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2011 NISSAN 370z Nismo OEM Service and Repair Workshop Manual

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1. CHECK PRE-CHARGE RELAY GROUND CIRCUIT

Check pre-charge relay ground circuit. Refer to [Diagnosis Procedure](#).

Is the inspection result normal?

YES>>

[GO TO 2](#)

NO>>

Repair or replace error-detected parts, [GO TO 3](#).

2. CHECK PRE-CHARGE RELAY CIRCUIT

Check pre-charge relay circuit. Refer to [Diagnosis Procedure](#)(66kWh LI-ION BATTERY), [Diagnosis Procedure](#)(91kWh LI-ION BATTERY).

Is the inspection result normal?

YES>>

INSPECTION END

NO>>

Repair or replace error-detected parts, [GO TO 3](#).

3. PERFORM CONFIRMATION PROCEDURE AGAIN

1. Erase DTC.

2. Perform DTC confirmation procedure again. Refer to [Confirmation Procedure](#).

Is DTC P168A-13 detected again?

YES>>

Replace VCM. Refer to [VCM : Removal & Installation](#).

NO>>

INSPECTION END

DTC Description

DTC		CONSULT screen terms	DTC detecting condition	
P1598	96	Interlock sensors	Diagnosis condition	Always
			Signal	Connection detection signal below <ul style="list-style-type: none"> • Service plug • Li-ion battery high voltage connector going to the inverter (front) • Li-ion battery high voltage connector going to the inverter (rear) • Li-ion battery high voltage connector going to the battery coolant heater • Li-ion battery high voltage connector going to the quick charge port • PTC heater high voltage connector • Electric compressor high voltage connector • On-board charger high voltage connector going to the normal charge port • High voltage junction box cover • High voltage junction box high voltage connector going to inverter (front) • High voltage junction box high voltage connector going to PTC heater • High voltage junction box high voltage connector going to electric compressor
			Threshold	When error of connection detection circuit is detected.
			Detection time	2 seconds

POSSIBLE CAUSE

- Harness and connector (Connection detection circuit is open or shorted.)
- LBC
- A/C auto amp.
- On-board charger
- VCM
- High voltage junction box

FAIL-SAFE

Not applicable

1. PRECONDITIONING

1. Press the power switch for at least 2 seconds to turn the high voltage system OFF and then check that the charging status indicator is not illuminated.

**NOTE:**

When the high voltage system is turned ON, the charging status indicator blinks green with a frequency of 1 second.

2. After the high voltage system is turned OFF, open the driver's side door, get out of the vehicle, close the driver's side door and wait for at least 5 minutes.

CAUTION:

- **Since the auto ACC function causes the accessory power to be turned ON, do not perform any vehicle operation including locking the doors or opening and closing of the doors during the standby state.**

If an operation is performed, wait an additional 5 minutes from that time.

- **Check that 12V battery voltage is 11 V or more.**

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[GO TO 2.](#)

2. PERFORM DTC CONFIRMATION PROCEDURE

 With CONSULT

1. Erase self-diagnostic result in “EV/HEV” using CONSULT.
2. Power switch ON and wait at least 10 seconds.
3. Check self-diagnostic result in “EV/HEV” using CONSULT.

Is DTC detected?

YES>>

Refer to [DTC Diagnosis Procedure](#).

NO-1>>

To check malfunction symptom before repair: Refer to [Intermittent Incident](#).

NO-2>>

Confirmation after repair: INSPECTION END

CAUTION:

Hybrid vehicles and electric vehicles equipped with high voltage batteries may cause an electric shock or a short circuit if handled in an inappropriate way. When you inspect and service a vehicle, follow the work procedure and perform the correct tasks.

WARNING:

- When you inspect and service the high voltage wiring harnesses and components, make sure to remove the service plug in order to shut off the high voltage circuit.
- When you have removed the service plug, be sure to carry it in your pocket, or store it in the tool box in order to keep someone from accidentally connecting it during work.
- When performing high voltage system operation, be sure to wear insulating protective equipment.
- During tasks involving high voltage systems, clarify a person in charge of the tasks and do not let others touch the vehicle. When the vehicle is not being serviced, use protective items such as an electric-proof cover sheet for covering the high voltage components so as to keep someone from accidentally touching the vehicle.
- Refer to [HIGH VOLTAGE PRECAUTIONS : Precautions](#).

CAUTION:

- Setting the vehicle to the READY state with the service plug removed may cause malfunctioning. Avoid setting the vehicle to the READY state unless otherwise specified in the service manual.
- When you turned the power switch ON with the service plug removed, be sure to erase all the DTCs after trouble diagnosis.

1. CHECK DTC IN VCM

 With CONSULT

1. Power switch ON.
2. Check self-diagnostic result in “EV/HEV”.

Is DTC detected?

YES>>

Perform diagnosis for detected DTC. Refer to [DTC Index](#).

NO>>

[GO TO 2.](#)

2. CHECK DTC IN LBC

 With CONSULT

Check self-diagnostic result in “HVBATTERY”.

Is DTC detected?

YES>>

Perform diagnosis for detected DTC. Refer to [DTC Index](#) (66kWh Li-ion Battery) or [DTC Index](#) (91kWh Li-ion Battery).

NO>>

[GO TO 3.](#)

3. CHECK DTC IN A/C AUTO AMP.

 With CONSULT

Check self-diagnostic result in “HVAC”.

Is DTC detected?

YES>>

Perform diagnosis for detected DTC. Refer to [DTC Index](#).

NO>>

[GO TO 4.](#)

4. CHECK DTC IN ON-BOARD CHARGER

 With CONSULT

Check self-diagnostic result in “CHARGER/POWER DELIVERY MODULE”.

Is DTC detected?

YES>>

Perform diagnosis for detected DTC. Refer to [DTC Index](#).

NO>>

[GO TO 5.](#)

5. PRECONDITIONING

WARNING:

Follow the instructions below before starting the procedure.

1. Disconnect high voltage circuit. Refer to [HOW TO DISCONNECT HIGH VOLTAGE : Precautions](#).
2. Check voltage in high voltage circuit. Refer to [CHECK VOLTAGE IN HIGH VOLTAGE CIRCUIT : Precautions](#).

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[GO TO 6.](#)

6. CHECK HIGH VOLTAGE JUNCTION BOX CONNECTION DETECTION CIRCUIT 1

1. Disconnect high voltage junction box harness connector.
2. Check for continuity between the high voltage junction box terminals.

High voltage junction box		Continuity
+	-	
Terminal		
4	5	Existing

3. Also check high voltage junction box for short to power supply.

Is the inspection result normal?

YES>>

[GO TO 7.](#)

NO>>

[GO TO 16.](#)

7. CHECK HIGH VOLTAGE JUNCTION BOX CONNECTION DETECTION CIRCUIT 1 POWER SUPPLY CIRCUIT-1

1. Disconnect VCM harness connector.
2. Check high voltage junction box for short to power supply.

+		-		Voltage
High voltage junction box		VCM		
Connector	Terminal	Connector	Terminal	
E1	4	Ground		0 V

Is the inspection result normal?

YES>>

[GO TO 8.](#)

NO>>

Repair or replace error-detected parts.

8. CHECK HIGH VOLTAGE JUNCTION BOX CONNECTION DETECTION CIRCUIT 1 POWER SUPPLY CIRCUIT-2

1. Check the continuity between high voltage junction box harness connector and VCM harness connector.

+		-		Continuity
High voltage junction box		VCM		
Connector	Terminal	Connector	Terminal	
E1	4	E48	132	Existing

2. Also check harness for short to ground.

Is the inspection result normal?

YES>>

[GO TO 9.](#)

NO>>

Repair or replace error-detected parts.

9. CHECK HIGH VOLTAGE JUNCTION BOX CONNECTION DETECTION CIRCUIT 1 SIGNAL CIRCUIT-1

Check high voltage junction box for short to power supply.

+		-	Voltage
High voltage junction box			
Connector	Terminal		
E1	5	Ground	0 V

Is the inspection result normal?

YES>>

[GO TO 10.](#)

NO>>

Repair or replace error-detected parts.

10. CHECK HIGH VOLTAGE JUNCTION BOX CONNECTION DETECTION CIRCUIT 1 SIGNAL CIRCUIT-2

1. Check the continuity between high voltage junction box harness connector and VCM harness connector.

+		-		Continuity
High voltage junction box		VCM		
Connector	Terminal	Connector	Terminal	
E1	5	E48	119	Existing

2. Also check harness for short to ground.

Is the inspection result normal?

YES>>

[GO TO 11.](#)

NO>>

Repair or replace error-detected parts.

11. CHECK HIGH VOLTAGE JUNCTION BOX CONNECTION DETECTION CIRCUIT 2

1. Check for continuation between the high voltage junction box terminals.

High voltage junction box		Continuity
+	-	
Terminal		
8	9	Existing

2. Also check high voltage junction box for short to power supply.

Is the inspection result normal?

YES>>

[GO TO 12.](#)

NO>>

[GO TO 18.](#)

12. CHECK HIGH VOLTAGE JUNCTION BOX CONNECTION DETECTION CIRCUIT 2 POWER SUPPLY CIRCUIT-1

Check high voltage junction box for short to power supply.

+		-	Voltage
High voltage junction box			
Connector	Terminal		
E1	8	Ground	0 V

Is the inspection result normal?

YES>>

[GO TO 13.](#)

NO>>

Repair or replace error-detected parts.

13. CHECK HIGH VOLTAGE JUNCTION BOX CONNECTION DETECTION CIRCUIT 2 POWER SUPPLY CIRCUIT-2

1. Check the continuity between high voltage junction box harness connector and VCM harness connector.

+		-		Continuity
High voltage junction box		VCM		
Connector	Terminal	Connector	Terminal	
E1	8	E48	100	Existing

2. Also check harness for short to ground.

Is the inspection result normal?

YES>>

[GO TO 14.](#)

NO>>

Repair or replace error-detected parts.

14. CHECK HIGH VOLTAGE JUNCTION BOX CONNECTION DETECTION CIRCUIT 2 SIGNAL CIRCUIT-1

Check high voltage junction box for short to power supply.

+		-	Voltage
High voltage junction box			
Connector	Terminal		
E1	9	Ground	0 V

Is the inspection result normal?

YES>>

[GO TO 15.](#)

NO>>

Repair or replace error-detected parts.

15. CHECK HIGH VOLTAGE JUNCTION BOX CONNECTION DETECTION CIRCUIT 2 SIGNAL CIRCUIT-2

1. Check the continuity between high voltage junction box harness connector and VCM harness connector.

+		-		Continuity
High voltage junction box		VCM		
Connector	Terminal	Connector	Terminal	
E1	9	E48	139	Existing

2. Also check harness for short to ground.

Is the inspection result normal?

YES>>

[GO TO 20.](#)

NO>>

Repair or replace error-detected parts.

16. CHECK HIGH VOLTAGE HARNESS CONNECTOR INSTALLATION CONDITION

Check following high voltage harness connector installation condition visually and tactually.

High voltage junction box connector	Connection point
H1	: PTC heater
H10	: Inverter (front)
H11	: Electric compressor

CAUTION:

When reconnecting the high voltage harness connector, insert it slowly and directly.

Is the inspection result normal?

YES>>

[GO TO 17.](#)

NO>>

Repair or replace error-detected parts.

17. PERFORM CONFIRMATION PROCEDURE AGAIN-1

 With CONSULT

1. Connect high voltage harness securely.

2. Perform DTC confirmation procedure again. Refer to [Confirmation Procedure](#).

Is DTC P1598-96 detected again?