

# 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.

## 2015 NISSAN Sentra SE-R OEM Service and Repair Workshop Manual

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Is the inspection result normal?

YES>>

Refer to [Trouble Diagnosis Flow Chart](#).

NO>>

Repair or replace the error-detected parts.

Sample

## DTC DETECTION LOGIC

DTC		CONSULT screen terms	DTC detection condition	
P07E9	00	Transmission Range Control	Diagnosis condition	READY
			Signal (terminal)	Electric shift sensor input signal
			Threshold	The input voltage is one of the following in one of electric shift sensors No.1 to No.8. <ul style="list-style-type: none"> <li>• 0.6 V &lt; Input voltage &lt; 1.1 V</li> <li>• 2.1 V &lt; Input voltage &lt; 2.7 V</li> <li>• 3.2 V &lt; Input voltage &lt; 4.5 V</li> </ul>
			Diagnosis delay time	2.4 seconds or more

## POSSIBLE CAUSE

- Electric shift selector (Electric shift sensor)
- Electric shift control module
- Harness or connectors (Electric shift sensor circuit is open or shorted.)

## FAIL-SAFE

No impact to vehicle behavior

## 1. PRECONDITIONING

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

**CAUTION:**

**While waiting, never operate the vehicle such as locking, opening, and closing doors. If operating it, results in the activation of ACC power supply according to the auto ACC function.**

**NOTE:**

**After the power switch OFF, there is time needed for data writing by the electric shift control module.**

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## 2. CHECK FOR DTC DETECTION

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 With CONSULT

1. Set the vehicle to READY.
2. Select "Data Monitor" in "SHIFT".
3. Select "Actual shift position".
4. Operate the selector lever as follows. (Keep the selector lever at each shift position for at least 3 seconds.)

**CAUTION:**

**Perform the operation safely with the wheels blocked, the brake pedal depressed, and the vehicle stopped.**

◦ H → N → R → N → D → N → H

5. Perform self-diagnosis for "SHIFT".
  - If more than one DTC is detected, also perform diagnosis based on the DTC Inspection Priority Chart (Refer to [DTC Inspection Priority Chart](#)).

Is "P07E9-00" 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

## 1. CHECK ELECTRIC SHIFT SENSOR INPUT VOLTAGE

### With CONSULT

1. Set the vehicle to READY.
2. Select “Data Monitor” in “SHIFT”.
3. Select “Shift sensor 1 voltage” to “Shift sensor 8 voltage”.
4. Operate the selector lever and check the input voltage to the electric shift control module.

**CAUTION:**

**Perform the operation safely with the wheels blocked, the brake pedal depressed, and the vehicle stopped.**

Monitor item	Condition	Value/Status
Shift sensor 1 voltage	Selector lever: H (home position) and kept in the R and Nr position	1.1 - 2.1 V
	Other than the above	2.7 - 3.2 V
Shift sensor 2 voltage	Selector lever: H (home position) and kept in the R and Nr position	1.1 - 2.1 V
	Other than the above	2.7 - 3.2 V
Shift sensor 3 voltage	Selector lever: H (home position) and kept in the Nr position	1.1 - 2.1 V
	Other than the above	2.7 - 3.2 V
Shift sensor 4 voltage	Selector lever: H (home position) and kept in the Nr and Nd position	1.1 - 2.1 V
	Other than the above	2.7 - 3.2 V
Shift sensor 5 voltage	Selector lever: H (home position) and kept in the Nr and Nd position	1.1 - 2.1 V
	Other than the above	2.7 - 3.2 V
Shift sensor 6 voltage	Selector lever: H (home position) and kept in the Nd position	1.1 - 2.1 V
	Other than the above	2.7 - 3.2 V
Shift sensor 7 voltage	Selector lever: H (home position) and kept in the Nd and D position	1.1 - 2.1 V
	Other than the above	2.7 - 3.2 V
Shift sensor 8 voltage	Selector lever: H (home position) and kept in the Nd and D position	1.1 - 2.1 V
	Other than the above	2.7 - 3.2 V

### Without CONSULT

1. Set the vehicle to READY.
2. Operate the selector lever and check the voltage between electric shift control module harness connector and ground.

**CAUTION:**

**Perform the operation safely with the wheels blocked, the brake pedal depressed, and the vehicle stopped.**

Electric shift sensor	+		-	Condition	Voltage
	Electric shift control module				
	Connector	Terminal			
No.1	M203	34	Ground	Selector lever: H (home position) and kept in the R	1.4 - 2.0

Electric shift sensor	+		-	Condition	Voltage
	Electric shift control module				
	Connector	Terminal			
				and Nr position	V
				Other than the above	2.8 - 3.2 V
No.2		35		Selector lever: H (home position) and kept in the R and Nr position	1.4 - 2.0 V
				Other than the above	2.8 - 3.2 V
No.3		36		Selector lever: H (home position) and kept in the Nr position	1.4 - 2.0 V
				Other than the above	2.8 - 3.2 V
No.4		37		Selector lever: H (home position) and kept in the Nr and Nd position	1.4 - 2.0 V
				Other than the above	2.8 - 3.2 V
No.5		44		Selector lever: H (home position) and kept in the Nr and Nd position	1.4 - 2.0 V
				Other than the above	2.8 - 3.2 V
No.6		45		Selector lever: H (home position) and kept in the Nd position	1.4 - 2.0 V
				Other than the above	2.8 - 3.2 V
No.7		39		Selector lever: H (home position) and kept in the Nd and D position	1.4 - 2.0 V
				Other than the above	2.8 - 3.2 V
No.8		40		Selector lever: H (home position) and kept in the Nd and D position	1.4 - 2.0 V
				Other than the above	2.8 - 3.2 V



**NOTE:**

There may be a difference between the value measured with a circuit tester and the CONSULT monitor value.

Is the inspection result normal?

YES>>

INSPECTION END

NO>>

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## **2. CHECK THE CIRCUIT BETWEEN ELECTRIC SHIFT CONTROL MODULE AND ELECTRIC SHIFT SENSOR (SENSOR SIGNAL CIRCUIT)**

1. Power switch OFF.

2. Disconnect electric shift selector harness connector.
3. Disconnect electric shift control module harness connector.
4. Check the resistance between electric shift control module harness connector and electric shift selector harness connector.

Electric shift sensor	Electric shift control module		Electric shift selector		Resistance
	Connector	Terminal	Connector	Terminal	
No.1	M203	34	M200	2	1 Ω or less
No.2		35		14	
No.3		36		3	
No.4		37		15	
No.5		44		4	
No.6		45		16	
No.7		39		5	
No.8		40		17	

Is the inspection result normal?

YES>>

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NO>>

Repair or replace the error-detected parts.

### 3. REPLACE ELECTRIC SHIFT SELECTOR

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1. Replace the electric shift selector. Refer to [ELECTRIC SHIFT SELECTOR : Removal & Installation.](#)
2. Connect all of disconnected connectors.
3. Perform DTC "Confirmation Procedure". Refer to [Confirmation Procedure.](#)

Is "P07E9-00" detected again?

YES>>

Replace electric shift control module. Refer to [ELECTRIC SHIFT CONTROL MODULE : Removal & Installation.](#)

NO>>

INSPECTION END

## DTC DETECTION LOGIC

DTC		CONSULT screen terms	DTC detection condition	
P07EA	00	Transmission Range Control	Diagnosis condition	READY
			Signal (terminal)	Electric shift sensor input signal
			Threshold	The input voltage of electric shift sensor No.1 to No.8 was continuously the following state. <ul style="list-style-type: none"> <li>Input voltage <math>\leq</math> 0.6 V</li> </ul>
			Diagnosis delay time	2.4 seconds or more

## POSSIBLE CAUSE

- Electric shift selector (Electric shift sensor)
- Electric shift control module
- Harness or connectors (Electric shift sensor circuit is open or shorted to ground.)

## FAIL-SAFE

No impact to vehicle behavior



## 1. PRECONDITIONING

---

If another DTC “Confirmation Procedure” was performed immediately before this task, make sure to OFF the power switch, exit the vehicle and close all doors (including the back door), and wait for at least 60 seconds until the combination meter OFF before starting the next test.

**CAUTION:**

**While waiting, never operate the vehicle such as locking, opening, and closing doors. If operating it, results in the activation of ACC power supply according to the auto ACC function.**

**NOTE:**

**After the power switch OFF, there is time needed for data writing by the electric shift control module.**

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[GO TO 2.](#)

## 2. CHECK FOR DTC DETECTION

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 With CONSULT

1. Set the vehicle to READY.
2. Select “Data Monitor” in “SHIFT”.
3. Select "Actual shift position".
4. Operate the selector lever as follows. (Keep the selector lever at each shift position for at least 3 seconds.)

**CAUTION:**

**Perform the operation safely with the wheels blocked, the brake pedal depressed, and the vehicle stopped.**

◦ H → N → R → N → D → N → H

5. Perform self-diagnosis for “SHIFT”.
  - If more than one DTC is detected, also perform diagnosis based on the DTC Inspection Priority Chart (Refer to [DTC Inspection Priority Chart](#)).

Is “P07EA-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

## 1. CHECK ELECTRIC SHIFT SENSOR INPUT VOLTAGE

### With CONSULT

1. Set the vehicle to READY.
2. Select "Data Monitor" in "SHIFT".
3. Select "Shift sensor 1 voltage" to "Shift sensor 8 voltage".
4. Operate the selector lever and check the input voltage to the electric shift control module.

#### CAUTION:

**Perform the operation safely with the wheels blocked, the brake pedal depressed, and the vehicle stopped.**

Monitor item	Condition	Value/Status
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	Other than the above	2.7 - 3.2 V
Shift sensor 3 voltage	Selector lever: H (home position) and kept in the Nr position	1.1 - 2.1 V
	Other than the above	2.7 - 3.2 V
Shift sensor 4 voltage	Selector lever: H (home position) and kept in the Nr and Nd position	1.1 - 2.1 V
	Other than the above	2.7 - 3.2 V
Shift sensor 5 voltage	Selector lever: H (home position) and kept in the Nr and Nd position	1.1 - 2.1 V
	Other than the above	2.7 - 3.2 V
Shift sensor 6 voltage	Selector lever: H (home position) and kept in the Nd position	1.1 - 2.1 V
	Other than the above	2.7 - 3.2 V
Shift sensor 7 voltage	Selector lever: H (home position) and kept in the Nd and D position	1.1 - 2.1 V
	Other than the above	2.7 - 3.2 V
Shift sensor 8 voltage	Selector lever: H (home position) and kept in the Nd and D position	1.1 - 2.1 V
	Other than the above	2.7 - 3.2 V

### Without CONSULT

1. Set the vehicle to READY.
2. Operate the selector lever and check the voltage between electric shift control module harness connector and ground.

#### CAUTION:

**Perform the operation safely with the wheels blocked, the brake pedal depressed, and the vehicle stopped.**

Electric shift sensor	+		-	Condition	Voltage
	Electric shift control module				
	Connector	Terminal			
No.1	M203	34	Ground	Selector lever: H (home position) and kept in the R	1.4 - 2.0