

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.

2024 Nissan Titan Service and Repair Manual

[Go to manual page](#)

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms	DTC detection condition	
		B24D9-19	PTC heater HVIL circuit
Signal (terminal)	—		
Threshold	When HVIL open circuit is detected in PTC heater system		
Diagnosis delay time	Less than 1 seconds		

POSSIBLE CAUSE

- High voltage harness connector connecting malfunction
- High voltage harness connector
- PTC heater

FAIL-SAFE

PTC heater operation is stopped

DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

 With CONSULT

1. Power switch OFF.
2. Set the vehicle to READY.
3. Operate the air conditioning system.
4. Set the temperature to full cold.
5. Select “Self Diagnostic Result” mode of “HVAC” using CONSULT.

Is DTC detected?

YES>>

Refer to [Diagnosis Procedure](#).

NO-1>>

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

NO-2>>

Confirmation after repair: INSPECTION END

WARNING:

Since hybrid vehicles and electric vehicles contain a high voltage battery, there is the risk of electric shock, electric leakage, or similar accidents if the high voltage component and vehicle are handled incorrectly. Be sure to follow the correct work procedures when performing inspection and maintenance.

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 insulating protective equipment consisting of glove, shoes, face shield and glasses 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.
- Refer to [Precautions for High Voltage](#).

CAUTION:

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.

DIAGNOSIS PROCEDURE

CAUTION:

Erase DTC after the work is completed.

1. 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 2.](#)

2. CHECK THE CONNECTION STATUS OF THE PTC HEATER HIGH VOLTAGE HARNESS CONNECTOR

Check that the high voltage harness connector of PTC heater is connected normally.

Is the inspection result normal?

YES>>

[GO TO 3.](#)

NO>>

Reconnect the high voltage harness connector. If reconnecting is impossible due to high voltage harness connector malfunction, replace the high voltage harness between PTC heater and high voltage junction box.

3. CHECK THE PTC HEATER HIGH VOLTAGE HARNESS CONNECTOR

1. Disconnect the PTC heater high voltage harness connector.
2. Check for any adhering foreign substances, cracking, or damage on the high voltage harness connector terminal of PTC heater

Is the inspection result normal?

YES>>

[GO TO 4.](#)

NO>>

Replace the high voltage harness between PTC heater and high voltage junction box.

4. CHECK THE HVIL CIRCUIT OF THE PTC HEATER HIGH VOLTAGE HARNESS CONNECTOR

Check for continuity between HVIL circuit terminals of PTC heater vehicle side high voltage harness connector. Refer to [Component Inspection](#).

Is the inspection result normal?

YES>>

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

NO>>

Replace the high voltage harness between PTC heater and high voltage junction box.

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms	DTC detection condition	
		B24E1-96	PTC heater IGBT circuit 1
Signal (terminal)	—		
Threshold	When PTC heater IGBT circuit 1 short is detected		
Diagnosis delay time	2 seconds or more		

POSSIBLE CAUSE

PTC heater

FAIL-SAFE

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DTC CONFIRMATION PROCEDURE

1. PERFORM DTC CONFIRMATION PROCEDURE

 With CONSULT

1. Power switch OFF.
2. Set the vehicle to READY.
3. Operate the air conditioning system.
4. Set the temperature to full hot.
5. Select “Self Diagnostic Result” mode of “HVAC” using CONSULT.

Is DTC detected?

YES>>

Refer to [Diagnosis Procedure](#).

NO-1>>

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

NO-2>>

Confirmation after repair: INSPECTION END

1. REPLACE PTC HEATER

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

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INSPECTION END

Sample

**NOTE:**

“Compressor voltage limitation” is indicated on CONSULT display, however this models for means PTC heater internal IGBT circuit abnormal.

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms	DTC detection condition	
		Diagnosis condition	Signal (terminal)
B24E2-96	Compressor voltage limitation	Diagnosis condition	Vehicle is READY
		Signal (terminal)	—
		Threshold	When PTC heater IGBT circuit 2 short is detected
		Diagnosis delay time	2 seconds or more


POSSIBLE CAUSE

PTC heater

FAIL-SAFE

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DTC CONFIRMATION PROCEDURE**1. PERFORM DTC CONFIRMATION PROCEDURE**

 With CONSULT

1. Power switch OFF.
2. Set the vehicle to READY.
3. Operate the air conditioning system.
4. Set the temperature to full hot.
5. Select “Self Diagnostic Result” mode of “HVAC” using CONSULT.

Is DTC detected?

YES>>

Refer to [Diagnosis Procedure](#).

NO-1>>

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

NO-2>>

Confirmation after repair: INSPECTION END

1. REPLACE PTC HEATER

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

>>

INSPECTION END

Sample

**NOTE:**

“Compressor voltage limitation” is indicated on CONSULT display, however this models for means PTC heater internal IGBT circuit abnormal.

DTC DETECTION LOGIC

DTC No.	CONSULT screen terms	DTC detection condition	
		Diagnosis condition	Signal (terminal)
B24E3-96	Compressor voltage limitation	Diagnosis condition	Vehicle is READY
		Signal (terminal)	—
		Threshold	When PTC heater IGBT circuit 3 short is detected
		Diagnosis delay time	2 seconds or more


POSSIBLE CAUSE

PTC heater

FAIL-SAFE

—

DTC CONFIRMATION PROCEDURE**1. PERFORM DTC CONFIRMATION PROCEDURE**

 With CONSULT

1. Power switch OFF.
2. Set the vehicle to READY.
3. Operate the air conditioning system.
4. Set the temperature to full hot.
5. Select “Self Diagnostic Result” mode of “HVAC” using CONSULT.

Is DTC detected?

YES>>

Refer to [Diagnosis Procedure](#).

NO-1>>

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

NO-2>>

Confirmation after repair: INSPECTION END

1. REPLACE PTC HEATER

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

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INSPECTION END

Sample