

SECTION **PWO**
POWER OUTLET

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PRECAUTION

PRECAUTIONS

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

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The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

WARNING:

Always observe the following items for preventing accidental activation.

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see "SRS AIR BAG".
- Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

Always observe the following items for preventing accidental activation.

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

Precautions for Removing of Battery Terminal

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- When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.

NOTE:

ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.

- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.

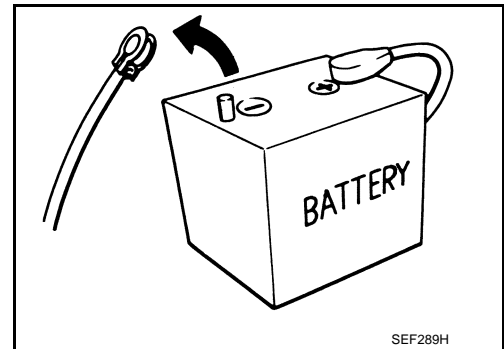
NOTE:

If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.

- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.

NOTE:

The removal of 12V battery may cause a DTC detection error.



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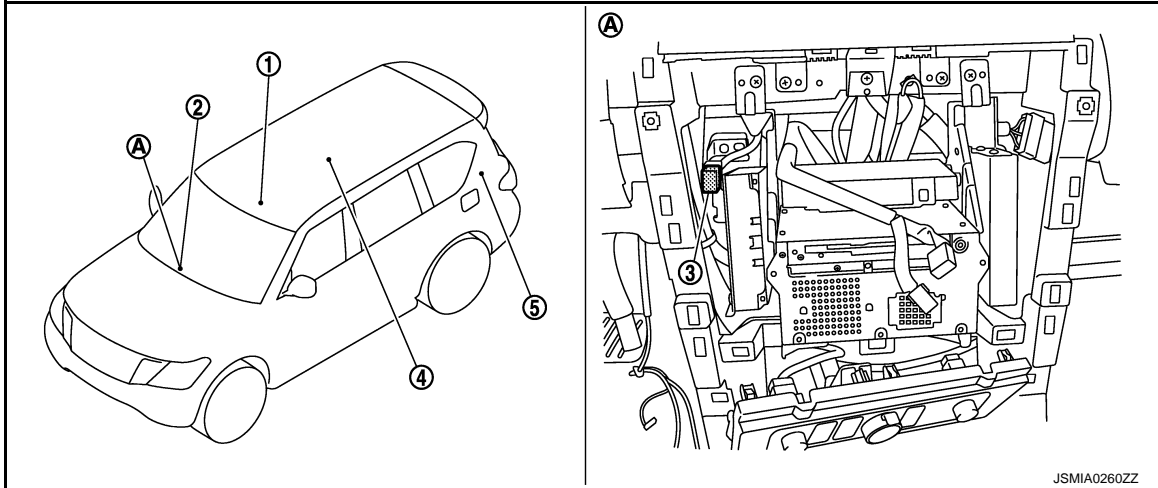
< SYSTEM DESCRIPTION >

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

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- 1. Console power socket (cup holder)
- 2. Front power socket
- 3. Accessory relay (2)
- 4. Console power socket (rear)
- 5. Luggage room power socket
- A. Behind cluster lid C finisher

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POWER SOCKET

< WIRING DIAGRAM >

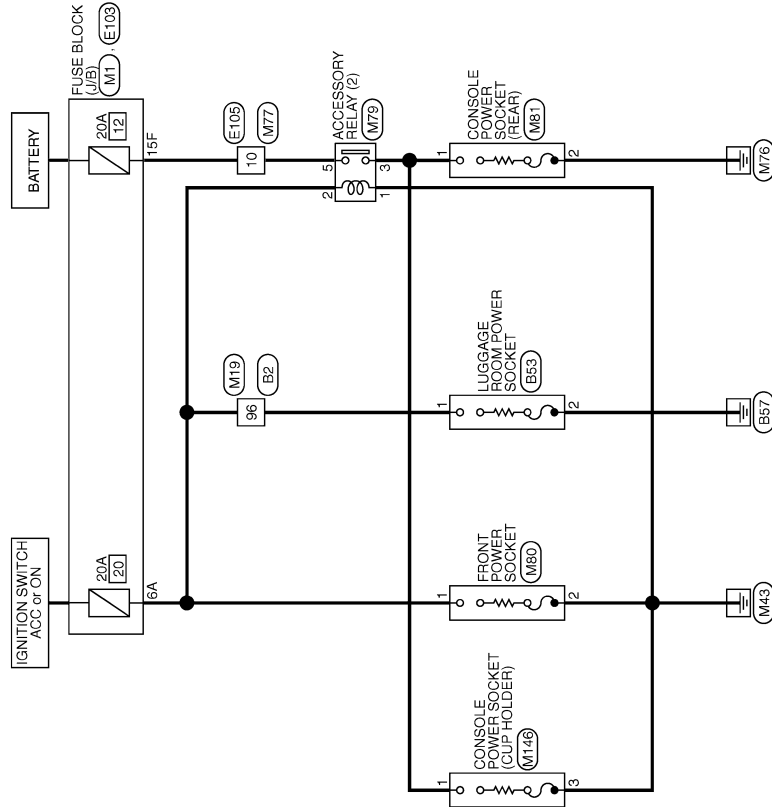
[POWER SOCKET]

WIRING DIAGRAM

POWER SOCKET

Wiring Diagram

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POWER SOCKET

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POWER SOCKET

< WIRING DIAGRAM >

[POWER SOCKET]

POWER SOCKET

Connector No.	B2
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
2	BR	-
3	R/W	-
4	V	-
5	G	-
6	W/B	-
7	GR	-
8	B	-
9	W	-
10	G	-
11	W/B	-
12	BR	-
13	GR	-
14	B/Y	-
15	W/R	-
16	GR/R	-
17	GW	-
18	V	-
19	W	-
20	W/G	-
21	B/W	-
22	V	-
23	G	-
24	O	-
25	Y	-
26	L/O	-
27	L/O	-
28	Y/R	-
29	L	-
30	R	-
31	G/Y	-
32	B/SB	-
33	LG/R	-
34	BR/W	-
35	GR/R	-
36	SB	-
37	LG	-
38	L	-
39	P	-
40	W/G	-
41	O	-

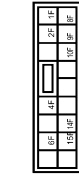
42	G/R	-
43	V/W	-
44	LG/B	-
45	R/Y	-
46	B	-
47	BR	-
48	GR	-
49	R/B	-
50	W/R	-
51	B/Y	-
52	B/Y	-
53	O/B	-
54	G/O	-
55	R/B	-
56	LG/R	-
57	GR/R	-
58	Y/G	-
59	V/W	-
60	R	-
61	B	-
62	R	-
63	W	-
64	G	-
65	W	-
66	G	-
67	SHIELD	-
68	LG/B	-
69	P/L	-
70	L	-
71	R	-
72	Y/B	-
73	Y	-
74	Y/L	-
75	Y	-
76	W/R	-
77	Y/L	-
78	Y	-
79	Y	-
80	W/R	-
81	Y/L	-
82	L/O	-
83	O	-
84	W/R	-
85	O	-
86	W/R	-
87	O	-
88	W/L	-
89	GR/L	-
90	W	-
91	W	-
92	G	-
93	W/R	-
94	L/W	-
95	R	-
96	V	-
97	L/W	-
98	L/W	-
99	P/B	-
100	P/B	-

Connector No.	B53
Connector Name	LUGGAGE ROOM POWER SOCKET
Connector Type	P02FB-Z



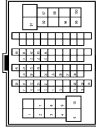
Terminal No.	Color Of Wire	Signal Name [Specification]
1	L/W	-
2	B	-

Connector No.	E103
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FM-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
10F	G	-
14F	Y	-
15F	G	-
1F	W/B	-
2F	R	-
4F	G	-
6F	Y/G	-
8F	L/B	-
9F	Y	-

Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
2	L/W	-
3	R/B	-
4	V	-
5	Y	-
6	W	-
7	W/G	-
8	P/B	-
9	W/B	-
10	G	-
11	L	-
12	P	-
13	P/B	-
14	BR	-
15	L/B	-
16	SB	-
17	BR	-
18	Y/G	-
19	Y/G	-
20	BR/Y	-
21	Y/V	-
22	L	-
23	Y	-
24	L/W	-
28	O	-
29	R/W	-
30	L/B	-
31	Y	-
32	GR/R	-
34	Y	-
35	R	-
36	BR	-
37	GY	-
38	G	-
40	SB	-
41	W/R	-
42	R	-

POWER SOCKET

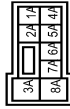
< WIRING DIAGRAM >

[POWER SOCKET]

POWER SOCKET

43	V	-
51	L/O	-
52	BR/W	-
53	BR/Y	-
54	GR/L	-
60	W	-
61	B	-
62	R	-
63	G	-
64	SHIELD	-
91	BR	-
92	L/W	-
94	Y/B	-
95	G/R	-
97	R	-
98	G/B	-
100	W/R	-

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NSDFW-12

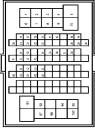


Terminal No.	Color Of Wire	Signal Name [Specification]
1A	Y	-
2A	GR	-
3A	W	-
4A	Y/G	-
5A	V	-
6A	L/W	-
7A	LG	-
8A	W	-

POWER SOCKET

43	V/W	-
44	LG/B	-
45	R/Y	-
46	B	-
47	BR/W	-
49	GR	-
50	R/B	-
51	W/R	-
52	BR/Y	-
53	O/B	-
54	G/O	-
55	R/B	-
56	LG/R	-
57	GR/R	-
58	Y/G	-
59	V/W	-
60	R	-
63	B	-
64	R	-
65	W	-
66	G	-
67	SHIELD	-
69	LG/B	-
70	P/L	-
71	L	-
72	R	-
77	Y/B	-
78	Y/L	-
79	Y	-
80	W/R	-
81	Y/L	-
84	L/O	-
86	O	-
87	W/R	-
88	O	-
89	W/L	-
90	GR/L	-
91	W	-
92	G	-
94	W/R	-
96	L/W	-
97	R	-
98	V	-
99	L/W	-
100	P/B	-

Connector No.	M177
Connector Name	WIRE TO WIRE
Connector Type	TH89FW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	L/W	-
3	R/B	-
4	L	-
6	Y	-
6	SB	-
7	W/G	-
8	P/B	-
9	W/B	-
10	G	-
11	L	-
12	P	-
13	P/B	-
14	BR	-
15	O/L	-
16	SB	-
18	BR	-
19	Y/G	-
20	BR/Y	-
21	V	-
22	L	-
23	Y	-
24	L/W	-
28	O	-
29	R/W	-
30	O/L	-
31	Y	-
32	GR/R	-
34	Y	-
35	R	-
36	B/O	-
37	G/Y	-
38	G	-
40	SB	-
41	W/R	-
42	R	-

POWER SOCKET

43	V/W	-
44	LG/B	-
45	R/Y	-
46	B	-
47	BR/W	-
49	GR	-
50	R/B	-
51	W/R	-
52	BR/Y	-
53	O/B	-
54	G/O	-
55	R/B	-
56	LG/R	-
57	GR/R	-
58	Y/G	-
59	V/W	-
60	R	-
63	B	-
64	R	-
65	W	-
66	G	-
67	SHIELD	-
69	LG/B	-
70	P/L	-
71	L	-
72	R	-
77	Y/B	-
78	Y/L	-
79	Y	-
80	W/R	-
81	Y/L	-
84	L/O	-
86	O	-
87	W/R	-
88	O	-
89	W/L	-
90	GR/L	-
91	W	-
92	G	-
94	W/R	-
96	L/W	-
97	R	-
98	V	-
99	L/W	-
100	P/B	-

Connector No.	M19
Connector Name	WIRE TO WIRE
Connector Type	TH89FW-CS16-TM4

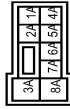


Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	L/W	-
3	R/B	-
4	L	-
6	Y	-
6	SB	-
7	W/G	-
8	P/B	-
9	W/B	-
10	G	-
11	L	-
12	P	-
13	P/B	-
14	BR	-
15	O/L	-
16	SB	-
18	BR	-
19	Y/G	-
20	BR/Y	-
21	V	-
22	L	-
23	Y	-
24	L/W	-
28	O	-
29	R/W	-
30	O/L	-
31	Y	-
32	GR/R	-
34	Y	-
35	R	-
36	B/O	-
37	G/Y	-
38	G	-
40	SB	-
41	W/R	-
42	R	-

POWER SOCKET

43	V	-
51	L/O	-
52	BR/W	-
53	BR/Y	-
54	GR/L	-
60	W	-
61	B	-
62	R	-
63	G	-
64	SHIELD	-
91	BR	-
92	L/W	-
94	Y/B	-
95	G/R	-
97	R	-
98	G/B	-
100	W/R	-

Connector No.	M1
Connector Name	FUSE BLOCK (J/B)
Connector Type	NSDFW-12



Terminal No.	Color Of Wire	Signal Name [Specification]
1A	Y	-
2A	GR	-
3A	W	-
4A	Y/G	-
5A	V	-
6A	L/W	-
7A	LG	-
8A	W	-

POWER SOCKET

43	V/W	-
44	LG/B	-
45	R/Y	-
46	B	-
47	BR/W	-
49	GR	-
50	R/B	-
51	W/R	-
52	BR/Y	-
53	O/B	-
54	G/O	-
55	R/B	-
56	LG/R	-
57	GR/R	-
58	Y/G	-
59	V/W	-
60	R	-
63	B	-
64	R	-
65	W	-
66	G	-
67	SHIELD	-
69	LG/B	-
70	P/L	-
71	L	-
72	R	-
77	Y/B	-
78	Y/L	-
79	Y	-
80	W/R	-
81	Y/L	-
84	L/O	-
86	O	-
87	W/R	-
88	O	-
89	W/L	-
90	GR/L	-
91	W	-
92	G	-
94	W/R	-
96	L/W	-
97	R	-
98	V	-
99	L/W	-
100	P/B	-

Connector No.	M19
Connector Name	WIRE TO WIRE
Connector Type	TH89FW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	L/W	-
3	R/B	-
4	L	-
6	Y	-
6	SB	-
7	W/G	-
8	P/B	-
9	W/B	-
10	G	-
11	L	-
12	P	-
13	P/B	-
14	BR	-
15	O/L	-
16	SB	-
18	BR	-
19	Y/G	-
20	BR/Y	-
21	V	-
22	L	-
23	Y	-
24	L/W	-
28	O	-
29	R/W	-
30	O/L	-
31	Y	-
32	GR/R	-
34	Y	-
35	R	-
36	B/O	-
37	G/Y	-
38	G	-
40	SB	-
41	W/R	-
42	R	-

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POWER SOCKET

< WIRING DIAGRAM >

[POWER SOCKET]

POWER SOCKET

43	V	-
51	L/O	-
52	BR/W	-
53	BR/Y	-
54	GR/L	-
60	W	-
61	B	-
62	G	-
63	R	-
64	SHIELD	-
91	BR	-
92	L/W	-
94	Y/B	-
95	L/R	-
97	R	-
98	OIL	-
100	W/B	-

Connector No.	M79
Connector Name	ACCESSORY RELAY (2)
Connector Type	MS02FL-M2-LC



Terminal No.	Color Of Wire	Signal Name (Specification)
1	B	-
2	L/W	-
3	G	-
5	G	-

Connector No.	M80
Connector Name	FRONT POWER SOCKET
Connector Type	P02FB-Z



Terminal No.	Color Of Wire	Signal Name (Specification)
1	L/W	-
2	B	-

Connector No.	M81
Connector Name	CONSOLE POWER SOCKET (REAR)
Connector Type	P02FB-Z



Terminal No.	Color Of Wire	Signal Name (Specification)
1	G	-
2	B	-

Connector No.	M146
Connector Name	CONSOLE POWER SOCKET (CLIP HOLDER)
Connector Type	NS03FM-CS



Terminal No.	Color Of Wire	Signal Name (Specification)
1	G	-
2	L/W	-
3	B	-

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POWER SOCKET

< REMOVAL AND INSTALLATION >

[POWER SOCKET]

REMOVAL AND INSTALLATION

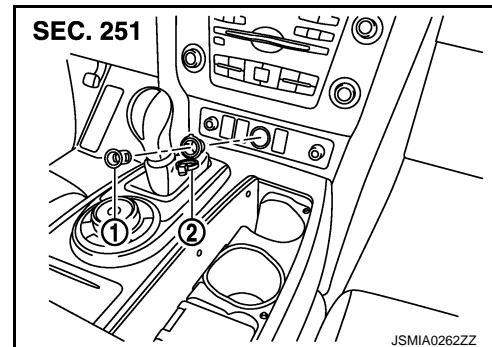
POWER SOCKET

FRONT POWER SOCKET

FRONT POWER SOCKET : Exploded View

INFOID:000000009011380

- 1 : Inner socket
- 2 : Ring



FRONT POWER SOCKET : Removal and Installation

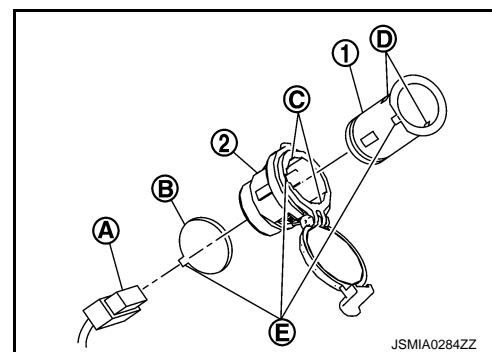
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REMOVAL

1. Remove cluster lid C lower. Refer to [JP-13, "Exploded View"](#).
2. Disconnect power socket connector (A).

- B : Hole for power socket
(Cluster lid C lower)
- E : Cut out

3. Pull out inner socket (1) by pushing the ring pawl (C) from the inner socket hole (square) (D).
4. Remove ring (2) from cluster lid C lower while pressing pawls.



INSTALLATION

Install in the reverse order of removal.

NOTE:

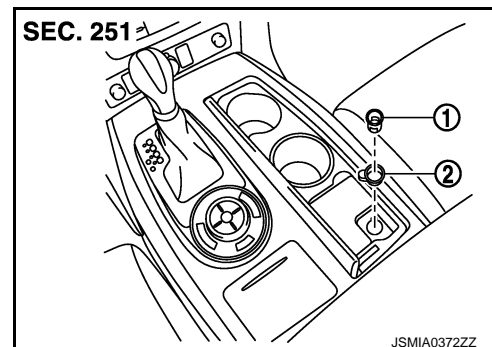
Align the cut outs of inner socket, ring and cluster lid C lower.

CONSOLE POWER SOCKET (CUP HOLDER)

CONSOLE POWER SOCKET (CUP HOLDER) : Exploded View

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- 1 : Inner socket
- 2 : Ring



CONSOLE POWER SOCKET (CUP HOLDER) : Removal and Installation

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REMOVAL

POWER SOCKET

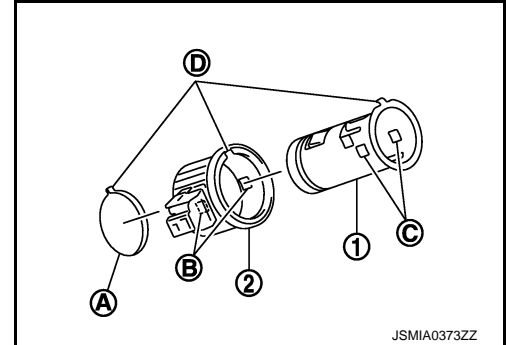
< REMOVAL AND INSTALLATION >

[POWER SOCKET]

1. Remove console finisher assembly. Refer to [IP-23. "Exploded View"](#).
2. Disconnect power socket connector and remove power socket illumination bulb.
3. Pull out inner socket (1) by pushing the ring pawl (B) from the inner socket hole (square) (C).

- A : Hole for power socket
(Console finisher assembly)
D : Cut out

4. Remove ring (2) from console finisher assembly while pressing pawls.



INSTALLATION

Install in the reverse order of removal.

NOTE:

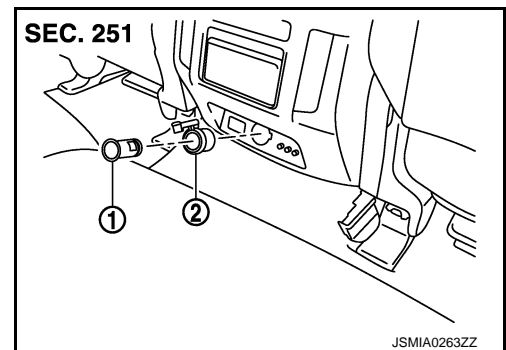
Align the cut outs of inner socket, ring and console finisher assembly.

CONSOLE POWER SOCKET (REAR)

CONSOLE POWER SOCKET (REAR) : Exploded View

INFOID:000000009011384

- 1 : Inner socket
2 : Ring



CONSOLE POWER SOCKET (REAR) : Removal and Installation

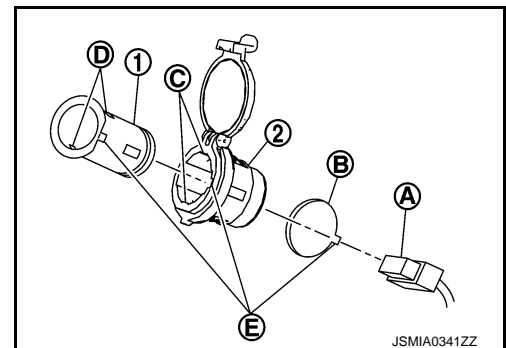
INFOID:000000009011385

REMOVAL

1. Remove console rear finisher. Refer to [IP-23. "Exploded View"](#).
2. Disconnect power socket connector (A).

- B : Hole for power socket
(Console rear finisher)
E : Cut out

3. Pull out inner socket (1) by pushing the ring pawl (C) from the inner socket hole (square) (D).
4. Remove ring (2) from console rear finisher while pressing pawls.



INSTALLATION

Install in the reverse order of removal.

NOTE:

Align the cut outs of inner socket, ring and console rear finisher.

LUGGAGE ROOM POWER SOCKET

POWER SOCKET

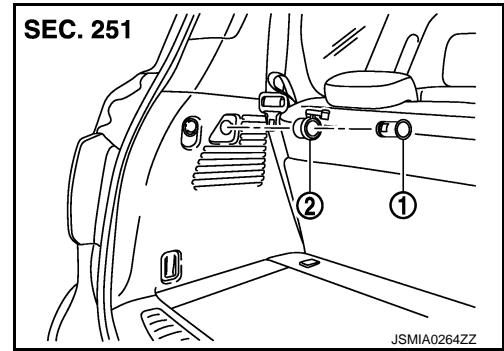
< REMOVAL AND INSTALLATION >

[POWER SOCKET]

LUGGAGE ROOM POWER SOCKET : Exploded View

INFOID:000000009011386

- 1 : Inner socket
- 2 : Ring



LUGGAGE ROOM POWER SOCKET : Removal and Installation

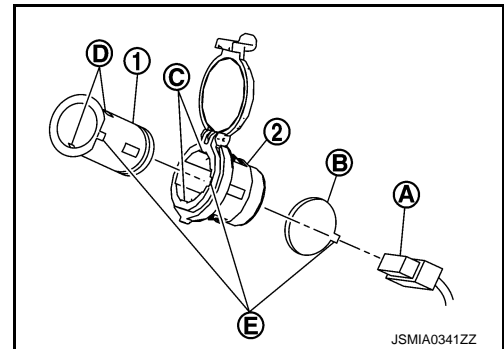
INFOID:000000009011387

REMOVAL

1. Remove luggage side lower finisher (LH). Refer to [INT-33, "Exploded View"](#).
2. Disconnect power socket connector (A).

- B : Hole for power socket
[Luggage side lower finisher (LH)]
- E : Cut out

3. Pull out inner socket (1) by pushing the ring pawl (C) from the inner socket hole (square) (D).
4. Remove ring (2) from luggage side lower finisher (LH) while pressing pawls.



INSTALLATION

Install in the reverse order of removal.

NOTE:

Align the cut outs of inner socket, ring and luggage side lower finisher (LH).

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PRECAUTION

PRECAUTIONS

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

INFOID:000000009011388

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

WARNING:

Always observe the following items for preventing accidental activation.

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see "SRS AIR BAG".
- Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

Always observe the following items for preventing accidental activation.

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

Precautions for Removing of Battery Terminal

INFOID:0000000098201

- When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.

NOTE:

ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.

- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.

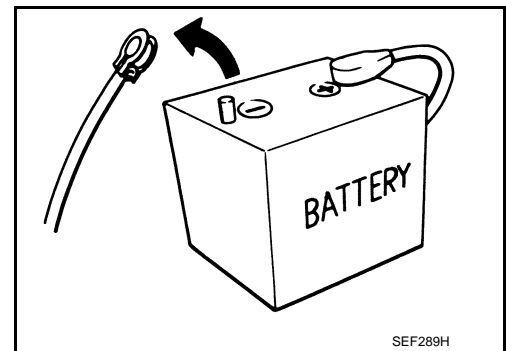
NOTE:

If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.

- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.

NOTE:

The removal of 12V battery may cause a DTC detection error.

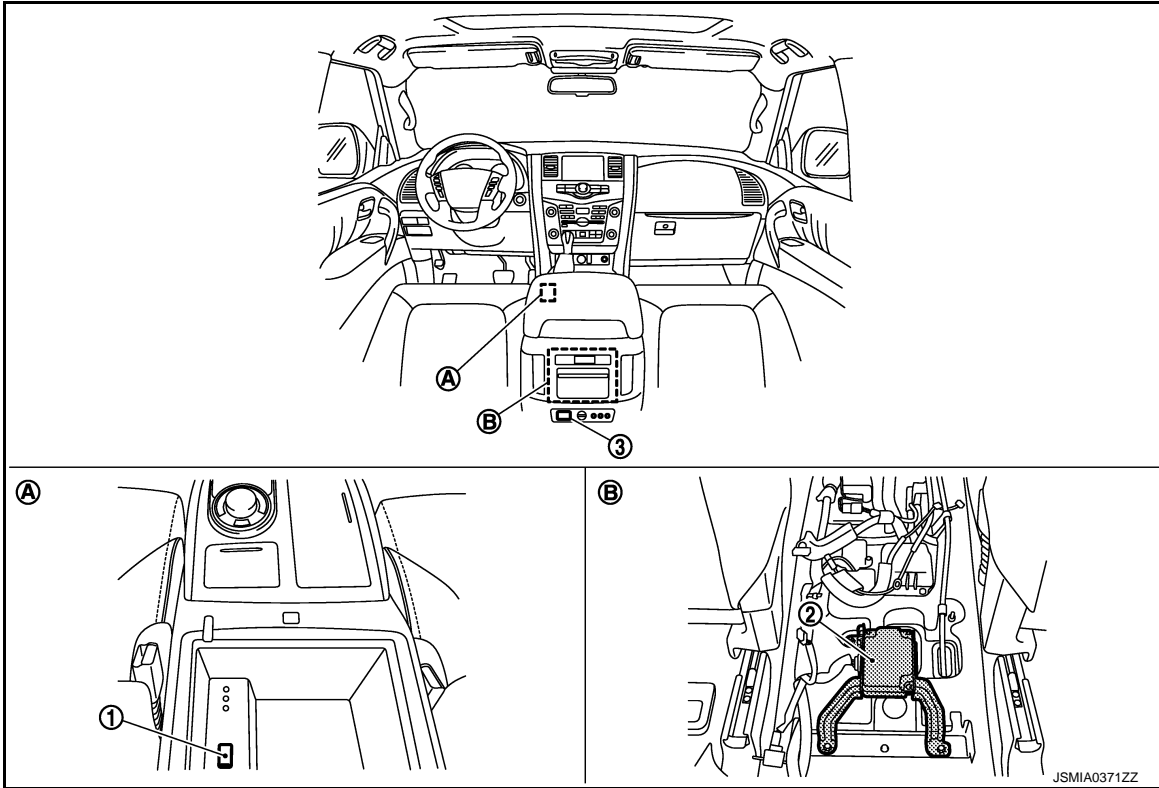


SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:000000009011389



- 1. AC 120 V outlet main switch
- 2. Inverter unit
- 3. AC 120 V outlet
- A. Inside of console box
- B. Center console remove condition

Component Description

INFOID:000000009011390

Component	Reference
Inverter unit	PWO-13. "Inverter Unit"
AC 120 V outlet main switch	PWO-13. "AC120 V Outlet Main Switch"
AC 120 V outlet	PWO-13. "AC120 V Outlet"

PWO

Inverter Unit

INFOID:000000009011391

The inverter unit converts an applied power supply voltage (approximately DC 12 V) to AC 120 V and outputs the converted voltage.

AC120 V Outlet Main Switch

INFOID:000000009011392

The operation of the switch enables the inverter unit to activate/inactivate and turn ON/OFF AC 120 V output.

AC120 V Outlet

INFOID:000000009011393

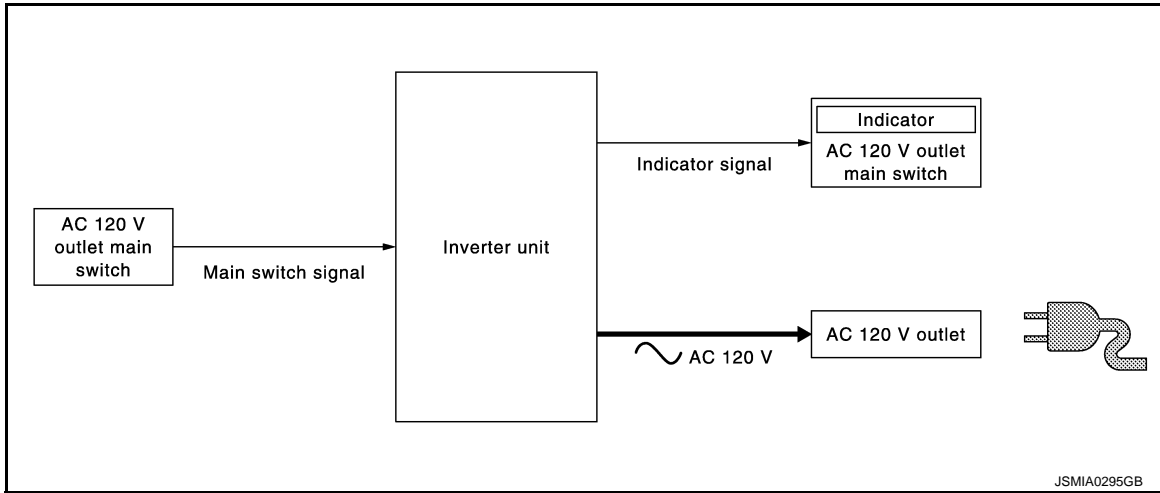
The AC 120 V outlet allows using AC 120 V converted in the inverter unit as an outlet.

SYSTEM

System Description

INFOID:000000009011394

SYSTEM DIAGRAM



SYSTEM DESCRIPTION

- When turning ON the AC 120 V outlet main switch with the ignition switch ON, the indicator turns ON and the inverter unit is activated.
- The inverter unit converts power supply voltage to AC 120 V and outputs the converted voltage to the AC 120 V outlet two seconds after the AC 120 V outlet main switch is turned ON.

Fail-safe

INFOID:000000009011395

When a malfunction listed below occurs, the inverter unit turns OFF the AC 120 V outlet main switch indicator and stops the output by operating the fail-safe.

Malfunction item	Fail-safe condition	Fail-safe cancellation condition
Inverter unit is overheated	When the inverter unit is overheated, the output stops to protect the inverter unit.	After the inverter unit temperature is lowered, the AC 120 V outlet main switch ON ⇒ OFF ⇒ ON operation allows normal return.
Inverter unit power supply voltage is 11.5 V or less	When inverter unit input voltage is lowered, the output stops to protect the battery from running out.	Automatic normal return when inverter unit power supply voltage reaches 11.5 V - 16 V.
Inverter unit power supply voltage is 16 V - 18 V	When inverter unit input voltage reaches 16 V - 18 V, the output stops to protect the inverter unit.	Automatic normal return when inverter unit power supply voltage reaches 11.5 V - 16 V.
Inverter unit power supply voltage is 18 V or more	When inverter unit input voltage reaches 18 V or more, the output stops to protect the inverter unit.	After the inverter unit power supply voltage reaches 11.5 V - 16 V, the AC 120 V outlet main switch ON ⇒ OFF ⇒ ON operation allows normal return.
Inverter unit output current is 2.8 A or more	When inverter unit output current reaches 2.8 A or more, the output stops to prevent over current. (e.g. connecting an electric appliance exceeding rated output)	Automatic normal return when inverter output current reaches 2.8 A.
Inverter unit output signal (AC 120 V output signal) is shorted	When inverter unit output signal is shorted, the output stops.	After recovering from inverter unit output signal short, the AC 120 V outlet main switch ON ⇒ OFF ⇒ ON operation allows normal return.

INVERTER UNIT

< ECU DIAGNOSIS INFORMATION >

[AC 120 V OUTLET]

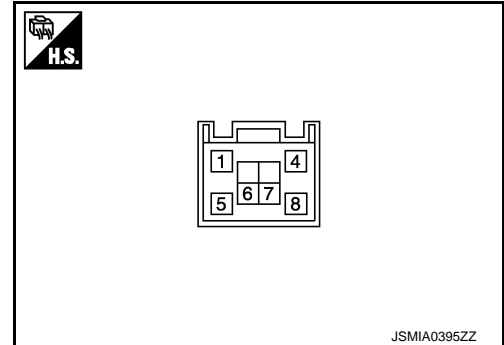
ECU DIAGNOSIS INFORMATION

INVERTER UNIT

Reference Value

INFOID:000000009011396

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
1 (R)	5 (G)	AC 120 V output	Output	Ignition switch OFF	0 V
				When AC 120 V outlet main switch ON (When using circuit tester)	AC 120 V
				When AC 120 V outlet main switch ON (When using oscilloscope)	Reference value AC 120 V
4 (G/R)	Ground	Battery power supply	Input	Ignition switch OFF	Battery power supply
5 (G)	1 (R)	AC 120 V output	Output	Ignition switch OFF	0 V
				When AC 120 V outlet main switch ON (When using circuit tester)	AC 120 V
				When AC 120 V outlet main switch ON (When using oscilloscope)	Reference value AC 120 V

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INVERTER UNIT

< ECU DIAGNOSIS INFORMATION >

[AC 120 V OUTLET]

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
6 (W)	Ground	AC 120 V outlet main switch	Input	Ignition switch OFF	When AC 120 V outlet main switch OFF	0 V
				Ignition switch ON	When AC 120 V outlet main switch ON	12 V
7 (O)		AC 120 V outlet main switch indicator	Output	Ignition switch OFF	When AC 120 V outlet main switch OFF	0 V
				Ignition switch ON	When AC 120 V outlet main switch ON	5.2 V
8 (B)	Ground	—	Ignition switch ON		0 V	

CAUTION:

- To measure AC 120 V output signal, always use the circuit tester or oscilloscope AC range. Never allow the probes to contact each other.
- Because of modified sine wave output of the AC 120 V output signal, voltage cannot be measured accurately without using a circuit tester that can measure true RMS (root mean square).

Fail-safe

INFOID:000000009011397

When a malfunction listed below occurs, the inverter unit turns OFF the AC 120 V outlet main switch indicator and stops the output by operating the fail-safe.

Malfunction item	Fail-safe condition	Fail-safe cancellation condition
Inverter unit is overheated	When the inverter unit is overheated, the output stops to protect the inverter unit.	After the inverter unit temperature is lowered, the AC 120 V outlet main switch ON ⇒ OFF ⇒ ON operation allows normal return.
Inverter unit power supply voltage is 11.5 V or less	When inverter unit input voltage is lowered, the output stops to protect the battery from running out.	Automatic normal return when inverter unit power supply voltage reaches 11.5 V - 16 V.
Inverter unit power supply voltage is 16 V - 18 V	When inverter unit input voltage reaches 16 V - 18 V, the output stops to protect the inverter unit.	Automatic normal return when inverter unit power supply voltage reaches 11.5 V - 16 V.
Inverter unit power supply voltage is 18 V or more	When inverter unit input voltage reaches 18 V or more, the output stops to protect the inverter unit.	After the inverter unit power supply voltage reaches 11.5 V - 16 V, the AC 120 V outlet main switch ON ⇒ OFF ⇒ ON operation allows normal return.
Inverter unit output current is 2.8 A or more	When inverter unit output current reaches 2.8 A or more, the output stops to prevent over current. (e.g. connecting an electric appliance exceeding rated output)	Automatic normal return when inverter output current reaches 2.8 A.
Inverter unit output signal (AC 120 V output signal) is shorted	When inverter unit output signal is shorted, the output stops.	After recovering from inverter unit output signal short, the AC 120 V outlet main switch ON ⇒ OFF ⇒ ON operation allows normal return.

AC 120 V POWER OUTLET

< WIRING DIAGRAM >

[AC 120 V OUTLET]

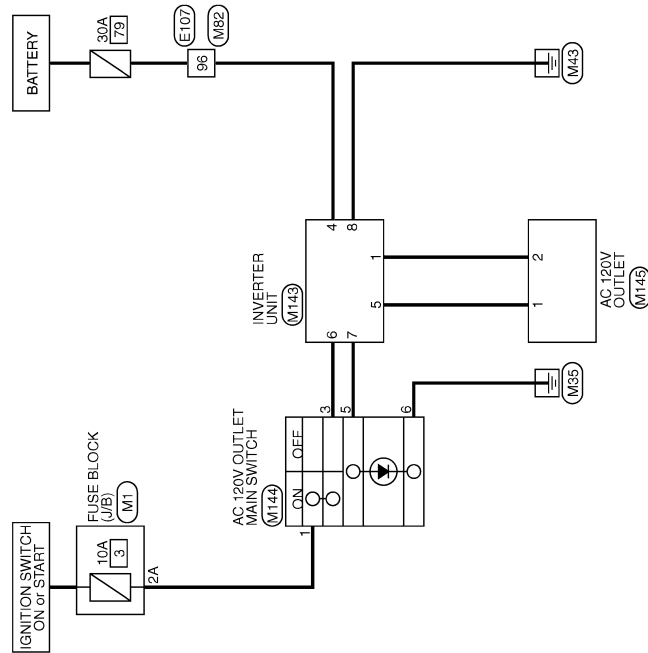
WIRING DIAGRAM

AC 120 V POWER OUTLET

Wiring Diagram

INFOID:000000009011398

AC 120 V POWER OUTLET



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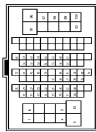
AC 120 V POWER OUTLET

< WIRING DIAGRAM >

[AC 120 V OUTLET]

AC 120 V POWER OUTLET

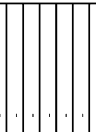
Connector No.	IE107
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
4	V/W	-
5	G/R	-
6	P	-
8	G/S/L	-
10	Y/R	-
11	U/R	-
12	W/G	-
13	BR/Y	-
14	L/G	-
15	BR/W	-
16	BY	-
17	WB	-
18	GR/R	-
20	W/R	-
21	B	-
22	R/L	-
23	G/R	-
24	R/W	-
25	W/L	-
26	R	-
27	L	-
28	G/B	-
35	G	-
36	Y	-
37	R	-
38	G/Y	-
39	O	-
40	W	-
41	R	-
42	B	-
43	G	-
44	S/HIELD	-
46	B	-
47	W	-

AC 120 V POWER OUTLET

Connector No.	IE107
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
48	S/HIELD	-
49	W	-
50	S/HIELD	-
51	Y/R	-
52	GR	-
53	LG/B	-
54	LG/R	-
55	R/G	-
56	BR	-
57	SB	-
60	G	-
61	B	-
62	W	-
63	R	-
64	S/HIELD	-
65	L/Y	-
66	V	-
67	BR/W	-
91	GR	-
85	SB	-
86	GR	-
97	GR/L	-
98	GW	-
99	P	-
100	L	-

AC 120 V POWER OUTLET

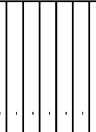
Connector No.	IM82
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
4	V/W	-
5	G/R	-
6	P	-
8	G/S/L	-
10	Y/R	-
11	U/R	-
12	W/G	-
13	BR/Y	-
14	L/G	-
15	BR/W	-
16	BY	-
17	WB	-
18	GR/R	-
20	W/R	-
21	B	-
22	R/L	-
23	G/R	-
24	R/W	-
25	W/L	-
26	R	-
27	L	-
28	B/S/B	-
35	G	-
36	Y	-
37	R	-
38	G/Y	-
39	O	-
40	W	-
41	R	-
42	B	-
43	G	-
44	S/HIELD	-
46	B	-
47	W	-

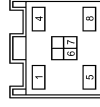
AC 120 V POWER OUTLET

Connector No.	IM143
Connector Name	INVERTER UNIT
Connector Type	IAAF04FB-AHCA



Terminal No.	Color Of Wire	Signal Name [Specification]
48	S/HIELD	-
49	W	-
50	S/HIELD	-
51	Y/R	-
52	GR	-
53	LG/B	-
54	LG/R	-
55	R/G	-
56	B/O	-
57	SB	-
60	G	-
61	B	-
62	W	-
63	R	-
64	S/HIELD	-
65	L/Y	-
66	V	-
67	BR/W	-
91	GR	-
85	SB	-
86	GR	-
97	GR/L	-
98	GW	-
99	P	-
100	L	-

Connector No.	IM143
Connector Name	INVERTER UNIT
Connector Type	IAAF04FB-AHCA



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	AC 120 V OUTPUT
4	G/R	BATTERY POWER SUPPLY
5	G	AC 120 V OUTPUT
6	W	AC 120 V OUTLET MAIN SWITCH
7	O	AC 120 V OUTLET MAIN SWITCH INDICATOR
8	B	GROUND

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AC 120 V POWER OUTLET

< WIRING DIAGRAM >

[AC 120 V OUTLET]

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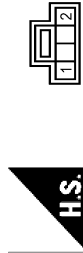
AC 120 V POWER OUTLET

Connector No.	M144
Connector Name	AC 120V OUTLET MAIN SWITCH
Connector Type	TK08FW-1V



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	-
2	B	-
3	W	-
4	LW	-
5	O	-
6	B	-

Connector No.	M145
Connector Name	AC 120V OUTLET
Connector Type	NS04FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	R	-

PWO

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DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[AC 120 V OUTLET]

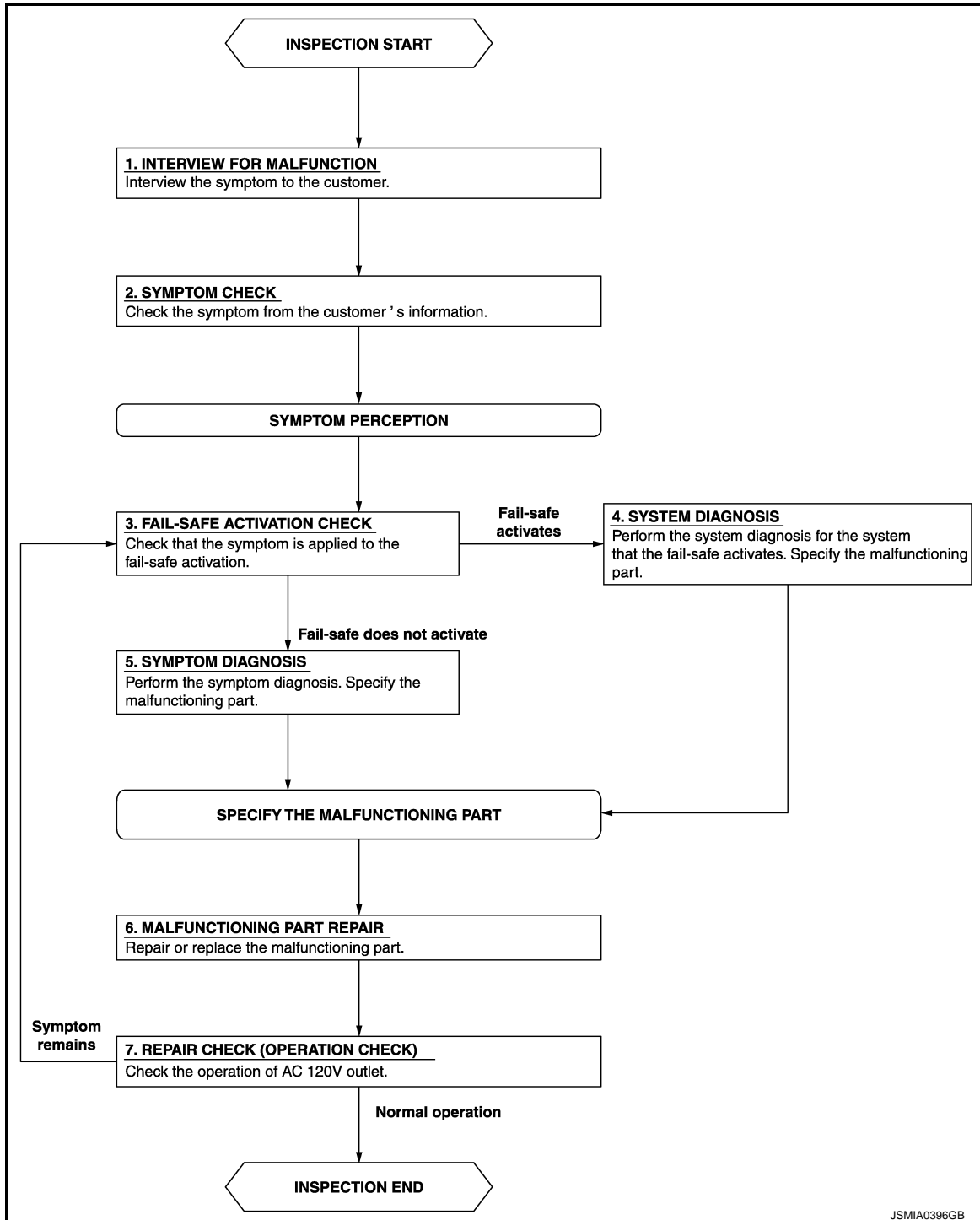
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:000000009011399

OVERALL SEQUENCE



DETAILED FLOW

1. INTERVIEW FOR MALFUNCTION

Interview the symptom to the customer.

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[AC 120 V OUTLET]

>> GO TO 2.

2. SYMPTOM CHECK

Check the symptom from the customer's information.

>> GO TO 3.

3. FAIL-SAFE ACTIVATION CHECK

Check that the symptom is applied to the fail-safe activation.

Does the fail-safe activate?

YES >> GO TO 4.

NO >> GO TO 5.

4. SYSTEM DIAGNOSIS

Perform the system diagnosis for the system that the fail-safe activates. Specify the malfunctioning part.

>> GO TO 6.

5. SYMPTOM DIAGNOSIS

Perform the symptom diagnosis. Specify the malfunctioning part.

>> GO TO 6.

6. MALFUNCTIONING PART REPAIR

Repair or replace the malfunctioning part.

>> GO TO 7.

7. REPAIR CHECK (OPERATION CHECK)

Check the operation of AC 120 V outlet.

Does it operate normally?

YES >> INSPECTION END

NO >> GO TO 3.

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PWO

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AC 120 V OUTLET]

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

INFOID:000000009011400

1. CHECK FUSE

Check that the following fuse is not blown.

Signal name	Fuse No.
Battery power supply	79

Is the fuse fusing?

YES >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

NO >> GO TO 2.

2. CHECK INVERTER UNIT POWER SUPPLY CIRCUIT

Check voltage between inverter unit harness connector and ground.

Terminal		Condition	Voltage (Approx.)
(+)	(-)		
Inverter unit		Ignition switch	Battery voltage
Connector	Terminal		
M143	4		
		OFF	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the inverter unit power supply circuit.

3. CHECK INVERTER UNIT GROUND CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect the inverter unit connector.
3. Check for continuity between inverter unit harness connector and ground.

Inverter unit		Ground	Continuity
Connector	Terminal		
M143	8		Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace the inverter unit ground circuit.

AC 120 V OUTLET MAIN SWITCH POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AC 120 V OUTLET]

AC 120 V OUTLET MAIN SWITCH POWER SUPPLY CIRCUIT

Diagnosis Procedure

INFOID:000000009011401

1. CHECK FUSE

Check that the following fuse is not blown.

Signal name	Fuse No.
Ignition power supply	3

Is the fuse fusing?

YES >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

NO >> GO TO 2.

2. CHECK POWER SUPPLY FOR AC 120 V OUTLET MAIN SWITCH

1. Turn ignition switch ON.
2. Check for voltage between the AC 120 V main switch harness connector and ground.

Terminals		Condition	Voltage (Approx.)	
(+)	(-)			
AC 120 V outlet main switch		Ignition switch		
Connector	Terminal			
M144	1	OFF		0 V
		ON		12 V

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair the AC 120 V main switch power supply circuit.

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AC 120 V OUTLET MAIN SWITCH INPUT SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AC 120 V OUTLET]

AC 120 V OUTLET MAIN SWITCH INPUT SIGNAL CIRCUIT

Diagnosis Procedure

INFOID:000000009011402

1. CHECK HARNESS BETWEEN INVERTER UNIT AND AC 120 V OUTLET MAIN SWITCH

1. Turn ignition switch OFF.
2. Disconnect inverter unit connector and AC 120 V outlet main switch connector.
3. Check for continuity between the inverter unit harness connector and AC 120 V outlet main switch harness connector.

Inverter unit		AC 120 V outlet main switch		Continuity
Connector	Terminal	Connector	Terminal	
M143	6	M144	3	Existed

4. Check for continuity between inverter unit harness connector and ground.

Inverter unit		Ground	Continuity
Connector	Terminal		
M143	6		Not existed

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the harnesses or connectors.

2. CHECK AC 120 V OUTLET MAIN SWITCH INPUT SIGNAL

1. Connect inverter unit connector and AC 120 V outlet main switch connector.
2. Turn ignition switch ON.
3. AC 120 V outlet main switch ON.
4. Check for voltage between the inverter unit harness connector and ground.

Terminals		Condition	Voltage (Approx.)
(+)	(-)		
Inverter unit		AC 120 V outlet main switch	
Connector	Terminal		
M143	6		
	Ground	OFF	0 V
		ON	12 V

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 3.

3. CHECK AC 120 V OUTLET MAIN SWITCH

1. Turn ignition switch OFF.
2. Remove AC 120 V outlet main switch.
3. Check AC 120 V outlet main switch. Refer to [PWO-24. "Component Inspection"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace AC 120 V outlet main switch.

Component Inspection

INFOID:000000009011403

1. CHECK AC 120 V OUTLET MAIN SWITCH

Check continuity of AC 120 V outlet main switch.

AC 120 V OUTLET MAIN SWITCH INPUT SIGNAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AC 120 V OUTLET]

Terminal		Condition	Continuity
1	3	When AC 120 V outlet main switch is ON	Existed
		When AC 120 V outlet main switch is OFF	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace AC 120 V outlet main switch.

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AC 120 V POWER OUTPUT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AC 120 V OUTLET]

AC 120 V POWER OUTPUT CIRCUIT

Diagnosis Procedure

INFOID:000000009011404

1. CHECK HARNESS BETWEEN INVERTER UNIT AND AC 120 V OUTLET

1. Turn ignition switch OFF.
2. Disconnect inverter unit connector and AC 120 V outlet connector.
3. Check for continuity between the inverter unit harness connector and AC 120 V outlet harness connector.

Inverter unit		AC 120 V outlet		Continuity
Connector	Terminal	Connector	Terminal	
M143	5	M145	1	Existed
	1		2	

4. Check for continuity between inverter unit harness connector and ground.

Inverter unit		Ground	Continuity
Connector	Terminal		
M143	5		Not existed
	1		

5. Check for continuity between inverter unit harness connector.

Inverter unit			Continuity
Connector	Terminal		
M143	5	1	Not existed
	1		

Is the inspection result normal?

- YES >> GO TO 2.
 NO >> Repair or replace the harnesses or connectors.

2. CHECK INVERTER UNIT OUTPUT SIGNAL

1. Connect inverter unit connector and AC 120 V outlet connector.
2. Turn ignition switch ON.
3. AC 120 V outlet main switch ON. (AC 120 V outlet main switch indicator ON)
4. Check voltage between inverter unit harness connector.

Terminals				Condition	Voltage (Approx.)
(+)		(-)			
Inverter unit		Inverter unit		AC 120 V outlet main switch	
Connector	Terminal	Connector	Terminal		
M143	5	M143	1	OFF	0 V
				ON	AC 120 V

CAUTION:

- To measure AC 120 V output signal, always use the circuit tester AC range.
- Never allow the probes to contact each other.

Is the inspection result normal?

- YES >> GO TO 3
 NO >> Replace inverter unit.

3. CHECK AC 120 V OUTLET VOLTAGE

1. AC 120 V outlet main switch ON. (AC 120 V outlet main switch indicator ON)
2. Check voltage between AC 120 V outlet.

AC 120 V POWER OUTPUT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AC 120 V OUTLET]

Terminals		Condition	Voltage (Approx.)
(+)	(-)		
AC 120 V outlet		AC 120 V outlet main switch	
Terminal			
1	2	OFF	0 V
		ON	AC 120 V

CAUTION:

- To measure AC 120 V output signal, always use the circuit tester AC range.
- Never allow the probes to contact each other.

Is the inspection result normal?

- YES >> INSPECTION END
NO >> Replace AC 120 V outlet.

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AC 120 V OUTLET MAIN SWITCH INDICATOR CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AC 120 V OUTLET]

AC 120 V OUTLET MAIN SWITCH INDICATOR CIRCUIT

Diagnosis Procedure

INFOID:000000009011405

1. CHECK HARNESS BETWEEN INVERTER UNIT AND AC 120 V OUTLET MAIN SWITCH

1. Turn ignition switch OFF.
2. Disconnect inverter unit connector and AC 120 V outlet main switch connector.
3. Check continuity between inverter unit harness connector and AC 120 V main switch harness connector.

Inverter unit		AC 120 V outlet main switch		Continuity
Connector	Terminal	Connector	Terminal	
M143	7	M144	5	Existed

4. Check continuity between inverter unit harness connector and ground.

Inverter unit		Ground	Continuity
Connector	Terminal		
M143	7		Not existed

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the harnesses or connectors.

2. CHECK AC 120 V OUTLET MAIN SWITCH GROUND CIRCUIT

Check continuity between AC 120 V outlet main switch harness connector and ground.

AC 120 V outlet main switch		Ground	Continuity
Connector	Terminal		
M144	6		Existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair the harnesses or connectors.

3. CHECK AC 120 V OUTLET MAIN SWITCH INDICATOR OUTPUT SIGNAL

1. Connect AC 120 V outlet main switch connector and inverter unit connector.
2. Turn ignition switch ON.
3. AC 120 V outlet main switch ON. (AC 120 V output is normal)
4. Check for voltage between the inverter unit harness connector and ground.

Terminals		Condition	Voltage (Approx.)
(+)	(-)		
Inverter unit		AC 120 V outlet main switch	
Connector	Terminal		
M143	7		
		ON	5.2 V

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace inverter unit.

4. CHECK AC 120 V OUTLET MAIN SWITCH INDICATOR

1. AC 120 V outlet main switch ON. (AC 120 V output is normal)
2. Check that AC 120 V outlet main switch indicator is illuminated.

Is the inspection result normal?

AC 120 V OUTLET MAIN SWITCH INDICATOR CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AC 120 V OUTLET]

YES >> INSPECTION END
NO >> Replace AC 120 V outlet main switch.

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PWO

SYMPTOM DIAGNOSIS

NO OUTPUT FROM AC 120 V OUTLET

Diagnosis Procedure

INFOID:000000009011406

1. CHECK FAIL-SAFE ACTIVATION

Check if the symptom is caused by a fail-safe operation. Refer to [PWO-16, "Fail-safe"](#).

Is fail-safe operating?

- YES >> Repair the part causing fail-safe operation.
- NO >> GO TO 2.

2. CHECK INVERTER UNIT POWER SUPPLY CIRCUIT

Check inverter unit power supply circuit. Refer to [PWO-22, "Diagnosis Procedure"](#).

Is the inspection result normal?

- YES >> GO TO 3.
- NO >> Repair or replace the malfunctioning parts.

3. CHECK AC 120 V OUTLET MAIN SWITCH POWER SUPPLY CIRCUIT

Check AC 120 V outlet main switch power supply circuit. Refer to [PWO-23, "Diagnosis Procedure"](#).

Is the inspection result normal?

- YES >> GO TO 4.
- NO >> Repair or replace the malfunctioning parts.

4. CHECK AC 120 V OUTLET MAIN SWITCH INPUT SIGNAL CIRCUIT

Check AC 120 V outlet main switch input signal circuit. Refer to [PWO-24, "Diagnosis Procedure"](#).

Is the inspection result normal?

- YES >> GO TO 5.
- NO >> Repair or replace the malfunctioning parts.

5. CHECK INVERTER UNIT POWER OUTPUT CIRCUIT

Check inverter unit power output circuit. Refer to [PWO-26, "Diagnosis Procedure"](#).

Is the inspection result normal?

- YES >> Refer to [GI-43, "Intermittent Incident"](#).
- NO >> Repair or replace the malfunctioning parts.

AC 120 V OUTLET MAIN SWITCH INDICATOR DOES NOT TURN ON

< SYMPTOM DIAGNOSIS >

[AC 120 V OUTLET]

AC 120 V OUTLET MAIN SWITCH INDICATOR DOES NOT TURN ON

Diagnosis Procedure

INFOID:000000009011407

1.CHECK FAIL-SAFE ACTIVATION

Check if the symptom is caused by a fail-safe operation. Refer to [PWO-16, "Fail-safe"](#).

Is fail-safe operating?

- YES >> Repair the part causing fail-safe operation.
- NO >> GO TO 2.

2.CHECK INVERTER UNIT POWER SUPPLY CIRCUIT

Check inverter unit power supply circuit. Refer to [PWO-22, "Diagnosis Procedure"](#).

Is the inspection result normal?

- YES >> GO TO 3.
- NO >> Repair or replace the malfunctioning parts.

3.CHECK AC 120 V OUTLET MAIN SWITCH POWER SUPPLY CIRCUIT

Check AC 120 V outlet main switch power supply circuit. Refer to [PWO-23, "Diagnosis Procedure"](#).

Is the inspection result normal?

- YES >> GO TO 4.
- NO >> Repair or replace the malfunctioning parts.

4.CHECK AC 120 V OUTLET MAIN SWITCH INPUT SIGNAL CIRCUIT

Check AC 120 V outlet main switch input signal circuit. Refer to [PWO-24, "Diagnosis Procedure"](#).

Is the inspection result normal?

- YES >> GO TO 5.
- NO >> Repair or replace the malfunctioning parts.

5.CHECK AC 120 V OUTLET MAIN SWITCH INDICATOR CIRCUIT

Check AC 120 V outlet main switch indicator circuit. Refer to [PWO-28, "Diagnosis Procedure"](#).

Is the inspection result normal?

- YES >> Refer to [GI-43, "Intermittent Incident"](#).
- NO >> Repair or replace the malfunctioning parts.

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PWO

NORMAL OPERATING CONDITION

Description

INFOID:000000009011408

Because of modified sine wave output, the AC 120 V outlet may not operate normally for electric appliance of which electric power consumption is 150 W or less.

- Electric appliances requiring a large amount of electric power consumption at startup (e.g. CRT-based TV, power tool)
- Measuring instruments for data requiring accuracy (e.g. medical equipment, measuring instrument)
- Microprocessor-controlled appliances (e.g. microprocessor-controlled blanket)

Noise may be caused in radio or TV, depending on an electric appliance.

REMOVAL AND INSTALLATION

INVERTER UNIT

Removal and Installation

INFOID:000000009011409

REMOVAL

1. Remove console body assembly. Refer to [JP-23. "Exploded View"](#).
2. Disconnect inverter unit connector.
3. Remove mounting bolt.
4. Remove inverter unit.

INSTALLATION

Install in the reverse order of removal.

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AC 120V OUTLET MAIN SW

Removal and Installation

INFOID:000000009011410

REMOVAL

1. Remove console body assembly. Refer to [IP-23. "Exploded View"](#).
2. Disengage pawl. Then remove AC 120 V outlet main switch from center console assembly.

INSTALLATION

Install in the reverse order of removal.

AC 120 V OUTLET

< REMOVAL AND INSTALLATION >

[AC 120 V OUTLET]

AC 120 V OUTLET

Removal and Installation

INFOID:000000009011411

REMOVAL

1. Remove console rear finisher. Refer to [IP-23. "Exploded View"](#).
2. Push the pawl from the back of the console rear finisher to remove the AC 120 V outlet.

INSTALLATION

Install in the reverse order of removal.

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SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

[AC 120 V OUTLET]

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

AC 120 V Power Outlet

INFOID:000000009011412

Rated voltage	AC 120 V
Maximum electric capacity	150 W or less (Total)
Maximum current	1.25 A or less (Total)