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2010 NISSAN 370Z OEM Service and Repair Workshop Manual

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NO>>

Repair harness connector connection.

3. CHECK CONTINUITY BETWEEN HARNESS CONNECTORS OF JUNCTION BOX AND VEHICLE COMMUNICATION.

1. Remove junction box harness connectors.
2. Check continuity between harness connectors of junction box and vehicle communication.

Main Relay 2 circuit

Junction box connector		Vehicle communication connector		Continuity
Connector	Terminal	Connector	Terminal	
LB11	S3	LB2	26	Exist
	S4		7	

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

Is inspection result normal?

YES>>

INSPECTION END

NO>>

Repair or Replace Li-ion battery vehicle communication harness.

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](#).

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2. CHECK CONNECTOR CONNECTION CONDITION

Check the connection of LBC 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 TOTAL CELL VOLTAGE DETECTION HARNESS CONTINUITY

1. Disconnect all harness connectors of LBC, each cell controller, and each module stack.
2. Check resistance value between LBC harness connector, module No.1 (MD1) harness connector and cell controller harness connector.

LBC		Cell controller 1		Resistance
Connector	Terminal	Connector	Terminal	
LB16	8	LB211	19	Less than 700 mΩ
			15	
	9	LB211	19	
			15	

LBC		MD1		Resistance
Connector	Terminal	Connector	Terminal	
LB16	8	LB101	6	Less than 700 mΩ
	9			

Is the inspection result normal?

YES>>

[GO TO 4.](#)

NO>>

Repair harness connector connection.

4. CHECK CELL VOLTAGE DETECTION HARNESS CONTINUITY

1. Check resistance value between each cell controller harness connector and each module stack harness connector.

Module No.	Cell No.	Connector	Terminal	Cell controller No.	Connector	Terminal	Resistance
MD1	1	LB101	6	Cell controller No.1	LB211	15	Less than 700 mΩ
	2		1			14	
	3		5			4	
	4		3			13	
	5		12			12	
	6		10			11	
	7		11			10	

Module No.	Cell No.	Connector	Terminal	Cell controller No.	Connector	Terminal	Resistance
MD2	8	LB102	6	Cell controller No.1	LB211	9	Less than 700 mΩ
	9		1			3	
	10		5			8	
	11		13			2	

Module No.	Cell No.	Connector	Terminal	Cell controller No.	Connector	Terminal	Resistance
	12		4			7	
	13		12	Cell controller No.2	LB212	15	
	14		15			14	

Module No.	Cell No.	Connector	Terminal	Cell controller No.	Connector	Terminal	Resistance
MD3	15	LB103	6	Cell controller No.2	LB212	4	Less than 700 mΩ
	16		1			13	
	17		5			12	
	18		13			11	
	19		4			10	
	20		12			9	
	21		15			3	

Module No.	Cell No.	Connector	Terminal	Cell controller No.	Connector	Terminal	Resistance
MD4	22	LB104	6	Cell controller No.2	LB212	8	Less than 700 mΩ
	23		1			2	
	24		5			7	
	25		13			1	
	26		4	15	Cell controller No.3	LB213	
	27		12	14			
	28		15	4			
				13			

Module No.	Cell No.	Connector	Terminal	Cell controller No.	Connector	Terminal	Resistance
MD5	29	LB105	6	Cell controller No.3	LB213	12	Less than 700 mΩ
	30		1			11	
	31		16			10	
	32		4			9	
	33		14			3	

Module No.	Cell No.	Connector	Terminal	Cell controller No.	Connector	Terminal	Resistance		
MD6	34	LB106	6	Cell controller No.3	LB213	8	Less than 700 mΩ		
	35		1			2			
	36		16			7			
	37		4			1			
	38				14	Cell controller No.4		LB214	15
									14

Module No.	Cell No.	Connector	Terminal	Cell controller No.	Connector	Terminal	Resistance
MD7	39	LB107	6	Cell controller No.4	LB214	4	Less than 700 mΩ
	40		1			13	
	41		16			12	

Module No.	Cell No.	Connector	Terminal	Cell controller No.	Connector	Terminal	Resistance
	42		4			11	
	43		14			10	

Module No.	Cell No.	Connector	Terminal	Cell controller No.	Connector	Terminal	Resistance
MD8	44	LB108	6	Cell controller No.4	LB214	9	Less than 700 mΩ
	45		1			3	
	46		16			8	
	47		4			2	
	48		14			7	
	49		9			1	

Module No.	Cell No.	Connector	Terminal	Cell controller No.	Connector	Terminal	Resistance
MD9	50	LB109	6	Cell controller No.5	LB215	15	Less than 700 mΩ
	51		1			14	
	52		16			4	
	53		4			13	
	54		14			12	

Module No.	Cell No.	Connector	Terminal	Cell controller No.	Connector	Terminal	Resistance
MD10	55	LB110	6	Cell controller No.5	LB215	11	Less than 700 mΩ
	56		1			10	
	57		6			9	
	58		4			3	
	59		14			8	

Module No.	Cell No.	Connector	Terminal	Cell controller No.	Connector	Terminal	Resistance
MD11	60	LB111	6	Cell controller No.5	LB215	2	Less than 700 mΩ
	61		1			7	
	62		16			1	
	63		4	Cell controller No.6	LB216	15	
						14	
						4	

Module No.	Cell No.	Connector	Terminal	Cell controller No.	Connector	Terminal	Resistance
MD12	65	LB112	6	Cell controller No.6	LB216	13	Less than 700 mΩ
	66		1			12	
	67		16			11	
	68		4			10	
	69		14			9	

Module No.	Cell No.	Connector	Terminal	Cell controller No.	Connector	Terminal	Resistance
MD13	70	LB113	6	Cell controller No.6	LB216	3	Less than 700 mΩ
	71		1			8	

Module No.	Cell No.	Connector	Terminal	Cell controller No.	Connector	Terminal	Resistance
	72		5			2	
	73		13			7	
	74		4			1	
	75		12			15	
	76		15			14	
						4	

Module No.	Cell No.	Connector	Terminal	Cell controller No.	Connector	Terminal	Resistance
MD14	77	LB114	6	Cell controller No.7	LB217	13	Less than 700 mΩ
	78		1			12	
	79		5			11	
	80		13			10	
	81		4			9	
	82		12			3	
	83		15			8	

Module No.	Cell No.	Connector	Terminal	Cell controller No.	Connector	Terminal	Resistance
MD15	84	LB115	6	Cell controller No.7	LB217	2	Less than 700 mΩ
	85		1			7	
	86		5			1	
	87		13			15	
	88		4	14			
	89		12	4			
	90		15	13			
				12			

Module No.	Cell No.	Connector	Terminal	Cell controller No.	Connector	Terminal	Resistance
MD16	91	LB116	6	Cell controller No.8	LB218	11	Less than 700 mΩ
	92		1			10	
	93		5			9	
	94		13			3	
	95		4			8	
	96		12			2	
	97		15			7	
	98		8			1	

Is the inspection result normal?

YES>>

INSPECTION END

NO>>

Repair harness connector connection.

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1. PRECONDITIONING

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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 from vehicle. Refer to [Removal & Installation](#).
4. Remove battery pack upper case. Refer to [Removal & Installation](#).

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2. CHECK CONNECTOR CONNECTING CONDITION

Check connection status of the junction box harness connector.

**NOTE:**

Pull connector first then push connector to check connection. Since if 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 BUS BAR CONNECTION STATUS

Check connection status of each bus bar in the high voltage circuit.

Is the inspection result normal?

YES>>

[GO TO 4.](#)

NO>>

Repair harness connector connection.

4. CHECK HIGH VOLTAGE FUSE

Check high voltage fuse. Refer to [Component Inspection](#).

Is the inspection result normal?

YES>>

INSPECTION END

NO>>

Replace fuse after trouble shooting cause of blown fuse.

Sample

1. CHECK CELL VOLTAGE WITH DATA MONITOR

 With CONSULT

1. Power switch ON.
2. Select “Data Monitor” of “HIGH VOLTAGE BATTERY”.
3. Record “Maximum cell voltage”.



NOTE:

When the procedure is reached to replace the malfunction module, the module voltage adjustment is required. At that time, the maximum cell voltage is also required.

4. Select “Cell voltage 01 - 96”.
5. Check abnormal voltage of any cell by comparing each monitored value.



NOTE:

If power switch cannot be turned ON, the cell voltage is confirmed by recorded "FFD".

Is there any abnormal cell?

YES>>

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NO>>

DIAGNOSIS END

2. CHECK PATTERN OF ABNORMAL CELL

 With CONSULT

Check with CONSULT, if the voltage fluctuation pattern of abnormal cells applies to any one of the following conditions.



NOTE:

For the comparison of ASIC, cell voltage, and module stack, Refer to [Component Description](#).

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

Voltage change

