

SECTION **VTL** VENTILATION SYSTEM

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SWITCHES AND THEIR CONTROL FUNCTION

< SYSTEM DESCRIPTION >

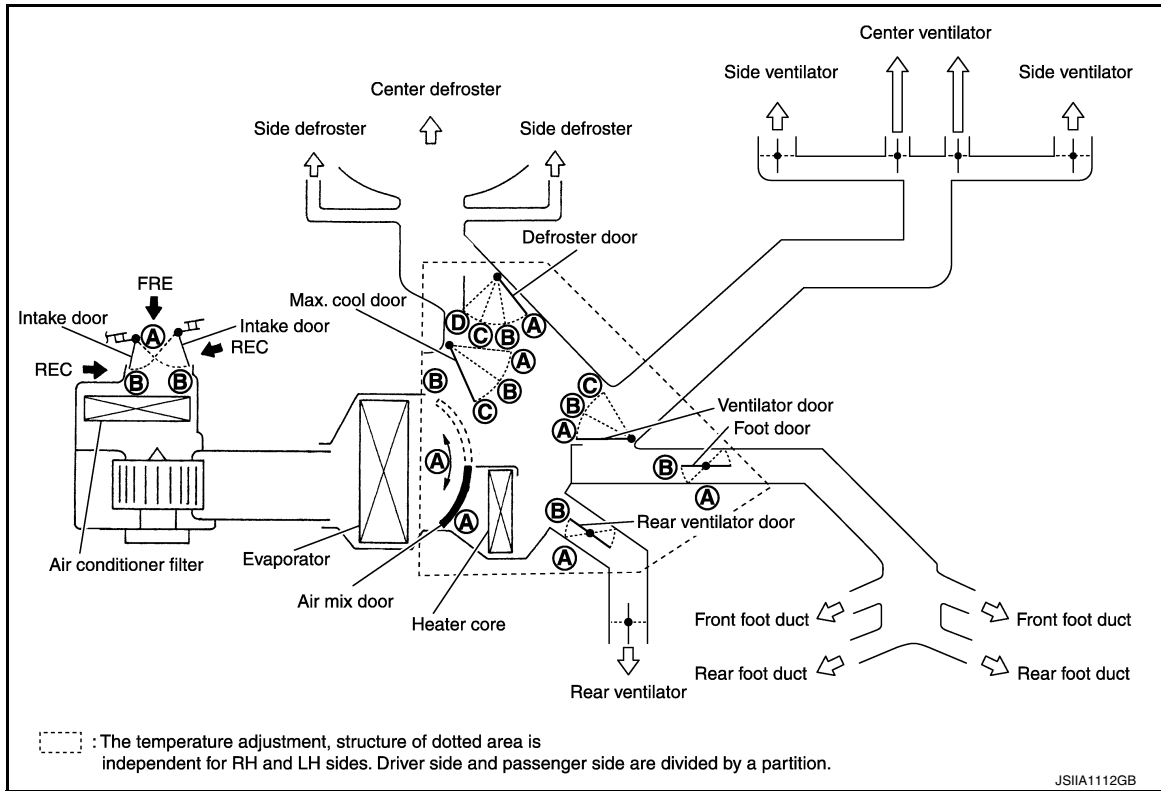
SYSTEM DESCRIPTION

SWITCHES AND THEIR CONTROL FUNCTION

WITHOUT ACCS

WITHOUT ACCS : System Description

INFOID:0000000010581879



Position or switch	DUAL switch	MODE switch				DEF switch		AUTO switch	Intake switch		Temperature control dial(Driver side)		Temperature control dial(Passenger side)		OFF switch
		VENT	B/L	FOOT	D/F	ON	OFF		FRE	REC					OFF
Door											18°C (60°F)	32°C (90°F)	18°C (60°F)	32°C (90°F)	OFF
Ventilator door	—	(A)	(B)	(C)	(C)	(C)	—	—	—	—	—	—	—	—	(C)
Max.cool door	—	(A)	(B)	(C)	(C)	(C)	—	—	—	—	—	—	—	—	(C)
Defroster door	—	(D)	(D)	(C)	(B)	(A)	—	—	—	—	—	—	—	—	(C)
Foot door	—	(B)	(B)	(B)	(B)	(A)	—	—	—	—	—	—	—	—	(B)
Rear ventilator door	—	(B)	(B)	(B)	(B)	(A)	—	—	—	—	—	—	—	—	(B)
Intake door	—	—	—	—	(B)	(B)	—	—	(B*)	(A*)	—	—	—	—	(B)
Air mix door (Driver side)	—	—	—	—	—	—	—	—	—	—	(A) AUTO	(B)	—	—	—
Air mix door (Passenger side)	ON	—	—	—	—	—	—	—	—	—	—	—	(A) AUTO	(B)	—
	OFF	—	—	—	—	—	—	—	—	—	(A) AUTO	(B)	—	—	—

*: Inlet status is displayed by LED when activating automatic control.

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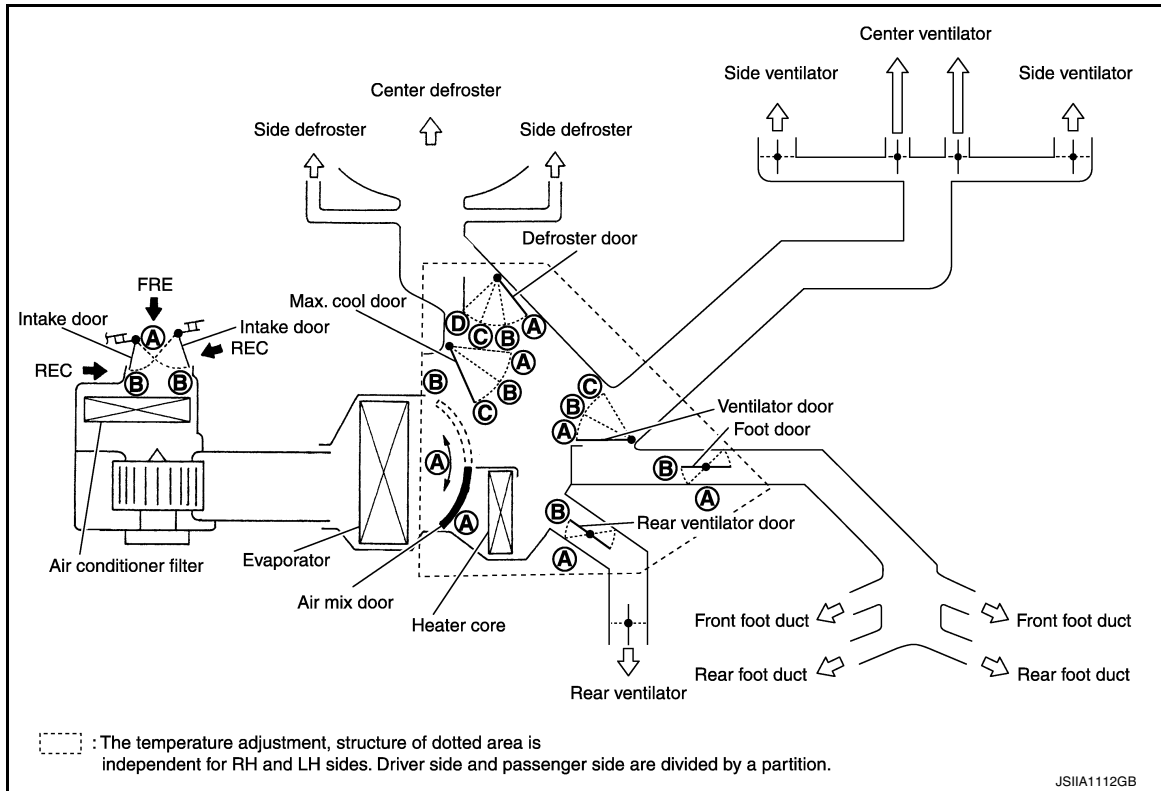
SWITCHES AND THEIR CONTROL FUNCTION

< SYSTEM DESCRIPTION >

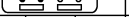
WITH ACCS

WITH ACCS : System Description

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Position or switch Door	DUAL switch	MODE switch				DEF switch	AUTO switch	Intake switch			Temperature control dial(Driver side)		Temperature control dial(Passenger side)		OFF switch		
		VENT	B/L	FOOT	D/F			AUTO	FRE	REC					OFF		
	MODE																
											18℃ (60°F)	⇄	32℃ (90°F)	18℃ (60°F)	⇄	32℃ (90°F)	
Ventilator door	—	(A)	(B)	(C)	(C)	(C)	AUTO	—			—		—		(C)		
Max.cool door	—	(A)	(B)	(C)	(C)	(C)		—							(C)		
Defroster door	—	(D)	(D)	(C)	(B)	(A)		—							(C)		
Foot door	—	(B)	(B)	(B)	(B)	(A)		—			—		(B)				
Rear ventilator door	—	(B)	(B)	(B)	(B)	(A)		—			—		(B)				
Intake door	—	—			(B)	(B)		AUTO	(B)	(A)	—		—		(B)		
Air mix door (Driver side)	—	—				—		—			(A)	AUTO	(B)	—		—	
Air mix door (Passenger side)	ON	—				—		—			—		(A)	AUTO	(B)		
	OFF	—				—	—			(A)	AUTO	(B)	—				

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AIR DISTRIBUTION

< SYSTEM DESCRIPTION >

AIR DISTRIBUTION

System Description

INFOID:0000000010581881

Discharge air flow						
Mode position indication	Condition	Air outlet/distribution				
		VENT		FOOT		DEF
		Front	Rear	Front	Rear	
	DUAL switch: OFF Rear ventilator : OPEN	89%	11%	—	—	—
		45%	11%	26%	18%	—
		13%	11%	32%	19%	25%
		10%	10%	28%	17%	35%
		17%	—	—	—	83%

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PRECAUTIONS

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PRECAUTION

PRECAUTIONS

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

INFOID:0000000010581882

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:

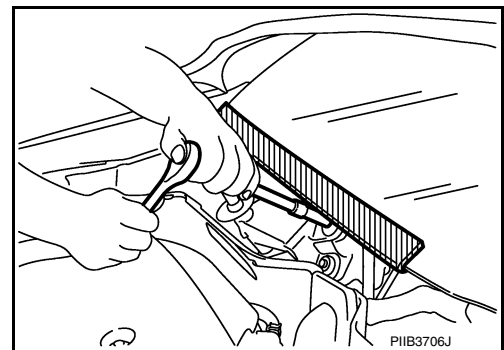
Always observe the following items for preventing accidental activation.

- 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.

Precaution for Procedure without Cowl Top Cover

INFOID:0000000010581883

When performing the procedure after removing cowl top cover, cover the lower end of windshield with urethane, etc to prevent damage to windshield.



PRECAUTIONS

< PRECAUTION >

Precautions for Removing Battery Terminal

INFOID:0000000010767900

- 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.

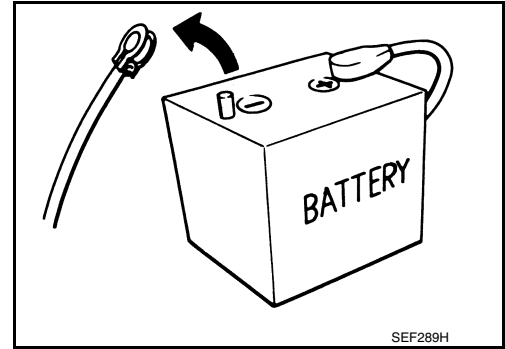
NOTE:

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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PREPARATION

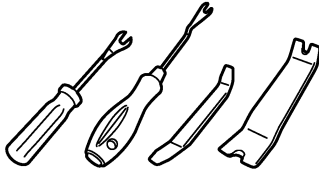
< PREPARATION >

PREPARATION

PREPARATION

Commercial Service Tool

INFOID:0000000010581884

Tool name	Description
Remover tool  JMKIA3050ZZ	Remove clips, pawls and metal clips

IN-CABIN MICROFILTER

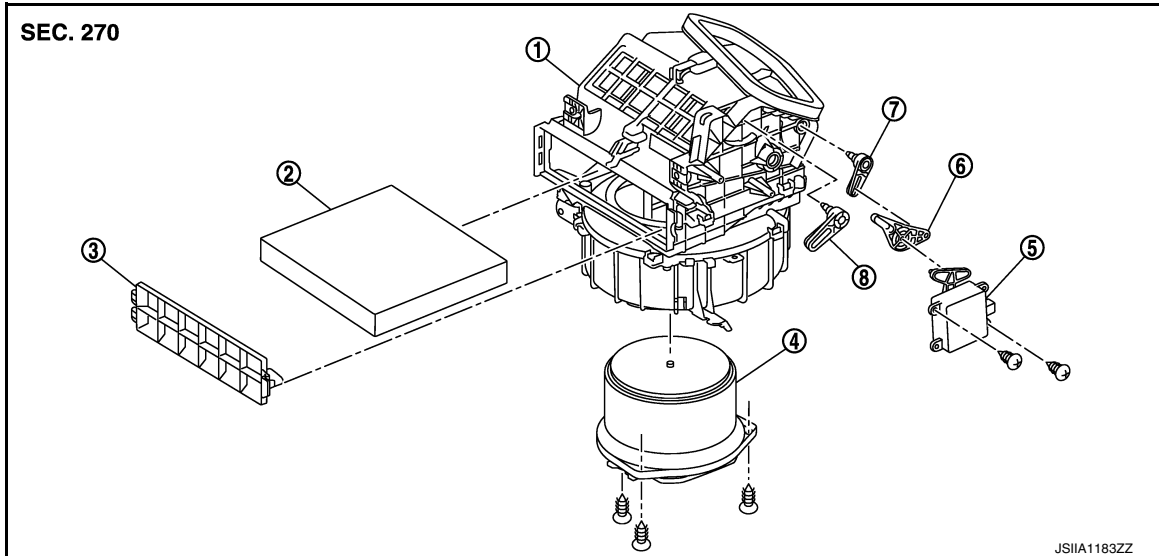
< PERIODIC MAINTENANCE >

PERIODIC MAINTENANCE

IN-CABIN MICROFILTER

Exploded View

INFOID:0000000010581885



- | | | |
|--------------------------|--|---------------------|
| 1. Blower unit | 2. In-cabin microfilter
(Air conditioner filter)* | 3. Filter cover |
| 4. Blower motor assembly | 5. Intake door motor | 6. Intake door link |
| 7. Intake door lever 1 | 8. Intake door lever 2 | |

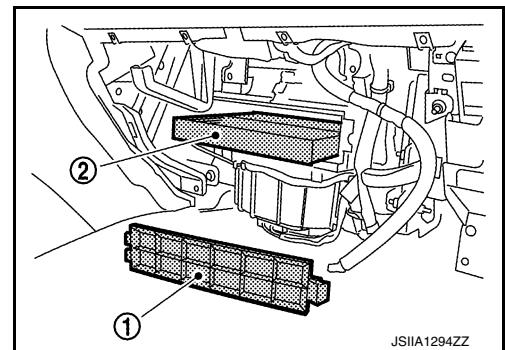
*: For MEXICO models

Removal and Installation

INFOID:0000000010581886

REMOVAL

1. Remove instrument lower panel RH. Refer to [IP-12. "Exploded View"](#).
2. Remove filter cover (1), and then remove in-cabin microfilter or air conditioner filter (2).



INSTALLATION

Install in the reverse order of removal.

Replacement

INFOID:0000000010581887

Replace in-cabin microfilter or air conditioner filter.

Refer to [MA-10. "FOR NORTH AMERICA : Introduction of Periodic Maintenance"](#) (For NORTH AMERICA) and [MA-13. "FOR MEXICO : Introduction of Periodic Maintenance"](#) (For MEXICO).

Affix a caution label inside the glove box when replacing filter.

DUCT AND GRILLE

< REMOVAL AND INSTALLATION >

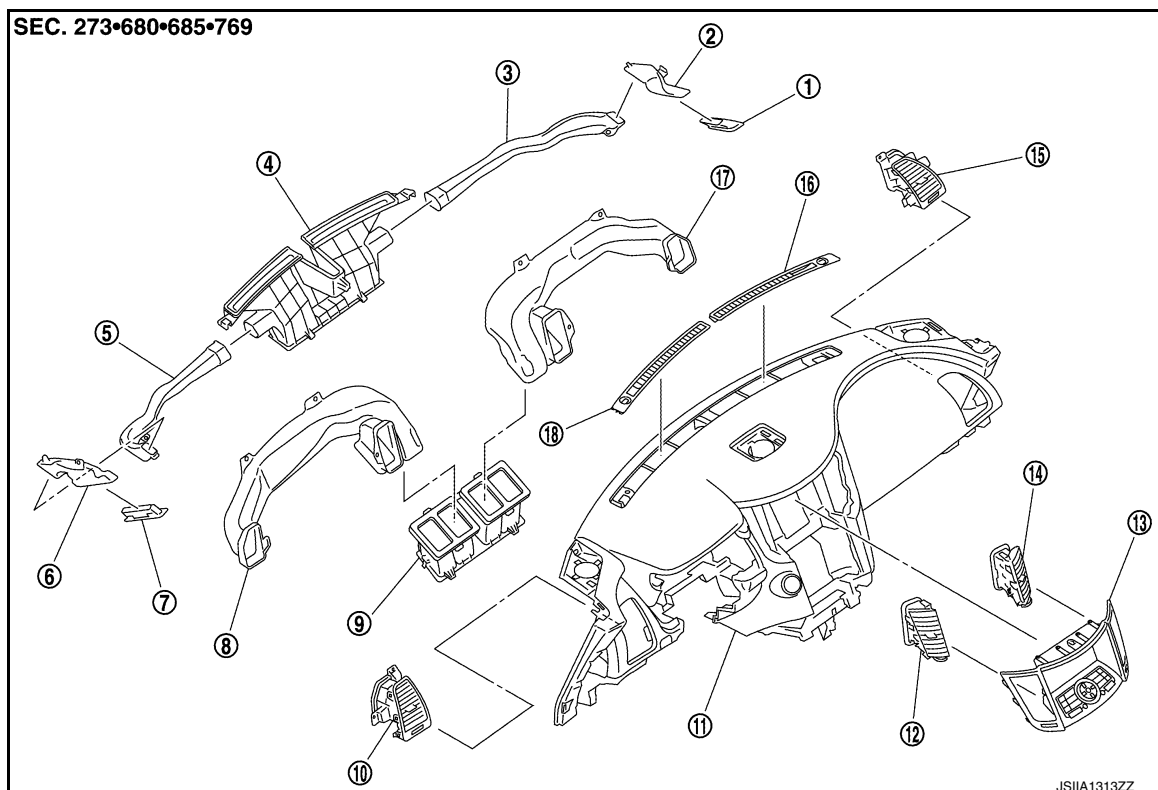
REMOVAL AND INSTALLATION

DUCT AND GRILLE

Exploded View

INFOID:000000010581888

FRONT

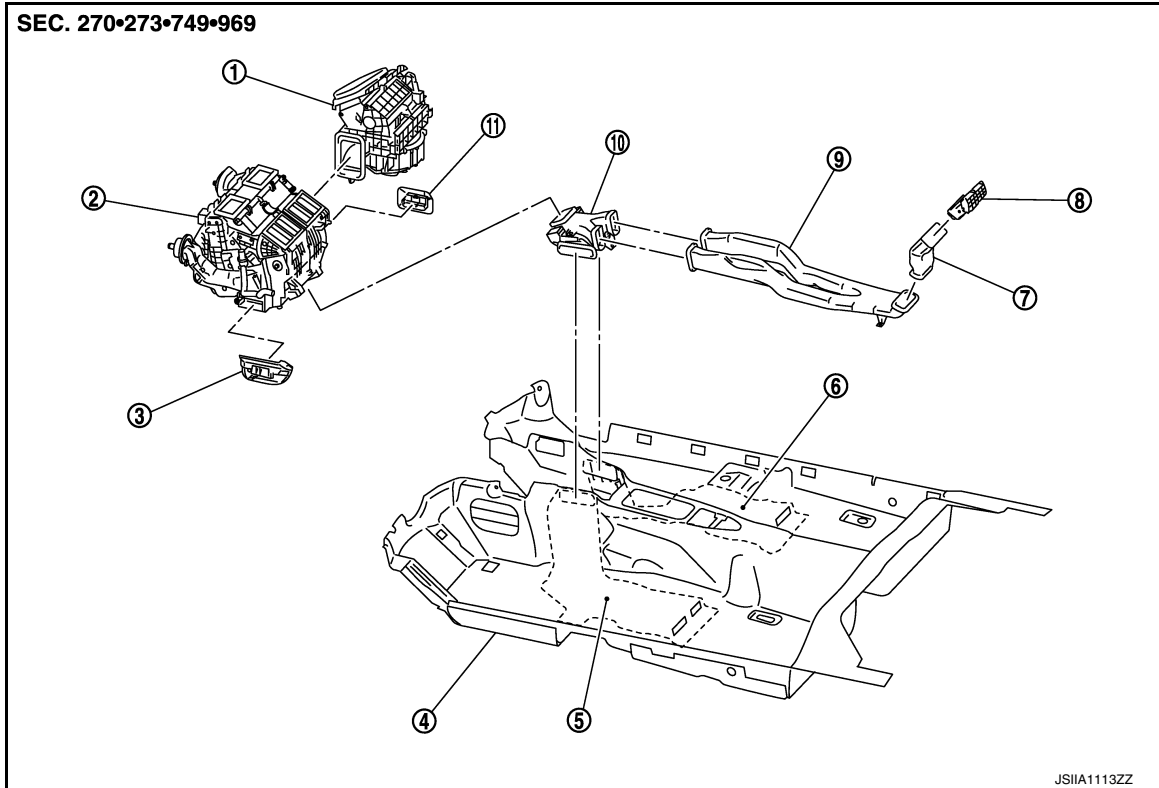


- | | | |
|--|--|--|
| 1. Side defroster grille RH
(Front pillar garnish RH) | 2. Side defroster duct RH
(Front pillar garnish RH) | 3. Side defroster nozzle RH |
| 4. Defroster nozzle | 5. Side defroster nozzle LH | 6. Side defroster duct LH
(Front pillar garnish LH) |
| 7. Side defroster grille LH
(Front pillar garnish LH) | 8. Ventilator duct LH | 9. Adaptor duct |
| 10. Side ventilator grille LH | 11. Instrument panel assembly | 12. Center ventilator grille LH |
| 13. Cluster lid D | 14. Center ventilator grille RH | 15. Side ventilator grille RH |
| 16. Front defroster grille RH | 17. Ventilator duct RH | 18. Front defroster grille LH |

REAR

DUCT AND GRILLE

< REMOVAL AND INSTALLATION >



- | | | |
|---------------------------|-----------------------------------|---------------------------|
| 1. Blower unit assembly | 2. Heater & cooling unit assembly | 3. Foot grille LH |
| 4. Floor carpet | 5. Rear floor duct 2 LH | 6. Rear floor duct 2 RH |
| 7. Rear ventilator duct 2 | 8. Rear ventilator grille | 9. Rear ventilator duct 1 |
| 10. Rear floor duct 1 | 11. Foot grille RH | |

CENTER VENTILATOR GRILLE

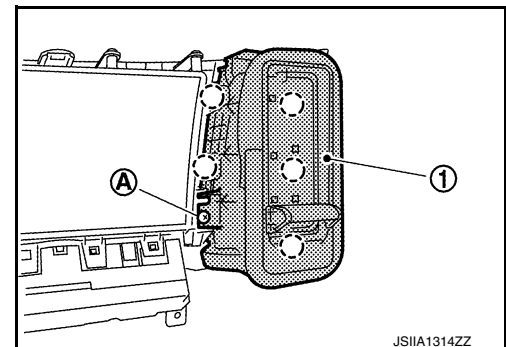
CENTER VENTILATOR GRILLE : Removal and Installation

INFOID:0000000010581889

REMOVAL

1. Remove cluster lid D. Refer to [IP-12. "Exploded View"](#).
2. Remove fixing screw (A).
3. Disengage fixing pawls, and then remove center ventilator grille (1).

 : Pawl



INSTALLATION

Install in the reverse order of removal.

SIDE VENTILATOR GRILLE

SIDE VENTILATOR GRILLE : Removal and Installation

INFOID:0000000010581890

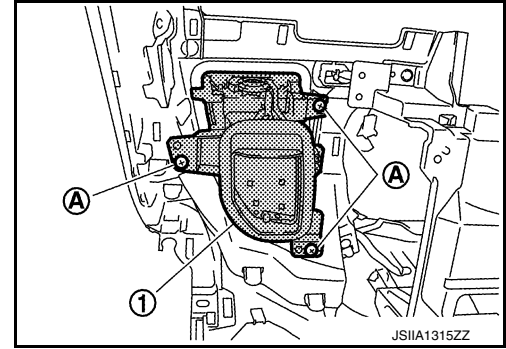
REMOVAL

Driver Side

DUCT AND GRILLE

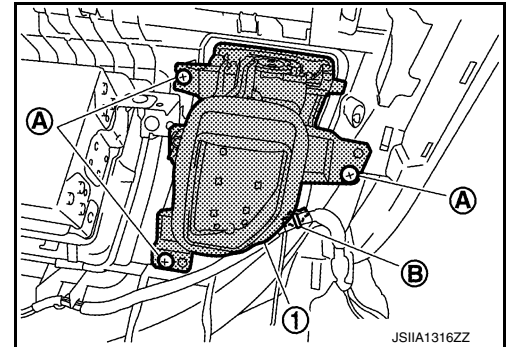
< REMOVAL AND INSTALLATION >

1. Remove ventilator duct LH. Refer to [VTL-10. "Exploded View"](#).
2. Remove fixing screws (A), and then remove side ventilator grille LH (1).



Passenger Side

1. Remove ventilator duct RH. Refer to [VTL-10. "Exploded View"](#).
2. Remove fixing screws (A).
3. Remove harness fixing clip (B), and then remove side ventilator grille RH (1).



INSTALLATION

Install in the reverse order of removal.

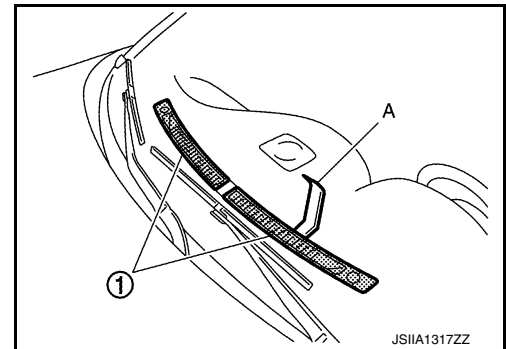
FRONT DEFROSTER GRILLE

FRONT DEFROSTER GRILLE : Removal and Installation

INFOID:0000000010581891

REMOVAL

Remove front defroster grilles (1), using a remover tool (A).



INSTALLATION

Install in the reverse order of removal.

SIDE DEFROSTER GRILLE

SIDE DEFROSTER GRILLE : Removal and Installation

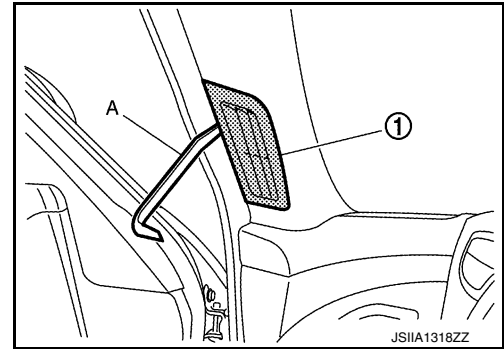
INFOID:0000000010581892

REMOVAL

DUCT AND GRILLE

< REMOVAL AND INSTALLATION >

Remove side defroster grille (1), using a remover tool (A).



INSTALLATION

Install in the reverse order of removal.

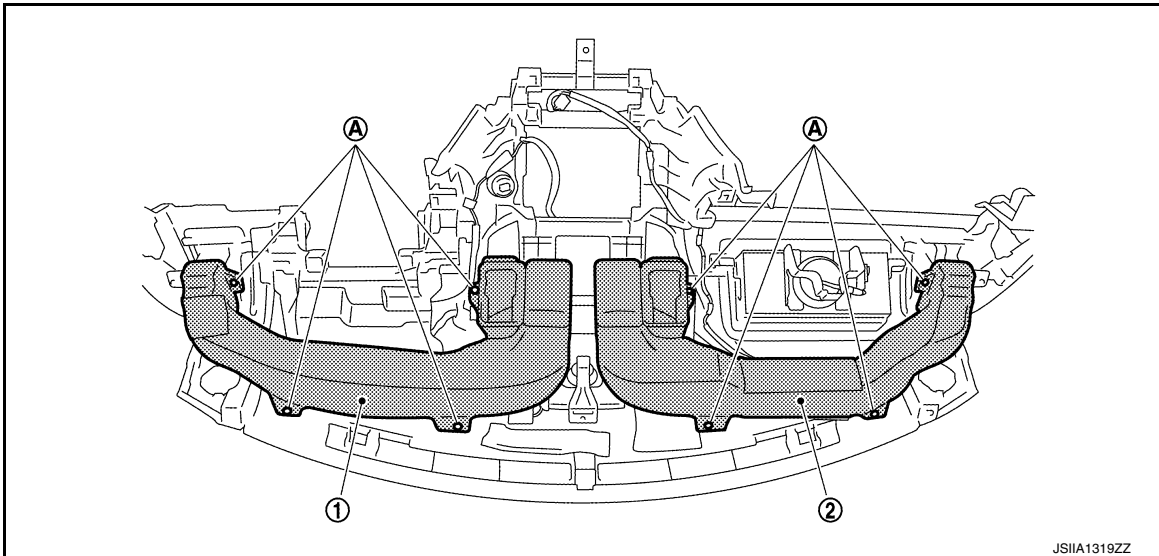
VENTILATOR DUCT

VENTILATOR DUCT : Removal and Installation

INFOID:0000000010581893

REMOVAL

1. Remove instrument panel assembly. Refer to [IP-12, "Exploded View"](#).
2. Remove fixing screws (A), and then remove ventilator duct LH (1) and RH (2).



INSTALLATION

Install in the reverse order of removal.

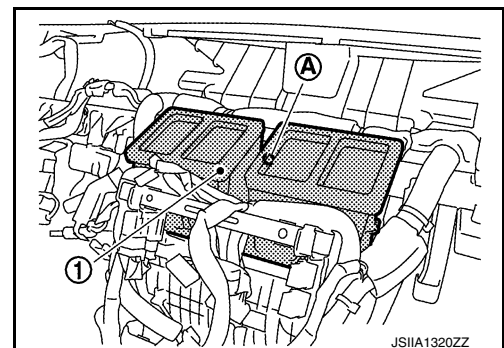
ADAPTOR DUCT

ADAPTOR DUCT : Removal and Installation

INFOID:0000000010581894

REMOVAL

1. Remove instrument panel assembly. Refer to [IP-12, "Exploded View"](#).
2. Remove fixing screw (A), and then remove adaptor duct (1).



DUCT AND GRILLE

< REMOVAL AND INSTALLATION >

INSTALLATION

Install in the reverse order of removal.

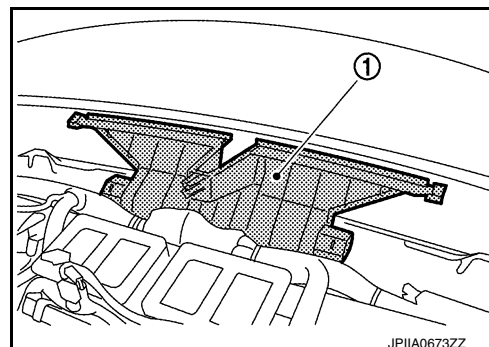
DEFROSTER NOZZLE

DEFROSTER NOZZLE : Removal and Installation

INFOID:0000000010581895

REMOVAL

1. Remove side defroster nozzle LH and RH. Refer to [VTL-10, "Exploded View"](#).
2. Remove defroster nozzle (1).



INSTALLATION

Install in the reverse order of removal.

SIDE DEFROSTER NOZZLE

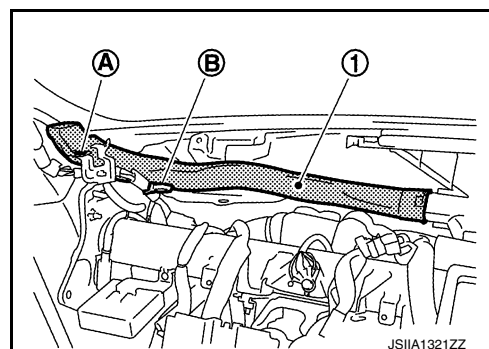
SIDE DEFROSTER NOZZLE : Removal and Installation

INFOID:0000000010581896

REMOVAL

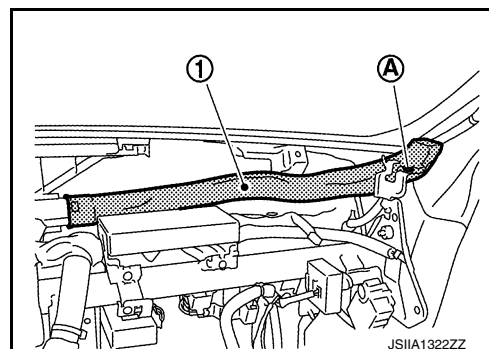
Driver Side

1. Remove instrument panel assembly. Refer to [IP-12, "Exploded View"](#).
2. Remove fixing clip (A) and harness fixing clip (B), and then remove side defroster nozzle LH (1).



Passenger Side

1. Remove instrument panel assembly. Refer to [IP-12, "Exploded View"](#).
2. Remove fixing clip (A), and then remove side defroster nozzle RH (1).



INSTALLATION

Install in the reverse order of removal.

DUCT AND GRILLE

< REMOVAL AND INSTALLATION >

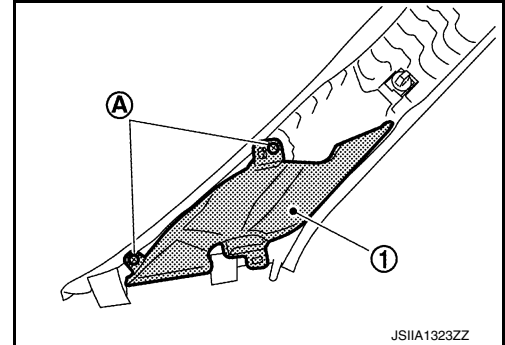
SIDE DEFROSTER DUCT

SIDE DEFROSTER DUCT : Removal and Installation

INFOID:000000010581897

REMOVAL

1. Remove front pillar garnish. Refer to [INT-18, "Exploded View"](#).
2. Remove fixing screws (A), and then remove side defroster duct (1).



INSTALLATION

Install in the reverse order of removal.

REAR VENTILATOR GRILLE

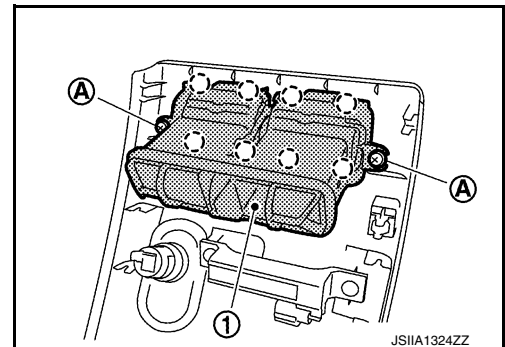
REAR VENTILATOR GRILLE : Removal and Installation

INFOID:000000010581898

REMOVAL

1. Remove console rear finisher. Refer to [IP-23, "Exploded View"](#).
2. Remove fixing screws (A).
3. Disengage fixing pawls, and then remove rear ventilator grille (1).

 : Pawl



INSTALLATION

Install in the reverse order of removal.

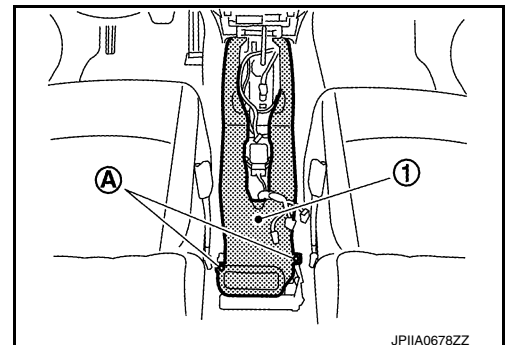
REAR VENTILATOR DUCT 1

REAR VENTILATOR DUCT 1 : Removal and Installation

INFOID:000000010581899

REMOVAL

1. Remove center console assembly. Refer to [IP-23, "Exploded View"](#).
2. Remove fixing screws (A), and then remove rear ventilator duct 1 (1).



DUCT AND GRILLE

< REMOVAL AND INSTALLATION >

INSTALLATION

Install in the reverse order of removal.

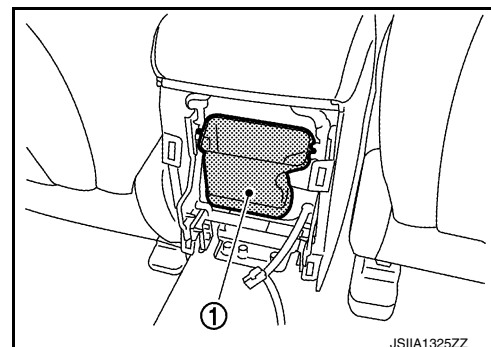
REAR VENTILATOR DUCT 2

REAR VENTILATOR DUCT 2 : Removal and Installation

INFOID:0000000010581900

REMOVAL

1. Remove console rear finisher. Refer to [IP-23, "Exploded View"](#).
2. Remove rear ventilator duct 2 (1).



INSTALLATION

Install in the reverse order of removal.

FOOT GRILLE

FOOT GRILLE : Removal and Installation

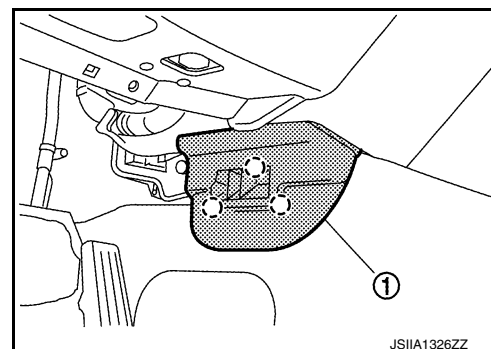
INFOID:0000000010581901

REMOVAL

Driver Side

Disengage fixing pawls, and then remove foot grille LH (1).

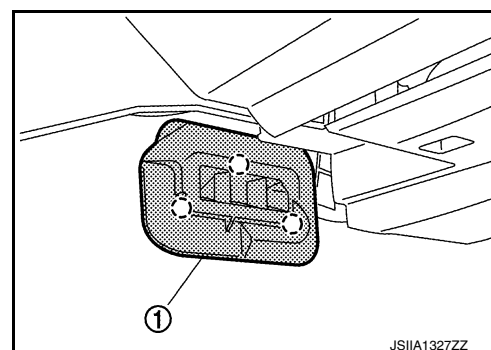
 : Pawl



Passenger Side

Disengage fixing pawls, and then remove foot grille RH (1).

 : Pawl



INSTALLATION

Install in the reverse order of removal.

FOOT DUCT

DUCT AND GRILLE

< REMOVAL AND INSTALLATION >

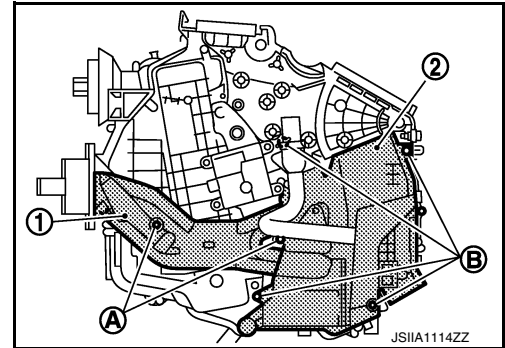
FOOT DUCT : Removal and Installation

INFOID:000000010581902

REMOVAL

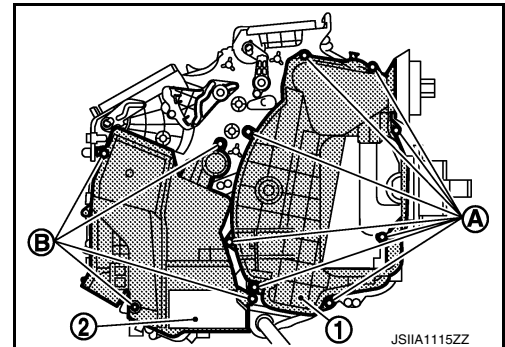
Driver Side

1. Remove heater & cooling unit assembly. Refer to the following.
 - Refer to [HA-53, "Exploded View"](#). (VQ37VHR)
 - Refer to [HA-110, "Exploded View"](#). (VK50VE)
2. Remove fixing screws (A), and then remove heater pipe cover (1).
3. Remove fixing screws (B), and then remove foot duct LH (2).



Passenger Side

1. Set the temperature at full cold.
2. Disconnect the battery cable from the negative terminal.
3. Remove air mix door motor. Refer to [HAC-202, "Exploded View"](#).
4. Remove mode door motor and links. Refer to [HAC-202, "Exploded View"](#).
5. Remove fixing screws (A), and then remove evaporator cover (1).
6. Remove fixing screws (B), and then remove foot duct RH (2).



INSTALLATION

Install in the reverse order of removal.

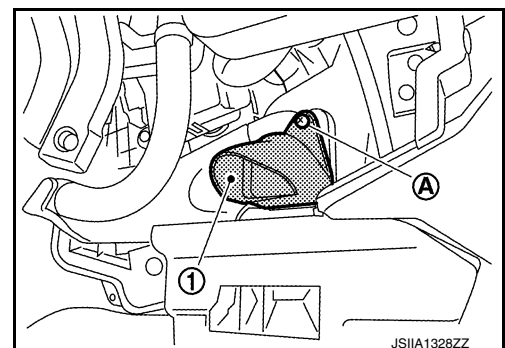
HEATER DUCT

HEATER DUCT : Removal and Installation

INFOID:000000010581903

REMOVAL

1. Remove instrument lower panel LH. Refer to [IP-12, "Exploded View"](#).
2. Remove fixing screw (A), and then remove heater duct (1).



DUCT AND GRILLE

< REMOVAL AND INSTALLATION >

INSTALLATION

Install in the reverse order of removal.

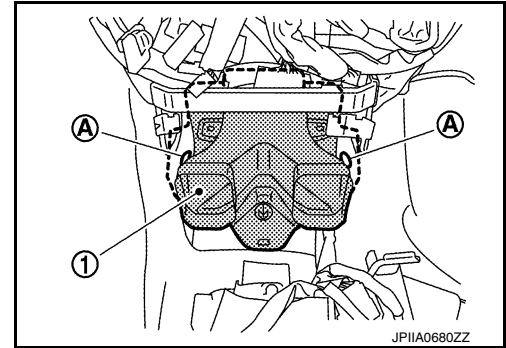
REAR FLOOR DUCT 1

REAR FLOOR DUCT 1 : Removal and Installation

INFOID:0000000010581904

REMOVAL

1. Remove instrument panel assembly. Refer to [IP-12, "Exploded View"](#).
2. Remove fixing clips (A), and then remove rear floor duct 1 (1).



INSTALLATION

Install in the reverse order of removal.

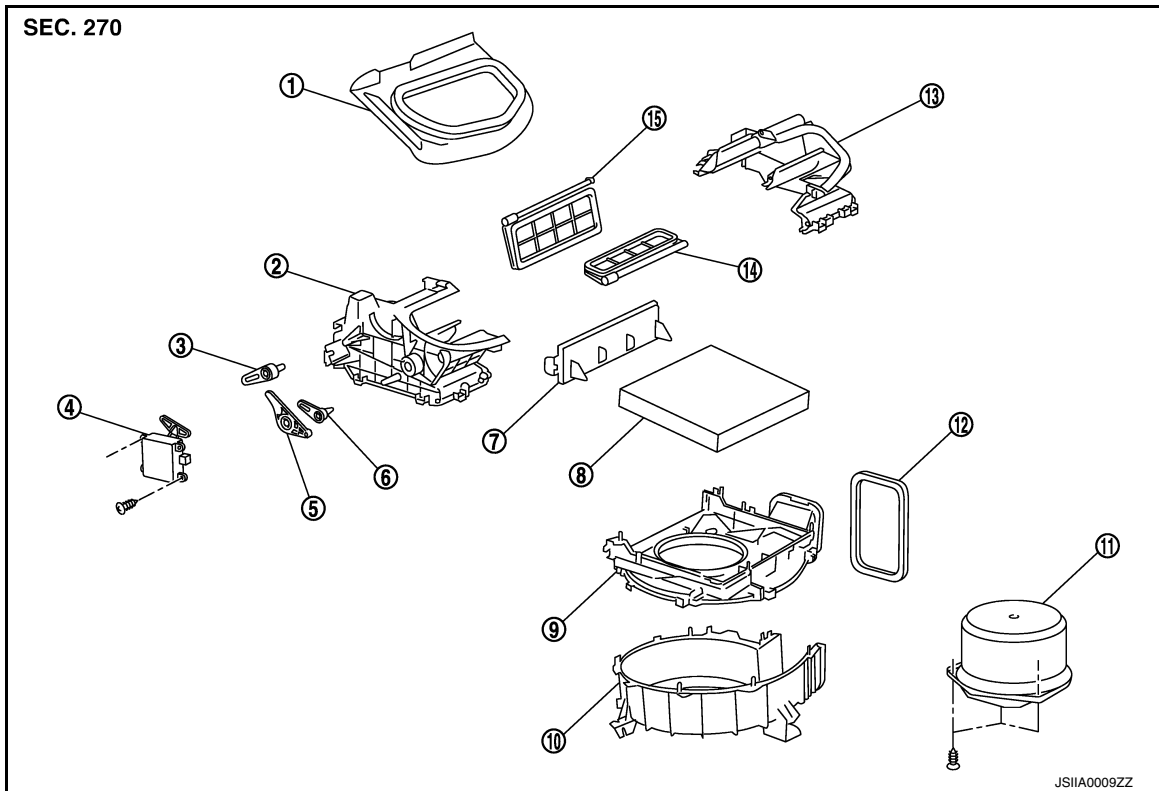
BLOWER UNIT

< REMOVAL AND INSTALLATION >

BLOWER UNIT

Exploded View

INFOID:000000010581905



- | | | |
|-----------------------|---------------------------|------------------------|
| 1. Adapter | 2. Intake box RH | 3. Intake door lever 2 |
| 4. Intake door motor | 5. Intake door link | 6. Intake door lever 1 |
| 7. Filter cover | 8. In-cabin microfilter | 9. Intake upper case |
| 10. Intake lower case | 11. Blower motor assembly | 12. Seal |
| 13. Intake box LH | 14. Intake door 1 | 15. Intake door 2 |

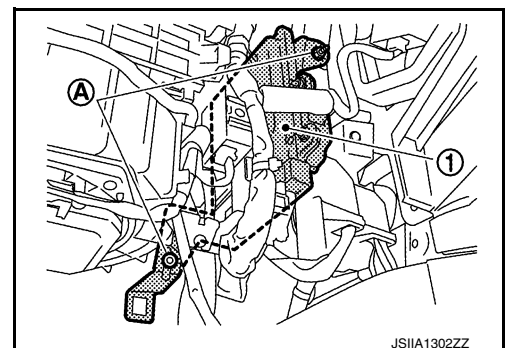
BLOWER UNIT

BLOWER UNIT : Removal and Installation

INFOID:000000010581906

REMOVAL

1. Remove instrument lower panel RH. Refer to [IP-12. "Exploded View"](#).
2. Disconnect AWD control unit connector. Refer to [DLN-58. "Exploded View"](#).
3. Disconnect ECM (1) connectors.
4. Remove mounting nuts (A), and then remove ECM with bracket attached.



5. Remove power steering control unit. Refer to [STC-24. "Removal and Installation"](#).
6. Disconnect intake door motor connector and blower motor connector.

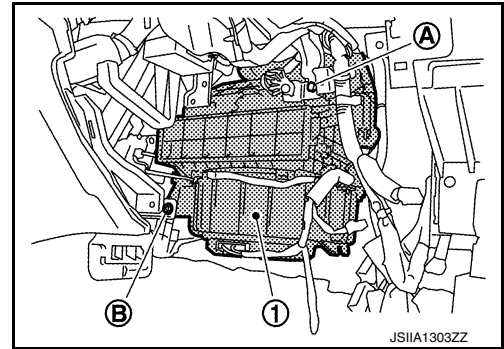
BLOWER UNIT

< REMOVAL AND INSTALLATION >

7. Remove mounting bolt (A) and fixing screw (B), and then remove blower unit assembly (1).

CAUTION:

Move blower unit assembly rightward, and remove locating pin (1 part) and joint. Then remove blower unit assembly downward.



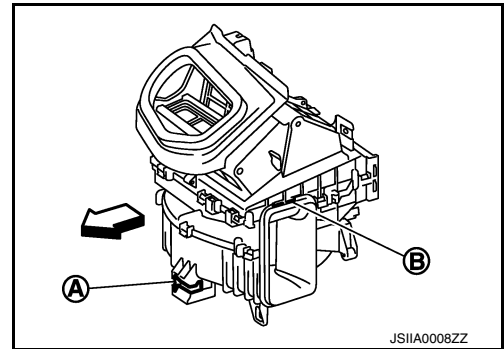
INSTALLATION

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

CAUTION:

Make sure locating pin (A) and joint (B) are securely inserted.

⇐ : Vehicle front



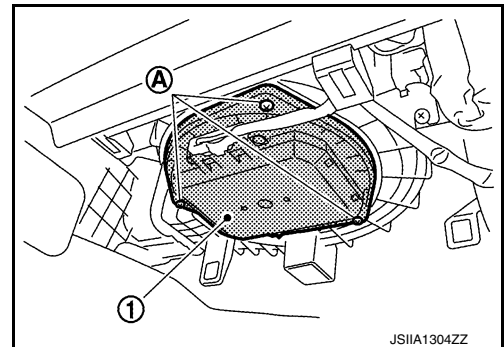
BLOWER MOTOR

BLOWER MOTOR : Removal and Installation

INFOID:0000000010581907

REMOVAL

1. Remove instrument lower cover RH. Refer to [IP-12. "Exploded View"](#).
2. Disconnect blower motor connector.
3. Remove fixing screws (A), and then remove blower motor (1).



INSTALLATION

Install in the reverse order of removal.