

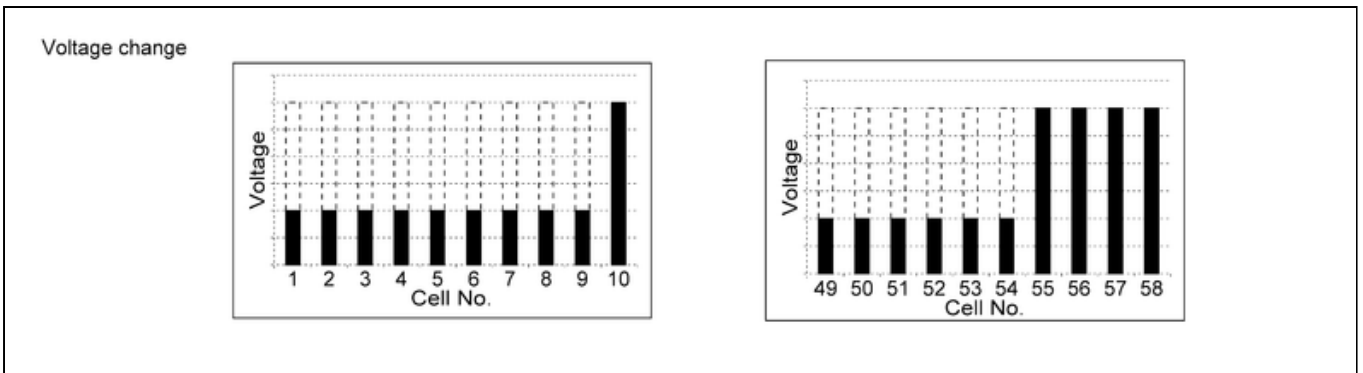
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2010 NISSAN 370Z Roadster OEM Service and Repair Workshop Manual

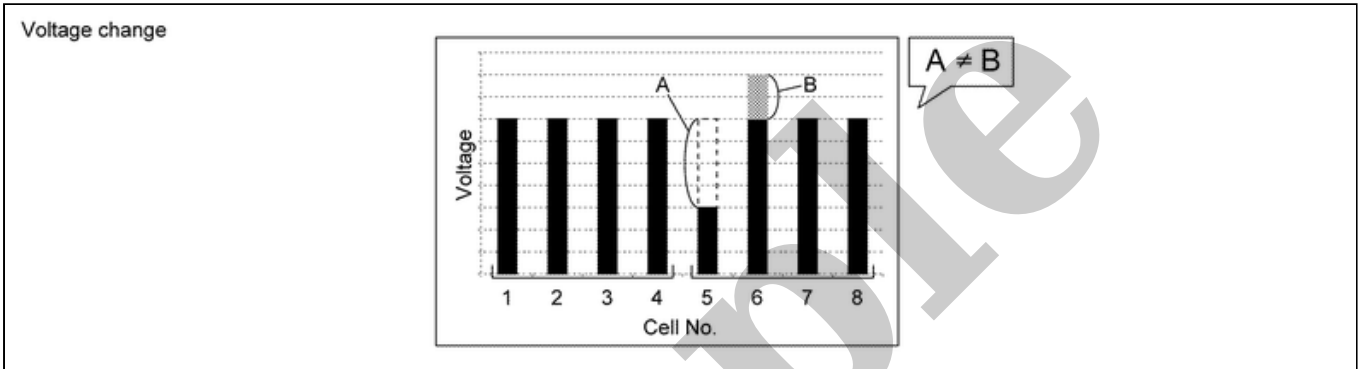
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- In comparison with the module, the voltage of consecutive 9 cell or 6 cell is almost the same and drops.



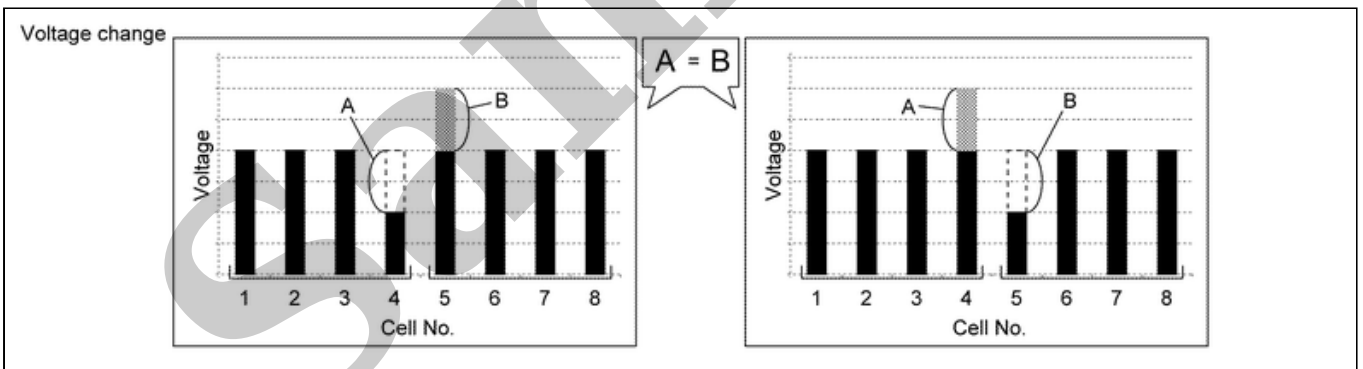
SIEMD-7377527-02-000378689

- The potential difference between two adjacent cells fluctuates unsymmetrically.



SIEMD-7377527-03-SCIA1685GB

- The potential difference between two adjacent cells fluctuates symmetrically.



SIEMD-7377527-04-SCIA1686GB

Does the abnormal cell voltage fluctuation pattern apply to any one of the above conditions?

YES-1>>

- In comparison with the cell controller (ASIC), the voltage of consecutive 12 cell or 13 cell is almost the same and drops.

Possible malfunction parts: Cell controller internal malfunction (ASIC circuit). Replace cell controller. Refer to [Removal & Installation](#).

YES-2>>

- In comparison with the module, the voltage of consecutive 9 cell or 6 cell is almost the same and drops.

Possible malfunction parts: Module or cell voltage circuit (Harness connector). [GO TO 3](#).

YES-3>>

- The potential difference between two adjacent cells fluctuates unsymmetrically.
- The potential difference between two adjacent cells fluctuates symmetrically.

Possible malfunction parts: Cell voltage circuit (Harness connector) or cell controller. [GO TO 4.](#)

NO>>

- Does not apply to any one of them.

Possible malfunction parts: Cell, module, cell voltage circuit (Harness connector) or cell controller. [GO TO 5.](#)

3. CHECK CELL VOLTAGE CIRCUIT-1

Check cell voltage circuit (Harness connector) connected to abnormal cells. Refer to [Diagnosis Procedure.](#)

Is the inspection result normal?

YES>>

Replace corresponding module.

- Refer to [Disassembly & Assembly.](#)
- Refer to [Disassembly & Assembly.](#)

NO>>

Repair or replace malfunctioning parts.

4. CHECK CELL VOLTAGE CIRCUIT-2

Check cell voltage circuit (Harness connector) connected to abnormal cells. Refer to [Diagnosis Procedure.](#)

Is the inspection result normal?

YES>>

Replace corresponding cell controller. Refer to [Removal & Installation.](#)

NO>>

Repair or replace malfunctioning parts.

5. CHECK CELL VOLTAGE CIRCUIT-3

Check cell voltage circuit (Harness connector) connected to abnormal cells. Refer to [Diagnosis Procedure.](#)

Is the inspection result normal?

YES>>

[GO TO 6.](#)

NO>>

Repair or replace malfunctioning parts.

6. CHECK MODULE VOLTAGE

Check voltage of module corresponding to abnormal cell number. Refer to [Component Inspection.](#)

Is the inspection result normal?

YES>>

Replace corresponding cell controller. Refer to [Removal & Installation.](#)

NO>>

7. MODULE REPLACED HISTORY CONFIRMATION

Confirm the latest replacing history of an abnormal module.

Was the module changed?

YES>>

Replace corresponding module and cell controller.

- Module:
 - Refer to [Disassembly & Assembly](#).
 - Refer to [Disassembly & Assembly](#).
- Cell controller: Refer to [Removal & Installation](#).

NO>>

Replace corresponding module.

- Refer to [Disassembly & Assembly](#).
- Refer to [Disassembly & Assembly](#).

Sample

WARNING:

Since hybrid vehicles and electric vehicles contain a high voltage battery, there is the risk of electric shock, electric leakage, or similar accidents if the high voltage component and vehicle are handled incorrectly. Be sure to follow the correct work procedures when performing inspection and maintenance.

WARNING:

- Be sure to remove the service plug in order to disconnect the high voltage circuits before performing inspection or maintenance of high voltage system harnesses and parts.
- The removed service plug must always be carried in a pocket of the responsible worker or placed in the tool box during the procedure to prevent the plug from being connected by mistake.
- Be sure to wear insulating protective equipment consisting of glove, shoes, face shield and glasses before beginning work on the high voltage system.
- Never allow workers other than the responsible person to touch the vehicle containing high voltage parts. To keep others from touching the high voltage parts, these parts must be covered with an insulating sheet except when using them.
- Refer to [HIGH VOLTAGE PRECAUTIONS : Precautions](#).

CAUTION:

Never bring the vehicle into the READY status with the service plug removed unless otherwise instructed in the Service Manual. A malfunction may occur if this is not observed.

1. PRECONDITIONING-1

WARNING:

Be sure to disconnect the high voltage and check residual voltage before work starts.

1. Disconnect the high voltage. Refer to [HOW TO DISCONNECT HIGH VOLTAGE : Precautions](#).
2. Check voltage of high voltage circuit. Refer to [CHECK VOLTAGE IN HIGH VOLTAGE CIRCUIT : Precautions](#).
3. Remove Li-ion battery. Refer to [Removal & Installation](#).
4. Remove battery pack upper case. Refer to [Removal & Installation](#).

>>

[GO TO 2.](#)

2. CHECK CONNECTOR CONNECTION CONDITION

Check the connection of each cell controller harness connectors and each module stack harness connector.

**NOTE:**

Pull the connector first then push the connector to confirm a connection. Since id connector is pressed first, connector may be locked, malfunction cannot be found.

Is the inspection result normal?

YES>>

[GO TO 3.](#)

NO>>

Repair harness connector connection.

3. CHECK MODULE TEMPERATURE SENSOR

1. Disconnect each cell controller harness connector.
2. Check module temperature sensor. Refer to Component Inspection.

Is the inspection result normal?

YES>>

[GO TO 4.](#)

NO>>

Replace malfunction module.

4. CHECK CONTINUITY BETWEEN MODULE TEMPERATURE SENSOR AND LBC

1. Disconnect connector of corresponding module.
2. Check continuity between module harness connector and cell controller harness connector.

MD1		Cell controller No.1		Resistance
Connector	Terminal	Connector	Terminal	
LB101	10	LB211	16	0 Ω approx.
	3		5	

MD2		Cell controller No.1		Resistance
Connector	Terminal	Connector	Terminal	
LB102	10	LB211	16	0 Ω approx.
	3		6	

MD3		Cell controller No.2		Resistance
Connector	Terminal	Connector	Terminal	
LB103	10	LB212	16	0 Ω approx.
	3		5	

MD4		Cell controller No.2		Resistance
Connector	Terminal	Connector	Terminal	
LB104	10	LB212	16	0 Ω approx.
	3		6	

MD5		Cell controller No.3		Resistance
Connector	Terminal	Connector	Terminal	
LB105	12	LB213	16	0 Ω approx.
	11		5	

MD6		Cell controller No.3		Resistance
Connector	Terminal	Connector	Terminal	
LB106	12	LB213	16	0 Ω approx.
	11		6	

MD7		Cell controller No.4		Resistance
Connector	Terminal	Connector	Terminal	
LB107	12	LB214	16	0 Ω approx.
	11		5	

MD8		Cell controller No.4		Resistance
Connector	Terminal	Connector	Terminal	
LB108	12	LB214	16	0 Ω approx.
	11		6	

MD9		Cell controller No.5		Resistance
Connector	Terminal	Connector	Terminal	
LB109	12	LB215	16	0 Ω approx.
	11		5	

MD10		Cell controller No.5		Resistance
Connector	Terminal	Connector	Terminal	
LB110	12	LB215	16	0 Ω approx.
	11		6	

MD11		Cell controller No.6		Resistance
Connector	Terminal	Connector	Terminal	
LB111	12	LB216	16	0 Ω approx.
	11		5	

MD12		Cell controller No.6		Resistance
Connector	Terminal	Connector	Terminal	
LB112	12	LB216	16	0 Ω approx.
	11		6	

MD11		Cell controller No.6		Resistance
Connector	Terminal	Connector	Terminal	
LB111	12	LB216	16	0 Ω approx.
	11		5	

MD12		Cell controller No.6		Resistance
Connector	Terminal	Connector	Terminal	
LB112	12	LB216	16	0 Ω approx.
	11		6	

MD13		Cell controller No.7		Resistance
Connector	Terminal	Connector	Terminal	
LB113	10	LB217	16	0 Ω approx.
	3		5	

MD14		Cell controller No.7		Resistance
Connector	Terminal	Connector	Terminal	
LB114	10	LB217	16	0 Ω approx.
	3		6	

MD15		Cell controller No.8		Resistance
Connector	Terminal	Connector	Terminal	
LB115	10	LB218	16	0 Ω approx.
	3		5	

MD16		Cell controller No.8		Resistance
Connector	Terminal	Connector	Terminal	
LB116	10	LB218	16	0 Ω approx.
	3		6	

3. Check harnesses for short to ground and short to lines.

Is the inspection result normal?

YES>>

INSPECTION END

NO>>

Replace or repair Li-ion batter vehicle communication harness.

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2. Check voltage of high voltage circuit. Refer to [CHECK VOLTAGE IN HIGH VOLTAGE CIRCUIT : Precautions](#).
3. Remove Li-ion battery. Refer to [Removal & Installation](#).
4. Remove battery pack upper case. Refer to [Removal & Installation](#).

>>

[GO TO 2.](#)

2. CHECK MODULE TEMPERATURE SENSOR

1. Disconnect each cell controller harness connector.
2. Check resistance of module temperature sensor.

WARNING:

Never measure the cell voltage terminal by mistake.

2P9S

Module	Measurement Condition	Resistance
Terminal		

Module		Measurement Condition	Resistance
Terminal			
4	14	10 °C	18 kΩ approx.
		25 °C	10 kΩ approx.
		10 °C	18 kΩ approx.

2P6S

Module		Measurement Condition	Resistance
Terminal			
11	10	10 °C	18 kΩ approx.
		25 °C	10 kΩ approx.
		26 °C	11 kΩ approx.

Is the inspection result normal?

YES>>

INSPECTION END

NO>>

Replace corresponding module.

- Refer to [Disassembly & Assembly](#).
- Refer to [Disassembly & Assembly](#).

Sample