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2010 NISSAN Altima OEM Service and Repair Workshop Manual

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Replace service plug.

Diagnosis Procedure

SIEMD-7377084

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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GO TO 2.

2. CHECK CONNECTOR CONNECTING CONDITION

Check the connection status of battery pack pressure sensor 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 CONTINUITY BETWEEN BATTERY PACK PRESSURE SENSOR AND VEHICLE COMMUNICATION HARNESS

1. Disconnect harness connectors of battery pack pressure sensor 1 and battery pack pressure sensor 2.
2. Check continuity between battery pack pressure sensor harness connector and vehicle communication harness connector.

Battery pack pressure sensor 1

Battery pack pressure sensor 1		Vehicle communication harness connector		Continuity
Connector	Terminal	Connector	Terminal	
LB5	1	LB2	3	Exist
	2		21	
	3		4	

Battery pack pressure sensor 2

Battery pack pressure sensor 2		Vehicle communication harness connector		Continuity
Connector	Terminal	Connector	Terminal	
LB10	1	LB2	9	Exist
	2		28	
	3		10	

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.

Diagnosis Procedure

SIEMD-7377598

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

WARNING:

Perform to disconnect the high voltage and check an residual voltage.

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 from vehicle. 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 condition of LBC and each cell controller harness connectors.

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 CONTINUITY OF CELL CONTROLLER COMMUNICATION CIRCUIT HARNESS.

1. Remove LBC and each cell controller harness connector.
2. Check resistance value between LBC harness connector and each cell controller harness connector.

LBC		Cell controller No.1		Resistance value
Connector	Terminal	Connector	Terminal	
LB16	2	LB221	24	0 Ω approx.
	1		23	
	6		18	
	5		17	

Cell controller No.1		Cell controller No.2		Resistance value
Connector	Terminal	Connector	Terminal	
LB221	22	LB222	24	0 Ω approx.
	21		23	
	32		18	
	31		17	

Cell controller No.2		Cell controller No.3		Resistance value
Connector	Terminal	Connector	Terminal	
LB222	22	LB223	24	0 Ω approx.
	21		23	
	32		18	
	31		17	

Cell controller No.3		Cell controller No.4		Resistance value
Connector	Terminal	Connector	Terminal	
LB223	22	LB224	24	0 Ω approx.
	21		23	
	32		18	
	31		17	

Cell controller No.4		Cell controller No.5		Resistance value
Connector	Terminal	Connector	Terminal	
LB224	22	LB225	24	0 Ω approx.
	21		23	
	32		18	
	31		17	

Cell controller No.5		Cell controller No.6		Resistance value
Connector	Terminal	Connector	Terminal	
LB225	22	LB226	24	0 Ω approx.
	21		23	
	32		18	
	31		17	

Cell controller No.6		Cell controller No.7		Resistance value
Connector	Terminal	Connector	Terminal	
LB226	22	LB227	24	0 Ω approx.
	21		23	
	32		18	
	31		17	

Cell controller No.7		Cell controller No.8		Resistance value
Connector	Terminal	Connector	Terminal	
LB227	22	LB228	24	0 Ω approx.
	21		23	
	32		18	
	31		17	

Is the inspection result normal?

YES>>

INSPECTION END

NO>>

Repair or replace harness.

Diagnosis Procedure

SIEMD-7377173

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 CONNECTING CONDITION

Check the connection status of battery pack pressure sensor 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 CONTINUITY BETWEEN JUNCTION BOX AND VEHICLE COMMUNICATION HARNESS

1. Disconnect junction box harness connector.
2. Check continuity junction box harness connector and vehicle communication harness connector.

Junction box		Vehicle communication harness connector		Continuity
Connector	Terminal	Connector	Terminal	
LB11	S15	LB2	5	Exist
	S17		18	
	S21		25	
	S22		15	

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

Is inspection result normal?

YES>>

GO TO 4.

NO>>

Repair or replace Li-ion battery vehicle communication harness.

4. CHECK CONTINUITY BETWEEN JUNCTION BOX AND LBC HARNESS CONNECTOR

1. Remove LBC harness connector.
2. Check continuity between junction box and LBC harness connector.

Junction box		LBC		Continuity
Connector	Terminal	Connector	Terminal	
LB11	S20	LB18	46	Exist

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.

Diagnosis Procedure

SIEMD-7377606

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.Refer to Removal & Installation.
4. Remove battery pack upper case. Refer to Removal & Installation.

>>

GO TO 4.

2. CHECK CONNECTOR CONNECTING CONDITION

Check the connection status of LBC 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.