

SECTION **PWO**
POWER OUTLET

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PRECAUTION

PRECAUTIONS

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

INFOID:000000006991834

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. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. 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.

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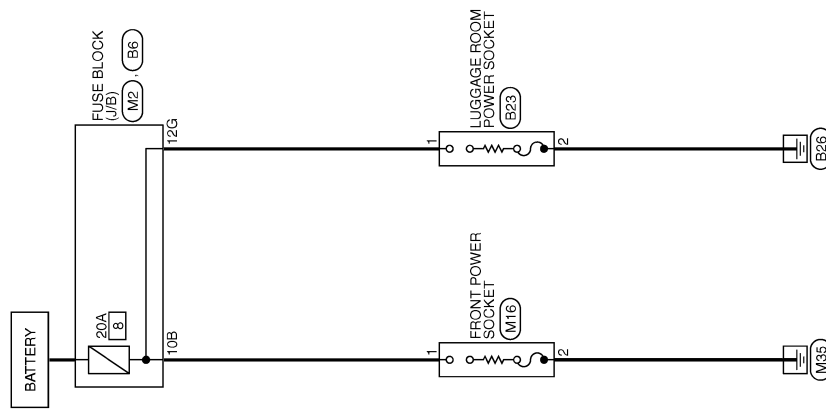
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WIRING DIAGRAM

POWER SOCKET

Wiring Diagram

INFOID:000000006991448



POWER SOCKET

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POWER SOCKET

< WIRING DIAGRAM >

[POWER SOCKET]

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POWER SOCKET

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| Connector No. | B8 |
| Connector Name | FUSE BLOCK (J/B) |
| Connector Type | NS12FBR-CS |



| | | | | |
|-----|----|----|----|----|
| 5G | 4G | 3G | 2G | 1G |
| 10G | 9G | 8G | 7G | 6G |

| Terminal No. | Color of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 2G | W | - |
| 4G | SB | - |
| 5G | L | - |
| 10G | Y | - |
| 12G | O | - |



| | |
|---|---|
| 2 | 1 |
|---|---|

| | |
|----------------|---------------------------|
| Connector No. | B23 |
| Connector Name | LUGGAGE ROOM POWER SOCKET |
| Connector Type | P02FE-Z |



| Terminal No. | Color of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1 | O | - |
| 2 | B/Y | - |

| | |
|----------------|------------------|
| Connector No. | M2 |
| Connector Name | FUSE BLOCK (J/B) |
| Connector Type | NS10FV-CS |



| | | | |
|-----|----|----|----|
| 4B | 3B | 2B | 1B |
| 10B | 9B | 8B | 7B |
| 6B | 5B | 4B | 3B |

| Terminal No. | Color of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 3B | V | - |
| 4B | W | - |
| 5B | BR | - |
| 6B | O | - |
| 8B | R/L | - |
| 9B | GR | - |
| 10B | R | - |



| | |
|---|---|
| 2 | 1 |
|---|---|

| | |
|----------------|--------------------|
| Connector No. | M16 |
| Connector Name | FRONT POWER SOCKET |
| Connector Type | F02FB-Z |

| Terminal No. | Color of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1 | R | - |
| 2 | B/Y | - |

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POWER SOCKET

< REMOVAL AND INSTALLATION >

[POWER SOCKET]

REMOVAL AND INSTALLATION

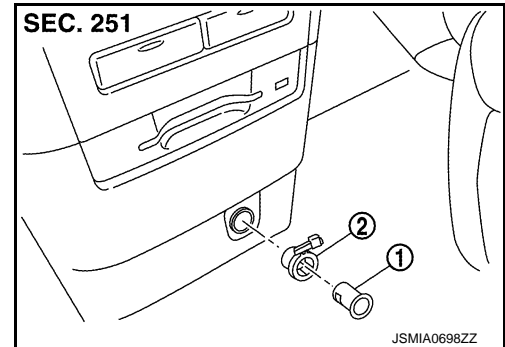
POWER SOCKET

FRONT POWER SOCKET

FRONT POWER SOCKET : Exploded View

INFOID:000000006991449

- 1 : Inner socket
- 2 : Ring

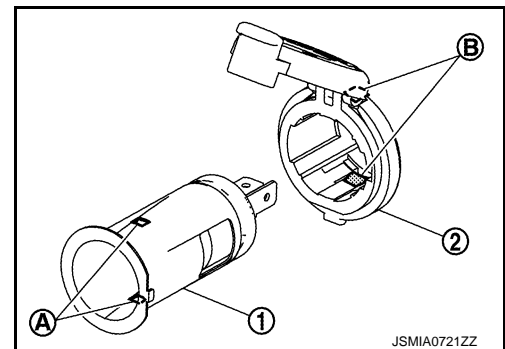


FRONT POWER SOCKET : Removal and Installation


INFOID:000000006991450

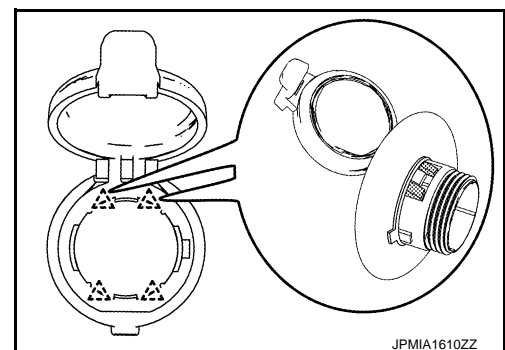
REMOVAL

1. Remove instrument lower cover center. Refer to [JP-13. "Removal and Installation"](#).
2. Pull out inner socket (1) by pushing the pawl (B) of the ring (2) from the inner socket hole (square) (A).



3. Press the ring pawl from the back of the instrument lower cover center to remove the ring.

 : Pawl



INSTALLATION

Note the following, and install in the reverse order of removal.

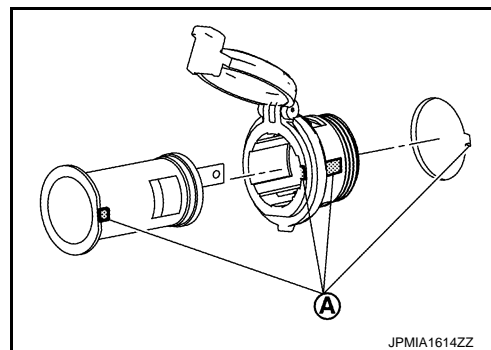
POWER SOCKET

< REMOVAL AND INSTALLATION >

[POWER SOCKET]

Align the cut outs of inner socket, ring and instrument lower cover center.

A : Cut out



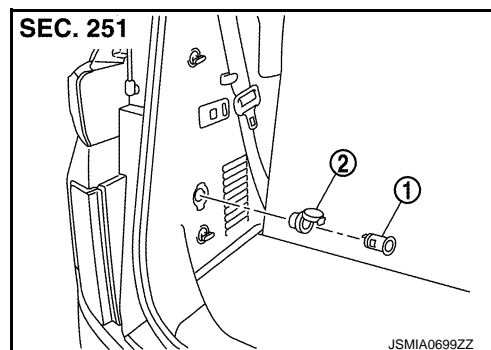
LUGGAGE ROOM POWER SOCKET

LUGGAGE ROOM POWER SOCKET : Exploded View

INFOID:0000000006991451

1 : Inner socket

2 : Ring

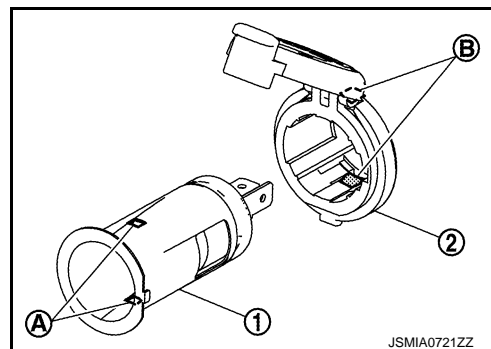


LUGGAGE ROOM POWER SOCKET : Removal and Installation


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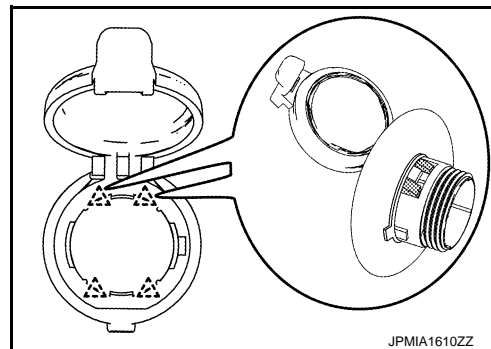
REMOVAL

1. Remove clips on the rear side of the luggage side lower finisher (LH) to obtain space for work. Refer to [INT-42, "LUGGAGE SIDE LOWER FINISHER : Removal and Installation"](#).
2. Disconnect power socket connector.
3. Pull out inner socket (1) by pushing the pawl (B) of the ring (2) from the inner socket hole (square) (A).



4. Press the ring pawl from the back of the luggage side lower finisher (LH) to remove the ring.

 : Pawl



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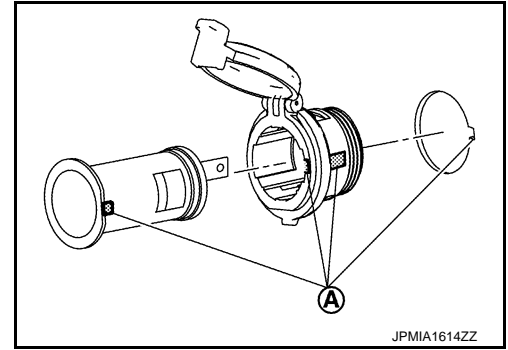
POWER SOCKET

< REMOVAL AND INSTALLATION >

[POWER SOCKET]

Note the following, and install in the reverse order of removal.
Align the cut outs of inner socket, ring and luggage side lower finisher (LH).

A : Cut out



SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

[POWER SOCKET]

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Power Socket

INFOID:000000006991453

| | |
|---------------------------|-----------------------|
| Rated voltage | DC 12 V |
| Maximum electric capacity | 120 W or less (Total) |
| Maximum current | 10 A or less (Total) |

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PRECAUTION

PRECAUTIONS

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

INFOID:000000007014030

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. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

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- 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.

COMPONENT PARTS

< SYSTEM DESCRIPTION >

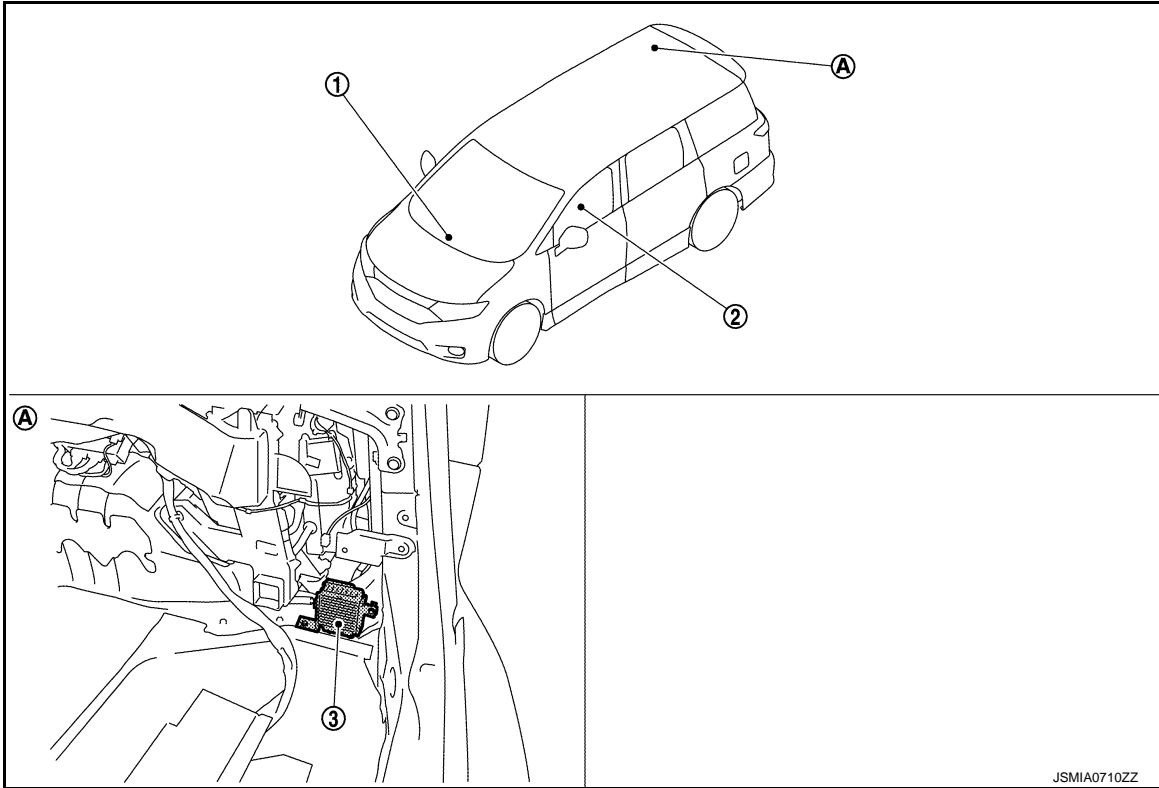
[AC 120 V OUTLET]

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:000000007014031



- A. Luggage room finisher RH remove condition

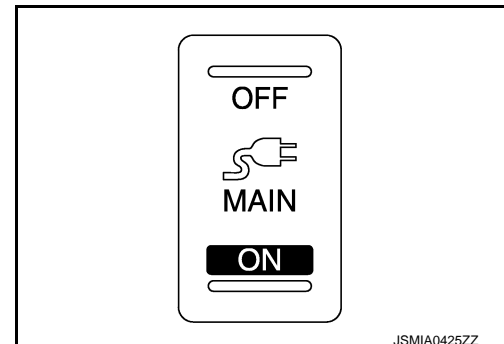
COMPONENT PARTS DESCRIPTION

| No. | Component | Function |
|-----|-----------------------------|---|
| 1. | AC 120 V outlet main switch | PWO-11, "AC 120 V Outlet Main Switch" |
| 2. | AC 120 V outlet | PWO-12, "AC 120 V Outlet" |
| 3. | Inverter unit | PWO-12, "Inverter Unit" |

AC 120 V Outlet Main Switch

INFOID:000000007014034

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



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COMPONENT PARTS

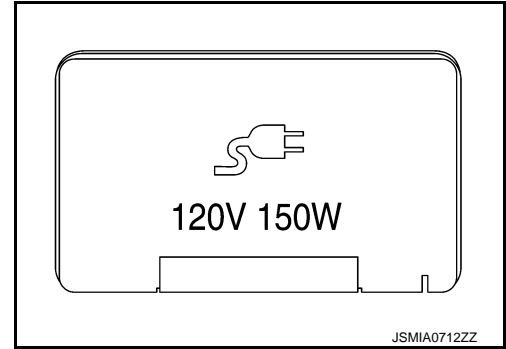
< SYSTEM DESCRIPTION >

[AC 120 V OUTLET]

AC 120 V Outlet

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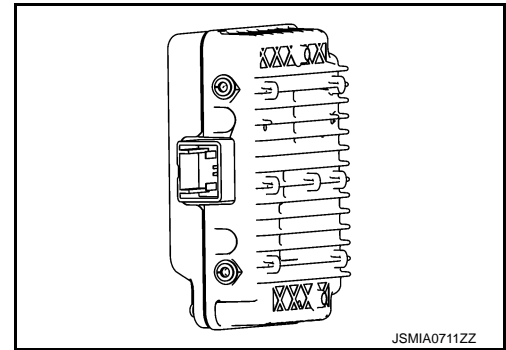
The AC 120 V outlet allows using AC 120 V converted in the inverter unit as an outlet.



Inverter Unit

INFOID:000000007014033

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



SYSTEM

< SYSTEM DESCRIPTION >

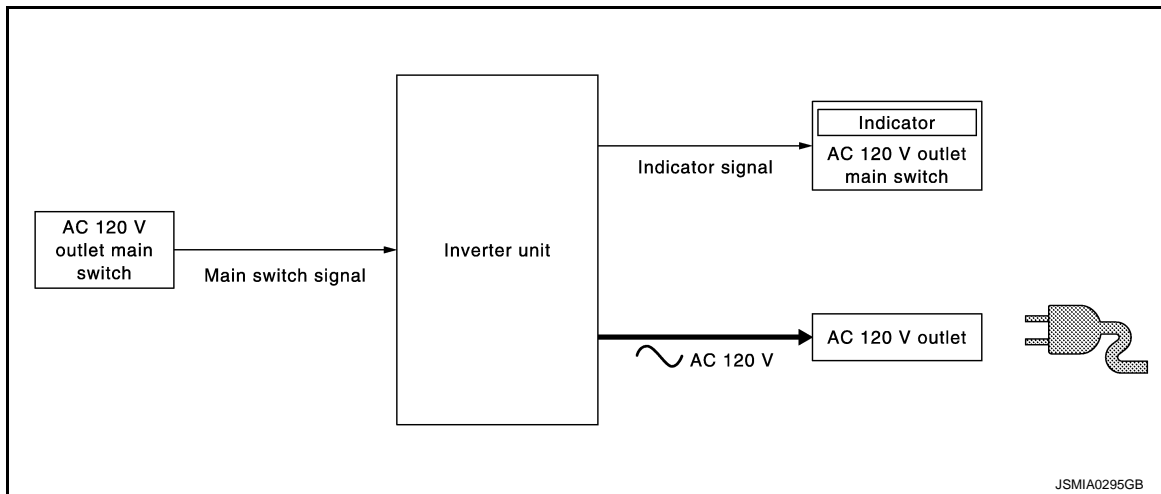
[AC 120 V OUTLET]

SYSTEM

System Description

INFOID:000000007014036

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.

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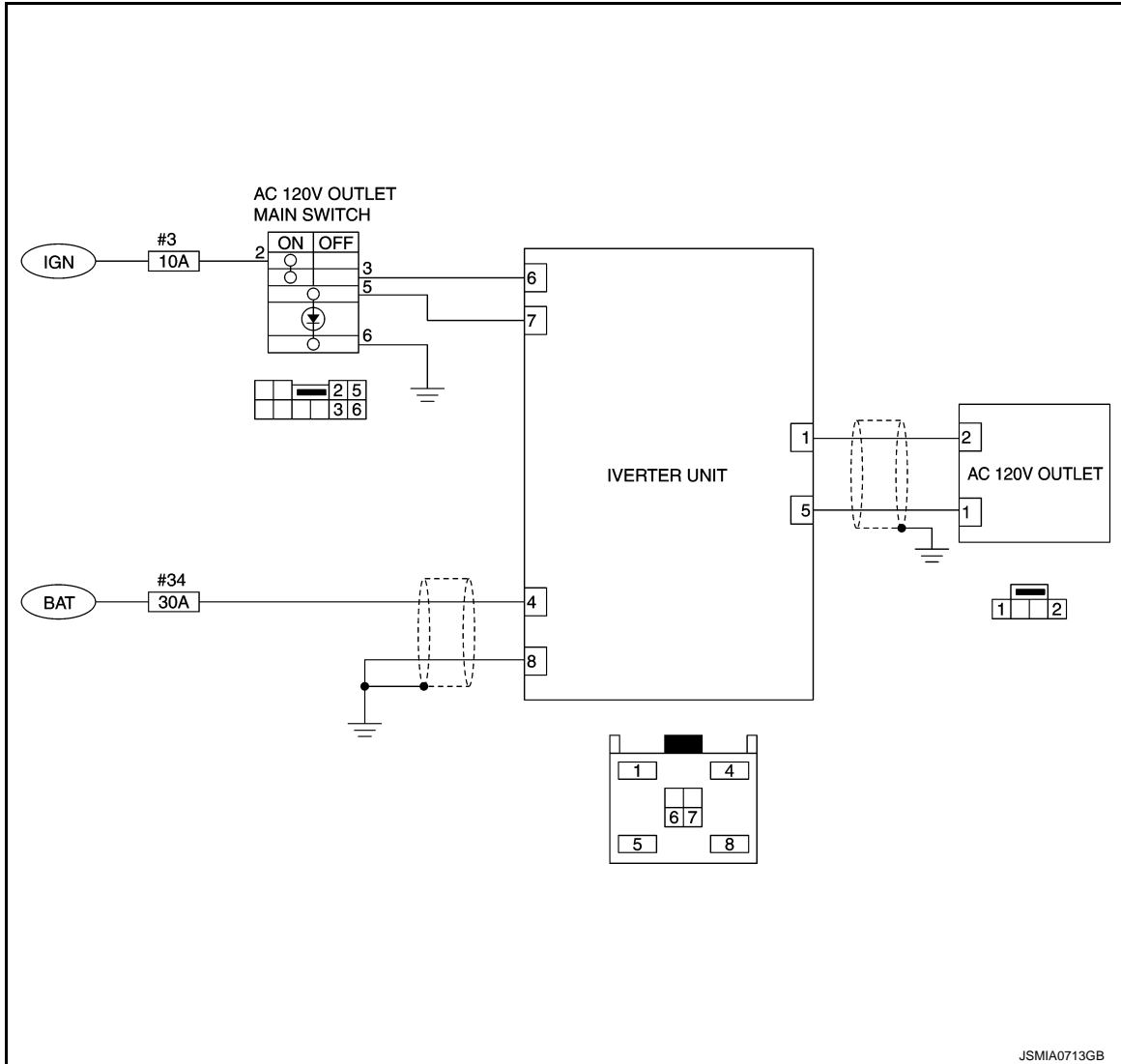
SYSTEM

< SYSTEM DESCRIPTION >

[AC 120 V OUTLET]

Circuit Diagram

INFOID:000000007093980



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Fail-safe

INFOID:000000007014037

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 120V outlet main switch ON ⇒ OFF ⇒ ON operation allows normal return. |

SYSTEM

< SYSTEM DESCRIPTION >

[AC 120 V OUTLET]

| Malfunction item | Fail-safe condition | Fail-safe cancellation condition |
|---|---|--|
| 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. |

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INVERTER UNIT

< ECU DIAGNOSIS INFORMATION >

[AC 120 V OUTLET]

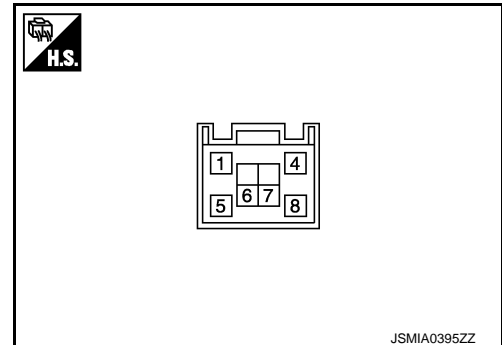
ECU DIAGNOSIS INFORMATION

INVERTER UNIT

Reference Value

INFOID:000000007014038

TERMINAL LAYOUT



PHYSICAL VALUES

| Terminal No. (Wire color) | | Description | | Condition | Standard value | Value (Approx.) |
|------------------------------|------------|----------------------|------------------|--|----------------|---|
| + | - | Signal name | Input/ Output | | | |
| 1 (B/W) | 5 (L) | AC 120 V output | Output | Ignition switch OFF | — | 0 V |
| | | | | Ignition switch ON | 108 – 132 V | AC 120 V |
| | | | | When AC 120 V outlet main switch ON (When using oscilloscope) | | <p>Reference value</p> <p style="text-align: right;">RMS 120V</p> <p style="text-align: right;">JSMIA0397GB</p> <p style="text-align: center;">AC 120 V</p> |
| 4 (W) | Ground | Battery power supply | Input | Ignition switch OFF | 11.5 – 16 V | Battery power supply |
| 5 (L) | 1 (B/W) | AC 120 V output | Output | Ignition switch OFF | — | 0 V |
| | | | | Ignition switch ON | 108 – 132 V | AC 120 V |
| | | | | When AC 120 V outlet main switch ON (When using oscilloscope) | | <p>Reference value</p> <p style="text-align: right;">RMS 120V</p> <p style="text-align: right;">JSMIA0397GB</p> <p style="text-align: center;">AC 120 V</p> |

INVERTER UNIT

< ECU DIAGNOSIS INFORMATION >

[AC 120 V OUTLET]

| Terminal No. (Wire color) | | Description | | Condition | Standard value | Value (Approx.) | |
|------------------------------|------------|---|------------------|--------------------------|---|--------------------|-------|
| + | - | Signal name | Input/ Output | | | | |
| 6 (P) | | AC 120 V outlet main switch | Input | Ignition switch ON | When AC 120 V outlet main switch OFF | — | 0 V |
| | | | | | When AC 120 V outlet main switch ON | — | 12 V |
| 7 (BR) | Grou nd | AC 120 V outlet main switch indi- cator | Output | Ignition switch ON | When AC 120 V outlet main switch OFF | — | 0 V |
| | | | | | 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:000000007014039

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 overheat- ed | 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 120V 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. |

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AC 120 V POWER OUTLET

< WIRING DIAGRAM >

[AC 120 V OUTLET]

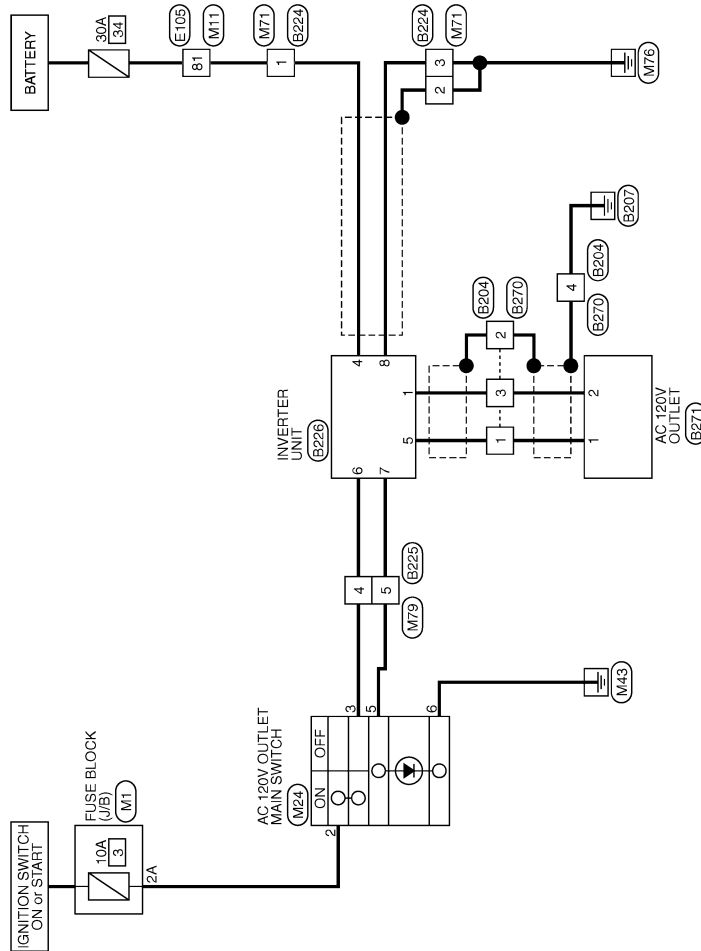
WIRING DIAGRAM

AC 120 V POWER OUTLET

Wiring Diagram

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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. | B204 |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS04MW-CS |



| Terminal No. | Color of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1 | B | |
| 2 | B/W | |
| 3 | SHIELD | |
| 4 | L | |

| | |
|----------------|--------------|
| Connector No. | B224 |
| Connector Name | WIRE TO WIRE |
| Connector Type | M03MW-GY-LC |



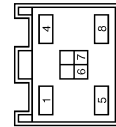
| Terminal No. | Color of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1 | W | |
| 2 | B | |
| 3 | SHIELD | |

| | |
|----------------|--------------|
| Connector No. | B225 |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH10MW-NH |



| Terminal No. | Color of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1 | SHIELD | |
| 2 | W | |
| 3 | B | |
| 4 | P | |
| 5 | BR | |
| 9 | L | |
| 10 | P | |
| 11 | SB | |
| 12 | W | |
| 13 | Y | |
| 14 | GR | |
| 15 | LG | |
| 16 | O | |

| | |
|----------------|---------------|
| Connector No. | B226 |
| Connector Name | INVERTER UNIT |
| Connector Type | A4F04FB-AHCA |



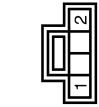
| Terminal No. | Color of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1 | B/W | AC 120 V OUTPUT |
| 4 | W | BAT |
| 5 | L | AC 120 V OUTPUT |
| 6 | P | MAIN SW SIGNAL |
| 7 | BR | MAIN SW INDICATOR |
| 8 | B | GRD |

| | |
|----------------|--------------|
| Connector No. | B270 |
| Connector Name | WIRE TO WIRE |
| Connector Type | NS04FW-CS |



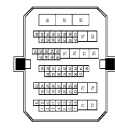
| Terminal No. | Color of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1 | GR | |
| 2 | Y | |
| 3 | SHIELD | |
| 4 | BR | |

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| Connector No. | B271 |
| Connector Name | AC 120V OUTLET |
| Connector Type | NS04FW-CS |



| Terminal No. | Color of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1 | BR | |
| 2 | Y | |

| | |
|----------------|----------------|
| Connector No. | E105 |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH10MW-CS10-M3 |



| Terminal No. | Color of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 6 | LG | |
| 7 | R | |
| 8 | GR | |
| 9 | SB | |
| 10 | BR | |
| 11 | Y | |
| 12 | O | |
| 13 | W | |
| 14 | L | |
| 15 | P | |
| 31 | GR | |
| 32 | R | |

| Terminal No. | Color of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 33 | W | |
| 37 | BR | |
| 38 | G | |
| 39 | Y | |
| 40 | P | |
| 41 | L | |
| 42 | LG | |
| 43 | O | |
| 45 | GR | |
| 46 | SB | |
| 47 | V | |
| 49 | L | |
| 51 | BR | |
| 52 | G | |
| 53 | B | |
| 54 | O | |
| 55 | Y | |
| 56 | SHIELD | |
| 61 | P | |
| 62 | G | |
| 63 | W/L | |
| 64 | L/O | |
| 66 | W | |
| 67 | Y | |
| 69 | SB | |
| 70 | LG | |
| 71 | R | |
| 72 | L | |
| 73 | GR | |
| 74 | Y | |
| 75 | SB | |
| 76 | Y | |
| 77 | G | |
| 78 | O | |
| 80 | R | |
| 81 | L | |
| 82 | LG | |
| 83 | R | |

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PWO

AC 120 V POWER OUTLET

< WIRING DIAGRAM >

[AC 120 V OUTLET]

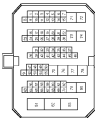
AC 120 V POWER OUTLET

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|----------------|------------------|
| Connector No. | M1 |
| Connector Name | FUSE BLOCK (J/B) |
| Connector Type | MS06FW-MZ |



| Terminal No. | Color of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1A | O | |
| 2A | G | |
| 3A | L | |
| 4A | GR | |
| 5A | V | |
| 7A | GR | |
| 8A | L | |

| | |
|----------------|----------------|
| Connector No. | M11 |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH70FW-CS10-M3 |



| Terminal No. | Color of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 6 | O | |
| 7 | G | |
| 8 | G | |
| 9 | B | |
| 10 | R | |
| 11 | W | |
| 12 | LG | |
| 13 | Y | |
| 14 | L | |
| 15 | P | |
| 31 | R | |
| 32 | V | |
| 33 | Y | |
| 37 | BR | |
| 38 | BR | |

| | | |
|----|--------|--|
| 39 | Y | |
| 40 | P | |
| 41 | L | |
| 42 | G | |
| 43 | W | |
| 45 | LG | |
| 46 | V | |
| 47 | LG | |
| 49 | G | |
| 51 | SB | |
| 52 | GR | |
| 53 | B | |
| 54 | R | |
| 55 | L | |
| 56 | SHIELD | |
| 61 | BR | |
| 62 | LG | |
| 63 | W/L | |
| 64 | L/O | |
| 66 | O | |
| 67 | SB | |
| 69 | Y | |
| 70 | R | |
| 71 | R | |
| 72 | L | |
| 73 | R | |
| 74 | Y | |
| 75 | G | |
| 76 | V | |
| 77 | P | |
| 78 | W | |
| 80 | Y | |
| 81 | W | |
| 82 | L | |
| 83 | R | |

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| Connector No. | M24 |
| Connector Name | AC 120V OUTLET MAIN SWITCH |
| Connector Type | TK10FW |



| Terminal No. | Color of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 2 | G | |

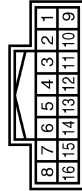
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| 3 | P | |
| 5 | BR | |
| 6 | B/R | |
| 7 | R/L | |
| 8 | B/R | |

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| Connector No. | M71 |
| Connector Name | WIRE TO WIRE |
| Connector Type | MS03FW-GY-LC |



| Terminal No. | Color of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1 | W | |
| 2 | B | |
| 3 | SHIELD | |

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| Connector No. | M79 |
| Connector Name | WIRE TO WIRE |
| Connector Type | TH10FW-AH |



| Terminal No. | Color of Wire | Signal Name [Specification] |
|--------------|---------------|-----------------------------|
| 1 | SHIELD | |
| 2 | W | |
| 3 | B | |
| 4 | P | |
| 5 | BR | |
| 9 | L | |
| 10 | P | |
| 11 | SB | |
| 12 | R | |
| 13 | V | |
| 14 | L | |
| 15 | G | |

| | | |
|----|----|--|
| 16 | GR | |
|----|----|--|

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[AC 120 V OUTLET]

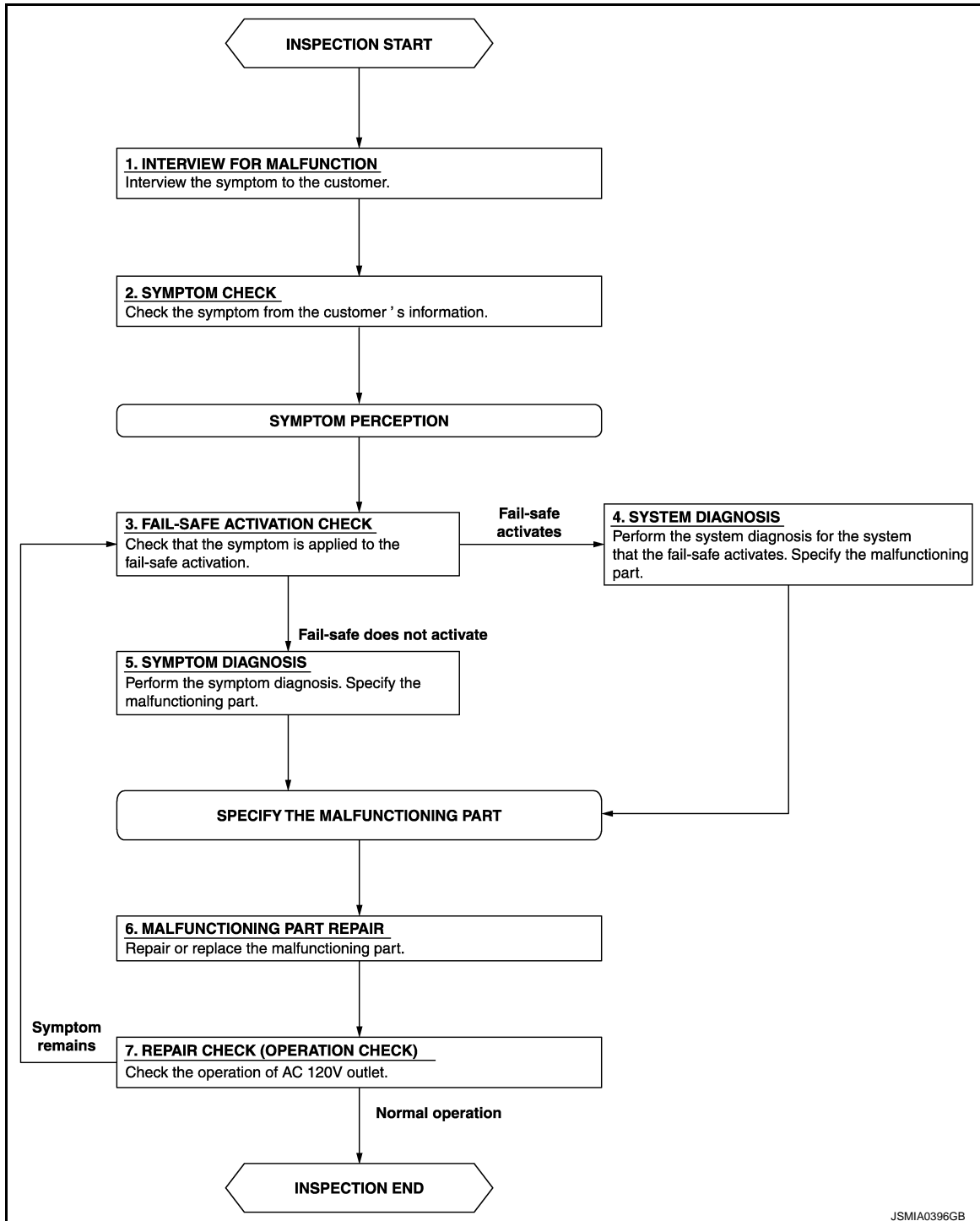
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:000000007014041

OVERALL SEQUENCE



DETAILED FLOW

1. INTERVIEW FOR MALFUNCTION

Interview the symptom to the customer.

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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.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AC 120 V OUTLET]

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

INFOID:000000007014042

1. CHECK FUSE

Check that the following fuse is not blown.

| Signal name | Fuse No. |
|----------------------|----------|
| Battery power supply | 34 |

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 | Standard value | Voltage (Approx.) |
|---------------|----------|-----------------|----------------|-------------------|
| (+) | (-) | | | |
| Inverter unit | | Ignition switch | 11.5 – 16 V | Battery voltage |
| Connector | Terminal | | | |
| B226 | 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 | | |
| B226 | 8 | | Existed |

Is the inspection result normal?

YES >> INSPECTION END

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

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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:000000007014043

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 | 0 V |
| Connector | Terminal | | |
| M24 | 2 | OFF | |
| | | ON | Battery voltage |

Is the inspection result normal?

YES >> INSPECTION END

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

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:000000007014044

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 | |
| B226 | 6 | M24 | 3 | Existed |

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

| Inverter unit | | Ground | Continuity |
|---------------|----------|--------|-------------|
| Connector | Terminal | | |
| B226 | 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 | | |
| B226 | 6 | | |
| | | 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-25. "Component Inspection"](#).

Is the inspection result normal?

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

Component Inspection

INFOID:000000007014045

1. CHECK AC 120 V OUTLET MAIN SWITCH

Check continuity of AC 120 V outlet main switch.

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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.

AC 120 V POWER OUTPUT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AC 120 V OUTLET]

AC 120 V POWER OUTPUT CIRCUIT

Diagnosis Procedure

INFOID:000000007014046

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 | |
| B226 | 5 | B271 | 1 | Existed |
| | 1 | | 2 | |

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

| Inverter unit | | Ground | Continuity |
|---------------|----------|--------|-------------|
| Connector | Terminal | | |
| B226 | 5 | | Not existed |
| | 1 | | |

5. Check for continuity between inverter unit harness connector.

| Inverter unit | | | Continuity |
|---------------|----------|---|-------------|
| Connector | Terminal | | |
| B226 | 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 | Standard value | Voltage (Approx.) |
|---------------|----------|---------------|----------|-----------------------------|----------------|-------------------|
| (+) | | (-) | | | | |
| Inverter unit | | Inverter unit | | AC 120 V outlet main switch | | |
| Connector | Terminal | Connector | Terminal | | | |
| B226 | 5 | B226 | 1 | OFF | Approx. 0 V | 0 V |
| | | | | ON | AC 108 – 132 V | 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.

PWO

AC 120 V POWER OUTPUT CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[AC 120 V OUTLET]

| Terminals | | Condition | Standard value | Voltage (Approx.) |
|-----------------|-----|-----------------------------|----------------|-------------------|
| (+) | (-) | | | |
| AC 120 V outlet | | AC 120 V outlet main switch | | |
| Terminal | | | | |
| 1 | 2 | OFF | Approx. 0 V | 0 V |
| | | ON | AC 108 – 132 V | 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.

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:000000007014047

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 | |
| B226 | 7 | M24 | 5 | Existed |

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

| Inverter unit | | Ground | Continuity |
|---------------|----------|--------|-------------|
| Connector | Terminal | | |
| B226 | 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 | | |
| M24 | 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 | | |
| B226 | 7 | | |
| | | OFF | 0 V |
| | | 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?

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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.

NO OUTPUT FROM AC 120 V OUTLET

< SYMPTOM DIAGNOSIS >

[AC 120 V OUTLET]

SYMPTOM DIAGNOSIS

NO OUTPUT FROM AC 120 V OUTLET

Diagnosis Procedure

INFOID:000000007014048

1. CHECK FAIL-SAFE ACTIVATION

Check if the symptom is caused by a fail-safe operation. Refer to [PWO-17, "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-23, "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-24, "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-25, "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-27, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> Refer to [GI-42, "Intermittent Incident"](#).

NO >> Repair or replace the malfunctioning parts.

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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:000000007014049

1. CHECK FAIL-SAFE ACTIVATION

Check if the symptom is caused by a fail-safe operation. Refer to [PWO-17, "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-23, "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-24, "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-25, "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-29, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> Refer to [GI-42, "Intermittent Incident"](#).

NO >> Repair or replace the malfunctioning parts.

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[AC 120 V OUTLET]

NORMAL OPERATING CONDITION

Description

INFOID:000000007014050

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.

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REMOVAL AND INSTALLATION

INVERTER UNIT

Removal and Installation

INFOID:000000007014051

REMOVAL

1. Remove luggage side lower finisher (RH). Refer to [INT-42, "LUGGAGE SIDE LOWER FINISHER : Removal and Installation"](#).
2. Disconnect inverter unit connector.
3. Remove mounting bolt.
4. Remove inverter unit.

INSTALLATION

Install in the reverse order of removal.

AC 120V OUTLET MAIN SW

< REMOVAL AND INSTALLATION >

[AC 120 V OUTLET]

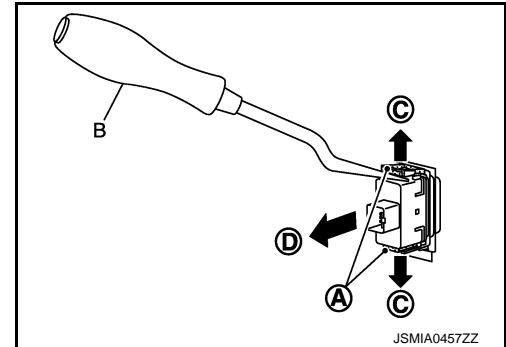
AC 120V OUTLET MAIN SW

Removal and Installation

INFOID:000000007014052

REMOVAL

1. Remove instrument lower panel center. Refer to [IP-13. "Removal and Installation"](#).
2. Insert remover tool (B) into pawl (A) of instrument lower panel center and press the pawl toward direction (C) to release the pawl.
3. Remove AC 120 V main switch from instrument lower panel center in direction (D).



INSTALLATION

Install in the reverse order of removal.

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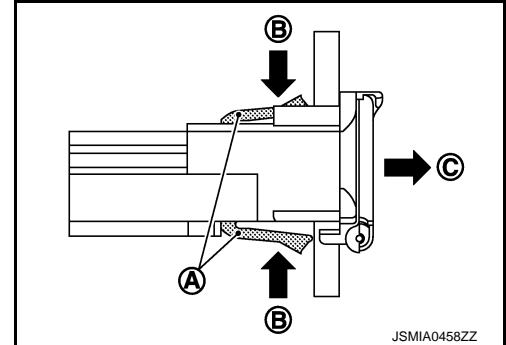
AC 120 V OUTLET

Removal and Installation

INFOID:000000007014053

REMOVAL

1. Remove center console upper finisher. Refer to [IP-26. "Removal and Installation"](#).
2. Press pawl (A) in direction (B) from the back of center console upper finisher to remove AC 120 V outlet in direction (C).



INSTALLATION

Install in the reverse order of removal.

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:000000007014054

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

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