

SECTION **VTL** VENTILATION SYSTEM

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SWITCHES AND THEIR CONTROL FUNCTION

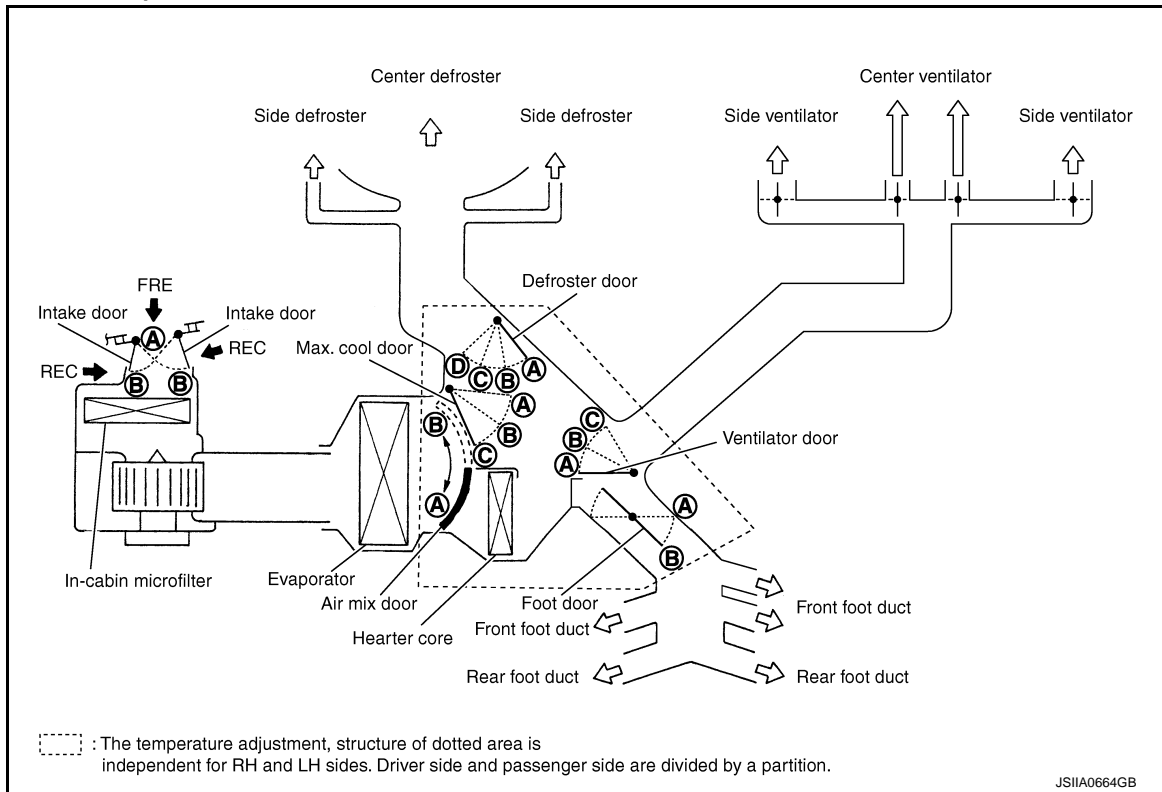
< SYSTEM DESCRIPTION >

SYSTEM DESCRIPTION

SWITCHES AND THEIR CONTROL FUNCTION

System Description

INFOID:000000004786039















WITHOUT ACCS

Switch position		Door position					
		Ventilator door	Max. cool door	Defroster door	Foot door	Intake door	Air mix door (Driver side) / Air mix door (Passenger side)
AUTO switch		AUTO					


SWITCHES AND THEIR CONTROL FUNCTION

< SYSTEM DESCRIPTION >

Switch position				Door position						
				Ventilator door	Max. cool door	Defroster door	Foot door	Intake door	Air mix door (Driver side)	Air mix door (Passenger side)
MODE switch	VENT			A	A	D	B	—	—	
	B/L			B	B	D	B			
	FOOT			C	C	C	B			
	D/F					B	B			B
DEF switch				—	—	—	—	—	—	
Intake switch	FRE									B*
	REC									
DUAL switch	DUAL									ON
	OFF									
Temperature control dial (Driver side)	DUAL switch: OFF	18.0°C (60°F)		—	—	—	—	A		
		18.5°C ⇔ 31.5°C (61°F ⇔ 89°F)						AUTO		
		32.0°C (90°F)						B		
Temperature control dial (Driver side)	DUAL switch: ON	18.0°C (60°F)						A	—	
		18.5°C ⇔ 31.5°C (61°F ⇔ 89°F)						AUTO		
		32.0°C (90°F)						B		
Temperature control dial (Passenger side)			18.0°C (60°F)					—	A	
			18.5°C ⇔ 31.5°C (61°F ⇔ 89°F)						AUTO	
			32.0°C (90°F)						B	
OFF switch				C	C	C	B	B	—	—














*: Inlet status is displayed by indicator when activating automatic control

WITH ACCS

Switch position		Door position					
		Ventilator door	Max. cool door	Defroster door	Foot door	Intake door	Air mix door (Driver side)
AUTO switch			AUTO				

SWITCHES AND THEIR CONTROL FUNCTION

< SYSTEM DESCRIPTION >

Switch position				Door position						
				Ventilator door	Max. cool door	Defroster door	Foot door	Intake door	Air mix door (Driver side)	Air mix door (Passenger side)
MODE switch	VENT			A	A	D	B	—	—	
	B/L			B	B	D	B			
	FOOT			C	C	C	B			
	D/F					B	B			B
DEF switch						A	A	B		
Intake switch	AUTO			—	—	—	—	AUTO*2	—	
	REC							A*1		
	FRE							B*1		
DUAL switch	DUAL							ON		
	OFF								OFF	
Temperature control dial (Driver side)	DUAL switch: OFF	18.0°C (60°F)						A		
		18.5°C ⇔ 31.5°C (61°F ⇔ 89°F)							AUTO	
		32.0°C (90°F)							B	
Temperature control dial (Driver side)	DUAL switch: ON	18.0°C (60°F)						—	—	—
		18.5°C ⇔ 31.5°C (61°F ⇔ 89°F)		AUTO						
		32.0°C (90°F)		B						
Temperature control dial (Passenger side)	DUAL switch: ON	18.0°C (60°F)		—	—	—	—	—	A	
		18.5°C ⇔ 31.5°C (61°F ⇔ 89°F)							AUTO	
		32.0°C (90°F)							B	
OFF switch				C	C	C	B	B	—	—

*1: Inlet status is displayed by indicator when activating automatic control

*2: Intake door control applies a gas sensor






AIR DISTRIBUTION

< SYSTEM DESCRIPTION >

AIR DISTRIBUTION

System Description

INFOID:000000004786040

Discharge air flow					
Mode position indication	Condition	Air outlet/distribution			
		VENT	FOOT		DEF
			Front	Rear	
	DUAL switch: OFF	100%	—	—	—
		53%	29%	18%	—
		11%	39%	24%	26%
		9%	33%	21%	37%
		16%	—	—	84%

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PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

INFOID:000000005190894

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:

- 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 the "SRS AIR BAG".
- Do not 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:

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, DO NOT 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.

Service Procedure Precautions for Models with a Pop-up Roll Bar

INFOID:000000005190906

WARNING:

- Risk of passenger injury or death may increase if the pop-up roll bar does not deploy during a roll over collision. In order to reduce the chance of an incident where the pop-up roll bar is inoperative, all maintenance must be performed by a NISSAN or INFINITI dealer.
- Before removing and installing the pop-up roll bar component parts and harness, always turn the ignition switch OFF, disconnect the battery negative terminal, and wait for 3 minutes or more. (The purpose of this operation is to discharge electricity that is accumulated in the auxiliary power supply circuit in the air bag diagnosis sensor unit.)
- When repairing, removing, and installing a pop-up roll bar, always refer to SRS AIR BAG and SRS AIR BAG CONTROL warnings in the Service Manual.

Precaution Necessary for Steering Wheel Rotation after Battery Disconnect

INFOID:000000005190896

NOTE:

- Before removing and installing any control units, first turn the push-button ignition switch to the LOCK position, then disconnect both battery cables.
- After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.

For vehicle with steering lock unit, if the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.

If turning the steering wheel is required with the battery disconnected or discharged, follow the operation procedure below before starting the repair operation.

PRECAUTIONS

< PRECAUTION >

OPERATION PROCEDURE

1. Connect both battery cables.
NOTE:
Supply power using jumper cables if battery is discharged.
2. Turn the push-button ignition switch to ACC position.
(At this time, the steering lock will be released.)
3. Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.
4. Perform the necessary repair operation.
5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the push-button ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the push-button ignition switch is turned to LOCK position.)
6. Perform self-diagnosis check of all control units using CONSULT-III.

Precaution for Battery Service

INFOID:000000005190900

Before disconnecting the battery, lower both the driver and passenger windows. This will prevent any interference between the window edge and the vehicle when the door is opened/closed. During normal operation, the window slightly raises and lowers automatically to prevent any window to vehicle interference. The automatic window function will not work with the battery disconnected.

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PREPARATION

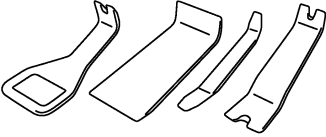
< PREPARATION >

PREPARATION

PREPARATION

Commercial Service Tool

INFOID:000000004786044

Tool name	Description
<p data-bbox="164 520 298 541">Remover tool</p>  <p data-bbox="849 632 911 646">PIIB7923J</p>	<p data-bbox="1084 520 1409 541">Remove clips, pawls, metal clips</p>

IN-CABIN MICROFILTER

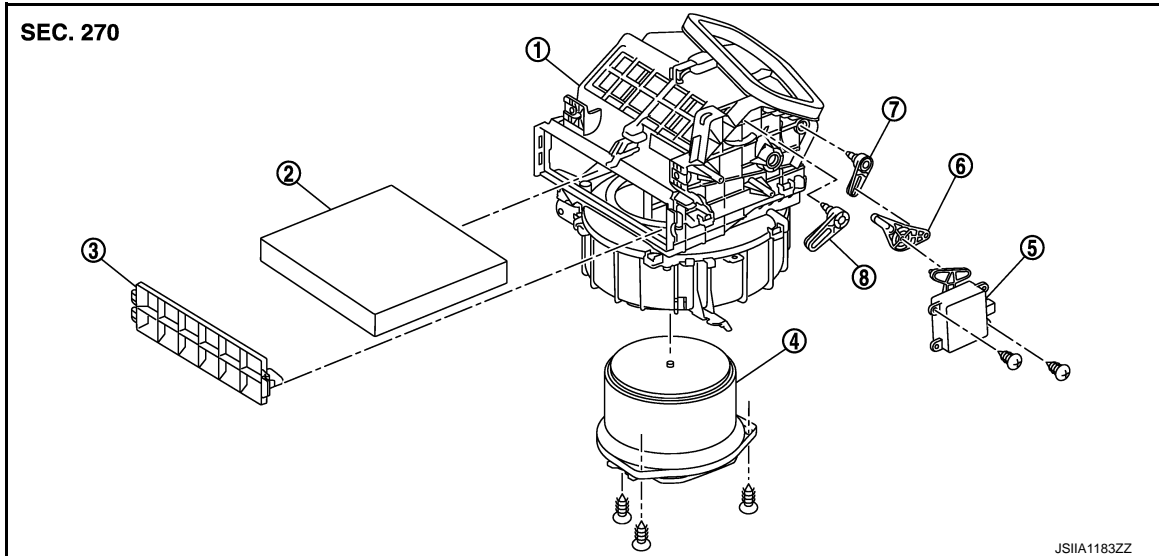
< PERIODIC MAINTENANCE >

PERIODIC MAINTENANCE

IN-CABIN MICROFILTER

Exploded View

INFOID:000000004786045



- | | | |
|--------------------------|-------------------------|---------------------|
| 1. Blower unit | 2. In-cabin microfilter | 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 | |

Removal and Installation

INFOID:000000004786046

REMOVAL

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

INSTALLATION

Installation is basically the reverse order of removal.

CAUTION:

- If the filter is deformed/damaged when removing, replace it with a new one. Deformed/damaged filter may deteriorate the duct collecting performance.
- When installing, handle the filter with extreme care to avoid deforming/damaging.
- Never open the wrap until just before the installation. Because the high performance filter (for odors, pollen, and other allergens) immediately starts absorbing odors by opening the wrap to remove them. (with ACCS)

Replacement

INFOID:000000004786047

Replace in-cabin microfilter.

Refer to [MA-6, "Schedule 1"](#) and [MA-8, "Schedule 2"](#).

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

DUCT AND GRILLE

< REMOVAL AND INSTALLATION >

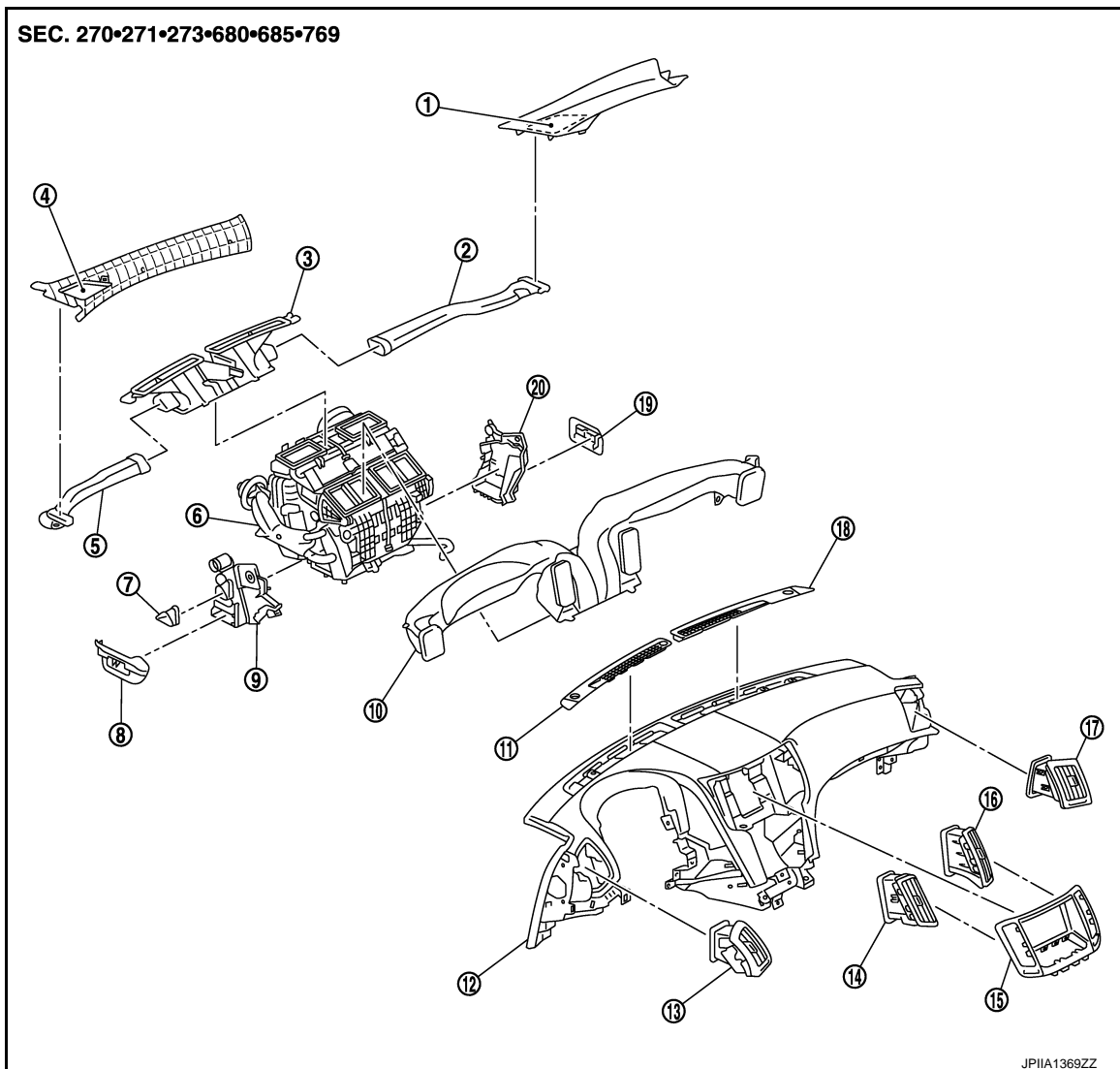
REMOVAL AND INSTALLATION

DUCT AND GRILLE

Exploded View

INFOID:000000004786048

FRONT

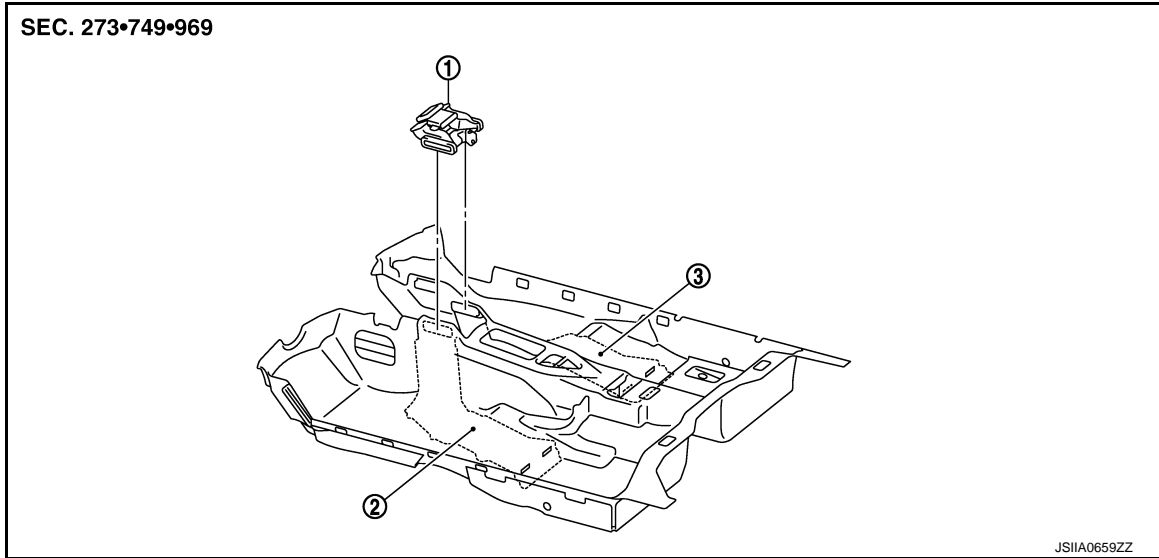


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|---|-------------------------------------|------------------------------------|
| 1. Side defroster duct (front pillar garnish) (right) | 2. Side defroster nozzle (right) | 3. Defroster nozzle |
| 4. Side defroster duct (front pillar garnish) (left) | 5. Side defroster nozzle (left) | 6. Heater & cooling unit assembly |
| 7. Heater duct | 8. Foot grille (left) | 9. Foot duct (left) |
| 10. Ventilator duct | 11. Front defroster grille (left) | 12. Instrument panel assembly |
| 13. Side ventilator grille (left) | 14. Center ventilator grille (left) | 15. Cluster lid D |
| 16. Center ventilator grille (right) | 17. Side ventilator grille (right) | 18. Front defroster grille (right) |
| 19. Foot grille (right) | 20. Foot duct (right) | |

REAR

DUCT AND GRILLE

< REMOVAL AND INSTALLATION >



1. Rear floor duct 1

2. Rear floor duct 2 (left)

3. Rear floor duct 2 (right)

CENTER VENTILATOR GRILLE

CENTER VENTILATOR GRILLE : Removal and Installation

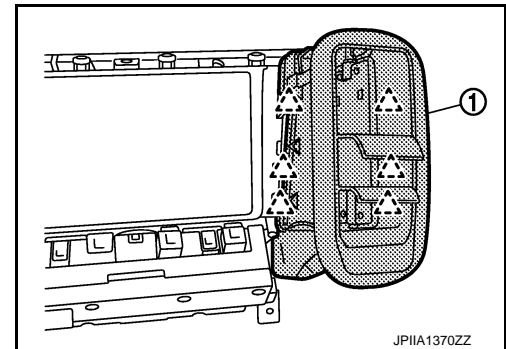
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REMOVAL

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



: pawl



INSTALLATION

Installation is basically the reverse order of removal.

SIDE VENTILATOR GRILLE

SIDE VENTILATOR GRILLE : Removal and Installation

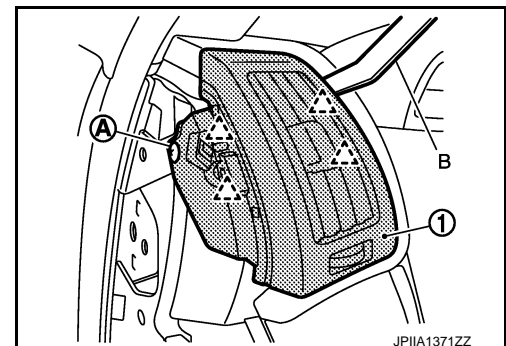
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REMOVAL

1. Remove the instrument side finisher. Refer to [IP-12. "Exploded View"](#).
2. Remove the mounting screw (A).
3. Remove side ventilator grille pawls using remover tool (B), and then remove side ventilator grille (1).



: pawl



DUCT AND GRILLE

< REMOVAL AND INSTALLATION >

INSTALLATION

Installation is basically the reverse order of removal.

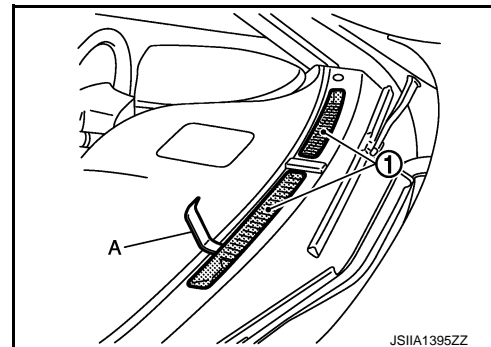
FRONT DEFROSTER GRILLE

FRONT DEFROSTER GRILLE : Removal and Installation

INFOID:000000004786051

REMOVAL

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



INSTALLATION

Installation is basically the reverse order of removal.

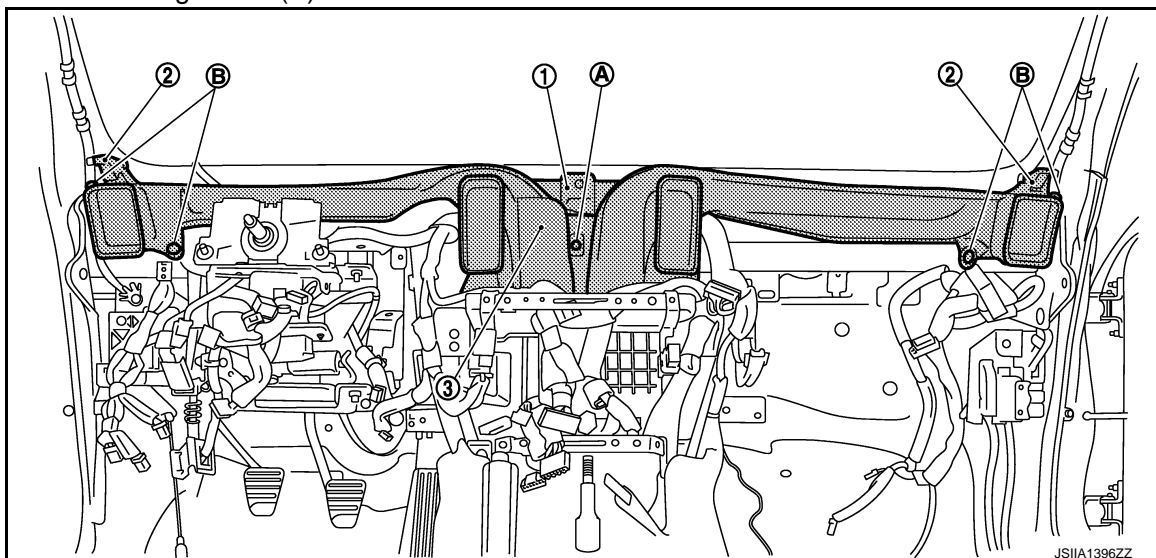
FRONT DEFROSTER NOZZLE, SIDE DEFROSTER NOZZLE AND VENTILATOR DUCT

FRONT DEFROSTER NOZZLE, SIDE DEFROSTER NOZZLE AND VENTILATOR DUCT : Removal and Installation

INFOID:000000004786052

REMOVAL

1. Remove instrument panel assembly. Refer to [IP-12. "Exploded View"](#).
2. Remove mounting screw (A).



3. Remove clips (B), and then remove defroster nozzle (1), side defroster nozzle (2) and ventilator duct (3).

INSTALLATION

Installation is basically the reverse order of removal.

SIDE DEFROSTER DUCT

SIDE DEFROSTER DUCT : Removal and Installation

INFOID:000000004786053

REMOVAL

Remove front pillar garnish. Refer to [INT-15. "Exploded View"](#).

DUCT AND GRILLE

< REMOVAL AND INSTALLATION >

INSTALLATION

Installation is basically the reverse order of removal.

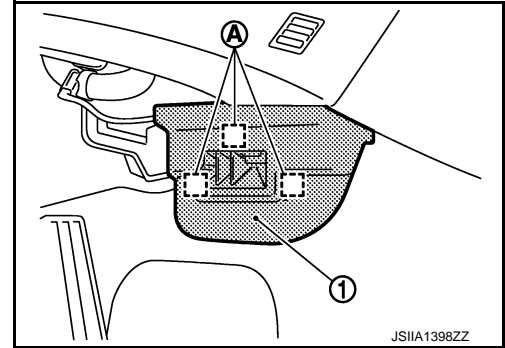
FOOT GRILLE

FOOT GRILLE : Removal and Installation

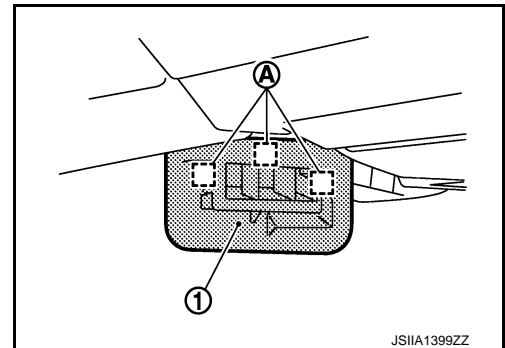
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REMOVAL

1. Remove mounting clips (A), and then remove foot grille (left) (1).



2. Remove mounting clips (A), and then remove foot grille (right) (1).



INSTALLATION

Installation is basically the reverse order of removal.

HEATER DUCT

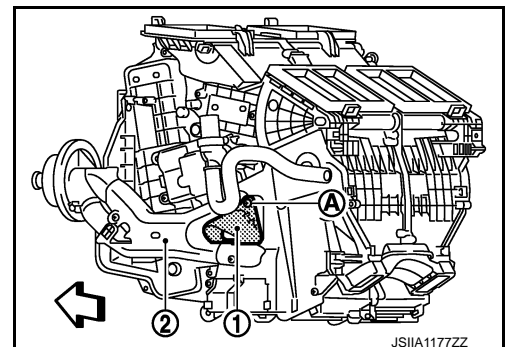
HEATER DUCT : Removal and Installation

INFOID:000000004786056

REMOVAL

Remove mounting screw (A), and then remove heater duct (1) from heater & cooling unit assembly (2).

← : Vehicle front



INSTALLATION

Installation is basically the reverse order of removal.

FOOT DUCT

FOOT DUCT : Removal and Installation

INFOID:000000004786057

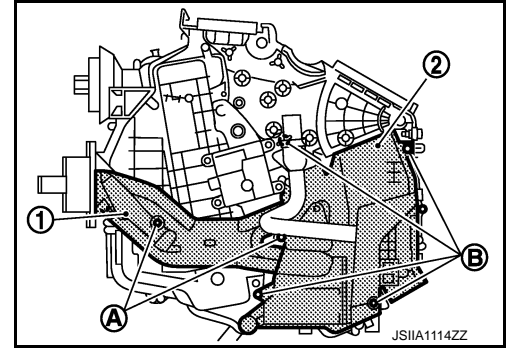
REMOVAL

Driver Side

DUCT AND GRILLE

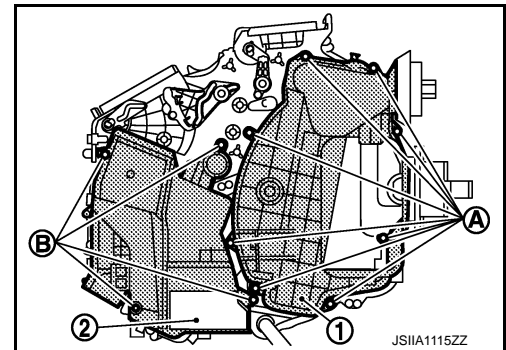
< REMOVAL AND INSTALLATION >

1. Remove heater & cooling unit assembly. Refer to [HA-48, "Exploded View"](#).
2. Remove mounting screws (A), and then remove heater pipe cover (1).
3. Remove mounting screws (B), and then remove foot duct (left) (2).



Passenger Side

1. Set the temperature at 18.0°C (60°F).
CAUTION:
The angle may be out, when installing the air mix door motor to the air mix door, unless the above procedure is performed.
2. Disconnect the battery cable from the negative terminal.
3. Remove heater & cooling unit assembly. Refer to [HA-48, "Exploded View"](#).
4. Remove air mix door motor (passenger side). Refer to [HAC-138, "Exploded View"](#).
5. Remove mode door motor and links. Refer to [HAC-138, "Exploded View"](#).
6. Remove mounting screws (A), and then remove evaporator cover (1).
7. Remove mounting screws (B), and then remove foot duct (right) (2).



INSTALLATION

Installation is basically the reverse order of removal.

REAR FLOOR DUCT 1

REAR FLOOR DUCT 1 : Removal and Installation

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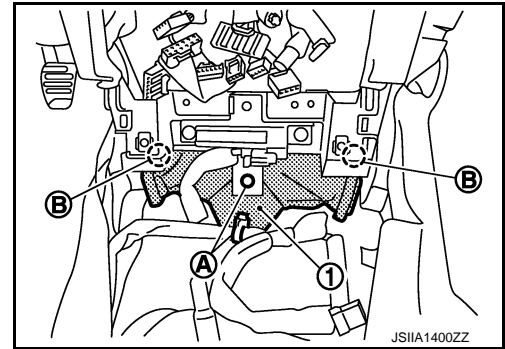
REMOVAL

1. Remove center console assembly. Refer to [IP-24, "Exploded View"](#).
2. Remove Instrument side panel RH. Refer to [IP-12, "Exploded View"](#).
3. Remove AV control unit. Refer to the following.
 - [AV-154, "Exploded View"](#) (BASE AUDIO WITHOUT NAVIGATION)
 - [AV-454, "Exploded View"](#) (BOSE AUDIO WITHOUT NAVIGATION)
 - [AV-738, "Exploded View"](#) (BOSE AUDIO WITH NAVIGATION)

DUCT AND GRILLE

< REMOVAL AND INSTALLATION >

4. Remove mounting clip (A).
5. Remove mounting clips (B), and then peel back floor carpet to a point where rear floor duct 1 (1) is visible.
6. Remove rear floor duct 1 to rightward.



INSTALLATION

Installation is basically the reverse order of removal.

REAR FLOOR DUCT 2

REAR FLOOR DUCT 2 : Removal and Installation

INFOID:000000004788545

REMOVAL

Remove floor trim. Refer to [INT-19. "Exploded View"](#).

INSTALLATION

Installation is basically the reverse order of removal.

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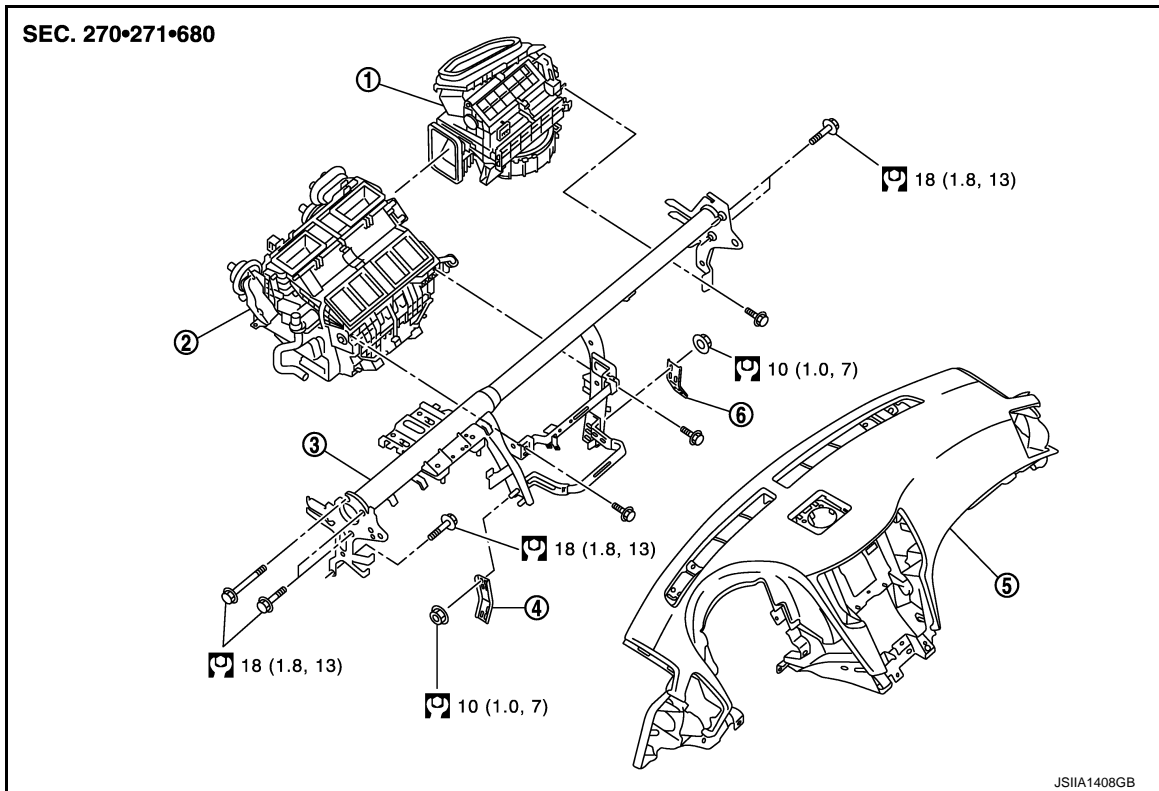
BLOWER UNIT

< REMOVAL AND INSTALLATION >

BLOWER UNIT

Exploded View

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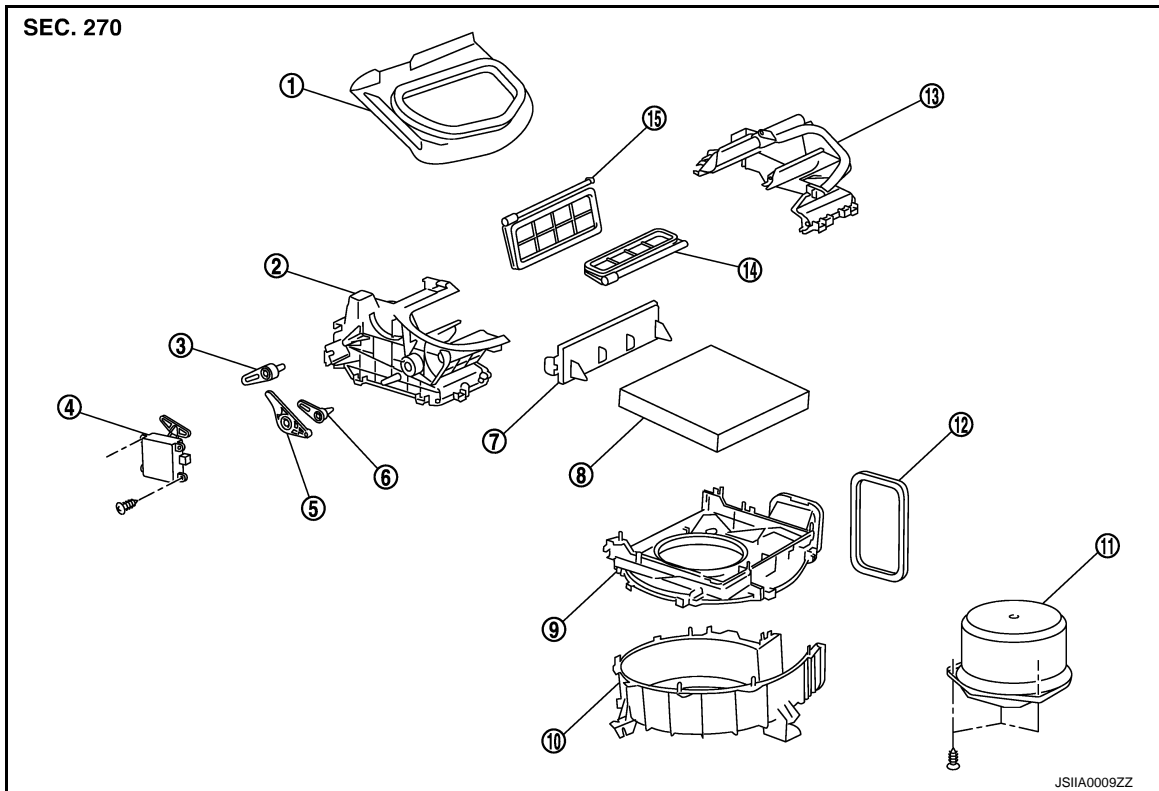
- | | | |
|---------------------------|-----------------------------------|----------------------------|
| 1. Blower unit | 2. Heater & cooling unit assembly | 3. Steering member |
| 4. Instrument stay (left) | 5. Instrument panel assembly | 6. Instrument stay (right) |

Refer to [GI-4, "Components"](#) for symbols in the figure.

DISASSEMBLY

BLOWER UNIT

< REMOVAL AND INSTALLATION >



- | | | |
|-----------------------|---------------------------|------------------------|
| 1. Adapter | 2. Intake box (right) | 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 (left) | 14. Intake door 1 | 15. Intake door 2 |

BLOWER UNIT

BLOWER UNIT : Removal and Installation

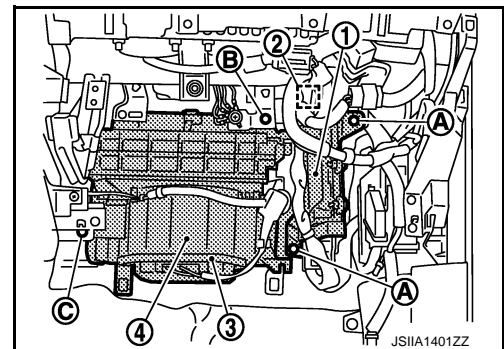
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REMOVAL

1. Remove instrument assist lower panel. Refer to [IP-12. "Exploded View"](#).
2. Disconnect ECM (1) connectors.
3. Remove mounting nuts (A), and then remove ECM with bracket attached.
4. Disconnect intake door motor (2) connector and blower motor (3) connector.
5. Remove mounting bolt (B) and screw (C), from blower unit (4).
6. Remove blower unit.

CAUTION:

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



INSTALLATION

Installation is basically the reverse order of removal.

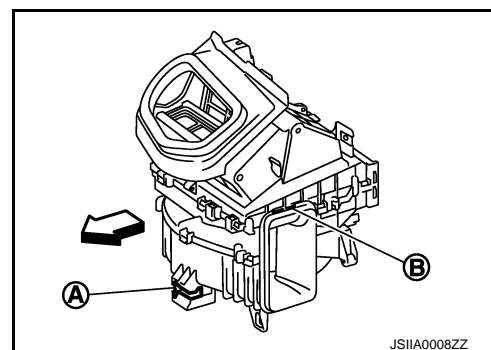
BLOWER UNIT

< REMOVAL AND INSTALLATION >

⇐ Vehicle front

CAUTION:

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



BLOWER MOTOR

BLOWER MOTOR : Removal and Installation

INFOID:000000004786060

REMOVAL

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

INSTALLATION

Installation is basically the reverse order of removal.