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2013 NISSAN NP300 Pickup Single Cab OEM Service and Repair Workshop Manual

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5. INSPECTION OF THE TEMPERATURE SENSOR CIRCUIT OF THE REAR TRACTION MOTOR 1

Check the resistance between the harness connector of the inverter (rear) and the body ground.

Inverter (rear)		—	Resistance
Connector	Terminal		
B297	2	Body ground	200 kΩ or more
	3		

Is the inspection result normal?

YES>>

[GO TO 6.](#)

NO>>

Repair or replace the malfunctioning parts.

6. INSPECTION OF THE TEMPERATURE SENSOR CIRCUIT OF THE REAR TRACTION MOTOR 2

1. Inspect the resistance between the wiring harness connector for the inverter (rear) and the wiring harness connector for the rear traction motor.

Inverter (rear)		Rear traction motor		Resistance
Connector	Terminal	Connector	Terminal	
B297	2	B301	10	1 Ω or less
	3		9	

2. Inspect the wiring harness for a short circuit.

Inverter (rear)		Rear traction motor		Resistance
Connector	Terminal	Connector	Terminal	
B297	2	B301	9	100 kΩ or more
	3		10	

Is the inspection result normal?

YES>>

[GO TO 7.](#)

NO>>

Repair or replace the malfunctioning parts.

7. INSPECTION OF THE TEMPERATURE SENSOR OF THE REAR TRACTION MOTOR

Inspect the temperature sensor of the rear traction motor. Refer to [Component Inspection](#).

Is the inspection result normal?

YES>>

Replace the inverter (rear). Refer to [Removal and Installation](#).

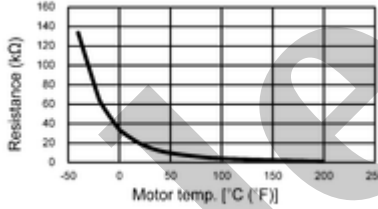
NO>>

Repair or replace the malfunctioning parts.

Sample

1. INSPECTION OF THE TEMPERATURE SENSOR OF THE REAR TRACTION MOTOR

1. Disconnect the harness connector of the rear traction motor.
2. Check the resistance between terminals in the rear traction motor connector.

Rear traction motor		Resistance
Terminal		
9	10	<p>Within $\pm 50\%$ of the temperature characteristics chart</p>  <p style="text-align: center;">SIEMD-7437774-01-000379917</p>

Is the inspection result normal?

YES>>

INSPECTION END

NO >>

The temperature sensor of the rear traction motor has malfunctioned. Replace the rear traction motor. Refer to [Removal and Installation](#).

1. INSPECTION OF THE HARNESS CONNECTOR 1

1. Turn OFF the power switch.
2. Check mating conditions of the harness connector for the inverter (rear).

Is the inspection result normal?

YES>>

[GO TO 2.](#)

NO>>

Repair or replace the malfunctioning parts.

2. INSPECTION OF THE HARNESS CONNECTOR 2

Check mating conditions of the harness connector for the rear traction motor.

Is the inspection result normal?

YES>>

[GO TO 3.](#)

NO>>

Repair or replace the malfunctioning parts.

3. INSPECTION OF THE CONNECTOR TERMINALS 1

1. Disconnect the harness connector of the inverter (rear).
2. Check the inverter (rear) connector for water intrusion, or damage or corrosion of the terminals.

Is the inspection result normal?

YES>>

[GO TO 4.](#)

NO>>

Repair or replace the malfunctioning parts.

4. INSPECTION OF THE CONNECTOR TERMINALS 2

1. Disconnect the harness connector of the rear traction motor.
2. Check the wiring harness connector of the rear traction motor for water intrusion, or damage or corrosion of the terminals.

Is the inspection result normal?

YES>>

[GO TO 5.](#)

NO>>

Repair or replace the malfunctioning parts.

5. INSPECTION OF THE OIL TEMPERATURE SENSOR CIRCUIT OF THE REAR TRACTION MOTOR 1

Check the resistance between the harness connector of the inverter (rear) and the body ground.

Inverter (rear)		—	Resistance
Connector	Terminal		
B297	1	Body ground	200 kΩ or more
	11		

Is the inspection result normal?

YES>>

[GO TO 6.](#)

NO>>

Repair or replace the malfunctioning parts.

6. INSPECTION OF THE OIL TEMPERATURE SENSOR CIRCUIT OF THE REAR TRACTION MOTOR 1

1. Inspect the resistance between the wiring harness connector for the inverter (rear) and the wiring harness connector for the rear traction motor.

Inverter (rear)		Rear traction motor		Resistance
Connector	Terminal	Connector	Terminal	
B297	1	B302	13	1 Ω or less
	11		12	

2. Inspect the wiring harness for a short circuit.

Inverter (rear)		Rear traction motor		Resistance
Connector	Terminal	Connector	Terminal	
B297	1	B302	12	100 kΩ or more
	11		13	

Is the inspection result normal?

YES>>

[GO TO 7.](#)

NO>>

Repair or replace the malfunctioning parts.

7. INSPECTION OF THE OIL TEMPERATURE SENSOR OF THE REAR TRACTION MOTOR

Inspect the oil temperature sensor of the rear traction motor. Refer to [Component Inspection](#).

Is the inspection result normal?

YES>>

Replace the inverter (rear). Refer to [Removal and Installation](#).

NO>>

Repair or replace the malfunctioning parts.

Sample

1. INSPECTION OF THE OIL TEMPERATURE SENSOR OF THE REAR TRACTION MOTOR

1. Disconnect the harness connector of the rear traction motor.
2. Check the resistance between terminals in the rear traction motor connector.

Rear traction motor		Resistance
Terminal		
12	13	<p>Within $\pm 50\%$ of the temperature characteristics chart</p> <p>SIEMD-7504940-MD-7058703-01-000379916OffOff-46B891C5-000379916</p>

Is the inspection result normal?

YES>>

INSPECTION END

NO >>

The oil temperature sensor of the rear traction motor has malfunctioned. Replace the rear traction motor. Refer to [Removal and Installation](#).

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. 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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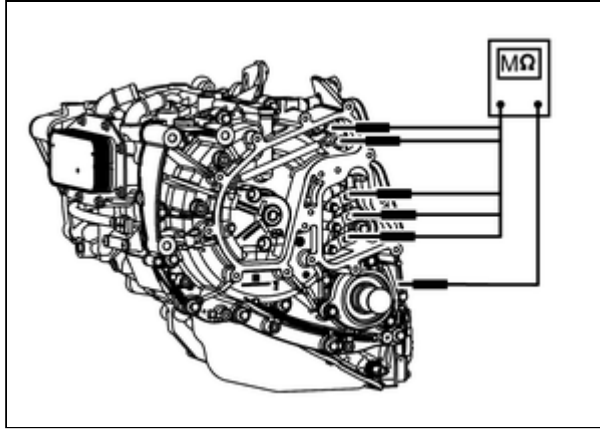
[GO TO 2.](#)

2. CHECK OF THE INSULATION RESISTANCE VALUE AT THE REAR TRACTION MOTOR

WARNING:

Unlike normal tester resistance meters, an insulation resistance tester (multi-tester) is for measuring an insulation resistance with 500 V applied to an insulating area, so its incorrect use may cause electric shock. Also note that using this tester on the 12V battery system for the vehicle may damage the power electronics. Carefully read the instruction manual for the insulation resistance tester (multi-tester) and perform the tasks safely.

1. Remove the rear traction motor. Refer to [Removal and Installation](#).
2. Inspect the insulation resistance in the rear traction motor with an insulation resistance tester (multi-tester).



SIEMD-7504896-01-000415404

CAUTION:

- Set an insulation resistance tester (multi-tester) to the 500 V range.
- Never use an applied voltage of 500 V or more in a component, which may damage it.
- Wait for approx. 30 seconds until the value stabilizes.



NOTE:

- Since each bus bar (U-phase, V-phase, W-phase) is in contact with each other inside the traction motor, inspect any one of the phases.
- Because the excitation terminals (Ex+, Ex-) are in contact inside the traction motor, check one of the phases.

Rear traction motor	Ground	Resistance
Terminal		
U-phase	Rear traction motor case	1 GΩ or more
V-phase		
W-phase		
Ex+		
Ex-		

Is the inspection result normal?

YES>>

INSPECTION END

NO>>

Replace the rear traction motor. Refer to [Removal and Installation](#).