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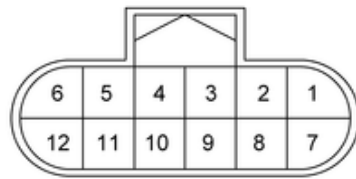
FactoryManuals.net is a great resource for anyone who wants to save money on repairs by doing their own work. The manuals provide detailed instructions and diagrams that make it easy to understand how to fix a vehicle.

2015 NISSAN Altima (Thailand) OEM Service and Repair Workshop Manual

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DTC	Self-diagnosis item (CONSULT screen items)	EV system warning lamp	Trip	Reference
P0D22-00	Battery charger output current	x	1	DTC Description
P0D2A-00	Battery charger input current	x	1	DTC Description
P0D3A-00	Battery charger input current sensor	x	1	DTC Description
P0D3B-00	Battery charger input current sensor	x	1	DTC Description
P0D3F-00	Battery charger input voltage sensor	x	1	DTC Description
P0D40-00	Battery charger input voltage sensor	x	1	DTC Description
P0D4E-00	Battery charger high voltage battery output voltage sensor	x	1	DTC Description
P0D4F-00	Battery charger high voltage battery output voltage sensor	x	1	DTC Description
P0D53-00	Battery charger high voltage battery output current sensor	x	1	DTC Description
P0D54-00	Battery charger high voltage battery output current sensor	x	1	DTC Description
P0D67-00	Battery charger control module	x	1	DTC Description
P0D85-00	Battery charging output voltage	x	1	DTC Description
P0E5E-00	Battery charger control module	x	1	DTC Description
P1C50-43	CAN controller	—	1	DTC Description
P1C50-46	CAN controller	—	1	DTC Description
P1C50-49	CAN controller	—	1	DTC Description
P1C50-4B	CAN controller	—	1	DTC Description
P1C60-19	DC over current error	x or —	1	DTC Description
P1C61-82	Communication error	x	1	DTC Description
P1C62-82	Communication error	x	1	DTC Description
P1C63-97	AC connector error	x	1	DTC Description
P1C64-17	AC over voltage error	—	1	DTC Description
P1C64-38	AC over voltage error	—	1	DTC Description
U1D40-87	Communication error	x	1	DTC Description
U2143-83	CAN communication error (VCM/HCM)	x	1	DTC Description
U2143-87	CAN communication error (VCM/HCM)	x	1	DTC Description
U2144-83	CAN communication (LBC)	x	1	DTC Description
U2A0F-88	Communication error	x	1	DTC Description

TERMINAL LAYOUT



SIEMD-7091384-02-000363805

PHYSICAL VALUES


NOTE:

Specification data in the following table are reference values.

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/Output		
1 (R)	12 (B)	12V BATTERY POWER SUPPLY	Input	Power switch: ON	9.0 – 16.0 V
2 (L)	—	CAN-H (EV SYSTEM CAN 2 CIRCUIT)	Input/Output	—	—
3 (G)	—	CAN-L (EV SYSTEM CAN 2 CIRCUIT)	Input/Output	—	—
4 (G)	12 (B)	EVSE CONNECTING SIGNAL	Output	Normal charge in progress	0 - 5.0 V
				Except the above	5.0 V
5 (L)	12 (B)	EVSE CONNECTING SIGNAL	Output	Normal charge in progress	0 - 5.0 V
				Except the above	5.0 V
6 (B)	—	GROUND	—	—	—
7 (L)	12 (B)	EVSE COMMUNICATION	Input/Output	Normal charge in progress	(-12.6) – (12.6) V
				Except the above	0 V
8 (W)	—	GROUND	—	—	—
9 (P)	12 (B)	EVSE COMMUNICATION	Input/Output	Normal charge in progress	(-12.6) – (12.6) V
				Except the above	0 V
10	—	ON-BOARD CHARGER GROUND	—	—	—

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/Output		
(B)					
11 (R)	12 (B)	EVSE COMMUNICATION	Input/Output	Normal charge in progress	(-12.6) - (12.6) V
				Except the above	0 V
12 (B)	—	GROUND	—	—	—

Sample



NOTE:

- Specification data in the following table is reference values.
- The following data that the on-board charger transmits and receives input and output data may differ from an actual operation. The values in the table are calculated by on-board charger based on signals from sensors.
- Charge does not start at power switch ON. If charge is required while power switch is ON, turn power switch OFF and charge starts and then power switch is ON.
- The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

Monitor item	Condition	Values/Status
AC voltage	Normal charge in progress	100 - 240 V
AC current	Normal charge in progress	5 - 32 A
DC voltage	Normal charge in progress	240 - 440 V
DC current	Normal charge in progress	32 A or less
Battery charger state	Normal charge in progress	Charge
	Preparing to start stop normal charge	Power ON
	<ul style="list-style-type: none"> • Power switch: ON • When charge is not yet done 	Standby
	When status of on-board charger is unknown	Unavailable Value
Battery charger fail code	<ul style="list-style-type: none"> • Normal charge in progress • DTC is not detected yet 	0
	<ul style="list-style-type: none"> • Normal charge in progress • DTC is detected 	1 - 49
DC current (Command value)	Normal charge in progress	32 A or less
AC current (Maximum value)	Normal charge in progress	32 A or less

1. CHECK CHARGE PORT CONDITION

Check damage, dust and foreign matter in charge port. Refer to [CHARGE PORT : Periodic Maintenance Operation](#).

Is the inspection result normal?

YES>>

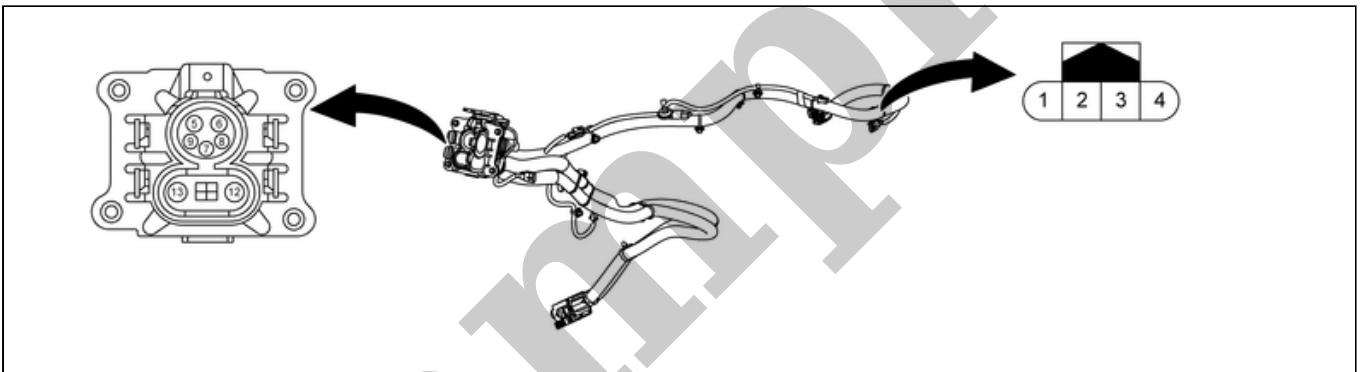
[GO TO 2.](#)

NO>>

Clean or replace charge port. Refer to [CHARGE PORT : Removal & Installation](#).

2. CHECK CHARGE PORT-1

1. Disconnect charge port harness connector.
2. Check the continuity between charge port terminals and normal charge port side harness connector of same terminals.



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Charge port		Charge port side harness connector		Continuity
Connector	Terminal	Connector	Terminal	
H41	8	E28	2	Existed
	9		1	

Is the inspection result normal?

YES>>

[GO TO 3.](#)

NO>>

Replace charge port. Refer to [CHARGE PORT : Removal & Installation](#).

3. CHECK CHARGE PORT-2

Check the resistance between charge port side harness connector and charge port ground.

Charge port side harness connector		Charge port		Resistance (kΩ)
Connector	Terminal	Connector	Terminal	
E28	2	H41	7	2.43 – 2.97

Is the inspection result normal?

YES>>

[GO TO 4.](#)

NO>>

Replace charge port. Refer to [CHARGE PORT : Removal & Installation.](#)

4. CHECK CHARGE PORT TEMPERATURE SENSOR

Check the resistance between charge port side harness connector terminals.

Charge port				Resistance (kΩ)
Connector	Terminal	Connector	Terminal	
E27	20	E27	18	4 - 170
			19	

Is the inspection result normal?

YES>>

INSPECTION END

NO>>

Replace charge port. Refer to [CHARGE PORT : Removal & Installation.](#)

Sample

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 consisting of glove, shoes, face shield and glasses 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. CHECK INSULATION RESISTANCE OF CHARGE PORT (1)

Using insulation resistance tester, measure insulation resistance between charge port terminals.

CAUTION:



Unlike normal resistance testers, insulation resistance testers (multi tester) are used by applying a voltage of 500 V. For this reason, improper handling of an insulation resistance tester may cause an electric shock. In addition to this, if an insulation resistance tester is used to the 12 V circuit, its electric devices may be damaged. To avoid these hazards, carefully read the handling manual of insulation resistance tester and perform safe operation.

CAUTION:

- Set the insulation resistance tester (multi tester) at 500 V.
- To ensure correct polarity of the tester, always connect to the circuit in the forward direction.
- Wait for 30 seconds until the resistance becomes steady.
- If the inspection result shows that there is no continuity, check that the parts are mounted correctly.

Charge port		Resistance
+	-	
Terminal		
5	7	40 MΩ or more
6		

Is the inspection result normal?

YES>>

INSPECTION END

NO>>

GO TO [2](#).

2. CHECK INSULATION RESISTANCE OF CHARGE PORT (2)

1. Remove charge port from the vehicle. Refer to [CHARGE PORT : Removal & Installation](#).
2. Using insulation resistance tester, measure insulation resistance between charge port terminals.

CAUTION:



Unlike normal resistance testers, insulation resistance testers (multi tester) are used by applying a voltage of 500 V. For this reason, improper handling of an insulation resistance tester may cause an electric shock. In addition to this, if an insulation resistance tester is used to the 12 V circuit, its electric devices may be damaged. To avoid these hazards, carefully read the handling manual of insulation resistance tester and perform safe operation.

CAUTION:

- Set the insulation resistance tester (multi tester) at 500 V.
- To ensure correct polarity of the tester, always connect to the circuit in the forward direction.
- Wait for 30 seconds until the resistance becomes steady.
- If the inspection result shows that there is no continuity, check that the parts are mounted correctly.

Charge port		Resistance
+	-	
Terminal		
5	7	40 MΩ or more
6		

Is the inspection result normal?

YES>>

Replace On-board charger. Refer to [ON-BOARD CHARGER : Disassembly & Assembly](#).

NO>>

Replace charge port. Refer to [CHARGE PORT : Removal & 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 consisting of glove, shoes, face shield and glasses 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. CHECK CHARGE PORT

1. Turn power switch OFF.
2. Disconnect charge port harness connector.
3. Check the charge port. [Component Inspection](#)

Is the inspection result normal?

YES>>

[GO TO 2.](#)

NO>>

Replace charge port. Refer to [CHARGE PORT : Removal & Installation.](#)

2. CHECK EVSE CONNECTION DETECTING CIRCUIT POWER SUPPLY

1. Turn power switch ON.
2. Check the voltage between normal charge port harness connector and ground.

+		-	Voltage
Charge port			
Connector	Terminal		
E28	2	Ground	5.0 V

Is the inspection result normal?