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2015 NISSAN Sunny OEM Service and Repair Workshop Manual

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To check malfunction symptom before repair: Refer to <u>Intermittent Incident</u>.

NO-2>>

Confirmation after repair: INSPECTION END



1. ELECTRIC SHIFT SENSOR INPUT SIGNAL INSPECTION

(H)With CONSULT

- 1. Set the vehicle to READY.
- 2. Select "Data Monitor" in "SHIFT".
- 3. Select "Shift sensor 1" to "Shift sensor 8".
- 4. Operate the selector lever and confirm the shift sensor in which the value is not switched.

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	Selector lever: H (home position) and kept in the R and Nr position	On
SHIII SEHSOI I	Other than the above	Off
Shift sensor 2	Selector lever: H (home position) and kept in the R and Nr position	On
SHIII SERSOF 2	Other than the above	Off
Shift sensor 3	Selector lever: H (home position) and kept in the Nr position	On
SHIII SEHSOF 5	Other than the above	Off
Shift sensor 4	Selector lever: H (home position) and kept in the Nr and Nd position	On
SHIII SEIISOF 4	Other than the above	Off
Shift sensor 5	Selector lever: H (home position) and kept in the Nr and Nd position	On
SHIII SEHSOF 5	Other than the above	Off
Shift sensor 6	Selector lever: H (home position) and kept in the Nd position	On
Smitt sensor o	Other than the above	Off
Shift sensor 7	Selector lever: H (home position) and kept in the Nd and D position	On
SHIII SEHSOF /	Other than the above	Off
Shift sensor 8	Selector lever: H (home position) and kept in the Nd and D position	On
SHILL SELISUL O	Other than the above	Off

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

	+				
Electric shift sensor	Electric shi mod		-	Condition	Voltage
	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
110.2		5		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
140.5		50		Other than the above	
No.4		37	Selector lever: H (home position) and kept in the Nr and Nd position		1.4 - 2.0 V
110.4		3,		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
110.5		ŗ		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
110.0		2		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
140.7		33		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
110.0		70		Other than the above	2.8 - 3.2 V

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<u>GO TO 2</u>.

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 power source circuit of the troubled shift sensor confirmed in the step 1.
- 5. Check the voltage between electric shift selector harness connector and ground.

	+				
Electric shift sensor	Electric shift selector	r	-	Voltage	
	Connector	Terminal			
No.1					
No.3		1			
No.5		1			
No.7	M200		Ground	Approx E.V	
No.2	W1200		Ground	Approx. 5 V	
No.4		12			
No.6		13			
No.8					

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	Electric shift control module		Electric shift selector	
Electric simit sensor	Connector	Terminal	Connector	Terminal	Continuity
No.1					
No.3	M202	19		1	
No.5	M202	19		1	
No.7			M200		Existed
No.2			101200		Existed
No.4	M203	48		13	
No.6	M203	40		13	
No.8					

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

Electric shift sensor	Electric shift control module			Continuity	
Electric simit sensor	Connector Terminal		_	Continuity	
No.1	M202	19	Ground	Not existed	
No.3					

The delical life and an	Electric shift control mod	lule		c : :	
Electric shift sensor	Connector	Terminal	_	Continuity	
No.5					
No.7					
No.2					
No.4	M203	48			
No.6	W12U5	40			
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	Electric shift control module		Electric shift selector	
Electric simit sensor	Connector	Terminal	Connector	Terminal	Continuity
No.1					
No.3		41		12	
No.5		41		12	
No.7	M203		M200		Existed
No.2	W1203		W1200		Existed
No.4		50		24	
No.6		30		24	
No.8					

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

Electric shift sensor	Electric shift control	l module			
Electric shift sensor	Connector	Terminal]_	Continuity	
No.1	M203		Ground	Not existed	
No.3		41			
No.5		41			
No.7					
No.2		50			
No.4					

Electric shift sensor	Electric shift control module		Conv		Continuity	
Electric silit sensor	Connector	Terminal		Continuity		
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	lectric shift control module		Electric shift selector	
Electric sinit sensor	Connector	Terminal	Connector	Terminal	Continuity
No.1		34		2	
No.2		35		14	
No.3		36		3	
No.4	M203	37	M200	15	Existed
No.5	101203	44	W1200	4	Existed
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 mod	dule		Continuity	
Electric sinit sensor	Connector	Terminal	_	Continuity	
No.1		34			
No.2		35	Ground	Not existed	
No.3		36			
No.4	M203	37			
No.5	101203	44			
No.6		45			
No.7		39			
No.8		40			

Is the inspection result normal?

YES>>

Due to the malfunction of the electric shift sensor, replace the electric shift selector. Refer to <u>ELECTRIC SHIFT SELECTOR</u>: <u>Removal & Installation</u>.

NO>>

Repair or replace the error-detected parts.



DTC DETECTION LOGIC

DTC		CONSULT screen terms	DTC detection condition	
P0850	00	Park/Neutral Switch	Diagnosis condition	READY
			Signal (terminal)	P position switch input signal
			Threshold	The input voltage is one of the following in one of P position switches No.1 and No.2. $\bullet 0.6 \text{ V} < \text{Input voltage} < 1.1 \text{ V}$ $\bullet 2.1 \text{ V} < \text{Input voltage} < 2.7 \text{ V}$ $\bullet 3.2 \text{ V} < \text{Input voltage} < 4.5 \text{ V}$
			Diagnosis delay time	2.4 seconds or more

POSSIBLE CAUSE

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

FAIL-SAFE

Does not shift to P position even when the P position switch is pressed.

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.



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

(H)With CONSULT

- 1. Set the vehicle to READY.
- 2. Press the P position switch to shift to the P position and wait for at least 5 seconds. (Press the P position for at least 1 second.)
- 3. 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 "P0850-00" detect?

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