

# 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 NP300 Pickup Double Cab OEM Service and Repair Workshop Manual

[Go to manual page](#)

If an A/C refrigerant gas other than EV specific refrigerant gas is used, there is a possibility that the insulation resistance might decrease.

Is there any abnormality with the refrigerant gas?

YES>>

Replace electric compressor. Refer to [Removal & Installation](#).

NO>>

Change A/C refrigerant gas and electric compressor oil.

## 6. 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](#).

>>

[GO TO 7.](#)

## 7. CHECK PTC HEATER INSULATION RESISTANCE

---

Check PTC heater insulation resistance. Refer to [Insulation Resistance Check](#).

### CAUTION:

- Since the tester is polarized, check the polarity of the tester that is used and connect it in the forward direction of the circuit.
- If the inspection result has no continuity, check that the parts are properly installed.

Is the inspection result normal?

YES>>

INSPECTION END

NO>>

Replace PTC heater. Refer to [Removal & Installation](#).

## 8. 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](#).

>>

[GO TO 9.](#)

## 9. CHECK FRONT TRACTION MOTOR INSULATION RESISTANCE

---

Check front traction motor insulation resistance. Refer to [Component Inspection](#).

**CAUTION:**

- Since the tester is polarized, check the polarity of the tester that is used and connect it in the forward direction of the circuit.
- If the inspection result has no continuity, check that the parts are properly installed.

Is the inspection result normal?

YES>>

[GO TO 10.](#)

NO>>

Replace front traction motor. Refer to [FRONT TRACTION MOTOR : Removal & Installation](#).

## 10. CHECK INVERTER (FRONT) INSULATION RESISTANCE

---

Check inverter (front) insulation resistance. Refer to [Component Inspection](#).

**CAUTION:**

- Since the tester is polarized, check the polarity of the tester that is used and connect it in the forward direction of the circuit.
- If the inspection result has no continuity, check that the parts are properly installed.

Is the inspection result normal?

YES>>

INSPECTION END

NO>>

Replace inverter (front). Refer to [INVERTER \(FRONT\) : Removal & Installation](#).

## 11. 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](#).

>>

[GO TO 12.](#)

## 12. CHECK ON-BOARD CHARGER INSULATION RESISTANCE

---

Check on-board charger insulation resistance. Refer to [Diagnosis Procedure](#).

**CAUTION:**

- Since the tester is polarized, check the polarity of the tester that is used and connect it in the forward direction of the circuit.
- If the inspection result has no continuity, check that the parts are properly installed.

Is the inspection result normal?

YES>>

INSPECTION END

NO>>

Replace on-board charger. Refer to [ON-BOARD CHARGER : Disassembly & Assembly](#).

## 13. 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](#).

>>

[GO TO 14.](#)

## 14. CHECK HIGH VOLTAGE JUNCTION BOX INSULATION RESISTANCE

---

Check high voltage junction box insulation resistance. Refer to [Diagnosis Procedure](#).

### **CAUTION:**

- Since the tester is polarized, check the polarity of the tester that is used and connect it in the forward direction of the circuit.
- If the inspection result has no continuity, check that the parts are properly installed.

Is the inspection result normal?

YES>>

[GO TO 15.](#)

NO>>

Replace high voltage junction box. Refer to [HIGH VOLTAGE JUNCTION BOX : Disassembly & Assembly](#).

## 15. CHECK DC/DC CONVERTER INSULATION RESISTANCE

---

Check DC/DC converter insulation resistance. Refer to [Diagnosis Procedure](#).

### **CAUTION:**

- Since the tester is polarized, check the polarity of the tester that is used and connect it in the forward direction of the circuit.
- If the inspection result has no continuity, check that the parts are properly installed.

Is the inspection result normal?

YES>>

[GO TO 16.](#)

NO>>

Replace DC/DC converter. Refer to [DC/DC CONVERTER : Disassembly & Assembly.](#)

## 16. CHECK ON-BOARD CHARGER INSULATION RESISTANCE

---

Check on-board charger insulation resistance. Refer to [Diagnosis Procedure.](#)

### CAUTION:

- Since the tester is polarized, check the polarity of the tester that is used and connect it in the forward direction of the circuit.
- If the inspection result has no continuity, check that the parts are properly installed.

Is the inspection result normal?

YES>>

[GO TO 17.](#)

NO>>

Replace on-board charger. Refer to [ON-BOARD CHARGER : Disassembly & Assembly.](#)

## 17. CHECK ELECTRIC COMPRESSOR INSULATION RESISTANCE

---

Check electric compressor insulation resistance. Refer to [Insulation Resistance Check.](#)

### CAUTION:

- Since the tester is polarized, check the polarity of the tester that is used and connect it in the forward direction of the circuit.
- If the inspection result has no continuity, check that the parts are properly installed.

Is the inspection result normal?

YES>>

[GO TO 19.](#)

NO>>

[GO TO 18.](#)

## 18. CHECK A/C REFRIGERANT GAS

---

Interview the customer and check maintenance records to confirm if there is a possibility that an A/C refrigerant gas other than EV specific refrigerant gas has been mixed in with the A/C refrigerant gas.



### NOTE:

If an A/C refrigerant gas other than EV specific refrigerant gas is used, there is a possibility that the insulation resistance might decrease.

Is there any abnormality with the refrigerant gas?

YES>>

Replace electric compressor. Refer to [Removal & Installation](#).

NO>>

Change A/C refrigerant gas and electric compressor oil.

## 19. CHECK PTC HEATER (FOR A/C SYSTEM) INSULATION RESISTANCE

---

Check PTC heater (for A/C system) insulation resistance. Refer to [Insulation Resistance Check](#).

### CAUTION:

- Since the tester is polarized, check the polarity of the tester that is used and connect it in the forward direction of the circuit.
- If the inspection result has no continuity, check that the parts are properly installed.

Is the inspection result normal?

YES>>

[GO TO 20.](#)

NO>>

Replace PTC heater. Refer to [Removal & Installation](#).

## 20. CHECK FRONT TRACTION MOTOR INSULATION RESISTANCE

---

Check front traction motor insulation resistance. Refer to [Component Inspection](#).

### CAUTION:

- Since the tester is polarized, check the polarity of the tester that is used and connect it in the forward direction of the circuit.
- If the inspection result has no continuity, check that the parts are properly installed.

Is the inspection result normal?

YES>>

[GO TO 21.](#)

NO>>

Replace front traction motor. Refer to [FRONT TRACTION MOTOR : Removal & Installation](#).

## 21. CHECK INVERTER (FRONT) INSULATION RESISTANCE

---

Check inverter (front) insulation resistance. Refer to [Component Inspection](#).

### CAUTION:

- Since the tester is polarized, check the polarity of the tester that is used and connect it in the forward direction of the circuit.
- If the inspection result has no continuity, check that the parts are properly installed.

Is the inspection result normal?

YES>>

[GO TO 22.](#)

NO>>

Replace inverter (front). Refer to [INVERTER \(FRONT\) : Removal & Installation](#).

## 22. CHECK LI-ION BATTERY INSULATION RESISTANCE

---

Check Li-ion battery insulation resistance. Refer to [Diagnosis Procedure](#)(66kWh LI-ION BATTERY), [Diagnosis Procedure](#)(91kWh LI-ION BATTERY).

### CAUTION:

- Since the tester is polarized, check the polarity of the tester that is used and connect it in the forward direction of the circuit.
- If the inspection result has no continuity, check that the parts are properly installed.

Is the inspection result normal?

YES>>

[GO TO 23.](#)

NO>>

Replace Li-ion battery. Refer to [Removal & Installation](#)(66kWh LI-ION BATTERY), [Removal & Installation](#)(91kWh LI-ION BATTERY).

## 23. CHECK HIGH VOLTAGE HARNESS INSULATION RESISTANCE

---

Check high voltage harness insulation resistance. Refer to [Component Inspection](#).

### CAUTION:

- Since the tester is polarized, check the polarity of the tester that is used and connect it in the forward direction of the circuit.
- If the inspection result has no continuity, check that the parts are properly installed.

Is the inspection result normal?

YES>>

[GO TO 24.](#)

NO>>

Repair or replace error-detected parts.

## 24. REPLACE VCM

---

 With CONSULT

1. Replace VCM. Refer to [VCM : Removal & Installation](#).
2. Reconnect removed parts.
3. Perform DTC confirmation procedure again. Refer to [Confirmation Procedure](#).

Is DTC P0AA6-23 detected again?

YES>>

Replace Li-ion battery controller. Refer to [Removal & Installation\(66kWh LI-ION BATTERY\)](#), [Removal & Installation\(91kWh LI-ION BATTERY\)](#).

NO>>

INSPECTION END

## AWD 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 HIGH VOLTAGE PARTS

---

1. Power switch OFF.
2. Check high voltage parts visually for damages.

Is the inspection result normal?

YES>>

[GO TO 2.](#)

NO>>

Repair or replace error-detected parts.

## 2. IDENTIFY THE MODE USED AT THE OCCURRENCE OF INSULATION RESISTANCE DECREASE

---

Check in which mode of the DTC confirmation procedure DTC is detected.



In which mode of the DTC confirmation procedure is DTC detected?

CONFIRMATION PROCEDURE-1>>

Replace Li-ion battery. Refer to [Removal & Installation](#)(66kWh LI-ION BATTERY), [Removal & Installation](#)(91kWh LI-ION BATTERY).

CONFIRMATION PROCEDURE-2>>

[GO TO 15.](#)

CONFIRMATION PROCEDURE-3>>

[GO TO 3.](#)

CONFIRMATION PROCEDURE-4>>

[GO TO 6.](#)

CONFIRMATION PROCEDURE-5>>

[GO TO 8.](#)

CONFIRMATION PROCEDURE-6>>

[GO TO 13.](#)

### 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.](#)

>>

[GO TO 4.](#)

### 4. CHECK ELECTRIC COMPRESSOR INSULATION RESISTANCE

---

Check electric compressor insulation resistance. Refer to [Insulation Resistance Check.](#)

**CAUTION:**

- **Since the tester is polarized, check the polarity of the tester that is used and connect it in the forward direction of the circuit.**
- **If the inspection result has no continuity, check that the parts are properly installed.**

Is the inspection result normal?

YES>>

INSPECTION END

NO>>

[GO TO 5.](#)

### 5. CHECK A/C REFRIGERANT GAS

---

Interview the customer and check maintenance records to confirm if there is a possibility that an A/C refrigerant gas other than EV specific refrigerant gas has been mixed in with the A/C refrigerant gas.



**NOTE:**

If an A/C refrigerant gas other than EV specific refrigerant gas is used, there is a possibility that the insulation resistance might decrease.

Is there any abnormality with the refrigerant gas?

YES>>

Replace electric compressor. Refer to [Removal & Installation](#).

NO>>

Change A/C refrigerant gas and electric compressor oil.

## 6. 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](#).

>>

[GO TO 7.](#)

## 7. CHECK PTC HEATER INSULATION RESISTANCE

---

Check PTC heater insulation resistance. Refer to [Insulation Resistance Check](#).

**CAUTION:**

- Since the tester is polarized, check the polarity of the tester that is used and connect it in the forward direction of the circuit.
- If the inspection result has no continuity, check that the parts are properly installed.

Is the inspection result normal?

YES>>

INSPECTION END

NO>>

Replace PTC heater. Refer to [Removal & Installation](#).

## 8. 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](#).