

2012 - Mazda6 - Body and Accessories

DETERMINING MALFUNCTIONING PART (MS-CAN) [MULTI PLEX COMMUNICATION SYSTEM]

CAUTION:

- If the malfunctioning part is detected in the communication line, before disconnecting the related connector for inspection, press the connector in the connection direction to verify that there is no looseness or disconnection.
- When disconnecting the connector, verify that there is no damage, deformation, or corrosion of the connector terminals.

1. Verify DTCs of the modules related to the CAN system.

2. Apply the following items to the **DTC Output Pattern and Malfunctioning Part**, and then verify the reference to the malfunctioning location.

- Communication error DTCs
- Malfunctioning module
- Display status of the air conditioner/audio control on the information display when the climate control unit, or either the audio unit or the car-navigation unit is operated.
- The operation condition of the SIRIUS satellite radio system and the hands-free telephone system.

NOTE:

- A hyphen (-) in the DTC output pattern cell indicates that the DTC may or may not be displayed depending on the malfunction detection conditions. If it is not displayed, the malfunctioning location can be determined by checking the crosses (×) and asterisks (*).

3. Inspect the possible cause and inspection item of the applicable malfunctioning part.

4. Perform the DTC inspection after the repair procedure.

- If any DTC is displayed, return to **FOREWORD [MULTI PLEX COMMUNICATION SYSTEM]**.

DTC Output Pattern and Malfunctioning Part

Cross (×): DisplayedHyphen (-): May or may not be displayedAsterisk (*): No operation

DTC display		DTC output pattern and malfunctioning location						
DTC output module	DTC	A	B	C	D	E	F	G
IC* ¹ (Instrument cluster)	U0164:00		×					
EATC* ¹ (Climate control unit)	U0155:00	×						
	U0184:00			×		×		
	U0423:68	-						
Car-navigation unit (with car-navigation unit)* ²	Device code 17:Error code 11	×		×				
	U015500HEC	×		×				×

Information display*3	U016400EATC		×	×			×
	U018400ACU					×	×
Information display*4	02:3E	×		×			×
	02:2E		×	×			×
	02:1E					×	×
M-MDS display module		“Fail” display pattern					
IC		×					
EATC			×				
Information display display		Display pattern on information display					
None ACU*3, *5						-	-
None EATC*3, *6			-	-			-
02:1-*4, *7						-	-
02:2-*4, *8			-	-			-
Audio control display		×	×	×	×		×
Air conditioning control display		×			×	×	×
System operation		System operation pattern					
SIRIUS satellite radio system						*	*
Hands-free telephone system					*	*	

*1

The DTC is displayed on M-MDS.

*2

The DTC is displayed on the car navigation unit.

*3

The DTC is displayed on the information display (type A).

*4

The DTC is displayed on the information display (type B).

*5

If “None ACU” is displayed on the information display, no DTC is displayed.

*6

If “None EATC” is displayed on the information display, no DTC is displayed.

*7

If “02:1-” is displayed on the information display, no DTC is displayed.

*8

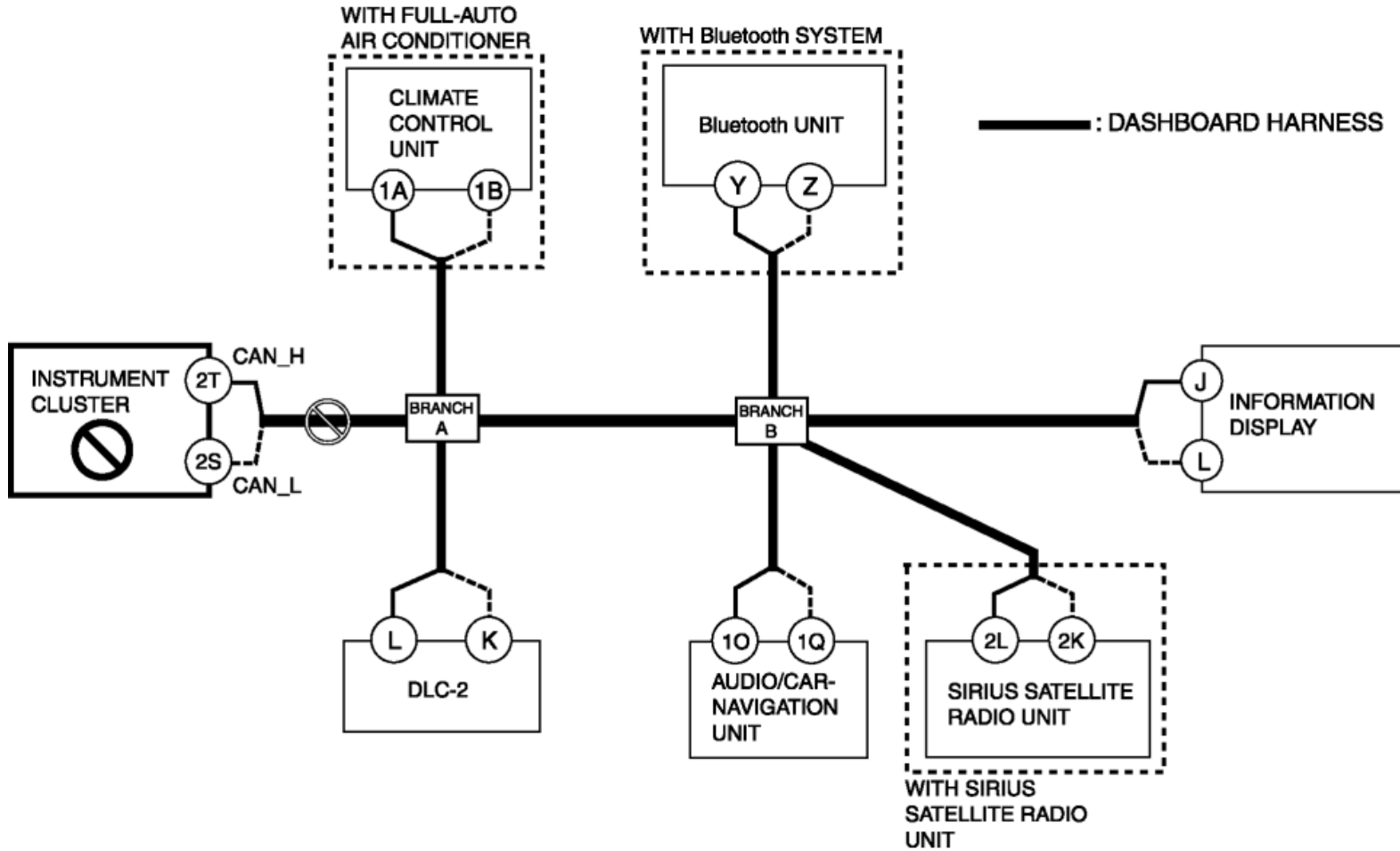
If “02:2-” is displayed on the information display, no DTC is displayed.

A

Possible cause

- Connector terminal disconnection, poor contact, damage, deformation, corrosion
- Open circuit in wiring harness between instrument cluster and branch A
- Instrument cluster malfunction

System wiring diagram



Inspection item

- Instrument cluster connector
- Wiring harness between instrument cluster terminal 2T and branch A
- Wiring harness between instrument cluster terminal 2S and branch A
- Instrument cluster

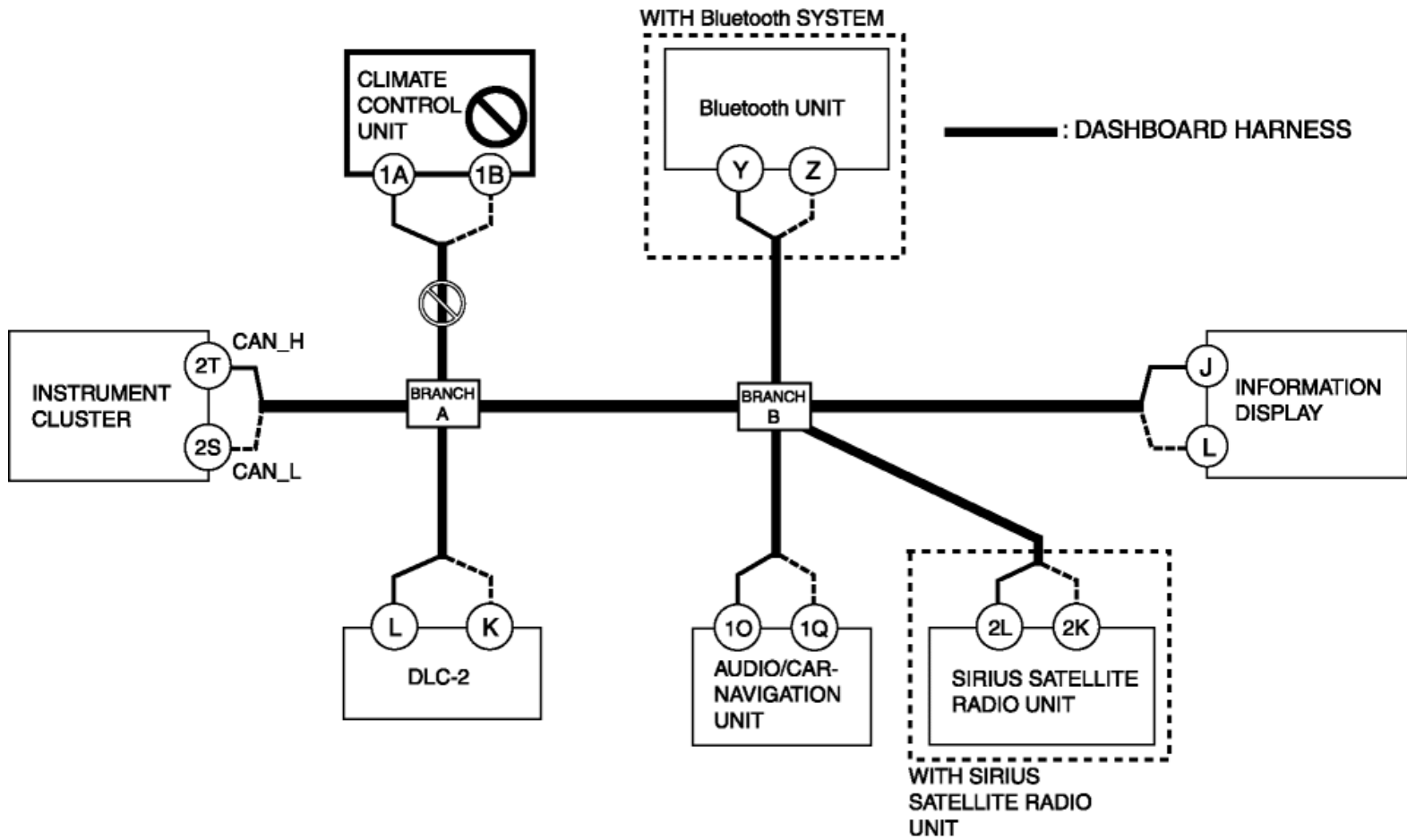
B

Possible cause

- Connector terminal disconnection, poor contact, damage, deformation, corrosion
- Open circuit in wiring harness between climate control unit and branch A

Climate control unit malfunction

System wiring diagram



Inspection item

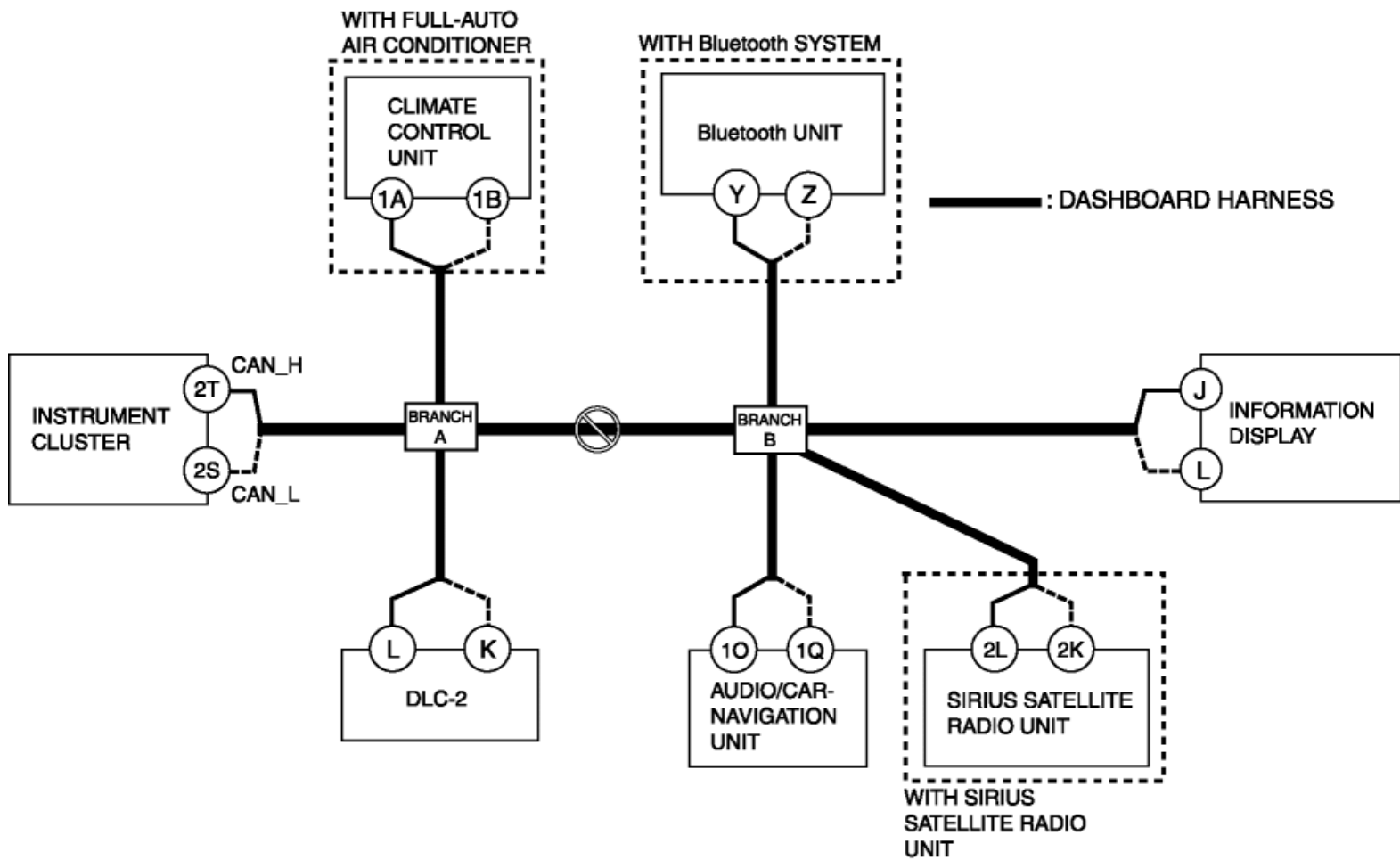
- Climate control unit connector
- Wiring harness between climate control unit terminal 1A and branch A
- Wiring harness between climate control unit terminal 1B and branch A
- Climate control unit

C

Possible cause

- Connector terminal disconnection, poor contact, damage, deformation, corrosion
- Open circuit in wiring harness between branch A and branch B

System wiring diagram



Inspection item

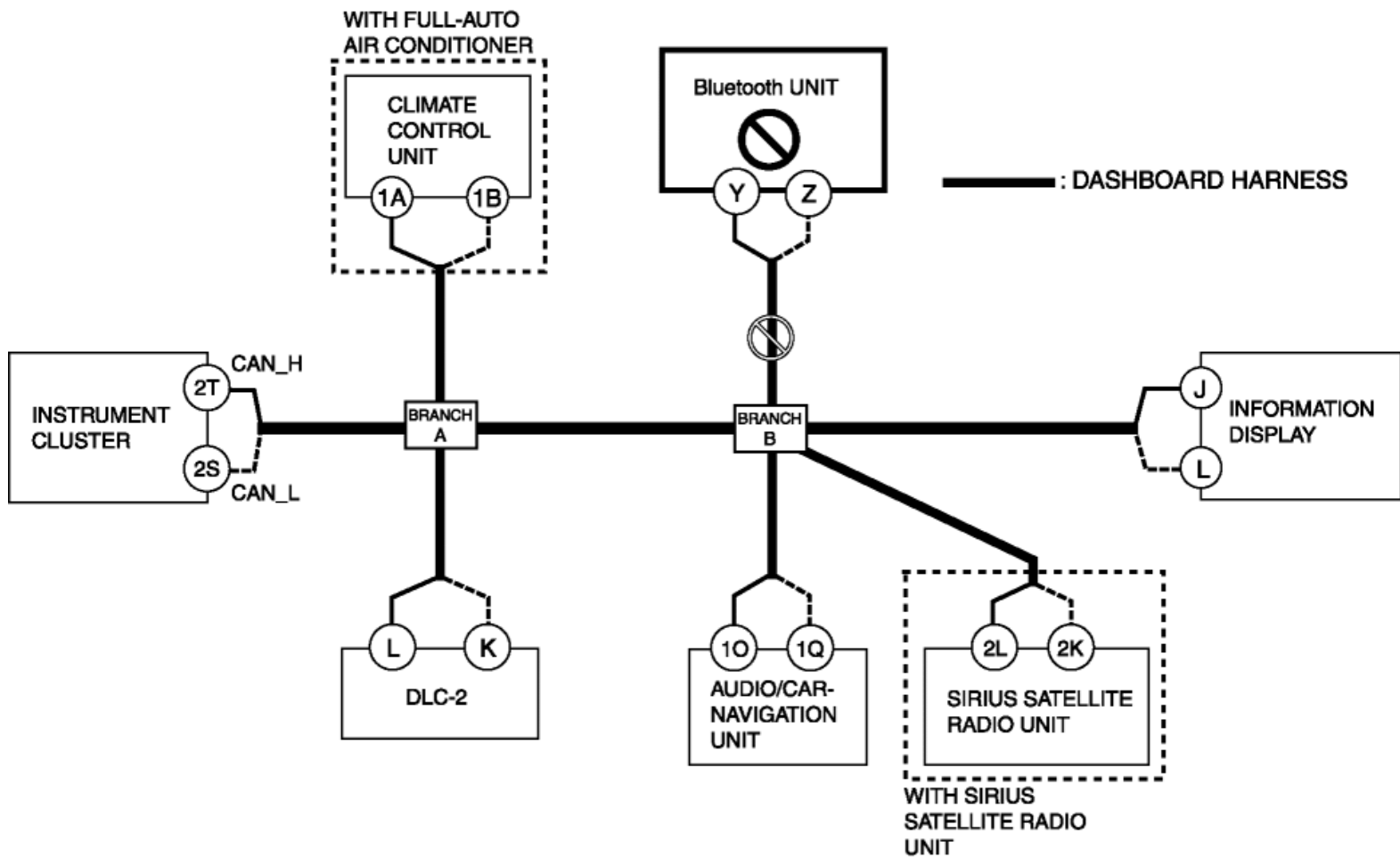
- Wiring harness between branch A and branch B

D

Possible cause

- Connector terminal disconnection, poor contact, damage, deformation, corrosion
- Open circuit in wiring harness between Bluetooth unit and branch B
- Bluetooth unit malfunction

System wiring diagram



Inspection item

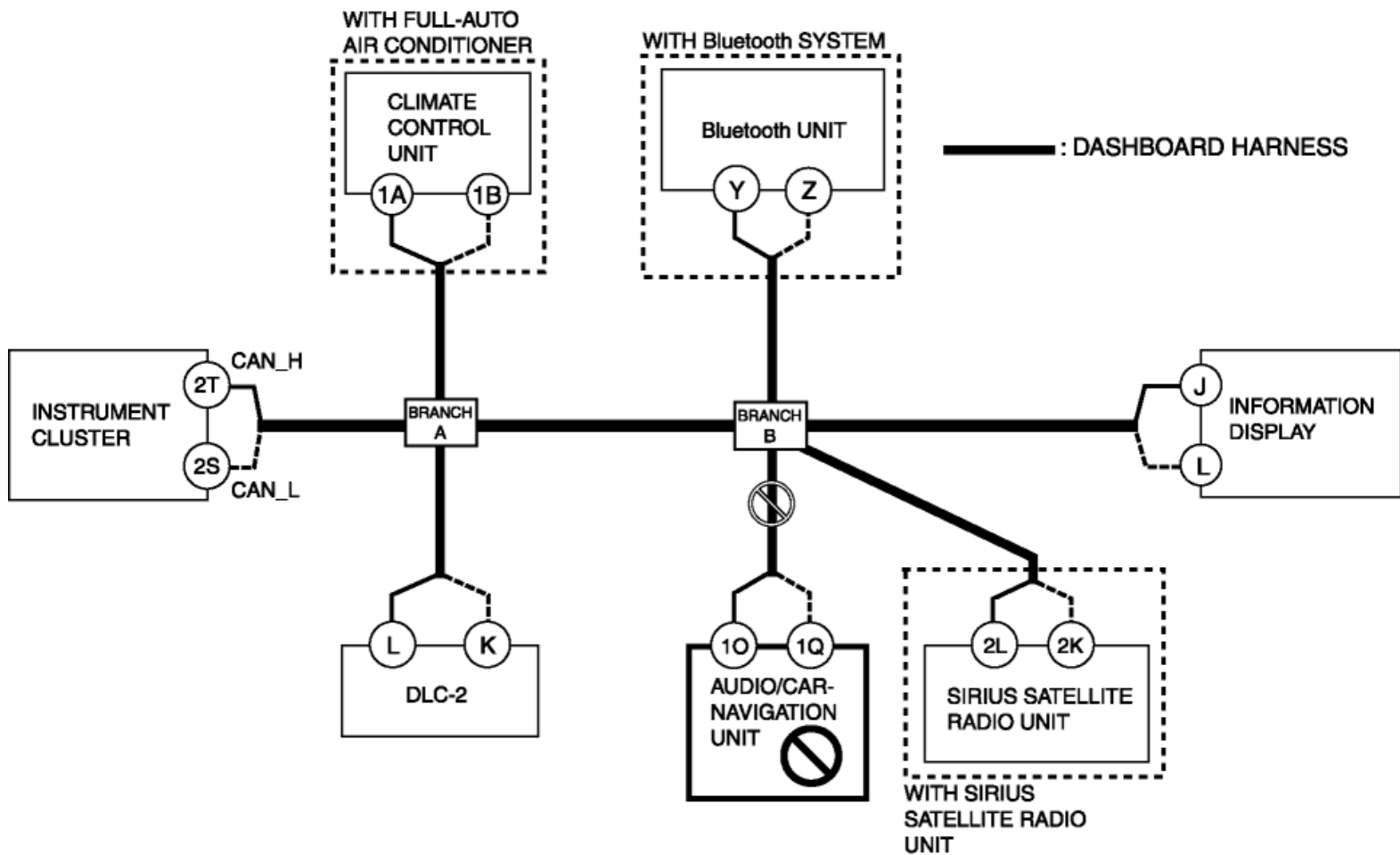
- Bluetooth unit connector
- Wiring harness between Bluetooth unit terminal Y and branch B
- Wiring harness between Bluetooth unit terminal Z and branch B
- Bluetooth unit

E

Possible cause

- Connector terminal disconnection, poor contact, damage, deformation, corrosion
- Open circuit in wiring harness between car-navigation unit or audio unit and branch B
- car-navigation unit or audio unit malfunction

System wiring diagram



Inspection item

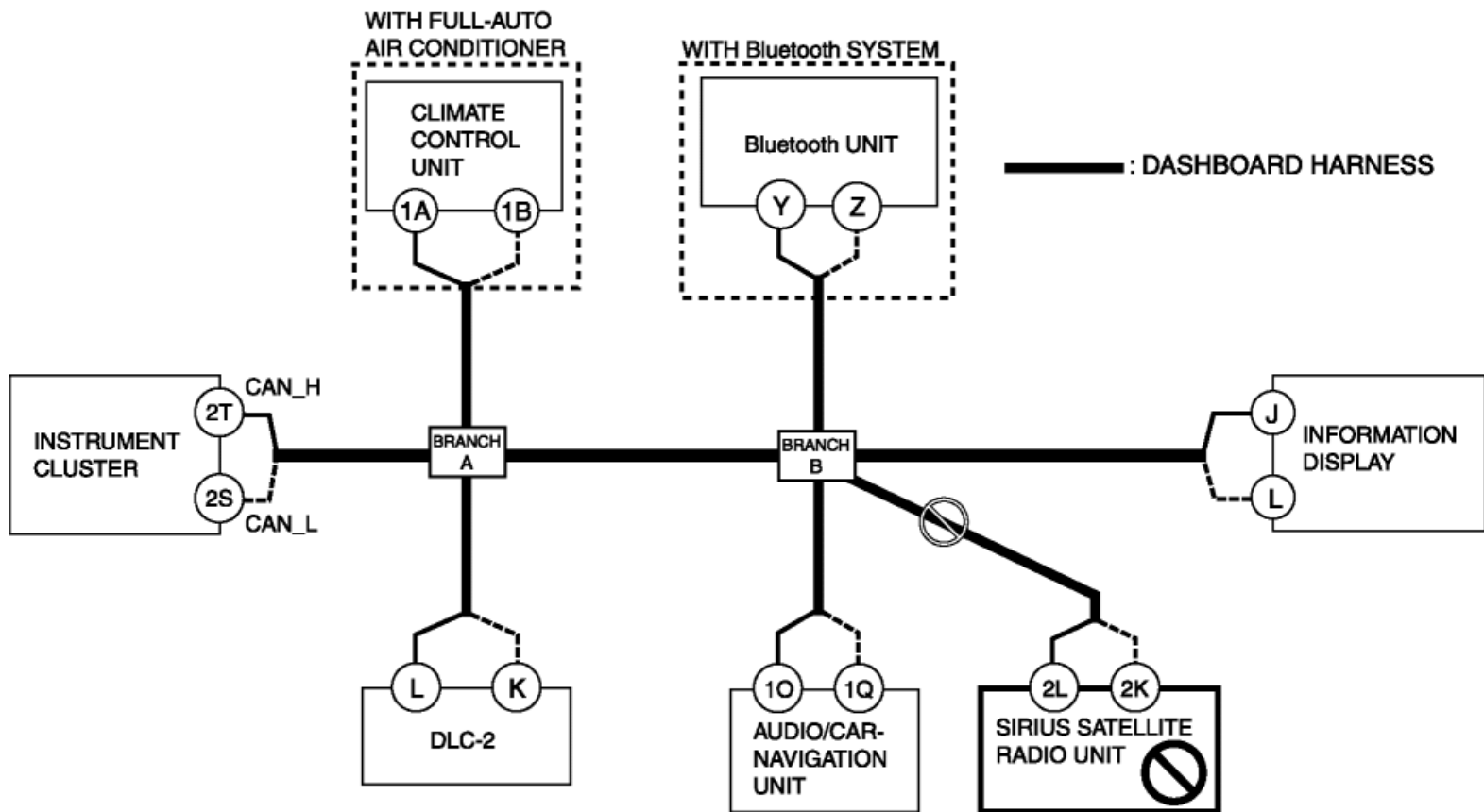
- Car-navigation unit or audio unit connector
- Wiring harness between car-navigation unit or audio unit terminal 1O and branch B
- Wiring harness between car-navigation unit or audio unit terminal 1Q and branch B
- Car-navigation unit or audio unit

F

Possible cause

- Connector terminal disconnection, poor contact, damage, deformation, corrosion
- Open circuit in wiring harness between sirius satellite radio unit and branch B
- Sirius satellite radio unit malfunction

System wiring diagram



Inspection item

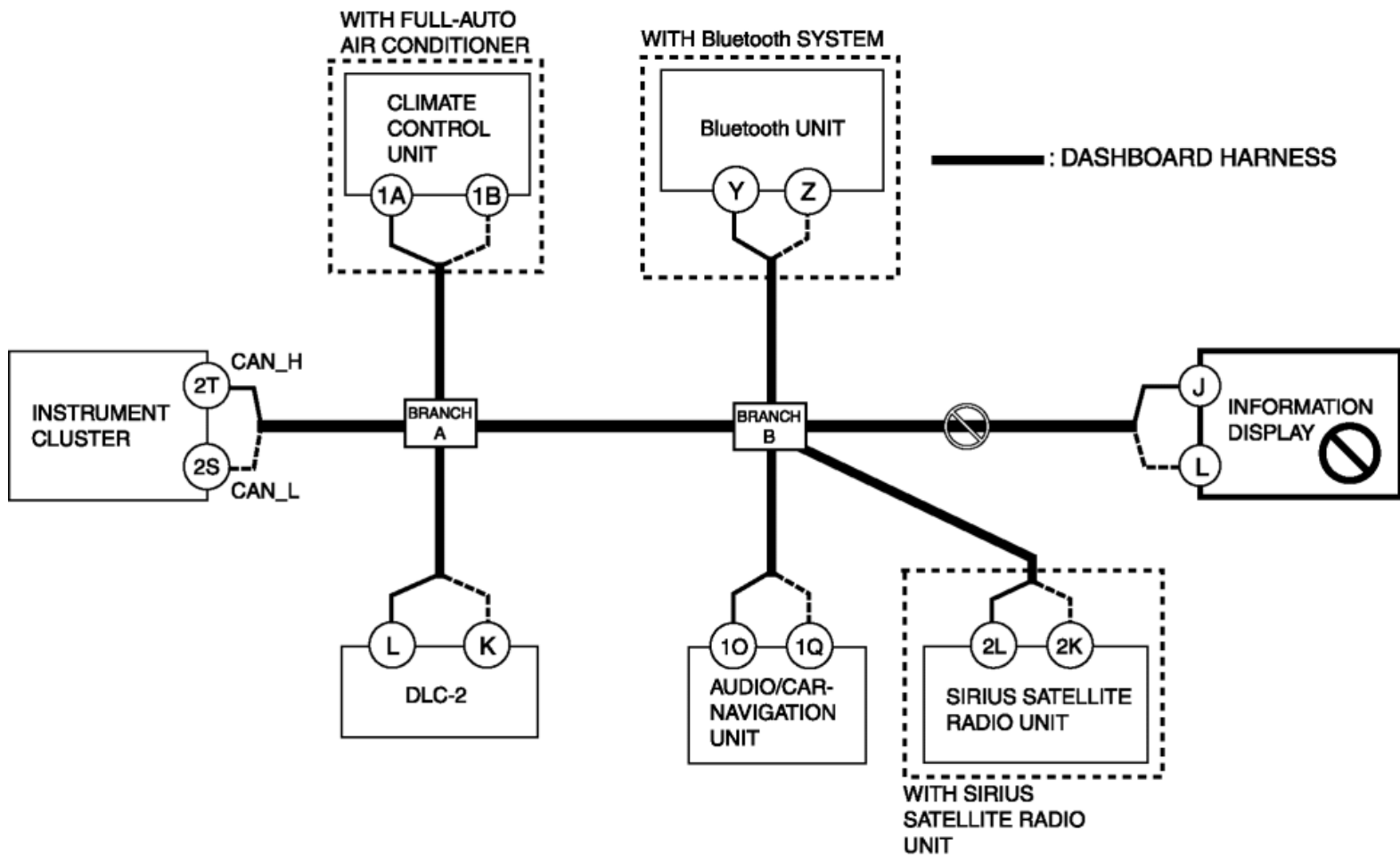
- Sirius satellite radio connector
- Wiring harness between sirius satellite radio terminal 2L and branch B
- Wiring harness between sirius satellite radio terminal 2K and branch B
- Sirius satellite radio

G

Possible cause

- Connector terminal disconnection, poor contact, damage, deformation, corrosion
- Open circuit in wiring harness between information display and branch B
- Information display malfunction

System wiring diagram



Inspection item

- Information display connector
- Wiring harness between information display terminal J and branch B
- Wiring harness between information display terminal L and branch B
- Information display

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EATC* ¹ (Climate control unit)	U0155:00	×						
	U0184:00			×		×		
	U0423:68	-						
Car-navigation unit (with car-navigation unit)* ²	Device code 17:Error code 11	×		×				
	U015500HEC	×		×				×

Information display*3	U016400EATC		×	×			×
	U018400ACU					×	×
Information display*4	02:3E	×		×			×
	02:2E		×	×			×
	02:1E					×	×
M-MDS display module		"Fail" display pattern					
IC		×					
EATC			×				
Information display display		Display pattern on information display					
None ACU*3, *5						-	-
None EATC*3, *6			-	-			-
02:1-*4, *7						-	-
02:2-*4, *8			-	-			-
Audio control display		×	×	×	×		×
Air conditioning control display		×			×	×	×
System operation		System operation pattern					
SIRIUS satellite radio system						*	*
Hands-free telephone system					*	*	

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The DTC is displayed on M-MDS.

*2

The DTC is displayed on the car navigation unit.

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The DTC is displayed on the information display (type A).

*4

The DTC is displayed on the information display (type B).

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If "None ACU" is displayed on the information display, no DTC is displayed.

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If "None EATC" is displayed on the information display, no DTC is displayed.

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If "02:1-" is displayed on the information display, no DTC is displayed.

*8

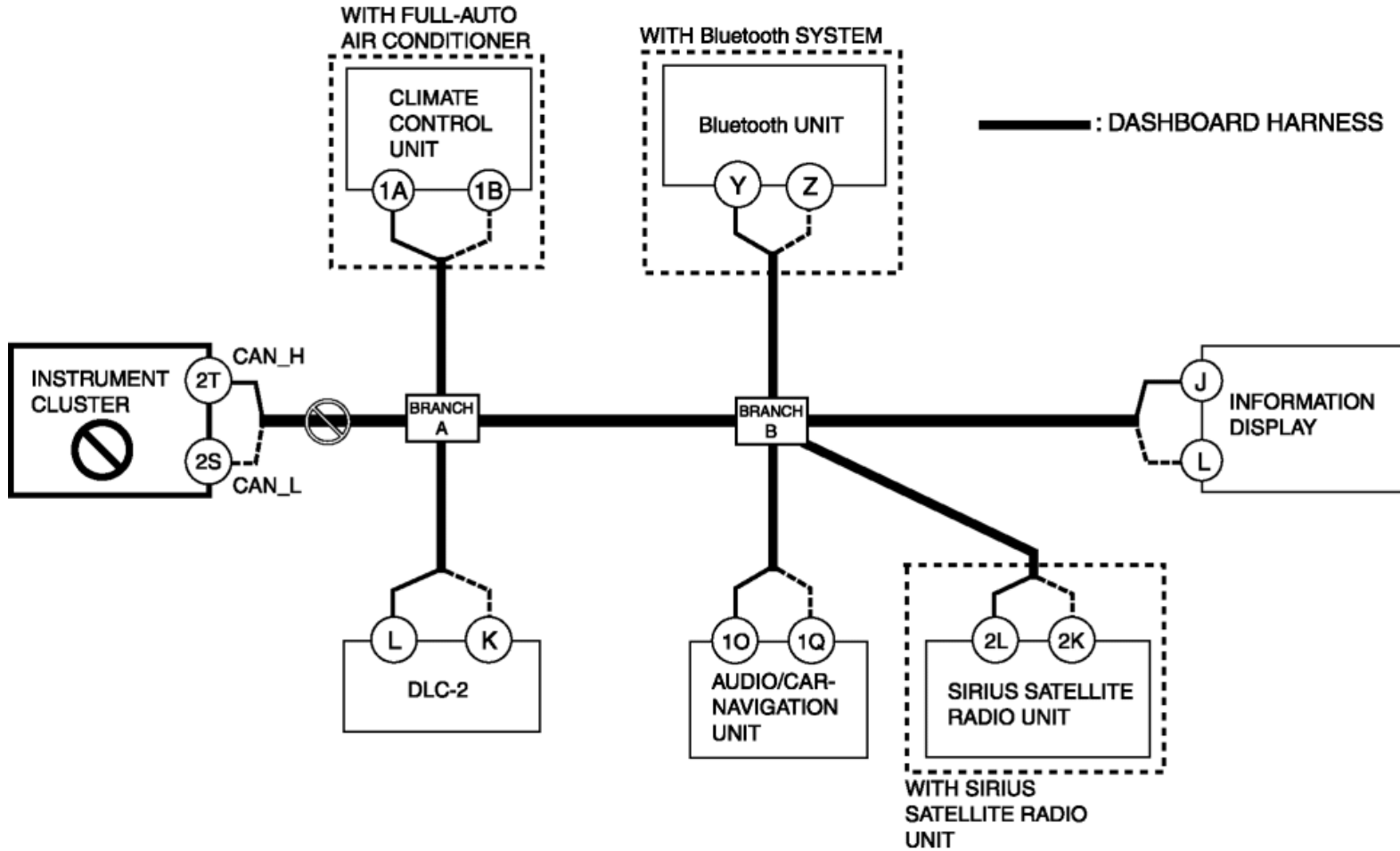
If "02:2-" is displayed on the information display, no DTC is displayed.

A

Possible cause

- Connector terminal disconnection, poor contact, damage, deformation, corrosion
- Open circuit in wiring harness between instrument cluster and branch A
- Instrument cluster malfunction

System wiring diagram



Inspection item

- Instrument cluster connector
- Wiring harness between instrument cluster terminal 2T and branch A
- Wiring harness between instrument cluster terminal 2S and branch A
- Instrument cluster

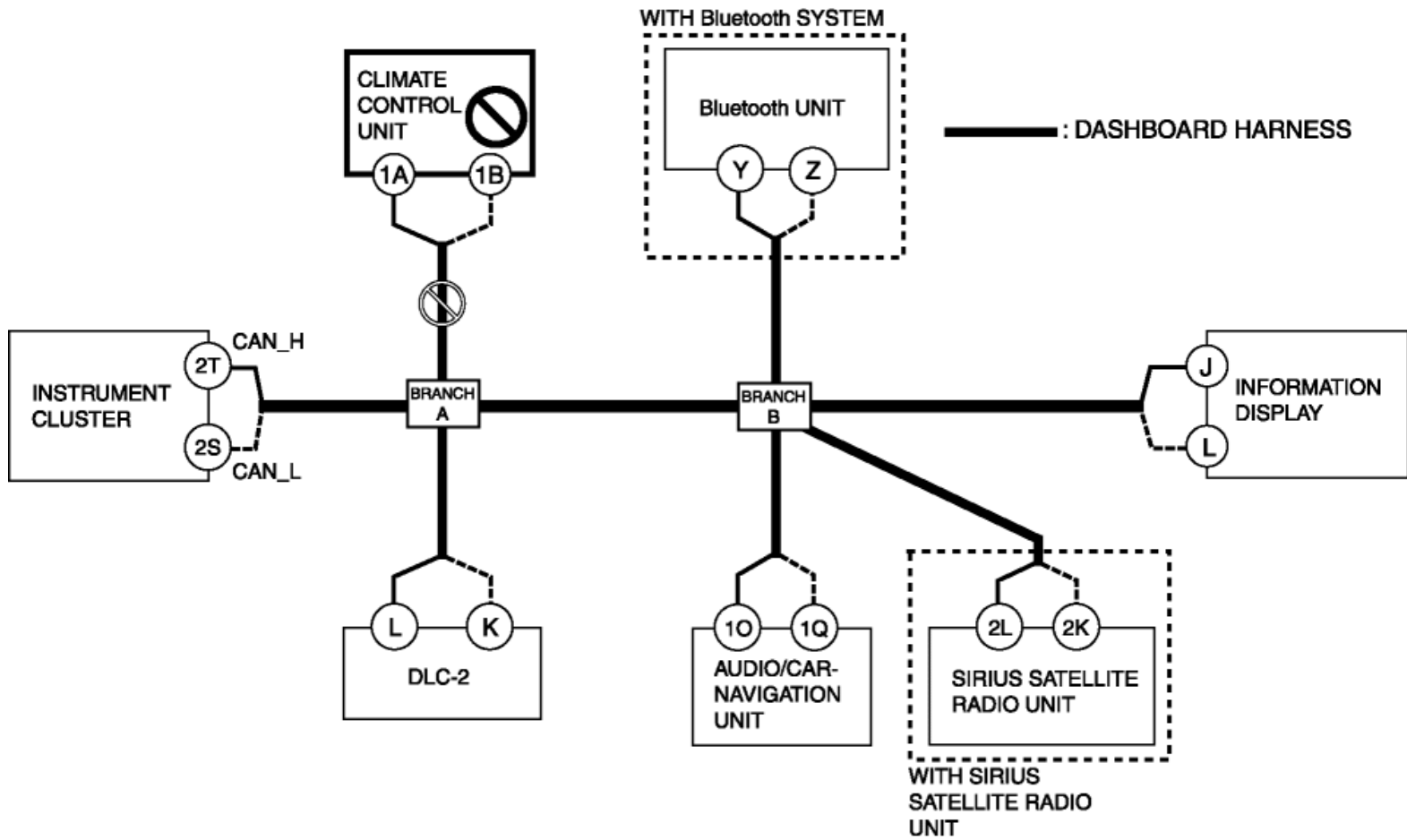
B

Possible cause

- Connector terminal disconnection, poor contact, damage, deformation, corrosion
- Open circuit in wiring harness between climate control unit and branch A

Climate control unit malfunction

System wiring diagram



Inspection item

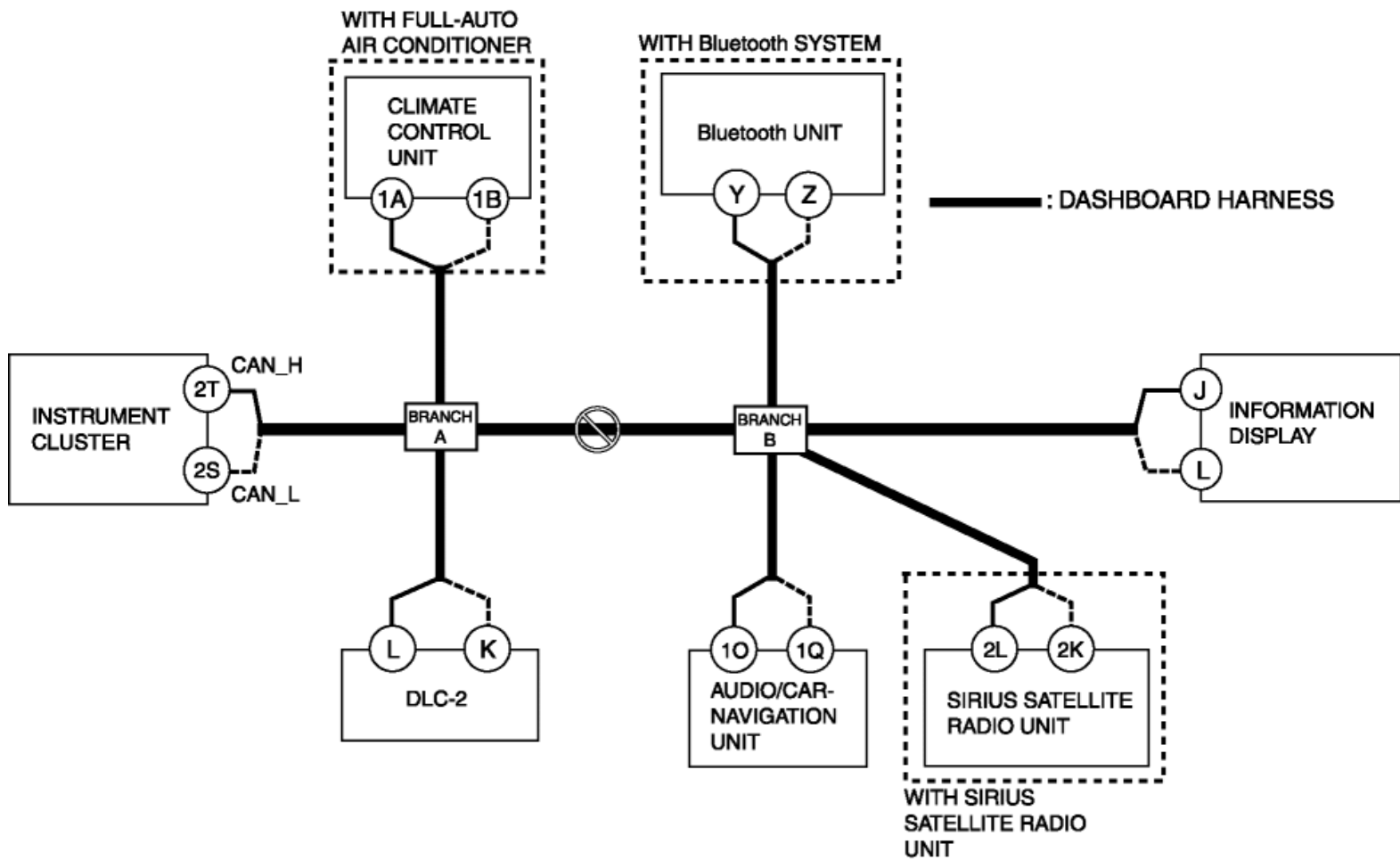
- Climate control unit connector
- Wiring harness between climate control unit terminal 1A and branch A
- Wiring harness between climate control unit terminal 1B and branch A
- Climate control unit

C

Possible cause

- Connector terminal disconnection, poor contact, damage, deformation, corrosion
- Open circuit in wiring harness between branch A and branch B

System wiring diagram



Inspection item

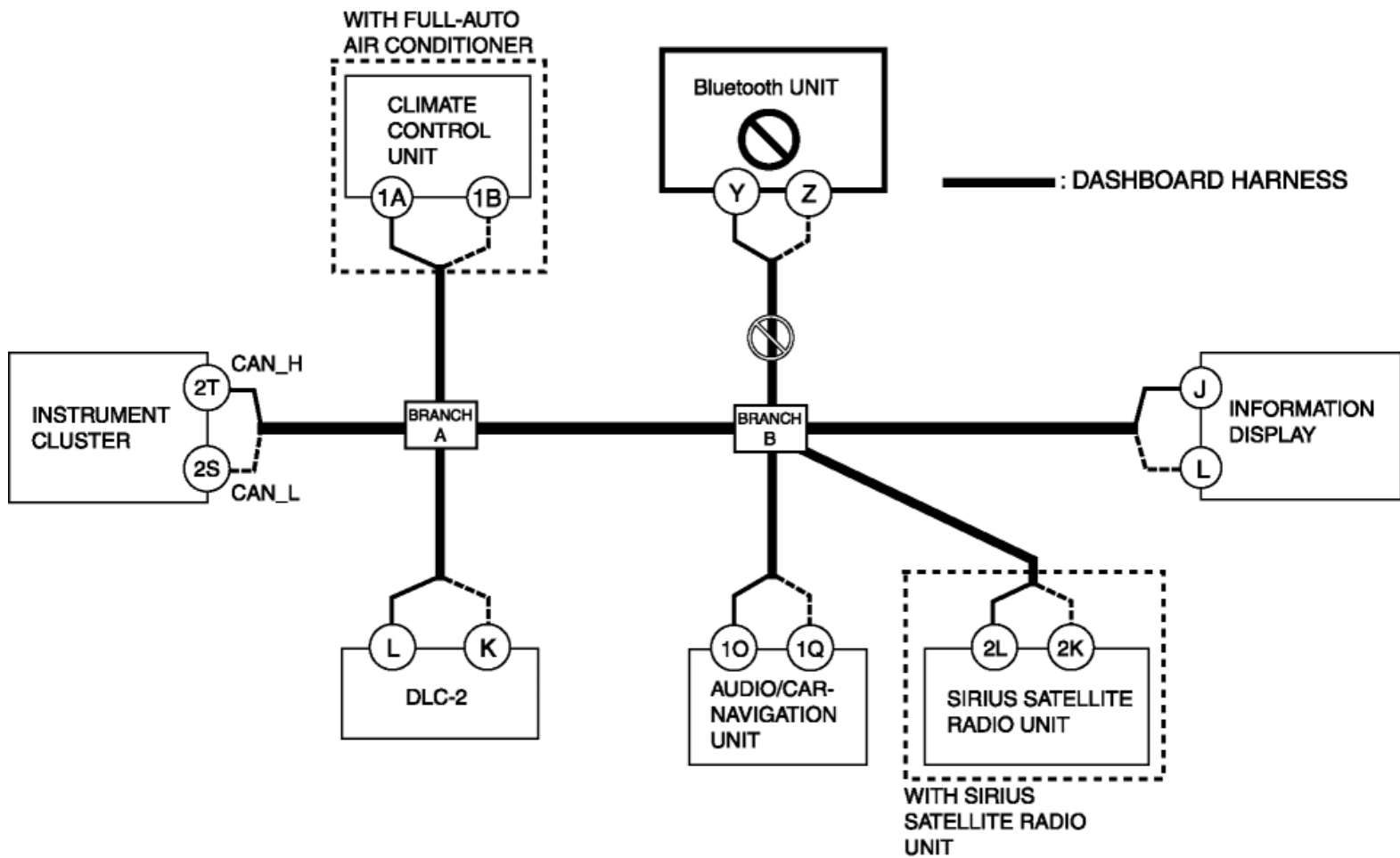
- Wiring harness between branch A and branch B

D

Possible cause

- Connector terminal disconnection, poor contact, damage, deformation, corrosion
- Open circuit in wiring harness between Bluetooth unit and branch B
- Bluetooth unit malfunction

System wiring diagram



Inspection item

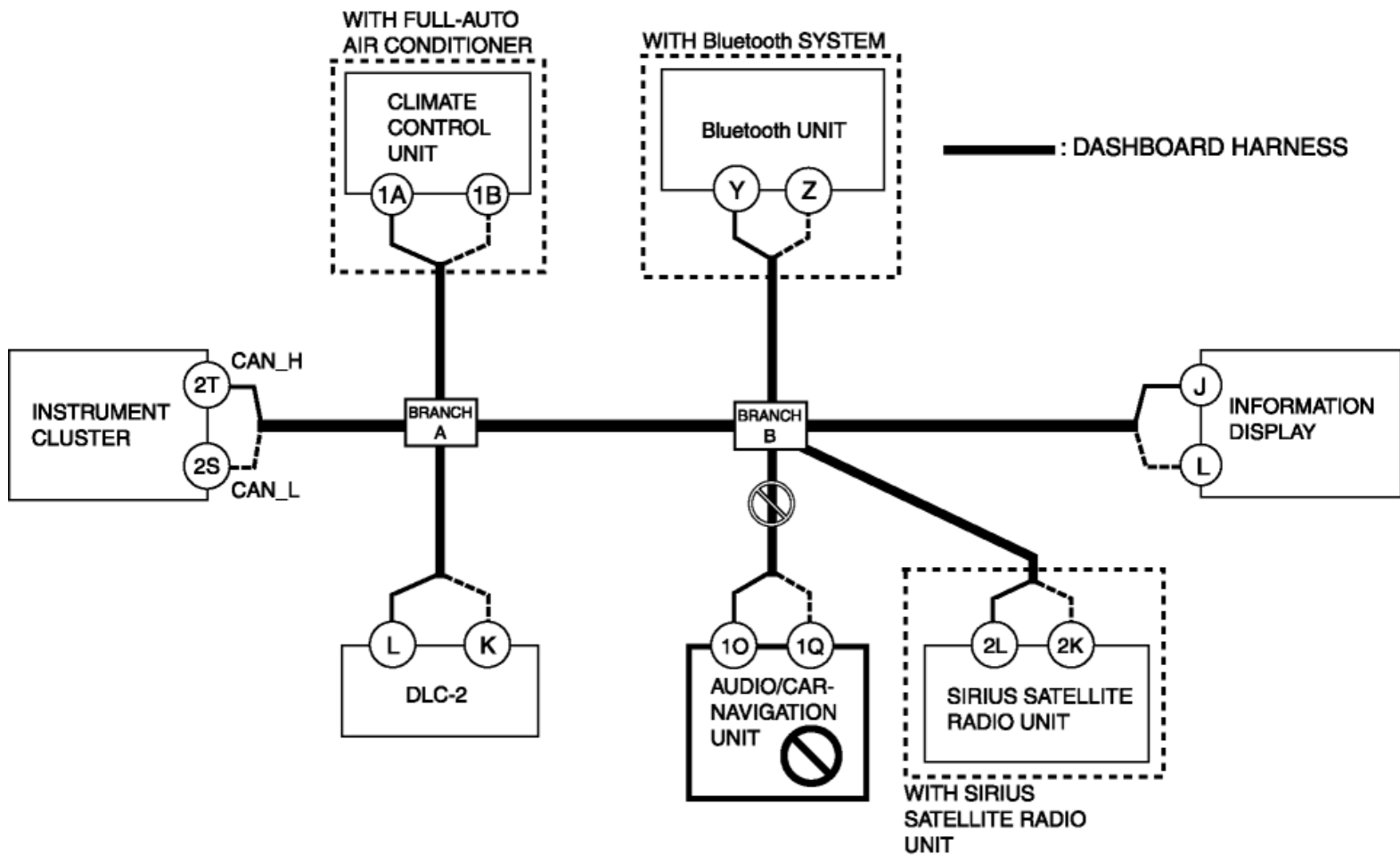
- Bluetooth unit connector
- Wiring harness between Bluetooth unit terminal Y and branch B
- Wiring harness between Bluetooth unit terminal Z and branch B
- Bluetooth unit

E

Possible cause

- Connector terminal disconnection, poor contact, damage, deformation, corrosion
- Open circuit in wiring harness between car-navigation unit or audio unit and branch B
- car-navigation unit or audio unit malfunction

System wiring diagram



Inspection item

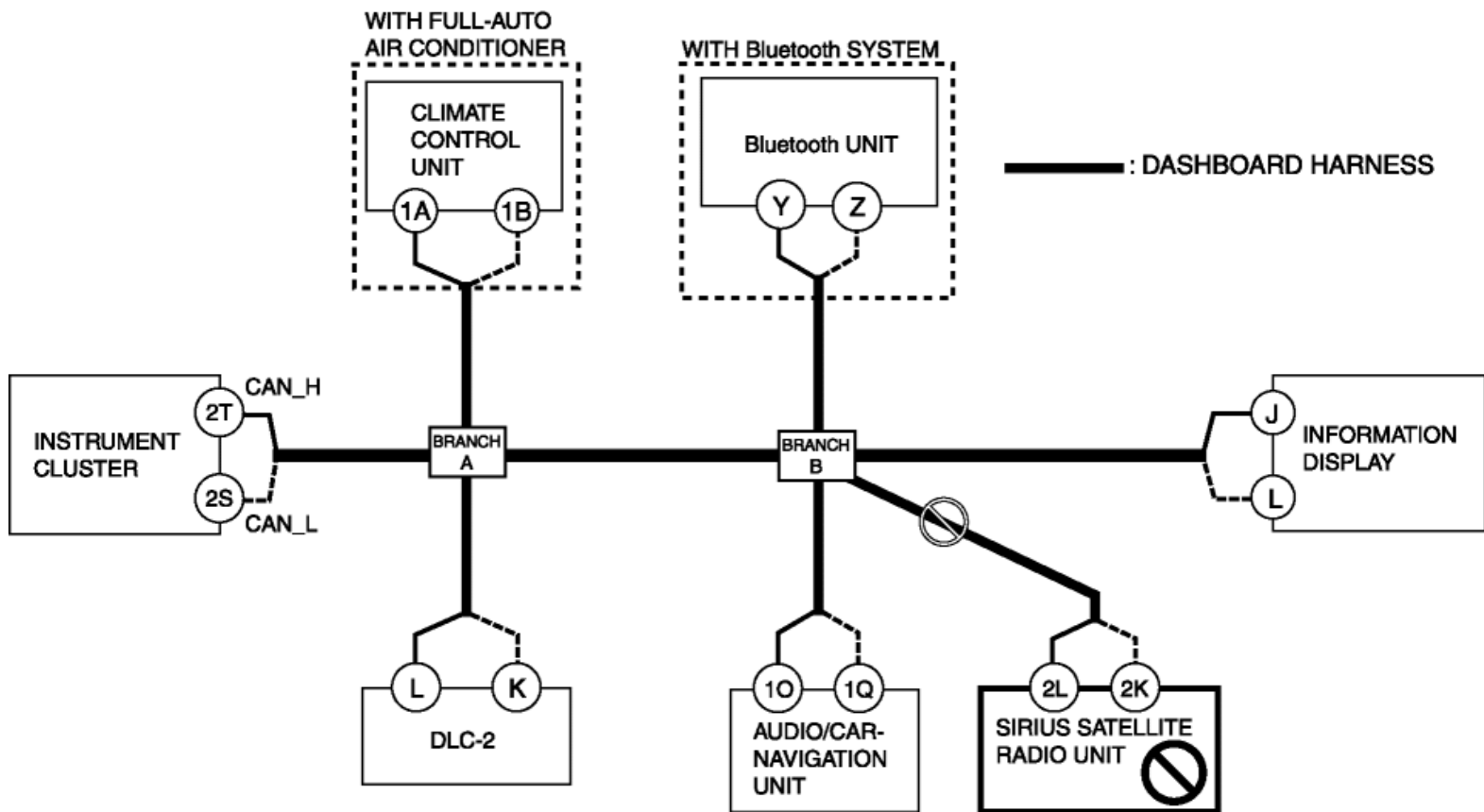
- Car-navigation unit or audio unit connector
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- Wiring harness between car-navigation unit or audio unit terminal 1Q and branch B
- Car-navigation unit or audio unit

F

Possible cause

- Connector terminal disconnection, poor contact, damage, deformation, corrosion
- Open circuit in wiring harness between sirius satellite radio unit and branch B
- Sirius satellite radio unit malfunction

System wiring diagram



Inspection item

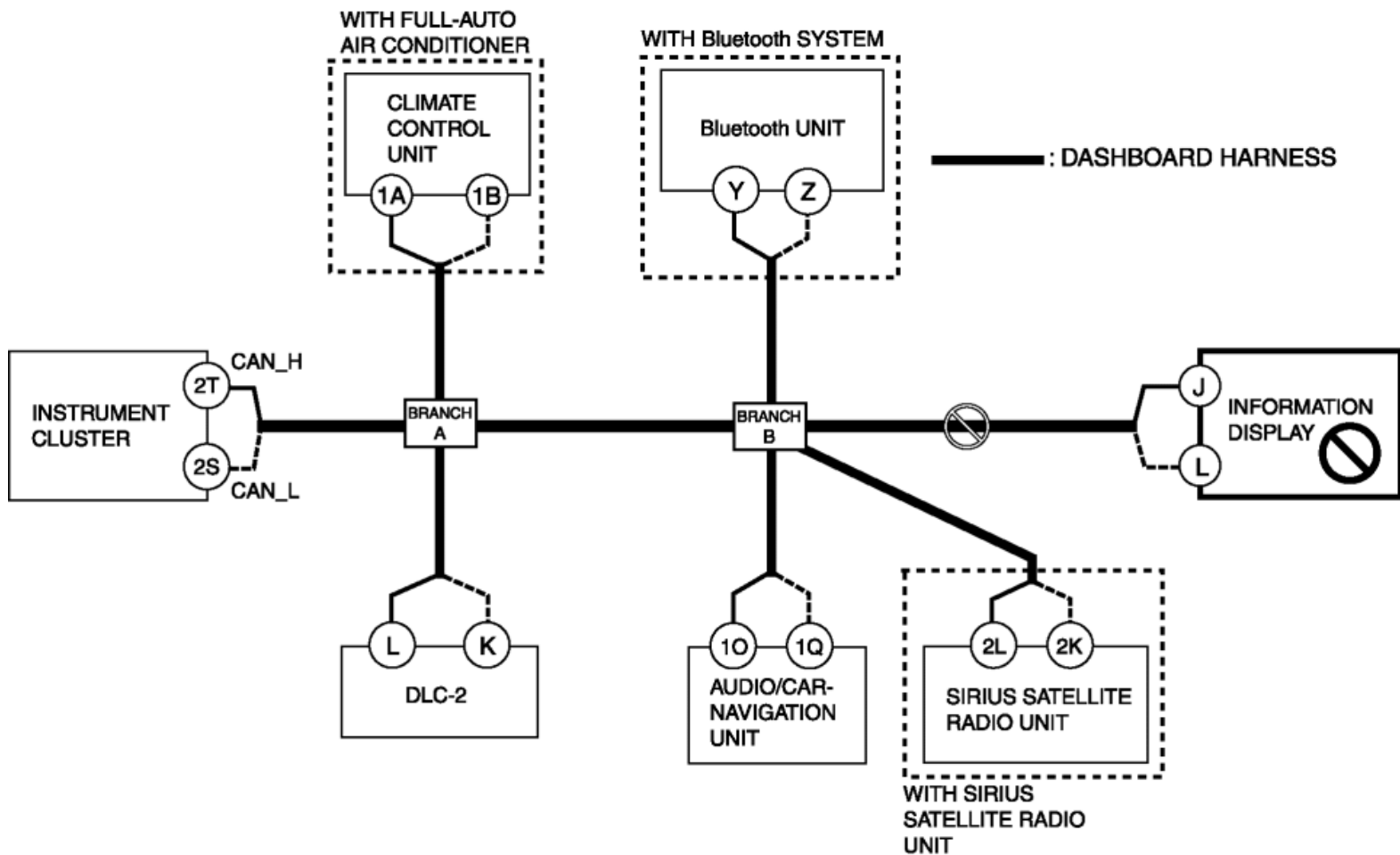
- Sirius satellite radio connector
- Wiring harness between sirius satellite radio terminal 2L and branch B
- Wiring harness between sirius satellite radio terminal 2K and branch B
- Sirius satellite radio

G

Possible cause

- Connector terminal disconnection, poor contact, damage, deformation, corrosion
- Open circuit in wiring harness between information display and branch B
- Information display malfunction

System wiring diagram



Inspection item

- Information display connector
- Wiring harness between information display terminal J and branch B
- Wiring harness between information display terminal L and branch B
- Information display

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