SECTION VTL
VENTILATION SYSTEM

CONTENTS

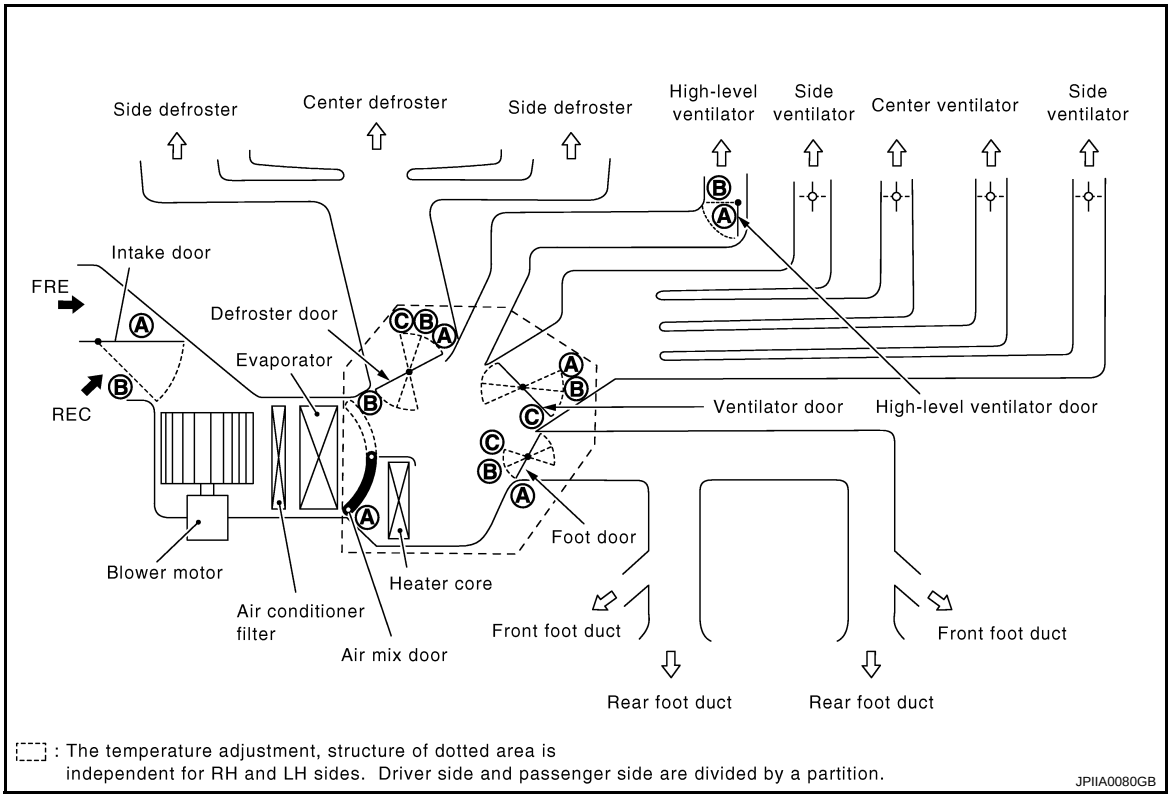
MANUAL AIR CONDITIONER

FUNCTION DIAGNOSIS

SWITCHES AND THEIR CONTROL FUNCTION

System Description

INFOID:0000000001182979



Door \ Position or Switch	DUAL SW ON	DUAL SW OFF	MODE SW VENT	MODE SW B/L	MODE SW FOOT	MODE SW D/F	DEF SW ON	DEF SW OFF	High-level ventilator SW ON	High-level ventilator SW OFF	AUTO SW	Intake SW FRE SW	Intake SW REC SW	Temperature control dial (Driver side)	Temperature control dial (Passenger side)	ON/OFF SW
	DUAL										AUTO					
														16°C ⇔ 30°C	16°C ⇔ 30°C	OFF
Ventilator door	—		Ⓐ	Ⓑ	Ⓒ	Ⓒ	Ⓒ									Ⓒ
Defroster door	—		Ⓐ	Ⓐ	Ⓐ,Ⓑ*1	Ⓒ	Ⓐ		—	—	AUTO	—	—	—	—	Ⓐ,Ⓑ*1
Foot door	—		Ⓐ	Ⓑ	Ⓒ	Ⓑ	Ⓒ									Ⓒ
High-level ventilator door	—		—	—	—	—	—	—	Ⓐ	Ⓑ	—					—
Intake door	—		—			Ⓑ	Ⓑ		—	—	—	Ⓑ*2	Ⓐ*2			AUTO
Air mix door (Driver side)	—		—				—		—	—	AUTO	—		Ⓐ AUTO Ⓑ	—	—
Air mix door (Passenger side)	ON		—				—					—		—	Ⓐ AUTO Ⓑ	
	OFF		—				—					—		Ⓐ AUTO Ⓑ	—	

* 1 This position is selected only when the mode door is automatic controlled.
* 2 Inlet status is displayed under the automatic control.

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AIR DISTRIBUTION

System Description

INFOID:0000000001182980

Fan speed display	Discharge air flow							
	Automatically controls the mode door				Manually controls the mode door			
	VENT	FOOT		DEF	VENT	FOOT		DEF
		Front	Rear			Front	Rear	
1st speed (Initial setting)	15%	39%	26%	20%	19%	49%	32%	–
2nd speed	15%	39%	26%	20%	15%	39%	26%	20%
3rd speed	19%	49%	32%	–	15%	39%	26%	20%
4th speed	19%	49%	32%	–	19%	49%	32%	–

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PRECAUTION

PRECAUTIONS

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

INFOID:0000000001182981

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 AIRBAG” 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 which 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 AIRBAG”.**
- **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.**

Precaution Necessary for Steering Wheel Rotation After Battery Disconnect

INFOID:0000000001182982

NOTE:

- This Procedure is applied only to models with Intelligent Key system and NATS (NISSAN ANTI-THEFT SYSTEM).
- Remove and install all control units after disconnecting both battery cables with the ignition knob in the ″LOCK″ position.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If DTC is detected, perform trouble diagnosis according to self-diagnostic results.

For models equipped with the Intelligent Key system and NATS, an electrically controlled steering lock mechanism is adopted on the key cylinder.
For this reason, if the battery is disconnected or if the battery is discharged, the steering wheel will lock and steering wheel rotation will become impossible.
If steering wheel rotation is required when battery power is interrupted, follow the procedure below before starting the repair operation.

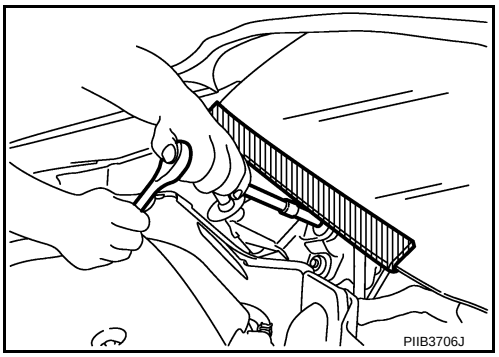
OPERATION PROCEDURE

1. Connect both battery cables.
   NOTE:
   Supply power using jumper cables if battery is discharged.
2. Use the Intelligent Key or mechanical key to turn the ignition switch to the ″ACC″ position. At this time, the steering lock will be released.
3. Disconnect both battery cables. The steering lock will remain released and the steering wheel can be rotated.
4. Perform the necessary repair operation.
5. When the repair work is completed, return the ignition switch to the ″LOCK″ position before connecting the battery cables. (At this time, the steering lock mechanism will engage.)
6. Perform a self-diagnosis check of all control units using CONSULT-III.

Precaution for Procedure without Cowl Top Cover

INFOID:0000000001182983

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



Precautions For Xenon Headlamp Service

INFOID:0000000001182984

WARNING:

Comply with the following warnings to prevent any serious accident.

- **Disconnect the battery cable (negative terminal) or the power supply fuse before installing, removing, or touching the xenon headlamp (bulb included). The xenon headlamp contains high-voltage generated parts.**
- **Never work with wet hands.**
- **Check the xenon headlamp ON-OFF status after assembling it to the vehicle. Never turn the xenon headlamp ON in other conditions. Connect the power supply to the vehicle-side connector. (Turning it ON outside the lamp case may cause fire or visual impairments.)**
- **Never touch the bulb glass immediately after turning it OFF. It is extremely hot.**

CAUTION:

Comply with the following cautions to prevent any error and malfunction.

- **Install the xenon bulb securely. (Insufficient bulb socket installation may melt the bulb, the connector, the housing, etc. by high-voltage leakage or corona discharge.)**
- **Never perform HID circuit inspection with a tester.**
- **Never touch the xenon bulb glass with hands. Never put oil and grease on it.**
- **Dispose of the used xenon bulb after packing it in thick vinyl without breaking it.**
- **Never wipe out dirt and contamination with organic solvent (thinner, gasoline, etc.).**

Working with HFC-134a (R-134a)

INFOID:0000000001182985

CAUTION:

- **CFC-12 (R-12) refrigerant and HFC-134a (R-134a) refrigerant are not compatible. These refrigerants must never be mixed, even in the smallest amounts. If the refrigerants are mixed and compressor malfunction is likely occur.**
- **Use only specified lubricant for the HFC-134a (R-134a) A/C system and HFC-134a (R-134a) components. If lubricant other than that specified is used, compressor malfunction is likely to occur.**
- **The specified HFC-134a (R-134a) lubricant rapidly absorbs moisture from the atmosphere. The following handling precautions must be observed:**
- **When removing refrigerant components from a vehicle, immediately cap (seal) the component to minimize the entry of moisture from the atmosphere.**
- **When installing refrigerant components to a vehicle, never remove the caps (unseal) until just before connecting the components. Connect all refrigerant loop components as quickly as possible to minimize the entry of moisture into system.**
- **Only use the specified lubricant from a sealed container. Immediately reseal containers of lubricant. Without proper sealing, lubricant will become moisture saturated and should not be used.**
- **Never allow lubricant (Nissan A/C System Oil Type S) to come in contact with styrene foam parts. Damage may result.**

General Refrigerant Precaution

INFOID:0000000001182986

WARNING:

- **Avoid breathing A/C refrigerant and lubricant vapor or mist. Exposure may irritate eyes, nose and throat. Use only approved recovery/recycling equipment to discharge HFC-134a (R-134a) refrigerant.**

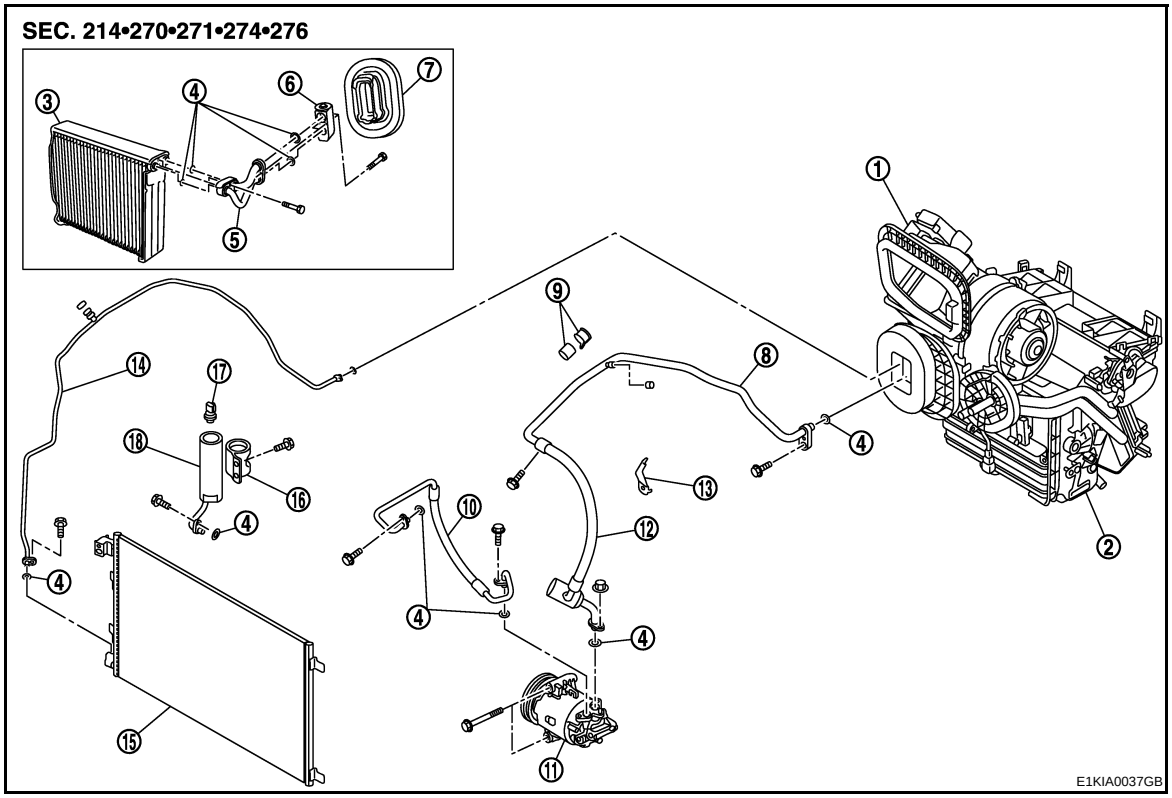
If accidental system discharge occurs, ventilate work area before resuming service. Additional health and safety information may be obtained from refrigerant and lubricant manufacturers.
- **Never release refrigerant into the air. Use approved recovery/recycling equipment to capture the refrigerant every time an air conditioning system is discharged.**
- **Always wear eye and hand protection (goggles and gloves) when working with any refrigerant or air conditioning system.**
- **Never store or heat refrigerant containers above 52°C (126°F).**
- **Never heat a refrigerant container with an open flame; if container warming is required, place the bottom of the container in a warm pail of water.**
- **Never intentionally drop, puncture, or incinerate refrigerant containers.**
- **Keep refrigerant away from open flames: poisonous gas will be produced if refrigerant burns.**
- **Refrigerant will displace oxygen, therefore be certain to work in well ventilated areas to prevent suffocation.**
- **Never pressure test or leak test HFC-134a (R-134a) service equipment and/or vehicle air conditioning systems with compressed air during repair. Some mixtures of air and HFC-134a (R-134a) have been shown to be combustible at elevated pressures. These mixtures, if ignited, may cause injury or property damage. Additional health and safety information may be obtained from refrigerant manufacturers.**

Refrigerant Connection

INFOID:0000000001182987

A new type refrigerant connection has been introduced to all refrigerant lines except the following location.
- Expansion valve to evaporator
- Refrigerant pressure sensor to liquid tank

O-RING AND REFRIGERANT CONNECTION (HR/MR)



1. Heater & blower unit assembly	2. Heater & cooling unit assembly	3. Evaporator
4. O-ring	5. Low pressure pipe 1 and high pressure pipe 2 assembly	6. Expansion valve
7. Heater sealing	8. Low pressure flexible hose and pipe 2	9. Low pressure pipe 2 fixing clamp assembly
10. High pressure flexible hose	11. Compressor	12. Low pressure flexible hose

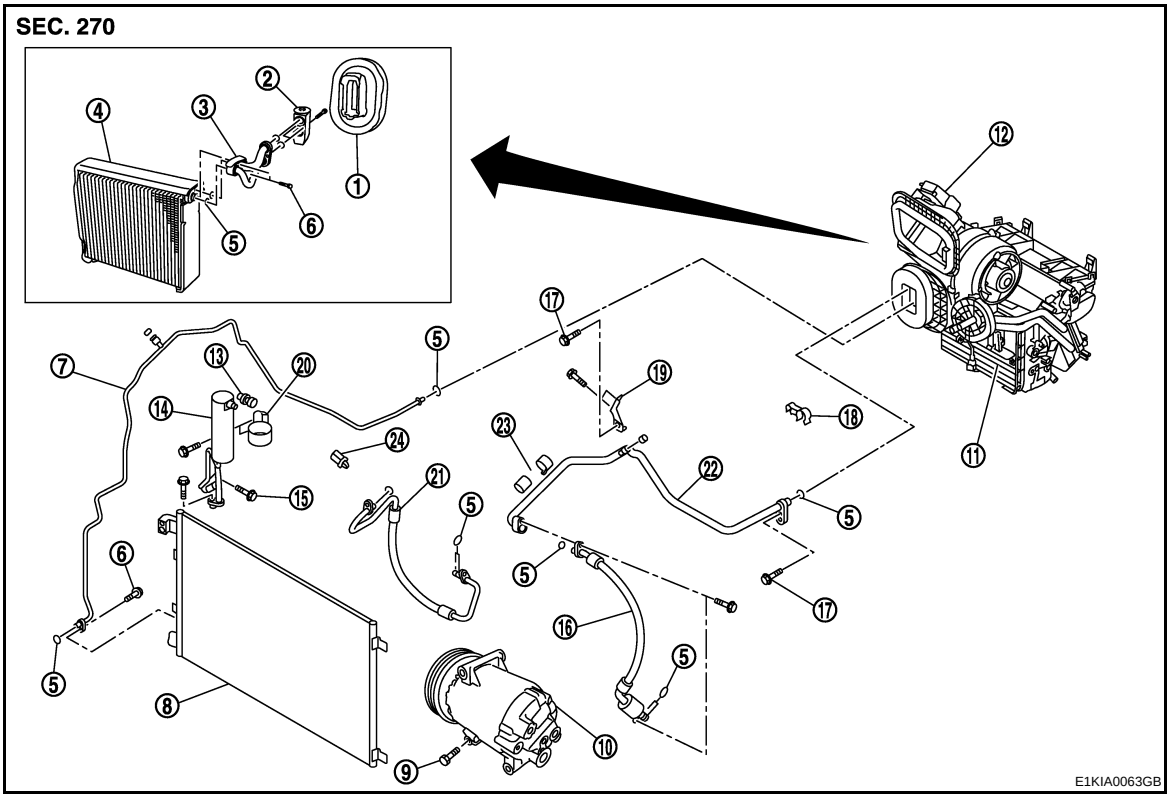
13. Low & high pipe bracket support
14. High pressure pipe 1
15. Condenser assembly
16. Liquid tank fixing bracket
17. Refrigerant pressure sensor
18. Liquid tank

CAUTION:
The new and former refrigerant connections use different O-ring configurations. Never confuse O-rings since they are not interchangeable. If a wrong O-ring is installed, refrigerant may leak at the connection.

O-Ring Part Numbers and Specifications

Connection type	Piping connection point		Part number	QTY	O-ring size
New	Low pressure pipe 2 to expansion valve		92473 N8210	1	16
	High pressure flexible pipe 1 to condenser		92472 N8210	1	12
	High pressure pipe 1 to expansion valve		92471 N8210	1	8
	Low pressure pipe 1 and high pressure pipe 2 assembly to expansion valve	Inlet	92475 71L00	1	12
		Outlet	92475 72L00	1	16
	Low pressure pipe 1 and high pressure pipe 2 assembly to evaporator	Inlet	92475 71L00	1	12
		Outlet	92475 72L00	1	16
	High pressure pipe 1 to liquid tank		92471 N8210	1	8
	Compressor to low pressure flexible hose		92474 N8210	1	16
	Compressor to high pressure flexible hose		92472 N8210	1	12
	Liquid tank to condenser		92473 N8210	1	16

O-RING AND REFRIGERANT CONNECTION (K9K)



1. Heater sealing
2. Expansion valve
3. Evaporator connector pipes
4. Evaporator
5. O-ring
6. Connector pipe fixing bolt
7. High pressure pipe
8. Condenser assembly
9. Fixing bolt
10. Compressor
11. Heater & cooling unit assembly
12. Heater & Blower unit assembly
13. Refrigerant pressure sensor
14. Liquid tank
15. Liquid tank fixing screw

16. Low pressure flexible hose
17. Fixing bolt
18. Pipes fixing clip
19. Low & high pressure pipe bracket
20. Liquid tank fixing bracket
21. High pressure flexible hose
22. Low pressure pipe
23. Low pressure pipe fixing clamp assembly
24. Pipe mantening clip

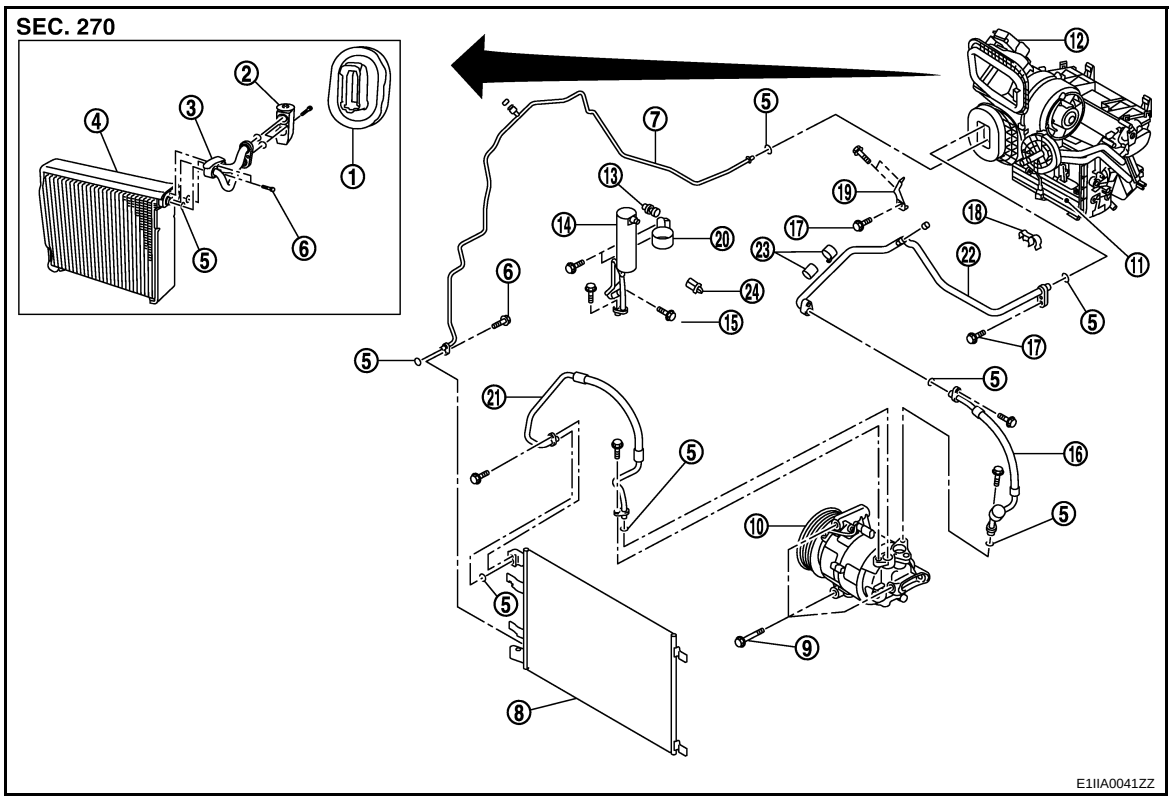
CAUTION:

The new and former refrigerant connections use different O-ring configurations. Never confuse O-rings since they are not interchangeable. If a wrong O-ring is installed, refrigerant may leak at the connection.

O-Ring Part Numbers and Specifications

Connection type	Piping connection point		Part number	QTY	O-ring size
New	Low pressure flexible hose to Low pressure pipe 2		92473 N8210	1	16
	Low pressure pipe 2 to expansion valve		92473 N8210	1	16
	High pressure flexible pipe 1 to condenser		92472 N8210	1	12
	High pressure pipe 1 to expansion valve		92471 N8210	1	8
	Low pressure pipe 1 and high pressure	Inlet	92475 71L00	1	12
	Pipe 2 assembly to expansion valve	Outlet	92475 72L00	1	16
	Low pressure pipe 1 and high pressure	Inlet	92475 71L00	1	12
	Pipe 2 assembly to evaporator	Outlet	92475 72L00	1	16
	High pressure pipe 1 to liquid tank		92471 N8210	1	8
	Compressor to low pressure flexible hose		77030 65315	2	16
	Compressor to high pressure flexible hose		77030 65316	2	12
	Liquid tank to condenser		92473 N8210	2	16

O-RING AND REFRIGERANT CONNECTION (M9R)



1. Heater sealing
2. Expansion valve
3. Low pressure pipe 1 and high pressure pipe 2 assembly
4. Evaporator
5. O-ring
6. Connector pipe fixing bolt
7. High pressure pipe 1
8. Condenser assembly
9. Fixing bolt
10. Compressor
11. Heater & cooling unit assembly
12. Heater & blower unit assembly
13. Refrigerant pressure sensor
14. Liquid tank
15. Liquid tank fixing screw
16. Low pressure flexible hose
17. Fixing bolt
18. Pipes fixing clip
19. Low & high pressure pipe bracket
20. Liquid tank fixing bracket
21. High pressure flexible hose
22. Low pressure pipe 2
23. Low pressure pipe fixing clamp assembly
24. Pipe mantening clip

CAUTION:
The new and former refrigerant connections use different O-ring configurations. Never confuse O-rings since they are not interchangeable. If a wrong O-ring is installed, refrigerant may leak at the connection.

O-Ring Part Numbers and Specifications

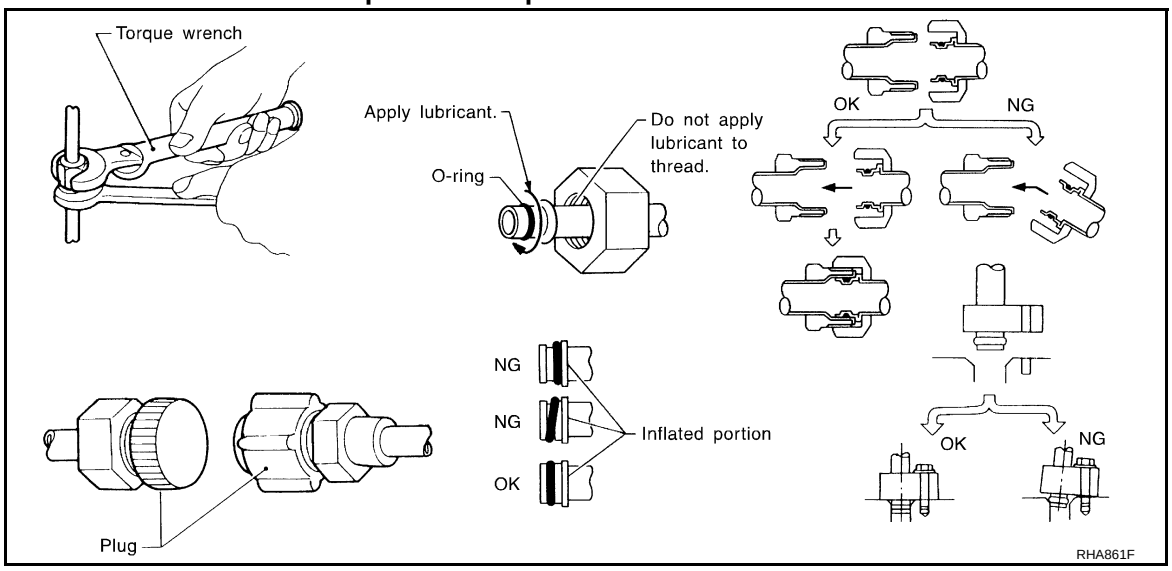
Connection type	Piping connection point		Part number	QTY	O-ring size
New	Low pressure pipe 2 to expansion valve		92473 N8210	1	16
	High pressure flexible pipe 1 to condenser		92472 N8210	1	12
	High pressure pipe 1 to expansion valve		92471 N8210	1	8
	Low pressure pipe 1 and high pressure	Inlet	92475 71L00	1	12
	pipe 2 assembly to expansion valve	Outlet	92475 72L00	1	16
	Low pressure pipe 1 and high pressure	Inlet	92475 71L00	1	12
	pipe 2 assembly to evaporator	Outlet	92475 72L00	1	16
	High pressure pipe 1 to liquid tank		92471 N8210	1	8
	Compressor to low pressure flexible hose		92474 N8210	1	16
	Compressor to high pressure flexible hose		92472 N8210	1	12
	Liquid tank to condenser		92473 N8210	1	16

WARNING:
Make sure all refrigerant is discharged into the recycling equipment and the pressure in the system is less than atmospheric pressure. Then gradually loosen the discharge side hose fitting and remove it.
CAUTION:
When replacing or cleaning refrigerant cycle components, observe the following.
- **When the compressor is removed, store it in the same way at it is when mounted on the car. Failure to do so will cause lubricant to enter the low-pressure chamber.**
- **When connecting tubes, always use a torque wrench and a back-up wrench.**
- **After disconnecting tubes, immediately plug all openings to prevent entry of dust and moisture.**
- **When installing an air conditioner in the vehicle, connect the pipes at the final stage of the operation. Never remove the seal caps of pipes and other components until just before required for connection.**
- **Allow components stored in cool areas to warm to working area temperature before removing seal caps. This prevents condensation from forming inside A/C components.**
- **Thoroughly remove moisture from the refrigeration system before charging the refrigerant.**
- **Always replace used O-rings.**
- **When connecting tube, apply lubricant to circle of the O-rings shown in illustration. Be careful not to apply lubricant to threaded portion.**

Name : Nissan A/C System Oil Type S

- **O-ring must be closely attached to the groove portion of tube.**
- **When replacing the O-ring, be careful not to damage O-ring and tube.**
- **Connect tube until a click can be heard, then tighten the nut or bolt by hand. Make sure that the O-ring is installed to tube correctly.**

- **After connecting line, perform leak test and make sure that there is no leakage from connections. When the refrigerant leaking point is found, disconnect that line and replace the O-ring. Then tighten connections of seal seat to the specified torque.**



Service Equipment

INFOID:0000000001182988

RECOVERY/RECYCLING EQUIPMENT

Be certain to follow the manufacturer's instructions for machine operation and machine maintenance. Never introduce any refrigerant other than that specified into the machine.

ELECTRICAL LEAK DETECTOR

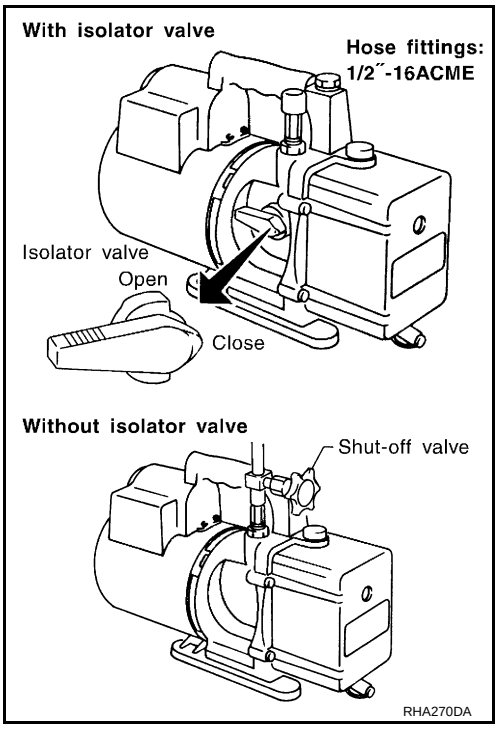
Be certain to follow the manufacturer's instructions for tester operation and tester maintenance.

VACUUM PUMP

The lubricant contained inside the vacuum pump is not compatible with the specified lubricant for HFC-134a (R-134a) A/C systems. The vent side of the vacuum pump is exposed to atmospheric pressure. So the vacuum pump lubricant may migrate out of the pump into the service hose. This is possible when the pump is switched off after evacuation (vacuuming) and hose is connected to it.
To prevent this migration, use a manual valve placed near the hose-to-pump connection, as follows.

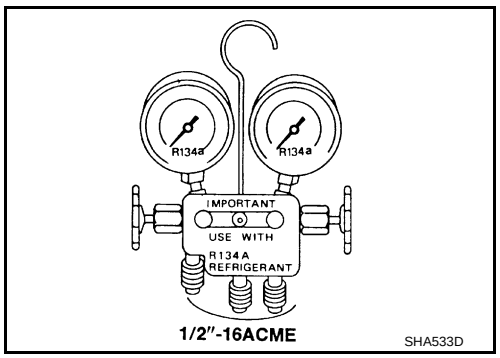
- Usually vacuum pumps have a manual isolator valve as part of the pump. Close this valve to isolate the service hose from the pump.
- For pumps without an isolator, use a hose equipped with a manual shut-off valve near the pump end. Close the valve to isolate the hose from the pump.
- If the hose has an automatic shut-off valve, disconnect the hose from the pump. As long as the hose is connected, the valve is open and lubricating oil may migrate.

Some one-way valves open when vacuum is applied and close under no vacuum condition. Such valves may restrict the pump's ability to pull a deep vacuum and are not recommended.



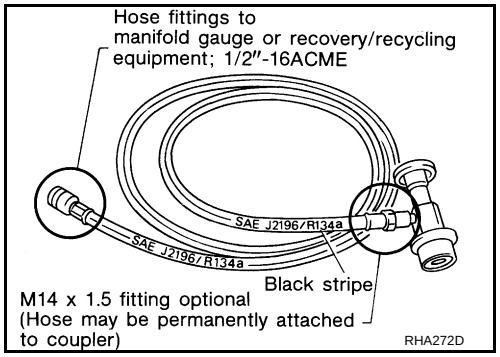
MANIFOLD GAUGE SET

Be certain that the gauge face indicates HFC-134a or R-134a. Be sure the gauge set has 1/2″-16 ACME threaded connections for service hoses. Confirm the set has been used only with refrigerant HFC-134a (R-134a) and specified lubricants.



SERVICE HOSES

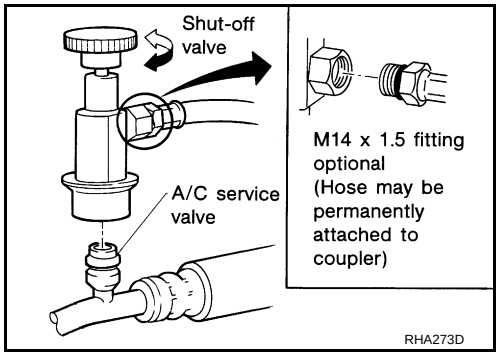
Be certain that the service hoses display the markings described (colored hose with black stripe). All hoses must include positive shut-off devices (either manual or automatic) near the end of the hoses opposite to the manifold gauge.



SERVICE COUPLERS

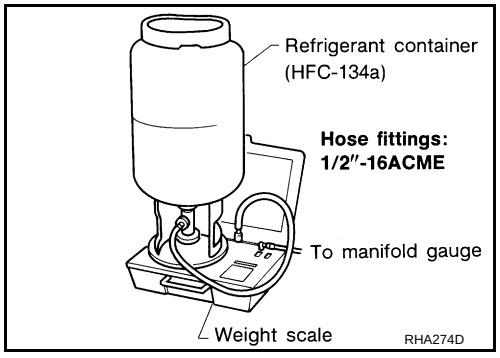
Never attempt to connect HFC-134a (R-134a) service couplers to a CFC-12 (R-12) A/C system. The HFC-134a (R-134a) couplers will not properly connect to the CFC-12 (R-12) system. However, if an improper connection is attempted, discharging and contamination may occur.

Shut-off valve rotation	A/C service valve
Clockwise	Open
Counterclockwise	Close



REFRIGERANT WEIGHT SCALE

Verify that no refrigerant other than HFC-134a (R-134a) and specified lubricants have been used with the scale. If the scale controls refrigerant flow electronically, the hose fitting must be 1/2″-16 ACME.



CHARGING CYLINDER

Using a charging cylinder is not recommended. Refrigerant may be vented into air from cylinder's top valve when filling the cylinder with refrigerant. Also, the accuracy of the cylinder is generally less than that of an electronic scale or of quality recycle/recharge equipment.

COMPRESSOR

General Precautions

INFOID:0000000001182989

CAUTION:

- **Plug all openings to prevent moisture and foreign matter from entering.**
- **When the compressor is removed, store it in the same way at it is when mounted on the car.**
- **When replacing or repairing compressor, follow “Maintenance of Lubricant Quantity in Compressor” exactly. Refer to HA-29, "Adjustment".**
- **Keep friction surfaces between clutch and pulley clean. If the surface is contaminated with lubricant, wipe it off by using a clean waste cloth moistened with thinner.**
- **After compressor service operation, turn the compressor shaft by hand more than five turns in both directions. This will equally distribute lubricant inside the compressor. After the compressor is installed, let the engine idle and operate the compressor for one hour.**
- **After replacing the compressor magnet clutch, apply voltage to the new one and check for normal operation.**

FLUORESCENT LEAK DETECTOR

General Precautions

INFOID:0000000001182990

CAUTION:

- **The A/C system contains a fluorescent leak detection dye used for locating refrigerant leaks. An ultraviolet (UV) lamp is required to illuminate the dye when inspecting for leaks.**
- **Always wear fluorescence enhancing UV safety goggles to protect your eyes and enhance the visibility of the fluorescent dye.**
- **The fluorescent dye leak detector is not a replacement for an electrical leak detector (SST: J-41995). The fluorescent dye leak detector should be used in conjunction with an electrical leak detector (SST: J-41995) to pin-point refrigerant leaks.**
- **For the purpose of safety and customer's satisfaction, read and follow all manufacture's operating instructions and precautions prior to performing the work.**
- **A compressor shaft seal should not necessarily be repaired because of dye seepage. The compressor shaft seal should only be repaired after confirming the leak with an electrical leak detector (SST: J-41995).**
- **Always remove any remaining dye from the leak area after repairs are completed to avoid a misdiagnosis during a future service.**
- **Never allow dye to come into contact with painted body panels or interior components. If dye is spilled, clean immediately with the approved dye cleaner. Fluorescent dye left on a surface for an extended period of time cannot be removed.**
- **Never spray the fluorescent dye cleaning agent on hot surfaces (engine exhaust manifold, etc.).**
- **Never use more than one refrigerant dye bottle (1/4 ounce /7.4 cc) per A/C system.**
- **Leak detection dyes for HFC-134a (R-134a) and CFC-12 (R-12) A/C systems are different. Never use HFC-134a (R-134a) leak detection dye in CFC-12 (R-12) A/C system, or CFC-12 (R-12) leak detection dye in HFC-134a (R-134a) A/C system, or A/C system damage may result.**
- **The fluorescent properties of the dye will remain for three years or a little over unless a compressor malfunction occurs.**

IDENTIFICATION

NOTE:

Vehicles with factory installed fluorescent dye have a green label.
Vehicles without factory installed fluorescent dye have a blue label.

IDENTIFICATION LABEL FOR VEHICLE

Vehicles with factory installed fluorescent dye have the identification label on the front side of hood.

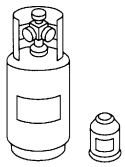
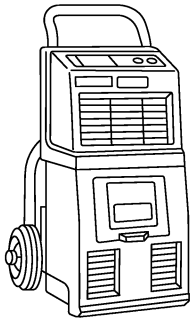
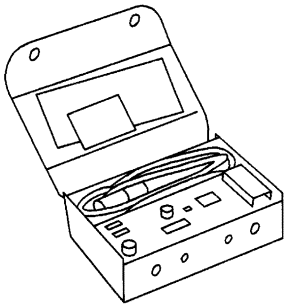
PREPARATION

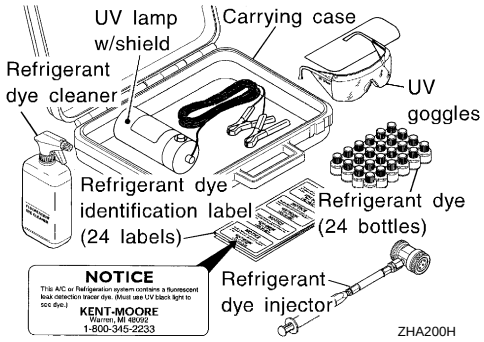
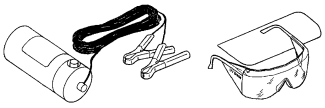
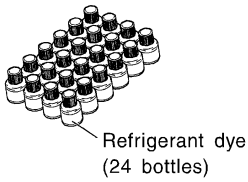
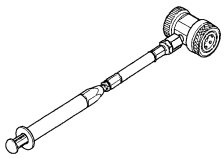
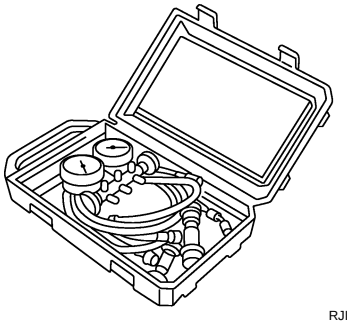
PREPARATION

HFC-134a (R-134a) Service Tools and Equipment

INFOID:0000000001182991

Never mix HFC-134a (R-134a) refrigerant and/or its specified lubricant with CFC-12 (R-12) refrigerant and/or its lubricant.
Separate and non-interchangeable service equipment must be used for handling each type of refrigerant/lubricant.
Refrigerant container fittings, service hose fittings and service equipment fittings (equipment which handles refrigerant and/or lubricant) are different between CFC-12 (R-12) and HFC-134a (R-134a). This is to avoid mixed use of the refrigerants/lubricant.
Adapters that convert one size fitting to another must never be used: refrigerant/lubricant contamination will occur and compressor malfunction will result.

Tool number Tool name		Description
HFC-134a (R-134a) refrigerant	 S-NT196	Container color: Light blue Container marking: HFC-134a (R-134a) Fitting size: Thread size • Large container 1/2″-16 ACME
KLH00-PAGS0 Nissan A/C System Oil Type S (DH-PS)	 S-NT197	Type: Polyalkylene glycol oil (PAG), type S (DH-PS) Application: HFC-134a (R-134a) wobble (swash) plate compressors (Nissan only) Lubricity: 40 m ℓ (1.4 Imp fl oz.)
Recovery/Recycling/ Recharging equipment (ACR4)	 RJIA0195E	Function: Refrigerant recovery and recycling and recharging
Electrical leak detector	 A/C leak detector SHA705EB	Power supply: DC 12V (Cigarette lighter)

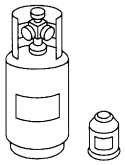
Tool number Tool name		Description
(J-43926) Refrigerant dye leak detection kit Kit includes: (J-42220) UV lamp and UV safety goggles (J-41459) HFC-134a (R-134a) dye injector Use with J-41447, 1/4 ounce bottle (J-41447) HFC-134a (R-134a) fluorescent leak detection dye (Box of 24, 1/4 ounce bottles) (J-43872) Refrigerant dye cleaner	 ZHA200H	Power supply: DC 12V (Battery terminal)
(J-42220) UV lamp and UV safety goggles	 SHA438F	Power supply: DC 12V (Battery terminal) For checking refrigerant leak when fluorescent dye is installed in A/C system Includes: UV lamp and UV safety goggles
(J-41447) HFC-134a (R-134a) fluorescent leak detection dye (Box of 24, 1/4 ounce bottles)	 SHA439F	Application: For HFC-134a (R-134a) PAG oil Container: 1/4 ounce (7.4 cc) bottle (Includes self-adhesive dye identification labels for affixing to vehicle after charging system with dye.)
(J-41459) HFC-134a (R-134a) dye injector Use with J-41447, 1/4 ounce bottle	 SHA440F	For injecting 1/4 ounce of fluorescent leak detection dye into A/C system.
(J-43872) Refrigerant dye cleaner	 SHA441F	For cleaning dye spills.
Manifold gauge set (with hoses and couplers)	 RJIA0196E	Identification: • The gauge face indicates HFC-134a (R-134a). Fitting size: Thread size • 1/2″ -16 ACME

Sealant or/and Lubricant

INFOID:0000000001182992

HFC-134a (R-134a) Service Tool and Equipment

- Never mix HFC-134a (R-134a) refrigerant and/or its specified lubricant with CFC-12 (R-12) refrigerant and/or its lubricant.
- Separate and non-interchangeable service equipment must be used for handling each type of refrigerant/lubricant.
- Refrigerant container fittings, service hose fittings and service equipment fittings (equipment which handles refrigerant and/or lubricant) are different between CFC-12 (R-12) and HFC-134a (R-134a). This is to avoid mixed use of the refrigerants/lubricant.
- Never use adapters that convert one size fitting to another: refrigerant/lubricant contamination occurs and compressor malfunction may result.

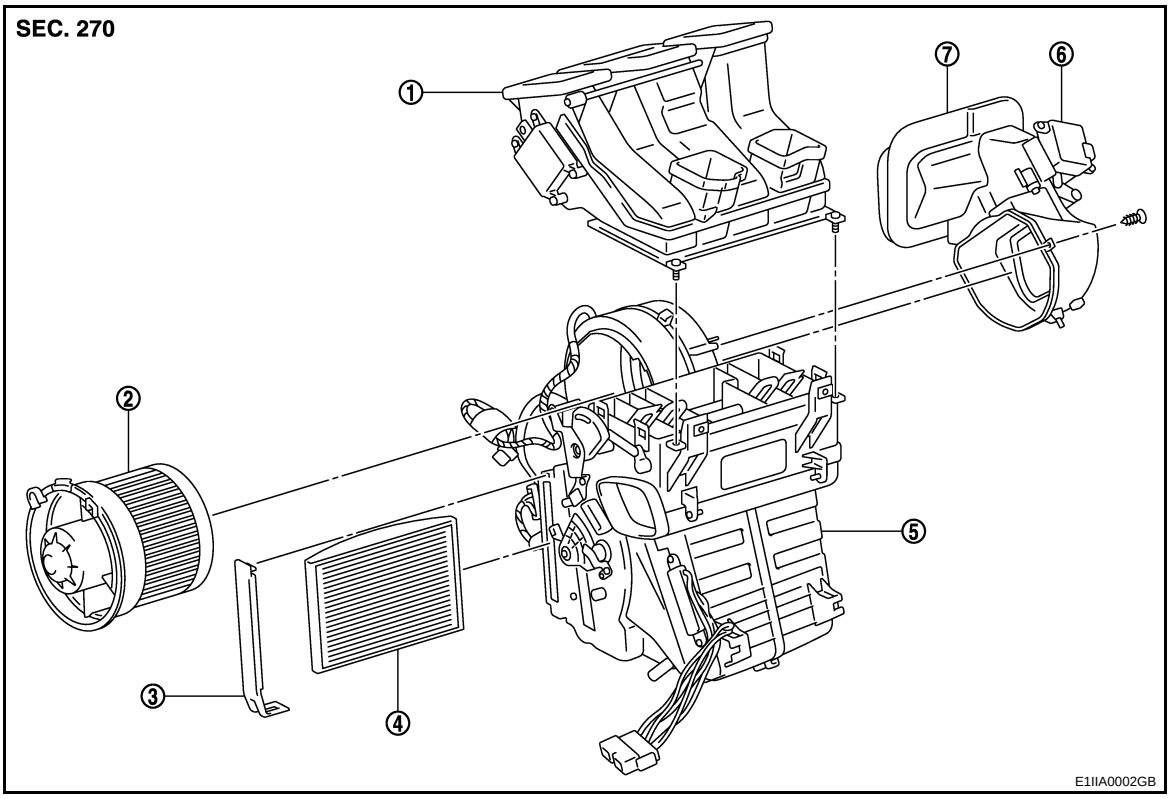
Tool name		Description
HFC-134a (R-134a) refrigerant	 S-NT196	Container color: Light blue Container marking: HFC-134a (R-134a) Fitting size: Thread size • Large container 1/2″-16 ACME
Nissan A/C System Oil Type S (DH-PS)	 S-NT197	Type: Polyalkylene glycol oil (PAG), type S (DH-PS) Application: HFC-134a (R-134a) swash plate compressors (Nissan only) Capacity: 40 m ℓ (1.4 US fl oz., 1.4 Imp fl oz.)

ON-VEHICLE MAINTENANCE

AIR CONDITIONER FILTER

Exploded View

INFOID:0000000001182993



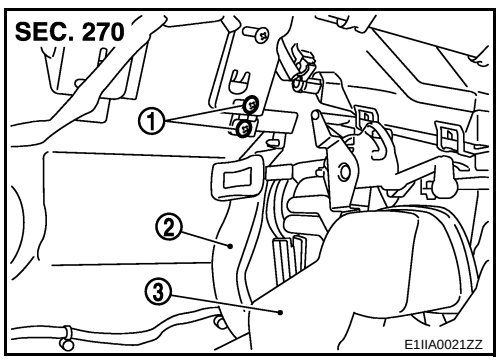
1. Hi-Level ventilation door unit assembly
2. Blower motor assembly
3. Filter cover
4. In-cabin microfilter
5. Blower unit
6. Intake door motor
7. Intake door unit assembly

Removal and Installation

INFOID:0000000001182994

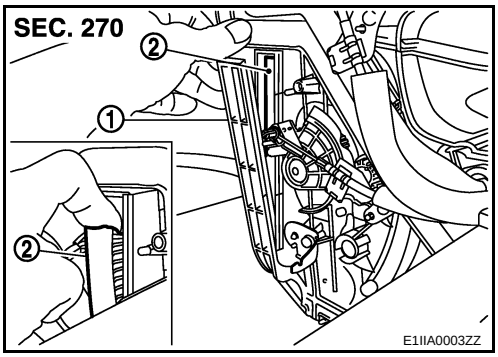
REMOVAL

1. Remove passenger instrument lower panel. Refer to IP-12, "Removal and Installation".
2. Remove glove box assembly (RHD). Refer to IP-12, "Removal and Installation".
3. Remove glove box air duct (RHD).
   - Remove fixing screw (1)
   - Pull outside to remove air duct (2)



4. Remove LH foot duct (3). Refer to VTL-56, "FOOT DUCT : Removal and Installation".
5. Remove LH lower instrument panel (LHD).

6. Remove accelerator pedal assembly (LHD). Refer to ACC-3, "Removal and Installation".
7. Remove clutch and brake pedal assembly (LHD). Refer to CL-9, "Removal and Installation" (Clutch pedal), BR-17, "Removal and Installation" (Brake pedal for LHD), BR-64, "Removal and Installation" (Brake pedal for RHD).
8. Remove filter cover (1) then remove air conditioner filter (2).



INSTALLATION

Installation is basically the reverse order of removal.

Replacement

INFOID:0000000001182995

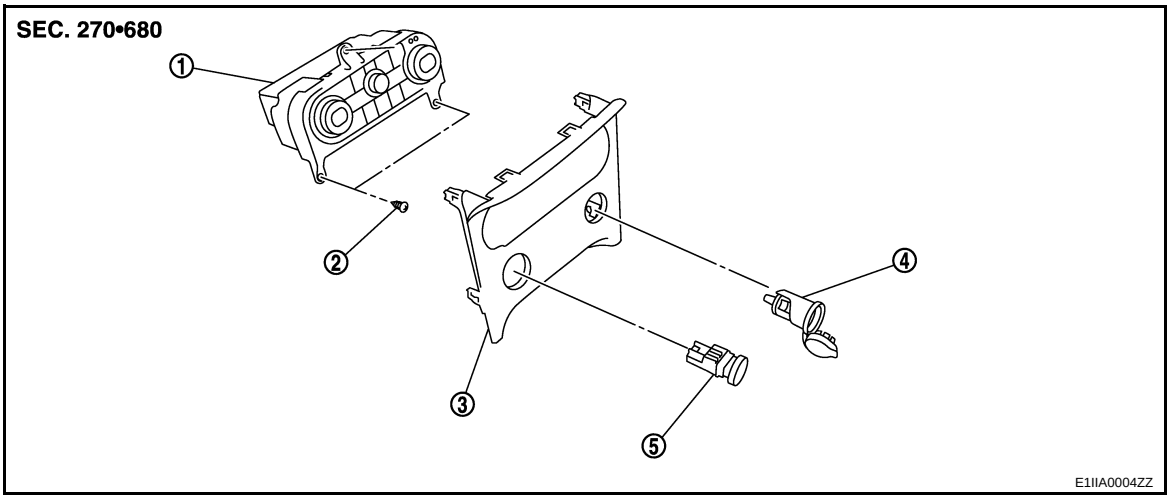
Replace air conditioner filter.
Refer to MA-9, "Periodic Maintenance".
When replacing filter, affix a caution label inside the glove box.

ON-VEHICLE REPAIR

PRESET SWITCH

Exploded View

INFOID:0000000001182996



1. Preset switch
2. Preset switch fixing screw
3. Cluster lid D
4. Power socket
5. Button

Removal and Installation

INFOID:0000000001182997

REMOVAL

Refer to IP-12, "Removal and Installation".

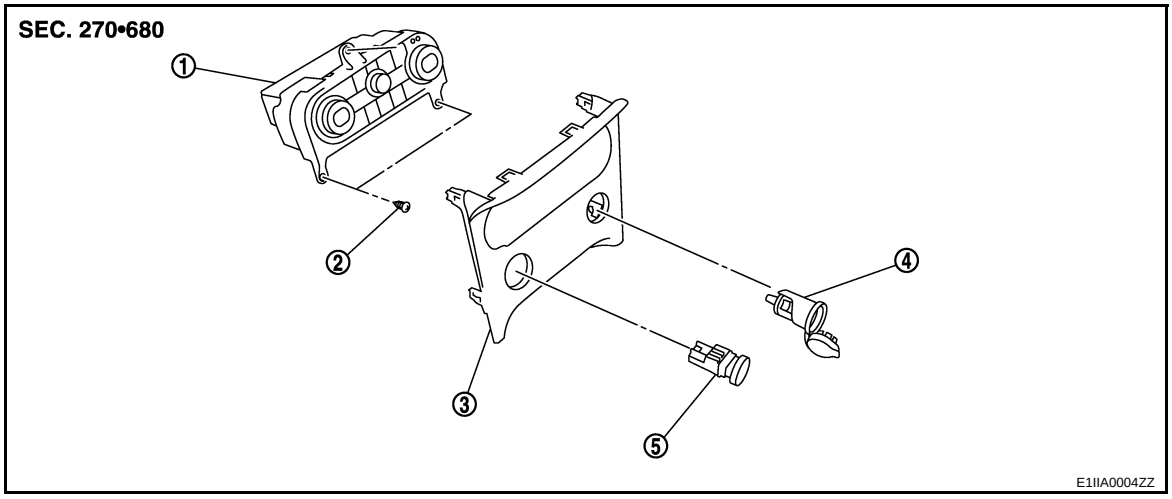
INSTALLATION

Installation is basically the reverse order of removal.

AUTO AMP.

Exploded View

INFOID:0000000001182998



1. Auto amp.
2. Preset switch fixing screw
3. Cluster lid D
4. Power socket
5. Button

Removal and Installation

INFOID:0000000001182999

REMOVAL

1. Remove cluster lid D. Refer to IP-12, "Removal and Installation".
2. Remove cluster lid C. Refer to IP-12, "Removal and Installation".
3. Remove auto amp. fixing screws from instrument panel, then pull auto amp. assembly, and disconnect harness connectors.
4. Remove auto amp. assembly.

INSTALLATION

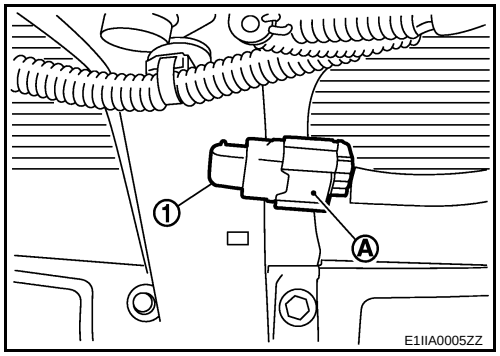
Installation is basically the reverse order of removal.

AMBIENT SENSOR

Exploded View

INFOID:0000000001183000

1. Ambient sensor

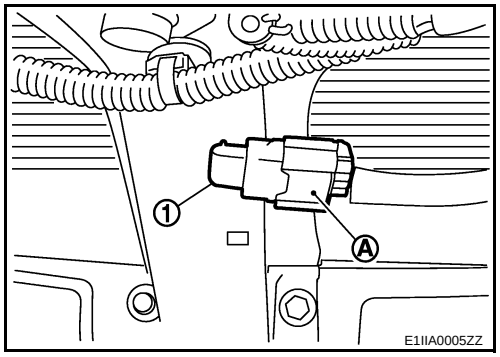


Removal and Installation

INFOID:0000000001183001

REMOVAL

1. Disconnect ambient sensor connector (A), and then remove ambient sensor(1).



INSTALLATION

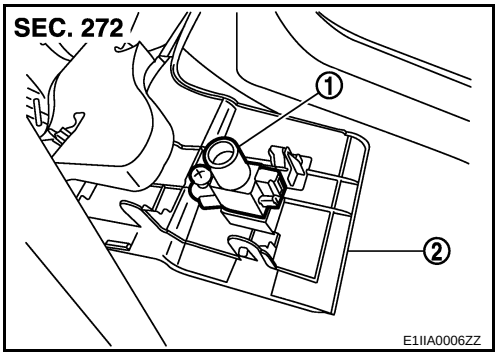
Installation is basically the reverse order of removal.

IN-VEHICLE SENSOR

Exploded View

INFOID:0000000001183002

1. In-vehicle sensor
2. instrument driver lower panel

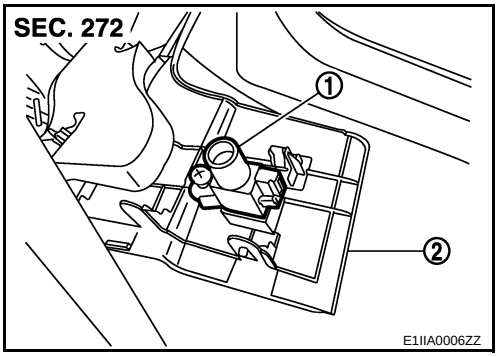


Removal and Installation

INFOID:0000000001183003

REMOVAL

1. Remove instrument driver lower panel (2). Refer to IP-12, "Removal and Installation".
2. Disconnect harness connector.
3. Remove hose tube from in-vehicle sensor (1).
4. Remove mounting screws, and then remove in-vehicle sensor.



INSTALLATION

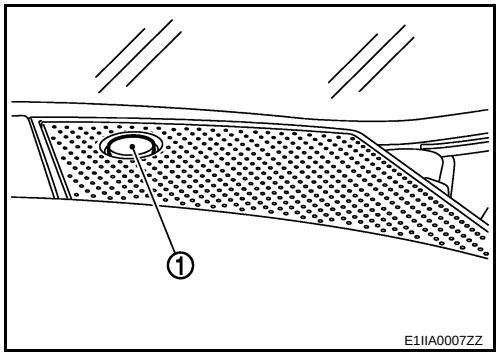
Installation is basically the reverse order of removal.

SUNLOAD SENSOR

Exploded View

INFOID:0000000001183004

1. Sunload sensor

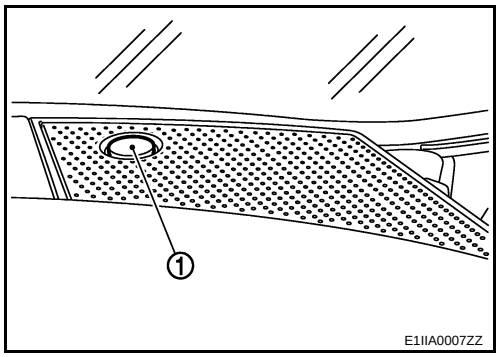


Removal and Installation

INFOID:0000000001183005

REMOVAL

1. Remove speaker grille (left). Refer to IP-12, "Removal and Installation".
2. Disconnect sunload sensor connector, and then remove sunload sensor (1).



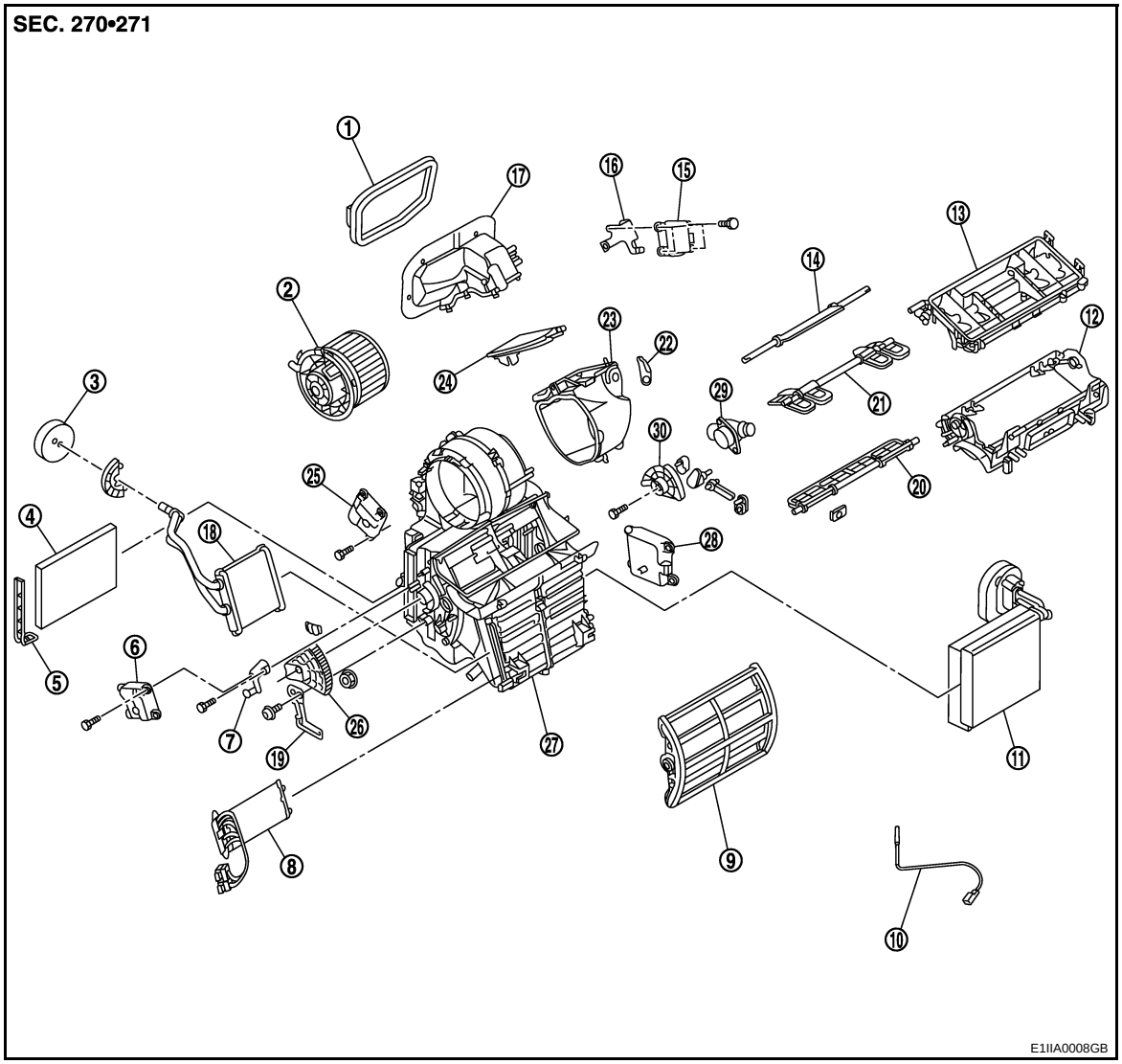
INSTALLATION

Installation is basically the reverse order of removal.

INTAKE SENSOR

Exploded View

INFOID:0000000001183006



1. Intake connector seal
2. Blower motor assembly
3. Heater pipe seal
4. Air conditioner filter
5. Air conditioner filter cover
6. Air mix door motor (left)
7. Air mix door lever
8. Electrical heater
9. Air mix door (slide door)
10. Intake sensor
11. Evaporator and expansion valve unit
12. Center case (lower)
13. Center case (upper)
14. Defroster door
15. Intake door motor
16. Intake motor bracket
17. Intake connector
18. Heater core
19. Air mix door link bracket
20. Front ventilator door
21. Slide ventilator door
22. Intake door lever
23. Intake door box
24. Intake door
25. More door motor
26. Air mix door link (left)
27. Heater and cooling unit case
28. Air mix door motor (right)
29. Aspirator
30. Air mix door link (right)

Removal and Installation

INFOID:0000000001183007

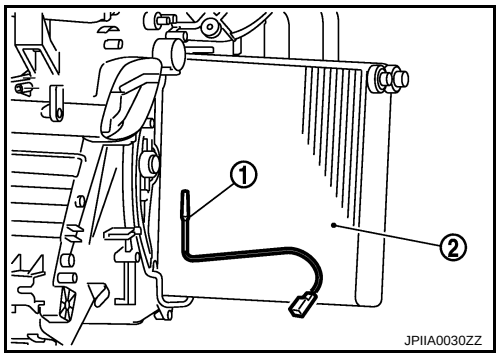
REMOVAL

1. Remove passenger front Air Bag. Refer to SR-8, "Removal and Installation".
2. Remove Instrument Panel. Refer to IP-12, "Removal and Installation".

3. Remove heater and cooling unit case.
4. Remove low-pressure pipe 1 and high-pressure pipe 2. Refer to HA-50, "Removal and Installation" (MR/HR), HA-102, "Removal and Installation" (K9K).

CAUTION:
Cap or wrap the joint of low-pressure pipe 1, 2 and high-pressure pipe 1, 2 with suitable material such as vinyl tape to avoid the entry of air.

5. Slide evaporator (2) to passenger side, and then remove intake sensor (1).



INSTALLATION

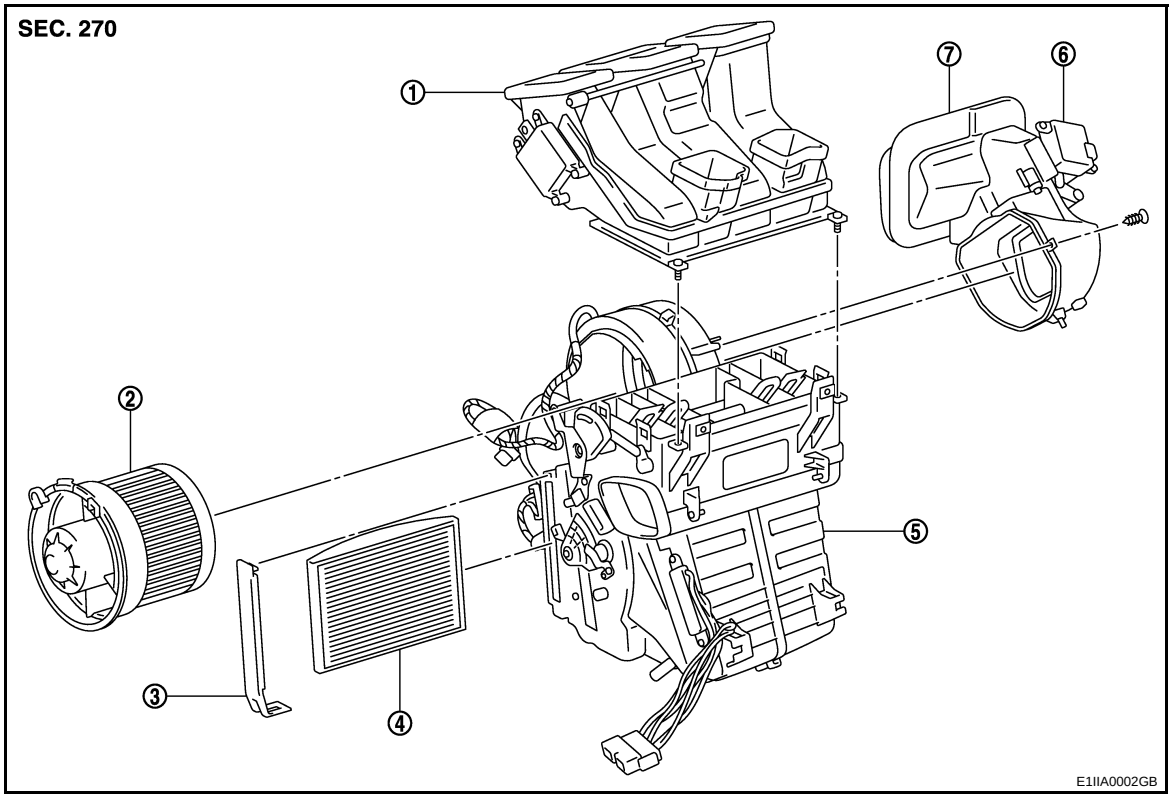
Installation is basically the reverse order of removal.

CAUTION:
- **Replace O-rings of low-pressure pipe 1, 2 and high-pressure pipe 1, 2 with new ones, and then apply compressor oil to it when installing it.**
- **Mark the mounting position of intake sensor bracket prior to removal so that the reinstalled sensor can be located in the same position.**
- **Female-side piping connection is thin and easy to deform. Slowly insert the male-side piping straight in axial direction.**
- **Insert piping securely until a click is heard.**
- **After piping connection is completed, pull male-side piping by hand to make sure that connection does not come loose.**
- **When recharging refrigerant, check for leaks.**

BLOWER UNIT

Exploded View

INFOID:0000000001183008



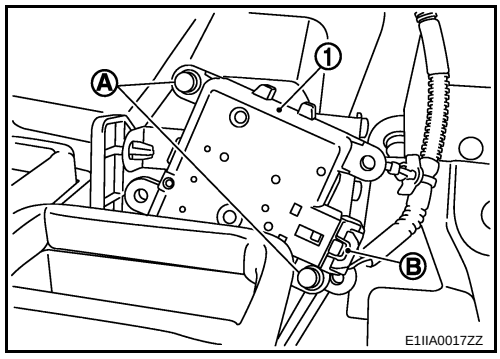
1. Hi-Level ventilation door unit assembly
2. Blower motor assembly
3. Filter cover
4. In-cabin microfilter
5. Blower unit
6. Intake door motor
7. Intake door unit assembly

Removal and Installation

INFOID:0000000001183009

REMOVAL

1. Remove Instrument Panel. Refer to IP-12, "Removal and Installation".
2. Remove steering member.
3. Remove Heater and cooling unit assembly. Refer to VTL-33, "Removal and Installation".
4. Remove harness fixing clip from upper intake box.
5. Remove door motor harness connector (B).
6. Remove lower intake box fixing screw from heater and cooling case.
7. Remove intake door motor (1).
   - Remove fixing screws (A).
   - Remove bracket support fixing screws and bracket support.
8. Remove blower motor.Refer to VTL-30, "Removal and Installation".



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.

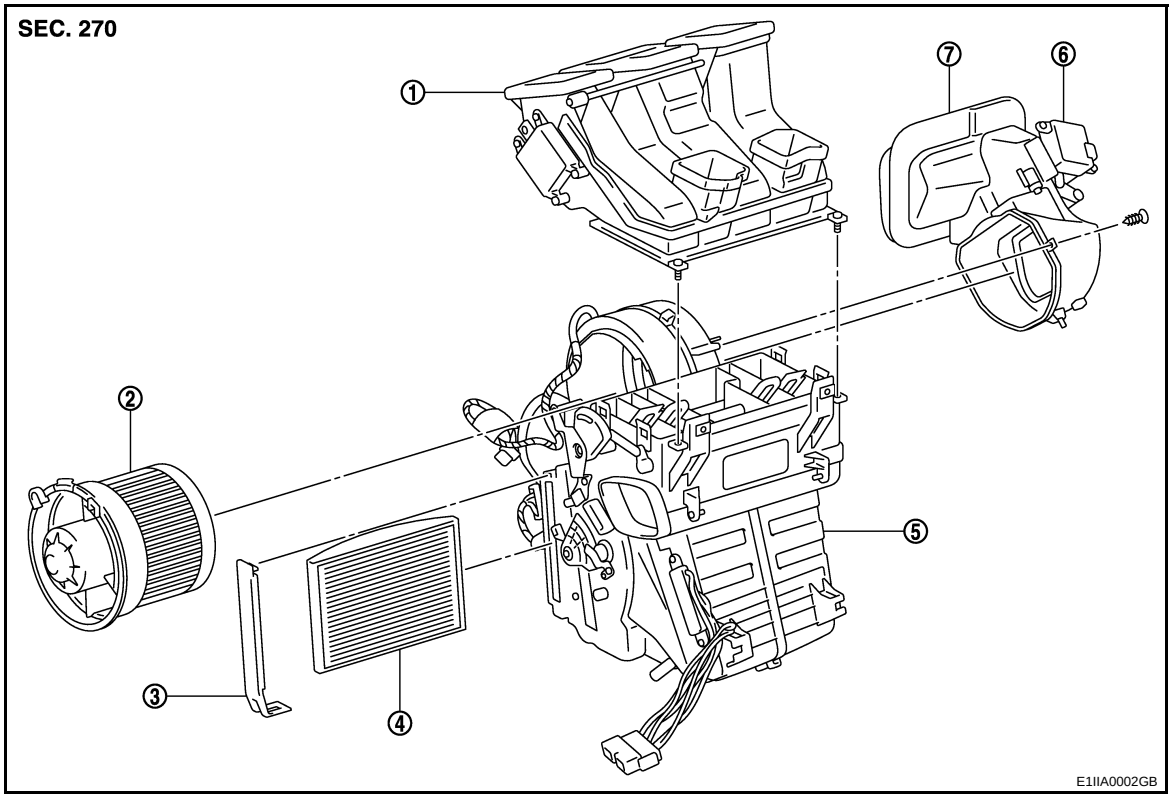
CAUTION:

Make sure locating pin are securely inserted.

BLOWER MOTOR

Exploded View

INFOID:0000000001183010



1. Hi-Level ventilation door unit assembly
2. Blower motor assembly
3. Filter cover
4. In-cabin microfilter
5. Blower unit
6. Intake door motor
7. Intake door unit assembly

Removal and Installation

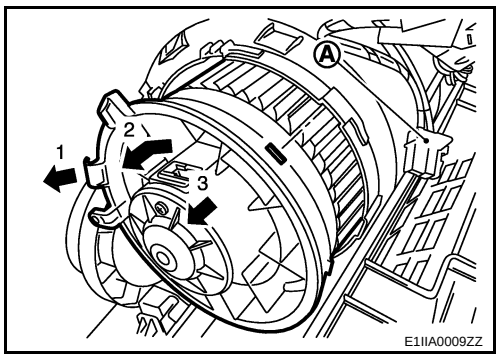
INFOID:0000000001183011

REMOVAL

LHD MODEL

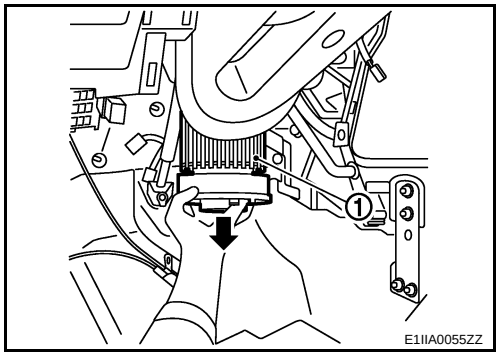
1. Remove front kicking plate inner. Refer to INT-14, "Exploded View".
2. Remove dash side finisher. Refer to INT-14, "Exploded View".
3. Remove instrument driver lower panel. Refer to IP-11, "Exploded View".
4. Remove foot duct. Refer to VTL-56, "FOOT DUCT : Removal and Installation" (automatic air conditioner), VTL-110, "FOOT DUCT : Removal and Installation" (manual air conditioner)
5. Remove accelerator pedal, and disconnect harness connector. Refer to ACC-3, "Exploded View".
6. Remove brake and clutch pedal assembly, disconnect harness connectors.Refer to BR-17, "Removal and Installation" (Brake pedal), CL-9, "Removal and Installation" (Clutch pedal).
7. Remove mode door motor.

8. Remove blower motor assembly, as shown.
   - Remove fixing screw.
   - Disconnect harness connector (A).
   - Release maintaining pawl (1)
   - Turn counter clockwise (2) blower motor assembly.
   - Pull blower motor (3)



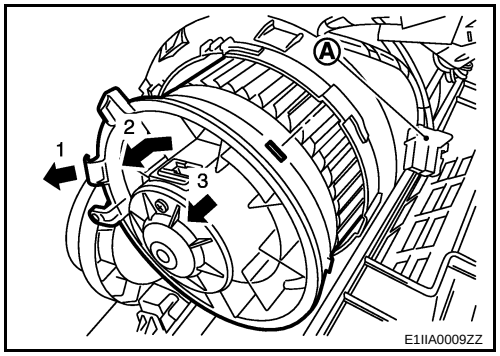
   - Handle blower motor (1) as shown to remove it.

CAUTION:
Take care of harness connectors around blower motor.



RHD MODEL

1. Remove passenger lower instrument panel. Refer to IP-12, "Removal and Installation".
2. Remove glove Box.
3. Remove passenger foot duct fixing screw, and remove it.
4. Remove glove box duct fixing screw, and remove it.
5. Remove BCM unit. Refer to BCS-65, "Removal and Installation".
6. Remove blower motor harness connector.
7. Remove blower motor assembly, as shown
8. Remove fixing screw.
   - Disconnect harness connector (A).
   - Release maintaining pawl (1) then turn counter clockwise (2) blower motor assembly.
   - Pull outside (3) and remove it.



CAUTION:
Take care of harness connectors around blower motor.

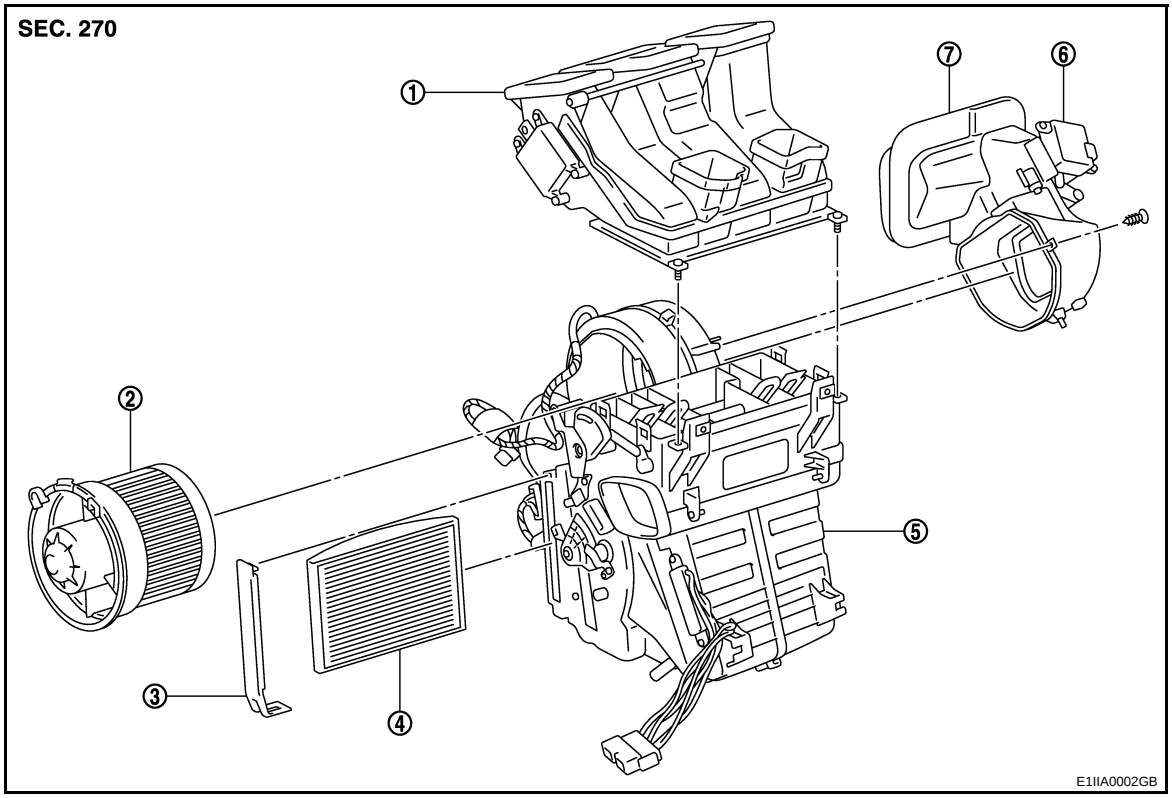
INSTALLATION

Installation is basically the reverse order of removal.

INTAKE DOOR MOTOR

Exploded View

INFOID:0000000001183012



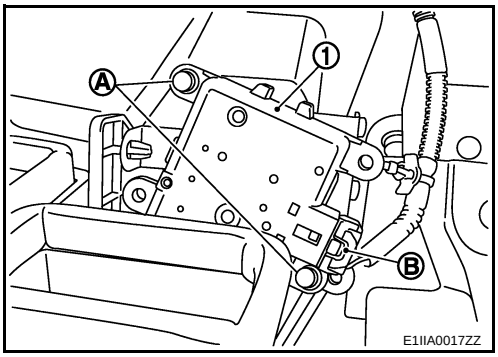
1. Hi-Level ventilation door unit assembly
2. Blower motor assembly
3. Filter cover
4. In-cabin microfilter
5. Blower unit
6. Intake door motor
7. Intake door unit assembly

Removal and Installation

INFOID:0000000001183013

REMOVAL

1. Remove Instrument Panel. Refer to IP-12, "Removal and Installation".
2. Disconnect intake door motor connector (B).
3. Remove harness connector fixing clip.
4. Remove intake door motor fixing screws (A).
5. Remove intake door motor (1).



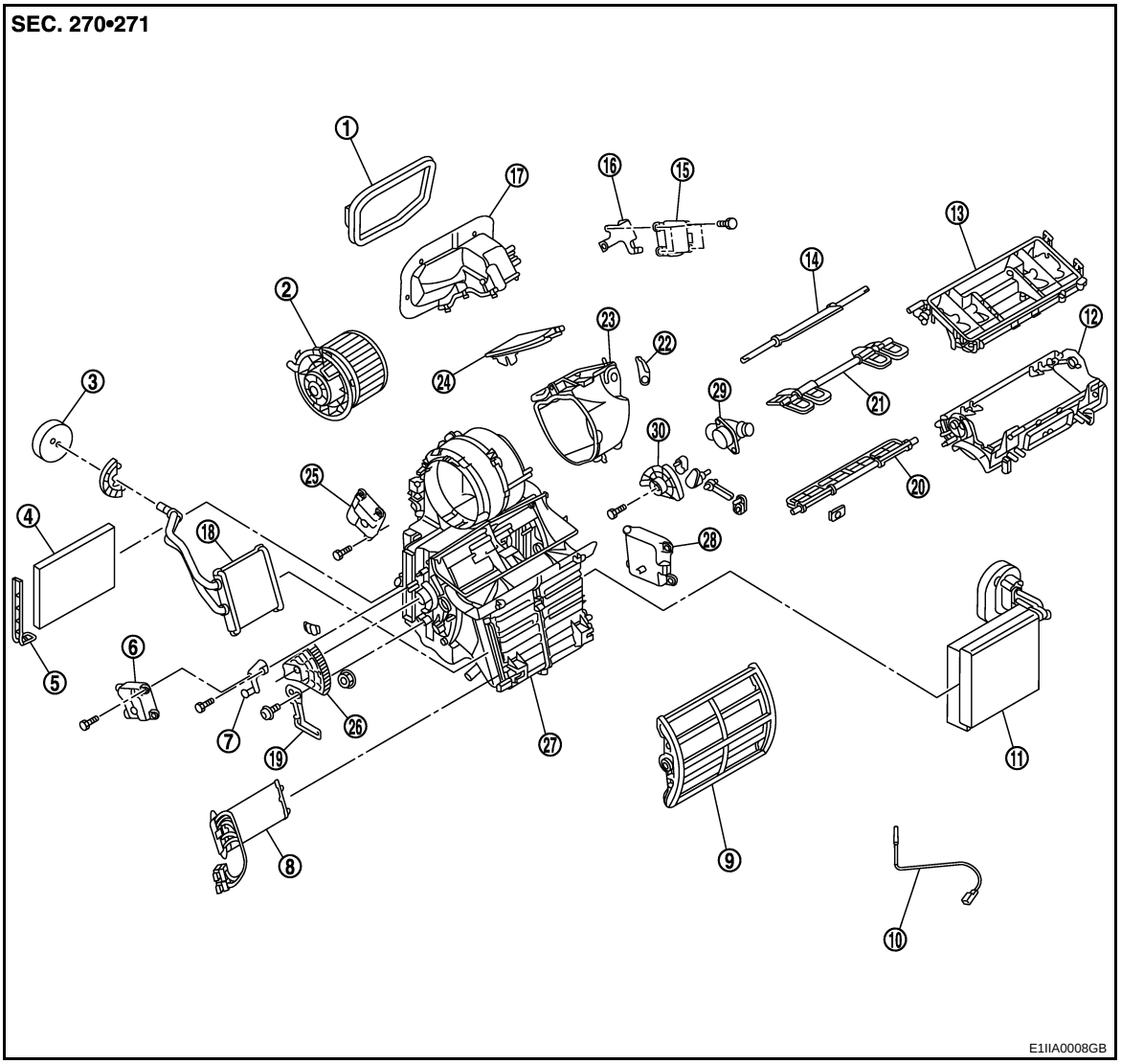
INSTALLATION

Installation is basically the reverse order of removal.

HEATER & COOLING UNIT ASSEMBLY

Exploded View

INFOID:0000000001183014



1. Intake connector seal	2. Blower motor assembly	3. Heater pipe seal
4. Air conditioner filter	5. Air conditioner filter cover	6. Air mix door motor (left)
7. Air mix door lever	8. Electrical heater	9. Air mix door (slide door)
10. Intake sensor	11. Evaporator and expansion valve unit	12. Center case (lower)
13. Center case (upper)	14. Defroster door	15. Intake door motor
16. Intake motor bracket	17. Intake connector	18. Heater core
19. Air mix door link bracket	20. Front ventilator door	21. Side ventilator door
22. Intake door lever	23. Intake door box	24. Intake door
25. Mode door motor	26. Air mix door link (left)	27. Heater and cooling unit case
28. Air mix door motor (right)	29. Aspirator	30. Air mix door link (right)

*With left and right ventilation temperature separately system.

Refer to GI-4, "Components" for symbols in the figure.

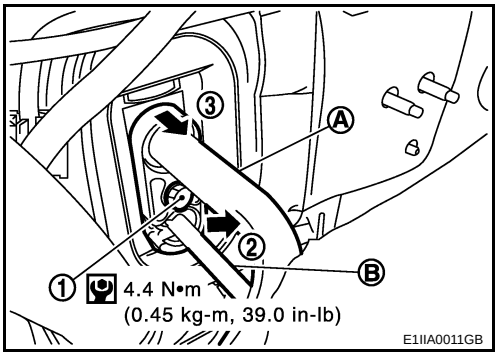
Removal and Installation

INFOID:0000000001183015

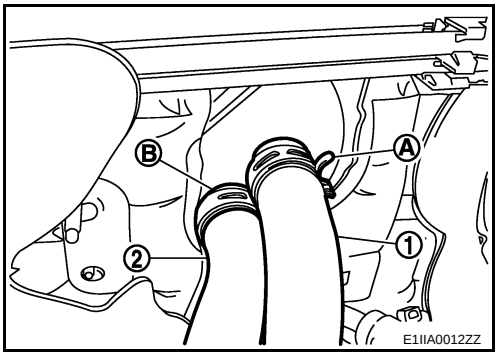
REMOVAL

1. Use a refrigerant collecting equipment (for HFC-134a) to discharge the refrigerant.
2. Drain engine coolant from cooling system. Refer to CO-9, "Draining" (HR), CO-30, "Draining" (MR), CO-52, "Draining" (K9K).
3. Remove pipe bracket fixing bolt (1), then, disconnect high-pressure pipe (B) and low-pressure pipe (A) from expansion valve as shown.

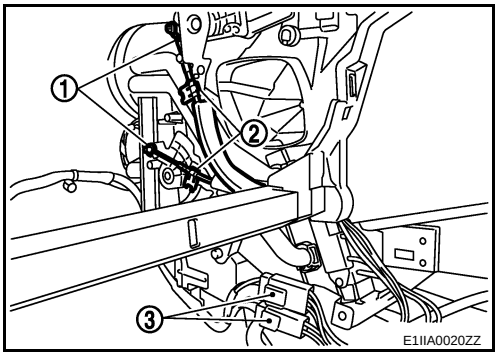
CAUTION:
Cap or wrap the joint of low-pressure pipe 1 and low-pressure pipe 2 with suitable material such as vinyl tape to avoid the entry of air.



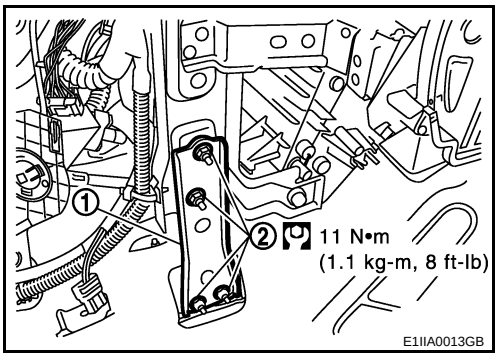
4. Remove clamp (A), then disconnect heater hoses (1) and then remove clamp (B), to remove heater hose (2).



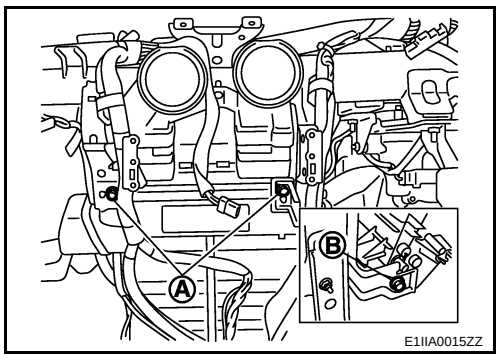
5. Remove Instrument Panel. Refer to IP-12, "Removal and Installation".
6. Remove BCM.Refer to BCS-65, "Removal and Installation".
   - Remove fixing screws.
   - Remove harness connectors.
7. Disconnect heater connectors (3), then remove heater connector and bracket.
8. Disconnect blower motor connector.
9. Remove heater control cable retainers (2) and cables (1) from heater and cooling unit.
10. Remove foot duct, RH.
11. Remove power steering C/U. Refer to STC-32, "Removal and Installation".
12. Disconnect intake door motor connector and blower motor connector.



13. Remove center air duct.
14. Remove blower intake motor connector and remove harness fixing clip.
15. Remove instrument stay (1).
16. Remove fixing nuts (2).
17. Remove heater draining hose.



18. Remove heater and cooling assembly lower fixing bolts, RH side.
19. Remove heater and cooling assembly upper fixing bolts.
20. Remove high and low pressure pipes. Refer to HA-50, "Removal and Installation" (HR/MR), HA-102, "Removal and Installation" (K9K).



21. Remove clips of main harness from steering member.
22. Remove steering member mounting bolts.
    • Disconnect harness fixing clips from steering member
    NOTE:
    Two workers are necessary to remove this part.
23. Remove heater and cooling unit assembly.

INSTALLATION

Installation is basically the reverse order of removal.

CAUTION:

- **Replace O-rings of low-pressure pipe 1, 2 and high-pressure pipe 1, 2 with new ones, and then apply compressor oil to it when installing it.**
- **Female-side piping connection is thin and easy to deform. Slowly insert the male-side piping straight in axial direction.**
- **Insert piping securely until a clicks is heard.**
- **After piping connection is completed, pull male-side piping by hand to make sure that connection does not come loose.**
- **When recharging refrigerant, check for leaks.**

NOTE:

- When filling radiator with engine coolant, refer to CO-9, "Refilling" (HR), CO-30, "Refilling" (MR), CO-52, "Refilling" (K9K).
- Recharge the refrigerant.

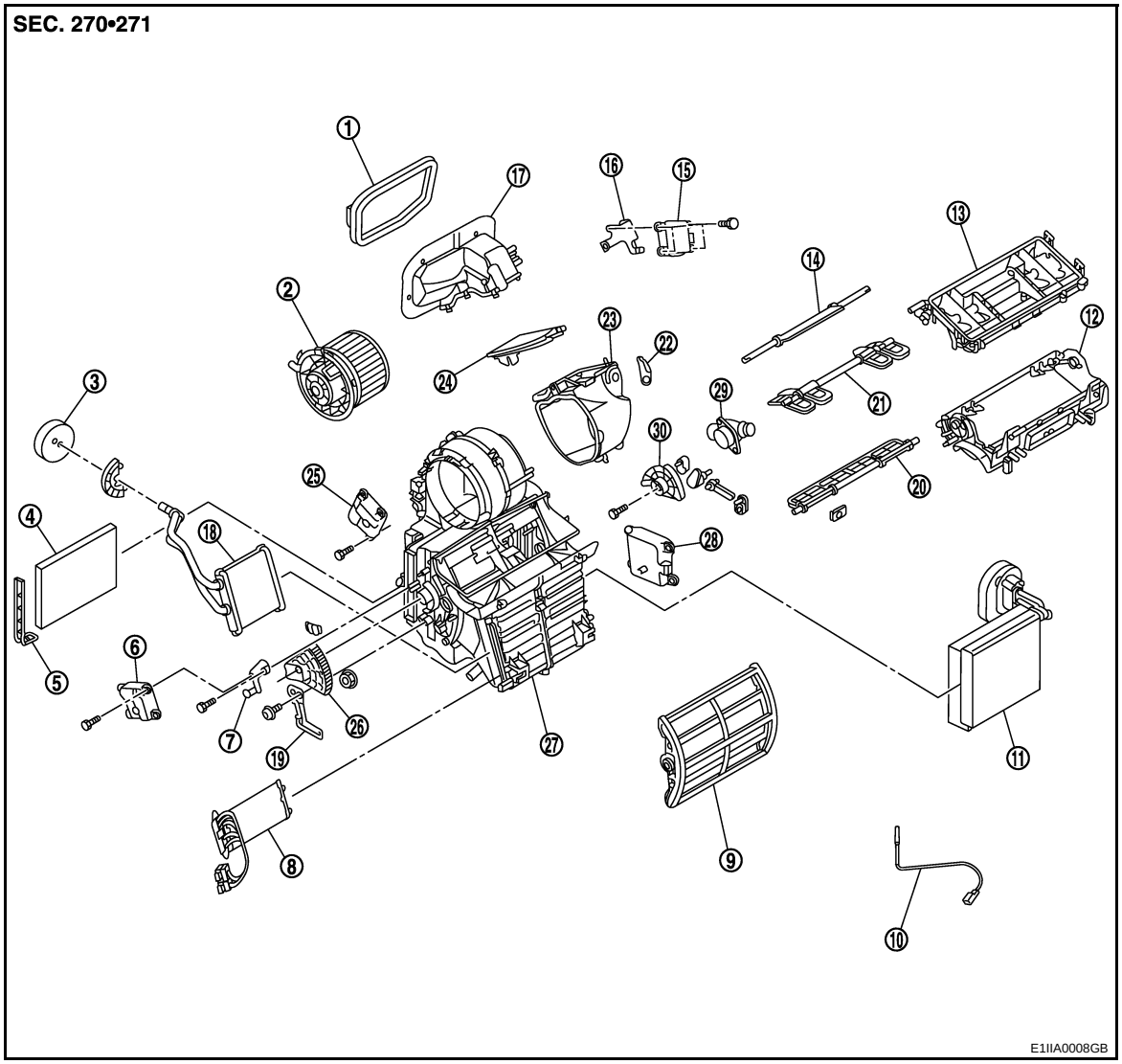
Heater & cooling unit (1) assembly mounting bolt (A)

: 6.9 N·m (0.7 kg·m, 61 in-lb)

MODE DOOR MOTOR

Exploded View

INFOID:0000000001183016



1. Intake connector seal
2. Blower motor assembly
3. Heater pipe seal
4. Air conditioner filter
5. Air conditioner filter cover
6. Air mix door motor (left)
7. Air mix door lever
8. Electrical heater
9. Air mix door (slide door)
10. Intake sensor
11. Evaporator and expansion valve unit
12. Center case (lower)
13. Center case (upper)
14. Defroster door
15. Intake door motor
16. Intake motor bracket
17. Intake connector
18. Heater core
19. Air mix door link bracket
20. Front ventilator door
21. Side ventilator door
22. Intake door lever
23. Intake door box
24. Intake door
25. Mode door motor
26. Air mix door link (left)
27. Heater and cooling unit case
28. Air mix door motor (right)
29. Aspirator
30. Air mix door link (right)

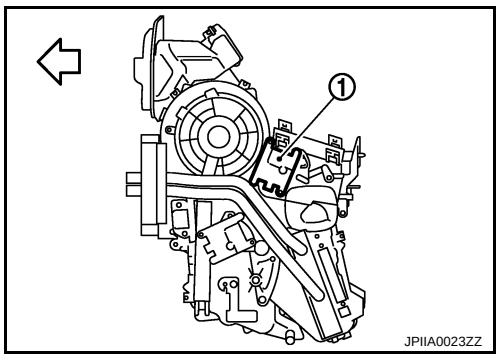
Removal and Installation

INFOID:0000000001183017

REMOVAL

1. Remove Instrument Panel. Refer to IP-12, "Removal and Installation".

2. Remove mode door motor fixing screws.
3. Remove harness connector and then remove mode door motor (1) from link.



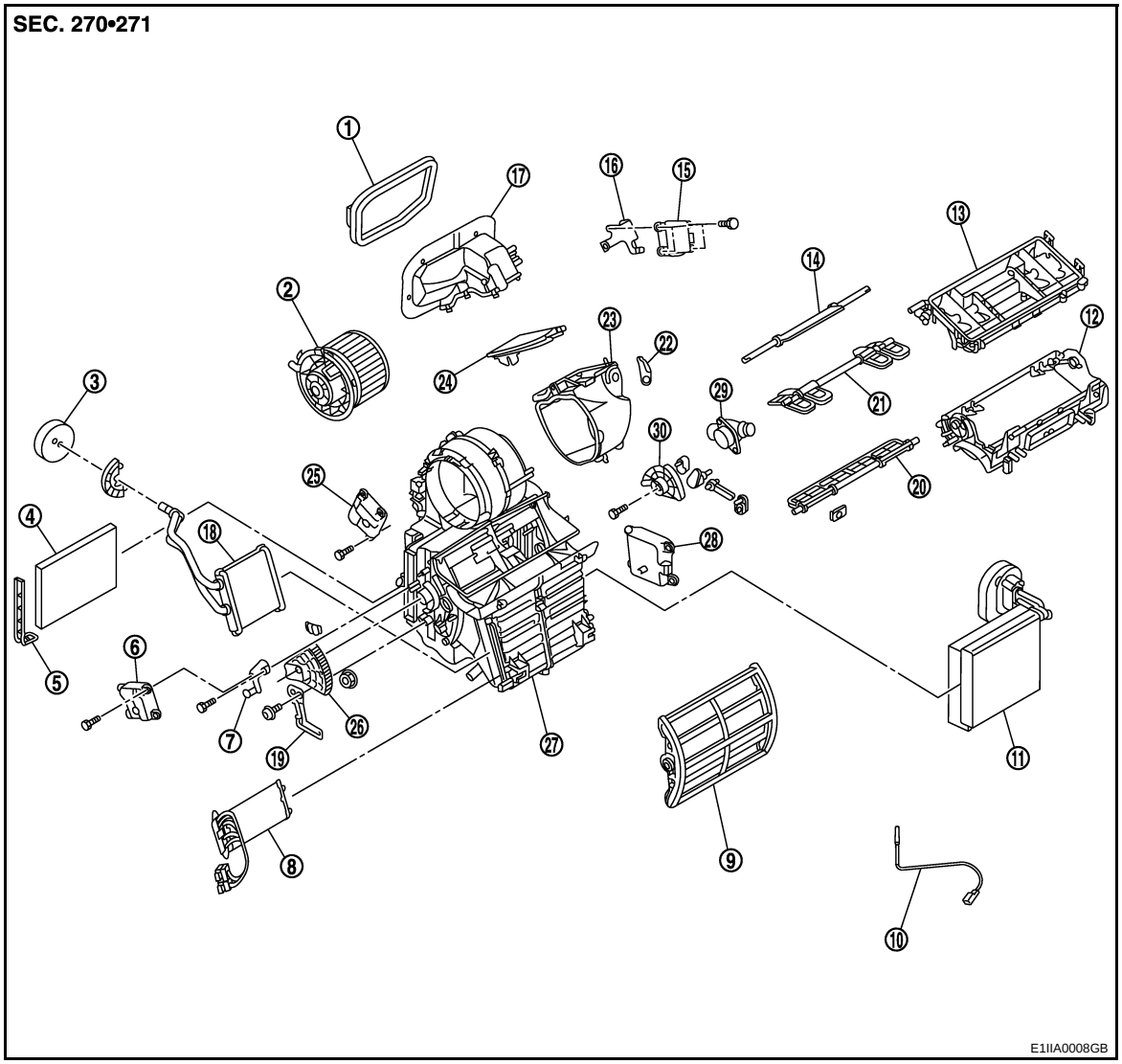
INSTALLATION

installation is basically the reverse order of removal.

HIGH-LEVEL VENTILATOR DOOR MOTOR

Exploded View

INFOID:0000000001183018



1. Intake connector seal
2. Blower motor assembly
3. Heater pipe seal
4. Air conditioner filter
5. Air conditioner filter cover
6. Air mix door motor (left)
7. Air mix door lever
8. Electrical heater
9. Air mix door (slide door)
10. Intake sensor
11. Evaporator and expansion valve unit
12. Center case (lower)
13. Center case (upper)
14. Defroster door
15. Intake door motor
16. Intake motor bracket
17. Intake connector
18. Heater core
19. Air mix door link bracket
20. Front ventilator door
21. Slide ventilator door
22. Intake door lever
23. Intake door box
24. Intake door
25. Mode door motor
26. Air mix door link (left)
27. Heater and cooling unit case
28. Air mix door motor (right)
29. Aspirator
30. Air mix door link (right)

Removal and Installation

INFOID:0000000001183019

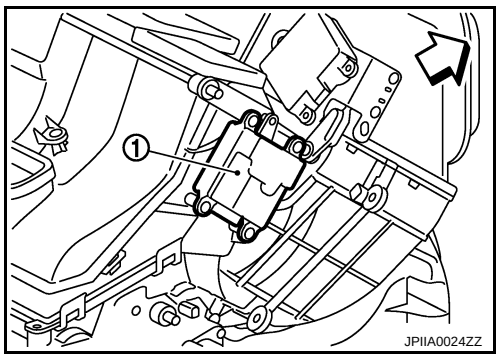
REMOVAL

LHD

1. Unclip instrument lower panel - passenger side.

2. Remove lower instrument cover.
3. Remove Glove Box Assembly. Refer to IP-12, "Removal and Installation".
4. Remove RH Foot Duct. Refer to VTL-56, "FOOT DUCT : Removal and Installation".
5. Remove high level motor fixing screws.
6. Remove high level motor harness connector.
7. Remove high level motor(1) from link.

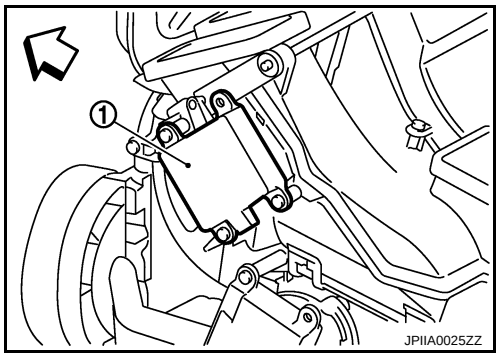
⇦ : Front



RHD

1. Unclip lower instrument panel - passenger side.
2. Remove lower instrument cover.
3. Remove Glove Box Assembly. Refer to IP-12, "Removal and Installation".
4. Remove LH Foot Duct. Refer to VTL-56, "FOOT DUCT : Removal and Installation".
5. Remove high level motor fixing screws.
6. Remove high level motor harness connector.
7. Remove high level motor(1) from link.

⇦ : Front



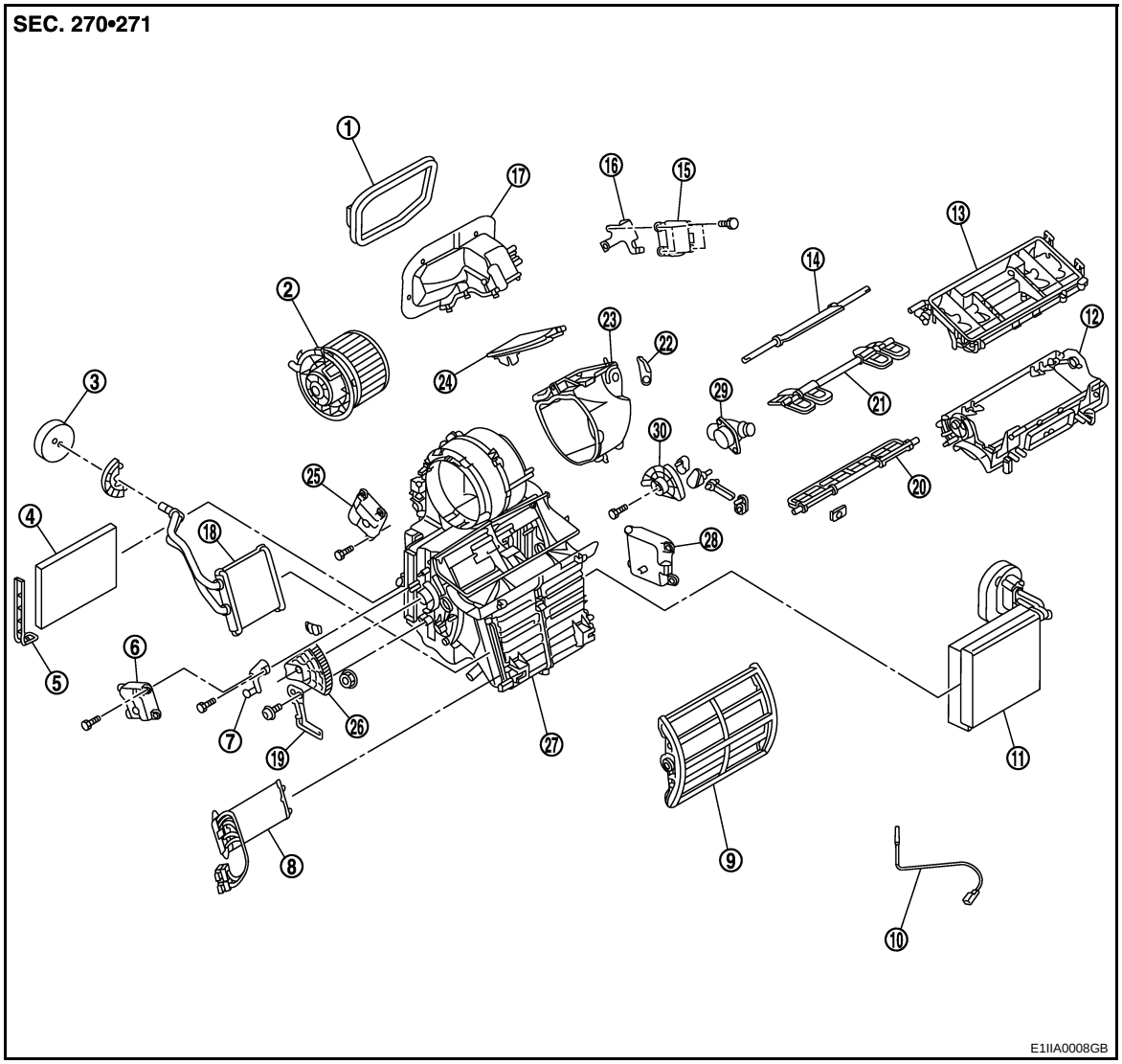
INSTALLATION

installation is basically the reverse order of removal.

AIR MIX DOOR MOTOR

Exploded View

INFOID:0000000001183020



1. Intake connector seal
2. Blower motor assembly
3. Heater pipe seal
4. Air conditioner filter
5. Air conditioner filter cover
6. Air mix door motor (left)
7. Air mix door lever
8. Electrical heater
9. Air mix door (slide door)
10. Intake sensor
11. Evaporator and expansion valve unit
12. Center case (lower)
13. Center case (upper)
14. Defroster door
15. Intake door motor
16. Intake motor bracket
17. Intake connector
18. Heater core
19. Air mix door link bracket
20. Front ventilator door
21. Slide ventilator door
22. Intake door lever
23. Intake door box
24. Intake door
25. Mode door motor
26. Air mix door link (left)
27. Heater and cooling unit case
28. Air mix door motor (right)
29. Aspirator
30. Air mix door link (right)

Removal and Installation

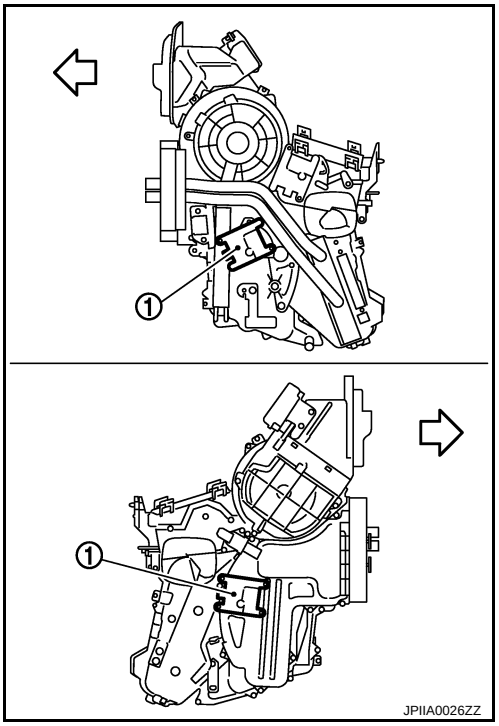
INFOID:0000000001183021

REMOVAL

Driver side

1. Remove lower instrument cover.
2. Remove Foot Duct. Refer to VTL-56, "FOOT DUCT : Removal and Installation".
3. Remove air mix door motor fixing screws.
4. Remove air mix door motor harness connector.
5. Remove air mix door motor(1) from link.

⇦ : Front



Passenger side

1. Unclip instrument lower panel - passenger side.
2. Remove lower instrument cover.
3. Remove Glove Box Assembly. Refer to IP-12, "Removal and Installation".
4. Remove Foot Duct. Refer to VTL-56, "FOOT DUCT : Removal and Installation".
5. Remove air mix door motor fixing screws.
6. Remove air mix door motor harness connector.
7. Remove air mix door motor(1) from link.

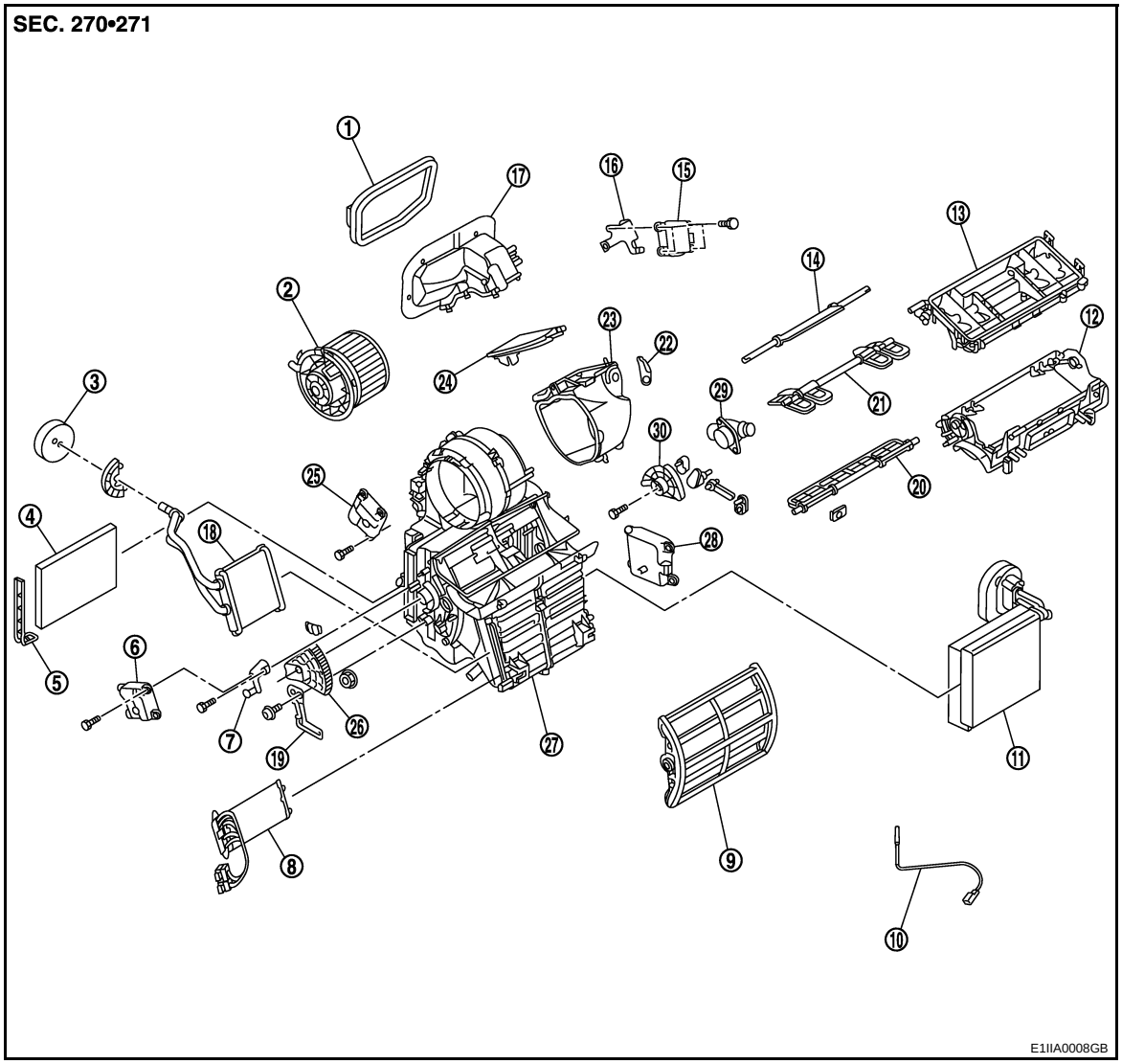
INSTALLATION

Installation is basically the reverse order of removal.

HEATER CORE

Exploded View

INFOID:0000000001183022



1. Intake connector seal	2. Blower motor assembly	3. Heater pipe seal
4. Air conditioner filter	5. Air conditioner filter cover	6. Air mix door motor (left)
7. Air mix door lever	8. Electrical heater	9. Air mix door (slide door)
10. Intake sensor	11. Evaporator and expansion valve unit	12. Center case (lower)
13. Center case (upper)	14. Defroster door	15. Intake door motor
16. Intake motor bracket	17. Intake connector	18. Heater core
19. Air mix door link bracket	20. Front ventilator door	21. Side ventilator door
22. Intake door lever	23. Intake door box	24. Intake door
25. Mode door motor	26. Air mix door link (left)	27. Heater and cooling unit case
28. Air mix door motor (right)	29. Aspirator	30. Air mix door link (right)

*With left and right ventilation temperature separately system.

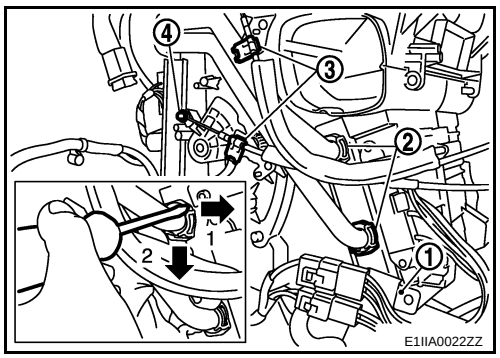
Refer to GI-4, "Components" for symbols in the figure.

Removal and Installation

INFOID:0000000001183023

REMOVAL

1. Remove LH instrument lower panel (LHD).
2. Remove glove box (RHD). Refer to IP-12, "Removal and Installation".
3. Remove LH foot duct.
4. Disconnect harness connectors, remove harness bracket (1).
5. Remove air mix door motor fixing screw.
6. Remove air mix door motor (4), from heater.
7. Remove heater core pipes metal clip retainers (2).
   CAUTION:
   Use shop cloth and all other protection necessaries to avoid damaging floor carpet.
8. Remove heater pipes as shown.
9. Pull to remove heater core.



INSTALLATION

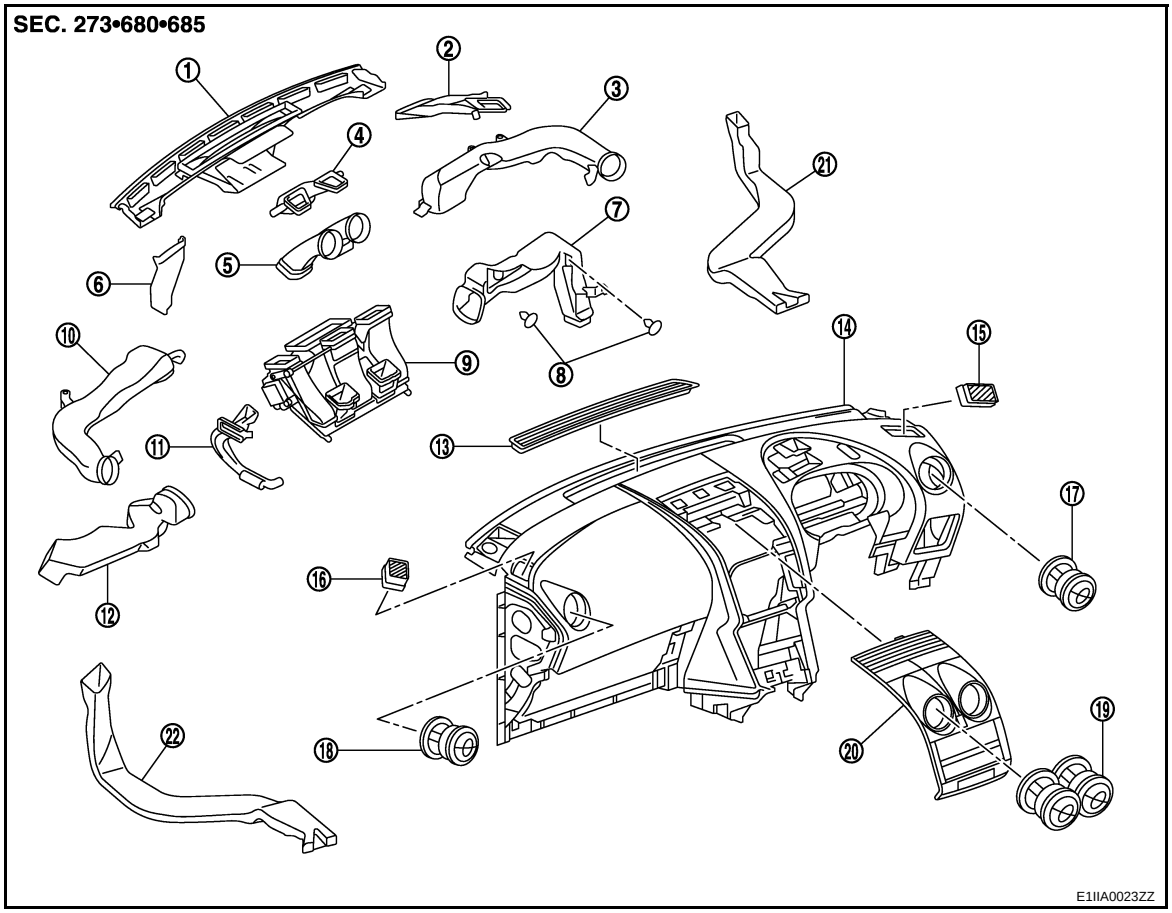
Installation is basically the reverse order of removal.

DUCT AND GRILLE

FRONT DEFROSTER GRILLE

FRONT DEFROSTER GRILLE : Exploded View

INFOID:0000000001569687



1. Defroster nozzle
2. Side defroster nozzle - RH
3. Side ventilator duct - RH
4. Front upper ventilator duct
5. Center ventilator duct
6. Side defroster nozzle - LH
7. Side foot duct - RH
8. Clip
9. Air mix duct
10. Side ventilator duct - LH
11. Glove box duct
12. Side foot duct - LH
13. Front defroster grille - center
14. Instrument panel
15. Side defroster grille - RH
16. Side defroster grille - LH
17. Side ventilator grille - RH
18. Side ventilator grille - LH
19. Center ventilator grille
20. Cluster lid C
21. Floor duct - RH
22. Floor duct - LH

FRONT DEFROSTER GRILLE : Removal and Installation

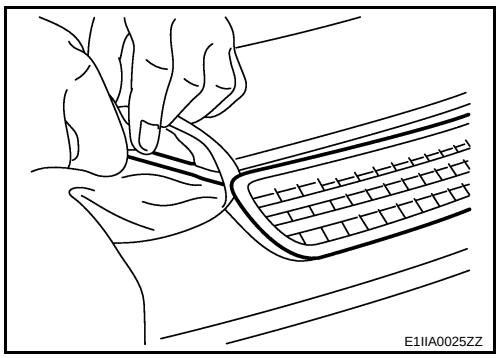
INFOID:0000000001569688

REMOVAL

1. Remove front defroster grille as shown.

CAUTION:

Use shop cloth and all other protection necessaries to avoid damage.



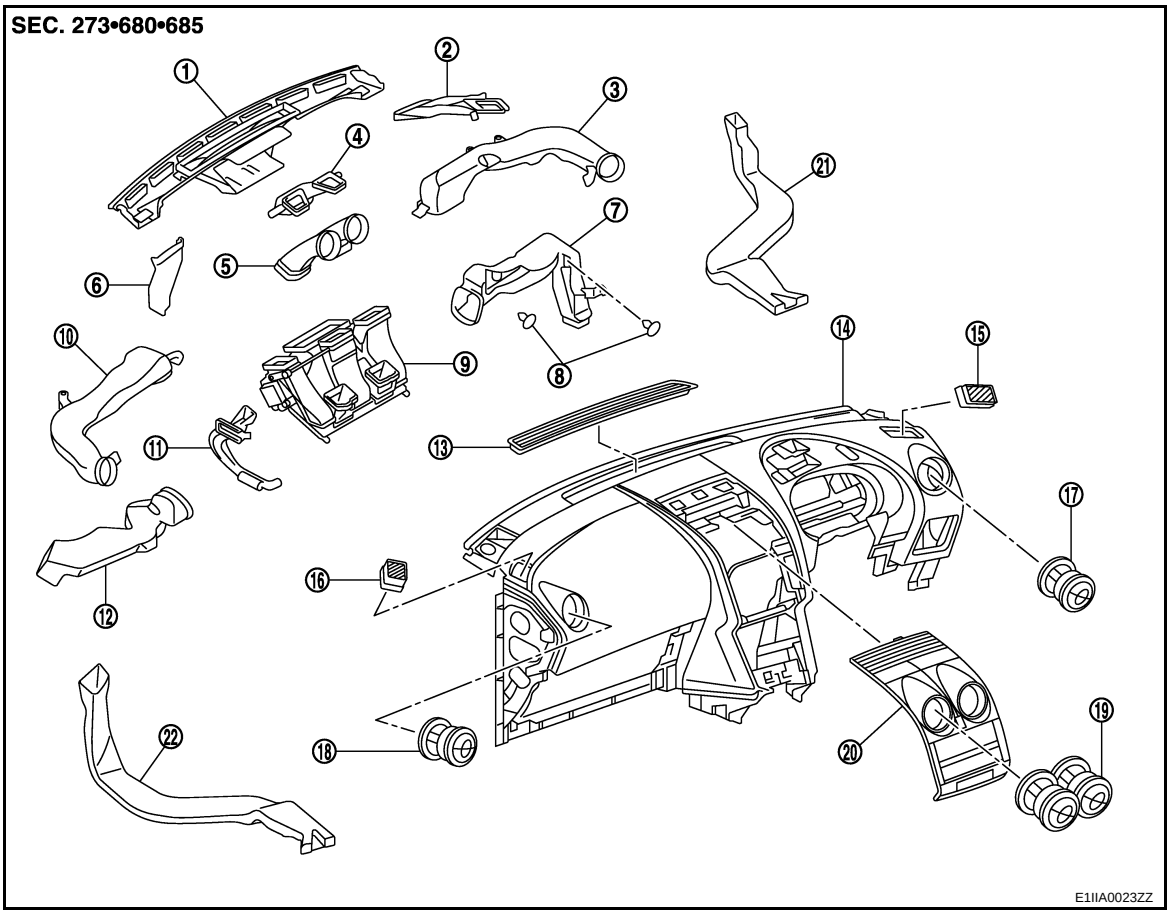
INSTALLATION

Installation is basically the reverse order of removal.

SIDE DEFROSTER GRILLE

SIDE DEFROSTER GRILLE : Exploded View

INFOID:0000000001569689



1. Defroster nozzle
2. Side defroster nozzle - RH
3. Side ventilator duct - RH
4. Front upper ventilator duct
5. Center ventilator duct
6. Side defroster nozzle - LH
7. Side foot duct - RH
8. Clip
9. Air mix duct
10. Side ventilator duct - LH
11. Glove box duct
12. Side foot duct - LH
13. Front defroster grille - center
14. Instrument panel
15. Side defroster grille - RH
16. Side defroster grille - LH
17. Side ventilator grille - RH
18. Side ventilator grille - LH
19. Center ventilator grille
20. Cluster lid C
21. Floor duct - RH
22. Floor duct - LH

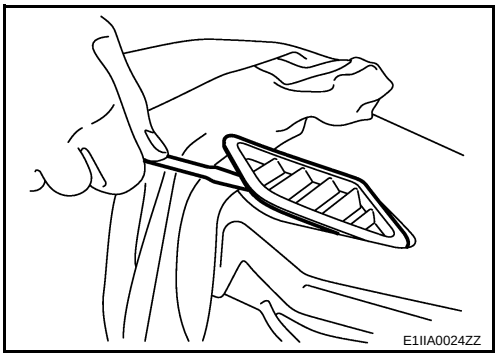
SIDE DEFROSTER GRILLE : Removal and Installation

INFOID:0000000001569690

REMOVAL

1. Remove side defroster grilles as shown.

CAUTION:
Use shop cloth and all other protection necessaries to avoid damage.



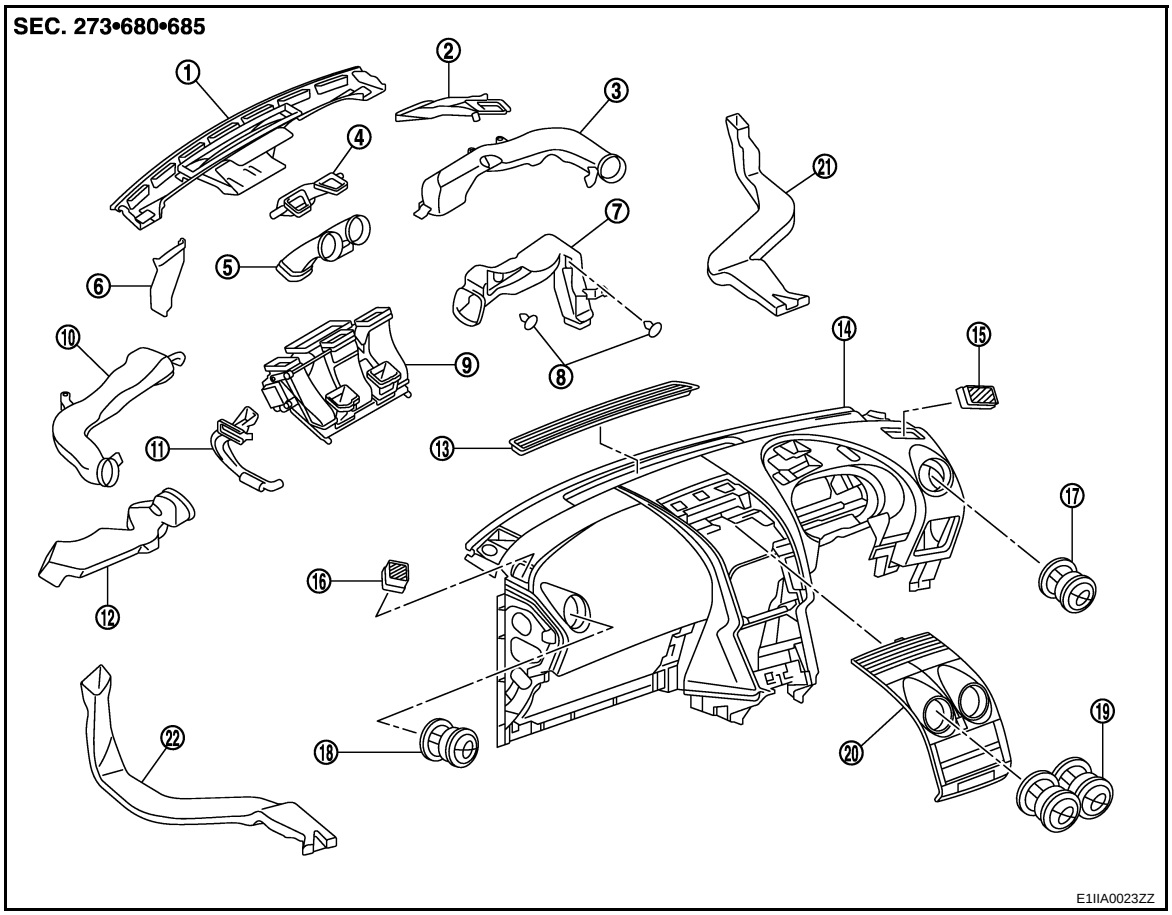
INSTALLATION

Installation is basically the reverse order of removal.

CENTER VENTILATOR GRILLE

CENTER VENTILATOR GRILLE : Exploded View

INFOID:0000000001183024



1. Defroster nozzle
2. Side defroster nozzle - RH
3. Side ventilator duct - RH
4. Front upper ventilator duct
5. Center ventilator duct
6. Side defroster nozzle - LH
7. Side foot duct - RH
8. Clip
9. Air mix duct
10. Side ventilator duct - LH
11. Glove box duct
12. Side foot duct - LH
13. Front defroster grille - center
14. Instrument panel
15. Side defroster grille - RH
16. Side defroster grille - LH
17. Side ventilator grille - RH
18. Side ventilator grille - LH

19. Center ventilator grille
20. Cluster lid C
21. Floor duct - RH
22. Floor duct - LH

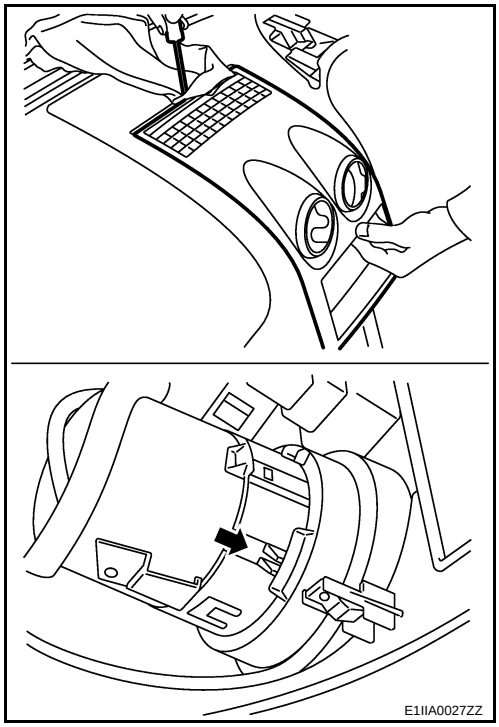
CENTER VENTILATOR GRILLE : Removal and Installation

INFOID:0000000001183025

REMOVAL

1. Remove cluster lid C. Refer to IP-12, "Removal and Installation".
2. Remove center ventilator grilles.
   - Use a screw driver to push down the clip, as shown.
   - Pull to remove center ventilator grilles from cluster lid C.

CAUTION:
Use shop cloth and all other protection necessaries to avoid damage.



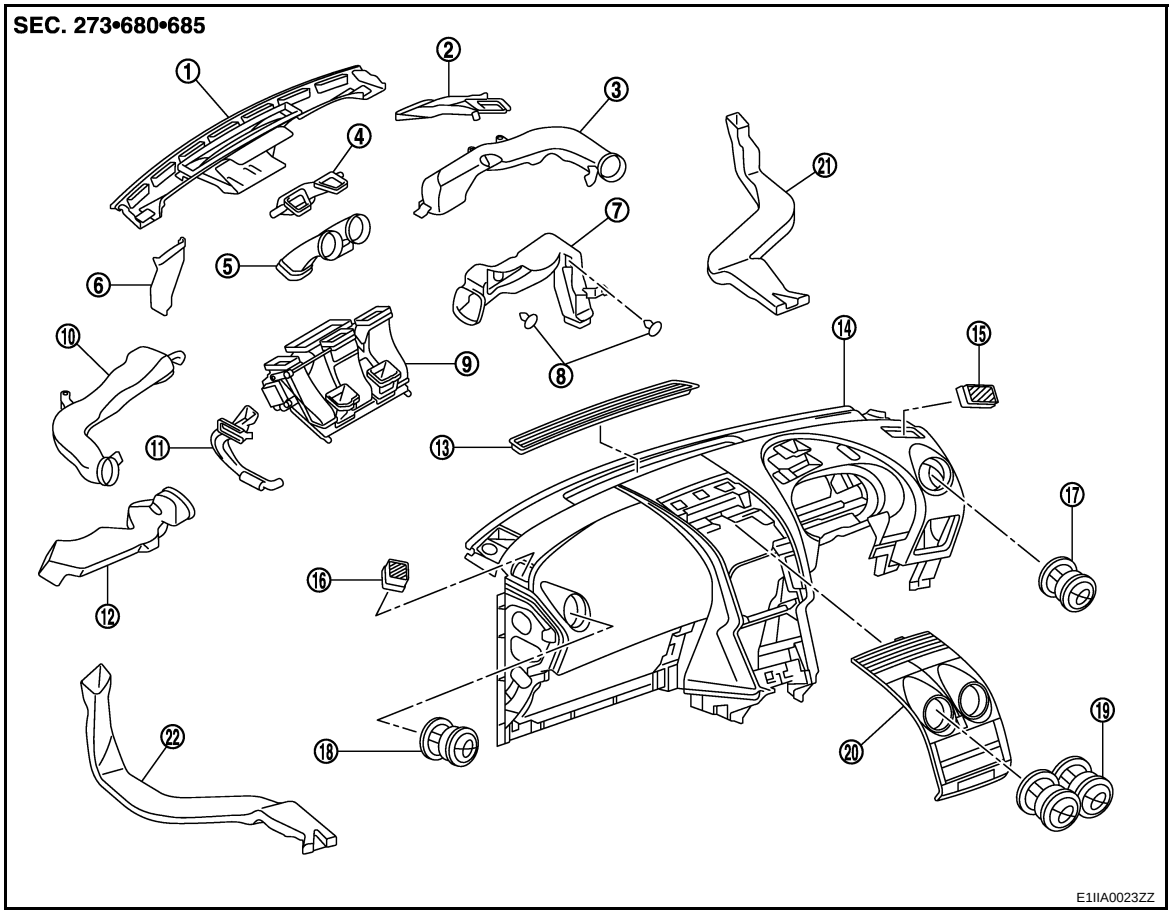
INSTALLATION

Installation is basically the reverse order of removal.

SIDE VENTILATOR GRILLE

SIDE VENTILATOR GRILLE : Exploded View

INFOID:0000000001183026



1. Defroster nozzle
2. Side defroster nozzle - RH
3. Side ventilator duct - RH
4. Front upper ventilator duct
5. Center ventilator duct
6. Side defroster nozzle - LH
7. Side foot duct - RH
8. Clip
9. Air mix duct
10. Side ventilator duct - LH
11. Glove box duct
12. Side foot duct - LH
13. Front defroster grille - center
14. Instrument panel
15. Side defroster grille - RH
16. Side defroster grille - LH
17. Side ventilator grille - RH
18. Side ventilator grille - LH
19. Center ventilator grille
20. Cluster lid C
21. Floor duct - RH
22. Floor duct - LH

SIDE VENTILATOR GRILLE : Removal and Installation

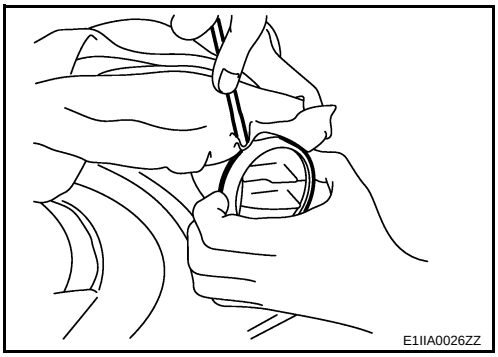
INFOID:0000000001183027

REMOVAL

Remove side ventilator grilles as shown.

CAUTION:

Use shop cloth and all other protection necessaries to avoid damage.



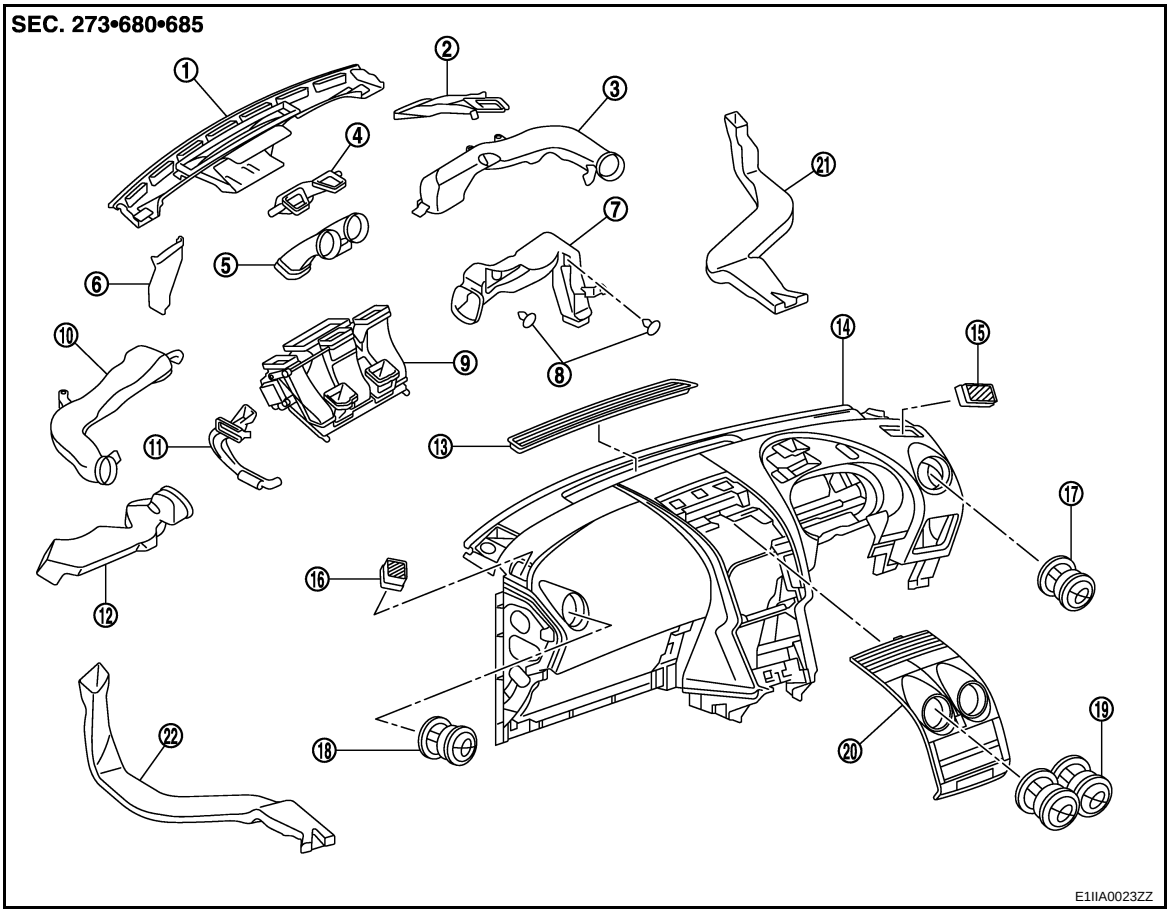
INSTALLATION

Installation is basically the reverse order of removal.

DEFROSTER NOZZLE

DEFROSTER NOZZLE : Exploded View

INFOID:0000000001183028



1. Defroster nozzle
2. Side defroster nozzle - RH
3. Side ventilator duct - RH
4. Front upper ventilator duct
5. Center ventilator duct
6. Side defroster nozzle - LH
7. Side foot duct - RH
8. Clip
9. Air mix duct
10. Side ventilator duct - LH
11. Glove box duct
12. Side foot duct - LH
13. Front defroster grille - center
14. Instrument panel
15. Side defroster grille - RH
16. Side defroster grille - LH
17. Side ventilator grille - RH
18. Side ventilator grille - LH
19. Center ventilator grille
20. Cluster lid C
21. Floor duct - RH
22. Floor duct - LH

DEFROSTER NOZZLE : Removal and Installation

INFOID:0000000001183029

REMOVAL

1. Remove instrument panel & pad. Refer to IP-12, "Removal and Installation".
2. Remove mounting screws.
3. Remove clips, and then remove defroster nozzle.

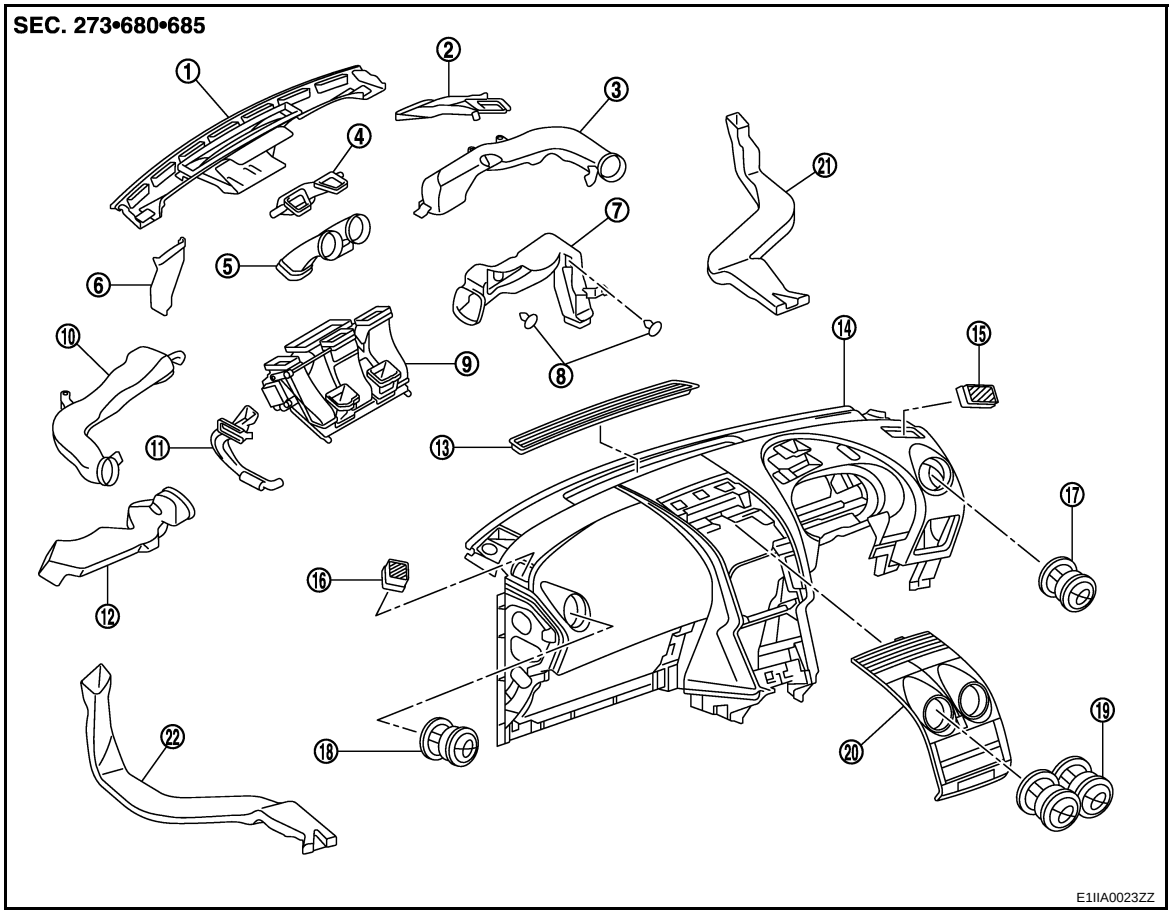
INSTALLATION

Installation is basically the reverse order of removal.

SIDE DEFROSTER NOZZLE

SIDE DEFROSTER NOZZLE : Exploded View

INFOID:0000000001183030



1. Defroster nozzle
2. Side defroster nozzle - RH
3. Side ventilator duct - RH
4. Front upper ventilator duct
5. Center ventilator duct
6. Side defroster nozzle - LH
7. Side foot duct - RH
8. Clip
9. Air mix duct
10. Side ventilator duct - LH
11. Glove box duct
12. Side foot duct - LH
13. Front defroster grille - center
14. Instrument panel
15. Side defroster grille - RH
16. Side defroster grille - LH
17. Side ventilator grille - RH
18. Side ventilator grille - LH
19. Center ventilator grille
20. Cluster lid C
21. Floor duct - RH
22. Floor duct - LH

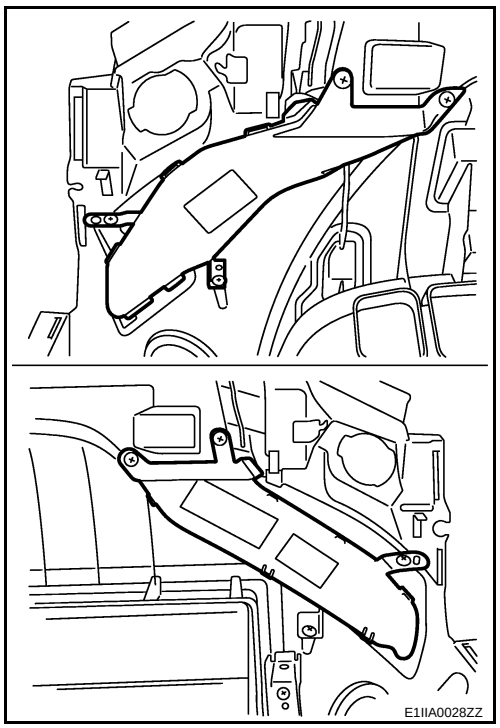
SIDE DEFROSTER NOZZLE : Removal and Installation

INFOID:0000000001183031

REMOVAL

1. Remove instrument panel. Refer to IP-12, "Removal and Installation".
2. Remove side ventilator ducts (RH/LH). Refer to VTL-48, "SIDE VENTILATOR GRILLE : Removal and Installation".

3. Remove side defroster nozzles (RH/LH) fixing screws.
4. Pull to release from defroster nozzle.
5. Remove side defroster nozzles.



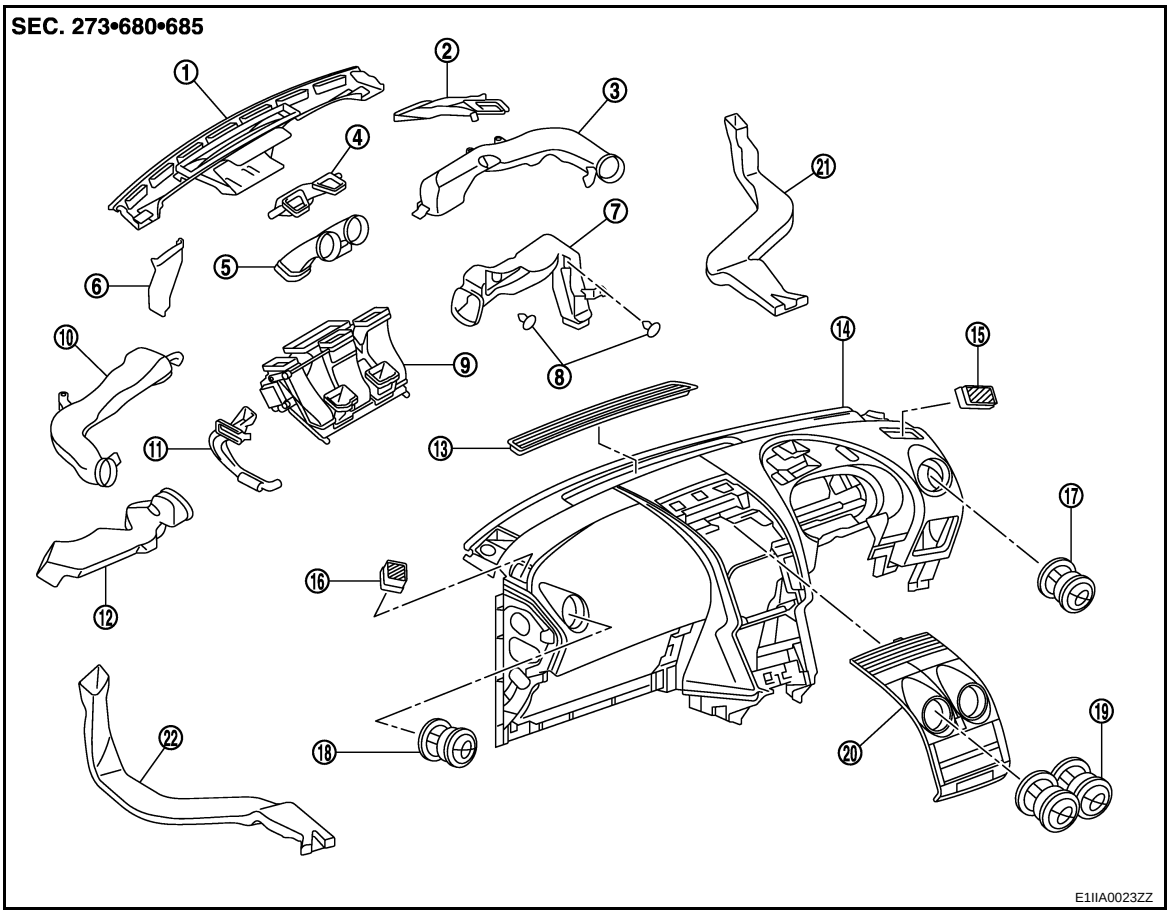
INSTALLATION

Installation is basically the reverse order of removal.

CENTER VENTILATOR DUCT

CENTER VENTILATOR DUCT : Exploded View

INFOID:0000000001569699



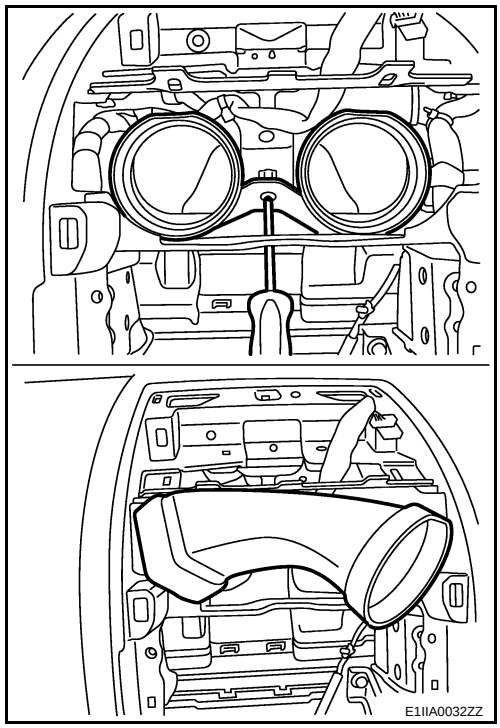
1. Defroster nozzle
2. Side defroster nozzle - RH
3. Side ventilator duct - RH
4. Front upper ventilator duct
5. Center ventilator duct
6. Side defroster nozzle - LH
7. Side foot duct - RH
8. Clip
9. Air mix duct
10. Side ventilator duct - LH
11. Glove box duct
12. Side foot duct - LH
13. Front defroster grille - center
14. Instrument panel
15. Side defroster grille - RH
16. Side defroster grille - LH
17. Side ventilator grille - RH
18. Side ventilator grille - LH
19. Center ventilator grille
20. Cluster lid C
21. Floor duct - RH
22. Floor duct - LH

CENTER VENTILATOR DUCT : Removal and Installation

INFOID:0000000001569700

REMOVAL

1. Remove cluster lid D. Refer to IP-12, "Removal and Installation".
2. Remove cluster lid C. Refer to IP-12, "Removal and Installation".
3. Remove fixing screws from instrument panel.
4. Turn as shown to remove center ventilator duct.



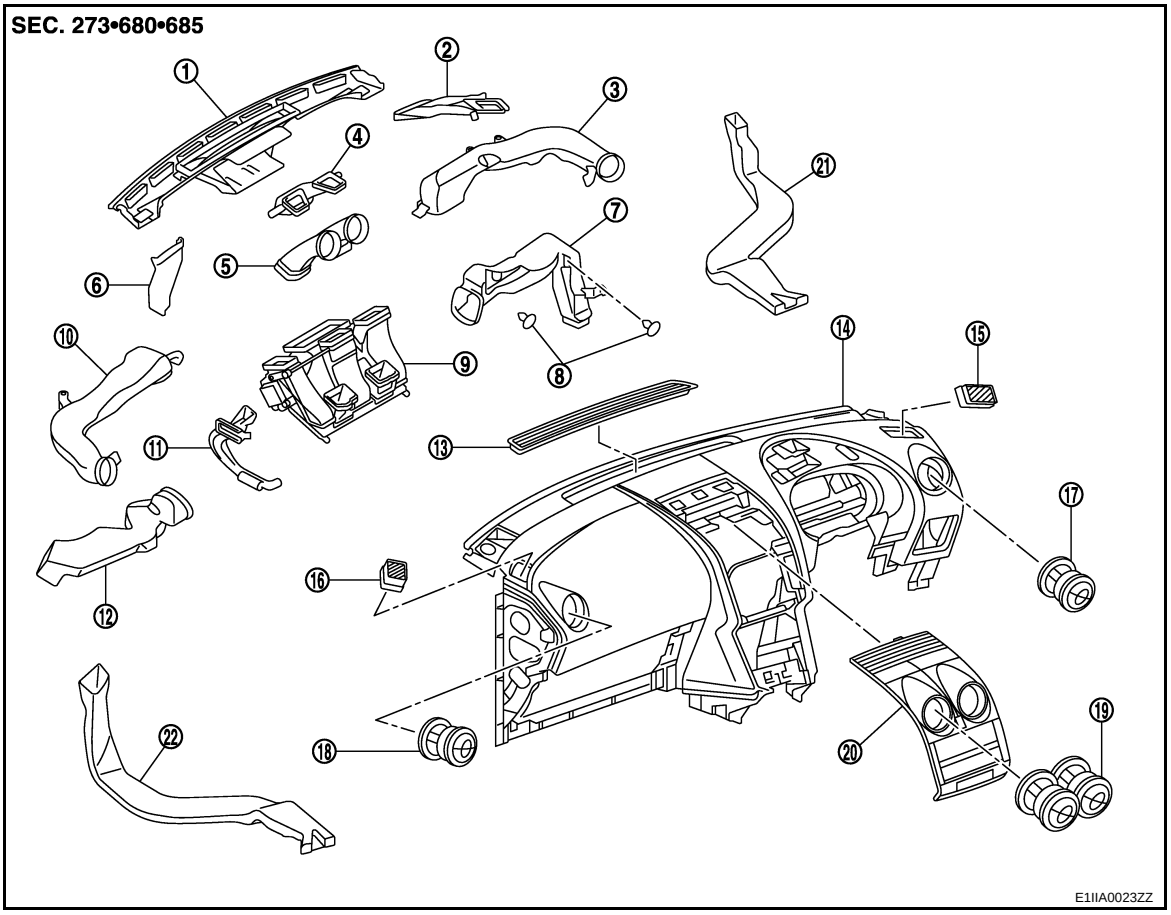
INSTALLATION

Installation is basically the reverse order of removal.

FRONT UPPER VENTILATOR DUCT

FRONT UPPER VENTILATOR DUCT : Exploded View

INFOID:0000000001569701



1. Defroster nozzle
2. Side defroster nozzle - RH
3. Side ventilator duct - RH
4. Front upper ventilator duct
5. Center ventilator duct
6. Side defroster nozzle - LH
7. Side foot duct - RH
8. Clip
9. Air mix duct
10. Side ventilator duct - LH
11. Glove box duct
12. Side foot duct - LH
13. Front defroster grille - center
14. Instrument panel
15. Side defroster grille - RH
16. Side defroster grille - LH
17. Side ventilator grille - RH
18. Side ventilator grille - LH
19. Center ventilator grille
20. Cluster lid C
21. Floor duct - RH
22. Floor duct - LH

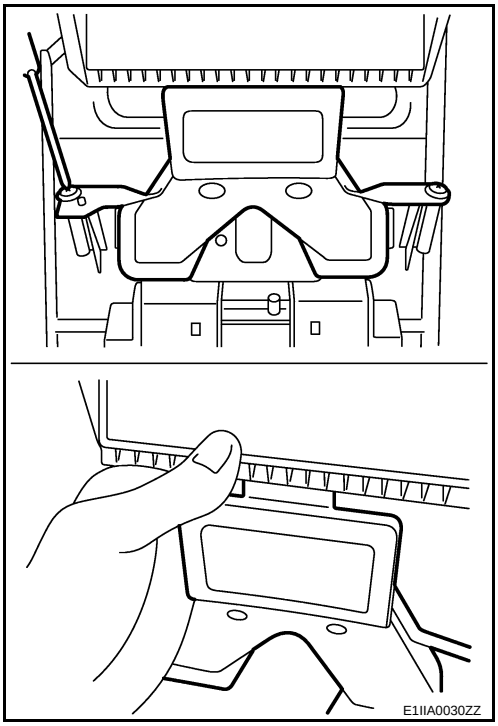
FRONT UPPER VENTILATOR DUCT : Removal and Installation

INFOID:0000000001569702

REMOVAL

1. Remove instrument panel. Refer to IP-12, "Removal and Installation".

2. Remove fixing screws, then release duct from center pin.
3. Pull to release front upper ventilator duct from center defroster duct as shown.



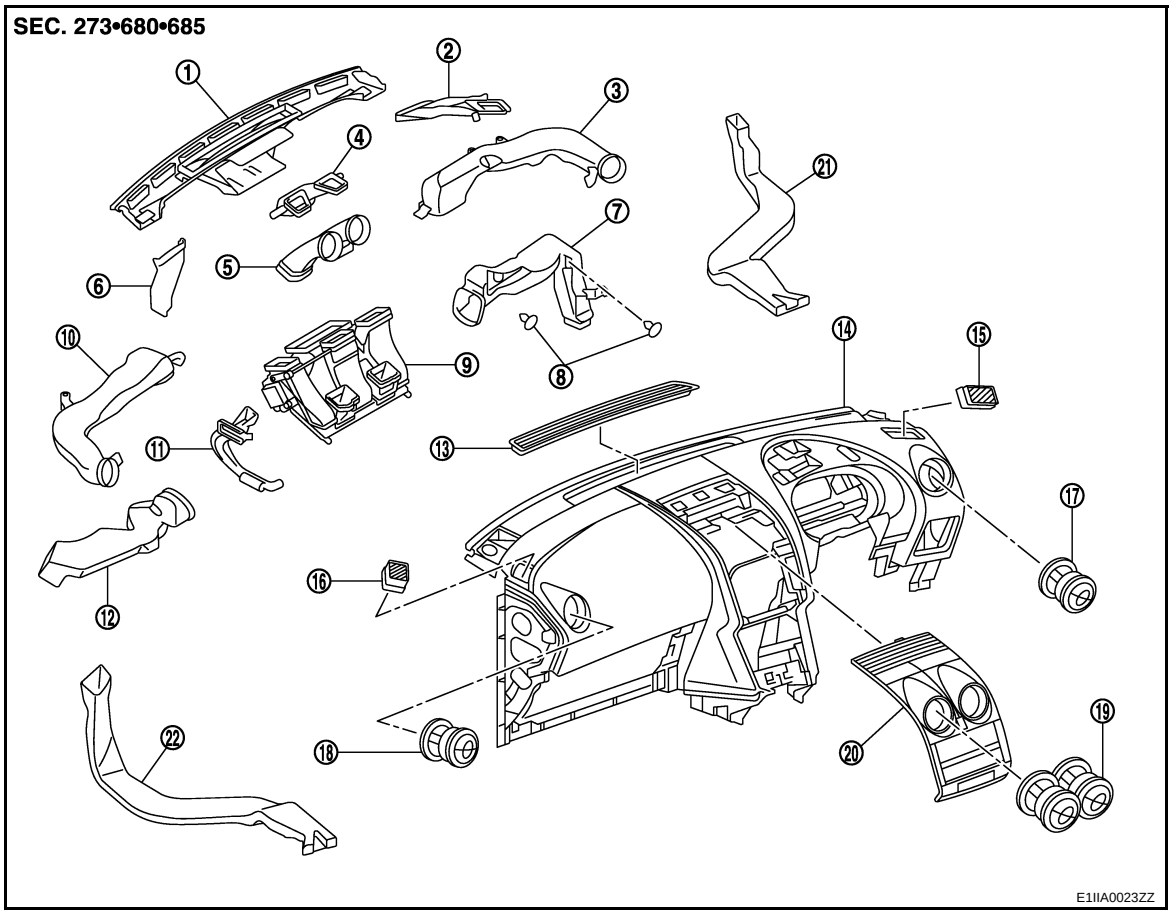
INSTALLATION

Installation is basically the reverse order of removal.

SIDE VENTILATOR DUCT

SIDE VENTILATOR DUCT : Exploded View

INFOID:0000000001569704



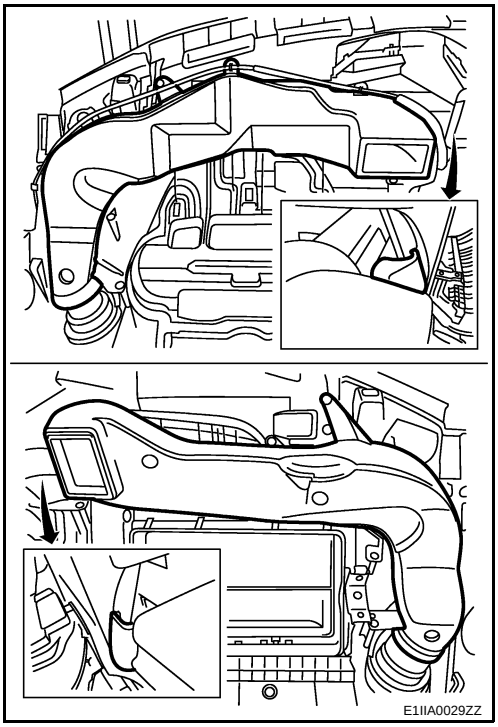
1. Defroster nozzle
2. Side defroster nozzle - RH
3. Side ventilator duct - RH
4. Front upper ventilator duct
5. Center ventilator duct
6. Side defroster nozzle - LH
7. Side foot duct - RH
8. Clip
9. Air mix duct
10. Side ventilator duct - LH
11. Glove box duct
12. Side foot duct - LH
13. Front defroster grille - center
14. Instrument panel
15. Side defroster grille - RH
16. Side defroster grille - LH
17. Side ventilator grille - RH
18. Side ventilator grille - LH
19. Center ventilator grille
20. Cluster lid C
21. Floor duct - RH
22. Floor duct - LH

SIDE VENTILATOR DUCT : Removal and Installation

INFOID:0000000001569705

REMOVAL

1. Remove instrument panel. Refer to IP-12, "Removal and Installation".
2. Remove fixing screws from instrument panel.
3. Release side ventilator ducts from side ventilator grille.
4. Pull to release tab from center defroster duct.
5. Remove side ventilator ducts.



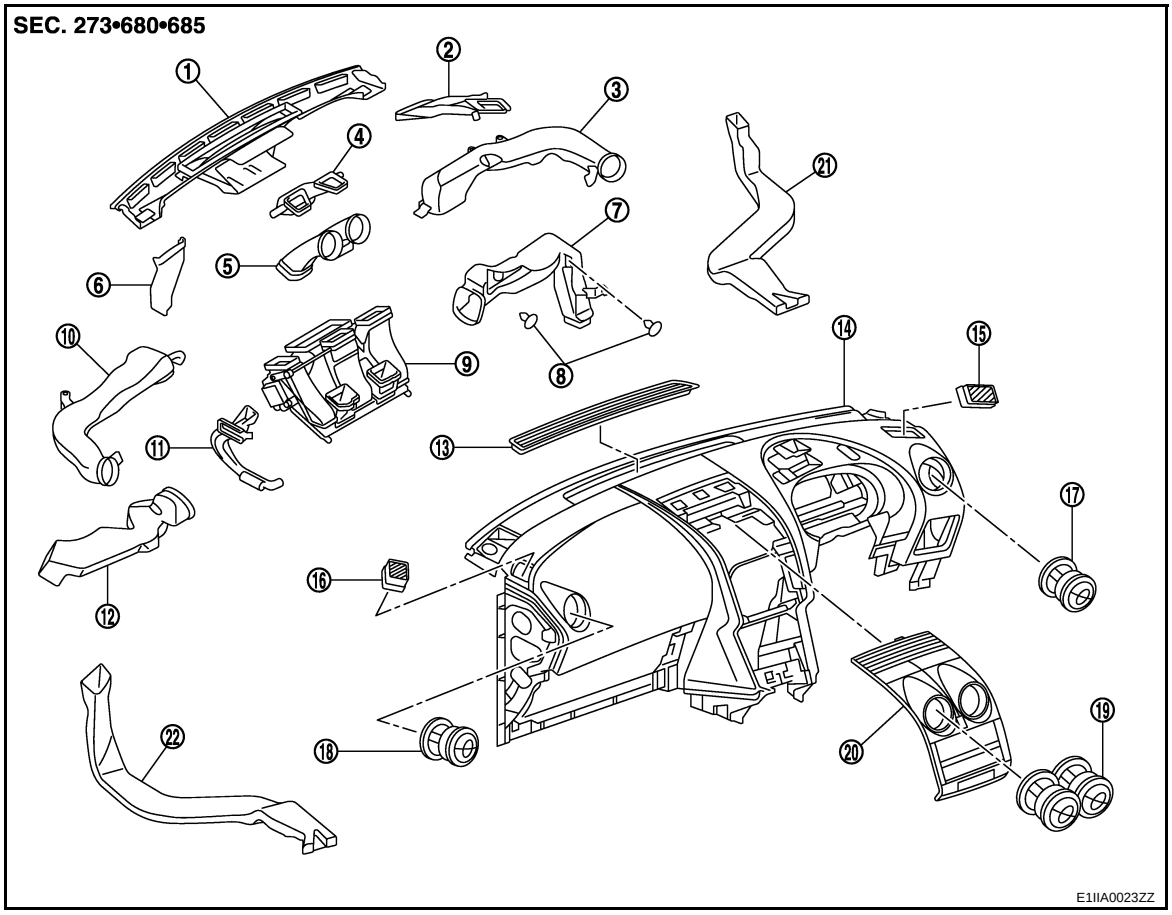
INSTALLATION

Installation is basically the reverse order of removal.

FOOT DUCT

FOOT DUCT : Exploded View

INFOID:0000000001183032



1. Defroster nozzle
2. Side defroster nozzle - RH
3. Side ventilator duct - RH
4. Front upper ventilator duct
5. Center ventilator duct
6. Side defroster nozzle - LH
7. Side foot duct - RH
8. Clip
9. Air mix duct
10. Side ventilator duct - LH
11. Glove box duct
12. Side foot duct - LH
13. Front defroster grille - center
14. Instrument panel
15. Side defroster grille - RH
16. Side defroster grille - LH
17. Side ventilator grille - RH
18. Side ventilator grille - LH
19. Center ventilator grille
20. Cluster lid C
21. Floor duct - RH
22. Floor duct - LH

FOOT DUCT : Removal and Installation

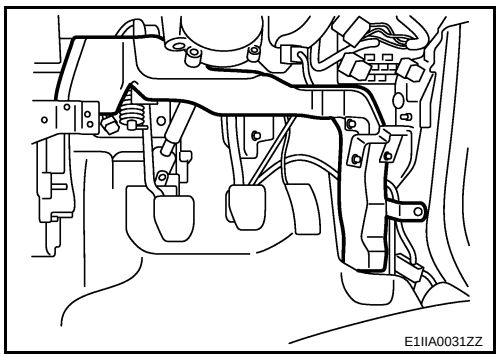
INFOID:0000000001183033

REMOVAL

Driver Side

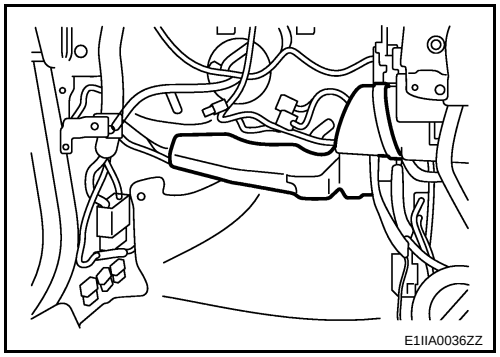
1. Remove driver side lower panel. Refer to IP-12, "Removal and Installation".
2. Remove side finisher. Refer to IP-12, "Removal and Installation".
3. Remove duct fixing bolt from lid and hood opener bracket.

4. Remove lower fixing clip from driver side foot duct.
5. Pull duct center side to release it from heater and cooling assembly
6. Release foot duct from floor duct (if equipped)
7. Handle to remove foot duct.



Passenger Side

1. Remove glove box assembly. Refer to IP-12, "Removal and Installation".
2. Remove lower instrument panel finisher.
3. Remove outer fixing screw from bracket.
4. Release foot duct center side from heater and cooling assembly.
   CAUTION:
   Be careful not to damage upper fixing clip.
5. Release foot duct from floor duct (if equipped).
6. Handle to remove foot duct.



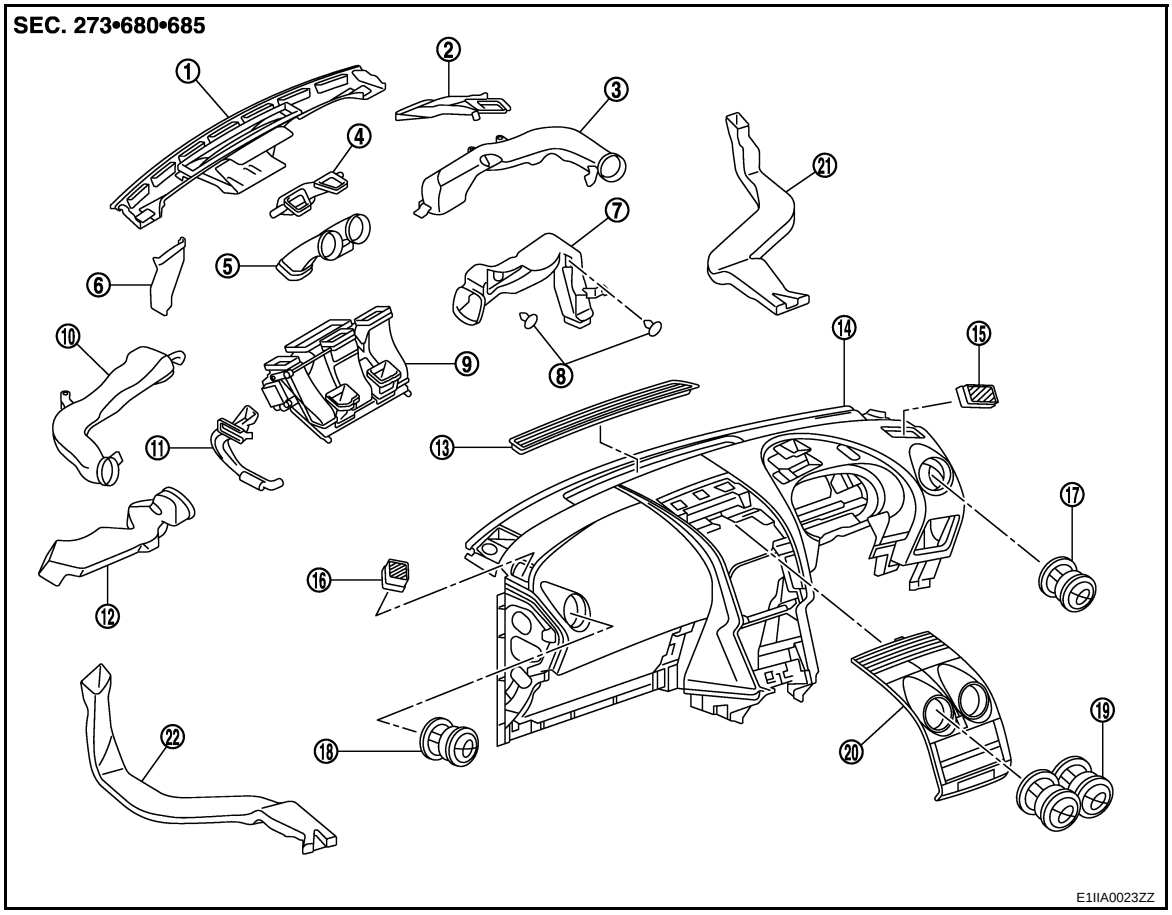
INSTALLATION

Installation is basically the reverse of removal.

FLOOR DUCT

FLOOR DUCT : Exploded View

INFOID:0000000001183034



1. Defroster nozzle
2. Side defroster nozzle - RH
3. Side ventilator duct - RH
4. Front upper ventilator duct
5. Center ventilator duct
6. Side defroster nozzle - LH
7. Side foot duct - RH
8. Clip
9. Air mix duct
10. Side ventilator duct - LH
11. Glove box duct
12. Side foot duct - LH
13. Front defroster grille - center
14. Instrument panel
15. Side defroster grille - RH
16. Side defroster grille - LH
17. Side ventilator grille - RH
18. Side ventilator grille - LH
19. Center ventilator grille
20. Cluster lid C
21. Floor duct - RH
22. Floor duct - LH

FLOOR DUCT : Removal and Installation

INFOID:0000000001183035

REMOVAL

1. Remove floor carpet. Refer to INT-18, "Removal and Installation".
2. Remove floor duct.

INSTALLATION

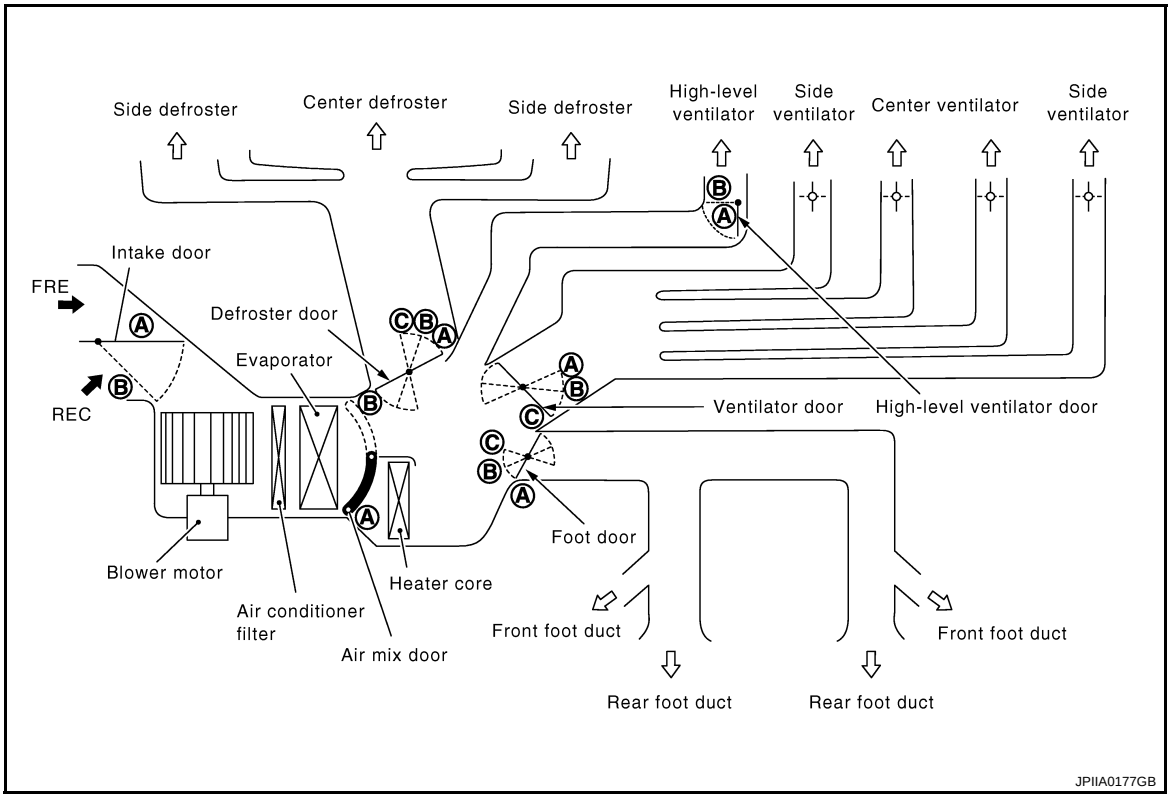
Installation is basically the reverse of removal.

FUNCTION DIAGNOSIS

SWITCHES AND THEIR CONTROL FUNCTION

System Description

INFOID:0000000001183036



DOOR \ Mode control dial	MODE position					High-level ventilator SW		REC SW		Temperature control dial		
	VENT	B/L	FOOT	D/F	DEF	ON	OFF	FRE	REC	Full cold	⇔	Full hot
Ventilator door	Ⓐ	Ⓑ	Ⓒ	Ⓒ	Ⓒ	–		–		–		
Defroster door	Ⓐ	Ⓐ	Ⓐ	Ⓑ	Ⓒ	–		–		–		
Foot door	Ⓐ	Ⓑ	Ⓒ	Ⓑ	Ⓐ	–		–		–		
High-level ventilator door	–	–	–	–	–	Ⓐ	Ⓑ	–		–		
Intake door	–					–		Ⓑ	Ⓐ	–		
Air mix door	–					–		–		Ⓐ	⇔	Ⓑ

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AIR DISTRIBUTION

System Description

INFOID:0000000001183037

Without rear ventilation

Discharge air flow

Mode door position	Air outlet/distribution		
	Vent	Foot	Defroster
	100%	–	–
	60%	40%	–
	16%	72%	12%
	16%	60%	24%
	16%	–	84%

SJIA0707E

PRECAUTION

PRECAUTIONS

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

INFOID:0000000001183038

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 AIRBAG” 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 which 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 AIRBAG”.**
- **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.**

Precaution Necessary for Steering Wheel Rotation After Battery Disconnect

INFOID:0000000001183039

NOTE:

- This Procedure is applied only to models with Intelligent Key system and NATS (NISSAN ANTI-THEFT SYSTEM).
- Remove and install all control units after disconnecting both battery cables with the ignition knob in the ″LOCK″ position.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If DTC is detected, perform trouble diagnosis according to self-diagnostic results.

For models equipped with the Intelligent Key system and NATS, an electrically controlled steering lock mechanism is adopted on the key cylinder.
For this reason, if the battery is disconnected or if the battery is discharged, the steering wheel will lock and steering wheel rotation will become impossible.
If steering wheel rotation is required when battery power is interrupted, follow the procedure below before starting the repair operation.

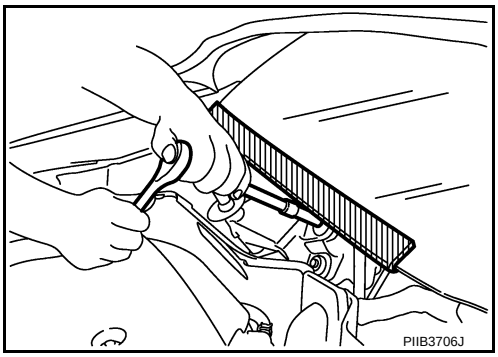
OPERATION PROCEDURE

1. Connect both battery cables.
   NOTE:
   Supply power using jumper cables if battery is discharged.
2. Use the Intelligent Key or mechanical key to turn the ignition switch to the ″ACC″ position. At this time, the steering lock will be released.
3. Disconnect both battery cables. The steering lock will remain released and the steering wheel can be rotated.
4. Perform the necessary repair operation.
5. When the repair work is completed, return the ignition switch to the ″LOCK″ position before connecting the battery cables. (At this time, the steering lock mechanism will engage.)
6. Perform a self-diagnosis check of all control units using CONSULT-III.

Precaution for Procedure without Cowl Top Cover

INFOID:0000000001183040

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



Precautions For Xenon Headlamp Service

INFOID:0000000001183041

WARNING:

Comply with the following warnings to prevent any serious accident.

- **Disconnect the battery cable (negative terminal) or the power supply fuse before installing, removing, or touching the xenon headlamp (bulb included). The xenon headlamp contains high-voltage generated parts.**
- **Never work with wet hands.**
- **Check the xenon headlamp ON-OFF status after assembling it to the vehicle. Never turn the xenon headlamp ON in other conditions. Connect the power supply to the vehicle-side connector. (Turning it ON outside the lamp case may cause fire or visual impairments.)**
- **Never touch the bulb glass immediately after turning it OFF. It is extremely hot.**

CAUTION:

Comply with the following cautions to prevent any error and malfunction.

- **Install the xenon bulb securely. (Insufficient bulb socket installation may melt the bulb, the connector, the housing, etc. by high-voltage leakage or corona discharge.)**
- **Never perform HID circuit inspection with a tester.**
- **Never touch the xenon bulb glass with hands. Never put oil and grease on it.**
- **Dispose of the used xenon bulb after packing it in thick vinyl without breaking it.**
- **Never wipe out dirt and contamination with organic solvent (thinner, gasoline, etc.).**

Working with HFC-134a (R-134a)

INFOID:0000000001183042

CAUTION:

- **CFC-12 (R-12) refrigerant and HFC-134a (R-134a) refrigerant are not compatible. These refrigerants must never be mixed, even in the smallest amounts. If the refrigerants are mixed and compressor malfunction is likely occur.**
- **Use only specified lubricant for the HFC-134a (R-134a) A/C system and HFC-134a (R-134a) components. If lubricant other than that specified is used, compressor malfunction is likely to occur.**
- **The specified HFC-134a (R-134a) lubricant rapidly absorbs moisture from the atmosphere. The following handling precautions must be observed:**

- **When removing refrigerant components from a vehicle, immediately cap (seal) the component to minimize the entry of moisture from the atmosphere.**
- **When installing refrigerant components to a vehicle, never remove the caps (unseal) until just before connecting the components. Connect all refrigerant loop components as quickly as possible to minimize the entry of moisture into system.**
- **Only use the specified lubricant from a sealed container. Immediately reseal containers of lubricant. Without proper sealing, lubricant will become moisture saturated and should not be used.**
- **Never allow lubricant (Nissan A/C System Oil Type S) to come in contact with styrene foam parts. Damage may result.**

General Refrigerant Precaution

INFOID:0000000001183043

WARNING:

- **Avoid breathing A/C refrigerant and lubricant vapor or mist. Exposure may irritate eyes, nose and throat. Use only approved recovery/recycling equipment to discharge HFC-134a (R-134a) refrigerant.**

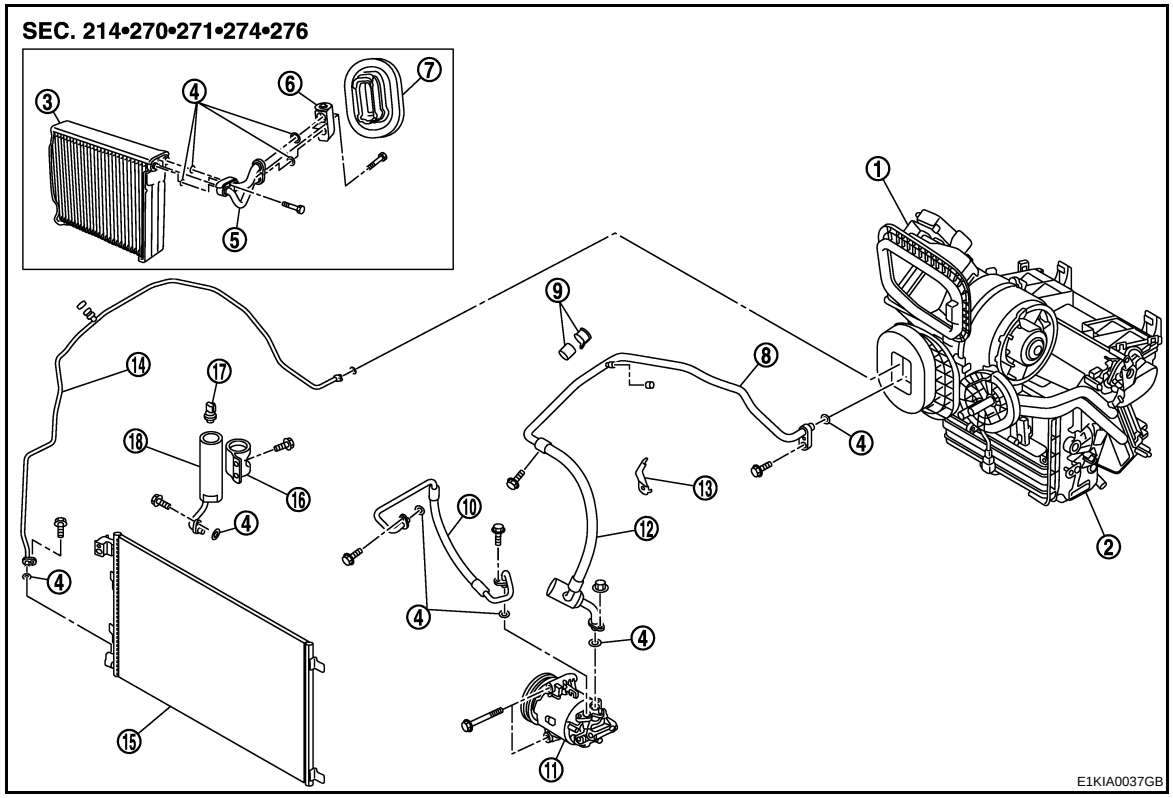
If accidental system discharge occurs, ventilate work area before resuming service. Additional health and safety information may be obtained from refrigerant and lubricant manufacturers.
- **Never release refrigerant into the air. Use approved recovery/recycling equipment to capture the refrigerant every time an air conditioning system is discharged.**
- **Always wear eye and hand protection (goggles and gloves) when working with any refrigerant or air conditioning system.**
- **Never store or heat refrigerant containers above 52°C (126°F).**
- **Never heat a refrigerant container with an open flame; if container warming is required, place the bottom of the container in a warm pail of water.**
- **Never intentionally drop, puncture, or incinerate refrigerant containers.**
- **Keep refrigerant away from open flames: poisonous gas will be produced if refrigerant burns.**
- **Refrigerant will displace oxygen, therefore be certain to work in well ventilated areas to prevent suffocation.**
- **Never pressure test or leak test HFC-134a (R-134a) service equipment and/or vehicle air conditioning systems with compressed air during repair. Some mixtures of air and HFC-134a (R-134a) have been shown to be combustible at elevated pressures. These mixtures, if ignited, may cause injury or property damage. Additional health and safety information may be obtained from refrigerant manufacturers.**

Refrigerant Connection

INFOID:0000000001183044

A new type refrigerant connection has been introduced to all refrigerant lines except the following location.
- Expansion valve to evaporator
- Refrigerant pressure sensor to liquid tank

O-RING AND REFRIGERANT CONNECTION (HR/MR)



1. Heater & blower unit assembly	2. Heater & cooling unit assembly	3. Evaporator
4. O-ring	5. Low pressure pipe 1 and high pressure pipe 2 assembly	6. Expansion valve
7. Heater sealing	8. Low pressure flexible hose and pipe 2	9. Low pressure pipe 2 fixing clamp assembly
10. High pressure flexible hose	11. Compressor	12. Low pressure flexible hose

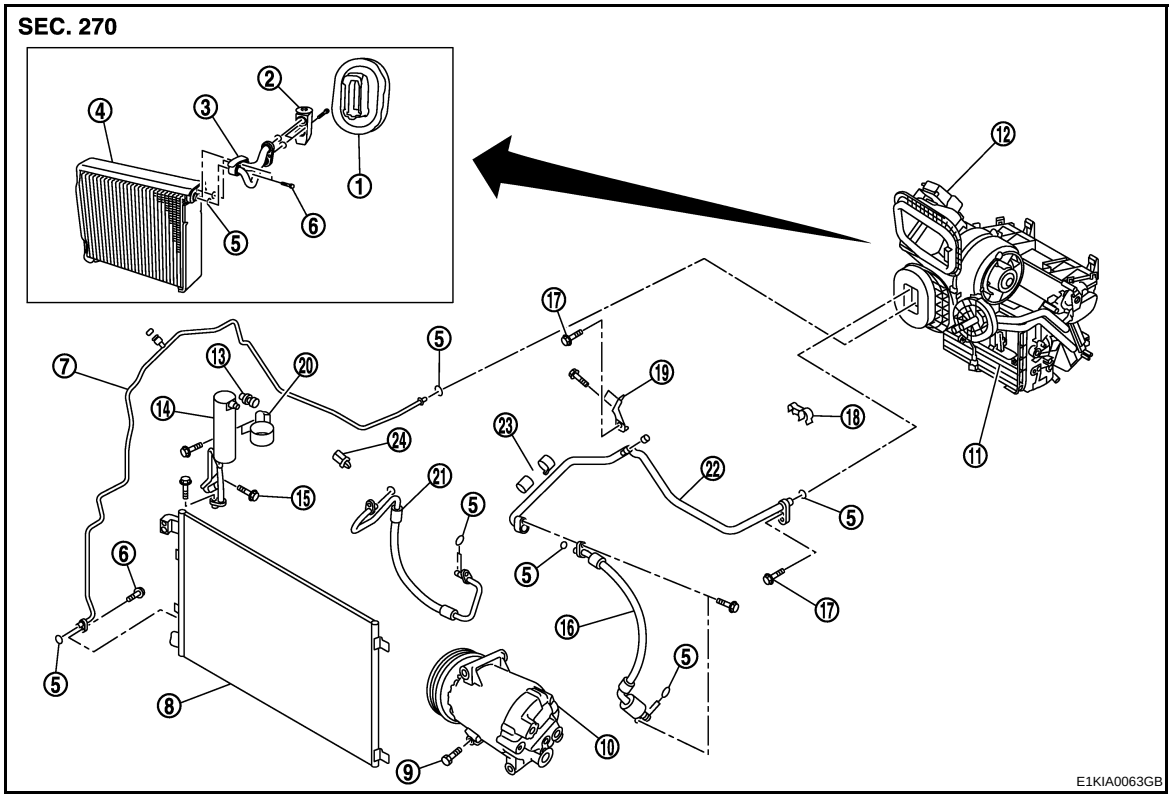
13. Low & high pipe bracket support
14. High pressure pipe 1
15. Condenser assembly
16. Liquid tank fixing bracket
17. Refrigerant pressure sensor
18. Liquid tank

CAUTION:
The new and former refrigerant connections use different O-ring configurations. Never confuse O-rings since they are not interchangeable. If a wrong O-ring is installed, refrigerant may leak at the connection.

O-Ring Part Numbers and Specifications

Connection type	Piping connection point		Part number	QTY	O-ring size
New	Low pressure pipe 2 to expansion valve		92473 N8210	1	16
	High pressure flexible pipe 1 to condenser		92472 N8210	1	12
	High pressure pipe 1 to expansion valve		92471 N8210	1	8
	Low pressure pipe 1 and high pressure pipe 2 assembly to expansion valve	Inlet	92475 71L00	1	12
		Outlet	92475 72L00	1	16
	Low pressure pipe 1 and high pressure pipe 2 assembly to evaporator	Inlet	92475 71L00	1	12
		Outlet	92475 72L00	1	16
	High pressure pipe 1 to liquid tank		92471 N8210	1	8
	Compressor to low pressure flexible hose		92474 N8210	1	16
	Compressor to high pressure flexible hose		92472 N8210	1	12
	Liquid tank to condenser		92473 N8210	1	16

O-RING AND REFRIGERANT CONNECTION (K9K)



1. Heater sealing
2. Expansion valve
3. Evaporator connector pipes
4. Evaporator
5. O-ring
6. Connector pipe fixing bolt
7. High pressure pipe
8. Condenser assembly
9. Fixing bolt
10. Compressor
11. Heater & cooling unit assembly
12. Heater & Blower unit assembly
13. Refrigerant pressure sensor
14. Liquid tank
15. Liquid tank fixing screw

16. Low pressure flexible hose
17. Fixing bolt
18. Pipes fixing clip
19. Low & high pressure pipe bracket
20. Liquid tank fixing bracket
21. High pressure flexible hose
22. Low pressure pipe
23. Low pressure pipe fixing clamp assembly
24. Pipe mantening clip

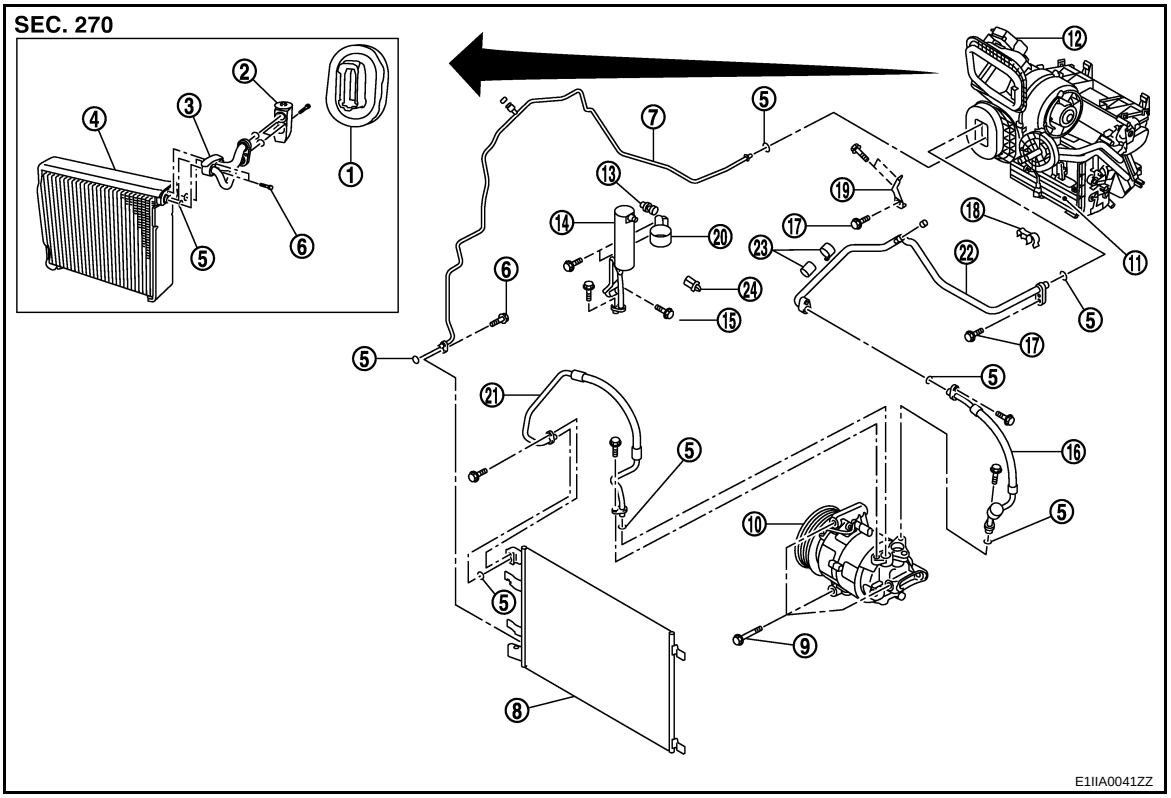
CAUTION:

The new and former refrigerant connections use different O-ring configurations. Never confuse O-rings since they are not interchangeable. If a wrong O-ring is installed, refrigerant may leak at the connection.

O-Ring Part Numbers and SpecificationsA

Connection type	Piping connection point		Part number	QTY	O-ring size
New	Low pressure flexible hose to Low pressure pipe 2		92473 N8210	1	16
	Low pressure pipe 2 to expansion valve		92473 N8210	1	16
	High pressure flexible pipe 1 to condenser		92472 N8210	1	12
	High pressure pipe 1 to expansion valve		92471 N8210	1	8
	Low pressure pipe 1 and high pressure	Inlet	92475 71L00	1	12
	Pipe 2 assembly to expansion valve	Outlet	92475 72L00	1	16
	Low pressure pipe 1 and high pressure	Inlet	92475 71L00	1	12
	Pipe 2 assembly to evaporator	Outlet	92475 72L00	1	16
	High pressure pipe 1 to liquid tank		92471 N8210	1	8
	Compressor to low pressure flexible hose		77030 65315	2	16
	Compressor to high pressure flexible hose		77030 65316	2	12
	Liquid tank to condenser		92473 N8210	2	16

O-RING AND REFRIGERANT CONNECTION (M9R)



1. Heater sealing
2. Expansion valve
3. Low pressure pipe 1 and high pressure pipe 2 assembly
4. Evaporator
5. O-ring
6. Connector pipe fixing bolt
7. High pressure pipe 1
8. Condenser assembly
9. Fixing bolt
10. Compressor
11. Heater & cooling unit assembly
12. Heater & blower unit assembly
13. Refrigerant pressure sensor
14. Liquid tank
15. Liquid tank fixing screw
16. Low pressure flexible hose
17. Fixing bolt
18. Pipes fixing clip
19. Low & high pressure pipe bracket
20. Liquid tank fixing bracket
21. High pressure flexible hose
22. Low pressure pipe 2
23. Low pressure pipe fixing clamp assembly
24. Pipe mantening clip

CAUTION:

The new and former refrigerant connections use different O-ring configurations. Never confuse O-rings since they are not interchangeable. If a wrong O-ring is installed, refrigerant may leak at the connection.

O-Ring Part Numbers and Specifications

Connection type	Piping connection point		Part number	QTY	O-ring size
New	Low pressure pipe 2 to expansion valve		92473 N8210	1	16
	High pressure flexible pipe 1 to condenser		92472 N8210	1	12
	High pressure pipe 1 to expansion valve		92471 N8210	1	8
	Low pressure pipe 1 and high pressure pipe 2 assembly to expansion valve	Inlet	92475 71L00	1	12
		Outlet	92475 72L00	1	16
	Low pressure pipe 1 and high pressure pipe 2 assembly to evaporator	Inlet	92475 71L00	1	12
		Outlet	92475 72L00	1	16
	High pressure pipe 1 to liquid tank		92471 N8210	1	8
	Compressor to low pressure flexible hose		92474 N8210	1	16
	Compressor to high pressure flexible hose		92472 N8210	1	12
	Liquid tank to condenser		92473 N8210	1	16

WARNING:

Make sure all refrigerant is discharged into the recycling equipment and the pressure in the system is less than atmospheric pressure. Then gradually loosen the discharge side hose fitting and remove it.

CAUTION:

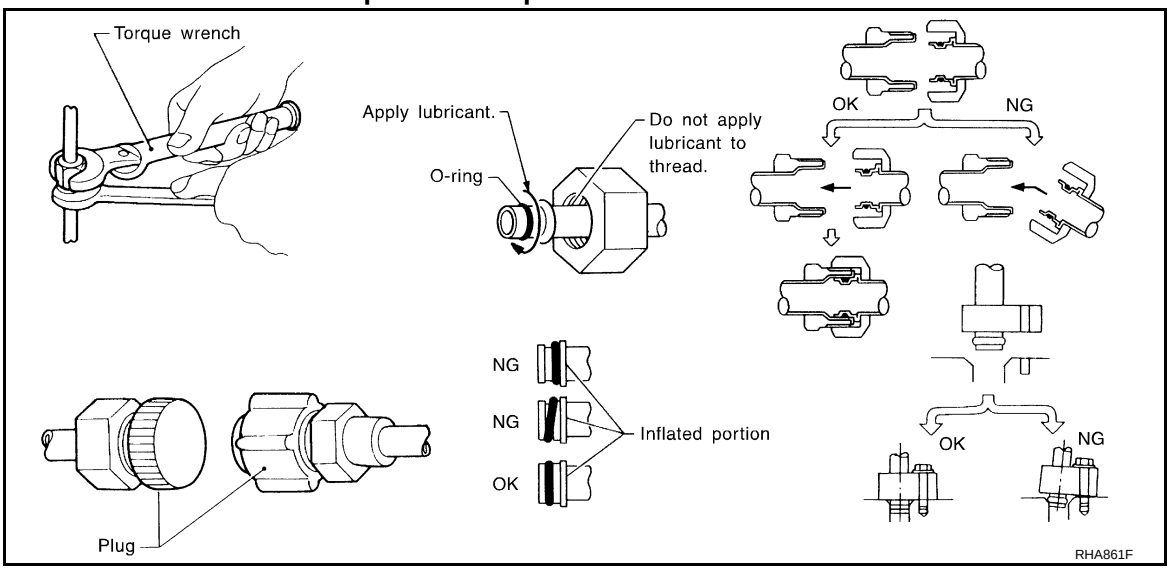
When replacing or cleaning refrigerant cycle components, observe the following.

- **When the compressor is removed, store it in the same way at it is when mounted on the car. Failure to do so will cause lubricant to enter the low-pressure chamber.**
- **When connecting tubes, always use a torque wrench and a back-up wrench.**
- **After disconnecting tubes, immediately plug all openings to prevent entry of dust and moisture.**
- **When installing an air conditioner in the vehicle, connect the pipes at the final stage of the operation. Never remove the seal caps of pipes and other components until just before required for connection.**
- **Allow components stored in cool areas to warm to working area temperature before removing seal caps. This prevents condensation from forming inside A/C components.**
- **Thoroughly remove moisture from the refrigeration system before charging the refrigerant.**
- **Always replace used O-rings.**
- **When connecting tube, apply lubricant to circle of the O-rings shown in illustration. Be careful not to apply lubricant to threaded portion.**

Name : Nissan A/C System Oil Type S

- **O-ring must be closely attached to the groove portion of tube.**
- **When replacing the O-ring, be careful not to damage O-ring and tube.**
- **Connect tube until a click can be heard, then tighten the nut or bolt by hand. Make sure that the O-ring is installed to tube correctly.**

- **After connecting line, perform leak test and make sure that there is no leakage from connections. When the refrigerant leaking point is found, disconnect that line and replace the O-ring. Then tighten connections of seal seat to the specified torque.**



Service Equipment

INFOID:0000000001183045

RECOVERY/RECYCLING EQUIPMENT

Be certain to follow the manufacturer's instructions for machine operation and machine maintenance. Never introduce any refrigerant other than that specified into the machine.

ELECTRICAL LEAK DETECTOR

Be certain to follow the manufacturer's instructions for tester operation and tester maintenance.

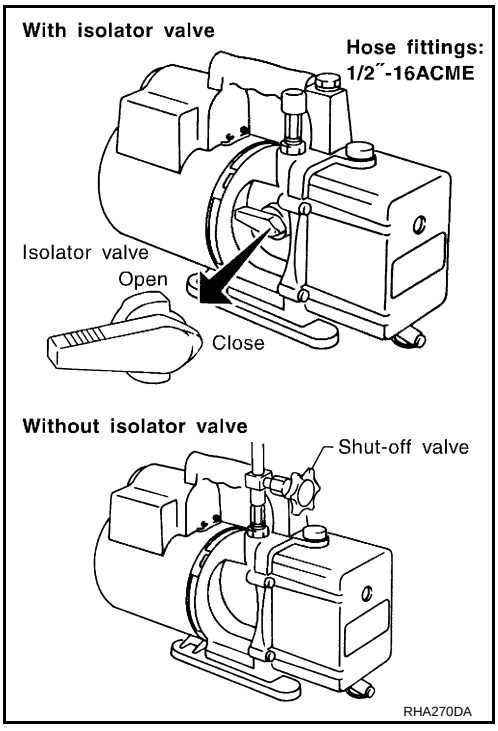
VACUUM PUMP

The lubricant contained inside the vacuum pump is not compatible with the specified lubricant for HFC-134a (R-134a) A/C systems. The vent side of the vacuum pump is exposed to atmospheric pressure. So the vacuum pump lubricant may migrate out of the pump into the service hose. This is possible when the pump is switched off after evacuation (vacuuming) and hose is connected to it.

To prevent this migration, use a manual valve placed near the hose-to-pump connection, as follows.

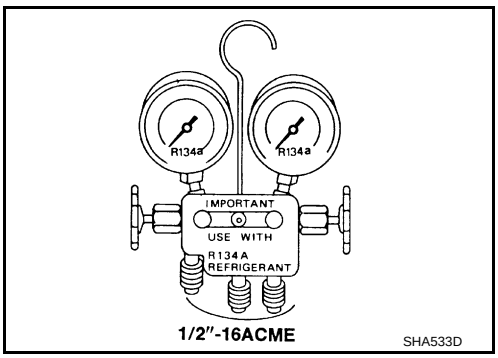
- Usually vacuum pumps have a manual isolator valve as part of the pump. Close this valve to isolate the service hose from the pump.
- For pumps without an isolator, use a hose equipped with a manual shut-off valve near the pump end. Close the valve to isolate the hose from the pump.
- If the hose has an automatic shut-off valve, disconnect the hose from the pump. As long as the hose is connected, the valve is open and lubricating oil may migrate.

Some one-way valves open when vacuum is applied and close under no vacuum condition. Such valves may restrict the pump's ability to pull a deep vacuum and are not recommended.



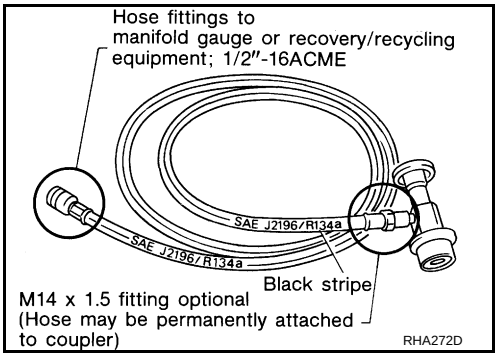
MANIFOLD GAUGE SET

Be certain that the gauge face indicates HFC-134a or R-134a. Be sure the gauge set has 1/2″-16 ACME threaded connections for service hoses. Confirm the set has been used only with refrigerant HFC-134a (R-134a) and specified lubricants.



SERVICE HOSES

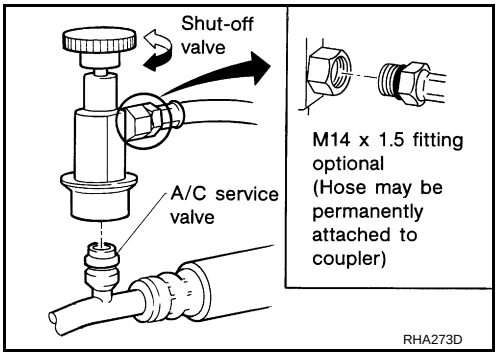
Be certain that the service hoses display the markings described (colored hose with black stripe). All hoses must include positive shut-off devices (either manual or automatic) near the end of the hoses opposite to the manifold gauge.



SERVICE COUPLERS

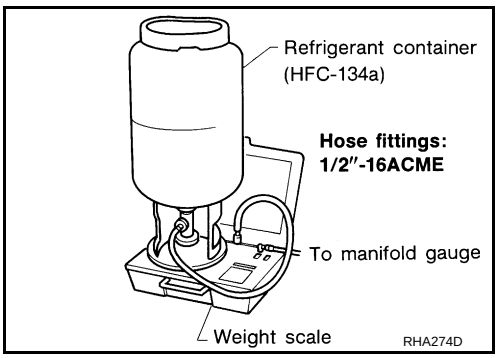
Never attempt to connect HFC-134a (R-134a) service couplers to a CFC-12 (R-12) A/C system. The HFC-134a (R-134a) couplers will not properly connect to the CFC-12 (R-12) system. However, if an improper connection is attempted, discharging and contamination may occur.

Shut-off valve rotation	A/C service valve
Clockwise	Open
Counterclockwise	Close



REFRIGERANT WEIGHT SCALE

Verify that no refrigerant other than HFC-134a (R-134a) and specified lubricants have been used with the scale. If the scale controls refrigerant flow electronically, the hose fitting must be 1/2″-16 ACME.



CHARGING CYLINDER

Using a charging cylinder is not recommended. Refrigerant may be vented into air from cylinder's top valve when filling the cylinder with refrigerant. Also, the accuracy of the cylinder is generally less than that of an electronic scale or of quality recycle/recharge equipment.

COMPRESSOR

General Precautions

INFOID:0000000001183046

CAUTION:

- **Plug all openings to prevent moisture and foreign matter from entering.**
- **When the compressor is removed, store it in the same way at it is when mounted on the car.**
- **When replacing or repairing compressor, follow “Maintenance of Lubricant Quantity in Compressor” exactly. Refer to HA-186, "Adjustment".**
- **Keep friction surfaces between clutch and pulley clean. If the surface is contaminated with lubricant, wipe it off by using a clean waste cloth moistened with thinner.**
- **After compressor service operation, turn the compressor shaft by hand more than five turns in both directions. This will equally distribute lubricant inside the compressor. After the compressor is installed, let the engine idle and operate the compressor for one hour.**
- **After replacing the compressor magnet clutch, apply voltage to the new one and check for normal operation.**

FLUORESCENT LEAK DETECTOR

General Precautions

INFOID:0000000001183047

CAUTION:

- **The A/C system contains a fluorescent leak detection dye used for locating refrigerant leaks. An ultraviolet (UV) lamp is required to illuminate the dye when inspecting for leaks.**
- **Always wear fluorescence enhancing UV safety goggles to protect your eyes and enhance the visibility of the fluorescent dye.**
- **The fluorescent dye leak detector is not a replacement for an electrical leak detector (SST: J-41995). The fluorescent dye leak detector should be used in conjunction with an electrical leak detector (SST: J-41995) to pin-point refrigerant leaks.**
- **For the purpose of safety and customer's satisfaction, read and follow all manufacture's operating instructions and precautions prior to performing the work.**
- **A compressor shaft seal should not necessarily be repaired because of dye seepage. The compressor shaft seal should only be repaired after confirming the leak with an electrical leak detector (SST: J-41995).**
- **Always remove any remaining dye from the leak area after repairs are completed to avoid a misdiagnosis during a future service.**
- **Never allow dye to come into contact with painted body panels or interior components. If dye is spilled, clean immediately with the approved dye cleaner. Fluorescent dye left on a surface for an extended period of time cannot be removed.**
- **Never spray the fluorescent dye cleaning agent on hot surfaces (engine exhaust manifold, etc.).**
- **Never use more than one refrigerant dye bottle (1/4 ounce /7.4 cc) per A/C system.**
- **Leak detection dyes for HFC-134a (R-134a) and CFC-12 (R-12) A/C systems are different. Never use HFC-134a (R-134a) leak detection dye in CFC-12 (R-12) A/C system, or CFC-12 (R-12) leak detection dye in HFC-134a (R-134a) A/C system, or A/C system damage may result.**
- **The fluorescent properties of the dye will remain for three years or a little over unless a compressor malfunction occurs.**

IDENTIFICATION

NOTE:

Vehicles with factory installed fluorescent dye have a green label.
Vehicles without factory installed fluorescent dye have a blue label.

IDENTIFICATION LABEL FOR VEHICLE

Vehicles with factory installed fluorescent dye have the identification label on the front side of hood.

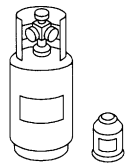
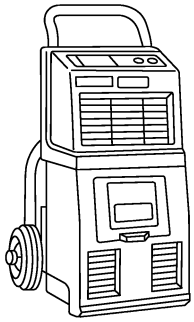
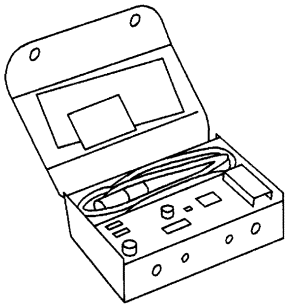
PREPARATION

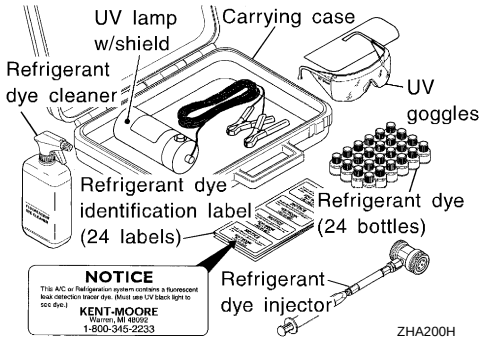
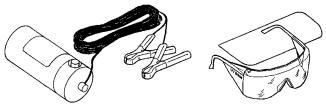
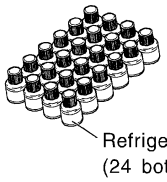
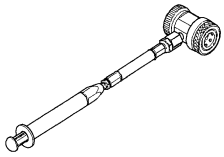
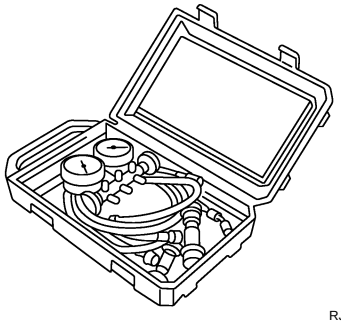
PREPARATION

HFC-134a (R-134a) Service Tools and Equipment

INFOID:0000000001183048

Never mix HFC-134a (R-134a) refrigerant and/or its specified lubricant with CFC-12 (R-12) refrigerant and/or its lubricant.
Separate and non-interchangeable service equipment must be used for handling each type of refrigerant/lubricant.
Refrigerant container fittings, service hose fittings and service equipment fittings (equipment which handles refrigerant and/or lubricant) are different between CFC-12 (R-12) and HFC-134a (R-134a). This is to avoid mixed use of the refrigerants/lubricant.
Adapters that convert one size fitting to another must never be used: refrigerant/lubricant contamination will occur and compressor malfunction will result.

Tool number Tool name	Description
HFC-134a (R-134a) refrigerant  S-NT196	Container color: Light blue Container marking: HFC-134a (R-134a) Fitting size: Thread size • Large container 1/2″-16 ACME
KLH00-PAGS0 Nissan A/C System Oil Type S (DH-PS)  S-NT197	Type: Polyalkylene glycol oil (PAG), type S (DH-PS) Application: HFC-134a (R-134a) wobble (swash) plate compressors (Nissan only) Lubricity: 40 m ℓ (1.4 Imp fl oz.)
Recovery/Recycling/ Recharging equipment (ACR4)  RJIA0195E	Function: Refrigerant recovery and recycling and recharging
Electrical leak detector  A/C leak detector SHA705EB	Power supply: DC 12V (Cigarette lighter)

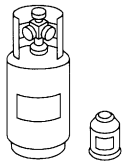
Tool number Tool name		Description
(J-43926) Refrigerant dye leak detection kit Kit includes: (J-42220) UV lamp and UV safety goggles (J-41459) HFC-134a (R-134a) dye injector Use with J-41447, 1/4 ounce bottle (J-41447) HFC-134a (R-134a) fluorescent leak detection dye (Box of 24, 1/4 ounce bottles) (J-43872) Refrigerant dye cleaner	 ZHA200H	Power supply: DC 12V (Battery terminal)
(J-42220) UV lamp and UV safety goggles	 SHA438F	Power supply: DC 12V (Battery terminal) For checking refrigerant leak when fluorescent dye is installed in A/C system Includes: UV lamp and UV safety goggles
(J-41447) HFC-134a (R-134a) fluorescent leak detection dye (Box of 24, 1/4 ounce bottles)	 SHA439F	Application: For HFC-134a (R-134a) PAG oil Container: 1/4 ounce (7.4 cc) bottle (Includes self-adhesive dye identification labels for affixing to vehicle after charging system with dye.)
(J-41459) HFC-134a (R-134a) dye injector Use with J-41447, 1/4 ounce bottle	 SHA440F	For injecting 1/4 ounce of fluorescent leak detection dye into A/C system.
(J-43872) Refrigerant dye cleaner	 SHA441F	For cleaning dye spills.
Manifold gauge set (with hoses and couplers)	 RJIA0196E	Identification: • The gauge face indicates HFC-134a (R-134a). Fitting size: Thread size • 1/2″ -16 ACME

Sealant or/and Lubricant

INFOID:0000000001183049

HFC-134a (R-134a) Service Tool and Equipment

- Never mix HFC-134a (R-134a) refrigerant and/or its specified lubricant with CFC-12 (R-12) refrigerant and/or its lubricant.
- Separate and non-interchangeable service equipment must be used for handling each type of refrigerant/lubricant.
- Refrigerant container fittings, service hose fittings and service equipment fittings (equipment which handles refrigerant and/or lubricant) are different between CFC-12 (R-12) and HFC-134a (R-134a). This is to avoid mixed use of the refrigerants/lubricant.
- Never use adapters that convert one size fitting to another: refrigerant/lubricant contamination occurs and compressor malfunction may result.

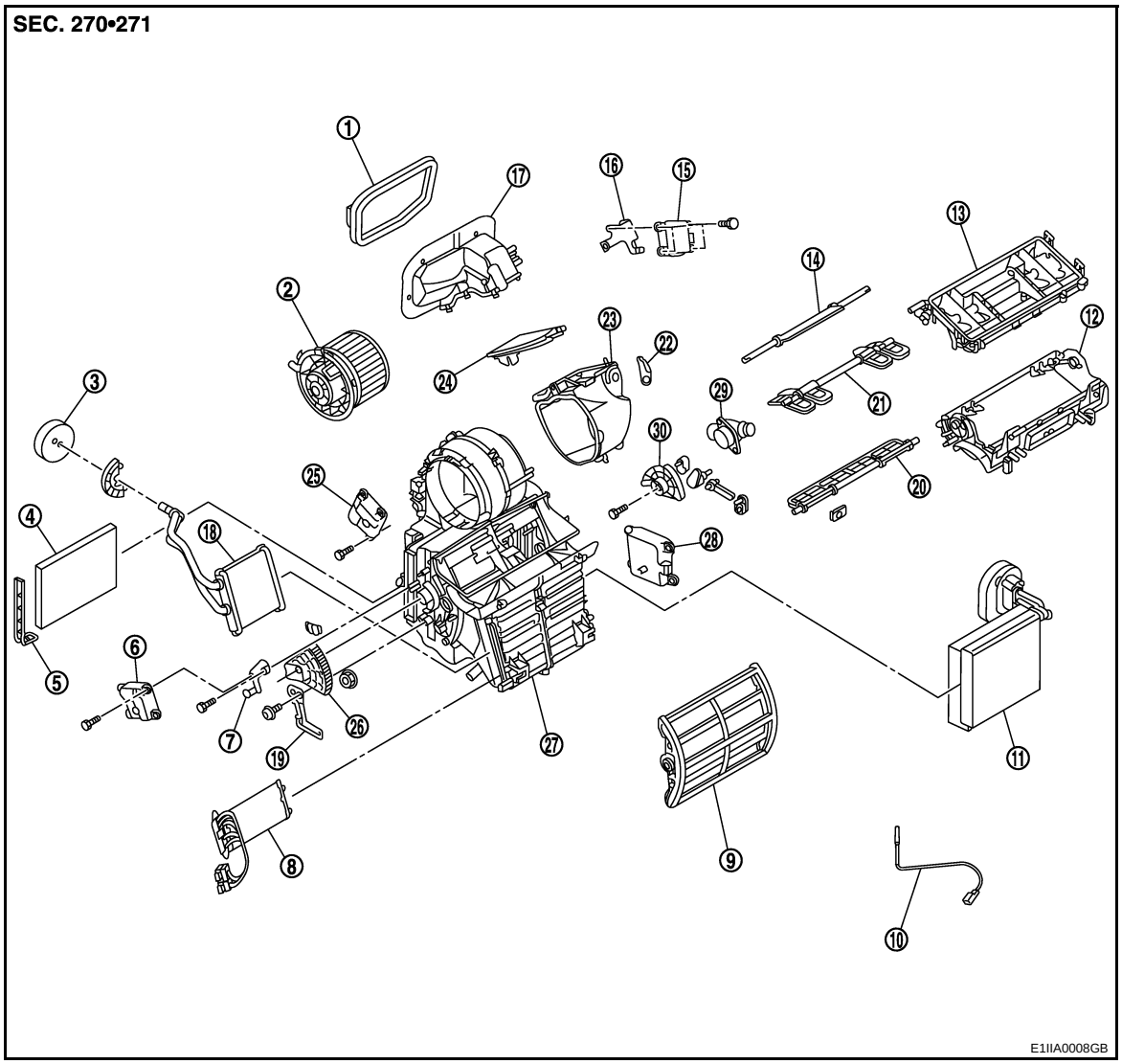
Tool name	Description
HFC-134a (R-134a) refrigerant  S-NT196	Container color: Light blue Container marking: HFC-134a (R-134a) Fitting size: Thread size • Large container 1/2″-16 ACME
Nissan A/C System Oil Type S (DH-PS)  S-NT197	Type: Polyalkylene glycol oil (PAG), type S (DH-PS) Application: HFC-134a (R-134a) swash plate compressors (Nissan only) Capacity: 40 m ℓ (1.4 US fl oz., 1.4 Imp fl oz.)

ON-VEHICLE MAINTENANCE

MODE DOOR

Exploded View

INFOID:0000000001183050



1. Intake connector seal
2. Blower motor assembly
3. Heater pipe seal
4. Air conditioner filter
5. Air conditioner filter cover
6. Air mix door motor (left)
7. Air mix door lever
8. Electrical heater
9. Air mix door (slide door)
10. Intake sensor
11. Evaporator and expansion valve unit
12. Center case (lower)
13. Center case (upper)
14. Defroster door
15. Intake door motor
16. Intake motor bracket
17. Intake connector
18. Heater core
19. Air mix door link bracket
20. Front ventilator door
21. Side ventilator door
22. Intake door lever
23. Intake door box
24. Intake door
25. Mode door motor
26. Air mix door link (left)
27. Heater and cooling unit case
28. Air mix door motor (right)
29. Aspirator
30. Air mix door link (right)

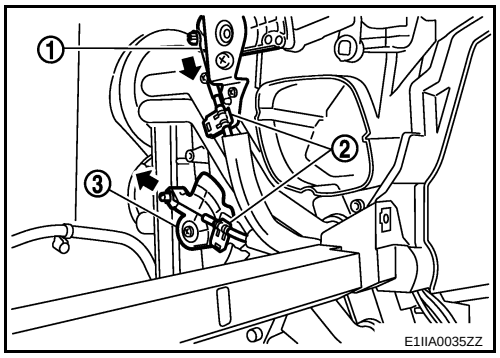
*With left and right ventilation temperature separately system.

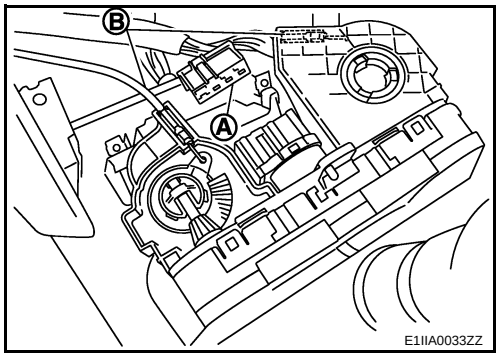
Refer to GI-4, "Components" for symbols in the figure.

Adjustment

INFOID:0000000001183051

1. Remove the instrument lower panel. Refer to IP-12, "Removal and Installation".
2. Remove the outer cable of mode door cable from the clamp.
3. Set mode dial to “ventilation” position.
4. Push the main link in the direction shown by the arrow, then carefully pull outer cable to the controller side, and install the clamp.
5. Operate the mode dial to insure that the inner cable moves smoothly.
   CAUTION:
   When clamping the outer cable, de not move the inner cable.

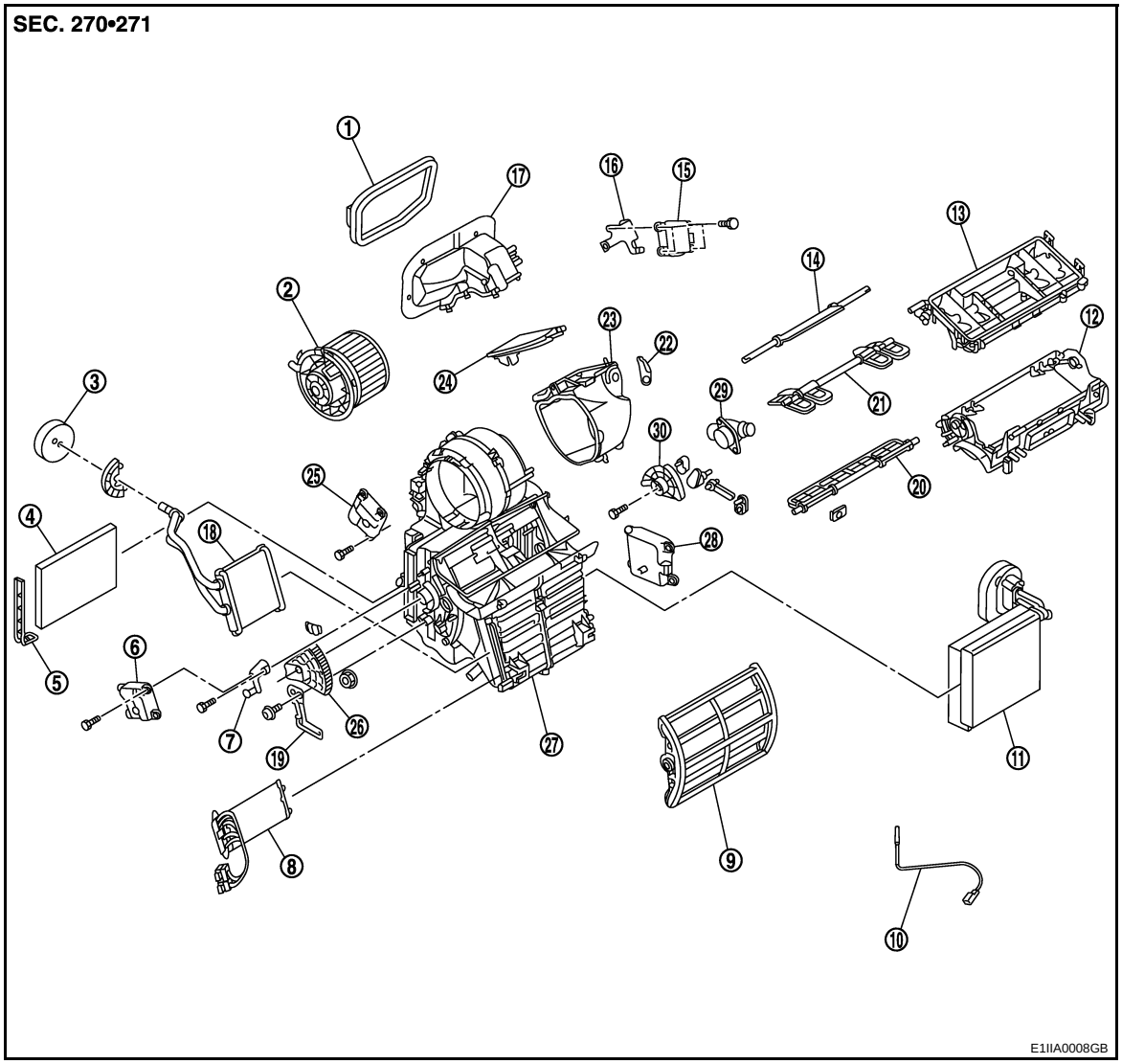




AIR MIX DOOR

Exploded View

INFOID:0000000001183052



1. Intake connector seal
2. Blower motor assembly
3. Heater pipe seal
4. Air conditioner filter
5. Air conditioner filter cover
6. Air mix door motor (left)
7. Air mix door lever
8. Electrical heater
9. Air mix door (slide door)
10. Intake sensor
11. Evaporator and expansion valve unit
12. Center case (lower)
13. Center case (upper)
14. Defroster door
15. Intake door motor
16. Intake motor bracket
17. Intake connector
18. Heater core
19. Air mix door link bracket
20. Front ventilator door
21. Side ventilator door
22. Intake door lever
23. Intake door box
24. Intake door
25. Mode door motor
26. Air mix door link (left)
27. Heater and cooling unit case
28. Air mix door motor (right)
29. Aspirator
30. Air mix door link (right)

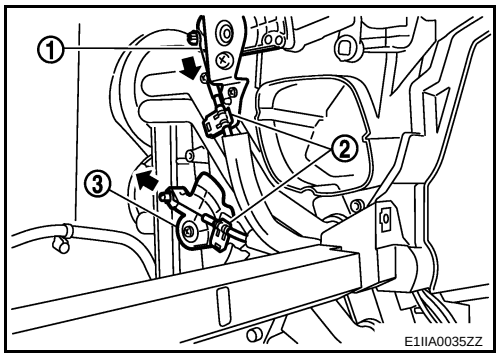
*With left and right ventilation temperature separately system.

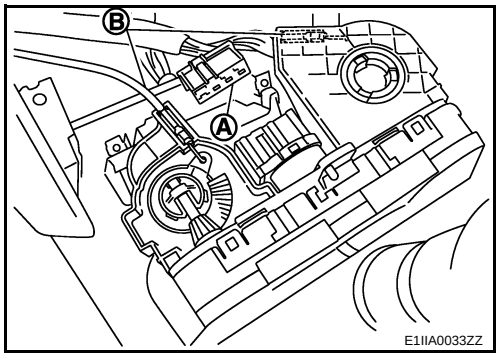
Refer to GI-4, "Components" for symbols in the figure.

Adjustment

INFOID:0000000001183053

1. Remove the instrument panel stay cover. Refer to IP-12, "Removal and Installation".
2. Remove the outer cable of air mix door cable from the clamp.
3. Set temperature control dial to “full cold” position.
4. Push the air mix door lever in the direction shown by arrow and then carefully pull the outer cable toward controller side, and install the clamp.
5. Operate the temperature control dial to insure than the inner cable moves smoothly.
   CAUTION:
   When clamping the outer cable, do not move the inner cable.

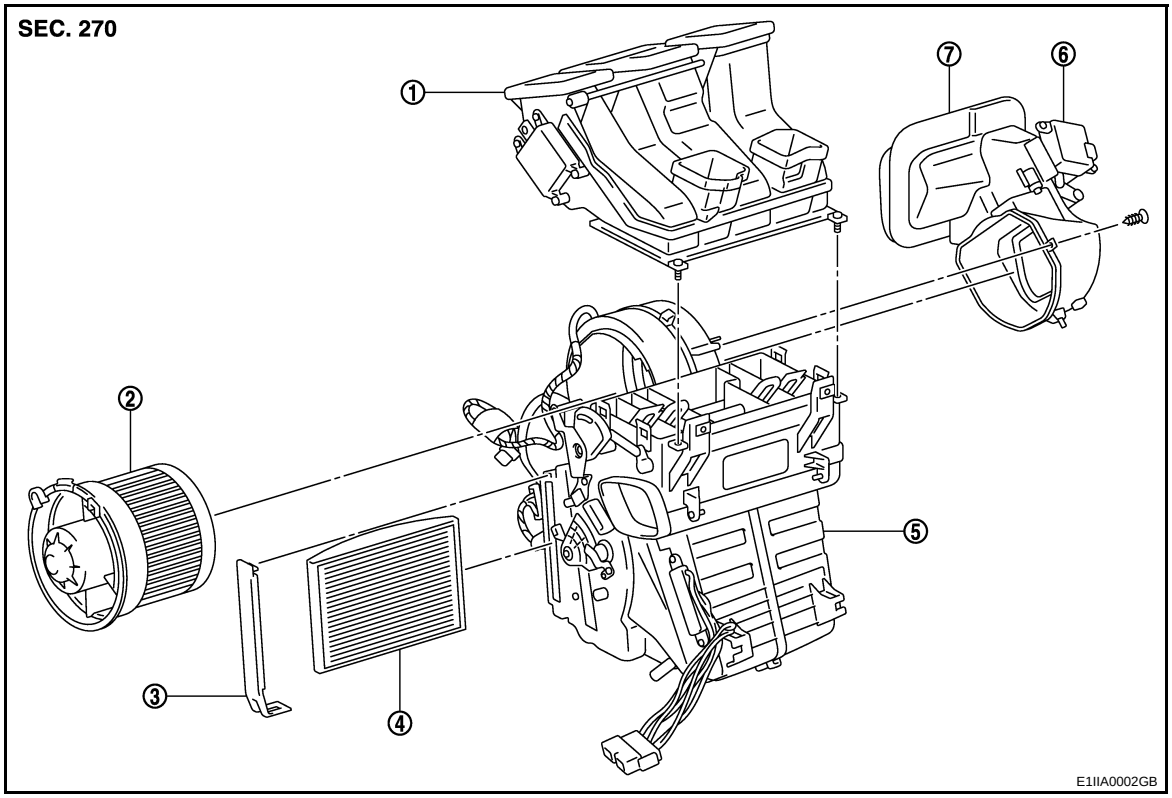




AIR CONDITIONER FILTER

Exploded View

INFOID:0000000001183054



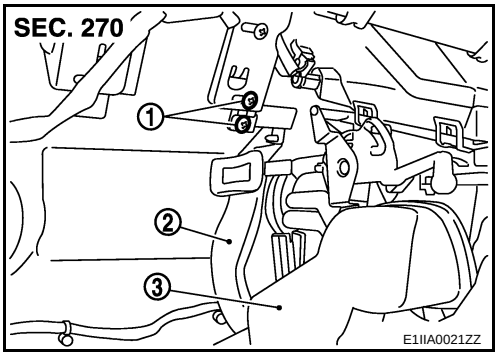
1. Hi-Level ventilation door unit assembly
2. Blower motor assembly
3. Filter cover
4. In-cabin microfilter
5. Blower unit
6. Intake door motor
7. Intake door unit assembly

Removal and Installation

INFOID:0000000001183055

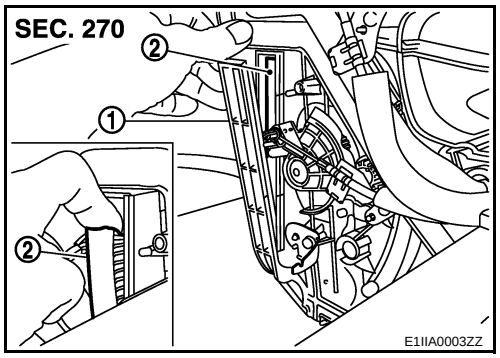
REMOVAL

1. Remove passenger Lower instrument panel. Refer to IP-12, "Removal and Installation".
2. Remove glove box assembly (RHD). Refer to IP-12, "Removal and Installation".
3. Remove glove box air duct (RHD).
   - Remove fixing screw (1)
   - Pull outside to remove air duct (2)



4. Remove LH foot duct (3). Refer to VTL-56, "FOOT DUCT : Removal and Installation".
5. Remove LH Lower instrument panel, (LHD)
6. Remove accelerator pedal assembly (LHD). Refer to ACC-3, "Removal and Installation".

7. Remove clutch and brake pedal assembly (LHD). Refer to CL-9, "Removal and Installation" (Clutch pedal), BR-17, "Removal and Installation" (Brake pedal).
8. Remove filter cover (1) then remove air conditioner filter (2).



INSTALLATION

Installation is basically the reverse order of removal.

Replacement

INFOID:0000000001183056

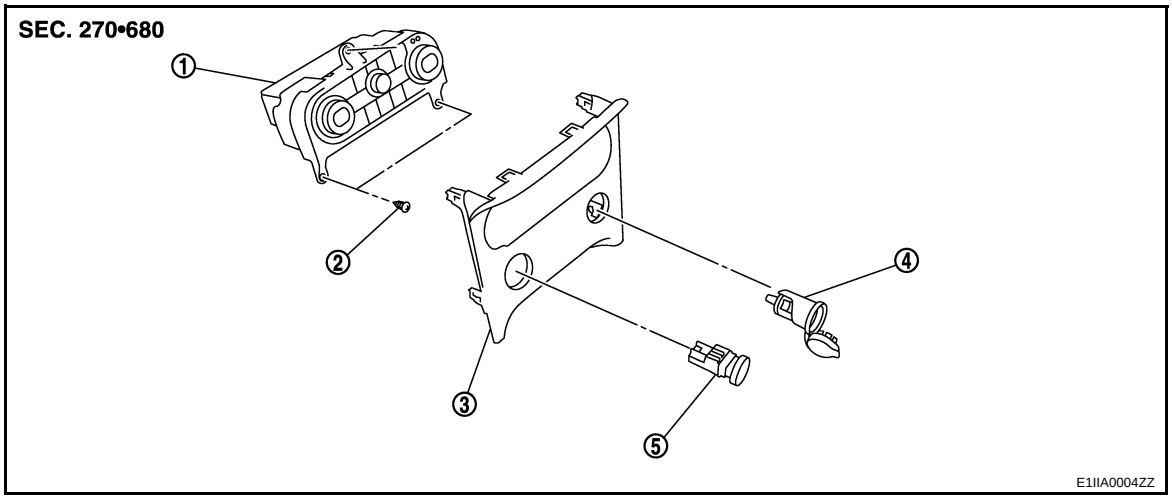
Replace air conditioner filter.
Refer to MA-9, "Periodic Maintenance".
When replacing filter, affix a caution label inside the glove box.

ON-VEHICLE REPAIR

PRESET SWITCH

Exploded View

INFOID:0000000001183057



1. Preset switch
2. Preset switch fixing screw
3. Cluster lid D
4. Power socket
5. Button

Removal and Installation

INFOID:0000000001183058

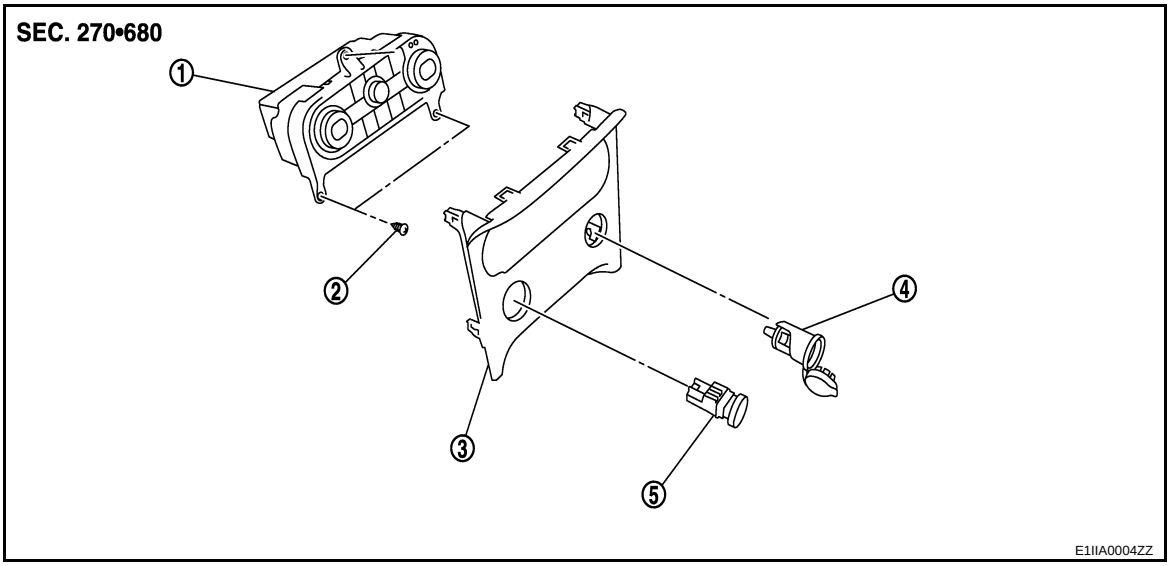
REMOVAL
Refer to IP-12, "Removal and Installation".

INSTALLATION
Installation is basically the reverse order of removal.

HEATER CONTROL PANEL

Exploded View

INFOID:0000000001183059



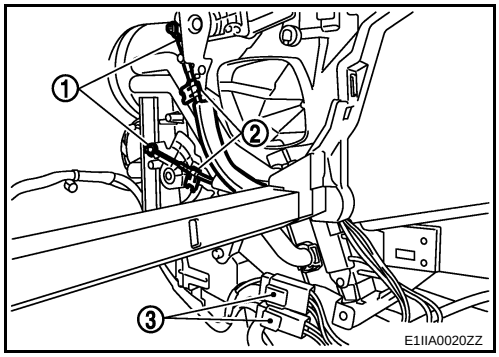
1. Heater control panel
2. Preset switch fixing screw
3. Cluster lid D
4. Power socket
5. Button

Removal and Installation

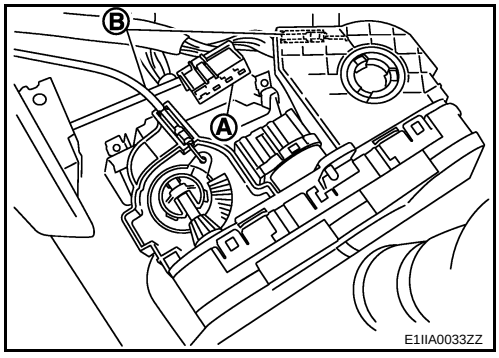
INFOID:0000000001183060

REMOVAL

1. Remove cluster lid D. Refer to IP-12, "Removal and Installation".
2. Remove cluster lid C. Refer to IP-12, "Removal and Installation".
3. Remove glove box (RHD). Refer to IP-12, "Removal and Installation".
4. Remove RH foot duct (RHD). Refer to VTL-110, "FOOT DUCT : Removal and Installation".
5. Remove cables fixing metal clips (2), then remove cables (1) from heater assembly.



6. Remove heater control fixing screws from instrument panel, then pull manual heater control assembly, and disconnect harness connector (A), and hand heater control cables (B).
7. Remove heater control assembly.



INSTALLATION

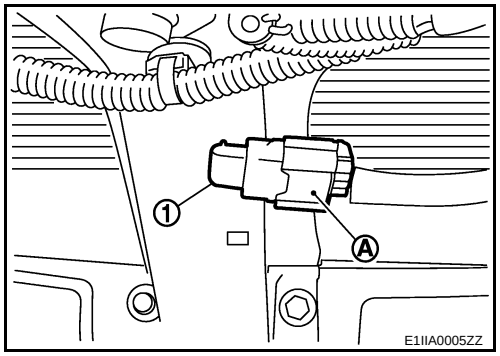
Installation is basically the reverse order of removal.

AMBIENT SENSOR

Exploded View

INFOID:0000000001183061

1. Ambient sensor

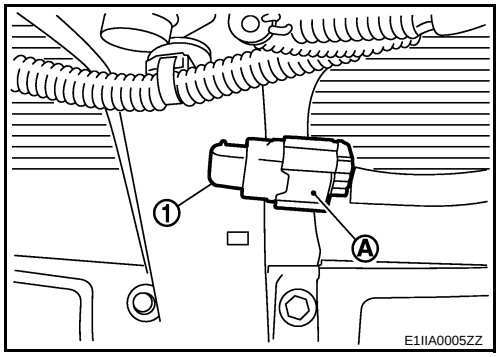


Removal and Installation

INFOID:0000000001183062

REMOVAL

1. Disconnect ambient sensor connector (A), and then remove ambient sensor (1).



INSTALLATION

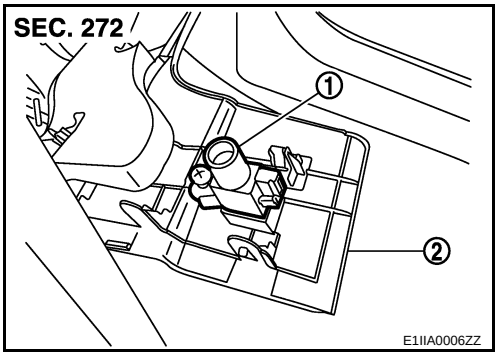
Installation is basically the reverse order of removal.

IN-VEHICLE SENSOR

Exploded View

INFOID:0000000001183063

1. In-vehicle sensor
2. instrument driver lower panel

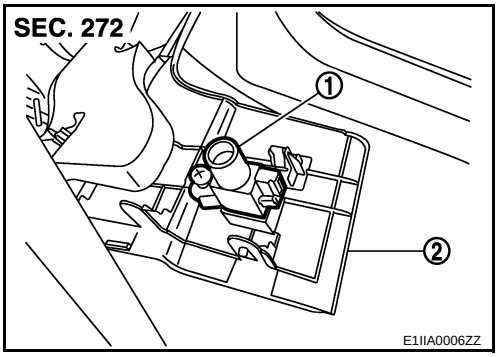


Removal and Installation

INFOID:0000000001183064

REMOVAL

1. Remove instrument driver lower panel (2). Refer to IP-12, "Removal and Installation".
2. Disconnect harness connector.
3. Remove hose tube from in-vehicle sensor (1).
4. Remove mounting screws, and then remove in-vehicle sensor.



INSTALLATION

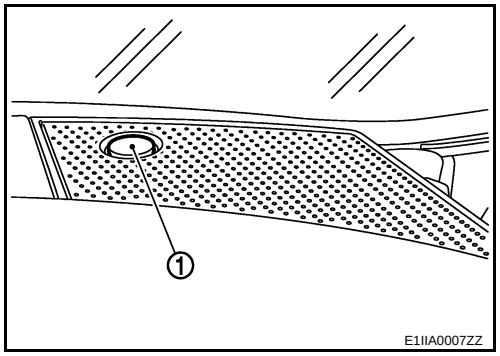
Installation is basically the reverse order of removal.

SUNLOAD SENSOR

Exploded View

INFOID:0000000001183065

1. Sunload sensor

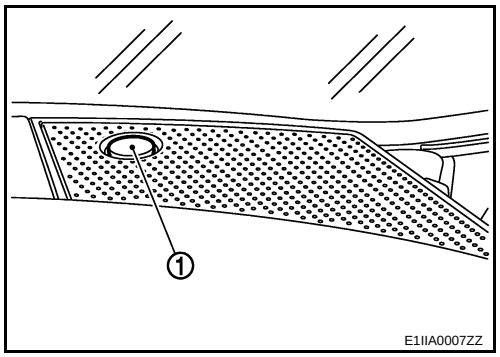


Removal and Installation

INFOID:0000000001183066

REMOVAL

1. Remove speaker grille (left). Refer to IP-12, "Removal and Installation".
2. Disconnect sunload sensor connector, and then remove sunload sensor (1).



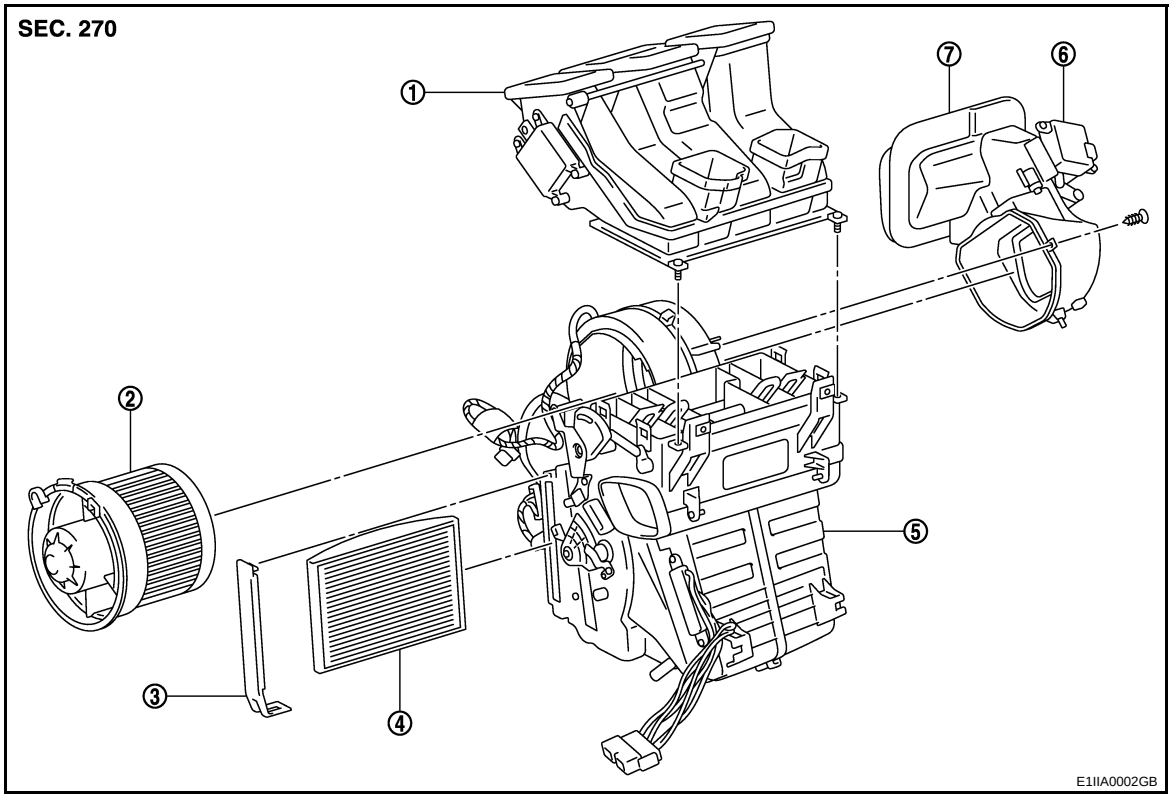
INSTALLATION

Installation is basically the reverse order of removal.

BLOWER UNIT

Exploded View

INFOID:0000000001183067



1. Hi-Level ventilation door unit assembly
2. Blower motor assembly
3. Filter cover
4. In-cabin microfilter
5. Blower unit
6. Intake door motor
7. Intake door unit assembly

Removal and Installation

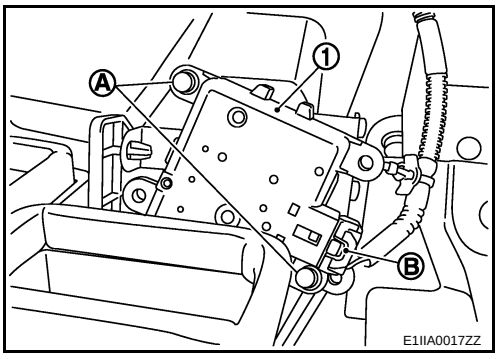
INFOID:0000000001183068

REMOVAL

1. Remove Instrument Panel. Refer to IP-12, "Removal and Installation".
2. Remove steering member. Refer to IP-12, "Removal and Installation".
3. Remove Heater and cooling unit assembly.
4. Remove harness fixing clip from upper intake box.
5. Remove door motor harness connector (B).
6. Remove lower intake box fixing screw from heater and cooling case.
7. Remove intake door motor (1).
   - Remove fixing screws (A)
   - Remove bracket support fixing screws and bracket support
8. Remove blower motor.Refer to VTL-88, "Removal and Installation".

   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.

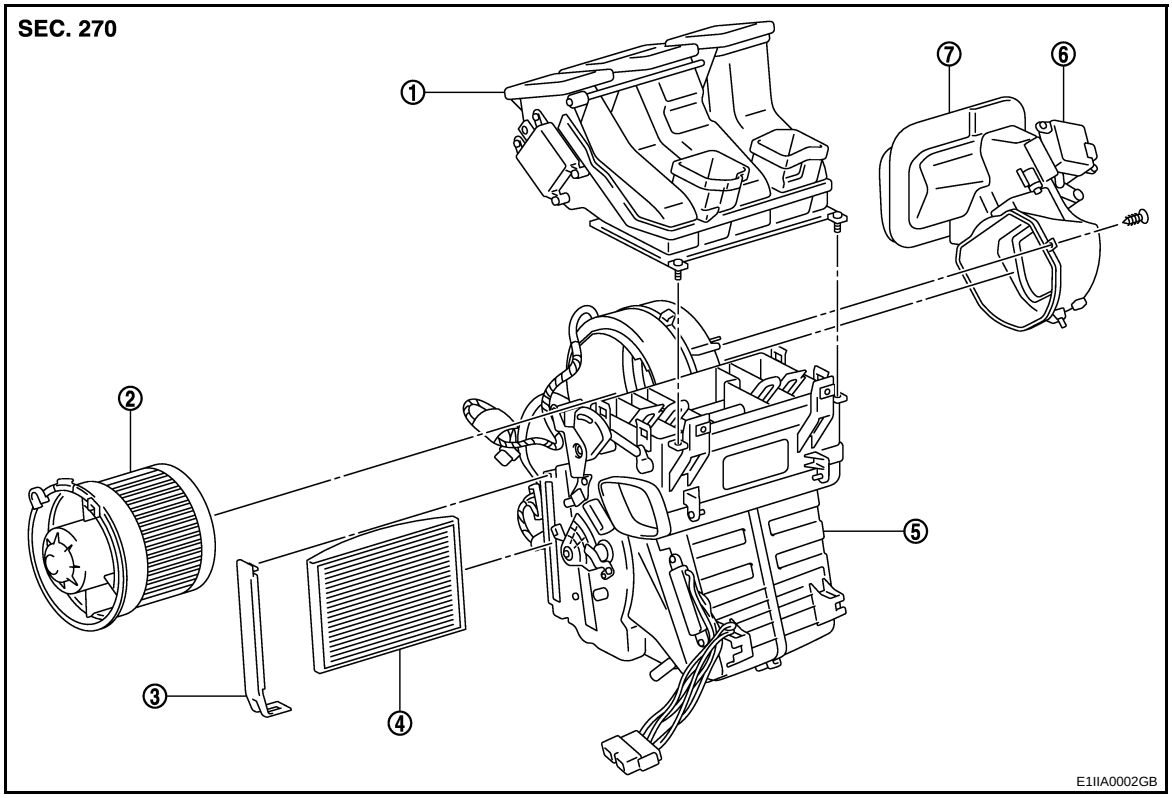
CAUTION:

Make sure locating pin (A) are securely inserted.

BLOWER MOTOR

Exploded View

INFOID:0000000001183069



1. Hi-Level ventilation door unit assembly
2. Blower motor assembly
3. Filter cover
4. In-cabin microfilter
5. Blower unit
6. Intake door motor
7. Intake door unit assembly

Removal and Installation

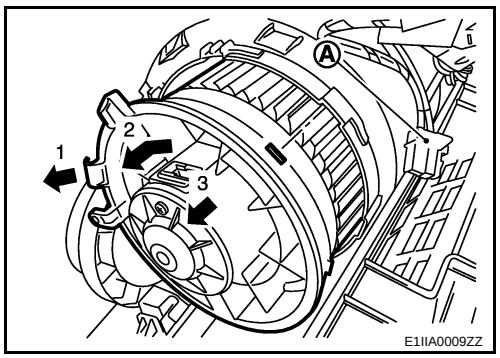
INFOID:0000000001183070

REMOVAL

LHD Model

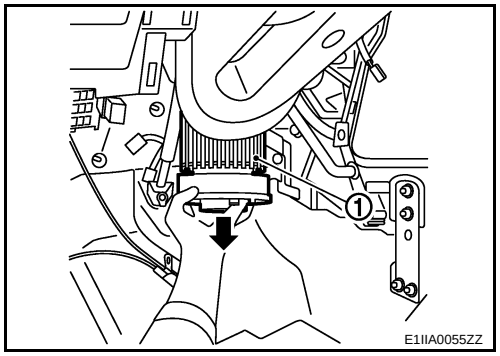
1. Remove front kicking plate inner. Refer to INT-14, "Exploded View".
2. Remove dash side finisher. Refer to INT-14, "Exploded View".
3. Remove instrument driver lower panel. Refer to IP-11, "Exploded View".
4. Remove foot duct. Refer to VTL-56, "FOOT DUCT : Removal and Installation" (automatic air conditioner), VTL-110, "FOOT DUCT : Removal and Installation" (manual air conditioner).
5. Remove accelerator pedal, and disconnect harness connector. Refer to ACC-3, "Exploded View".
6. Remove brake and clutch pedal assembly, disconnect harness connectors. Refer to BR-17, "Removal and Installation" (Brake pedal), CL-9, "Removal and Installation" (Clutch pedal).
7. Remove mode door motor.

8. Remove blower motor assembly, as shown.
   - Remove fixing screw.
   - Disconnect harness connector (A).
   - Release maintaining pawl (1).
   - Turn counter clockwise (2) blower motor assembly.
   - Pull blower motor (3).



   - Handle blower motor (1) as shown to remove it.

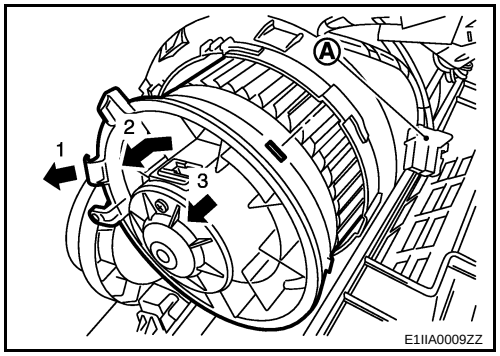
CAUTION:
Take care of harness connectors around blower motor.



RHD Model

1. Remove passenger lower instrument panel. Refer to IP-12, "Removal and Installation".
2. Remove Glove Box.
3. Remove passenger foot duct fixing screw, and remove it.
4. Remove glove box duct fixing screw, and remove it.
5. Remove BCM unit. Refer to BCS-65, "Removal and Installation".
6. Remove blower motor harness connector.
7. Remove blower motor assembly, as shown.
8. Remove fixing screw.
   - Disconnect harness connector (A).
   - Release maintaining pawl (1) then turn counter clockwise (2) blower motor assembly.
   - Pull outside (3) and remove it.

CAUTION:
Take care of harness connectors around blower motor.



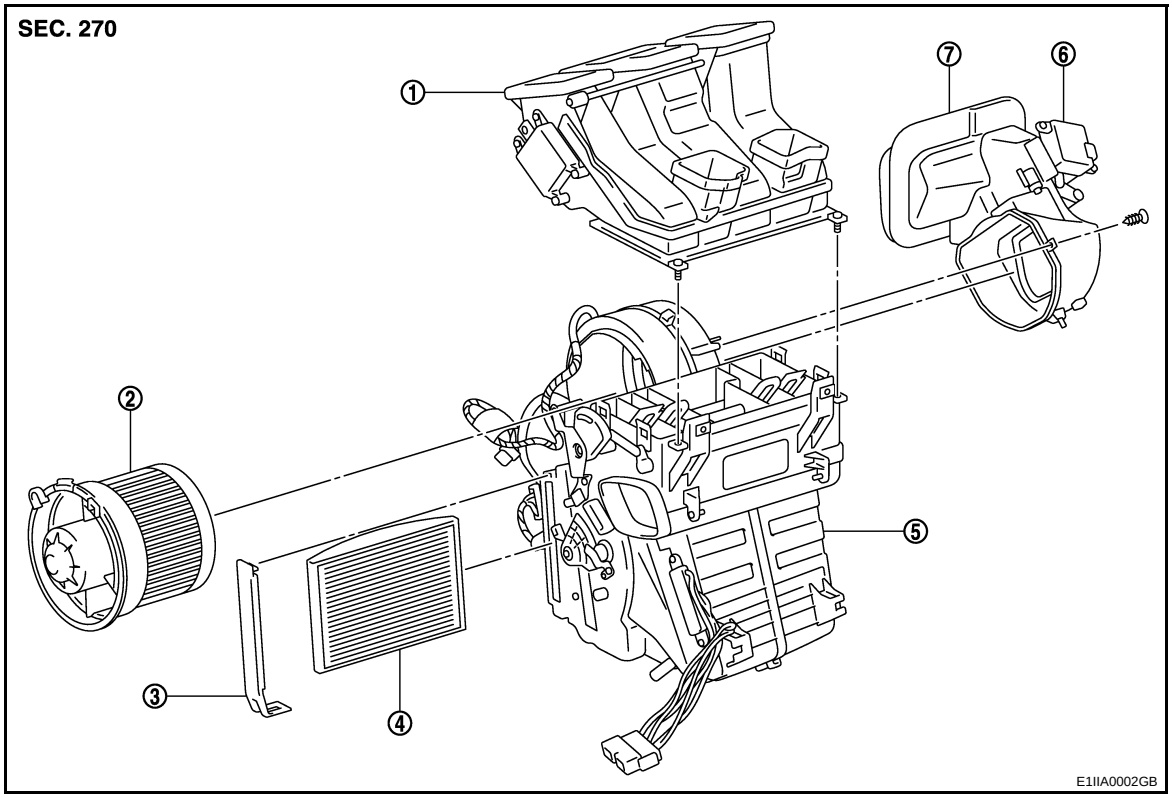
INSTALLATION

Installation is basically the reverse order of removal.

INTAKE DOOR MOTOR

Exploded View

INFOID:0000000001183071



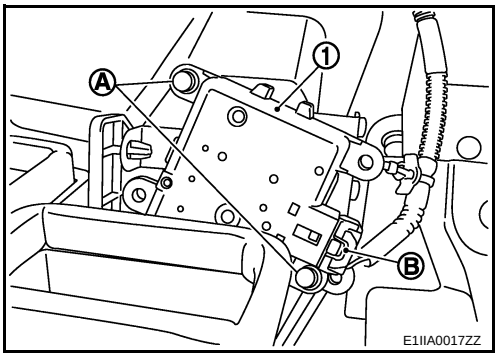
1. Hi-Level ventilation door unit assembly
2. Blower motor assembly
3. Filter cover
4. In-cabin microfilter
5. Blower unit
6. Intake door motor
7. Intake door unit assembly

Removal and Installation

INFOID:0000000001183072

REMOVAL

1. Remove Instrument Panel. Refer to IP-12, "Removal and Installation".
2. Disconnect intake door motor connector (B).
3. Remove harness connector fixing clip.
4. Remove intake door motor fixing screws (A).
5. Remove intake door motor (1).



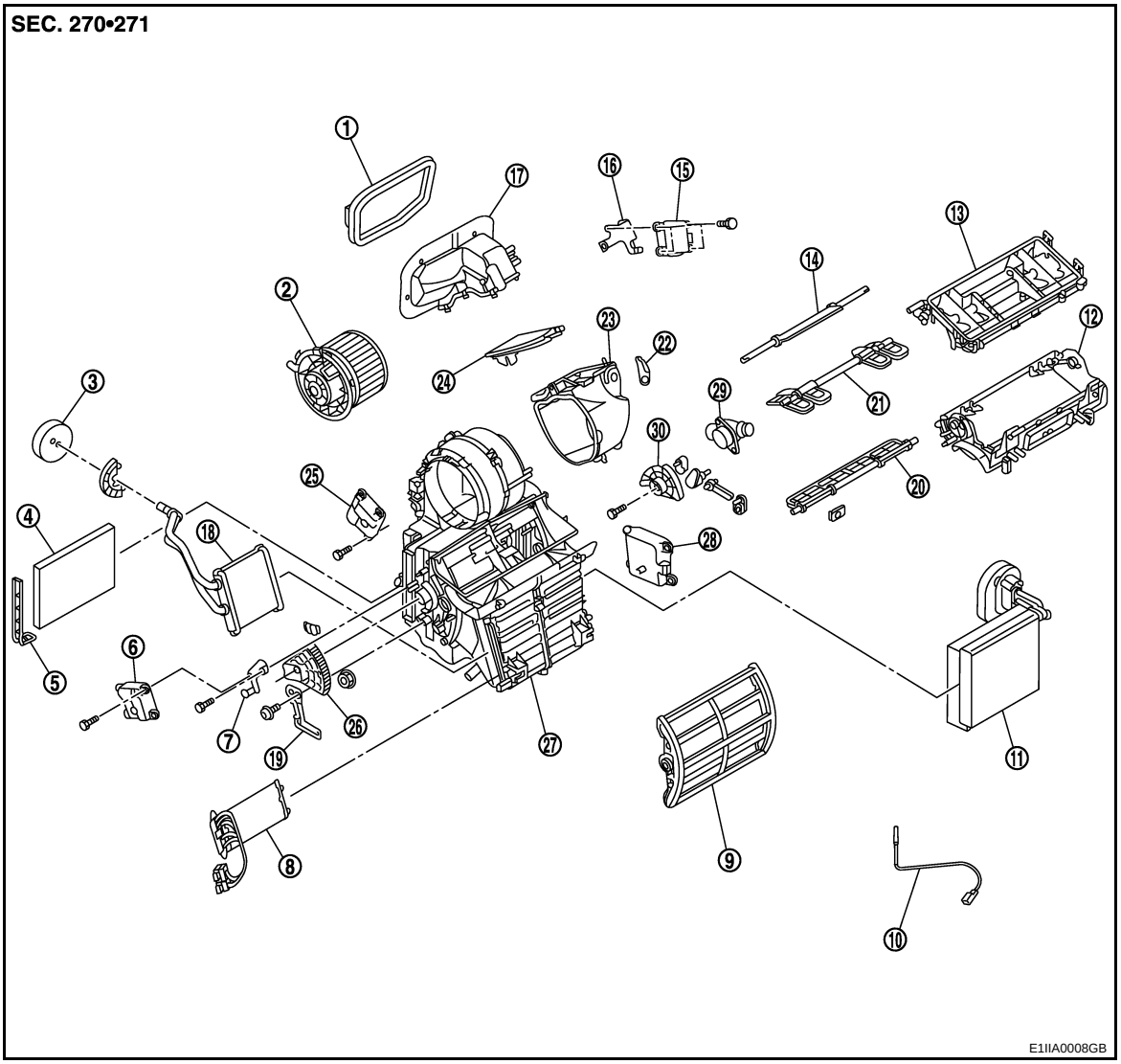
INSTALLATION

Installation is basically the reverse order of removal.

HEATER & COOLING UNIT ASSEMBLY

Exploded View

INFOID:0000000001183073



1. Intake connector seal	2. Blower motor assembly	3. Heater pipe seal
4. Air conditioner filter	5. Air conditioner filter cover	6. Air mix door motor (left)
7. Air mix door lever	8. Electrical heater	9. Air mix door (slide door)
10. Intake sensor	11. Evaporator and expansion valve unit	12. Center case (lower)
13. Center case (upper)	14. Defroster door	15. Intake door motor
16. Intake motor bracket	17. Intake connector	18. Heater core
19. Air mix door link bracket	20. Front ventilator door	21. Side ventilator door
22. Intake door lever	23. Intake door box	24. Intake door
25. Mode door motor	26. Air mix door link (left)	27. Heater and cooling unit case
28. Air mix door motor (right)	29. Aspirator	30. Air mix door link (right)

*With left and right ventilation temperature separately system.

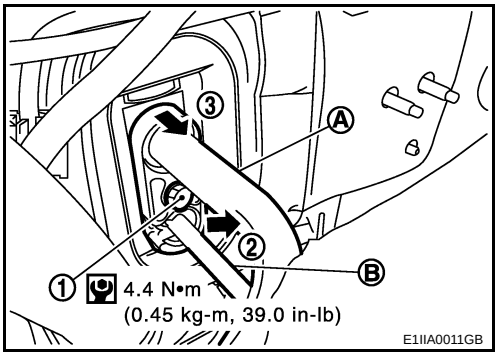
Refer to GI-4, "Components" for symbols in the figure.

Removal and Installation

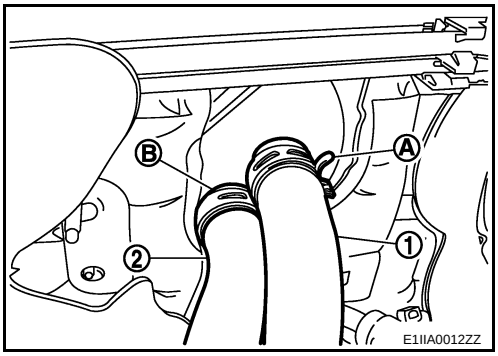
INFOID:0000000001183074

REMOVAL

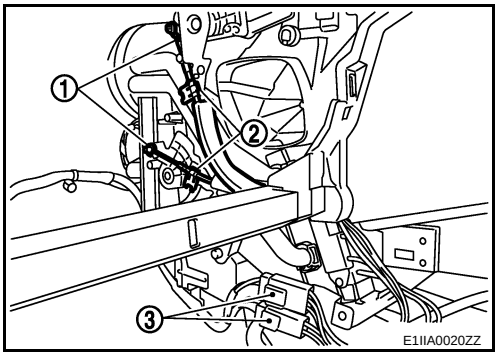
1. Use a refrigerant collecting equipment (for HFC-134a) to discharge the refrigerant.
2. Drain engine coolant from cooling system. Refer to CO-9, "Draining" (HR), CO-30, "Draining" (MR), CO-52, "Draining" (K9K).
3. Remove pipe bracket fixing bolt (1), then, disconnect high-pressure pipe 1 (B) and low-pressure pipe 2 (A) from expansion valve.
   CAUTION:
   Cap or wrap the joint of high-pressure pipe 1 and low-pressure pipe 2 with suitable material such as vinyl tape to avoid the entry of air.



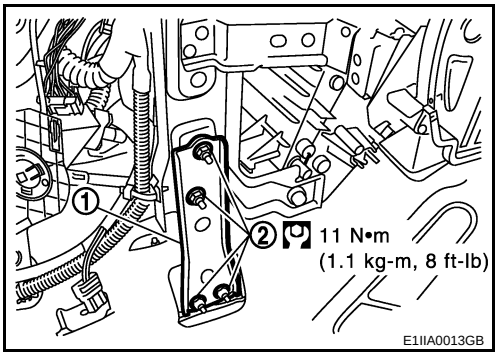
4. Remove clamp (A), then disconnect heater hoses (1), and then remove clamp (B), to remove heater hose (2).



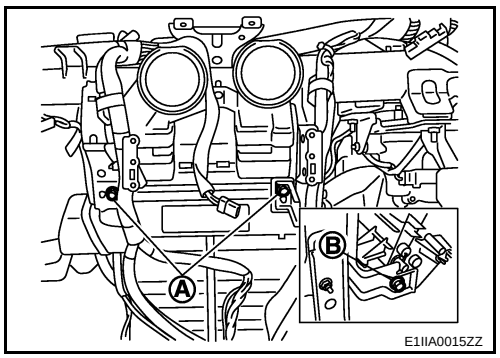
5. Remove Instrument Panel. Refer to IP-12, "Removal and Installation".
6. Remove BCM.Refer to BCS-65, "Removal and Installation".
   - Remove fixing screws.
   - Remove harness connectors.
7. Disconnect heater connectors (3), then remove heater connector and bracket.
8. Disconnect blower motor connector.
9. Remove heater control cables from heater and cooling unit (1).
10. Remove foot duct, RH.
11. Remove power steering C/U. Refer to STC-32, "Removal and Installation".
12. Disconnect intake door motor connector and blower motor connector.
13. Remove center air duct.
14. Remove blower intake motor connector and remove harness fixing clip.



15. Remove instrument stay (1).
16. Remove fixing nuts (2).
17. Remove heater draining hose.



18. Remove heater and cooling assembly lower fixing bolts (B), RH side.
19. Remove heater and cooling assembly upper fixing bolts (A).
20. Remove high and low pressure pipes. Refer to HA-207, "Removal and Installation" (HR/MR), HA-259, "Removal and Installation" (K9K).



21. Remove clips of main harness from steering member.
22. Remove steering member mounting bolts.
    - Disconnect harness fixing clips from steering member

    NOTE:
    Two workers are necessary to remove this part.
23. Remove heater and cooling unit assembly.

INSTALLATION

Installation is basically the reverse order of removal.

CAUTION:

- **Replace O-rings of low-pressure pipe 1, 2 and high-pressure pipe 1, 2 with new ones, and then apply compressor oil to it when installing it.**
- **Female-side piping connection is thin and easy to deform. Slowly insert the male-side piping straight in axial direction.**
- **Insert piping securely until a clicks is heard.**
- **After piping connection is completed, pull male-side piping by hand to make sure that connection does not come loose.**
- **When recharging refrigerant, check for leaks.**

NOTE:

- When filling radiator with engine coolant. Refer to CO-9, "Refilling" (HR), CO-30, "Refilling" (MR), CO-52, "Refilling" (K9K).
- Recharge the refrigerant.

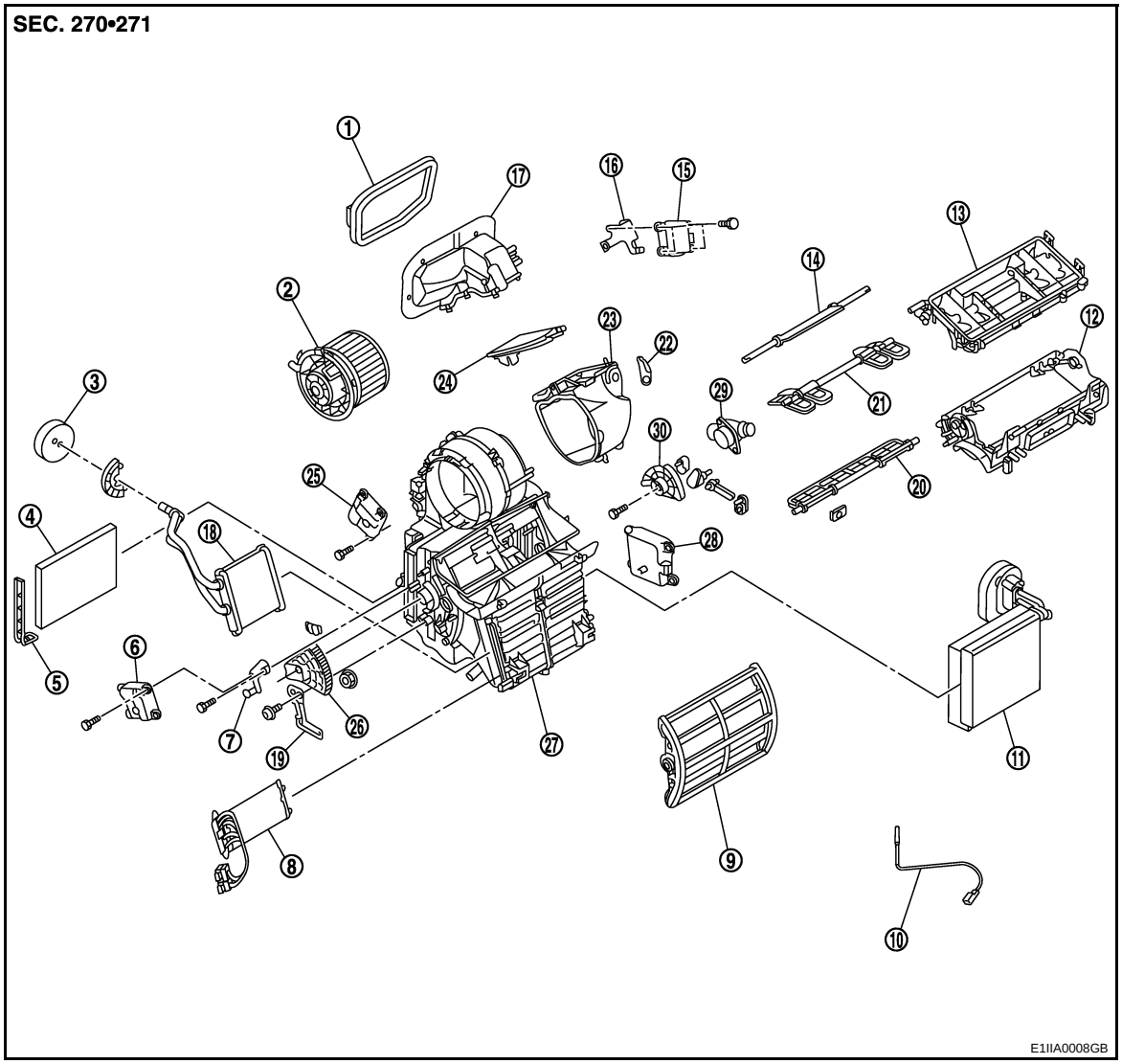
Heater & cooling unit (1) assembly mounting bolt (A)

: 6.9 N·m (0.7 kg·m, 61 in-lb)

HIGH-LEVEL VENTILATOR DOOR MOTOR

Exploded View

INFOID:0000000001183075



1. Intake connector seal
2. Blower motor assembly
3. Heater pipe seal
4. Air conditioner filter
5. Air conditioner filter cover
6. Air mix door motor (left)
7. Air mix door lever
8. Electrical heater
9. Air mix door (slide door)
10. Intake sensor
11. Evaporator and expansion valve unit
12. Center case (lower)
13. Center case (upper)
14. Defroster door
15. Intake door motor
16. Intake motor bracket
17. Intake connector
18. Heater core
19. Air mix door link bracket
20. Front ventilator door
21. Side ventilator door
22. Intake door lever
23. Intake door box
24. Intake door
25. Mode door motor
26. Air mix door link (left)
27. Heater and cooling unit case
28. Air mix door motor (right)
29. Aspirator
30. Air mix door link (right)

Removal and Installation

INFOID:0000000001183076

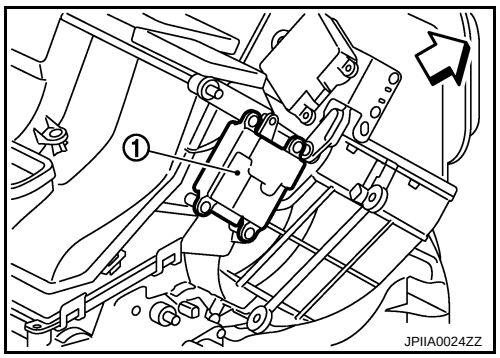
REMOVAL

LHD Model

1. Unclip lower instrument panel - passenger side.

2. Remove lower instrument cover.
3. Remove Glove Box Assembly. Refer to IP-12, "Removal and Installation".
4. Remove RH foot Duct. Refer to VTL-110, "FOOT DUCT : Removal and Installation".
5. Remove high level door motor fixing screws.
6. Remove high level door motor harness connector.
7. Remove high level door motor (1) from link.

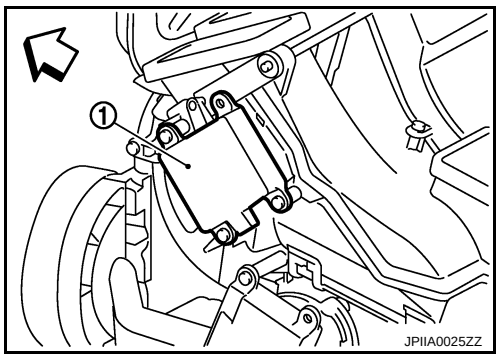
⇦ : Front



RHD Model

1. Unclip instrument lower panel - passenger side.
2. Remove lower instrument cover.
3. Remove Glove Box Assembly. Refer to IP-12, "Removal and Installation".
4. Remove LH foot Duct. Refer to VTL-110, "FOOT DUCT : Removal and Installation".
5. Remove high level door motor fixing screws.
6. Remove high level door motor harness connector.
7. Remove high level door motor (1) from link.

⇦ : Front



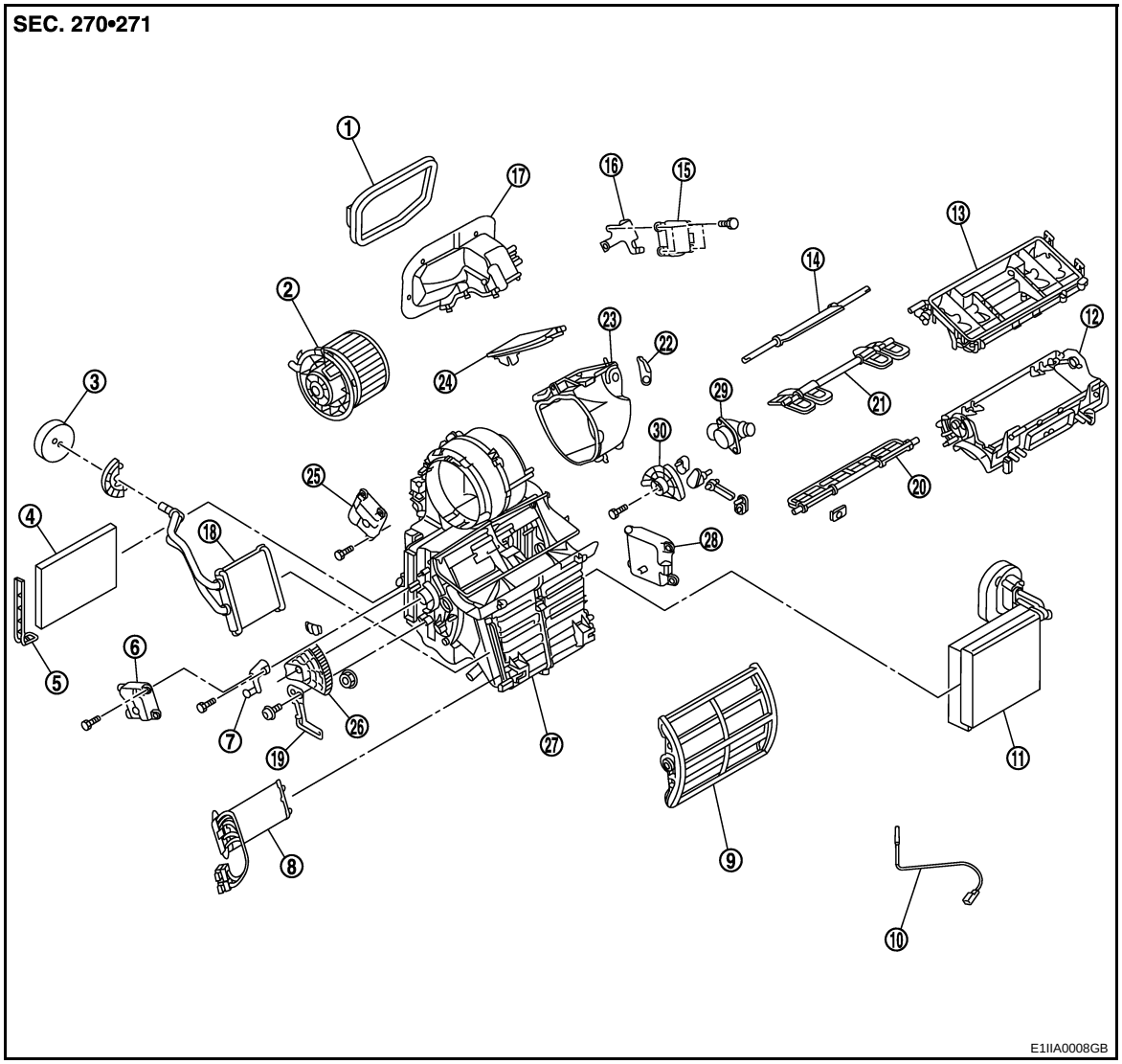
INSTALLATION

installation is basically the reverse order of removal.

HEATER CORE

Exploded View

INFOID:0000000001183077



1. Intake connector seal	2. Blower motor assembly	3. Heater pipe seal
4. Air conditioner filter	5. Air conditioner filter cover	6. Air mix door motor (left)
7. Air mix door lever	8. Electrical heater	9. Air mix door (slide door)
10. Intake sensor	11. Evaporator and expantion valve unit	12. Center case (lower)
13. Center case (upper)	14. Defroster door	15. Intake door motor
16. Intake motor bracket	17. Intake connector	18. Heater core
19. Air mix door link bracket	20. Front ventilator door	21. Side ventilator door
22. Intake door lever	23. Intake door box	24. Intake door
25. Mode door motor	26. Air mix door link (left)	27. Heater and cooling unit case
28. Air mix door motor (right)	29. Aspirator	30. Air mix door link (right)

*With left and right ventilation temperature separately system.

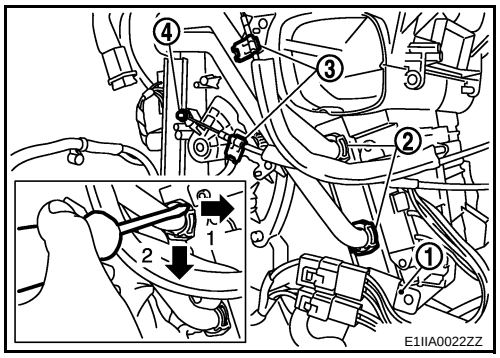
Refer to GI-4, "Components" for symbols in the figure.

Removal and Installation

INFOID:0000000001183078

REMOVAL

1. Remove LH lower instrument panel (RHD).
2. Remove LH foot duct.
3. Disconnect harness connectors, remove harness bracket (1).
4. Remove heater cable fixing metal clips (3).
5. Remove air mix cable (4), from heater.
6. Remove heater core pipes metal clip retainers (2).
   CAUTION:
   Use shop cloth and all other protection necessaries to avoid damaging floor carpet.
7. Remove heater pipes as shown.
8. Pull to remove heater core.



INSTALLATION

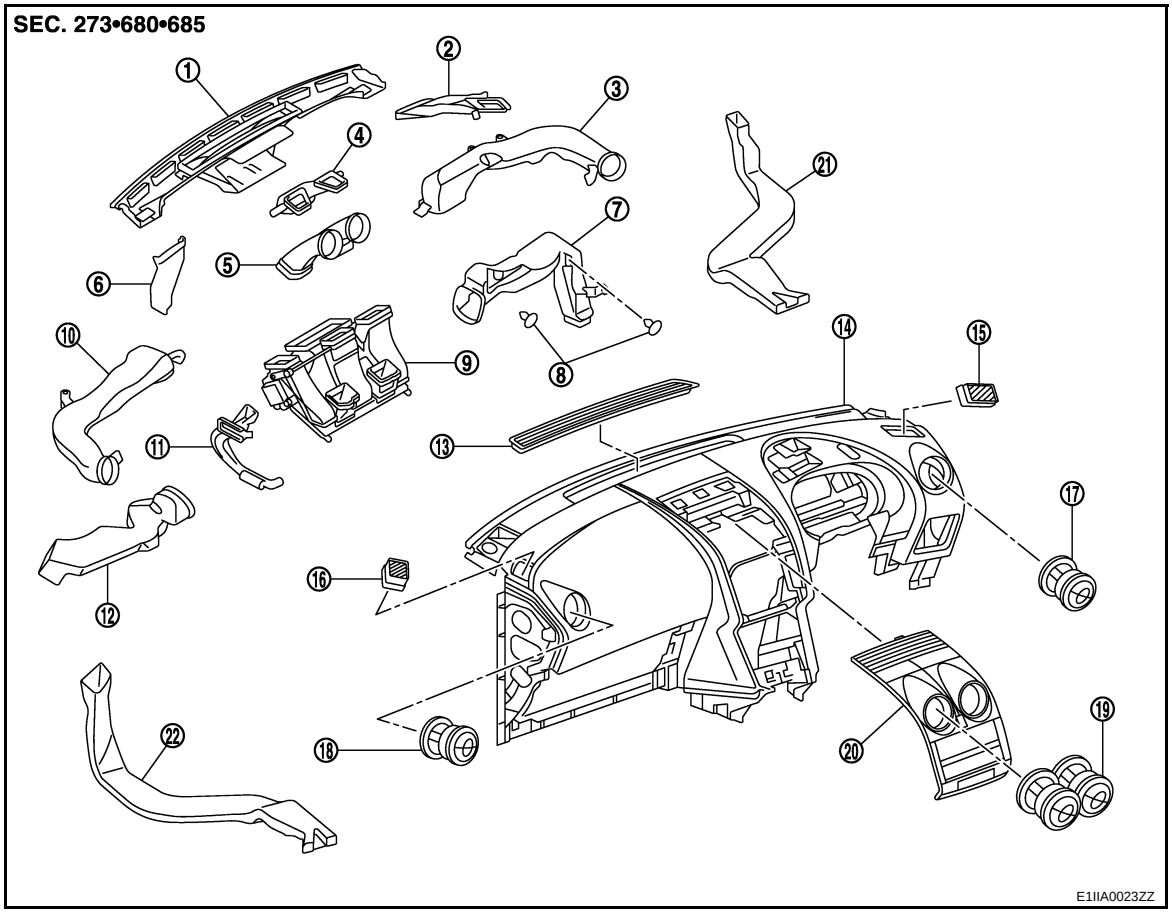
Installation is basically the reverse order of removal.

DUCT AND GRILLE

FRONT DEFROSTER GRILLE

FRONT DEFROSTER GRILLE : Exploded View

INFOID:0000000001569756



1. Defroster nozzle
2. Side defroster nozzle - RH
3. Side ventilator duct - RH
4. Front upper ventilator duct
5. Center ventilator duct
6. Side defroster nozzle - LH
7. Side foot duct - RH
8. Clip
9. Air mix duct
10. Side ventilator duct - LH
11. Glove box duct
12. Side foot duct - LH
13. Front defroster grille - center
14. Instrument panel
15. Side defroster grille - RH
16. Side defroster grille - LH
17. Side ventilator grille - RH
18. Side ventilator grille - LH
19. Center ventilator grille
20. Cluster lid C
21. Floor duct - RH
22. Floor duct - LH

FRONT DEFROSTER GRILLE : Removal and Installation

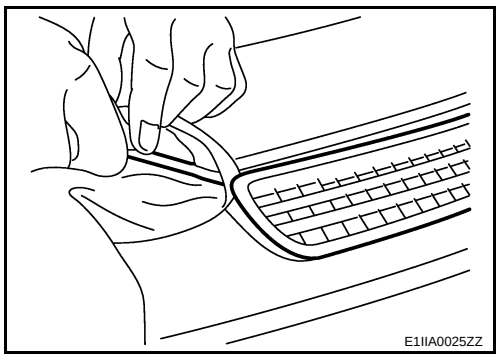
INFOID:0000000001569757

REMOVAL

1. Remove front defroster grille as shown.

CAUTION:

Use shop cloth and all other protection necessaries to avoid damage.



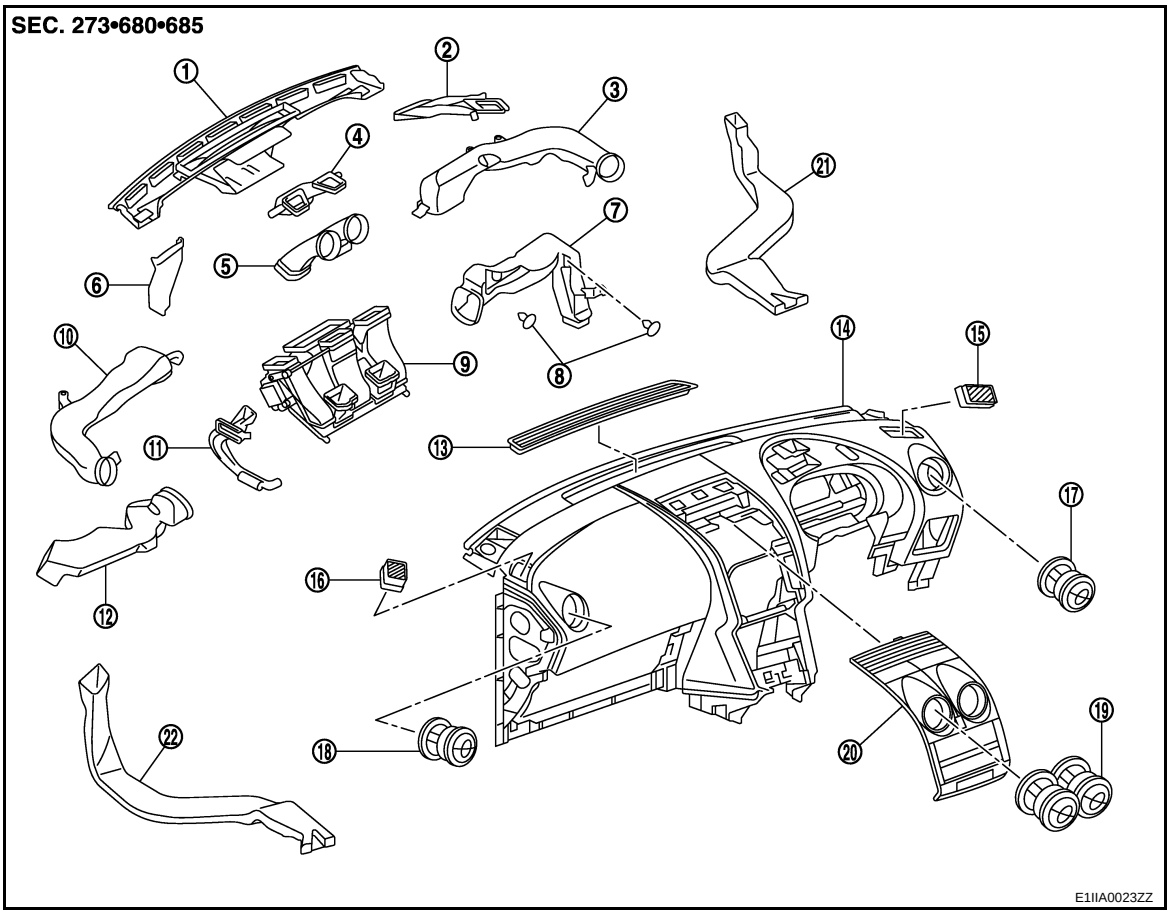
INSTALLATION

Installation is basically the reverse order of removal.

SIDE DEFROSTER GRILLE

SIDE DEFROSTER GRILLE : Exploded View

INFOID:0000000001569758



1. Defroster nozzle
2. Side defroster nozzle - RH
3. Side ventilator duct - RH
4. Front upper ventilator duct
5. Center ventilator duct
6. Side defroster nozzle - LH
7. Side foot duct - RH
8. Clip
9. Air mix duct
10. Side ventilator duct - LH
11. Glove box duct
12. Side foot duct - LH
13. Front defroster grille - center
14. Instrument panel
15. Side defroster grille - RH
16. Side defroster grille - LH
17. Side ventilator grille - RH
18. Side ventilator grille - LH
19. Center ventilator grille
20. Cluster lid C
21. Floor duct - RH
22. Floor duct - LH

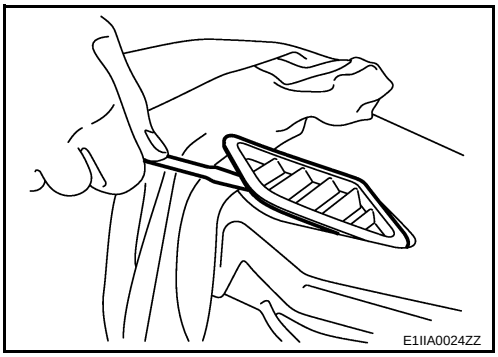
SIDE DEFROSTER GRILLE : Removal and Installation

INFOID:0000000001569759

REMOVAL

1. Remove side defroster grilles as shown.

CAUTION:
Use shop cloth and all other protection necessaries to avoid damage.



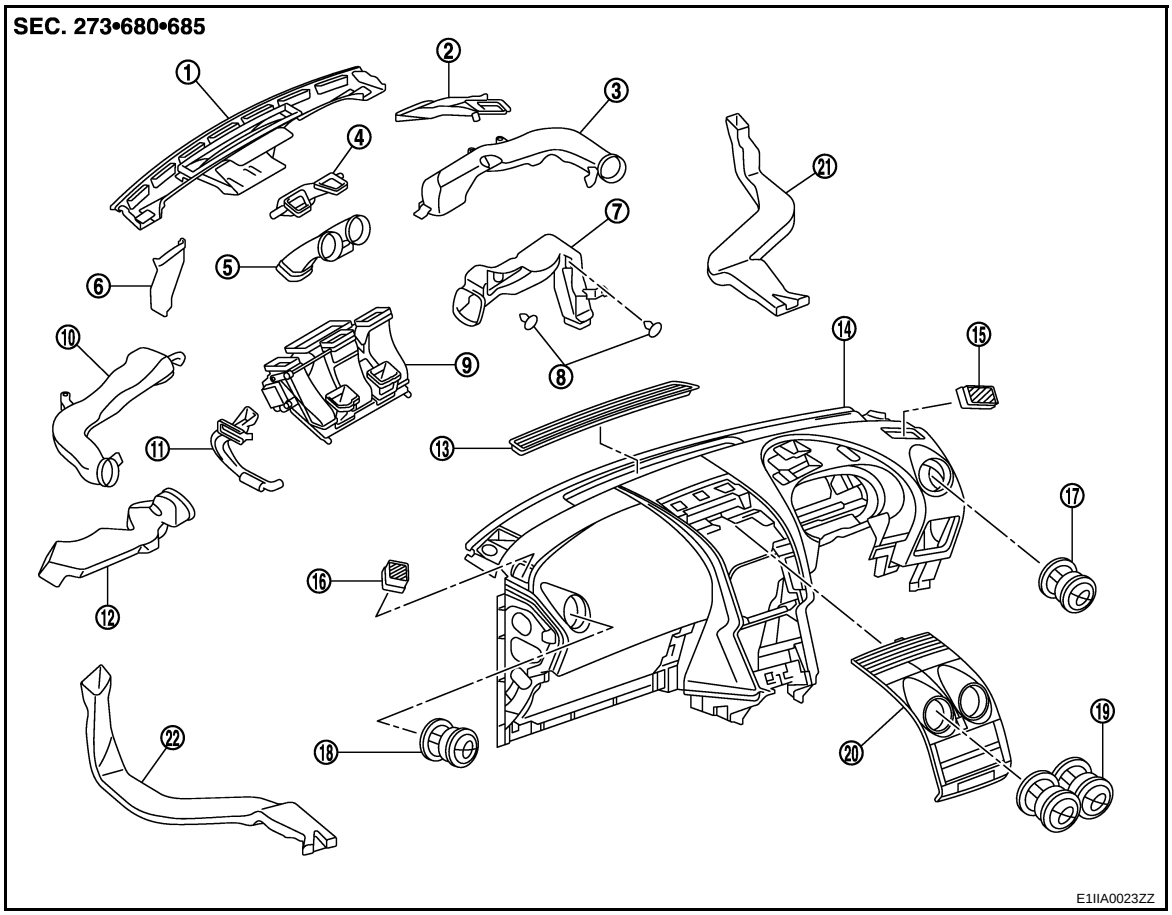
INSTALLATION

Installation is basically the reverse order of removal.

CENTER VENTILATOR GRILLE

CENTER VENTILATOR GRILLE : Exploded View

INFOID:0000000001183079



1. Defroster nozzle
2. Side defroster nozzle - RH
3. Side ventilator duct - RH
4. Front upper ventilator duct
5. Center ventilator duct
6. Side defroster nozzle - LH
7. Side foot duct - RH
8. Clip
9. Air mix duct
10. Side ventilator duct - LH
11. Glove box duct
12. Side foot duct - LH
13. Front defroster grille - center
14. Instrument panel
15. Side defroster grille - RH
16. Side defroster grille - LH
17. Side ventilator grille - RH
18. Side ventilator grille - LH

19. Center ventilator grille
20. Cluster lid C
21. Floor duct - RH
22. Floor duct - LH

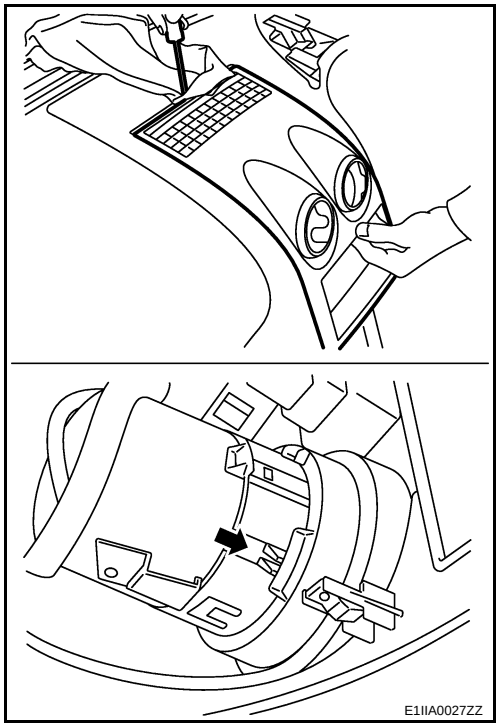
CENTER VENTILATOR GRILLE : Removal and Installation

INFOID:0000000001183080

REMOVAL

1. Remove cluster lid C. Refer to IP-12, "Removal and Installation".
2. Remove center ventilator grilles.
   - Use a screw driver to push down the clip, as shown.
   - Pull to remove center ventilator grilles from cluster lid C.

CAUTION:
Use shop cloth and all other protection necessaries to avoid damage.



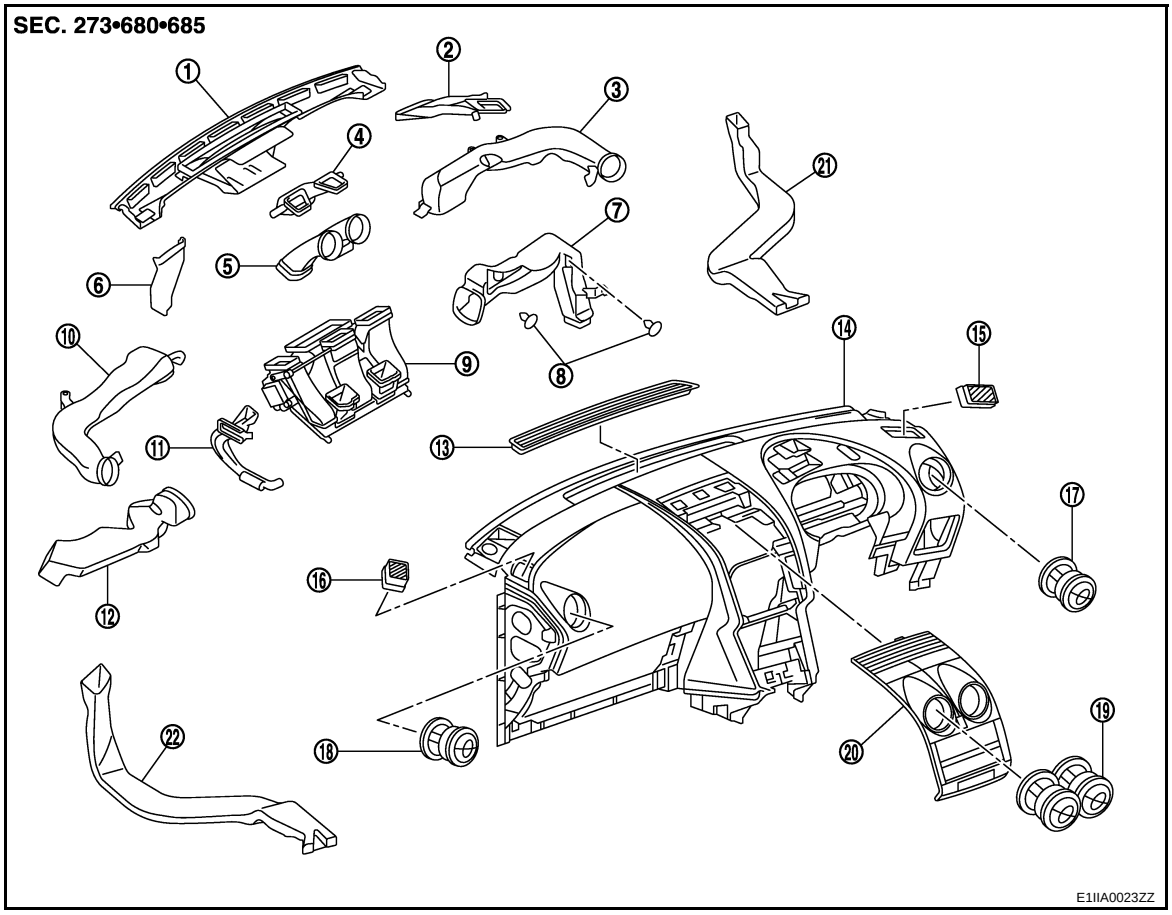
INSTALLATION

Installation is basically the reverse order of removal.

SIDE VENTILATOR GRILLE

SIDE VENTILATOR GRILLE : Exploded View

INFOID:0000000001183081



1. Defroster nozzle
2. Side defroster nozzle - RH
3. Side ventilator duct - RH
4. Front upper ventilator duct
5. Center ventilator duct
6. Side defroster nozzle - LH
7. Side foot duct - RH
8. Clip
9. Air mix duct
10. Side ventilator duct - LH
11. Glove box duct
12. Side foot duct - LH
13. Front defroster grille - center
14. Instrument panel
15. Side defroster grille - RH
16. Side defroster grille - LH
17. Side ventilator grille - RH
18. Side ventilator grille - LH
19. Center ventilator grille
20. Cluster lid C
21. Floor duct - RH
22. Floor duct - LH

SIDE VENTILATOR GRILLE : Removal and Installation

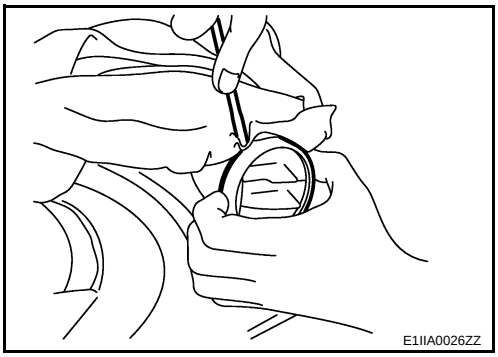
INFOID:0000000001183082

REMOVAL

Remove side ventilator grilles as shown.

CAUTION:

Use shop cloth and all other protection necessaries to avoid damage.



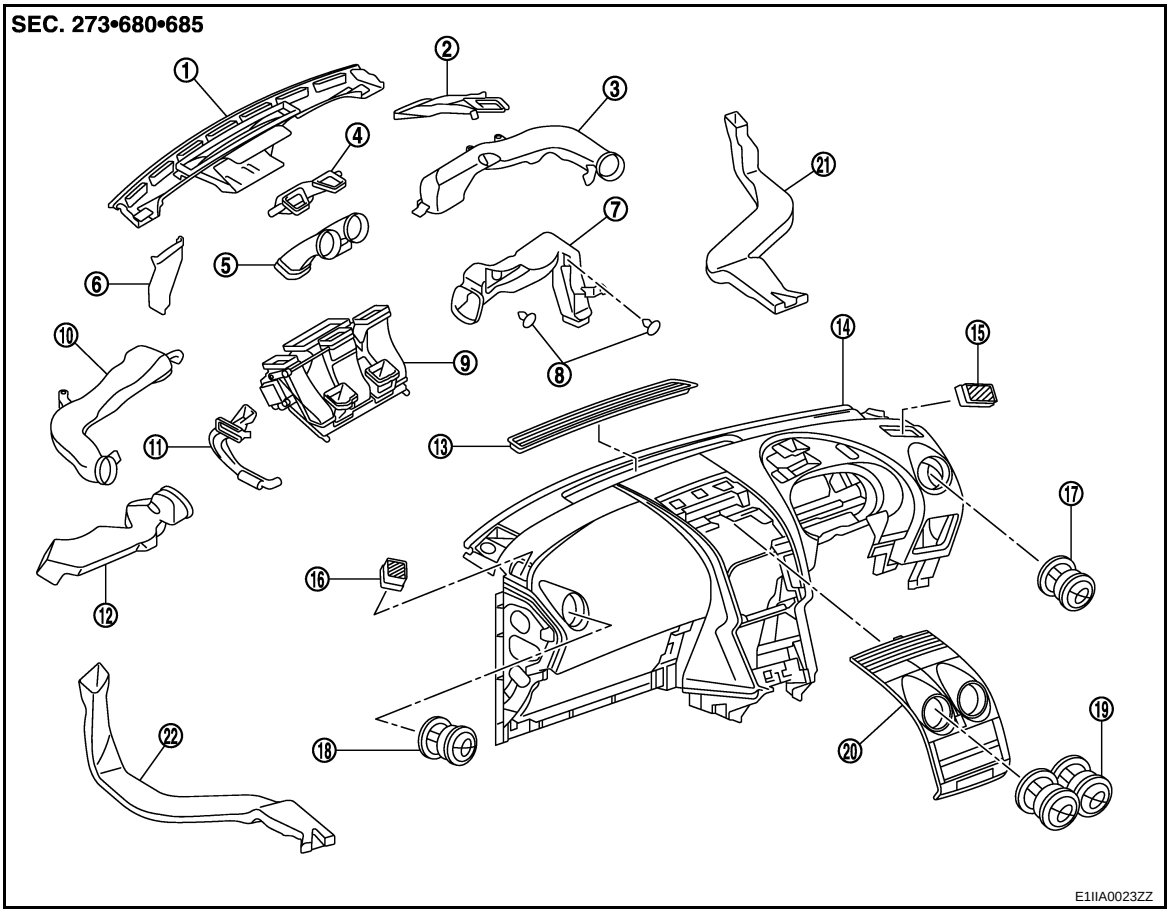
INSTALLATION

Installation is basically the reverse order of removal.

DEFROSTER NOZZLE

DEFROSTER NOZZLE : Exploded View

INFOID:0000000001183083



1. Defroster nozzle
2. Side defroster nozzle - RH
3. Side ventilator duct - RH
4. Front upper ventilator duct
5. Center ventilator duct
6. Side defroster nozzle - LH
7. Side foot duct - RH
8. Clip
9. Air mix duct
10. Side ventilator duct - LH
11. Glove box duct
12. Side foot duct - LH
13. Front defroster grille - center
14. Instrument panel
15. Side defroster grille - RH
16. Side defroster grille - LH
17. Side ventilator grille - RH
18. Side ventilator grille - LH
19. Center ventilator grille
20. Cluster lid C
21. Floor duct - RH
22. Floor duct - LH

DEFROSTER NOZZLE : Removal and Installation

INFOID:0000000001183084

REMOVAL

1. Remove instrument panel & pad. Refer to IP-12, "Removal and Installation".
2. Remove mounting screws.
3. Remove clips, and then remove defroster nozzle.

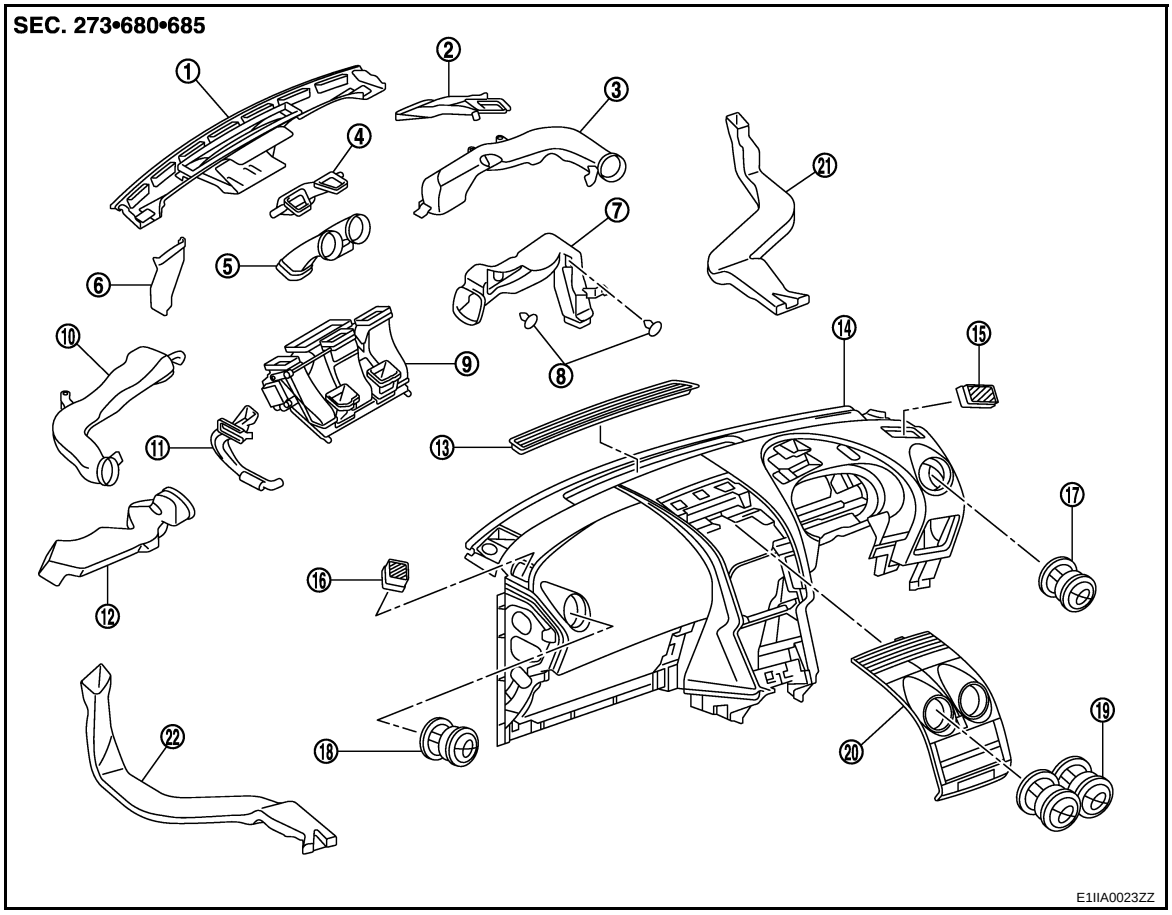
INSTALLATION

Installation is basically the reverse order of removal.

SIDE DEFROSTER NOZZLE

SIDE DEFROSTER NOZZLE : Exploded View

INFOID:0000000001183085



1. Defroster nozzle
2. Side defroster nozzle - RH
3. Side ventilator duct - RH
4. Front upper ventilator duct
5. Center ventilator duct
6. Side defroster nozzle - LH
7. Side foot duct - RH
8. Clip
9. Air mix duct
10. Side ventilator duct - LH
11. Glove box duct
12. Side foot duct - LH
13. Front defroster grille - center
14. Instrument panel
15. Side defroster grille - RH
16. Side defroster grille - LH
17. Side ventilator grille - RH
18. Side ventilator grille - LH
19. Center ventilator grille
20. Cluster lid C
21. Floor duct - RH
22. Floor duct - LH

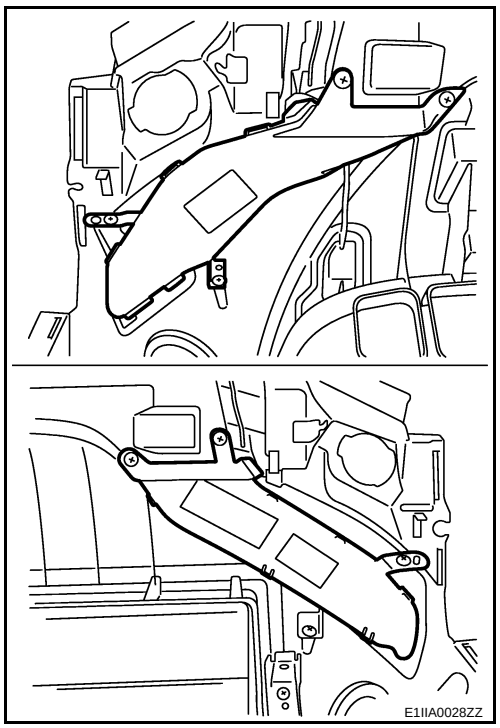
SIDE DEFROSTER NOZZLE : Removal and Installation

INFOID:0000000001183086

REMOVAL

1. Remove instrument panel. Refer to IP-12, "Removal and Installation".
2. Remove side ventilator ducts (RH/LH). Refer to VTL-102, "SIDE VENTILATOR GRILLE : Removal and Installation".
3. Remover side defroster nozzles (RH/LH) fixing screws.
4. Pull to release from defroster nozzle.

5. Remove side defroster nozzles.



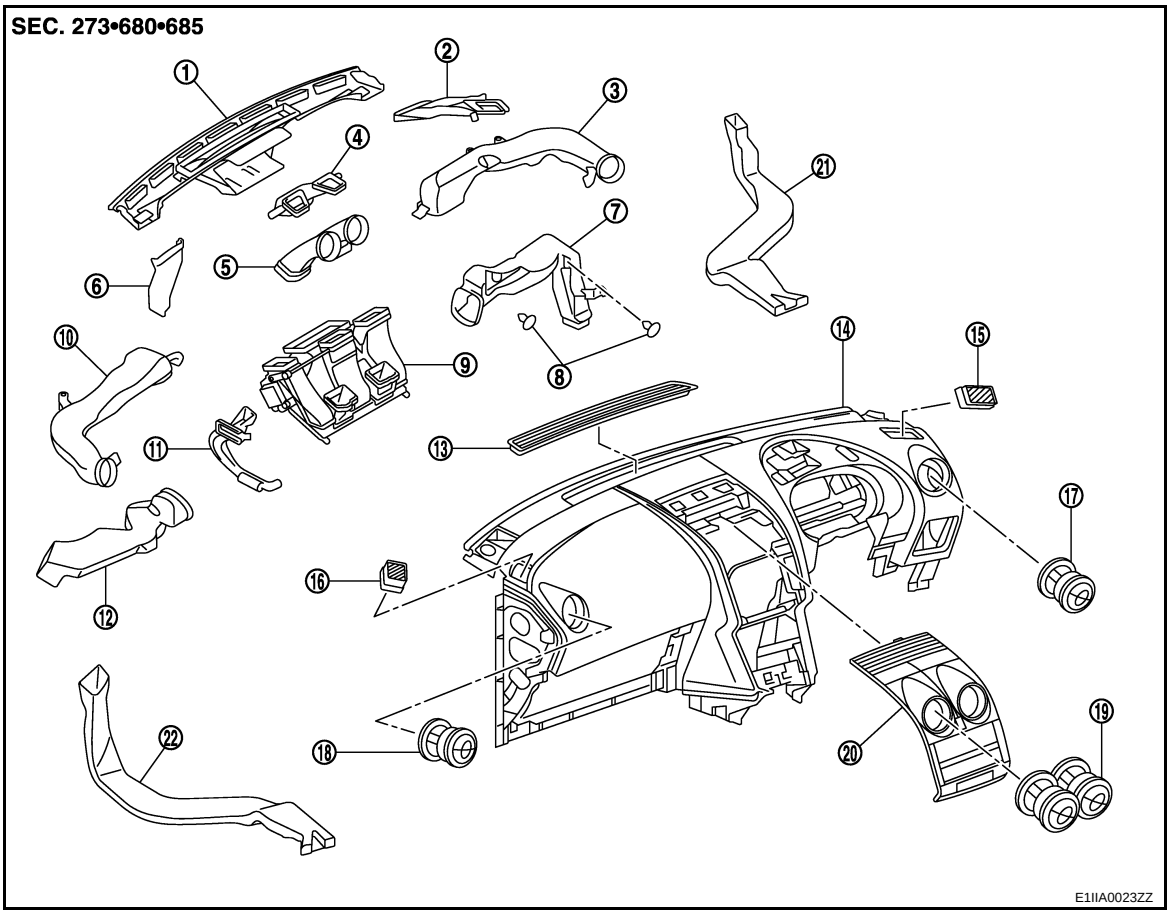
INSTALLATION

Installation is basically the reverse order of removal.

CENTER VENTILATOR DUCT

CENTER VENTILATOR DUCT : Exploded View

INFOID:0000000001569760



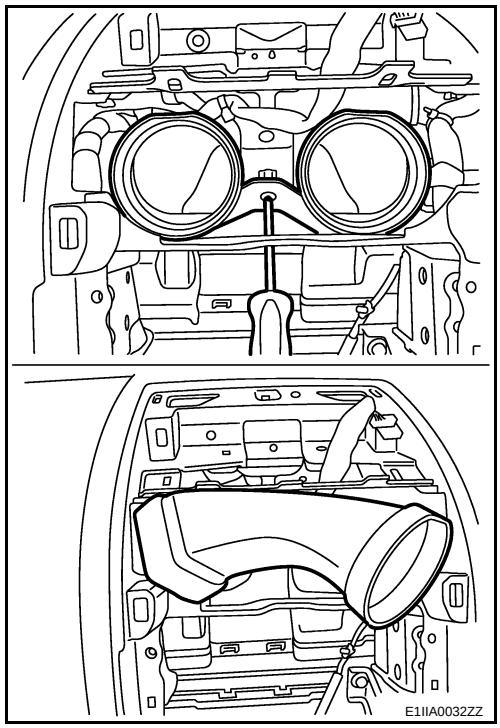
1. Defroster nozzle
2. Side defroster nozzle - RH
3. Side ventilator duct - RH
4. Front upper ventilator duct
5. Center ventilator duct
6. Side defroster nozzle - LH
7. Side foot duct - RH
8. Clip
9. Air mix duct
10. Side ventilator duct - LH
11. Glove box duct
12. Side foot duct - LH
13. Front defroster grille - center
14. Instrument panel
15. Side defroster grille - RH
16. Side defroster grille - LH
17. Side ventilator grille - RH
18. Side ventilator grille - LH
19. Center ventilator grille
20. Cluster lid C
21. Floor duct - RH
22. Floor duct - LH

CENTER VENTILATOR DUCT : Removal and Installation

INFOID:0000000001569761

REMOVAL

1. Remove Cluster lid D. Refer to IP-12, "Removal and Installation".
2. Remove Cluster lid C. Refer to IP-12, "Removal and Installation".
3. Remove fixing screws from instrument panel.
4. Turn as shown to remove center ventilator duct.



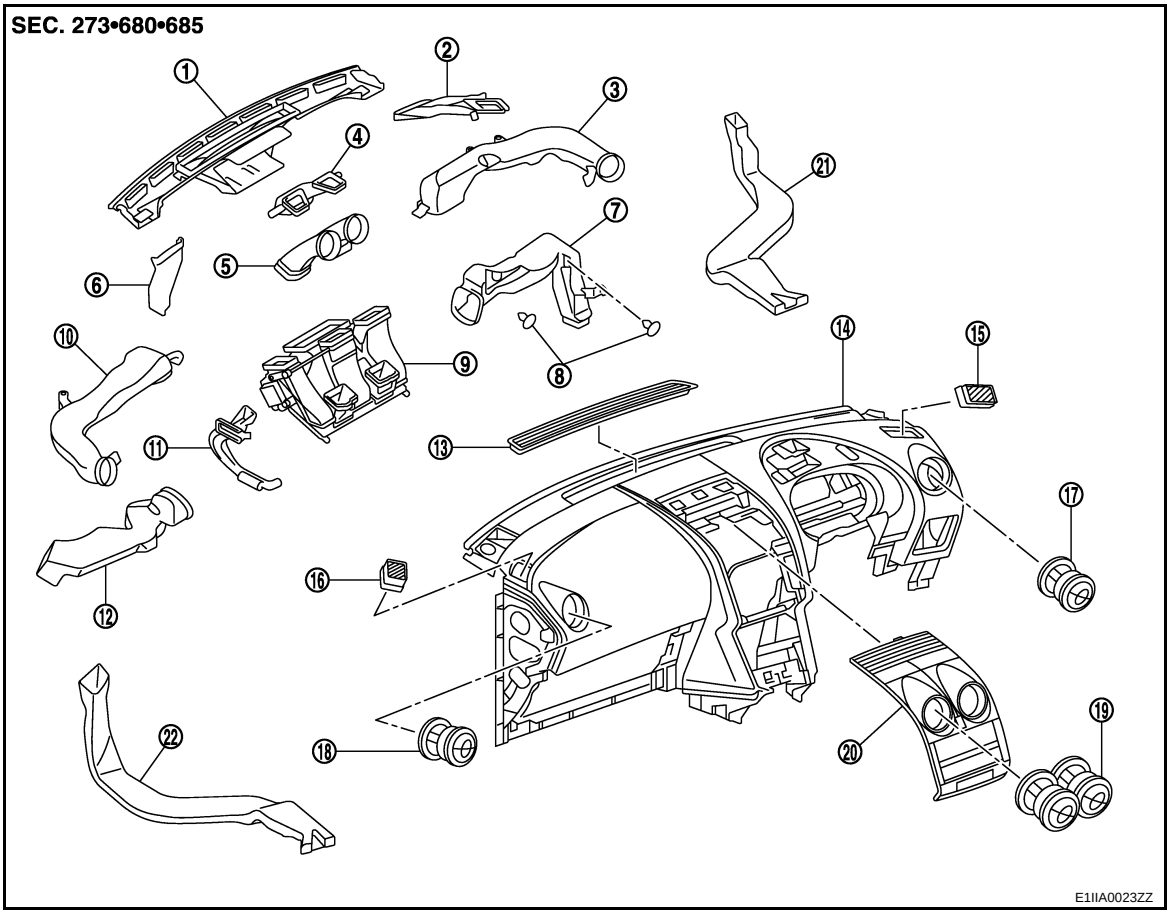
INSTALLATION

Installation is basically the reverse order of removal.

FRONT UPPER VENTILATOR DUCT

FRONT UPPER VENTILATOR DUCT : Exploded View

INFOID:0000000001569762



1. Defroster nozzle
2. Side defroster nozzle - RH
3. Side ventilator duct - RH
4. Front upper ventilator duct
5. Center ventilator duct
6. Side defroster nozzle - LH
7. Side foot duct - RH
8. Clip
9. Air mix duct
10. Side ventilator duct - LH
11. Glove box duct
12. Side foot duct - LH
13. Front defroster grille - center
14. Instrument panel
15. Side defroster grille - RH
16. Side defroster grille - LH
17. Side ventilator grille - RH
18. Side ventilator grille - LH
19. Center ventilator grille
20. Cluster lid C
21. Floor duct - RH
22. Floor duct - LH

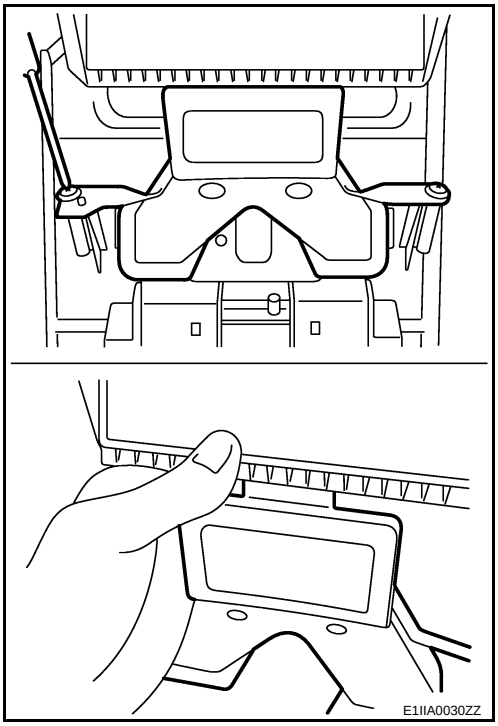
FRONT UPPER VENTILATOR DUCT : Removal and Installation

INFOID:0000000001569763

REMOVAL

1. Remove instrument panel. Refer to IP-12, "Removal and Installation".

2. Remove fixing screws, then release duct from center pin.
3. Pull to release front upper ventilator duct from center defroster duct as shown.



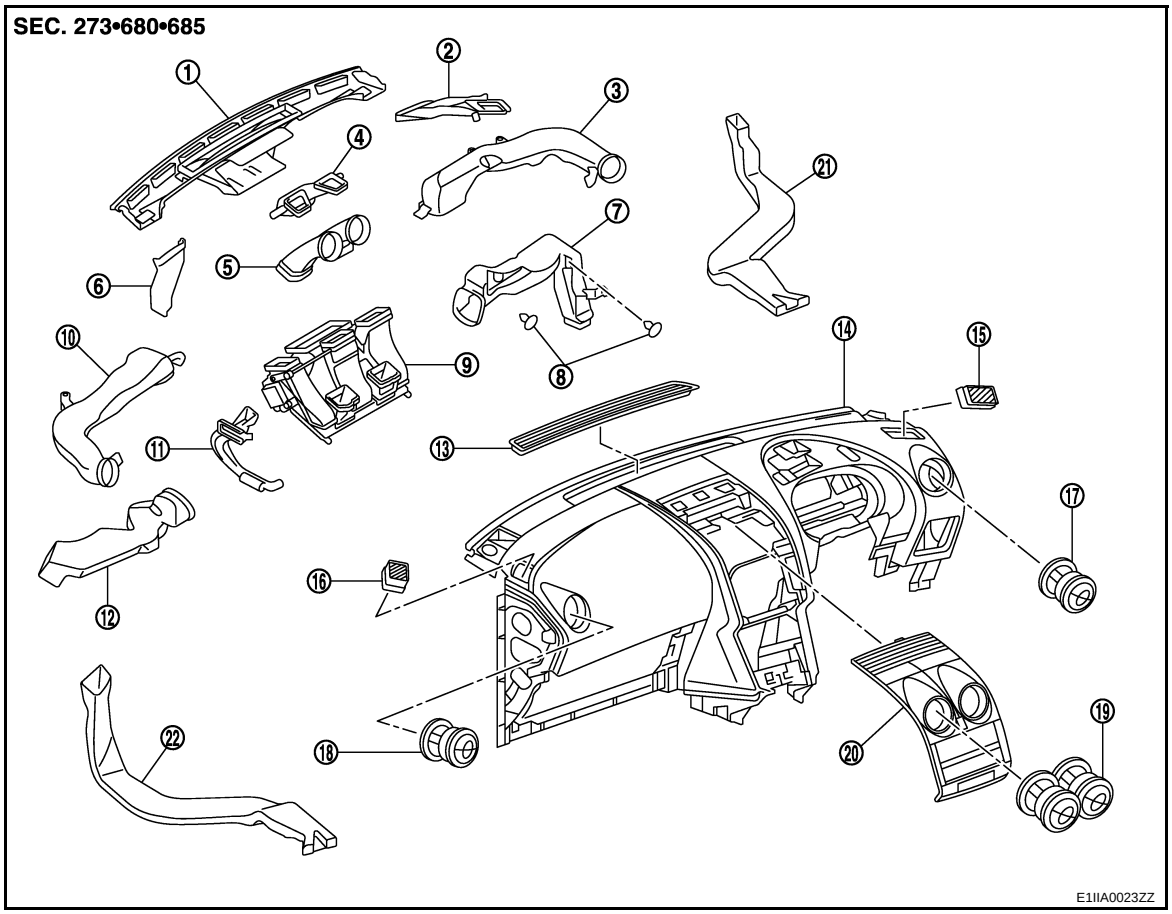
INSTALLATION

Installation is basically the reverse order of removal.

SIDE VENTILATOR DUCT

SIDE VENTILATOR DUCT : Exploded View

INFOID:0000000001569764



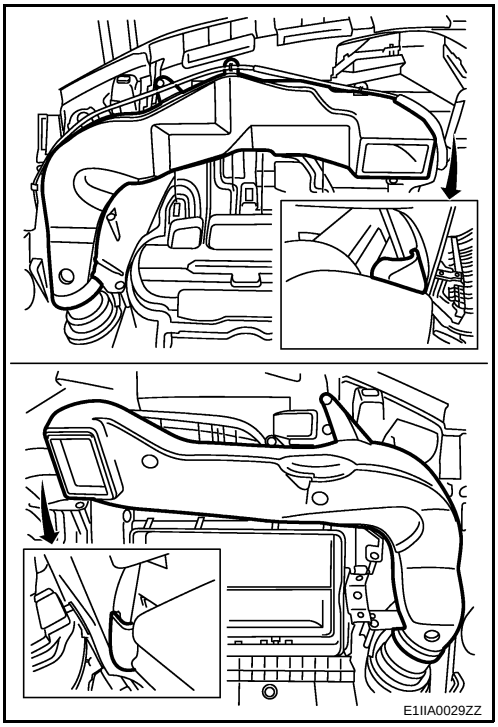
1. Defroster nozzle
2. Side defroster nozzle - RH
3. Side ventilator duct - RH
4. Front upper ventilator duct
5. Center ventilator duct
6. Side defroster nozzle - LH
7. Side foot duct - RH
8. Clip
9. Air mix duct
10. Side ventilator duct - LH
11. Glove box duct
12. Side foot duct - LH
13. Front defroster grille - center
14. Instrument panel
15. Side defroster grille - RH
16. Side defroster grille - LH
17. Side ventilator grille - RH
18. Side ventilator grille - LH
19. Center ventilator grille
20. Cluster lid C
21. Floor duct - RH
22. Floor duct - LH

SIDE VENTILATOR DUCT : Removal and Installation

INFOID:0000000001569765

REMOVAL

1. Remove instrument panel. Refer to IP-12, "Removal and Installation".
2. Remove fixing screws from instrument panel.
3. Release side ventilator ducts from side ventilator grille.
4. Pull to release tab from center defroster duct.
5. Remove side ventilator ducts.



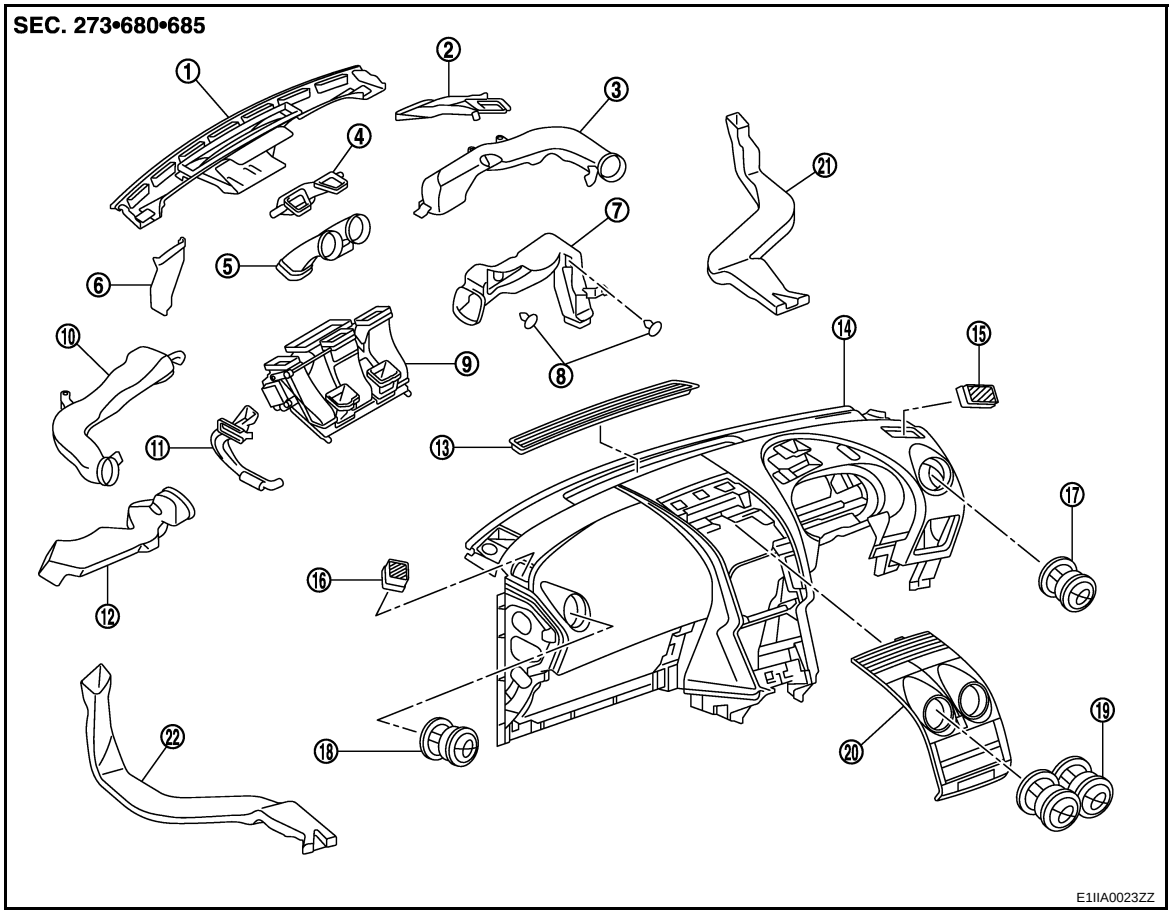
INSTALLATION

Installation is basically the reverse order of removal.

FOOT DUCT

FOOT DUCT : Exploded View

INFOID:0000000001183087



1. Defroster nozzle
2. Side defroster nozzle - RH
3. Side ventilator duct - RH
4. Front upper ventilator duct
5. Center ventilator duct
6. Side defroster nozzle - LH
7. Side foot duct - RH
8. Clip
9. Air mix duct
10. Side ventilator duct - LH
11. Glove box duct
12. Side foot duct - LH
13. Front defroster grille - center
14. Instrument panel
15. Side defroster grille - RH
16. Side defroster grille - LH
17. Side ventilator grille - RH
18. Side ventilator grille - LH
19. Center ventilator grille
20. Cluster lid C
21. Floor duct - RH
22. Floor duct - LH

FOOT DUCT : Removal and Installation

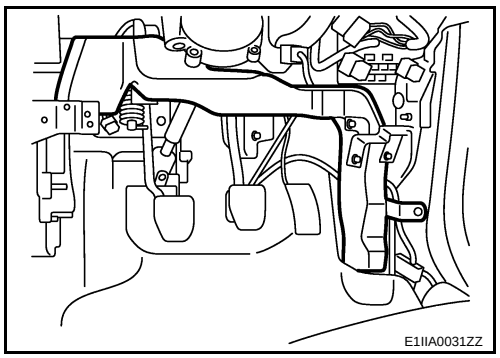
INFOID:0000000001183088

REMOVAL

Driver Side

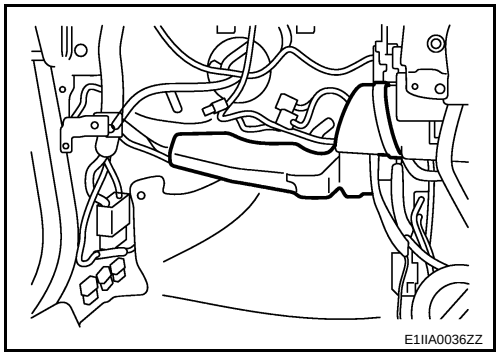
1. Remove driver side lower panel. Refer to IP-12, "Removal and Installation".
2. Remove side finisher. Refer to IP-12, "Removal and Installation".

3. Remove duct fixing bolt from lid and hood opener bracket.
4. Remove lower fixing clip from driver side foot duct.
5. Pull duct center side to release it from heater and cooling assembly.
6. Release foot duct from floor duct (if equipped).
7. Handle to remove foot duct.


E1IIA0031ZZ

Passenger Side

1. Remove glove box assembly. Refer to IP-12, "Removal and Installation".
2. Remove lower instrument panel finisher.
3. Remove outer fixing screw from bracket.
4. Release foot duct center side from heater and cooling assembly.
   CAUTION:
   Be careful not to damage upper fixing clip.
5. Release foot duct from floor duct.
6. Handle to remove foot duct.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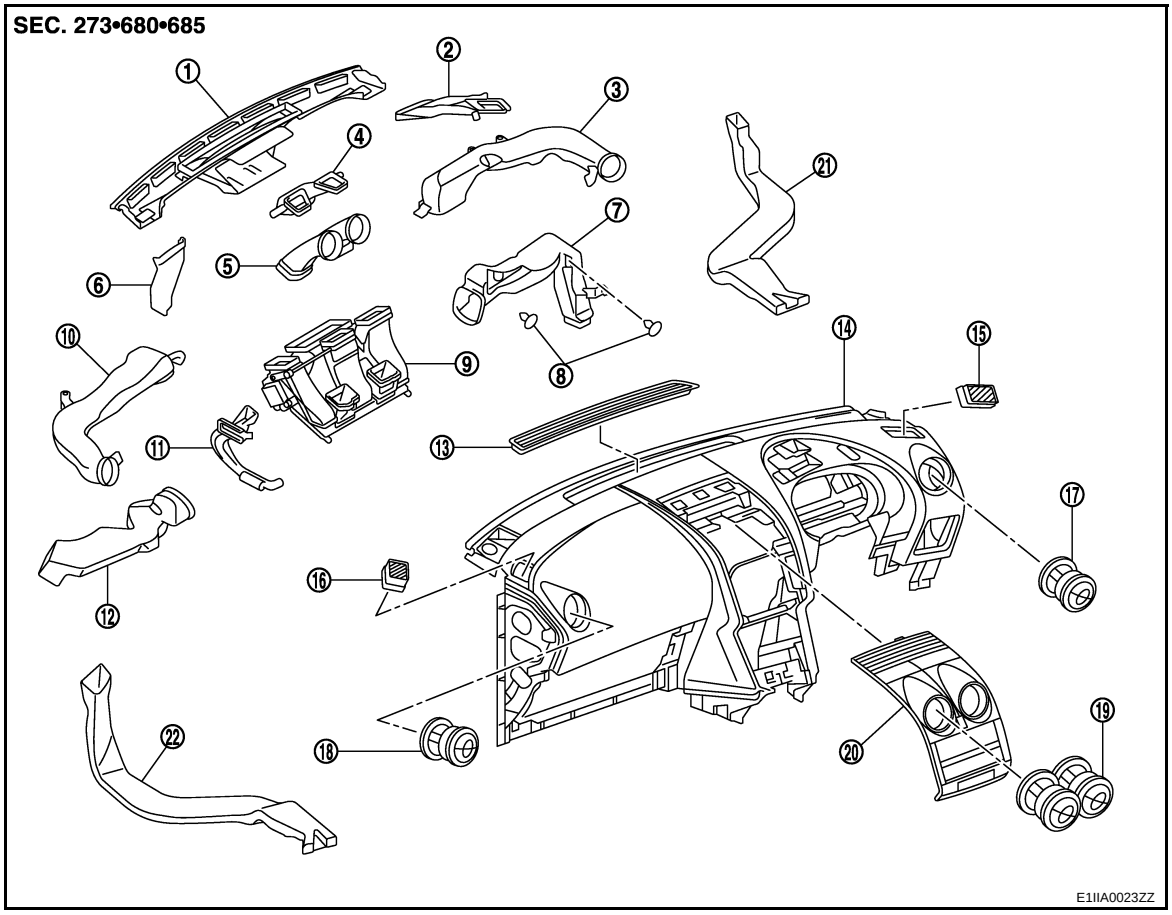
INSTALLATION

Installation is basically the reverse of removal.

FLOOR DUCT

FLOOR DUCT : Exploded View

INFOID:0000000001183089



1. Defroster nozzle
2. Side defroster nozzle - RH
3. Side ventilator duct - RH
4. Front upper ventilator duct
5. Center ventilator duct
6. Side defroster nozzle - LH
7. Side foot duct - RH
8. Clip
9. Air mix duct
10. Side ventilator duct - LH
11. Glove box duct
12. Side foot duct - LH
13. Front defroster grille - center
14. Instrument panel
15. Side defroster grille - RH
16. Side defroster grille - LH
17. Side ventilator grille - RH
18. Side ventilator grille - LH
19. Center ventilator grille
20. Cluster lid C
21. Floor duct - RH
22. Floor duct - LH

FLOOR DUCT : Removal and Installation

INFOID:0000000001183090

REMOVAL

1. Remove floor carpet. Refer to INT-18, "Removal and Installation".
2. Remove floor duct.

INSTALLATION

Installation is basically the reverse of removal.