

Your Ultimate Source for OEM Repair Manuals

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2012 NISSAN CrossCabriolet OEM Service and Repair Workshop Manual

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1. CHECK QUICK CHARGE RELAY 1 AND 2 CIRCUITS-1

1. Power switch OFF.
2. Disconnect VCM harness connector and Li-ion battery harness connector.
3. Check for continuation between VCM harness connector and Li-ion battery harness connector.

+		-		Continuation
VCM		Li-ion battery		
Connector	Terminal	Connector	Terminal	Existing
E47	91	E9	2	
	92		8	

4. Also check harness for short to power supply and for short to ground.

Is the inspection result normal?

YES>>

[GO TO 2](#) .

NO>>

Repair or replace error-detected parts.

2. CHECK QUICK CHARGE RELAY 1 AND 2 CIRCUITS-2

Check quick charge relay 1 and 2 circuits. Refer to [Diagnosis Procedure](#)(66kWh LI-ION BATTERY), [Diagnosis Procedure](#)(91kWh LI-ION BATTERY).

Is the inspection result normal?

YES>>

[GO TO 3](#).

NO>>

Repair or replace error-detected parts.

3. PERFORM CONFIRMATION PROCEDURE AGAIN

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

Is DTC P0AE2-72 detected again?

YES>>

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

NO>>

INSPECTION END

DTC DETECTION LOGIC

DTC		CONSULT screen terms	DTC detecting condition	
P0AE2	73	High voltage battery precharge contactor	Diagnosis condition	Power switch ON
			Signal	—
			Threshold	Quick charger charging coupler is not in a connected state but the quick charge port voltage is detected to be more than 60V
			Detection time	More than 20 seconds

POSSIBLE CAUSE

- Quick charge relay drive harness
- Quick charge relay is stuck in ON position
- VCM

FAIL-SAFE

- Restart is prohibited
- Quick charge is prohibited
- Normal charge is prohibited

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.**

>>

[GO TO 2](#) .

2. PERFORM DTC CONFIRMATION PROCEDURE

 With CONSULT

1. Power switch ON and wait at least 30 seconds.
2. Check self-diagnostic result in "EV/HEV".

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

1. CHECK QUICK CHARGE RELAY 1 AND 2 CIRCUITS-1

1. Power switch OFF.
2. Disconnect VCM harness connector and Li-ion battery harness connector.
3. Check for continuation between VCM harness connector and Li-ion battery harness connector.

+		-		Continuation
VCM		Li-ion battery		
Connector	Terminal	Connector	Terminal	Existing
E47	91	E9	2	
	92		8	

4. Also check harness for short to power supply and for short to ground.

Is the inspection result normal?

YES>>

[GO TO 2](#) .

NO>>

Repair or replace error-detected parts.

2. CHECK QUICK CHARGE RELAY 1 AND 2 CIRCUITS-2

Check quick charge relay 1 and 2 circuits. Refer to [Diagnosis Procedure](#)(66kWh LI-ION BATTERY), [Diagnosis Procedure](#)(91kWh LI-ION BATTERY).

Is the inspection result normal?

YES>>

[GO TO 3](#).

NO>>

Repair or replace error-detected parts.

3. PERFORM CONFIRMATION PROCEDURE AGAIN

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

Is DTC P0AE2-73 detected again?

YES>>

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

NO>>

INSPECTION END

2WD models

DTC DETECTION LOGIC

DTC		CONSULT screen terms	DTC detecting condition	
P0B33	63	High voltage service disconnect	Diagnosis condition	When switching pre-charge relay ON⇒OFF
			Signal	—
			Threshold	Pre-charge is not completed even after the specified time since the start of pre-charge.
			Detection time	More than 10 seconds

POSSIBLE CAUSE

- High voltage harness
- High voltage junction box
- Inverter (front)
- DC/DC converter
- Electric compressor
- PTC heater
- Battery heater (PTC)

FAIL-SAFE

High-voltage system is normally stopped

AWD models

DTC DETECTION LOGIC

DTC		CONSULT screen terms	DTC detecting condition	
P0B33	63	High voltage service disconnect	Diagnosis condition	When switching pre-charge relay ON⇒OFF
			Signal	—
			Threshold	Pre-charge is not completed even after the specified time since the start of pre-charge.
			Detection time	More than 10 seconds

POSSIBLE CAUSE

- High voltage harness
- High voltage junction box
- Inverter (front)

- DC/DC converter
- Electric compressor
- PTC heater
- Battery heater (PTC)
- Inverter (rear)

FAIL-SAFE

High-voltage system is normally stopped

Sample

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.**

>>

[GO TO 2](#) .

2. PERFORM DTC CONFIRMATION PROCEDURE

 With CONSULT

1. Set the vehicle to READY and wait at least 10 seconds.
2. Check self-diagnostic result in "EV/HEV".

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

2WD models

WARNING:

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 PRIORITY

If DTC P0B33-63 is displayed with P168A-11, P168A-12, P168A-13, P168B-73, P168C-72, P168D-11, P168D-12, P168D-13, P168D-73, P168E-11, P168E-12, P168E-13 or P168E-73, first perform the trouble diagnosis for P168A-11, P168A-12, P168A-13, P168B-73, P168C-72, P168D-11, P168D-12, P168D-13, P168D-73, P168E-11, P168E-12, P168E-13 or P168E-73.

Is applicable DTC detected?

YES>>

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

NO>>

[GO TO 2.](#)

2. PERFORM FRONT TRACTION MOTOR SELF-DIAGNOSIS

 With CONSULT

Check "Self-diagnosis result" in "MOTOR CONTROL".

Is DTC detected?

YES>>

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

NO>>

[GO TO 3.](#)

3. 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 4.](#)

4. CHECK HIGH VOLTAGE HARNESS CONNECTOR INSTALLATION CONDITION

Check high voltage harness connector installation condition visually and tactually.

CAUTION:

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

Is the inspection result normal?

YES>>

[GO TO 5.](#)

NO>>

Repair or replace error-detected parts.

5. CHECK HIGH VOLTAGE HARNESS CONNECTOR

1. Disconnect high voltage harness connector (H5) from Li-ion battery.
2. Check high voltage harness connector installation condition visually and tactually.

Is the inspection result normal?

YES>>

[GO TO 6.](#)

NO>>

Replace error-detected parts.

6. CHECK HIGH VOLTAGE CIRCUIT

Check for continuation between Li-ion battery harness connector and high voltage junction box harness connector.

+		-		Continuation
Li-ion battery		High voltage junction box		
Connector	Terminal	Connector	Terminal	Existing
H5	37	H10	N	