

Your Ultimate Source for OEM Repair Manuals

FactoryManuals.net is a great resource for anyone who wants to save money on repairs by doing their own work. The manuals provide detailed instructions and diagrams that make it easy to understand how to fix a vehicle.

2012 NISSAN Grand Livina OEM Service and Repair Workshop Manual

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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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2. PERFORM DTC CONFIRMATION PROCEDURE

 With CONSULT

1. Power switch ON 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

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 CAN COMMUNICATION CIRCUIT

 With CONSULT

Perform trouble diagnosis for CAN communication circuit. Refer to [Trouble Diagnosis Flow Chart](#).

Is the inspection result normal?

YES>>

[GO TO 2.](#)

NO>>

Repair or replace error-detected parts.

2. CHECK DTC IN VCM

 With CONSULT

Check self-diagnostic result in “EV/HEV”.

Is DTC detected other than P1597-F1?

YES>>

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

NO>>

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3. 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>>

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4. 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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5. CHECK LI-ION BATTERY HIGH VOLTAGE CONNECTOR GOING TO THE INVERTER (REAR) INSTALLATION CONDITION

Check Li-ion battery high voltage connector going to the inverter (rear) installation condition visually and tactually.

CAUTION:

When reconnecting the Li-ion battery high voltage connector going to the inverter (rear), insert it slowly and directly.

Is the inspection result normal?

YES>>

[GO TO 6.](#)

NO>>

Repair or replace error-detected parts.

6. CHECK LI-ION BATTERY HIGH VOLTAGE CONNECTOR GOING TO THE INVERTER (REAR)

1. Disconnect the Li-ion battery high voltage connector going to the inverter (rear).
2. Check the Li-ion battery high voltage connector going to the inverter (rear) visually for damages.

Is the inspection result normal?

YES>>

INSPECTION END

NO>>

Sample

DTC DETECTION LOGIC

DTC		CONSULT screen terms	DTC detecting condition	
P15BF	96	High voltage connector interlock	Diagnosis condition	Always
			Signal	Li-ion battery connector interlock detection signal
			Threshold	The Li-ion battery high voltage connector going to the quick charge port is detected to not be engaged
			Detection time	—

POSSIBLE CAUSE

- Harness and connector (Li-ion battery high voltage connector circuit going to the quick charge port)
- VCM
- Li-ion battery

FAIL-SAFE

- Quick charge is prohibited (When vehicle is stopped)
- Normal charge is prohibited (When vehicle is stopped)

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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. Power switch ON 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

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.
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- 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:

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1. CHECK CAN COMMUNICATION CIRCUIT

 With CONSULT

Perform trouble diagnosis for CAN communication circuit. Refer to [Trouble Diagnosis Flow Chart](#).

Is the inspection result normal?

YES>>

[GO TO 2](#)

NO>>

Repair or replace error-detected parts.

2. CHECK DTC IN VCM

 With CONSULT

Check self-diagnostic result in “EV/HEV”.

Is DTC detected other than P15BF-96?

YES>>

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

NO>>

[GO TO 3](#)

3. 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 4](#)

4. 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 5](#)

5. CHECK LI-ION BATTERY HIGH VOLTAGE CONNECTOR GOING TO THE QUICK CHARGE PORT INSTALLATION CONDITION

Check Li-ion battery high voltage connector going to the quick charge port installation condition visually and tactually.

CAUTION:

When reconnecting the Li-ion battery high voltage connector going to the quick charge port, insert it slowly and directly.

Is the inspection result normal?

YES>>

[GO TO 6](#)

NO>>

Repair or replace error-detected parts.

6. CHECK LI-ION BATTERY HIGH VOLTAGE CONNECTOR GOING TO THE QUICK CHARGE PORT

1. Disconnect the Li-ion battery high voltage connector going to the quick charge port.
2. Check the Li-ion battery high voltage connector going to the quick charge port visually for damages.

Is the inspection result normal?

YES>>

INSPECTION END

NO>>

Sample