

# 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.

## 2013 NISSAN 370z Nismo OEM Service and Repair Workshop Manual

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**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.

## 1. PRECONDITIONING

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**WARNING:**

Make sure to perform the procedure below before starting the work.

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

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## 2. CHECK HIGH VOLTAGE HARNESS INSULATION RESISTANCE

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Check the insulation resistance of the high voltage harnesses using an insulation resistance tester.

Measuring points

With the vehicle in an assembled state

- Resistance between the harness connector terminals and the body

Harness only

- Resistance between the harness connector terminals and the harness connector plastic
- Resistance between the harness connector terminals and the harness cover (Shield)

**CAUTION:**

- Check the harness connectors and harness covers (Shields) for damages such as scratches or cracks. Replace it if there is a scratch, crack or similar.

- Set the insulation resistance tester to 500 V.
- Since there is a danger of damage to electronic devices if more than 500 V is applied, be cautious.
- Wait for about 30 seconds until the value stabilizes.

- PTC heater

High voltage harness connector		Resistance
Connector	Terminal	
H2	1	More than 100 MΩ
	2	

- Li-ion battery [To Inverter (front)]

High voltage harness connector		Resistance
Connector	Terminal	
H5	37	More than 100 MΩ
	38	

- Li-ion battery [To Inverter (rear)]

High voltage harness connector		Resistance
Connector	Terminal	
H7	40	More than 100 MΩ
	41	

- Inverter (front) (To high voltage junction box)

High voltage harness connector		Resistance
Connector	Terminal	
H12	N	More than 100 MΩ
	P	

- Electric compressor

High voltage harness connector		Resistance
Connector	Terminal	
H9	7	More than 100 MΩ
	8	

- Inverter (front) (To Li-ion battery)

High voltage harness connector		Resistance
Connector	Terminal	
H6	N	More than 100 MΩ
	P	

- High voltage junction box (To PTC heater)

High voltage harness connector		Resistance
Connector	Terminal	
H1	13	More than 100 MΩ
	14	

- High voltage junction box (To inverter (front))

High voltage harness connector		Resistance
Connector	Terminal	
H10	N	More than 100 MΩ
	P	

- High voltage junction box (To electric compressor)

High voltage harness connector		Resistance
Connector	Terminal	
H11	18	More than 100 MΩ
	19	

- Inverter (rear)

High voltage harness connector		Resistance
Connector	Terminal	
H8	N	More than 100 MΩ
	P	

Is the inspection result normal?

YES>>

INSPECTION END

NO>>

Replace error-detected high voltage harness.

## 1. CHECK CHARGE PORT

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1. Power switch OFF.
2. Disconnect charge port vehicle side harness connector.
3. Check the charge port. Refer to [Component Inspection](#).

Is the inspection result normal?

YES>>

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NO>>

Replace charge port. Refer to [CHARGE PORT : Removal & Installation](#).

## 2. CHECK QUICK CHARGE PORT TEMPERATURE SENSOR CIRCUIT CONTINUITY

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1. Disconnect VCM vehicle side harness connector.
2. Check for continuation between the VCM vehicle harness connector and the charge port vehicle side harness connector.

Charge port		VCM		Continuity
Connector	Terminal	Connector	Terminal	
E27	18	E48	135	Existing
	19		124	

3. Also check harness for short to ground and short between harnesses.

Is the inspection result normal?

YES>>

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NO>>

Repair or replace error-detected parts.

## 3. CHECK QUICK CHARGE PORT TEMPERATURE SENSOR GROUND CIRCUIT

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Check for continuation between the charge port vehicle side harness connector and the VCM vehicle side harness connector.

Charge port		VCM		Continuity
Connector	Terminal	Connector	Terminal	
E27	20	E48	140	Existing

Is the inspection result normal?

YES>>

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NO>>

Repair or replace error-detected parts.

#### 4. TROUBLE CAUSE SIMULATION TEST

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Perform trouble cause simulation test. Refer to [Intermittent Incident](#).

Is the inspection result normal?

YES>>

INSPECTION END

NO>>

Repair or replace error-detected parts.

Sample

## 1. CHECK CHARGE PORT

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1. Power switch OFF.
2. Disconnect charge port vehicle side harness connector.
3. Check the charge port. Refer to [Component Inspection](#).

Is the inspection result normal?

YES>>

[GO TO 2](#)

NO>>

Replace charge port. Refer to [CHARGE PORT : Removal & Installation](#).

## 2. CHECK CHARGE CONNECTOR LOCK STATUS DETECTION SIGNAL CIRCUIT CONTINUITY

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1. Disconnect VCM vehicle side harness connector.
2. Check for continuation between the charge port vehicle side harness connector and the VCM vehicle side harness connector.

Charge port		VCM		Continuity
Connector	Terminal	Connector	Terminal	
E27	16	E47	62	Existing

3. Also check harness for short to ground and short between harnesses.

Is the inspection result normal?

YES>>

Perform trouble cause simulation test. Refer to [Intermittent Incident](#).

NO>>

Repair or replace error-detected parts.

**DANGER:**

Since hybrid vehicles and electric vehicles contain a high voltage battery, there is the risk of electric shock, electric leakage, or similar accidents resulting in death or severe injury, if high voltage components and vehicle are mishandled. When performing an inspection or maintenance, be sure to comply with the instructions below to perform correct work procedures.

**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 insulated protective equipment 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.

**CAUTION:**

- Be sure to install the high voltage harness clips to the original positions to prevent damage to high voltage harness. If the clips are damaged, replace them with new ones before installing the high voltage harness.
- To prevent damage to parts, never allow coolant to splash on the high voltage harness connector. If coolant splashes on the high voltage harness connector, immediately remove moisture from the high voltage harness connector by using an air blow gun.
- 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.

## POINT TO BE CHECKED BEFORE STARTING MAINTENANCE WORK

The high voltage system may start automatically. It is required to check that the charge cable (including EVSE) is not connected to charge port before starting maintenance work.

**NOTE:**

If the timer air conditioner or timer charge is set when the EVSE is connected, the high voltage system starts automatically even when the power switch is in OFF state.

## HIGH VOLTAGE HARNESS AND EQUIPMENT IDENTIFICATION

All the high voltage harnesses and connectors are orange. The Li-ion battery and other high voltage devices include an orange high voltage label. Never touch these harnesses and high voltage parts.

## HANDLING OF HIGH VOLTAGE HARNESS AND TERMINALS

Immediately insulate disconnected high voltage connectors and terminals with insulating tape.

## GUIDELINES ON WORKERS WITH MEDICAL ELECTRONICS

**WARNING:**

The vehicle contains parts that contain powerful magnets. If a person who is wearing a heart pacemaker or other medical device is close to these parts, the medical device may be affected by the magnets. Such persons must not perform work on



the vehicle.

## **PROHIBITED ITEMS TO CARRY DURING THE WORK**

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Hybrid vehicles and electric vehicles contain parts with high voltage and intense magnetic force. Never carry metal products and magnetic recording media (e.g. credit card, debit card) to repair/inspect high voltage parts. If this is not observed, the metal products may create a risk of short circuit and the magnetic recording media may lose their magnetic recording.

## **POST A SIGN OF “DANGER! HIGH VOLTAGE AREA. KEEP OUT”**

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Call the attention of other workers and indicate "High voltage work in progress." Do not touch vehicles where work is being performed on high voltage systems.

Sample

Person in charge: \_\_\_\_\_

**DANGER:  
HIGH VOLTAGE  
REPAIR IN PROGRESS.  
DO NOT TOUCH!**

**DANGER:  
HIGH VOLTAGE  
REPAIR IN PROGRESS.  
DO NOT TOUCH!**

Person in charge: \_\_\_\_\_

Copy this page and put it after folding on the roof of the vehicle in service.

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