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2013 NISSAN Titan Crew Cab OEM Service and Repair Workshop Manual

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DTC DETECTION LOGIC

DTC		CONSULT screen terms	DTC detection condition	
POAED	4B	Drive Motor Inverter Temperature Sensor A	Diagnosis condition	At inverter (front) start or READY state
			Signal	—
			Threshold	Any of the following was detected. <ul style="list-style-type: none"> The temperature in the inverter (front) exceeded the prescribed value. Overheat detected by hardware.
			Diagnosis delay time	Within 1 second

POSSIBLE CAUSE

- Coolant system for inverter (front)
- Inverter (front)

FAIL-SAFE

The driving torque of the front traction motor is limited to 0 Nm. Or, control of the front traction motor stops.

1. PREPARATION BEFORE OPERATION

If another "Confirmation Procedure" was performed immediately before this task, always power switch OFF exit the vehicle and close all doors (including the back door), and wait for at least 60 seconds until the combination meter turns off before starting the next test.

CAUTION:

While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the auto ACC function.

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2. PERFORM THE DTC CONFIRMATION PROCEDURE

 With CONSULT

1. Set the vehicle to READY and wait for at least 10 seconds.
2. Drive the vehicle for at least 20 minutes to warm it up.
3. Fully depress the accelerator pedal and accelerate the vehicle from 0 km/h (0 MPH) to 10 km/h (6 MPH). Repeat this for 10 times without interruption to the maximum extent possible.
4. Stop the vehicle.
5. Check the DTC.

Is "P0AED-4B 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 FOR DTC RELATED TO THE HIGH VOLTAGE COOLING SYSTEM

 With CONSULT

1. Power switch ON and wait at least 10 seconds.
2. Check "Self Diagnostic Result" of "EV/HEV".

Is a DTC related to the high voltage cooling system detected?

YES>>

Check the detected DTC item. Refer to [DTC Index](#).

NO>>

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2. INSPECTION OF COOLANT

Inspect the coolant volume and leakage of coolant. Refer to [COOLANT : Inspection](#).

Is the inspection result normal?

YES>>

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NO>>

Repair or replace the malfunctioning parts.

3. INSPECTION OF THE COOLANT HOSE

Check for clogging or twisting of the hose in the coolant system for the inverter (front).

Is the inspection result normal?

YES>>

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NO>>

Repair or replace the malfunctioning parts.

4. PERFORM THE DTC CONFIRMATION PROCEDURE

Perform the DTC CONFIRMATION PROCEDURE. Refer to [Confirmation Procedure](#).

YES>>

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

NO>>

INSPECTION END

DTC DETECTION LOGIC

DTC		CONSULT screen terms	DTC detection condition	
P0DA8	00	Hybrid/EV Battery Voltage/Drive Motor A Inverter Voltage Correlation	Diagnosis condition	READY state
			Signal	—
			Threshold	The high voltage monitor value inside the inverter (front) and the LBC recognized voltage that is received via CAN were compared and the prescribed value was exceeded.
			Diagnosis delay time	Within 10 seconds

POSSIBLE CAUSE

- Inverter (front)
- Li-ion battery

FAIL-SAFE

Control of the front traction motor stops.

1. PREPARATION BEFORE OPERATION

If another "Confirmation Procedure" was performed immediately before this task, always power switch OFF exit the vehicle and close all doors (including the back door), and wait for at least 60 seconds until the combination meter turns off before starting the next test.

CAUTION:

While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the auto ACC function.

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2. PERFORM THE DTC CONFIRMATION PROCEDURE

 With CONSULT

1. Set the vehicle to READY and wait for at least 10 seconds.
2. Check the DTC.

Is "P0DA8-00 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

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 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 [HIGH VOLTAGE PRECAUTIONS : Precautions](#).

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.

1. CHECK FOR DTC RELATED TO THE HIGH VOLTAGE SYSTEM

 With CONSULT

1. Power switch ON and wait at least 10 seconds.
2. Check the DTCs related to the high voltage system.

Is a DTC related to the high voltage system other than the inverter (front) detected?

YES>>

Check the detected DTC.

NO>>

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2. 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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3. INSPECTION OF THE HIGH VOLTAGE HARNESS

Inspect the high voltage harness between the Li-ion battery and the inverter (front).

Is the inspection result normal?

YES>>

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

NO>>

Repair or replace the malfunctioning parts.

Sample

Wiring Diagram

Click link to [Wiring Diagram](#).

Sample

DESCRIPTION

By understanding those conditions properly, a quick and exact diagnosis can be achieved.

In general, customers have their own criteria for a problem. Therefore, it is important to understand the symptom and status well enough by asking the customer about the concerns carefully. In order to systemize all the information for the diagnosis, prepare the question sheet referring to the question points.

KEY POINTS	
WHAT Vehicle & motor model
WHEN Date, Frequencies
WHERE Road conditions
HOW Operating conditions, Weather conditions, Symptoms

SIEMD-7058296-01-000379881

WORKSHEET SAMPLE

Question Sheet							
Customer name	Motor No.		Inverter No.				
MR/MS	Incident Date		VIN				
	Model & Year		In Service Date				
	Trans.		Mileage			km/mile	
Symptoms	<input type="checkbox"/> Does not to READY		<input type="checkbox"/> EV system warning lamp is on		<input type="checkbox"/> Power limitation indicator lamp is on		
	<input type="checkbox"/> Water leak*	<input type="checkbox"/> Noise*	<input type="checkbox"/> Vibration*	<input type="checkbox"/> Shock*	<input type="checkbox"/> Gear noise*		
	<input type="checkbox"/> Non driving*	<input type="checkbox"/> Poor acceleration*		<input type="checkbox"/> Poor torque*	<input type="checkbox"/> Radio noise*		
	<input type="checkbox"/> Does not charge			<input type="checkbox"/> Other*	*: If applied, enter in detail		
	Detailed symptom						
	Onomatopoeia						
Frequency	<input type="checkbox"/> All the time	<input type="checkbox"/> Once	<input type="checkbox"/> Sometimes (times a day)		<input type="checkbox"/> Other		
Weather conditions	<input type="checkbox"/> Not affected						
	Weather	<input type="checkbox"/> Fine	<input type="checkbox"/> Clouding	<input type="checkbox"/> Raining	<input type="checkbox"/> Snowing	<input type="checkbox"/> Other ()	
	Temp.	<input type="checkbox"/> Hot	<input type="checkbox"/> Warm	<input type="checkbox"/> Cool	<input type="checkbox"/> Cold	<input type="checkbox"/> Temp. [Approx. °C (°F)]	
	Humidity	<input type="checkbox"/> High	<input type="checkbox"/> Middle	<input type="checkbox"/> Low	<input type="checkbox"/> Humidity (Approx. %)		
Road conditions	<input type="checkbox"/> Not affected	<input type="checkbox"/> In town	<input type="checkbox"/> Freeway	<input type="checkbox"/> Off road (Up / Down)		<input type="checkbox"/> Deplorable road	
	<input type="checkbox"/> Flat road	<input type="checkbox"/> While turning (Right / Left)		<input type="checkbox"/> Bump			