

Last Modified: 11-27-2007		1.6 U
Service Category: Power Source/Network	Section: Networking	
Model Year: 2008	Model: LX570	Doc ID: RM000001RSQ00LX
Title: NETWORKING: CAN COMMUNICATION SYSTEM: TERMINALS OF ECU (2008 LX570)		

TERMINALS OF ECU

HINT:

Operating the engine switch, any switches or any doors triggers related ECU and sensor communication with the CAN, which causes resistance variation.

1. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

- (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.

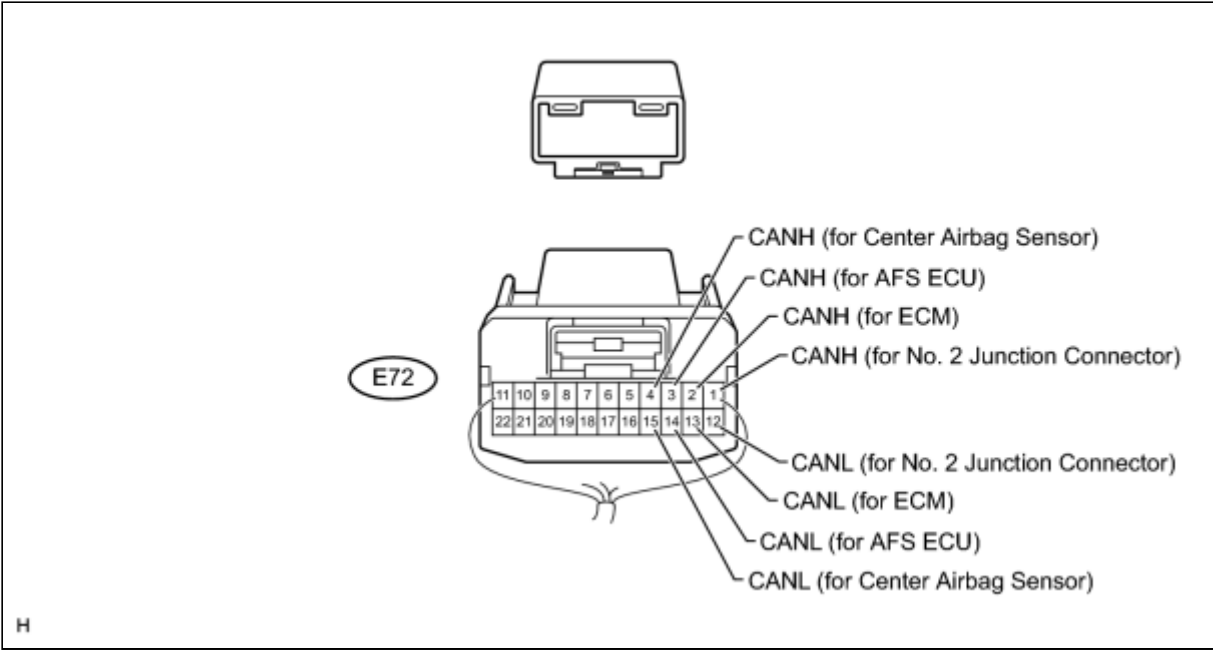
NOTICE:

- Before measuring the resistance, leave the vehicle for at least 1 minute and do not operate the engine switch, any switches or doors. If doors need to be opened in order to check connectors, open the doors and leave them open.
 - 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.

2. JUNCTION CONNECTOR

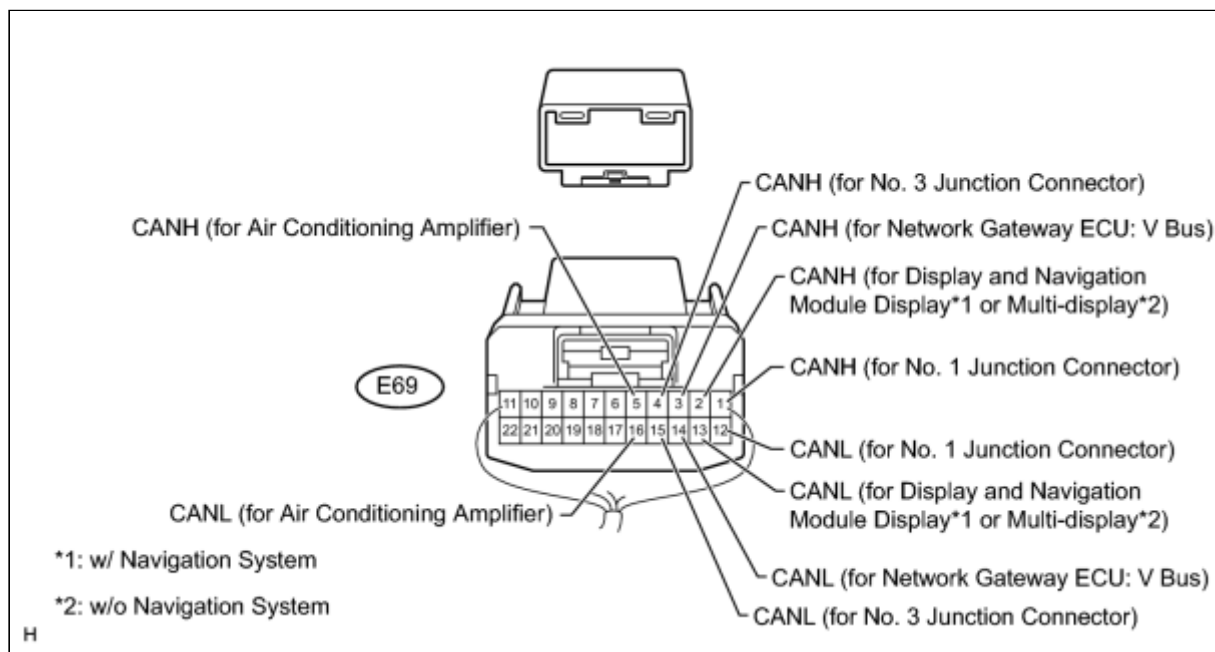
- (a) NO. 1 JUNCTION CONNECTOR



NO. 1 JUNCTION CONNECTOR	WIRING COLOR	CONNECT TO
E72-1 (CANH)	Y	No. 2 junction connector
E72-12 (CANL)	B	

NO. 1 JUNCTION CONNECTOR	WIRING COLOR	CONNECT TO
E72-2 (CANH)	P	ECM
E72-13 (CANL)	B	
E72-3 (CANH)	LG	AFS ECU (headlight swivel ECU)
E72-14 (CANL)	B	
E72-4 (CANH)	GR	Center airbag sensor
E72-15 (CANL)	B	

(b) NO. 2 JUNCTION CONNECTOR

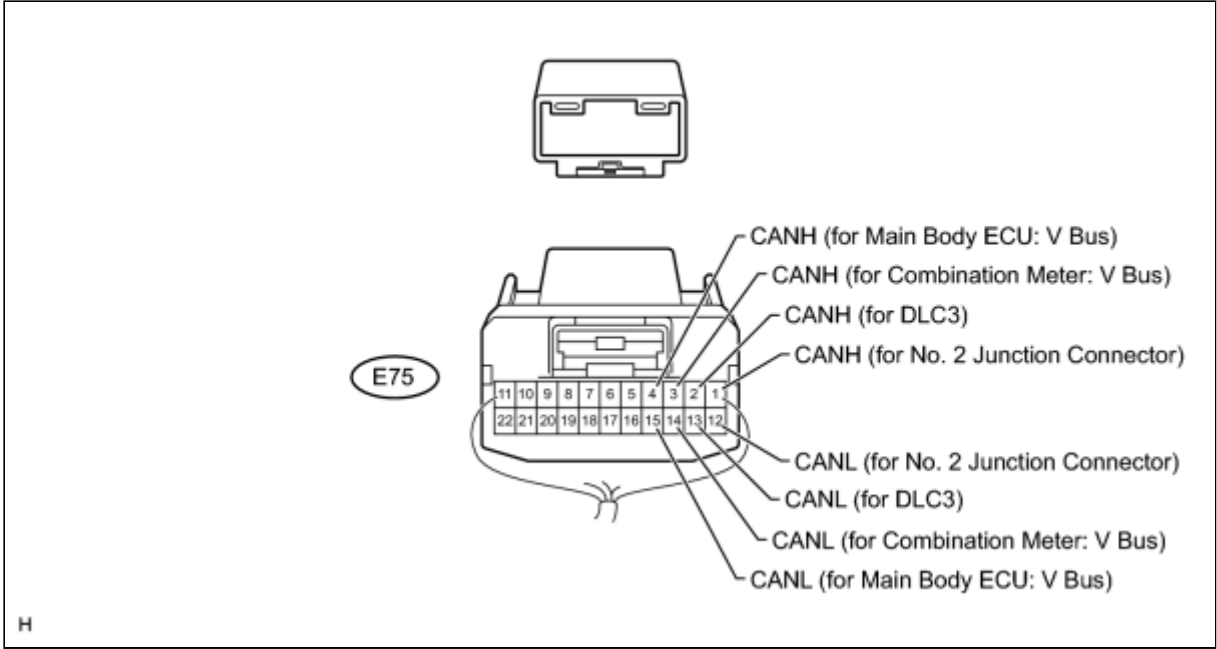


NO. 2 JUNCTION CONNECTOR	WIRING COLOR	CONNECT TO
E69-1 (CANH)	Y	No. 1 junction connector
E69-12 (CANL)	B	
E69-2 (CANH)	P	Display and navigation module display*1 Multi-display*2
E69-13 (CANL)	B	
E69-3 (CANH)	BR	Network gateway ECU (V bus)
E69-14 (CANL)	B	
E69-4 (CANH)	W	No. 3 junction connector
E69-15 (CANL)	B	
E69-5 (CANH)	G	Air conditioning amplifier
E69-16 (CANL)	B	

*1: w/ Navigation System

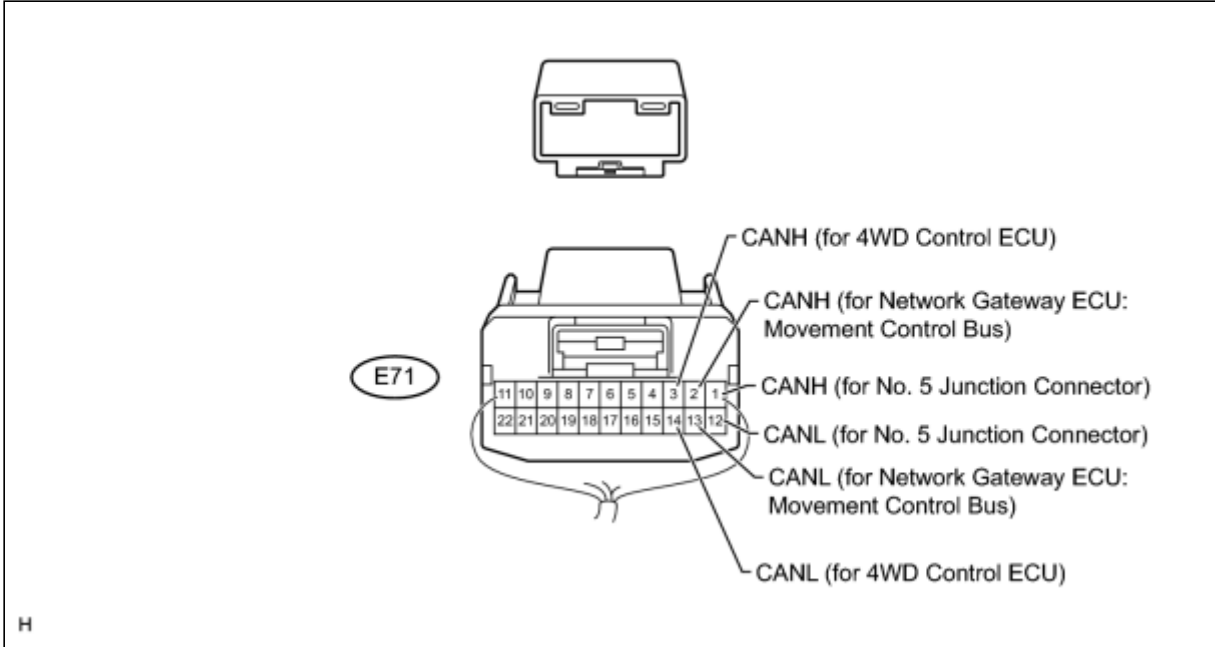
*2: w/o Navigation System

(c) NO. 3 JUNCTION CONNECTOR



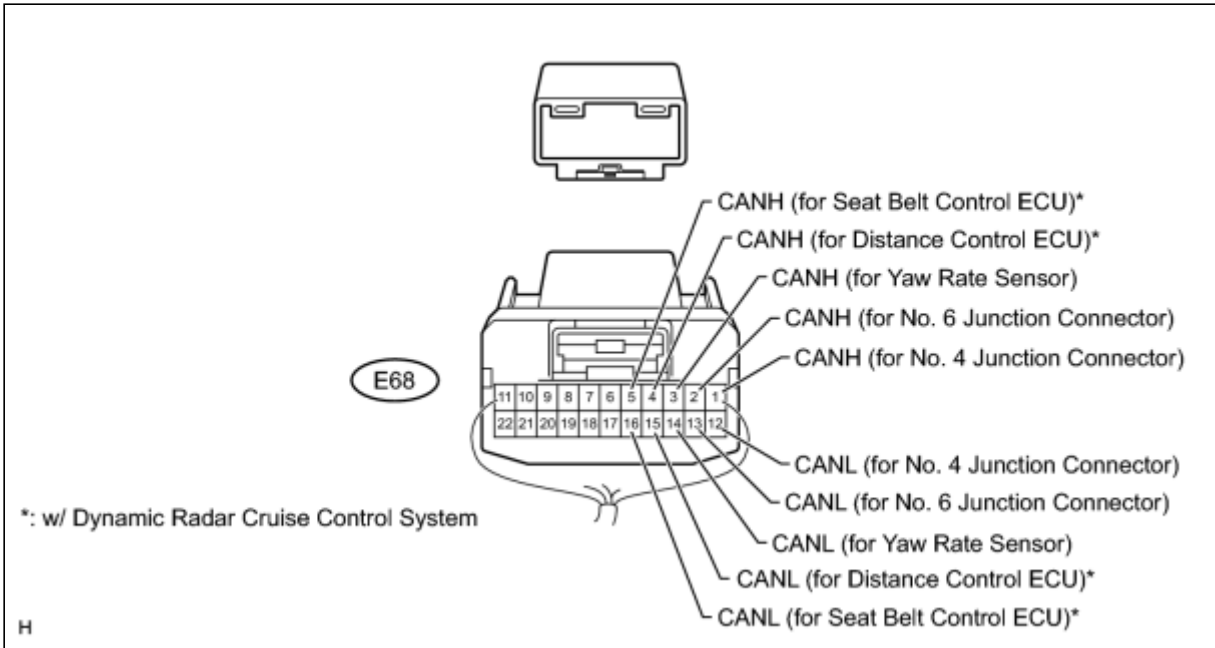
NO. 3 JUNCTION CONNECTOR	WIRING COLOR	CONNECT TO
E75-1 (CANH)	W	No. 2 junction connector
E75-12 (CANL)	B	
E75-2 (CANH)	G	DLC3
E75-13 (CANL)	B	
E75-3 (CANH)	V	Combination meter (V bus)
E75-14 (CANL)	B	
E75-4 (CANH)	SB	Main body ECU (cowl side junction block LH) (V bus)
E75-15 (CANL)	B	

(d) NO. 4 JUNCTION CONNECTOR



NO. 4 JUNCTION CONNECTOR	WIRING COLOR	CONNECT TO
E71-1 (CANH)	W	No. 5 junction connector
E71-12 (CANL)	L	
E71-2 (CANH)	SB	Network gateway ECU (movement control bus)
E71-13 (CANL)	L	
E71-3 (CANH)	P	4WD control ECU
E71-14 (CANL)	L	

(e) NO. 5 JUNCTION CONNECTOR

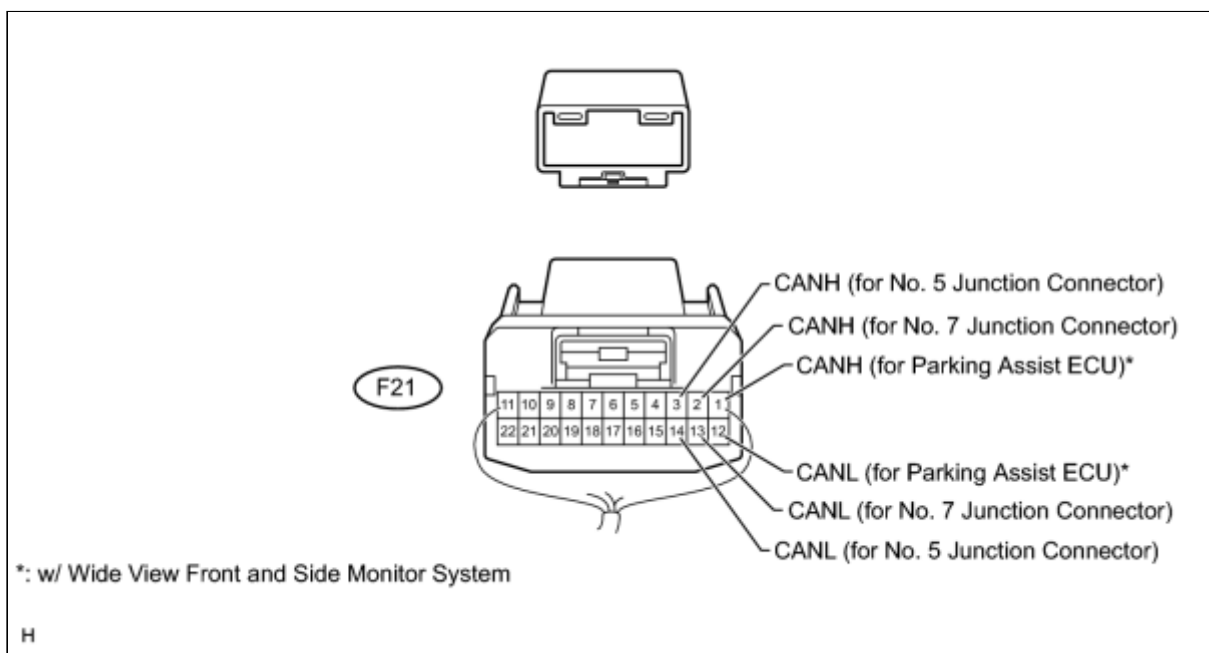


NO. 5 JUNCTION CONNECTOR	WIRING COLOR	CONNECT TO
E68-1 (CANH)	W	No. 4 junction connector
E68-12 (CANL)	L	

NO. 5 JUNCTION CONNECTOR	WIRING COLOR	CONNECT TO
E68-2 (CANH)	Y	No. 6 junction connector
E68-13 (CANL)	L	
E68-3 (CANH)	BR	Yaw rate sensor
E68-14 (CANL)	L	
E68-4 (CANH)*	SB	Distance control ECU
E68-15 (CANL)*	L	
E68-5 (CANH)*	G	Seat belt control ECU
E68-16 (CANL)*	L	

*: w/ Dynamic Radar Cruise Control System

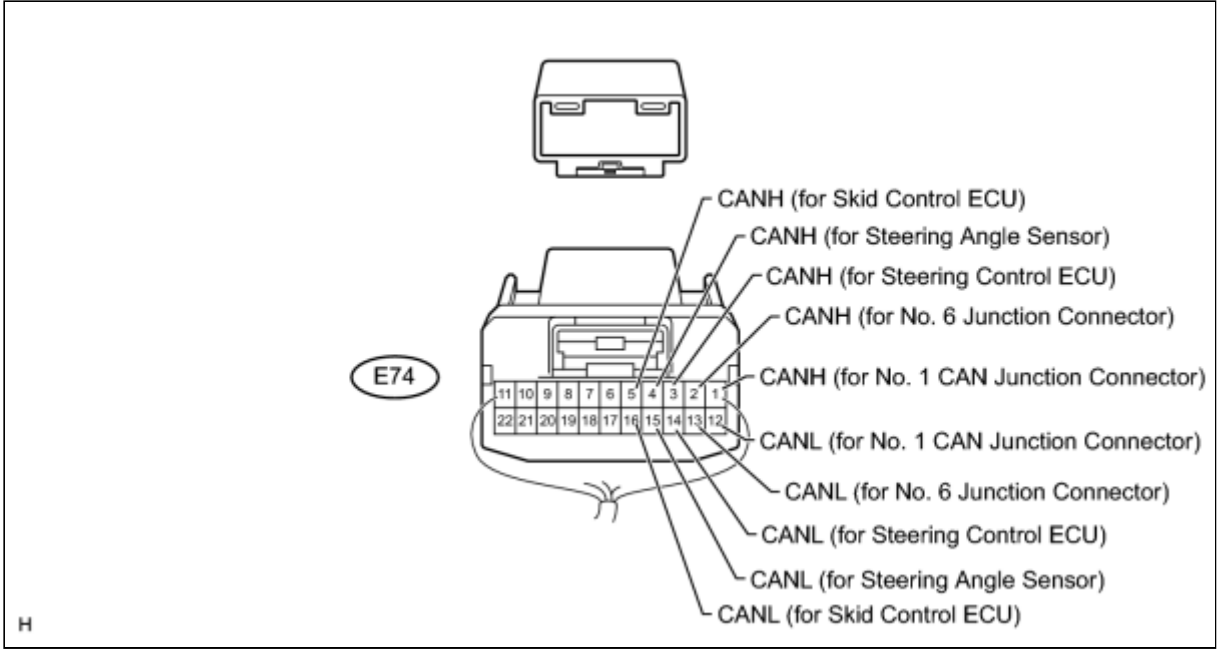
(f) NO. 6 JUNCTION CONNECTOR



NO. 6 JUNCTION CONNECTOR	WIRING COLOR	CONNECT TO
F21-1 (CANH)*	V	Parking assist ECU
F21-12 (CANL)*	L	
F21-2 (CANH)	Y	No. 7 junction connector
F21-13 (CANL)	L	
F21-3 (CANH)	Y	No. 5 junction connector
F21-14 (CANL)	L	

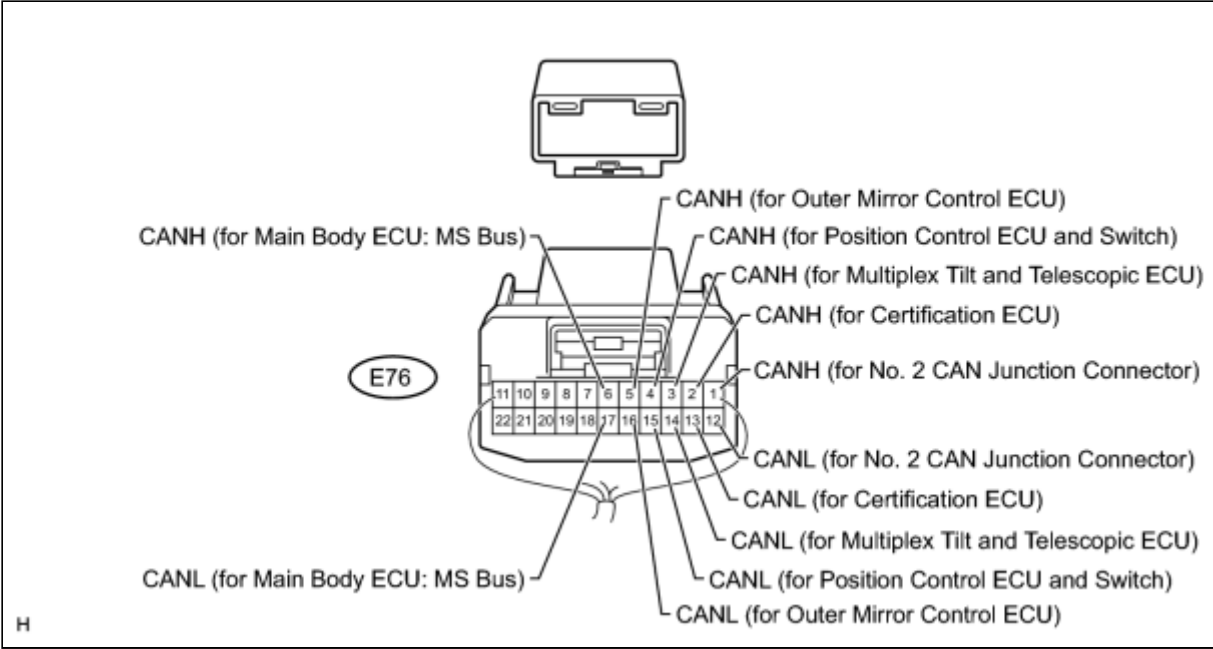
*: w/ Wide View Front and Side Monitor System

(g) NO. 7 JUNCTION CONNECTOR



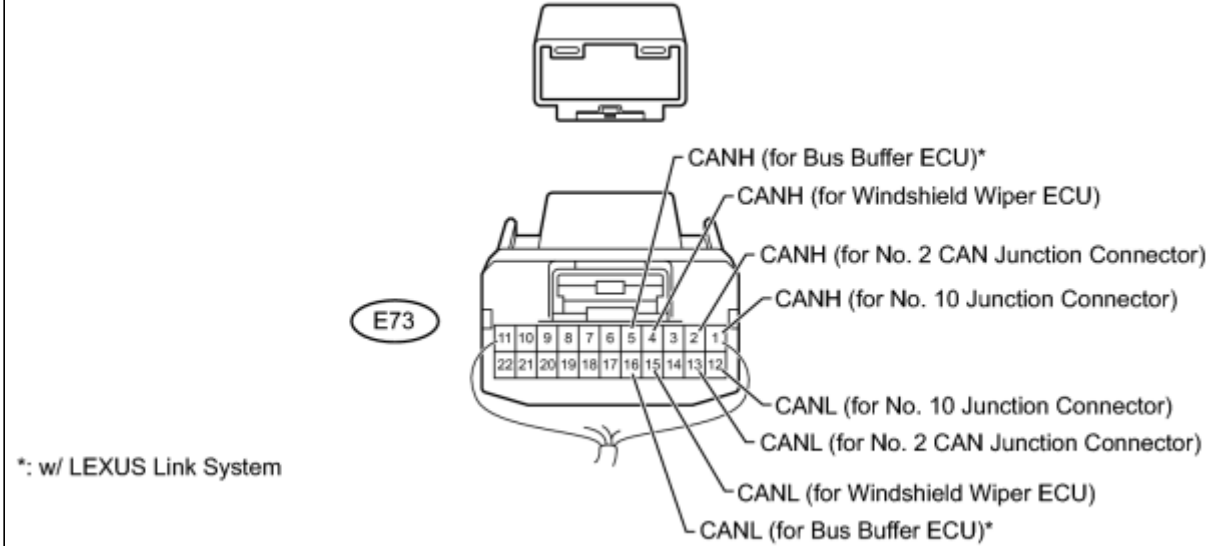
NO. 7 JUNCTION CONNECTOR	WIRING COLOR	CONNECT TO
E74-1 (CANH)	W	No. 1 CAN junction connector
E74-12 (CANL)	L	
E74-2 (CANH)	Y	No. 6 junction connector
E74-13 (CANL)	L	
E74-3 (CANH)	LG	Steering control ECU
E74-14 (CANL)	L	
E74-4 (CANH)	GR	Steering angle sensor
E74-15 (CANL)	L	
E74-5 (CANH)	V	Master cylinder solenoid (skid control ECU)
E74-16 (CANL)	L	

(h) NO. 8 JUNCTION CONNECTOR



NO. 8 JUNCTION CONNECTOR	WIRING COLOR	CONNECT TO
E76-1 (CANH)	W	No. 2 CAN junction connector
E76-12 (CANL)	R	
E76-2 (CANH)	LG	Certification ECU (smart key ECU)
E76-13 (CANL)	R	
E76-3 (CANH)	P	Multiplex tilt and telescopic ECU
E76-14 (CANL)	R	
E76-4 (CANH)	V	Position control ECU and switch
E76-15 (CANL)	R	
E76-5 (CANH)	BR	Outer mirror control ECU
E76-16 (CANL)	R	
E76-6 (CANH)	GR	Main body ECU (cowl side junction block LH) (MS bus)
E76-17 (CANL)	R	

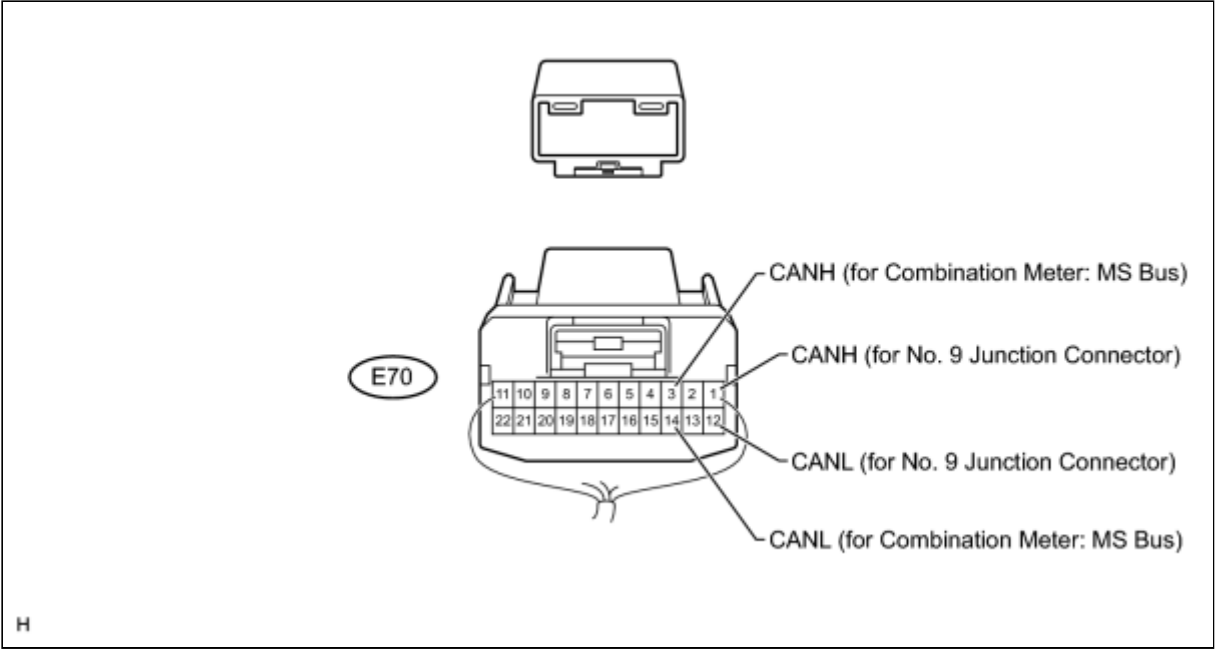
(i) NO. 9 JUNCTION CONNECTOR



NO. 9 JUNCTION CONNECTOR	WIRING COLOR	CONNECT TO
E73-1 (CANH)	W	No. 10 junction connector
E73-12 (CANL)	R	
E73-2 (CANH)	Y	No. 2 CAN junction connector
E73-13 (CANL)	R	
E73-4 (CANH)	LG	Windshield wiper ECU
E73-15 (CANL)	R	
E73-5 (CANH)*	G	Bus buffer ECU
E73-16 (CANL)*	R	

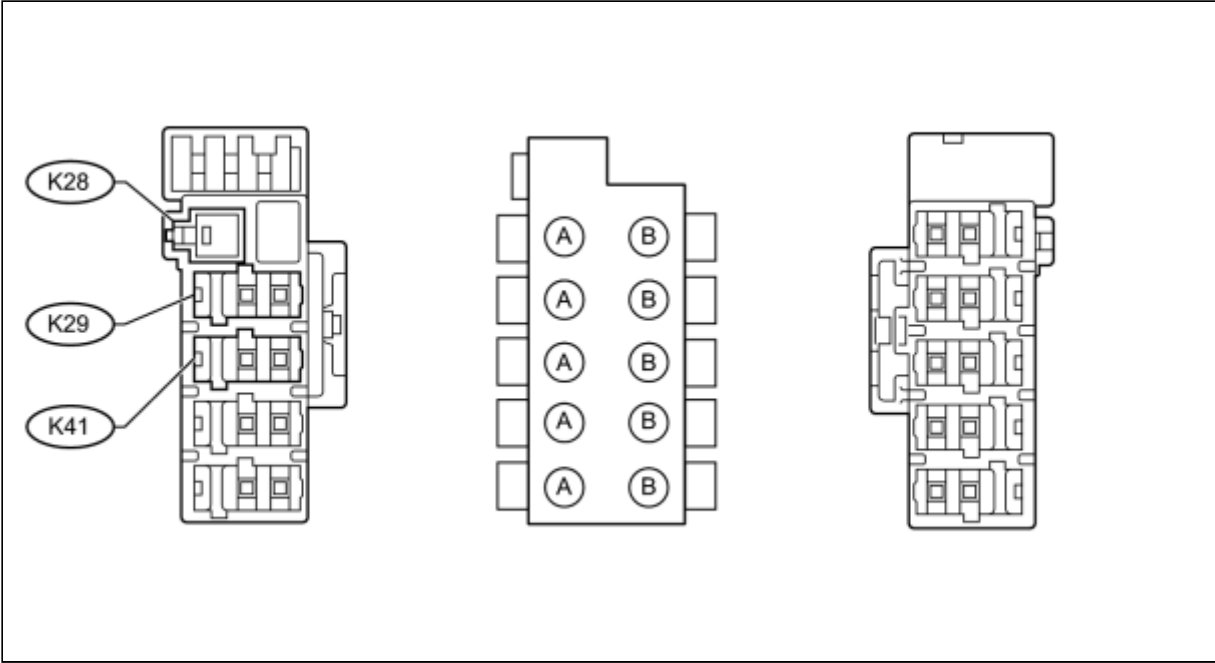
*: w/ LEXUS Link System

(j) NO. 10 JUNCTION CONNECTOR



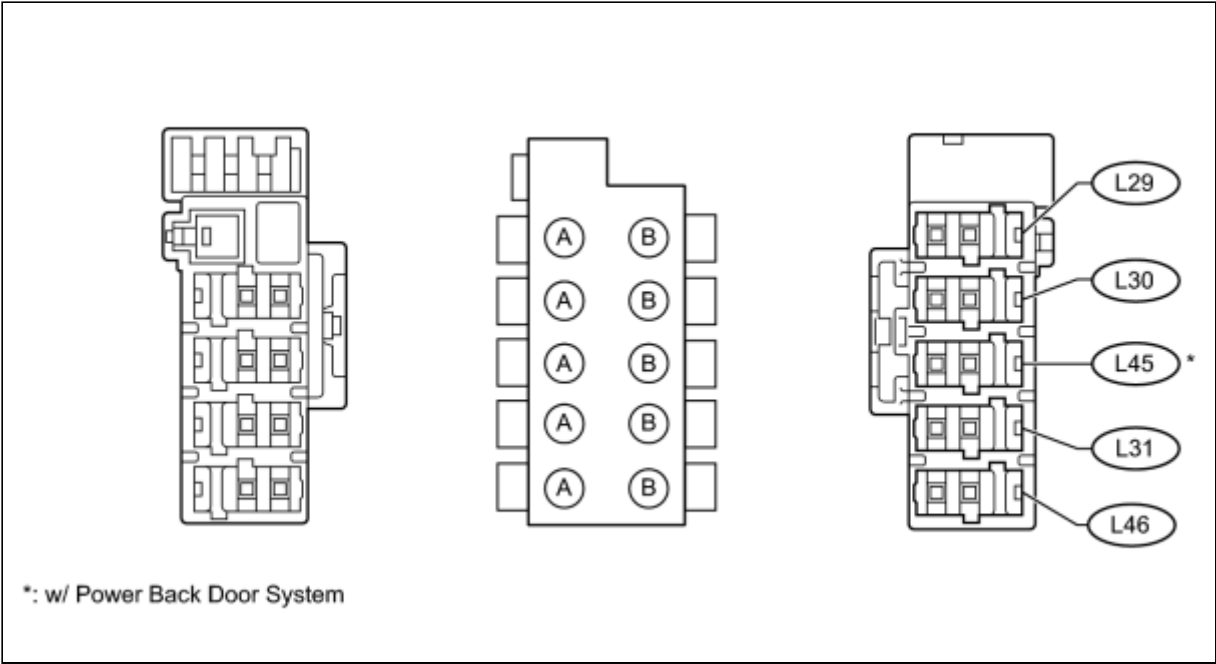
NO. 10 JUNCTION CONNECTOR	WIRING COLOR	CONNECT TO
E70-1 (CANH)	W	No. 9 Junction Connector
E70-12 (CANL)	R	
E70-3 (CANH)	LG	Combination Meter (MS bus)
E70-14 (CANL)	R	

(k) NO. 1 CAN JUNCTION CONNECTOR



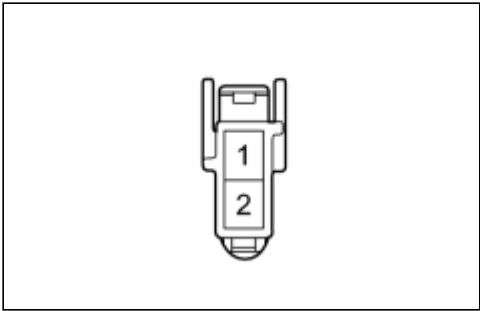
JUNCTION CONNECTOR A SIDE	WIRING COLOR (CANH SIDE)	WIRING COLOR (CANL SIDE)
Body ground (K28)	-	W-B
No. 7 junction connector (K29)	W	L
Suspension control ECU (K41)	V	L

(l) NO. 2 CAN JUNCTION CONNECTOR



JUNCTION CONNECTOR B SIDE	WIRING COLOR (CANH SIDE)	WIRING COLOR (CANL SIDE)
No. 8 junction connector (L29)	W	R
No. 9 junction connector (L30)	Y	R
Tire pressure warning ECU (L31)	G	R
Power back door ECU (L45)*	V	R
No. 2 main body ECU (L46)	LG	R

*: w/ Power Back Door System



3. TERMINALS OF CONNECTORS FOR JUNCTION CONNECTOR (CAN JUNCTION CONNECTOR)

TERMINAL NO.	SYMBOL
1	CANH
2	CANL

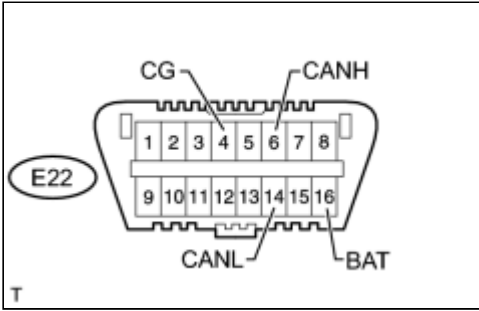
4. CHECK DLC3

- (a) Disconnect the cable from the negative (-) battery terminal before measuring the resistances of the main wire and the branch wire.

NOTICE:

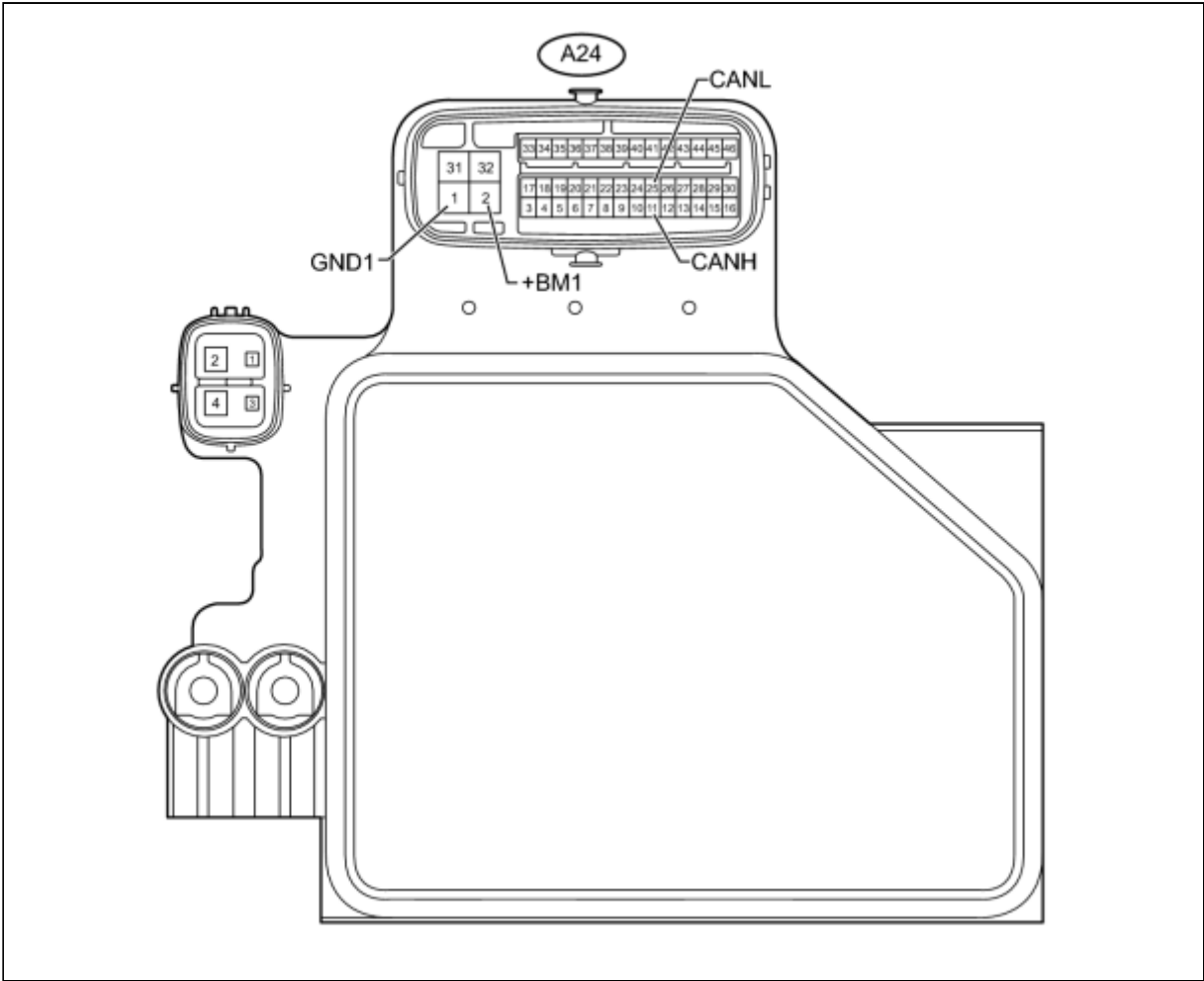
When disconnecting the cable, some systems need to be initialized after the cable is reconnected INFO.

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



TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
E22-6 (CANH) - E22-14 (CANL)	G - B	Engine switch off	54 to 69 Ω
E22-6 (CANH) - E22-4 (CG)	G - W-B	Engine switch off	200 Ω or higher
E22-14 (CANL) - E22-4 (CG)	B - W-B	Engine switch off	200 Ω or higher
E22-6 (CANH) - E22-16 (BAT)	G - O	Engine switch off	6 kΩ or higher
E22-14 (CANL) - E22-16 (BAT)	B - O	Engine switch off	6 kΩ or higher

5. CHECK MASTER CYLINDER SOLENOID (SKID CONTROL ECU)

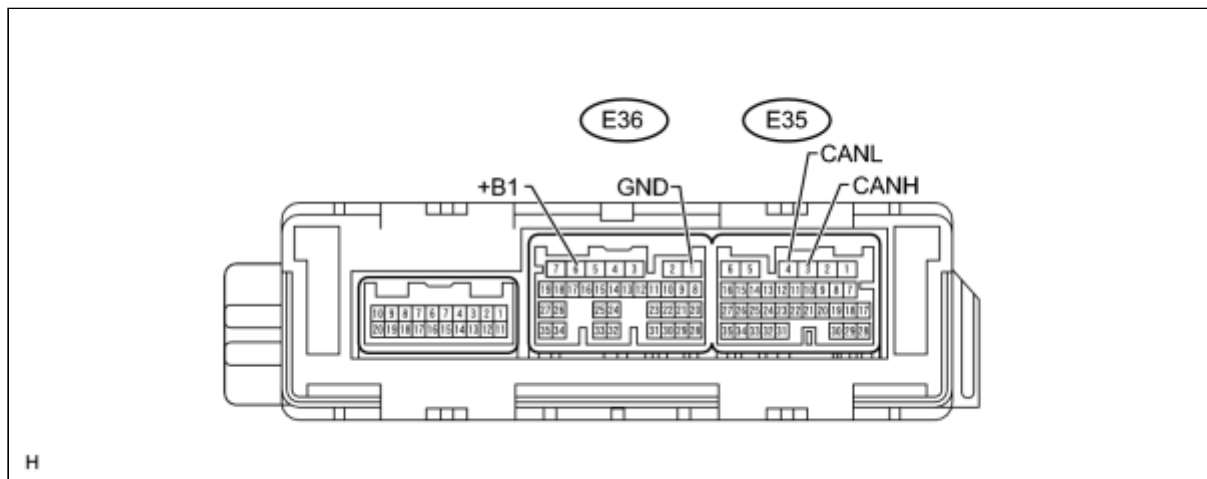


- (a) Disconnect the A24 ECU connector.
- (b) Measure the resistance according to the value(s) in the table below.

TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
A24-11 (CANH) - A24-25 (CANL)	V - L	Engine switch off	54 to 69 Ω

TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
A24-11 (CANH) - A24-1 (GND1)	V - W-B	Engine switch off	200 Ω or higher
A24-25 (CANL) - A24-1 (GND1)	L - W-B	Engine switch off	200 Ω or higher
A24-11 (CANH) - A24-2 (+BM1)	V - B	Engine switch off	6 k Ω or higher
A24-25 (CANL) - A24-2 (+BM1)	L - B	Engine switch off	6 k Ω or higher

6. CHECK AIR CONDITIONING AMPLIFIER

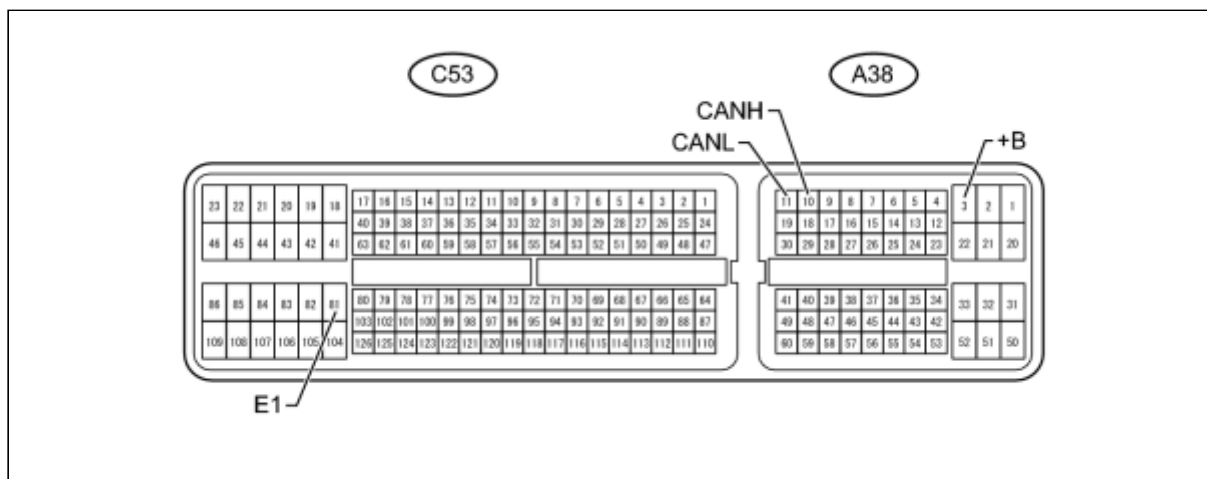


(a) Disconnect the E35 and E36 amplifier connectors.

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

TERMINAL NO. (SYMBOL)	WIRING COLOR	CONDITION	SPECIFIED CONDITION
E35-3 (CANH) - E35-4 (CANL)	G - B	Engine switch off	54 to 69 Ω
E35-3 (CANH) - E36-1 (GND)	G - W-B	Engine switch off	200 Ω or higher
E35-4 (CANL) - E36-1 (GND)	B - W-B	Engine switch off	200 Ω or higher
E35-3 (CANH) - E36-6 (+B1)	G - R	Engine switch off	6 k Ω or higher
E35-4 (CANL) - E36-6 (+B1)	B - R	Engine switch off	6 k Ω or higher

7. CHECK ECM

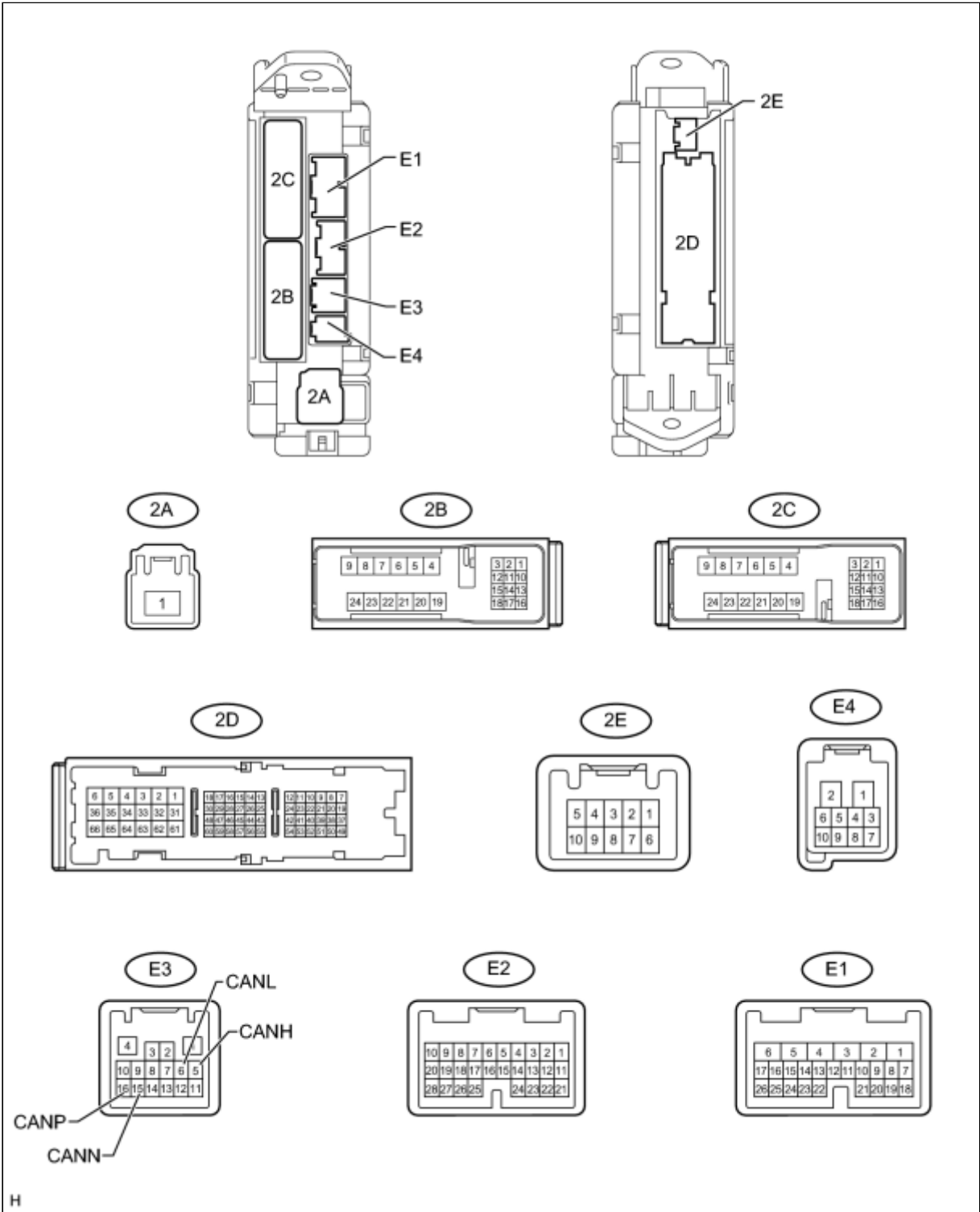


(a) Disconnect the A38 and C53 ECM connectors.

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

TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
A38-10 (CANH) - A38-11 (CANL)	P - B	Engine switch off	108 to 132 Ω
A38-10 (CANH) - C53-81 (E1)	P - W-B	Engine switch off	200 Ω or higher
A38-11 (CANL) - C53-81 (E1)	B - W-B	Engine switch off	200 Ω or higher
A38-10 (CANH) - A38-3 (+B)	P - B	Engine switch off	6 kΩ or higher
A38-11 (CANL) - A38-3 (+B)	B - B	Engine switch off	6 kΩ or higher

8. CHECK MAIN BODY ECU (COWL SIDE JUNCTION BLOCK LH)



- (a) Disconnect the E3 ECU connector.
- (b) Disconnect the 2A and 2D junction connectors.

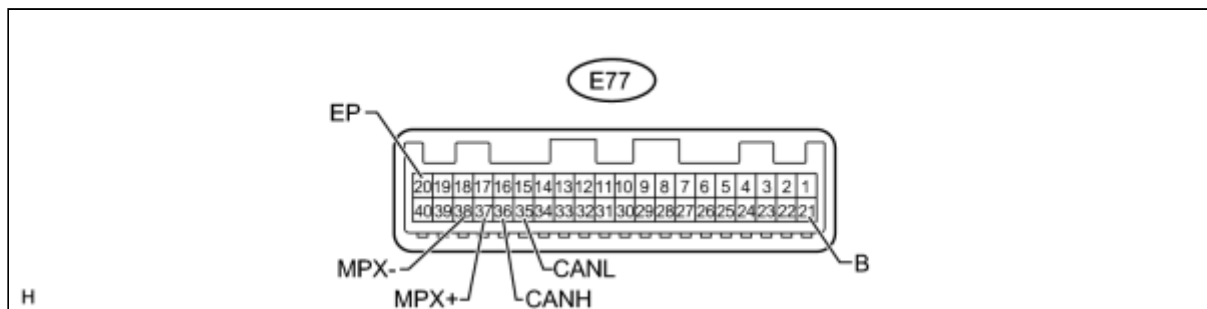
(c) Measure the resistance according to the value(s) in the table below.

TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
E3-5 (CANH) - E3-6 (CANL)*1	SB - B	Engine switch off	54 to 69 Ω
E3-5 (CANH) - 2D-62 (GND2)*1	SB - W-B	Engine switch off	200 Ω or higher
E3-6 (CANL) - 2D-62 (GND2)*1	B - W-B	Engine switch off	200 Ω or higher
E3-5 (CANH) - 2A-1 (ALTB)*1	SB - B	Engine switch off	6 k Ω or higher
E3-6 (CANL) - 2A-1 (ALTB)*1	B - B	Engine switch off	6 k Ω or higher
E3-16 (CANP) - E3-15 (CANN)*2	GR - R	Engine switch off	108 to 132 Ω
E3-16 (CANP) - 2D-62 (GND2)*2	GR - W-B	Engine switch off	200 Ω or higher
E3-15 (CANN) - 2D-62 (GND2)*2	R - W-B	Engine switch off	200 Ω or higher
E3-16 (CANP) - 2A-1 (ALTB)*2	GR - B	Engine switch off	6 k Ω or higher
E3-15 (CANN) - 2A-1 (ALTB)*2	R - B	Engine switch off	6 k Ω or higher

*1: For V bus

*2: For MS bus

9. CHECK COMBINATION METER



(a) Disconnect the E77 meter connector.

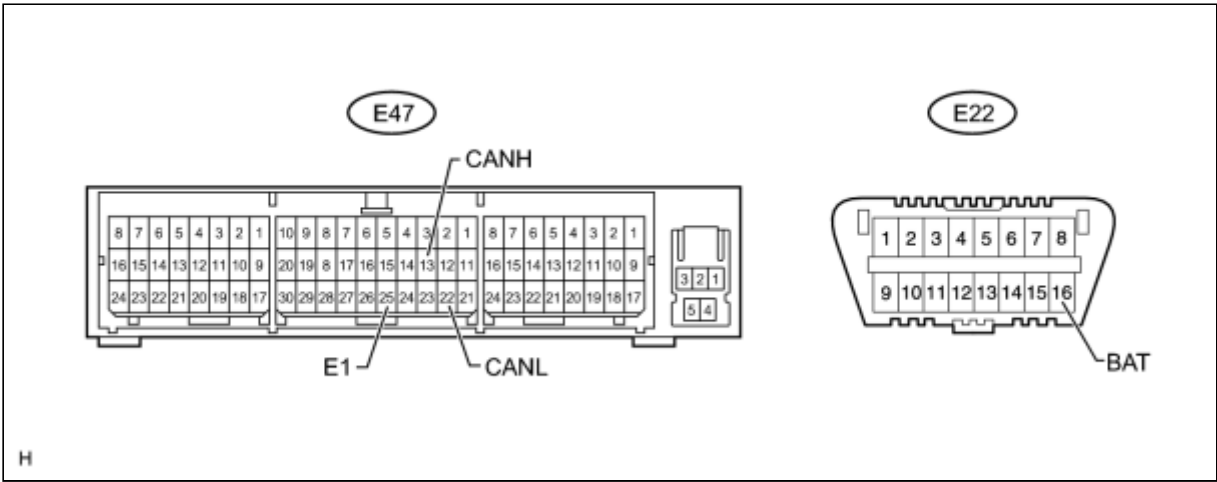
(b) Measure the resistance according to the value(s) in the table below.

TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
E77-36 (CANH) - E77-35 (CANL)*1	V - B	Engine switch off	108 to 132 Ω
E77-36 (CANH) - E77-20 (EP)*1	V - W-B	Engine switch off	200 Ω or higher
E77-35 (CANL) - E77-20 (EP)*1	B - W-B	Engine switch off	200 Ω or higher
E77-36 (CANH) - E77-21 (B)*1	V - R	Engine switch off	6 k Ω or higher
E77-35 (CANL) - E77-21 (B)*1	B - R	Engine switch off	6 k Ω or higher
E77-37 (MPX+) - E77-38 (MPX-)*2	LG - R	Engine switch off	108 to 132 Ω
E77-37 (MPX+) - E77-20 (EP)*2	LG - W-B	Engine switch off	200 Ω or higher
E77-38 (MPX-) - E77-20 (EP)*2	R - W-B	Engine switch off	200 Ω or higher
E77-37 (MPX+) - E77-21 (B)*2	LG - R	Engine switch off	6 k Ω or higher
E77-38 (MPX-) - E77-21 (B)*2	R - R	Engine switch off	6 k Ω or higher

*1: For V bus

*2: For MS bus

10. CHECK CENTER AIRBAG SENSOR

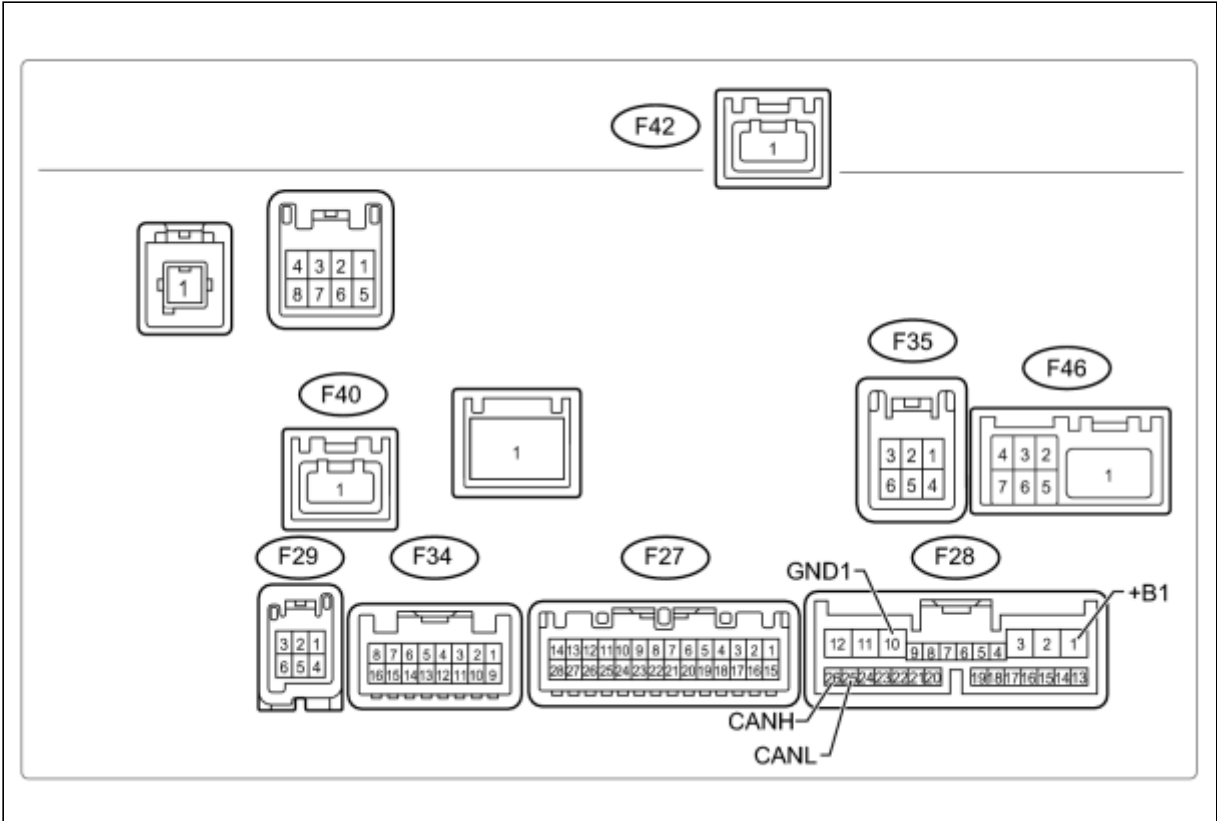


- (a) Disconnect the E47 sensor connector.
- (b) Measure the resistance according to the value(s) in the table below.

TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
E47-13 (CANH) - E47-22 (CANL)	GR - B	Engine switch off	54 to 69 Ω
E47-13 (CANH) - E47-25 (E1)	GR - W-B	Engine switch off	200 Ω or higher
E47-22 (CANL) - E47-25 (E1)	B - W-B	Engine switch off	200 Ω or higher
E47-13 (CANH) - E22-16 (BAT)	GR - O	Engine switch off	6 kΩ or higher
E47-22 (CANL) - E22-16 (BAT)	B - O	Engine switch off	6 kΩ or higher

11. CHECK DISPLAY AND NAVIGATION MODULE DISPLAY

For vehicles with the navigation system only.

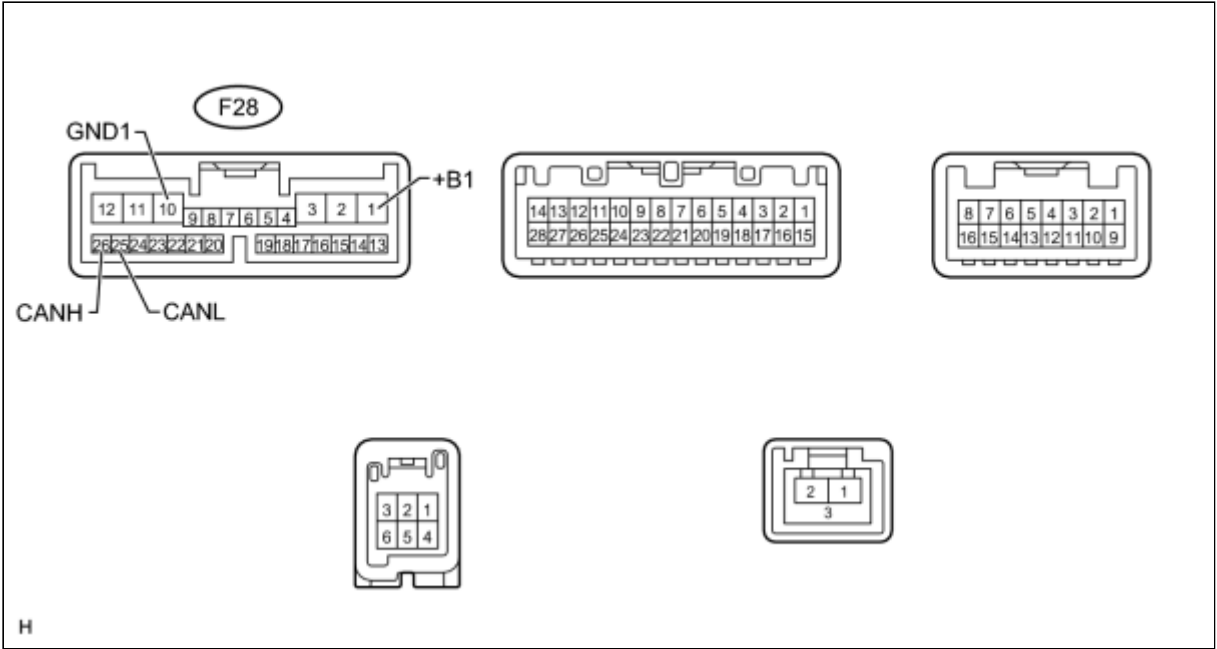


- (a) Disconnect the F28 display connector.
- (b) Measure the resistance according to the value(s) in the table below.

TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
F28-26 (CANH) - F28-25 (CANL)	P - B	Engine switch off	54 to 69 Ω
F28-26 (CANH) - F28-10 (GND1)	P - W-B	Engine switch off	200 Ω or higher
F28-25 (CANL) - F28-10 (GND1)	B - W-B	Engine switch off	200 Ω or higher
F28-26 (CANH) - F28-1 (+B1)	P - R	Engine switch off	6 kΩ or higher
F28-25 (CANL) - F28-1 (+B1)	B - R	Engine switch off	6 kΩ or higher

12. CHECK MULTI-DISPLAY

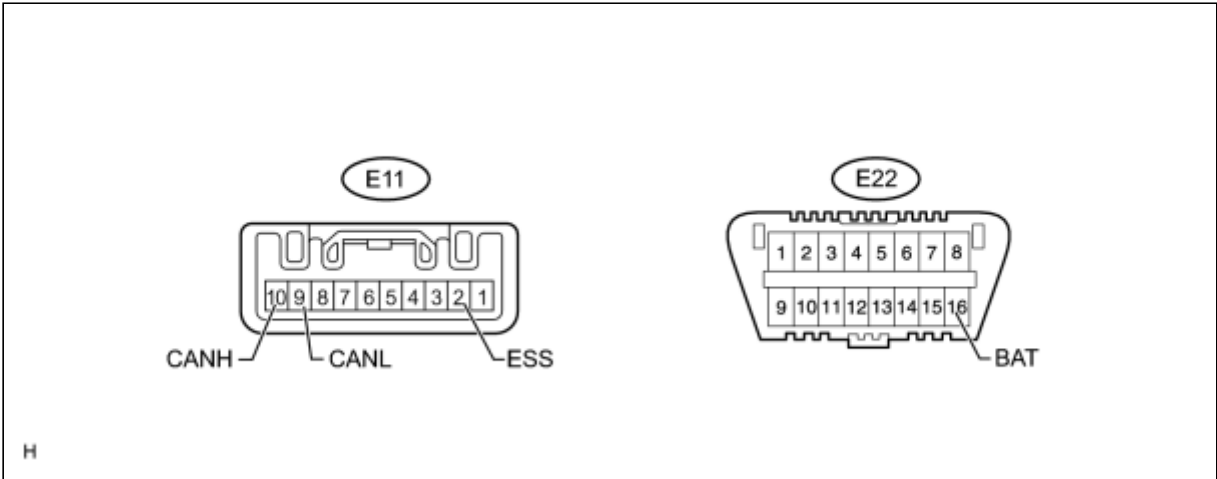
For vehicles without the navigation system only.



- (a) Disconnect the F28 multi-display connector.
- (b) Measure the resistance according to the value(s) in the table below.

TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
F28-26 (CANH) - F28-25 (CANL)	P - B	Engine switch off	54 to 69 Ω
F28-26 (CANH) - F28-10 (GND1)	P - W-B	Engine switch off	200 Ω or higher
F28-25 (CANL) - F28-10 (GND1)	B - W-B	Engine switch off	200 Ω or higher
F28-26 (CANH) - F28-1 (+B1)	P - R	Engine switch off	6 kΩ or higher
F28-25 (CANL) - F28-1 (+B1)	B - R	Engine switch off	6 kΩ or higher

13. CHECK STEERING ANGLE SENSOR

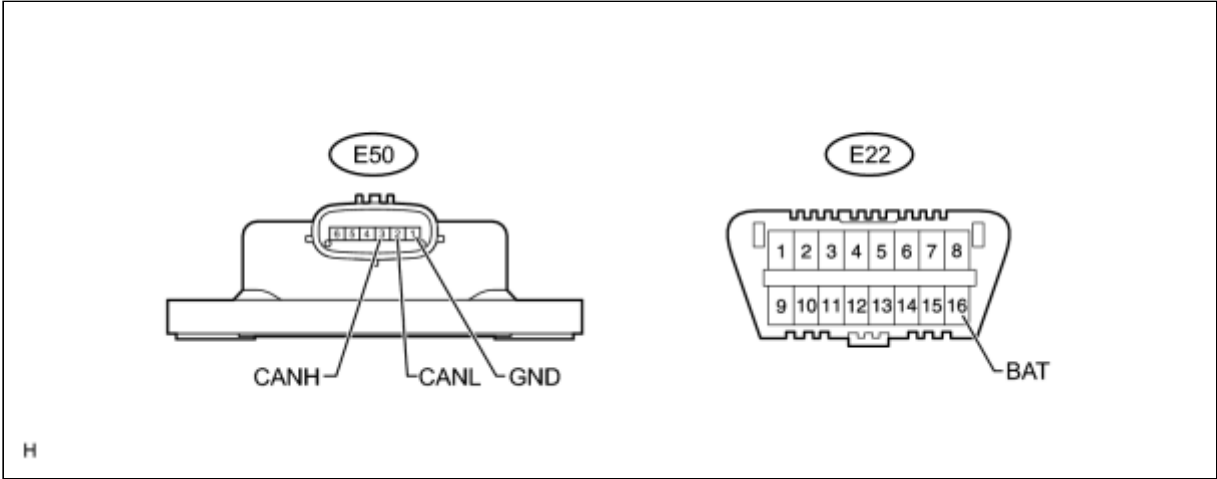


- (a) Disconnect the E11 sensor connector.
- (b) Measure the resistance according to the value(s) in the table below.

TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
E11-10 (CANH) - E11-9 (CANL)	GR - L	Engine switch off	54 to 69 Ω
E11-10 (CANH) - E11-2 (ESS)	GR - W-B	Engine switch off	200 Ω or higher

TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
E11-9 (CANL) - E11-2 (ESS)	L - W-B	Engine switch off	200 Ω or higher
E11-10 (CANH) - E22-16 (BAT)	GR - O	Engine switch off	6 kΩ or higher
E11-9 (CANL) - E22-16 (BAT)	L - O	Engine switch off	6 kΩ or higher

14. CHECK YAW RATE SENSOR

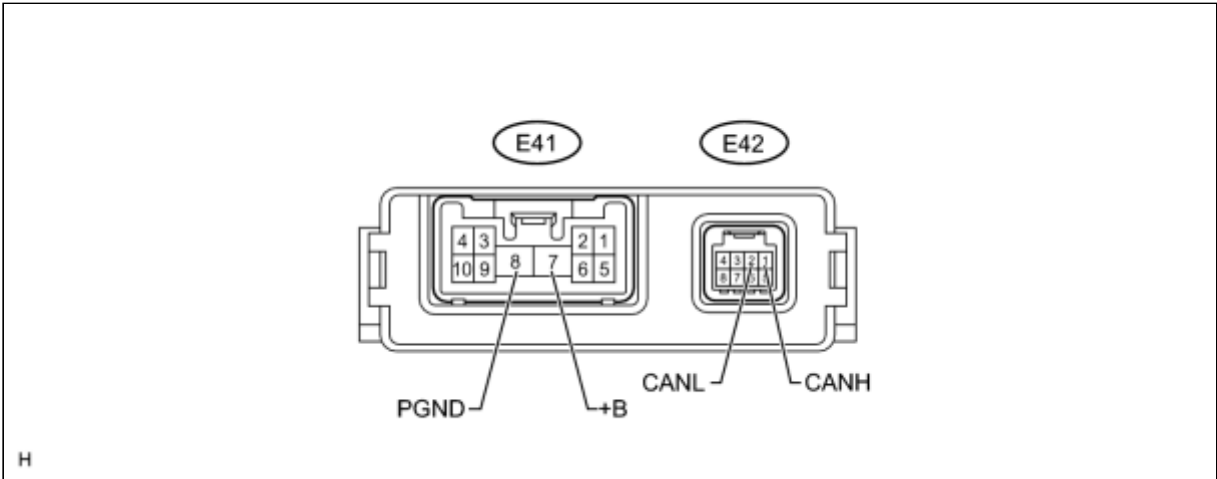


- (a) Disconnect the E50 sensor connector.
- (b) Measure the resistance according to the value(s) in the table below.

TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
E50-3 (CANH) - E50-2 (CANL)	BR - L	Engine switch off	54 to 69 Ω
E50-3 (CANH) - E50-1 (GND)	BR - W-B	Engine switch off	200 Ω or higher
E50-2 (CANL) - E50-1 (GND)	L - W-B	Engine switch off	200 Ω or higher
E50-3 (CANH) - E22-16 (BAT)	BR - O	Engine switch off	6 kΩ or higher
E50-2 (CANL) - E22-16 (BAT)	L - O	Engine switch off	6 kΩ or higher

15. CHECK SEAT BELT CONTROL ECU

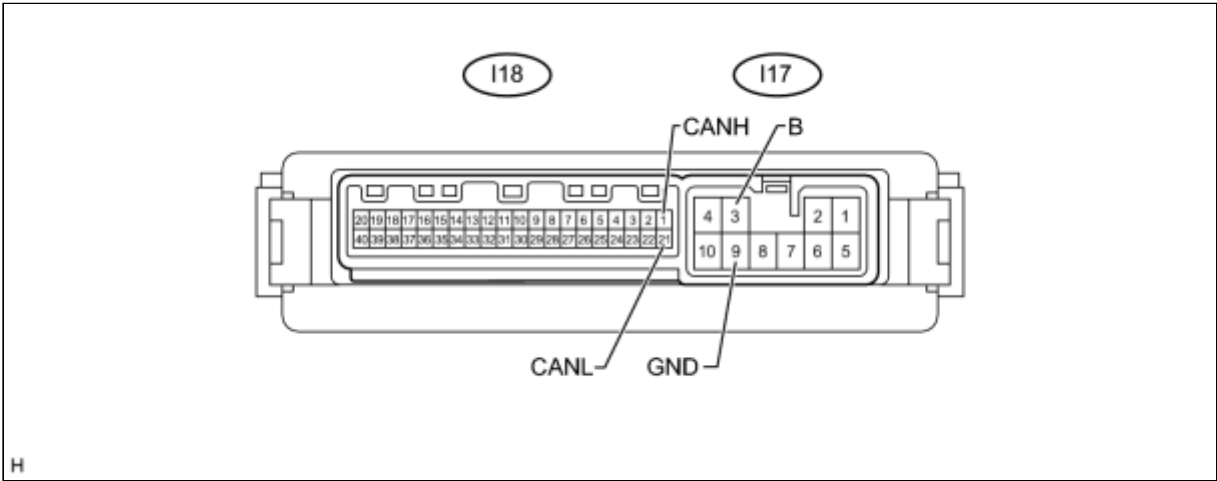
For vehicles with the dynamic radar cruise control system only.



- (a) Disconnect the E41 and E42 ECU connectors.
- (b) Measure the resistance according to the value(s) in the table below.

TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
E42-1 (CANH) - E42-2 (CANL)	G - L	Engine switch off	54 to 69 Ω
E42-1 (CANH) - E41-8 (PGND)	G - W-B	Engine switch off	200 Ω or higher
E42-2 (CANL) - E41-8 (PGND)	L - W-B	Engine switch off	200 Ω or higher
E42-1 (CANH) - E41-7 (+B)	G - R	Engine switch off	6 kΩ or higher
E42-2 (CANL) - E41-7 (+B)	L - R	Engine switch off	6 kΩ or higher

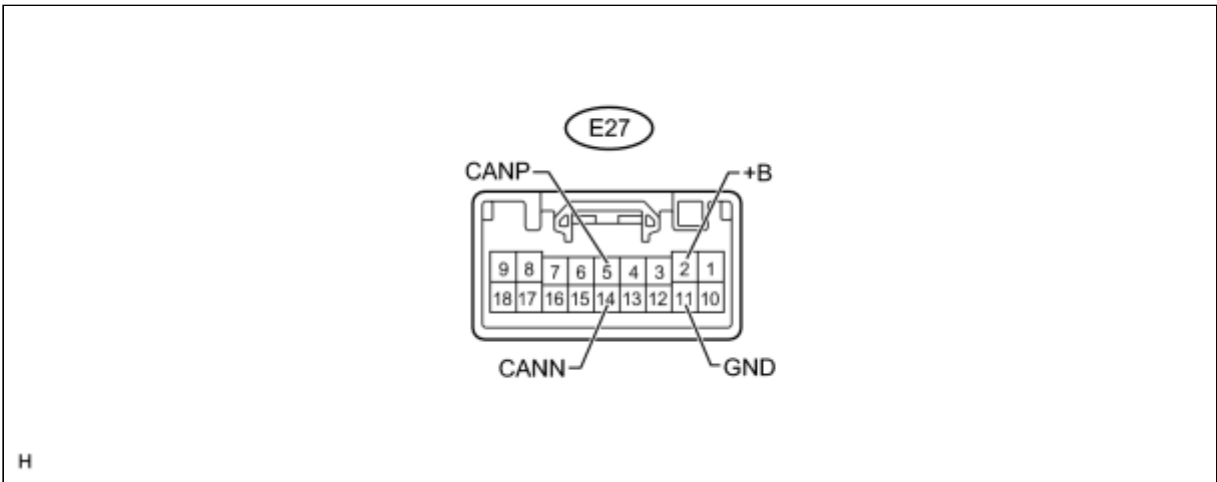
16. CHECK OUTER MIRROR CONTROL ECU



- (a) Disconnect the I18 and I17 ECU connectors.
- (b) Measure the resistance according to the value(s) in the table below.

TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
I18-1 (CANH) - I18-21 (CANL)	BR - R	Engine switch off	54 to 69 Ω
I18-1 (CANH) - I17-9 (GND)	BR - W-B	Engine switch off	200 Ω or higher
I18-21 (CANL) - I17-9 (GND)	R - W-B	Engine switch off	200 Ω or higher
I18-1 (CANH) - I17-3 (B)	BR - R	Engine switch off	6 kΩ or higher
I18-21 (CANL) - I17-3 (B)	R - R	Engine switch off	6 kΩ or higher

17. CHECK MULTIPLEX TILT AND TELESCOPIC ECU

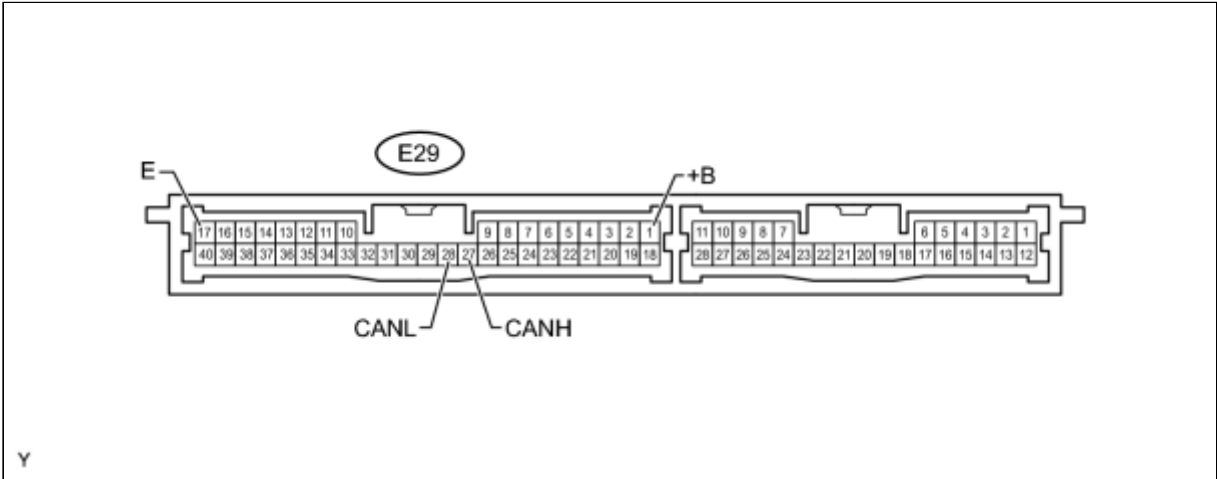


- (a) Disconnect the E27 ECU connector.

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

TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
E27-5 (CANP) - E27-14 (CANN)	P - R	Engine switch off	54 to 69 Ω
E27-5 (CANP) - E27-11 (GND)	P - W-B	Engine switch off	200 Ω or higher
E27-14 (CANN) - E27-11 (GND)	R - W-B	Engine switch off	200 Ω or higher
E27-5 (CANP) - E27-2 (+B)	P - L	Engine switch off	6 kΩ or higher
E27-14 (CANN) - E27-2 (+B)	R - L	Engine switch off	6 kΩ or higher

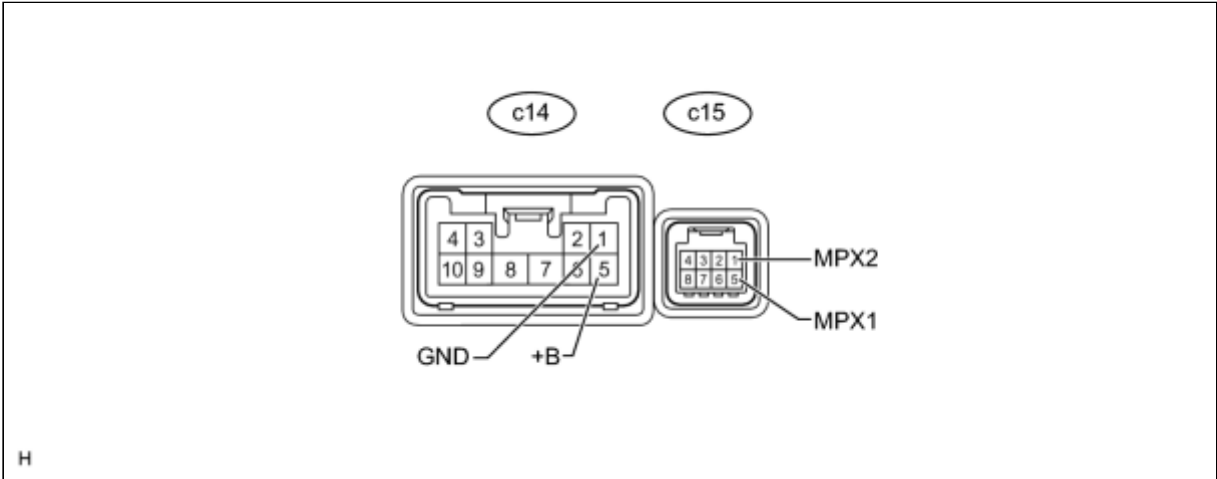
18. CHECK CERTIFICATION ECU (SMART KEY ECU)



- (a) Disconnect the E29 ECU connector.
- (b) Measure the resistance according to the value(s) in the table below.

TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
E29-27 (CANH) - E29-28 (CANL)	LG - R	Engine switch off	54 to 69 Ω
E29-27 (CANH) - E29-17 (E)	LG - W-B	Engine switch off	200 Ω or higher
E29-28 (CANL) - E29-17 (E)	R - W-B	Engine switch off	200 Ω or higher
E29-27 (CANH) - E29-1 (+B)	LG - B	Engine switch off	6 kΩ or higher
E29-28 (CANL) - E29-1 (+B)	R - B	Engine switch off	6 kΩ or higher

19. CHECK POSITION CONTROL ECU AND SWITCH

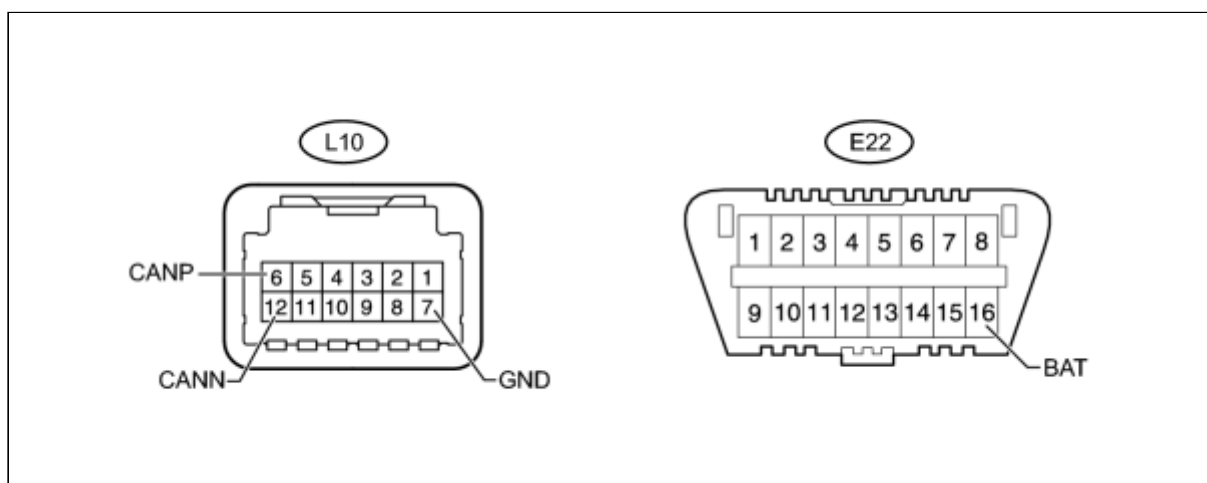


(a) Disconnect the c14 and c15 ECU connectors.

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

TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
c15-5 (MPX1) - c15-1 (MPX2)	V - R	Engine switch off	54 to 69 Ω
c15-5 (MPX1) - c14-1 (GND)	V - W-B	Engine switch off	200 Ω or higher
c15-1 (MPX2) - c14-1 (GND)	R - W-B	Engine switch off	200 Ω or higher
c15-5 (MPX1) - c14-5 (+B)	V - L	Engine switch off	6 k Ω or higher
c15-1 (MPX2) - c14-5 (+B)	R - L	Engine switch off	6 k Ω or higher

20. CHECK TIRE PRESSURE WARNING ECU

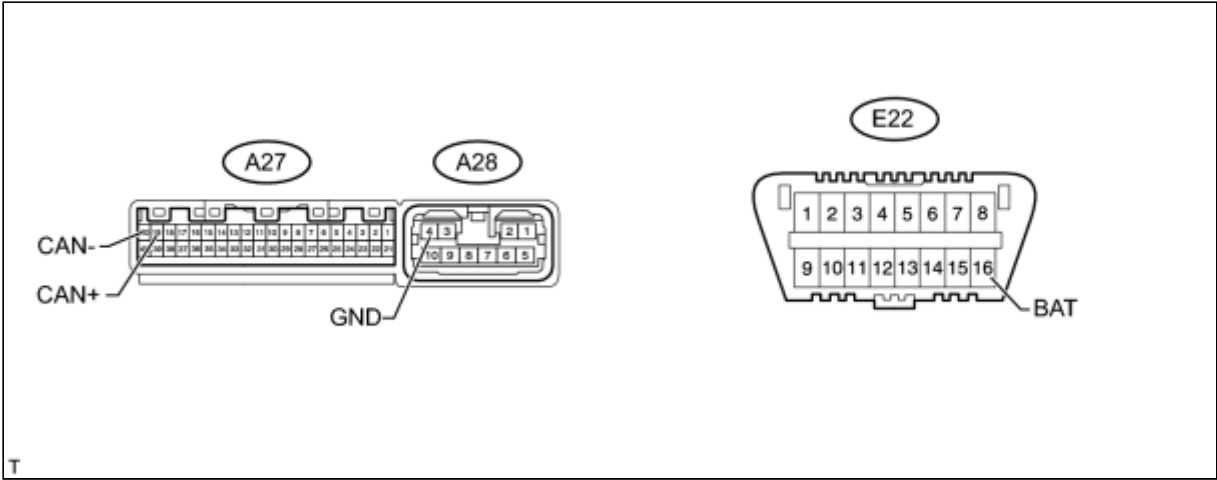


(a) Disconnect the L10 connector.

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

TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
L10-6 (CANP) - L10-12 (CANN)	G - R	Engine switch off	54 to 69 Ω
L10-6 (CANP) - L10-7 (GND)	G - W-B	Engine switch off	200 Ω or higher
L10-12 (CANN) - L10-7 (GND)	R - W-B	Engine switch off	200 Ω or higher
L10-6 (CANP) - E22-16 (BAT)	G - O	Engine switch off	6 k Ω or higher
L10-12 (CANN) - E22-16 (BAT)	R - O	Engine switch off	6 k Ω or higher

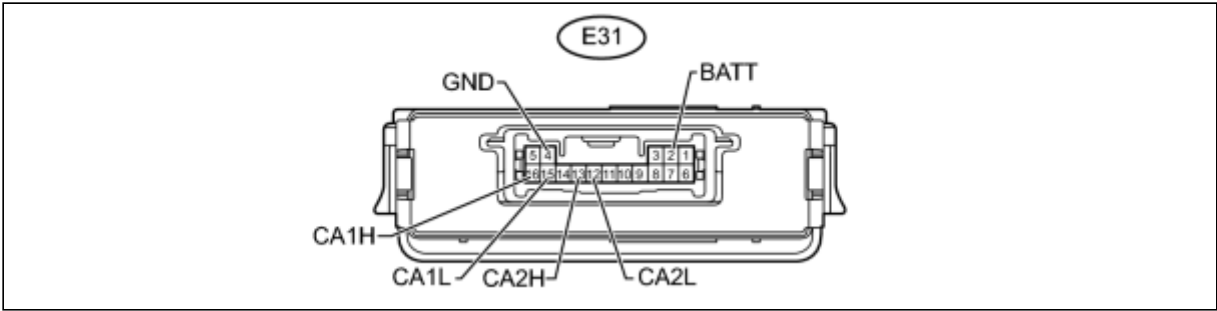
21. CHECK 4WD CONTROL ECU



- (a) Disconnect the A27 and A28 ECU connectors.
- (b) Measure the resistance according to the value(s) in the table below.

TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
A27-19 (CAN+) - A27-20 (CAN-)	P - L	Engine switch off	54 to 69 Ω
A27-19 (CAN+) - A28-4 (GND)	P - W	Engine switch off	200 Ω or higher
A27-20 (CAN-) - A28-4 (GND)	L - W	Engine switch off	200 Ω or higher
A27-19 (CAN+) - E22-16 (BAT)	P - O	Engine switch off	6 kΩ or higher
A27-20 (CAN-) - E22-16 (BAT)	L - O	Engine switch off	6 kΩ or higher

22. CHECK NETWORK GATEWAY ECU



- (a) Disconnect the E31 ECU connector.
- (b) Measure the resistance according to the value(s) in the table below.

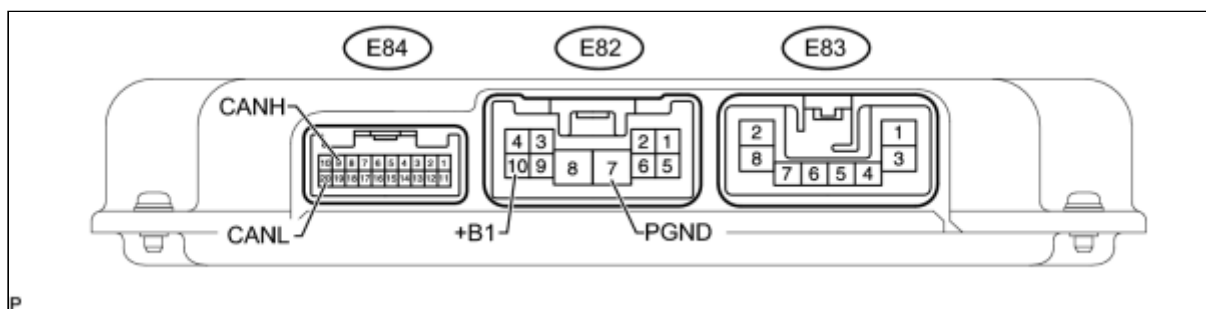
TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
E31-16 (CA1H) - E31-15 (CA1L)*1	BR - B	Engine switch off	54 to 69 Ω
E31-16 (CA1H) - E31-4 (GND)*1	BR - W-B	Engine switch off	200 Ω or higher
E31-15 (CA1L) - E31-4 (GND)*1	B - W-B	Engine switch off	200 Ω or higher
E31-16 (CA1H) - E31-2 (BATT)*1	BR - R	Engine switch off	6 kΩ or higher
E31-15 (CA1L) - E31-2 (BATT)*1	B - R	Engine switch off	6 kΩ or higher
E31-13 (CA2H) - E31-12 (CA2L)*2	SB - L	Engine switch off	108 to 132 Ω
E31-13 (CA2H) - E31-4 (GND)*2	SB - W-B	Engine switch off	200 Ω or higher
E31-12 (CA2L) - E31-4 (GND)*2	L - W-B	Engine switch off	200 Ω or higher

TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
E31-13 (CA2H) - E31-2 (BATT)*2	SB - R	Engine switch off	6 kΩ or higher
E31-12 (CA2L) - E31-2 (BATT)*2	L - R	Engine switch off	6 kΩ or higher

*1: For V bus

*2: For movement control bus

23. CHECK STEERING CONTROL ECU

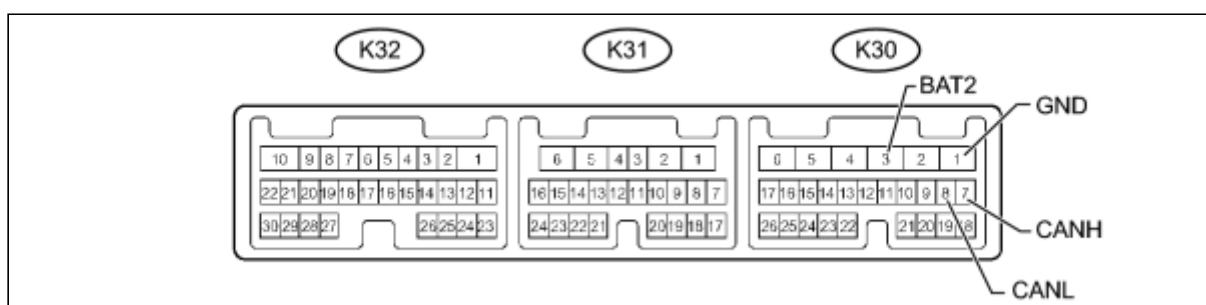


(a) Disconnect the E82 and E84 ECU connectors.

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

TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
E84-9 (CANH) - E84-20 (CANL)	LG - L	Engine switch off	200 Ω or higher
E84-9 (CANH) - E82-7 (PGND)	LG - W-B	Engine switch off	200 Ω or higher
E84-20 (CANL) - E82-7 (PGND)	L - W-B	Engine switch off	200 Ω or higher
E84-9 (CANH) - E82-10 (+B1)	LG - R	Engine switch off	6 kΩ or higher
E84-20 (CANL) - E82-10 (+B1)	L - R	Engine switch off	6 kΩ or higher

24. CHECK SUSPENSION CONTROL ECU

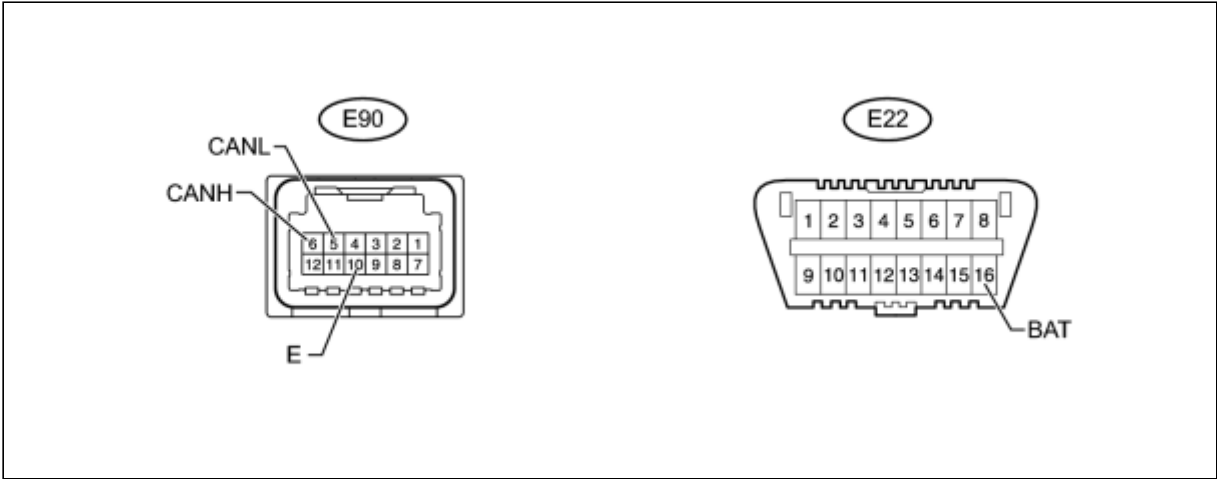


(a) Disconnect the K30 ECU connector.

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

TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
K30-7 (CANH) - K30-8 (CANL)	V - L	Engine switch off	54 to 69 Ω
K30-7 (CANH) - K30-1 (GND)	V - W-B	Engine switch off	200 Ω or higher
K30-8 (CANL) - K30-1 (GND)	L - W-B	Engine switch off	200 Ω or higher
K30-7 (CANH) - K30-3 (BAT2)	V - R	Engine switch off	6 kΩ or higher
K30-8 (CANL) - K30-3 (BAT2)	L - R	Engine switch off	6 kΩ or higher

25. CHECK WINDSHIELD WIPER ECU

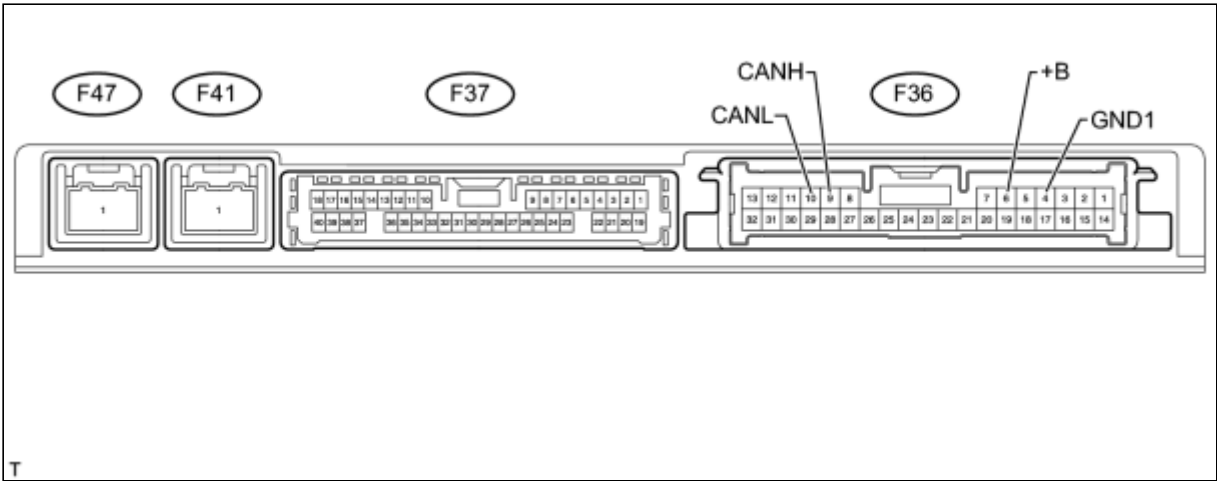


- (a) Disconnect the E90 ECU connector.
- (b) Measure the resistance according to the value(s) in the table below.

TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
E90-6 (CANH) - E90-5 (CANL)	LG - R	Engine switch off	54 to 69 Ω
E90-6 (CANH) - E90-10 (E)	LG - W-B	Engine switch off	200 Ω or higher
E90-5 (CANL) - E90-10 (E)	R - W-B	Engine switch off	200 Ω or higher
E90-6 (CANH) - E22-16 (BAT)	LG - O	Engine switch off	6 kΩ or higher
E90-5 (CANL) - E22-16 (BAT)	R - O	Engine switch off	6 kΩ or higher

26. CHECK PARKING ASSIST ECU

For vehicles with the wide view front and side monitor system only.



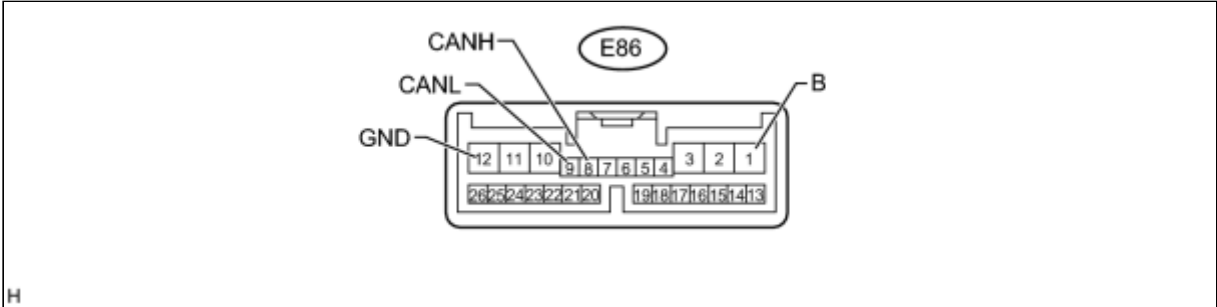
- (a) Disconnect the F36 ECU connector.
- (b) Measure the resistance according to the value(s) in the table below.

TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
F36-9 (CANH) - F36-10 (CANL)	V - L	Engine switch off	54 to 69 Ω
F36-9 (CANH) - F36-4 (GND1)	V - W-B	Engine switch off	200 Ω or higher
F36-10 (CANL) - F36-4 (GND1)	L - W-B	Engine switch off	200 Ω or higher

TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
F36-9 (CANH) - F36-6 (+B)	V - L	Engine switch off	6 kΩ or higher
F36-10 (CANL) - F36-6 (+B)	L - L	Engine switch off	6 kΩ or higher

27. CHECK DISTANCE CONTROL ECU

For vehicles with the dynamic radar cruise control system only.

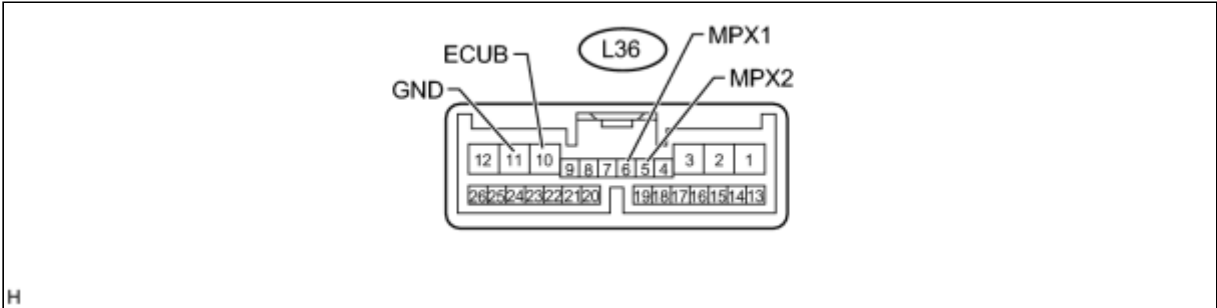


- (a) Disconnect the E86 ECU connector.
- (b) Measure the resistance according to the value(s) in the table below.

TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
E86-8 (CANH) - E86-9 (CANL)	SB - L	Engine switch off	54 to 69 Ω
E86-8 (CANH) - E86-12 (GND)	SB - BR	Engine switch off	200 Ω or higher
E86-9 (CANL) - E86-12 (GND)	L - BR	Engine switch off	200 Ω or higher
E86-8 (CANH) - E86-1 (B)	SB - R	Engine switch off	6 kΩ or higher
E86-9 (CANL) - E86-1 (B)	L - R	Engine switch off	6 kΩ or higher

28. CHECK POWER BACK DOOR UNIT (POWER BACK DOOR ECU)

For vehicles with the power back door system only.

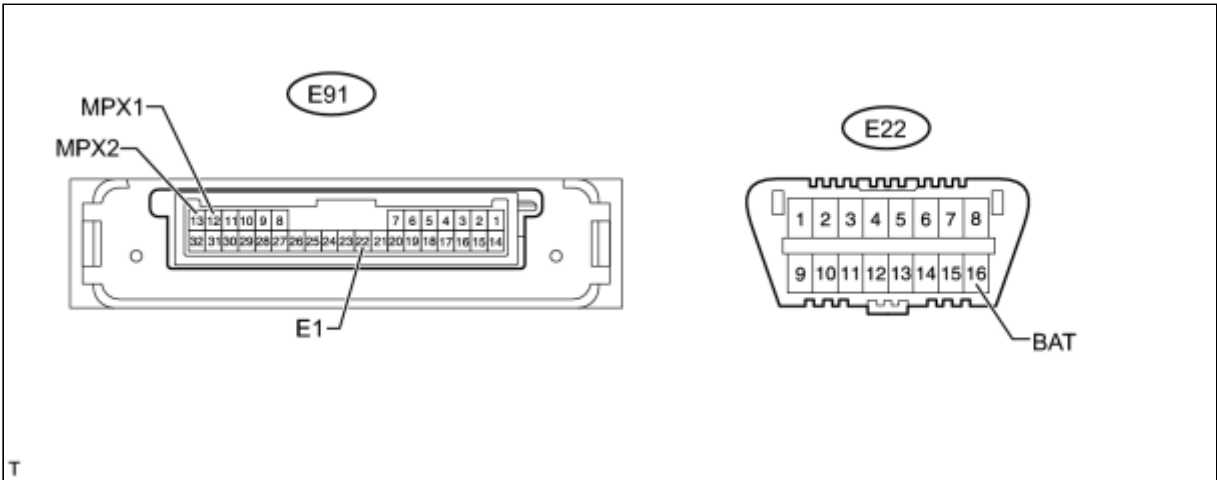


- (a) Disconnect the L36 unit connector.
- (b) Measure the resistance according to the value(s) in the table below.

TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
L36-6 (MPX1) - L36-5 (MPX2)	V - R	Engine switch off	54 to 69 Ω
L36-6 (MPX1) - L36-11 (GND)	V - W-B	Engine switch off	200 Ω or higher
L36-5 (MPX2) - L36-11 (GND)	R - W-B	Engine switch off	200 Ω or higher
L36-6 (MPX1) - L36-10 (ECUB)	V - R	Engine switch off	6 kΩ or higher

TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
L36-5 (MPX2) - L36-10 (ECUB)	R - R	Engine switch off	6 kΩ or higher

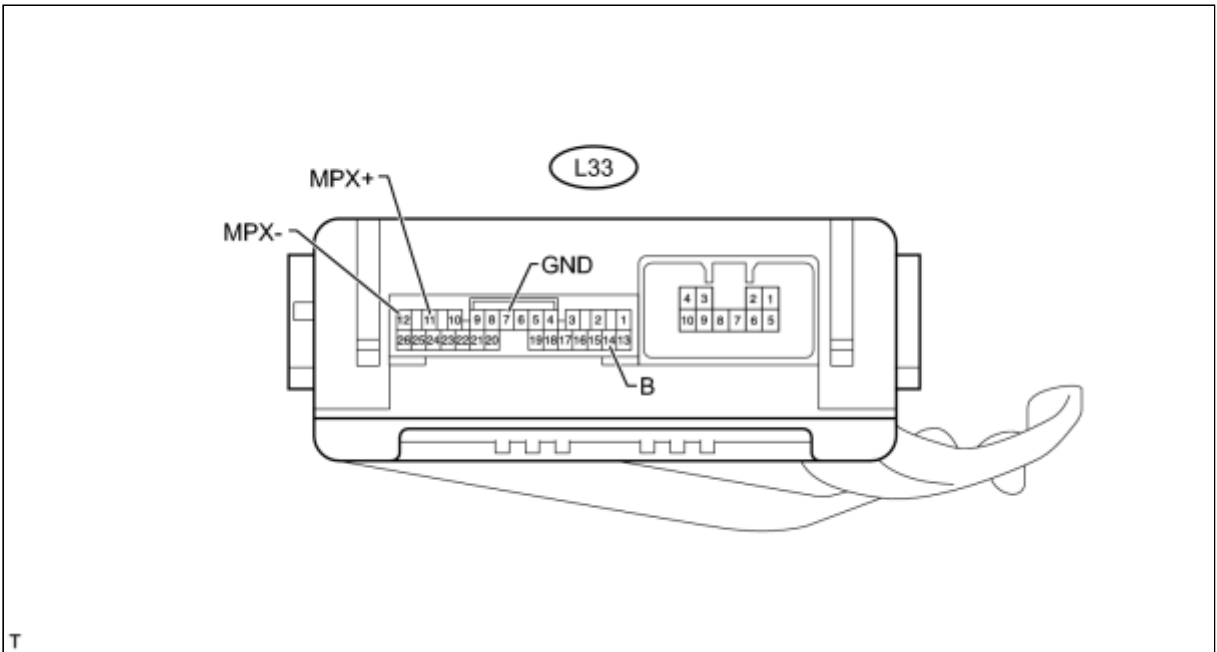
29. CHECK AFS ECU (HEADLIGHT SWIVEL ECU)



- (a) Disconnect the E91 ECU connector.
- (b) Measure the resistance according to the value(s) in the table below.

TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
E91-12 (MPX1) - E91-13 (MPX2)	LG - B	Engine switch off	54 to 69 Ω
E91-12 (MPX1) - E91-22 (E1)	LG - W-B	Engine switch off	200 Ω or higher
E91-13 (MPX2) - E91-22 (E1)	B - W-B	Engine switch off	200 Ω or higher
E91-12 (MPX1) - E22-16 (BAT)	LG - O	Engine switch off	6 kΩ or higher
E91-13 (MPX2) - E22-16 (BAT)	B - O	Engine switch off	6 kΩ or higher

30. CHECK NO. 2 MAIN BODY ECU



- (a) Disconnect the L33 ECU connector.
- (b) Measure the resistance according to the value(s) in the table below.

TERMINAL NO. (SYMBOL)	WIRING COLOR	SWITCH CONDITION	SPECIFIED CONDITION
L33-11 (MPX+) - L33-12 (MPX-)	LG - R	Engine switch off	54 to 69 Ω
L33-11 (MPX+) - L33-7 (GND)	LG - W-B	Engine switch off	200 Ω or higher
L33-12 (MPX-) - L33-7 (GND)	R - W-B	Engine switch off	200 Ω or higher
L33-11 (MPX+) - L33-14 (BECU)	LG - R	Engine switch off	6 kΩ or higher
L33-12 (MPX-) - L33-14 (BECU)	R - R	Engine switch off	6 kΩ or higher

