire pressure warning ECU branch wire or connector • Power back door unit (power back door ECU) branch wire or connector*1 • Windshield wiper ECU branch wire or connector • Bus buffer ECU branch wire or connector*2 • No. 2 main body ECU branch wire or connector • Main body ECU (cowl side junction block LH) main wire or connector • Combination meter main wire or connector • Certification ECU (smart key ECU assembly) • Position control ECU and switch assembly • Outer mirror control ECU assembly • Multiplex tilt and telescopic ECU • Tire pressure warning ECU • Power back door unit assembly (power back door ECU)*1 • Windshield wiper ECU • Bus buffer ECU*2 • No. 2 main body ECU • Main body ECU (cowl side junction block LH) • Combination meter assembly • No. 8 junction connector • No. 9 junction connector • No. 10 junction connector

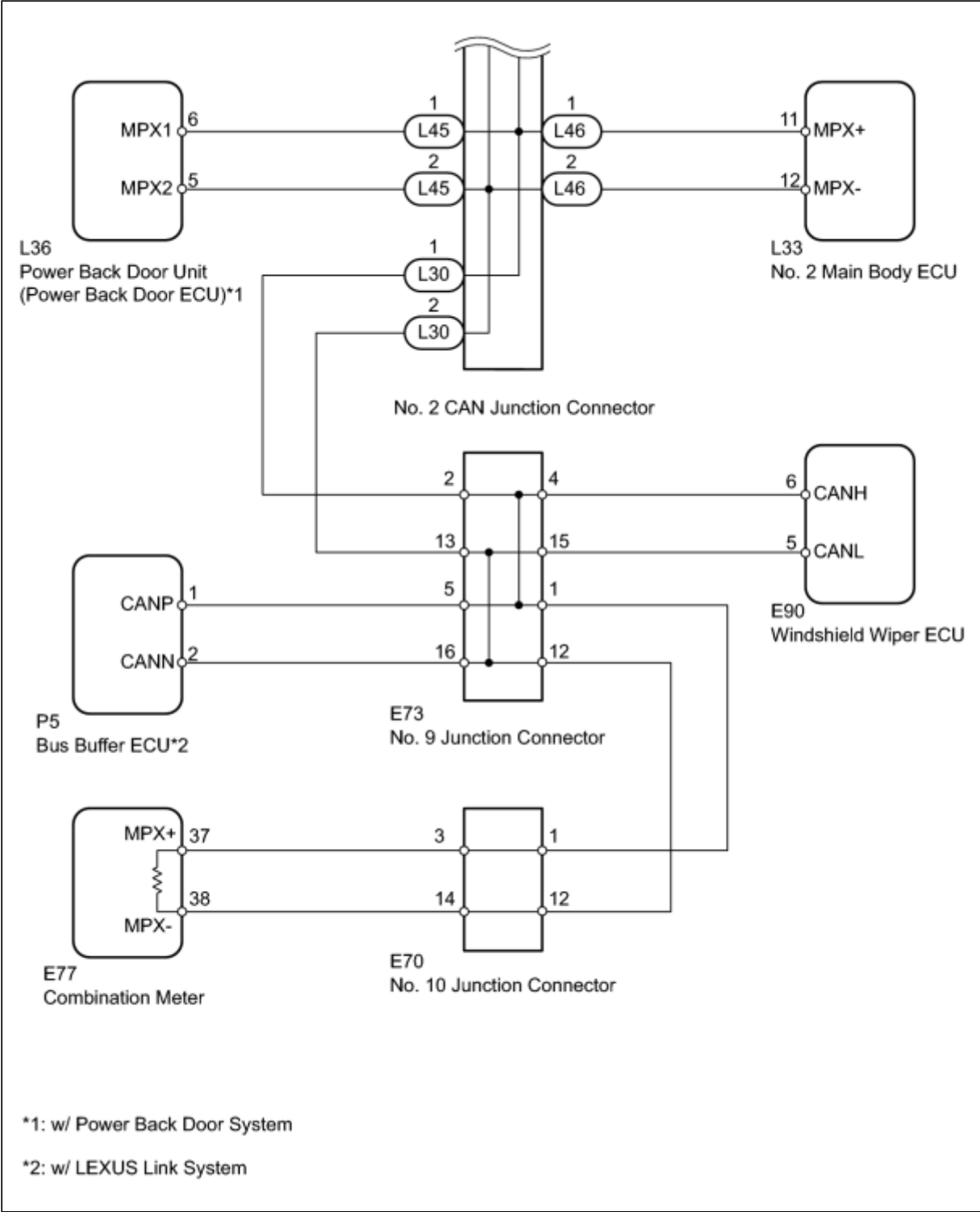
DTC CODE	DTC DETECTION CONDITION	TROUBLE AREA
		• No. 2 CAN junction connector

*1: w/ Power Back Door System

*2: w/ LEXUS Link System

WIRING DIAGRAM





INSPECTION PROCEDURE

PROCEDURE

1.	DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL
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(a) Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

CAUTION:
Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to disable the SRS system.

NOTICE:

- w/ Navigation System:

After the engine switch is turned off, the HDD navigation system requires approximately 6 minutes to record various types of memory and settings. As a result, after turning the engine switch off, wait 6 minutes or more before disconnecting the cable from the negative (-) battery terminal.

- When disconnecting the cable, some systems need to be initialized after the cable is reconnected INFO.

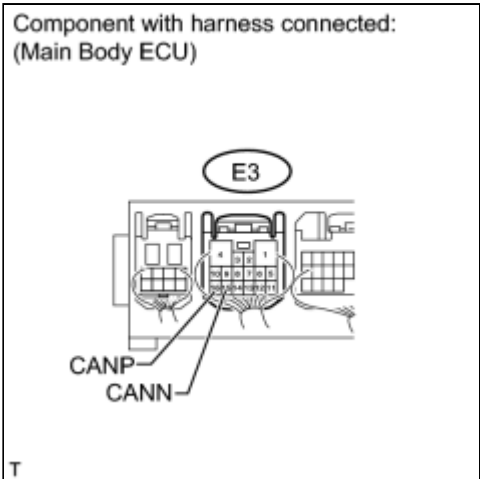
NEXT

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2.	CHECK CAN BUS WIRE (MAIN WIRE FOR DISCONNECTION, BUS LINE FOR SHORT CIRCUIT)
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(a) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION	RESISTANCE MALFUNCTION
E3-16 (CANP) - E3-15 (CANN)	Engine switch off	54 to 69 Ω	Below 53 Ω: Short in line
	Engine switch off		70 Ω or higher: Open in CAN main bus line
E3-16 (CANP) - 2A-1 (ALTB)	Engine switch off	6 kΩ or higher	Below 6 kΩ: +B short
E3-15 (CANN) - 2A-1 (ALTB)	Engine switch off	6 kΩ or higher	Below 6 kΩ: +B short
E3-16 (CANP) - 2D-62 (GND2)	Engine switch off	200 Ω or higher	Below 200 Ω: Ground short
E3-15 (CANN) - 2D-62 (GND2)	Engine switch off	200 Ω or higher	Below 200 Ω: Ground short

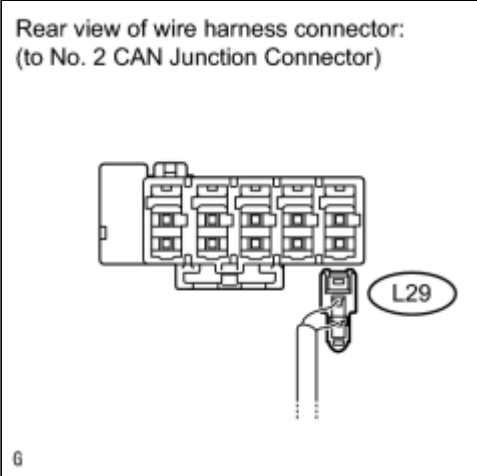
Result

RESULT	PROCEED TO
NG - Open in CAN main bus line	A
NG - Short in line - +B short - Ground short	B
OK	C

A



3.	CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 2 CAN JUNCTION CONNECTOR - MAIN BODY ECU)
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(a) Disconnect the L29 No. 2 CAN junction connector connector.

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

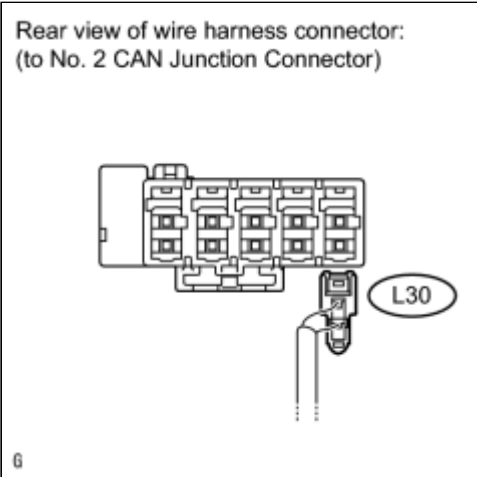
Standard Resistance:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
L29-1 (CANH) - L29-2 (CANL)	Engine switch off	108 to 132 Ω

OK



4.	CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 2 CAN JUNCTION CONNECTOR - COMBINATION METER)
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(a) Disconnect the L30 No. 2 CAN junction connector connector.

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

Standard Resistance:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
L30-1 (CANH) - L30-2 (CANL)	Engine switch off	108 to 132 Ω

OK

▼

5.

CONNECT CONNECTOR

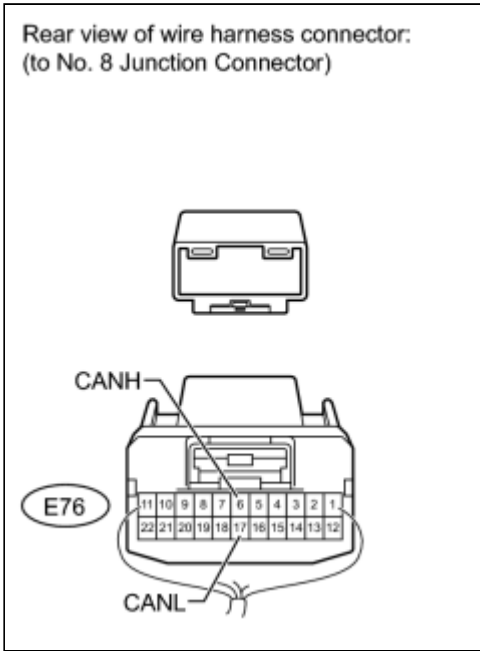
(a) Reconnect the L29 No. 2 CAN junction connector connector.

NEXT

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6.

CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 8 JUNCTION CONNECTOR - MAIN BODY ECU)



(a) Disconnect the E76 No. 8 junction connector.

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

Standard Resistance:

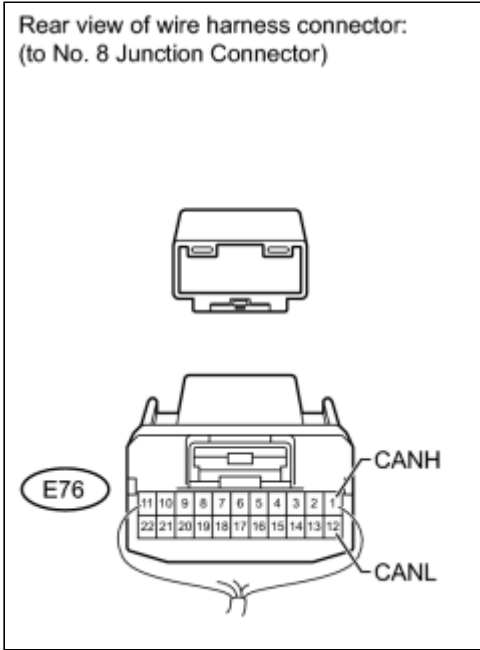
TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
E76-6 (CANH) - E76-17 (CANL)	Engine switch off	108 to 132 Ω

OK

▼

7.

CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 8 JUNCTION CONNECTOR - NO. 2 CAN JUNCTION CONNECTOR)



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

Standard Resistance:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
E76-1 (CANH) - E76-12 (CANL)	Engine switch off	108 to 132 Ω

OK

▼

8.

CONNECT CONNECTOR

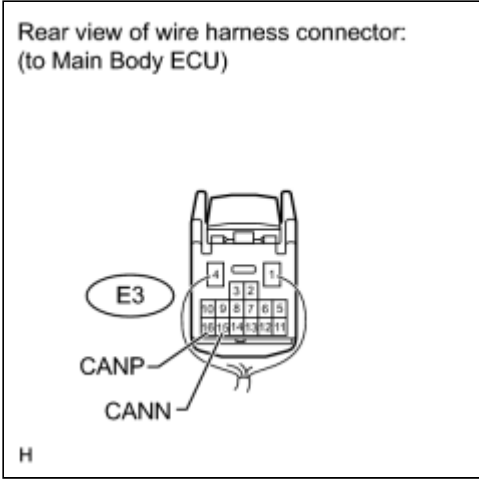
(a) Reconnect the E76 No. 8 junction connector connector.

NEXT

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9.

CHECK FOR OPEN IN CAN BUS MAIN WIRE (MAIN BODY ECU - NO. 8 JUNCTION CONNECTOR)



(a) Disconnect the E3 main body ECU (cowl side junction block LH) connector.

(b) Measure the resistance according to the value(s) in the table below.
Standard Resistance:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
E3-16 (CANP) - E3-15 (CANN)	Engine switch off	108 to 132 Ω

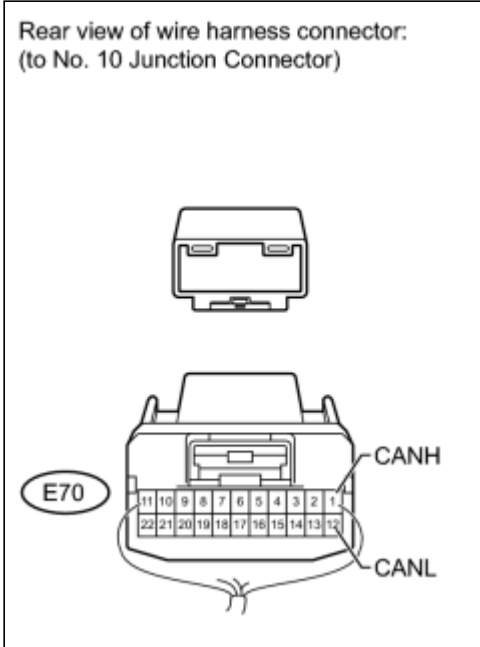
OK
▼

10.	CONNECT CONNECTOR
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(a) Reconnect the L29 and L30 No. 2 CAN junction connector connectors.

NEXT
▼

11.	CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 9 JUNCTION CONNECTOR - NO. 10 JUNCTION CONNECTOR)
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(a) Disconnect the E70 No. 10 junction connector.

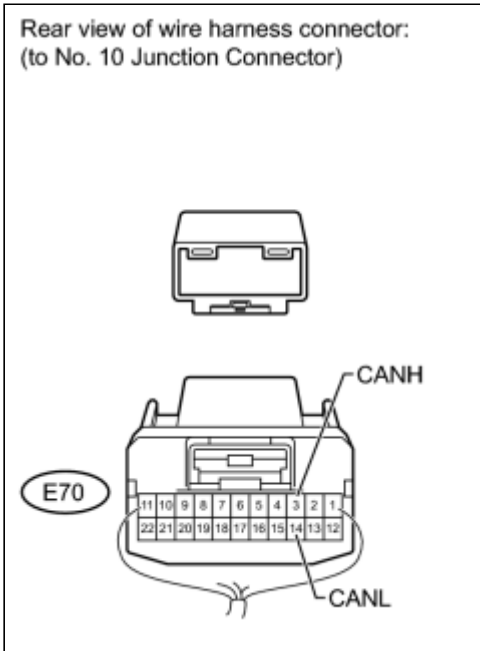
(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
E70-1 (CANH) - E70-12 (CANL)	Engine switch off	108 to 132 Ω

OK
▼

12.	CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 10 JUNCTION CONNECTOR - COMBINATION METER)
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(a) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
E70-3 (CANH) - E70-14 (CANL)	Engine switch off	108 to 132 Ω

OK

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13.

CONNECT CONNECTOR

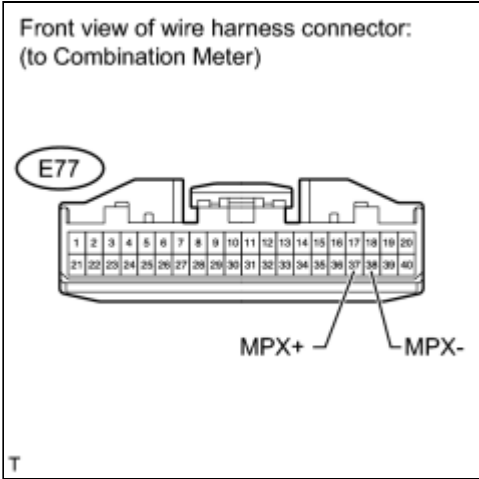
(a) Reconnect the E70 No. 10 junction connector connector.

NEXT

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14.

CHECK FOR OPEN IN CAN BUS MAIN WIRE (COMBINATION METER - NO. 10 JUNCTION CONNECTOR)



(a) Disconnect the E77 combination meter connector.

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

Standard Resistance:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
E77-37 (MPX+) - E77-38 (MPX-)	Engine switch off	108 to 132 Ω

OK

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15.

CONNECT CONNECTOR

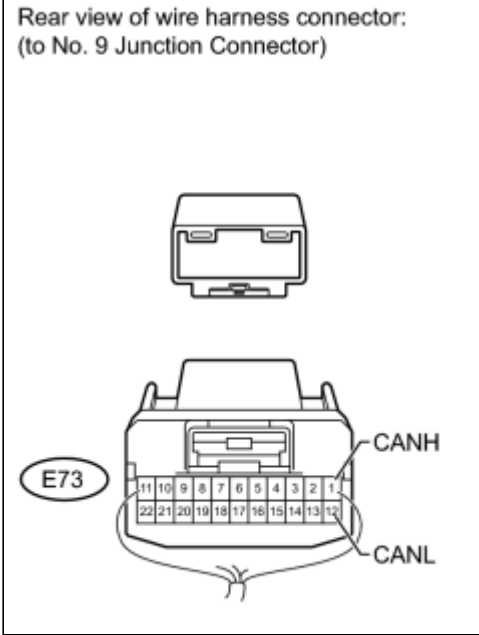
(a) Reconnect the E70 No. 10 junction connector connector.

NEXT

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16.

CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 9 JUNCTION CONNECTOR - NO. 10 JUNCTION CONNECTOR)



(a) Disconnect the E73 No. 9 junction connector.

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

Standard Resistance:

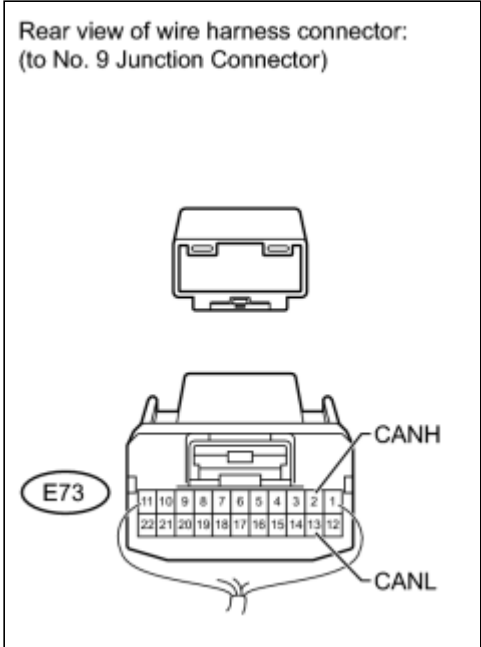
TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
E73-1 (CANH) - E73-12 (CANL)	Engine switch off	108 to 132 Ω

OK

▼

17.

CHECK FOR OPEN IN CAN BUS MAIN WIRE (NO. 2 CAN JUNCTION CONNECTOR - NO. 9 JUNCTION CONNECTOR)



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

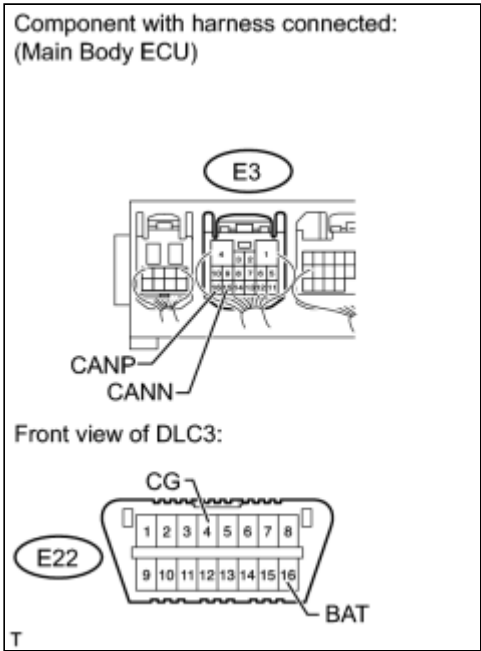
Standard Resistance:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
E73-2 (CANH) - E73-13 (CANL)	Engine switch off	108 to 132 Ω

OK



18. CHECK FOR SHORT IN CAN BUS WIRES (NO. 10 JUNCTION CONNECTOR SIDE)



(a) Disconnect the E70 No. 10 junction connector connector.

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

Standard Resistance:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
E3-16 (CANP) - E3-15 (CANN)	Engine switch off	108 to 132 Ω
E3-16 (CANP) - E22-4 (CG)	Engine switch off	200 Ω or higher
E3-15 (CANN) - E22-4 (CG)	Engine switch off	200 Ω or higher

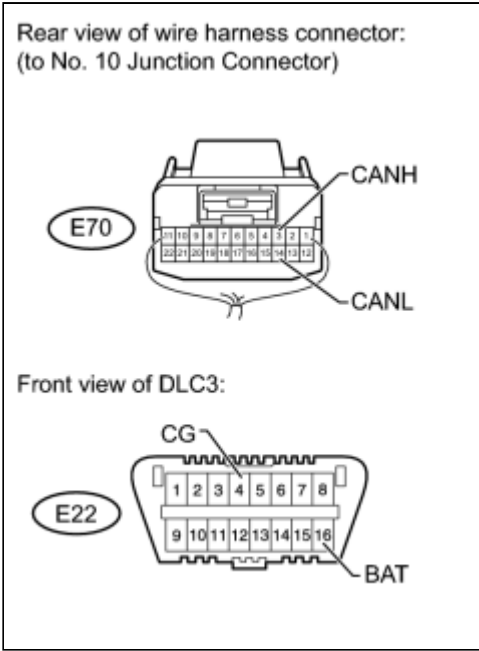
TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
E3-16 (CANP) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E3-15 (CANN) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

OK

19.	CHECK FOR SHORT IN CAN BUS WIRES (NO. 10 JUNCTION CONNECTOR - COMBINATION METER)
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(a) Measure the resistance according to the value(s) in the table below.

Result



TESTER CONNECTION	SWITCH CONDITION	MEASURED RESISTANCE	PROCEED TO
E70-3 (CANH) - E70-14 (CANL)	Engine switch off	1 Ω or higher	OK
E70-3 (CANH) - E70-14 (CANL)	Engine switch off	Below 1 Ω	NG
E70-3 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E70-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E70-3 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E70-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E70-3 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E70-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E70-3 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E70-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

OK

20.	CONNECT CONNECTOR
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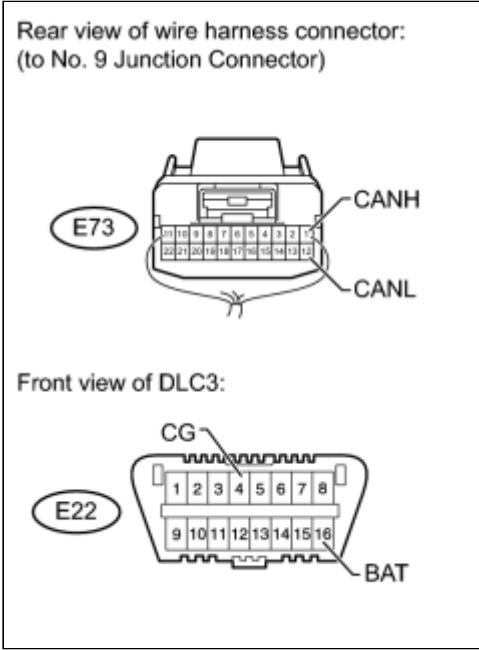
(a) Reconnect the E70 No. 10 junction connector connector.

NEXT

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21.

CHECK FOR SHORT IN CAN BUS WIRES (NO. 10 JUNCTION CONNECTOR - NO. 9 JUNCTION CONNECTOR)



(a) Disconnect the E73 No. 9 junction connector connector.

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

Standard Resistance:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
E73-1 (CANH) - E73-12 (CANL)	Engine switch off	108 to 132 Ω
E73-1 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E73-12 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher
E73-1 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E73-12 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

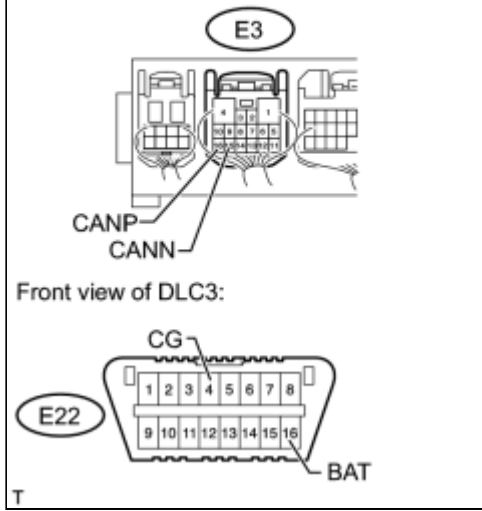
OK

▼

22.

CHECK FOR SHORT IN CAN BUS WIRES (NO. 9 JUNCTION CONNECTOR SIDE)

Component with harness connected:
(Main Body ECU)



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

Standard Resistance:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
E3-16 (CANP) - E3-15 (CANN)	Engine switch off	108 to 132 Ω
E3-16 (CANP) - E22-4 (CG)	Engine switch off	200 Ω or higher
E3-15 (CANN) - E22-4 (CG)	Engine switch off	200 Ω or higher
E3-16 (CANP) - E22-16 (BAT)	Engine switch off	6 k Ω or higher
E3-15 (CANN) - E22-16 (BAT)	Engine switch off	6 k Ω or higher

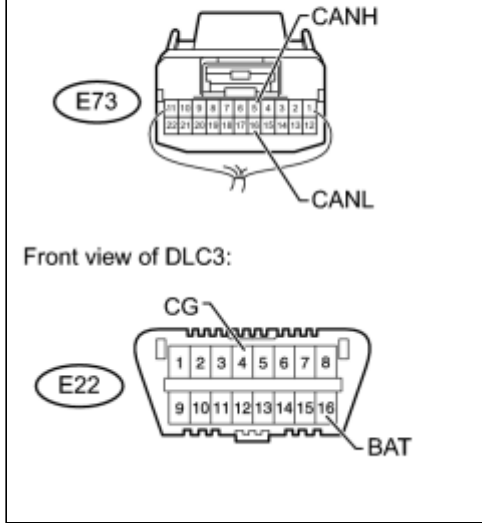
OK
▼

23.	CHECK FOR SHORT IN CAN BUS WIRES (NO. 9 JUNCTION CONNECTOR - BUS BUFFER ECU)
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NOTICE:

For vehicles without the LEXUS link system, go to "Check for Short in CAN Bus Wires (No. 9 Junction Connector - Windshield Wiper ECU)".

Rear view of wire harness connector:
(to No. 9 Junction Connector)



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

Result

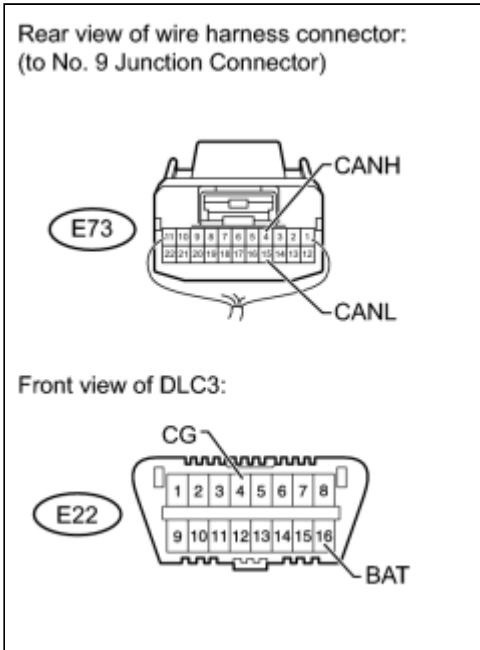
TESTER CONNECTION	SWITCH CONDITION	MEASURED RESISTANCE	PROCEED TO
E73-5 (CANH) - E73-16 (CANL)	Engine switch off	1 Ω or higher	OK
E73-5 (CANH) - E73-16 (CANL)	Engine switch off	Below 1 Ω	NG
E73-5 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E73-16 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E73-5 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG

TESTER CONNECTION	SWITCH CONDITION	MEASURED RESISTANCE	PROCEED TO
E73-16 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E73-5 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E73-16 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E73-5 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E73-16 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

OK

▼

24.	CHECK FOR SHORT IN CAN BUS WIRES (NO. 9 JUNCTION CONNECTOR - WINDSHIELD WIPER ECU)
-----	---



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

Result

TESTER CONNECTION	SWITCH CONDITION	MEASURED RESISTANCE	PROCEED TO
E73-4 (CANH) - E73-15 (CANL)	Engine switch off	1 Ω or higher	OK
E73-4 (CANH) - E73-15 (CANL)	Engine switch off	Below 1 Ω	NG
E73-4 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E73-15 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E73-4 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E73-15 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E73-4 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E73-15 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E73-4 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

TESTER CONNECTION	SWITCH CONDITION	MEASURED RESISTANCE	PROCEED TO
E73-15 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

OK

▼

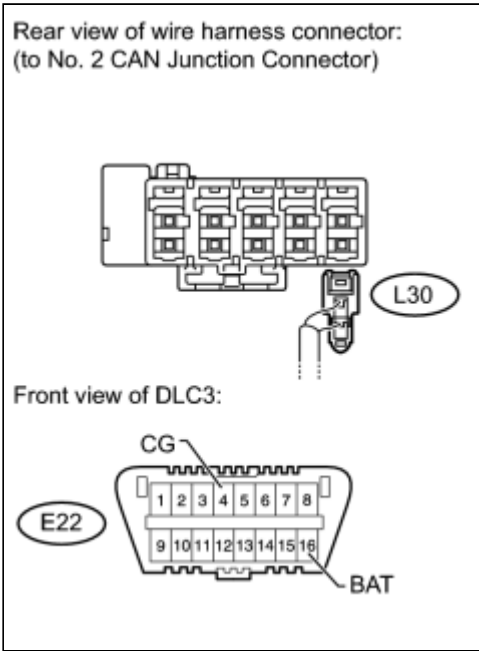
25.	CONNECT CONNECTOR
-----	-------------------

(a) Reconnect the E73 No. 9 junction connector connector.

NEXT

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26.	CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 CAN JUNCTION CONNECTOR - NO. 9 JUNCTION CONNECTOR)
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(a) Disconnect the L30 No. 2 CAN junction connector connector.

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

Standard Resistance:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
L30-1 (CANH) - L30-2 (CANL)	Engine switch off	108 to 132 Ω
L30-1 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
L30-2 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher
L30-1 (CANH) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
L30-2 (CANL) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

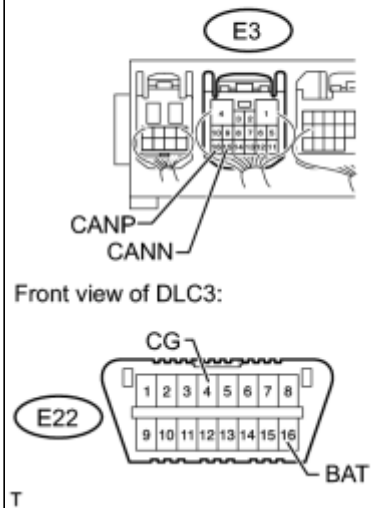
OK

▼

27.	CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 CAN JUNCTION CONNECTOR SIDE)
-----	--

(a) Disconnect the L29 No. 2 CAN junction connector connector.

Component with harness connected:
(Main Body ECU)



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

Standard Resistance:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
E3-16 (CANP) - E3-15 (CANN)	Engine switch off	108 to 132 Ω
E3-16 (CANP) - E22-4 (CG)	Engine switch off	200 Ω or higher
E3-15 (CANN) - E22-4 (CG)	Engine switch off	200 Ω or higher
E3-16 (CANP) - E22-16 (BAT)	Engine switch off	6 kΩ or higher
E3-15 (CANN) - E22-16 (BAT)	Engine switch off	6 kΩ or higher

OK

▼

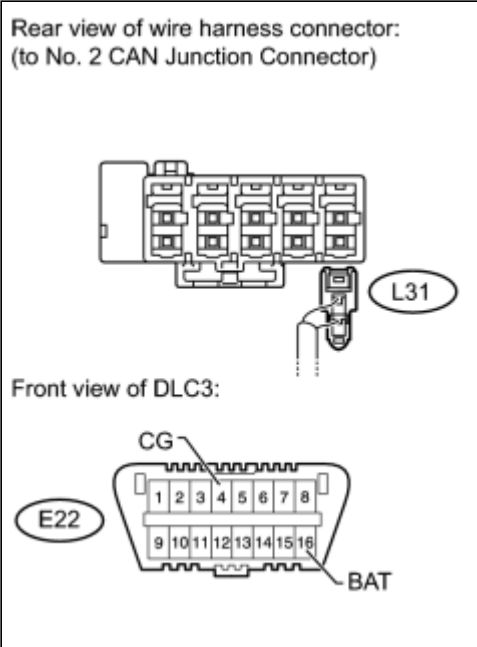
28.	CONNECT CONNECTOR
-----	-------------------

(a) Reconnect the E73 No. 9 junction connector connector.

NEXT

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29.	CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 CAN JUNCTION CONNECTOR - TIRE PRESSURE WARNING ECU)
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(a) Disconnect the L31 No. 2 CAN junction connector connector.

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

Result

TESTER CONNECTION	SWITCH CONDITION	MEASURED RESISTANCE	PROCEED TO
L31-1 (CANH) - L31-2 (CANL)	Engine switch off	1 Ω or higher	OK
L31-1 (CANH) - L31-2 (CANL)	Engine switch off	Below 1 Ω	NG
L31-1 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
L31-2 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
L31-1 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
L31-2 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
L31-1 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
L31-2 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
L31-1 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
L31-2 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

OK

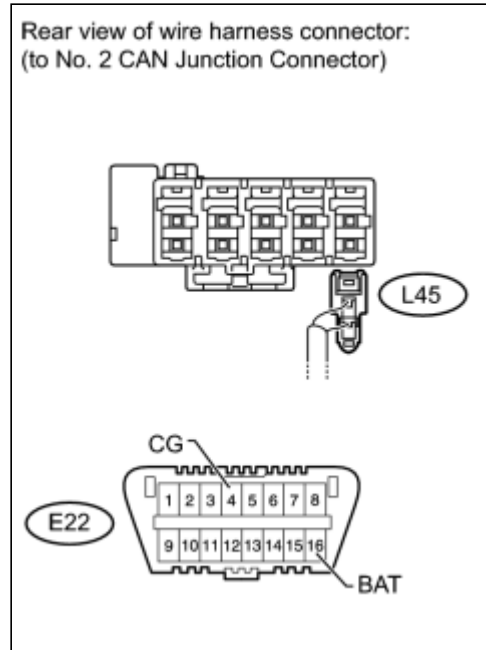


30.	CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 CAN JUNCTION CONNECTOR - POWER BACK DOOR UNIT)
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NOTICE:

For vehicles without the power back door system, go to "Check for Short in CAN Bus Wires (No. 2 CAN Junction Connector - No. 2 Main Body ECU)".

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



Result

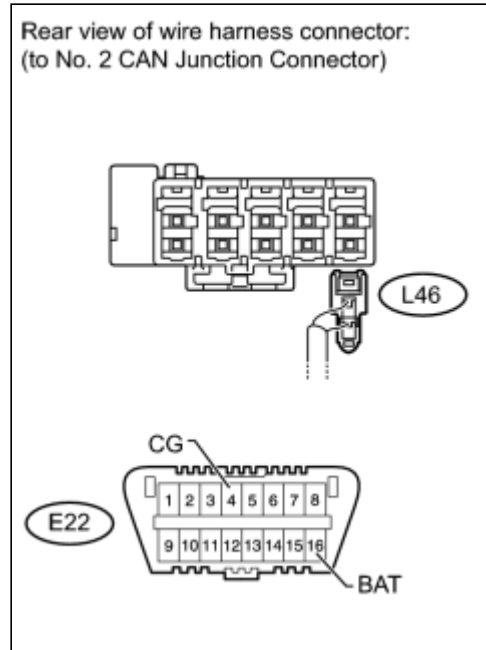
TESTER CONNECTION	SWITCH CONDITION	MEASURED RESISTANCE	PROCEED TO
L45-1 (CANH) - L45-2 (CANL)	Engine switch off	1 Ω or higher	OK
L45-1 (CANH) - L45-2 (CANL)	Engine switch off	Below 1 Ω	NG
L45-1 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
L45-2 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
L45-1 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
L45-2 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
L45-1 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
L45-2 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
L45-1 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
L45-2 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

OK

31.

CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 CAN JUNCTION CONNECTOR - NO. 2 MAIN BODY ECU)

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



Result

TESTER CONNECTION	SWITCH CONDITION	MEASURED RESISTANCE	PROCEED TO
L46-1 (CANH) - L46-2 (CANL)	Engine switch off	1 Ω or higher	OK
L46-1 (CANH) - L46-2 (CANL)	Engine switch off	Below 1 Ω	NG
L46-1 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
L46-2 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
L46-1 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
L46-2 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
L46-1 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
L46-2 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
L46-1 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
L46-2 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

OK



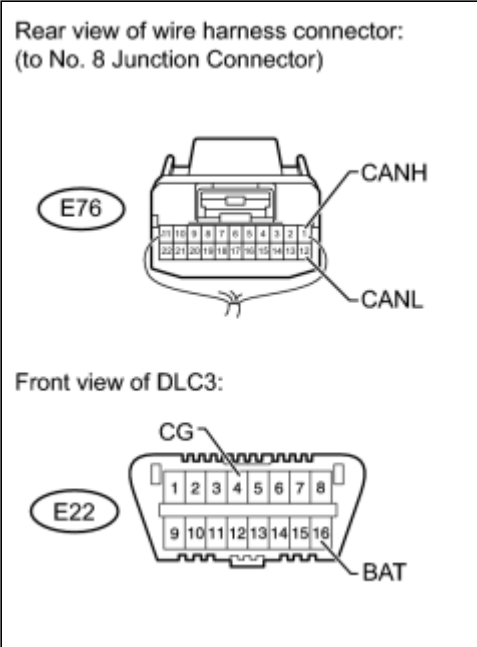
32.	CONNECT CONNECTOR
-----	-------------------

(a) Reconnect the L29 and L30 No. 2 CAN junction connector connectors.

NEXT



33.	CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 CAN JUNCTION CONNECTOR - NO. 8 JUNCTION CONNECTOR)
-----	--



(a) Disconnect the E76 No. 8 junction connector connector.

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

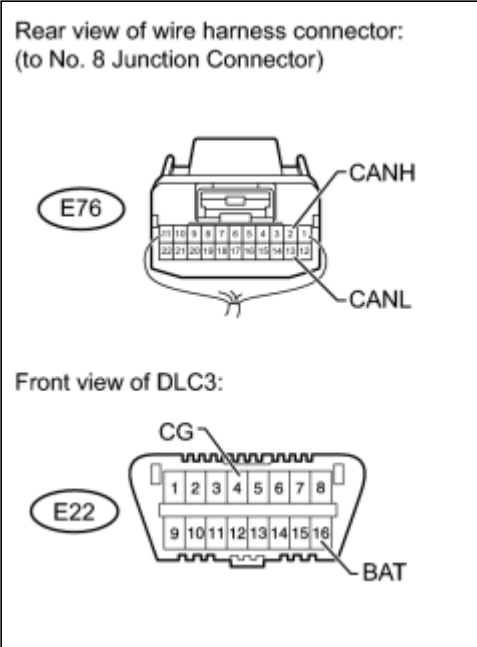
Standard Resistance:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
E76-1 (CANH) - E76-12 (CANL)	Engine switch off	108 to 132 Ω
E76-1 (CANH) - E22-4 (CG)	Engine switch off	200 Ω or higher
E76-12 (CANL) - E22-4 (CG)	Engine switch off	200 Ω or higher
E76-1 (CANH) - E22-16 (BAT)	Engine switch off	6 k Ω or higher
E76-12 (CANL) - E22-16 (BAT)	Engine switch off	6 k Ω or higher

OK

▼

34.	CHECK FOR SHORT IN CAN BUS WIRES (NO. 8 JUNCTION CONNECTOR - CERTIFICATION ECU)
-----	---



(a) Disconnect the E76 No. 8 junction connector connector.

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

Result

TESTER CONNECTION	SWITCH CONDITION	MEASURED RESISTANCE	PROCEED TO
E76-2 (CANH) - E76-13 (CANL)	Engine switch off	1 Ω or higher	OK
E76-2 (CANH) - E76-13 (CANL)	Engine switch off	Below 1 Ω	NG
E76-2 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E76-13 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E76-2 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E76-13 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E76-2 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E76-13 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E76-2 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E76-13 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

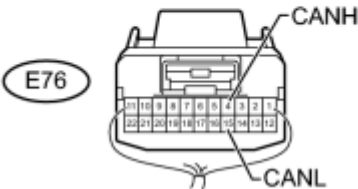
OK

35.	CHECK FOR SHORT IN CAN BUS WIRES (NO. 8 JUNCTION CONNECTOR - POSITION CONTROL ECU AND SWITCH)
-----	---

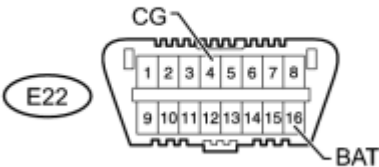
(a) Measure the resistance according to the value(s) in the table below.

Result

Rear view of wire harness connector:
(to No. 8 Junction Connector)



Front view of DLC3:



TESTER CONNECTION	SWITCH CONDITION	MEASURED RESISTANCE	PROCEED TO
E76-4 (CANH) - E76-15 (CANL)	Engine switch off	1 Ω or higher	OK
E76-4 (CANH) - E76-15 (CANL)	Engine switch off	Below 1 Ω	NG
E76-4 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E76-15 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E76-4 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E76-15 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E76-4 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E76-15 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E76-4 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E76-15 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

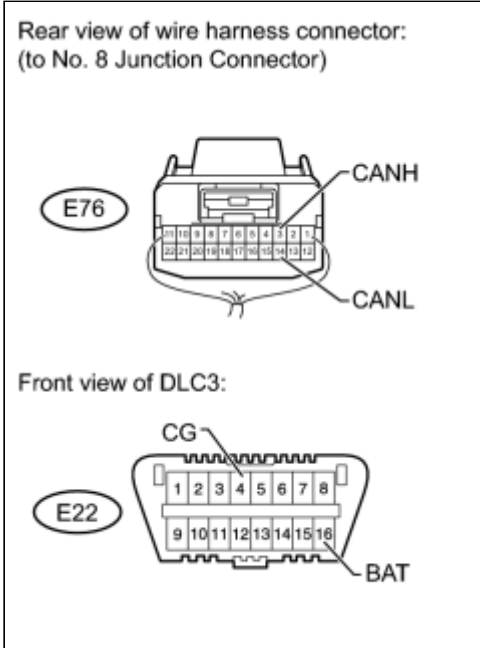
OK

▼

36.	CHECK FOR SHORT IN CAN BUS WIRES (NO. 8 JUNCTION CONNECTOR - MULTIPLEX TILT AND TELESCOPIC ECU)
-----	---

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

Result



TESTER CONNECTION	SWITCH CONDITION	MEASURED RESISTANCE	PROCEED TO
E76-3 (CANH) - E76-14 (CANL)	Engine switch off	1 Ω or higher	OK
E76-3 (CANH) - E76-14 (CANL)	Engine switch off	Below 1 Ω	NG
E76-3 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E76-14 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E76-3 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E76-14 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E76-3 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E76-14 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E76-3 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E76-14 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

OK

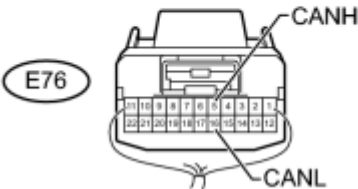
▼

37.	CHECK FOR SHORT IN CAN BUS WIRES (NO. 8 JUNCTION CONNECTOR - OUTER MIRROR CONTROL ECU)
-----	--

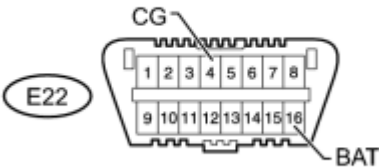
(a) Measure the resistance according to the value(s) in the table below.

Result

Rear view of wire harness connector:
(to No. 8 Junction Connector)



Front view of DLC3:



TESTER CONNECTION	SWITCH CONDITION	MEASURED RESISTANCE	PROCEED TO
E76-5 (CANH) - E76-16 (CANL)	Engine switch off	1 Ω or higher	OK
E76-5 (CANH) - E76-16 (CANL)	Engine switch off	Below 1 Ω	NG
E76-5 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E76-16 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E76-5 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E76-16 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E76-5 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E76-16 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E76-5 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E76-16 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

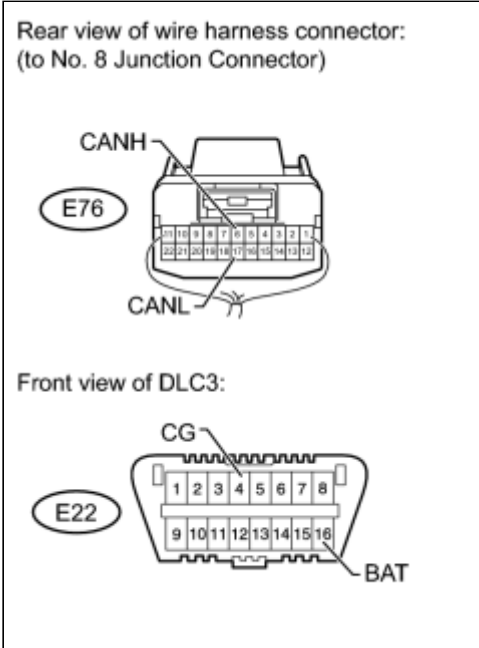
OK

▼

38.	CHECK FOR SHORT IN CAN BUS WIRES (NO. 8 JUNCTION CONNECTOR - MAIN BODY ECU)
-----	---

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

Result



TESTER CONNECTION	SWITCH CONDITION	MEASURED RESISTANCE	PROCEED TO
E76-6 (CANH) - E76-17 (CANL)	Engine switch off	1 Ω or higher	OK
E76-6 (CANH) - E76-17 (CANL)	Engine switch off	Below 1 Ω	NG
E76-6 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E76-17 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E76-6 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E76-17 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E76-6 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E76-17 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E76-6 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E76-17 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

OK

▼

39.

CONNECT CONNECTOR

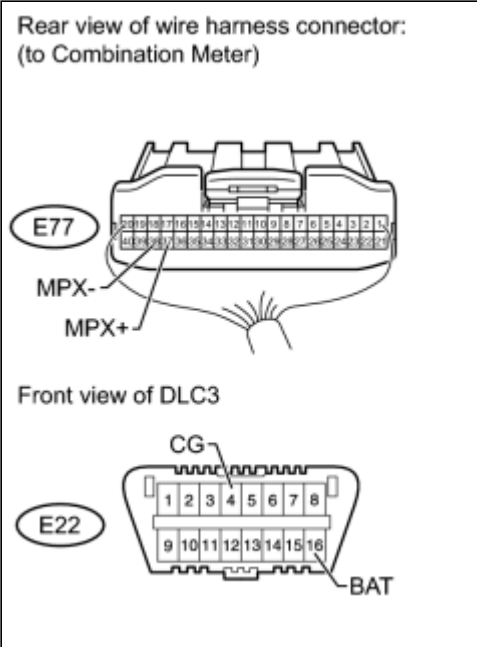
(a) Reconnect the E70 No. 10 junction connector connector.

NEXT

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40.

CHECK FOR SHORT IN CAN BUS WIRES (COMBINATION METER)



(a) Disconnect the E77 combination meter connector.

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

Result

TESTER CONNECTION	SWITCH CONDITION	MEASURED RESISTANCE	PROCEED TO
E77-37 (MPX+) - E77-38 (MPX-)	Engine switch off	1 Ω or higher	OK
E77-37 (MPX+) - E77-38 (MPX-)	Engine switch off	Below 1 Ω	NG
E77-37 (MPX+) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E77-38 (MPX-) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E77-37 (MPX+) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E77-38 (MPX-) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E77-37 (MPX+) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E77-38 (MPX-) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E77-37 (MPX+) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E77-38 (MPX-) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

OK

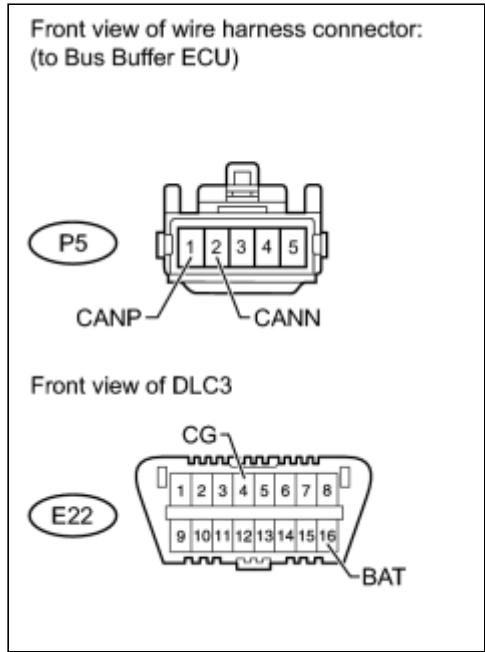
41.	CONNECT CONNECTOR
-----	-------------------

(a) Reconnect the E73 No. 9 junction connector connector.

NEXT

42.	CHECK FOR SHORT IN CAN BUS WIRES (BUS BUFFER ECU)
-----	---

(a) Disconnect the P5 bus buffer ECU connector.



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

Result

TESTER CONNECTION	SWITCH CONDITION	MEASURED RESISTANCE	PROCEED TO
P5-1 (CANP) - P5-2 (CANN)	Engine switch off	1 Ω or higher	OK
P5-1 (CANP) - P5-2 (CANN)	Engine switch off	Below 1 Ω	NG
P5-1 (CANP) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
P5-2 (CANN) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
P5-1 (CANP) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
P5-2 (CANN) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
P5-1 (CANP) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
P5-2 (CANN) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
P5-1 (CANP) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
P5-2 (CANN) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

OK

▼

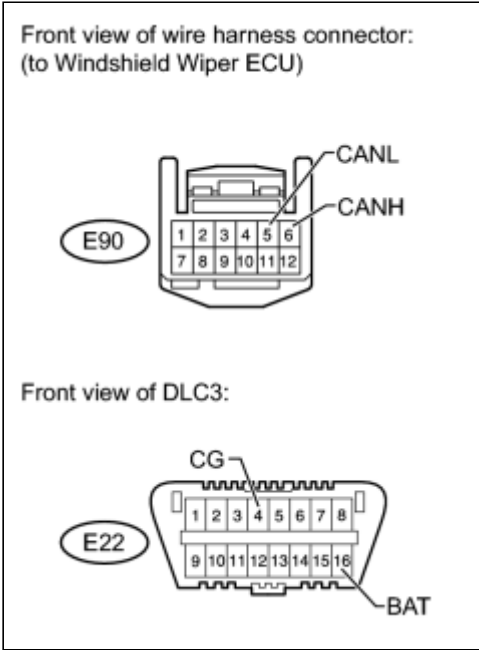
43.	CONNECT CONNECTOR
-----	-------------------

(a) Reconnect the E73 No. 9 junction connector connector.

NEXT

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44. CHECK FOR SHORT IN CAN BUS WIRES (WINDSHIELD WIPER ECU)



(a) Disconnect the E90 windshield wiper ECU connector.

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

Result

TESTER CONNECTION	SWITCH CONDITION	MEASURED RESISTANCE	PROCEED TO
E90-6 (CANH) - E90-5 (CANL)	Engine switch off	1 Ω or higher	OK
E90-6 (CANH) - E90-5 (CANL)	Engine switch off	Below 1 Ω	NG
E90-6 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E90-5 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E90-6 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E90-5 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E90-6 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E90-5 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E90-6 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E90-5 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

OK

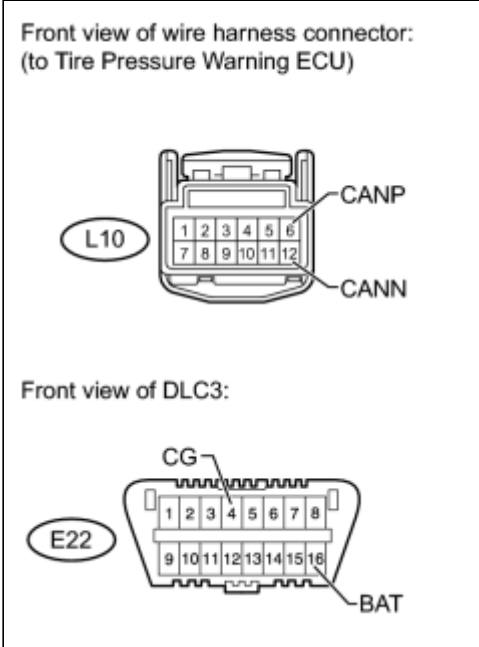
45. CONNECT CONNECTOR

(a) Reconnect the E73 No. 9 junction connector connector.

NEXT

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46. CHECK FOR SHORT IN CAN BUS WIRES (TIRE PRESSURE WARNING ECU)



(a) Disconnect the L10 tire pressure warning ECU connector.

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

Result

TESTER CONNECTION	SWITCH CONDITION	MEASURED RESISTANCE	PROCEED TO
L10-6 (CANP) - L10-12 (CANN)	Engine switch off	1 Ω or higher	OK
L10-6 (CANP) - L10-12 (CANN)	Engine switch off	Below 1 Ω	NG
L10-6 (CANP) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
L10-12 (CANN) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
L10-6 (CANP) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
L10-12 (CANN) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
L10-6 (CANP) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
L10-12 (CANN) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
L10-6 (CANP) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
L10-12 (CANN) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

OK

▼

47. CONNECT CONNECTOR

(a) Reconnect the E73 No. 9 junction connector connector.

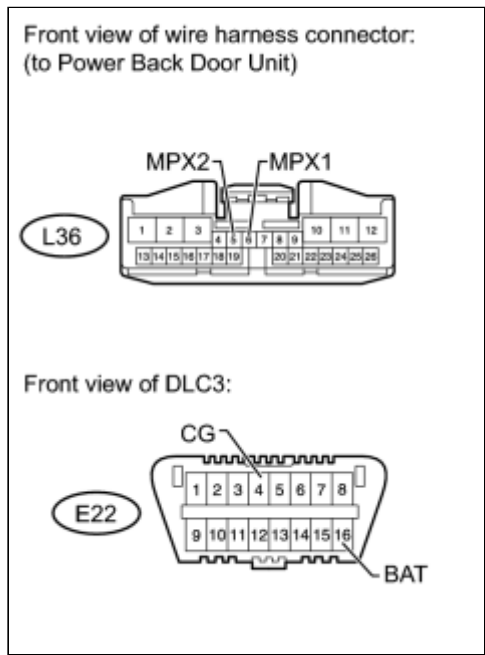
NEXT

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48.

CHECK FOR SHORT IN CAN BUS WIRES (POWER BACK DOOR UNIT)

(a) Disconnect the L36 power back door unit (power back door ECU) connector.



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

Result

TESTER CONNECTION	SWITCH CONDITION	MEASURED RESISTANCE	PROCEED TO
L36-6 (MPX1) - L36-5 (MPX2)	Engine switch off	1 Ω or higher	OK
L36-6 (MPX1) - L36-5 (MPX2)	Engine switch off	Below 1 Ω	NG
L36-6 (MPX1) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
L36-5 (MPX2) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
L36-6 (MPX1) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
L36-5 (MPX2) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
L36-6 (MPX1) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
L36-5 (MPX2) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
L36-6 (MPX1) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
L36-5 (MPX2) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

OK

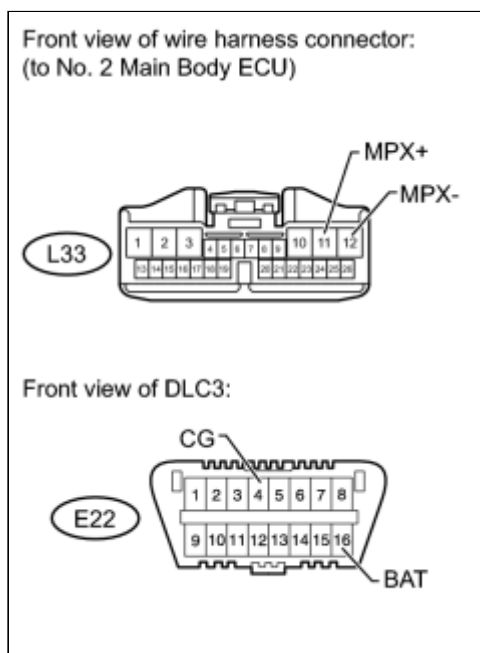
▼

49. CONNECT CONNECTOR

(a) Reconnect the E73 No. 9 junction connector connector.

NEXT**50. CHECK FOR SHORT IN CAN BUS WIRES (NO. 2 MAIN BODY ECU)**

(a) Disconnect the L33 No. 2 main body ECU connector.



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

Result

TESTER CONNECTION	SWITCH CONDITION	MEASURED RESISTANCE	PROCEED TO
L33-11 (MPX+) - L33-12 (MPX-)	Engine switch off	1 Ω or higher	OK
L33-11 (MPX+) - L33-12 (MPX-)	Engine switch off	Below 1 Ω	NG
L33-11 (MPX+) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
L33-12 (MPX-) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
L33-11 (MPX+) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
L33-12 (MPX-) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
L33-11 (MPX+) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
L33-12 (MPX-) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
L33-11 (MPX+) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
L33-12 (MPX-) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

OK

▼

51.

CONNECT CONNECTOR

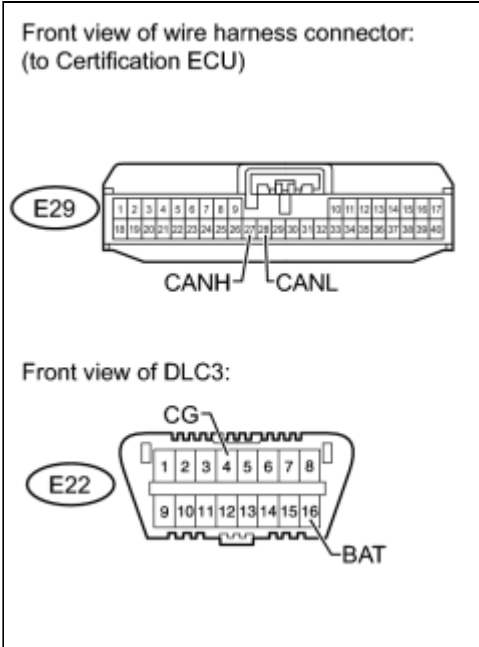
(a) Reconnect the E76 No. 8 junction connector connector.

NEXT

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52.

CHECK FOR SHORT IN CAN BUS WIRES (CERTIFICATION ECU (SMART KEY ECU ASSEMBLY))



(a) Disconnect the E29 certification ECU (smart key ECU) connector.

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

Result

TESTER CONNECTION	SWITCH CONDITION	MEASURED RESISTANCE	PROCEED TO
E29-27 (CANH) - E29-28 (CANL)	Engine switch off	1 Ω or higher	OK
E29-27 (CANH) - E29-28 (CANL)	Engine switch off	Below 1 Ω	NG
E29-27 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E29-28 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E29-27 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E29-28 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E29-27 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E29-28 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E29-27 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

TESTER CONNECTION	SWITCH CONDITION	MEASURED RESISTANCE	PROCEED TO
E29-28 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

OK

▼

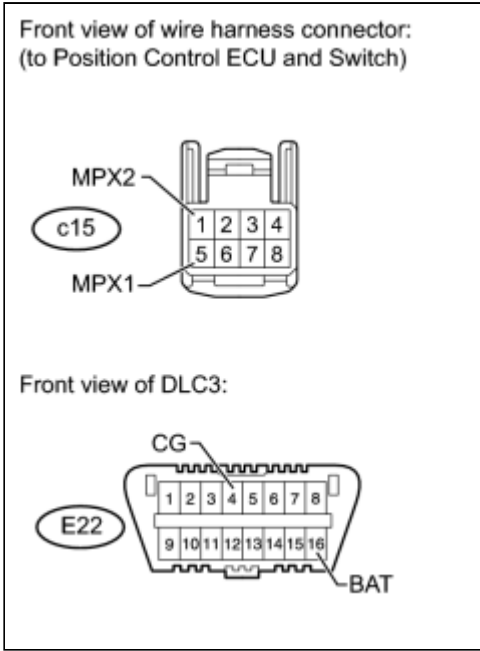
53.	CONNECT CONNECTOR
-----	-------------------

(a) Reconnect the E76 No. 8 junction connector connector.

NEXT

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54.	CHECK FOR SHORT IN CAN BUS WIRES (POSITION CONTROL ECU AND SWITCH)
-----	--



(a) Disconnect the c15 position control ECU and switch connector.

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

Result

TESTER CONNECTION	SWITCH CONDITION	MEASURED RESISTANCE	PROCEED TO
c15-5 (MPX1) - c15-1 (MPX2)	Engine switch off	1 Ω or higher	OK
c15-5 (MPX1) - c15-1 (MPX2)	Engine switch off	Below 1 Ω	NG
c15-5 (MPX1) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
c15-1 (MPX2) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
c15-5 (MPX1) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
c15-1 (MPX2) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
c15-5 (MPX1) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK

TESTER CONNECTION	SWITCH CONDITION	MEASURED RESISTANCE	PROCEED TO
c15-1 (MPX2) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
c15-5 (MPX1) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
c15-1 (MPX2) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

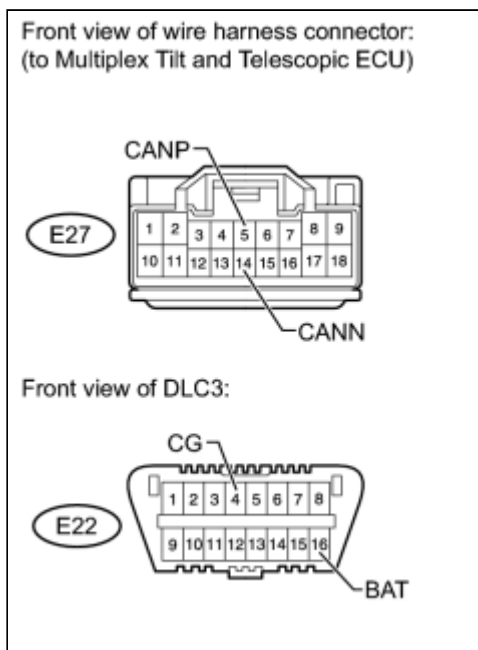
OK

55.	CONNECT CONNECTOR
------------	--------------------------

(a) Reconnect the E76 No. 8 junction connector connector.

NEXT

56.	CHECK FOR SHORT IN CAN BUS WIRES (MULTIPLEX TILT AND TELESCOPIC ECU)
------------	---



(a) Disconnect the E27 multiplex tilt and telescopic ECU connector.

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

Result

TESTER CONNECTION	SWITCH CONDITION	MEASURED RESISTANCE	PROCEED TO
E27-5 (CANP) - E27-14 (CANN)	Engine switch off	1 Ω or higher	OK
E27-5 (CANP) - E27-14 (CANN)	Engine switch off	Below 1 Ω	NG
E27-5 (CANP) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E27-14 (CANN) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E27-5 (CANP) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG

TESTER CONNECTION	SWITCH CONDITION	MEASURED RESISTANCE	PROCEED TO
E27-14 (CANN) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E27-5 (CANP) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E27-14 (CANN) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E27-5 (CANP) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E27-14 (CANN) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

OK

▼

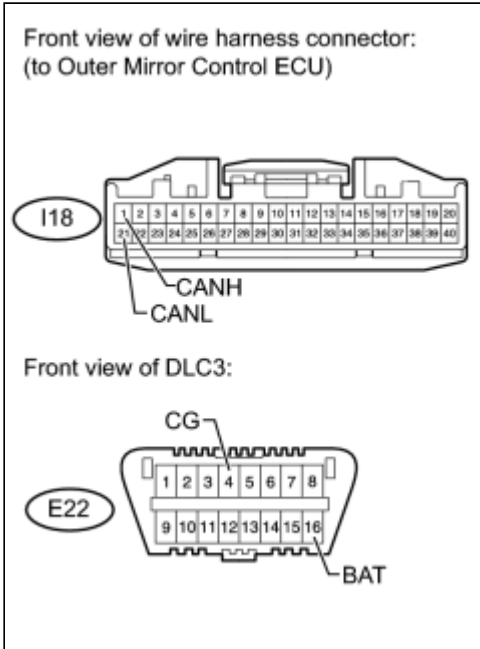
57.	CONNECT CONNECTOR
-----	-------------------

(a) Reconnect the E76 No. 8 junction connector connector.

NEXT

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58.	CHECK FOR SHORT IN CAN BUS WIRES (OUTER MIRROR CONTROL ECU)
-----	---



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

Result

TESTER CONNECTION	SWITCH CONDITION	MEASURED RESISTANCE	PROCEED TO
I18-1 (CANH) - I18-21 (CANL)	Engine switch off	1 Ω or higher	OK
I18-1 (CANH) - I18-21 (CANHL)	Engine switch off	Below 1 Ω	NG
I18-1 (CANH) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK

TESTER CONNECTION	SWITCH CONDITION	MEASURED RESISTANCE	PROCEED TO
I18-21 (CANL) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
I18-1 (CANH) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
I18-21 (CANL) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
I18-1 (CANH) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
I18-21 (CANL) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
I18-1 (CANH) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
I18-21 (CANL) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

OK

▼

59.

CONNECT CONNECTOR

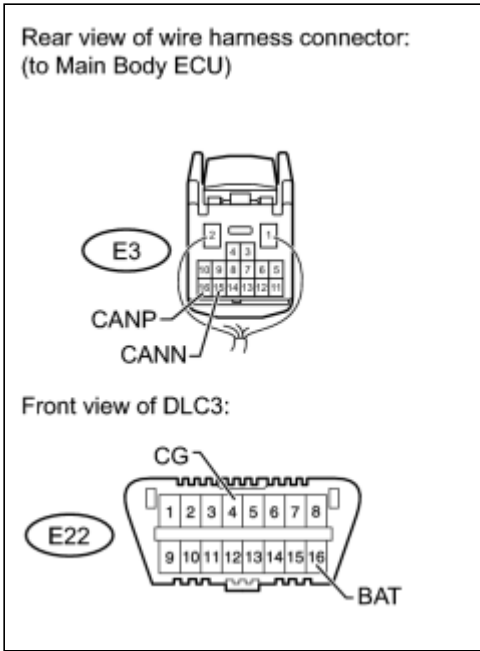
(a) Reconnect the E76 No. 8 junction connector connector.

NEXT

▼

60.

CHECK FOR SHORT IN CAN BUS WIRES (MAIN BODY ECU)



(a) Disconnect the E3 main body ECU (cowl side junction block LH) connector.

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

Result

TESTER CONNECTION	SWITCH CONDITION	MEASURED RESISTANCE	PROCEED TO
E3-16 (CANP) - E3-15 (CANN)	Engine switch off	1 Ω or higher	OK

TESTER CONNECTION	SWITCH CONDITION	MEASURED RESISTANCE	PROCEED TO
E3-16 (CANP) - E3-15 (CANN)	Engine switch off	Below 1 Ω	NG
E3-16 (CANP) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E3-15 (CANN) - E22-4 (CG)	Engine switch off	1 Ω or higher	OK
E3-16 (CANP) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E3-15 (CANN) - E22-4 (CG)	Engine switch off	Below 1 Ω	NG
E3-16 (CANP) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E3-15 (CANN) - E22-16 (BAT)	Engine switch off	1 Ω or higher	OK
E3-16 (CANP) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG
E3-15 (CANN) - E22-16 (BAT)	Engine switch off	Below 1 Ω	NG

OK

▼

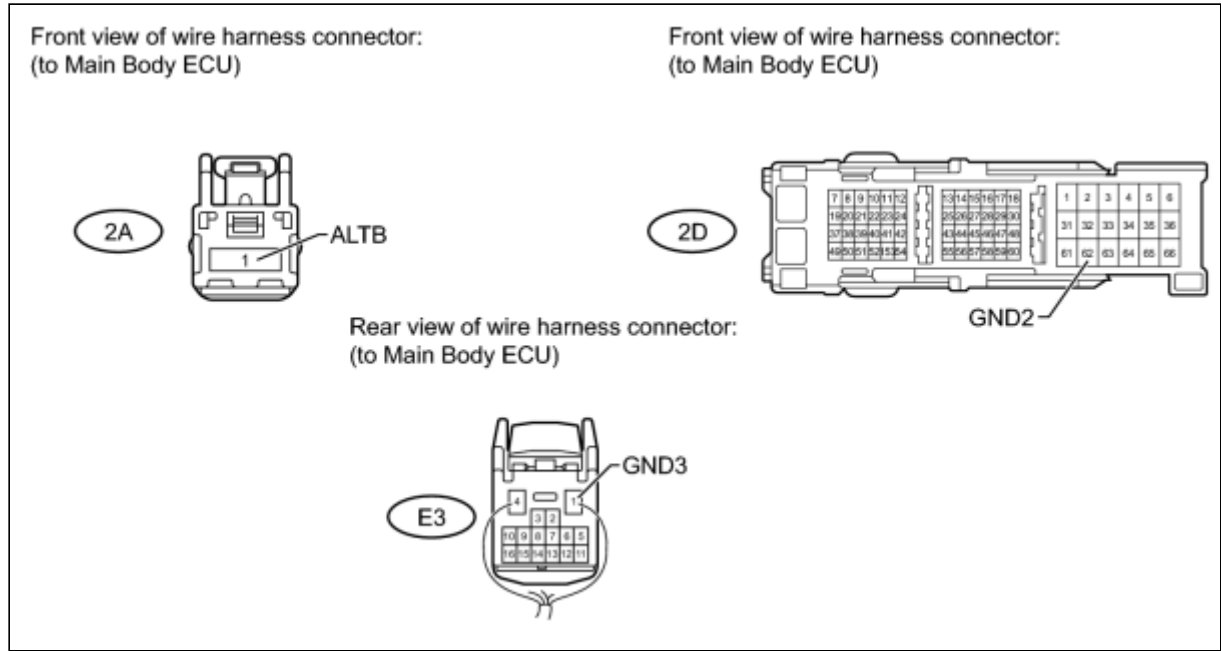
61.

CHECK HARNESS AND CONNECTOR (MAIN BODY ECU - BATTERY AND BODY GROUND)

(a) Connect the cable to the negative (-) battery terminal.

NOTICE:

When disconnecting the cable, some systems need to be initialized after the cable is reconnected



(b) Disconnect the 2A, 2D and E3 main body ECU (cowl side junction block LH) connectors.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
2D-62 (GND2) - Body ground	Always	Below 1 Ω

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E3-1 (GND3) - Body ground		

(d) Measure the voltage according to the value(s) in the table below.

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
2A-1 (ALTB) - Body ground	Always	11 to 14 V

