

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 Service and Repair Manual

[Go to manual page](#)

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>>

[GO TO 2.](#)

2. ELECTRIC SHIFT SENSOR POWER SUPPLY INSPECTION

1. Power switch OFF.

2. Disconnect electric shift selector harness connector.
3. Power switch ON.
4. Check the voltage between electric shift selector harness connector and ground.

Electric shift sensor	+		-	Voltage
	Electric shift selector			
	Connector	Terminal		
No.1 No.3 No.5 No.7	M200	1	Ground	Approx. 5 V
No.2 No.4 No.6 No.8		13		

Is the inspection result normal?

YES>>

[GO TO 4.](#)

NO>>

[GO TO 3.](#)

3. CHECK THE CIRCUIT BETWEEN ELECTRIC SHIFT CONTROL MODULE AND ELECTRIC SHIFT SENSOR (SENSOR POWER CIRCUIT)

1. Power switch OFF.
2. Disconnect electric shift control module harness connector.
3. Check the continuity between electric shift control module harness connector and electric shift selector harness connector.

Electric shift sensor	Electric shift control module		Electric shift selector		Continuity
	Connector	Terminal	Connector	Terminal	
No.1 No.3 No.5 No.7	M202	19	M200	1	Existed
No.2 No.4 No.6 No.8				M203	

4. Check the continuity between electric shift control module harness connector and ground.

Electric shift sensor	Electric shift control module		—	Continuity
	Connector	Terminal		
No.1 No.3 No.5 No.7	M202	19	Ground	Not existed
No.2 No.4 No.6 No.8				

Is the inspection result normal?

YES>>

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

NO>>

Repair or replace the error-detected parts.

4. CHECK ELECTRIC SHIFT SENSOR GROUND CIRCUIT

1. Power switch OFF.
2. Disconnect electric shift control module harness connector.
3. Check the continuity between electric shift control module harness connector and electric shift selector harness connector.

Electric shift sensor	Electric shift control module		Electric shift selector		Continuity
	Connector	Terminal	Connector	Terminal	
No.1 No.3 No.5 No.7	M203	41	M200	12	Existed
No.2 No.4 No.6 No.8		50		24	

4. Check the continuity between electric shift control module harness connector and ground.

Electric shift sensor	Electric shift control module		—	Continuity
	Connector	Terminal		
No.1 No.3 No.5	M203	41	Ground	Not existed

Electric shift sensor	Electric shift control module		—	Continuity
	Connector	Terminal		
No.7				
No.2		50		
No.4				
No.6				
No.8				

Is the inspection result normal?

YES>>

[GO TO 5.](#)

NO>>

Repair or replace the error-detected parts.

5. CHECK THE CIRCUIT BETWEEN ELECTRIC SHIFT CONTROL MODULE AND ELECTRIC SHIFT SENSOR (SENSOR SIGNAL CIRCUIT)

1. Check the continuity between electric shift control module harness connector and electric shift selector harness connector.

Electric shift sensor	Electric shift control module		Electric shift selector		Continuity
	Connector	Terminal	Connector	Terminal	
No.1	M203	34	M200	2	Existed
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	

2. Check the continuity between electric shift control module harness connector and ground.

Electric shift sensor	Electric shift control module		—	Continuity
	Connector	Terminal		
No.1	M203	34	Ground	Not existed
No.2		35		
No.3		36		
No.4		37		
No.5		44		
No.6		45		
No.7		39		
No.8		40		

3. Check the continuity between electric shift control module harness connector terminals.

Electric shift sensor	Electric shift control module				Continuity
	Connector	Terminal	Connector	Terminal	
No.1	M203	34	M203	Except 34	Not existed
No.2		35		Except 35	
No.3		36		Except 36	
No.4		37		Except 37	
No.5		44		Except 44	
No.6		45		Except 45	
No.7		39		Except 39	
No.8		40		Except 40	

Is the inspection result normal?

YES>>

Due to the malfunction of the electric shift sensor, replace the electric shift selector. Refer to [ELECTRIC SHIFT SELECTOR : Removal & Installation](#).

NO>>

Repair or replace the error-detected parts.

Sample

DTC DETECTION LOGIC

DTC		CONSULT screen terms	DTC detection condition	
P07EB	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"> Input voltage \geq 4.5 V
			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 power.)

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.

>>

[GO TO 2.](#)

2. CHECK FOR DTC DETECTION

 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 "P07EB-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>>

[GO TO 2.](#)

2. ELECTRIC SHIFT SENSOR POWER SUPPLY INSPECTION

1. Power switch OFF.