

# 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 Murano OEM Service and Repair Workshop Manual

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## 1. OBTAIN INFORMATION ABOUT SYMPTOM

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Refer to Diagnostic Work Sheet and interview the customer to obtain the malfunction information (conditions and environment when the malfunction occurred) as much as possible when the customer brings in the vehicle. Refer to [Diagnostic Work Sheet](#).

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[GO TO 2.](#)

## 2. CHECK DTC IN INVERTER (REAR)

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1. Before checking the malfunction, check whether any DTC exists.

2. If DTC exists, perform the following operations.

- Record the DTC and freeze frame data. (Print out the data using CONSULT and affix them to the Work Order Sheet.)
- Erase DTCs.
- Check the relationship between the cause that is clarified with DTC and the malfunction information described by the customer.

Do malfunction information and DTC exist?

Malfunction information and DTC exists. >>

[GO TO 3.](#)

Malfunction information exists, but no DTC. >>

[GO TO 4.](#)

No malfunction information, but DTC exists. >>

[GO TO 5.](#)

## 3. REPRODUCE MALFUNCTION SYMPTOM

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Check any malfunction described by a customer, except those with DTC on the vehicle.

Also investigate whether the symptom is a fail-safe or normal operation. Refer to [Fail-safe](#).

When a malfunction symptom is reproduced, the question sheet is effective. Refer to [Diagnostic Work Sheet](#).

Verify the relationship between the symptom and the conditions in which the malfunction described by the customer occurs.

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[GO TO 5.](#)

## 4. REPRODUCE MALFUNCTION SYMPTOM

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Check the malfunction described by the customer on the vehicle.

Also investigate whether the symptom is a normal operation. Refer to [Protection Function](#).

When a malfunction symptom is reproduced, the question sheet is effective. Refer to [Diagnostic Work Sheet](#).

Verify the relationship between the symptom and the conditions in which the malfunction described by the customer occurs.

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[GO TO 7.](#)

## 5. PERFORM “DTC CONFIRMATION PROCEDURE”

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Perform “DTC CONFIRMATION PROCEDURE” of the appropriate DTC to check if DTC is detected again.

Refer to DTC Inspection Priority Chart when multiple DTCs are detected, and then determine the order for performing the diagnosis. Refer to [DTC Inspection Priority Chart](#).



**NOTE:**

**If no DTC is detected, refer to the freeze frame data.**

Is any DTC detected?

YES>>

[GO TO 6.](#)

NO>>

Check according to Intermittent Incident. Refer to [Intermittent Incident](#).

## 6. REPAIR OR REPLACE THE MALFUNCTIONING PARTS

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Repair or replace the detected malfunctioning parts.

Reconnect parts or connector after repairing or replacing, and then erase DTC if necessary.

>>

[GO TO 7.](#)

## 7. FINAL CHECK

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Perform “DTC CONFIRMATION PROCEDURE” again to make sure that the repair is correctly performed.

Check that malfunctions are not reproduced when obtaining the malfunction information from the customer, referring to the symptom inspection result in step 3 or 4.

Is DTC or malfunction symptom reproduced?

YES>>

[GO TO 2.](#)

NO>>

Before delivering the vehicle to the customer, make sure that DTC is erased.

## 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.

<b>KEY POINTS</b>	
<b>WHAT</b>	..... Vehicle & motor model
<b>WHEN</b>	..... Date, Frequencies
<b>WHERE</b>	..... Road conditions
<b>HOW</b>	..... Operating conditions, Weather conditions, Symptoms

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## 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			

### Question Sheet

	<input type="checkbox"/> Other				
Shift position	<input type="checkbox"/> Not affected				
	<input type="checkbox"/> P position	<input type="checkbox"/> R position	<input type="checkbox"/> N position	<input type="checkbox"/> D position	<input type="checkbox"/> B position
	<input type="checkbox"/> ECO mode				
Driving conditions	<input type="checkbox"/> Not affected				
	<input type="checkbox"/> Power switch ON → OFF		<input type="checkbox"/> Power switch OFF → ON		<input type="checkbox"/> READY (stop the vehicle)
	<input type="checkbox"/> While cruising	<input type="checkbox"/> While decelerating	<input type="checkbox"/> Just before stopping	<input type="checkbox"/> Just after stopping	<input type="checkbox"/> D position (stop the vehicle)
	<input type="checkbox"/> While recharging		<input type="checkbox"/> Other		
	<input type="checkbox"/> Vehicle speed [          km/h (          MPH)]			<input type="checkbox"/> Accelerator pedal (          / 8)	
	<input type="checkbox"/> Battery level (Low / Middle / High)				
Moments when malfunction disappears	<input type="checkbox"/> Disappears while driving		<input type="checkbox"/> Disappears when stopped		<input type="checkbox"/> Disappears with select operation
	<input type="checkbox"/> Disappears when power switch is pushed OFF		<input type="checkbox"/> Disappears when battery charge is stopped		<input type="checkbox"/> Does not disappear
	<input type="checkbox"/> Other				
Other					

Sample

## Description

After the inverter (rear) are replaced, the following operations need to be conducted. Refer to [Work Procedure](#).

- Performing recommunication with the intelligent key unit
- Writing resolver offset value and rotor resistance value

Sample

## **1. PERFORMING RECOMMUNICATION WITH THE INTELLIGENT KEY UNIT**

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Perform recommunication with the intelligent key unit. Refer to [Work Procedure](#).

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[GO TO 2.](#)

## **2. WRITING RESOLVER OFFSET VALUE AND ROTOR RESISTANCE VALUE**

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Writing resolver offset value and rotor resistance value. Refer to [Description](#).

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WORK END

Sample

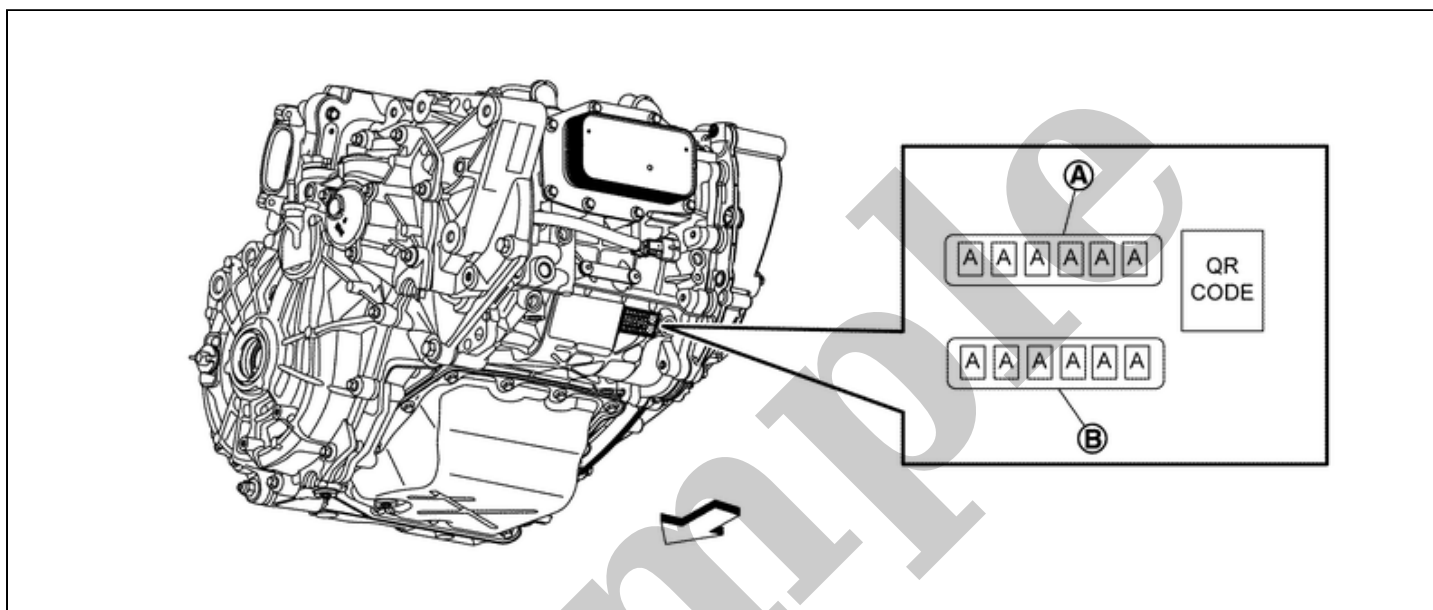
# Description

SIEMD-7504788

When one of the following operations is conducted, resolver offset value and rotor resistance value for the rear traction motor need to be written into the inverter (rear). (For details, refer to [Work Procedure.](#))

- Replacement of the rear traction motor
- Replacement of the inverter (rear)
- Replacement of the rear traction motor and inverter (rear)

## MARKING POSITION OF THE REAR TRACTION MOTOR RESOLVER OFFSET VALUE AND ROTOR RESISTANCE VALUE



SIEMD-7437684-01-000415398

Ⓐ	Resolver offset value	Ⓑ	Rotor resistance value
←	: Vehicle front		



**CAUTION:**

After the inverter (rear) was replaced, when the power switch is turned ON, the EV system warning lamp turns ON and DTC "P3081-44" and "P3082-44" are detected. After writing of the resolver offset value and rotor resistance value for the rear traction motor is completed, check that the EV system warning lamp turns OFF and erase DTC "P3081-44" and "P3082-44".

## 1. CHECK BEFORE WRITING THE RESOLVER OFFSET VALUE AND THE ROTOR RESISTANCE VALUE FOR THE REAR TRACTION MOTOR

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Check the parts that were replaced.

Which parts were replaced?

Rear traction motor>>

[GO TO 2.](#)

Inverter (rear)>>

[GO TO 3.](#)

Rear traction motor and inverter (rear)>>

[GO TO 3.](#)

## 2. WRITING THE RESOLVER OFFSET VALUE AND THE ROTOR RESISTANCE VALUE FOR THE REAR TRACTION MOTOR

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 With CONSULT

1. Power switch ON.
2. Select "Work support" under "REAR MOTOR CONTROL".
3. Select "Writing Resolver Offset Value and Rotor Resistance Value".
4. Enter the resolver offset value and rotor resistance value that are printed on the rear traction motor into the "Write value of resolver offset value and rotor resistance value" field.

**CAUTION:**

After entering the resolver offset value and rotor resistance value, check that the entered values are correct.

5. Touch "Write".

Is "Writing is complete." displayed?

YES>>


1. Power switch OFF.
2. Power switch ON and wait at least 2 seconds.
3. Check that the value input in "Writing Resolver Offset Value and Rotor Resistance Value" has been applied.
4. Power switch OFF and finish the task.

NO>>

Perform Step 2 again.

### 3. WRITING THE RESOLVER OFFSET VALUE AND THE ROTOR RESISTANCE VALUE FOR THE REAR TRACTION MOTOR

---

 With CONSULT

1. Power switch ON.



**NOTE:**

The EV system warning lamp turns ON.

2. Select "Work support" under "REAR MOTOR CONTROL".
3. Select "Writing Resolver Offset Value and Rotor Resistance Value".
4. Enter the resolver offset value and rotor resistance value that are printed on the rear traction motor into the "Write value of resolver offset value and rotor resistance value" field.

**CAUTION:**

After entering the resolver offset value and rotor resistance value, check that the entered values are correct.

5. Touch "Write".

Is "Writing is complete." displayed?

YES>>

[GO TO 4.](#)

NO>>

Perform Step 3 again.

### 4. WORK AFTER WRITING THE RESOLVER OFFSET VALUE AND THE ROTOR RESISTANCE VALUE FOR THE REAR TRACTION MOTOR

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 With CONSULT

1. Power switch OFF.
2. Power switch ON and wait at least 2 seconds.
3. Check that the EV system warning lamp turns OFF.
4. Select "Work support" under "REAR MOTOR CONTROL".
5. Select "Writing Resolver Offset Value and Rotor Resistance Value".
6. Check that "Current resolver offset value and rotor resistance value" has changed to the value that was input.
7. Select "Self Diagnostic Result" under "REAR MOTOR CONTROL".
8. Clear DTC "P3081-44" and "P3082-44".
9. Power switch OFF.

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WORK END