SECTION VTL
VENTILATION SYSTEM

CONTENTS

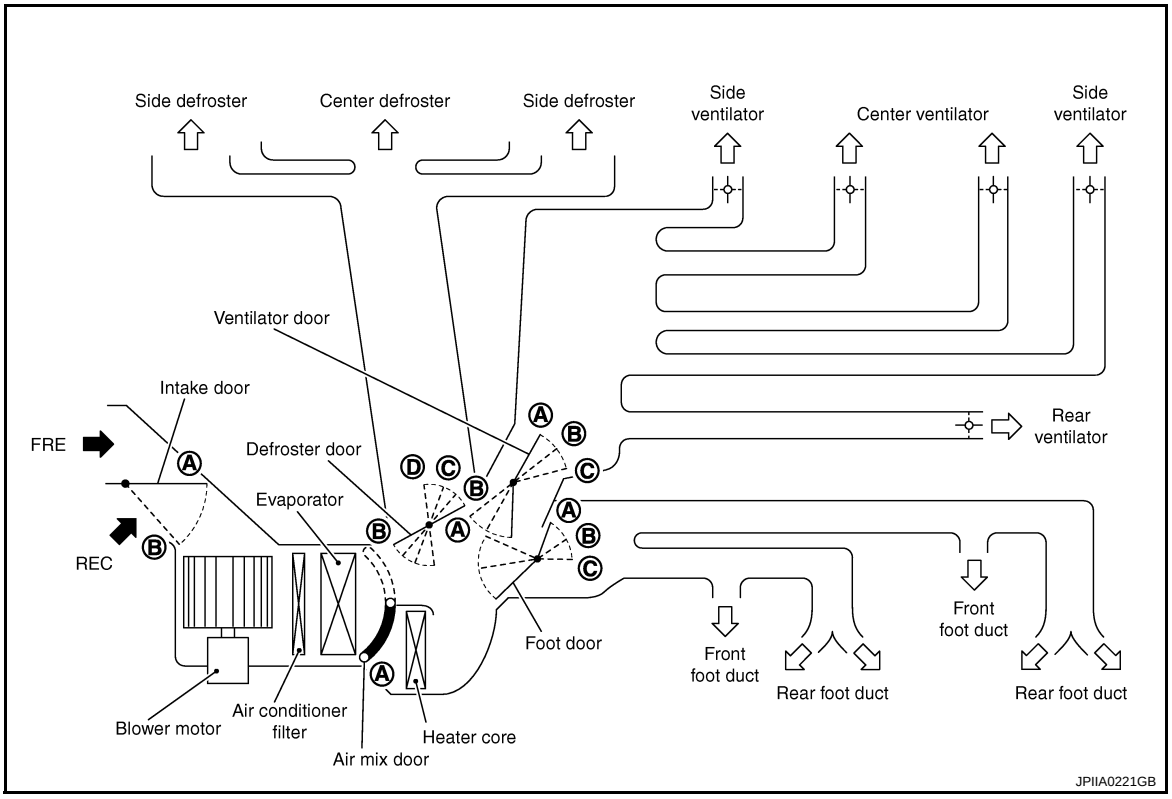
AUTO AIR CONDITIONER (RHD)

FUNCTION DIAGNOSIS

SWITCHES AND THEIR CONTROL FUNCTION

System Description

INFOID:0000000001162011



Door \ Position or switch	MODE control dial								Intake SW		Temperature control dial		
	VENT	B/L	FOOT	FOOT2	D/F	D/F2	DEF	AUTO					
				—		—		—			16°C	⇔	28°C
Ventilator door	Ⓐ	Ⓑ	Ⓒ	Ⓒ	Ⓒ	Ⓒ	Ⓒ	AUTO	—		—		
Foot door	Ⓐ	Ⓑ	Ⓒ	Ⓑ	Ⓒ	Ⓑ	Ⓐ		—		—		
Defroster door	Ⓐ	Ⓐ	Ⓐ or Ⓑ *1	Ⓑ–Ⓒ	Ⓒ	Ⓒ–Ⓓ	Ⓓ		—		—		
Intake door	—						Ⓑ	—	Ⓐ *2 AUTO	Ⓑ *2 AUTO	—		
Air mix door	—						—	AUTO	—		Ⓐ	AUTO	Ⓑ

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

JPIIA0222GB

AIR DISTRIBUTION

System Description

INFOID:0000000001162012

Discharge air flow

Mode door position	Air outlet/distribution		
	Vent	Foot	Defroster
	100%	–	–
	60%	40%	–
	18% (22%)	62% (78%)	20% (–)
	15%	40%	45%
	22%	–	78%

( ) :Manually control

JPIIA0218GB

PRECAUTION

PRECAUTIONS

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

INFOID:0000000001557103

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the “SRS 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:0000000001557104

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.

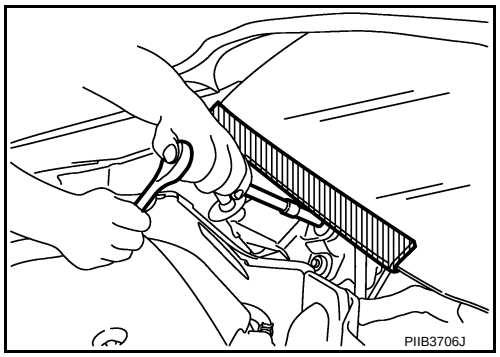
OPERATION PROCEDURE

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:0000000001557110

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



Precautions For Xenon Headlamp Service

INFOID:0000000001557116

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:0000000001280570

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. Compressor malfunction is likely occur if the refrigerants are mixed.**
- **Use only specified lubricant for the HFC-134a (R-134a) A/C system and HFC-134a (R-134a) components. Compressor malfunction is likely to occur if lubricant other than that specified is used.**
- **The specified HFC-134a (R-134a) lubricant rapidly absorbs moisture from the atmosphere. The following handling precautions must be observed:**
- **Cap (seal) immediately the component to minimize the entry of moisture from the atmosphere when removing refrigerant components from a vehicle.**
- **Never remove the caps (unseal) until just before connecting the components when installing refrigerant components to a vehicle. Connect all refrigerant loop components as quickly as possible to minimize the entry of moisture into system.**
- **Use only the specified lubricant from a sealed container. Reseal immediately containers of lubricant. Lubricant becomes moisture saturated and should not be used without proper sealing.**
- **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:0000000001280571

WARNING:

- **Never breath 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.**

Ventilate work area before resuming service if accidental system discharge occurs. 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 each time an air conditioning system is discharged.**
- **Wear always 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; Place the bottom of the container in a warm pail of water if container warming is required.**
- **Never intentionally drop, puncture, or incinerate refrigerant containers.**
- **Keep refrigerant away from open flames: poisonous gas is produced if refrigerant burns.**
- **Refrigerant displaces oxygen, therefore be certain to work in well ventilated areas to prevent suffocation.**
- **Never pressure test or leakage 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.**

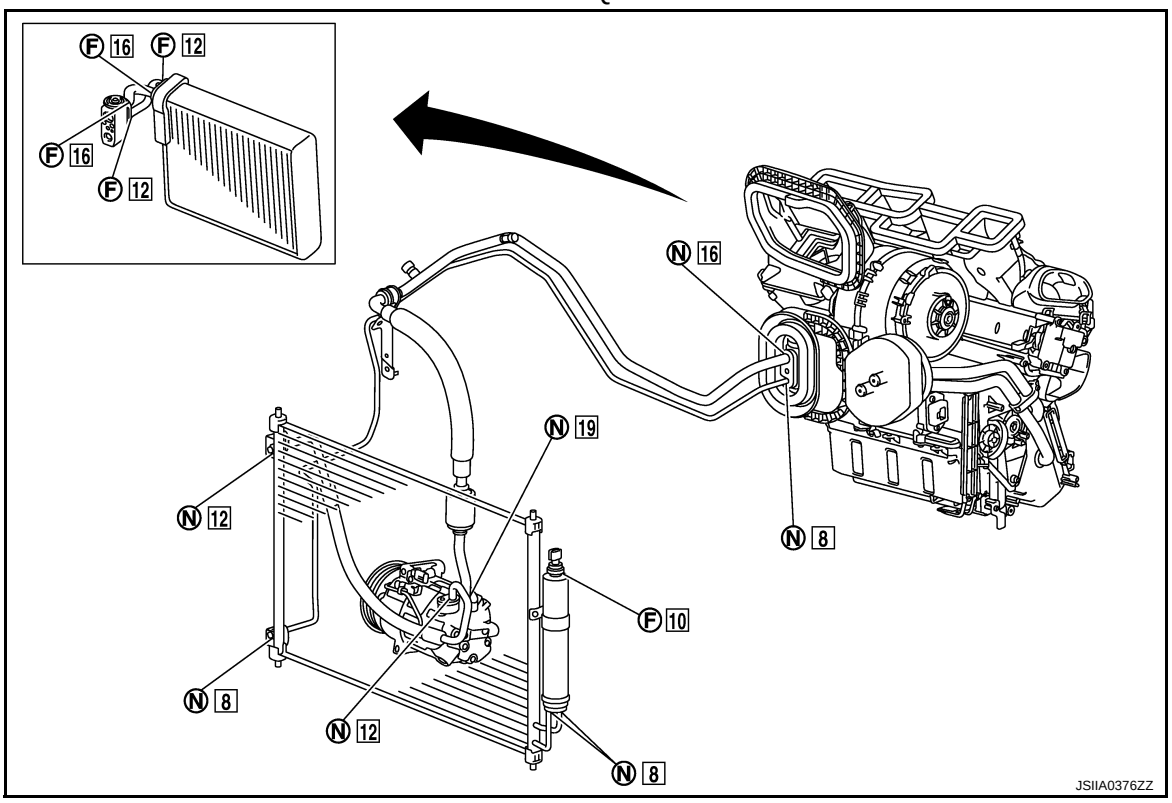
Refrigerant Connection

INFOID:0000000001280572

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

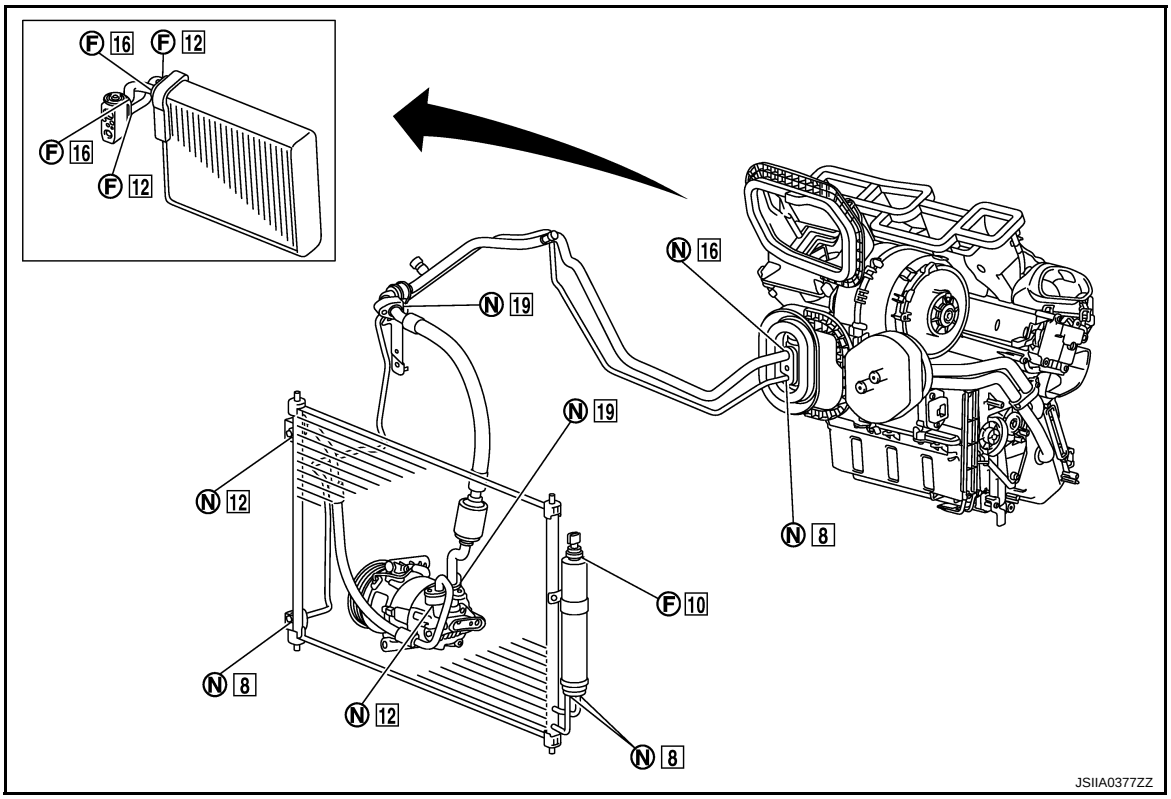
MR20DE/QR25DE



F. Former type refrigerant connection N. New type refrigerant connection

□: O-ring size

M9R



F. Former type refrigerant connection N. New type refrigerant connection

□: O-ring size

CAUTION:

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

O-Ring Part Numbers and Specifications

Connection type	Piping connection point		Part number	QTY	O-ring size
New	Low-pressure flexible hose to expansion valve		92473 N8210	1	16
	Low-pressure flexible hose to low-pressure pipe (M9R)		92474 N8210	1	19
	Low-pressure pipe to expansion valve (M9R)		92473 N8210	1	16
	Compressor to low-pressure flexible hose		92474 N8210	1	19
	Compressor to high-pressure flexible hose		92472 N8210	1	12
	Condenser to high-pressure flexible hose		92472 N8210	1	12
	Condenser to high-pressure pipe		92471 N8210	1	8
	High-pressure pipe to expansion valve		92471 N8210	1	8
	Liquid tank to condenser	Inlet	92471 N8210	1	8
		Outlet		1	
Former	Refrigerant pressure sensor to liquid tank		J2476 89956	1	10
	Cooler pipe assembly	High-pressure side	92475 71L00	1	12
		Low-pressure side	92475 72L00	1	16

WARNING:

Check that 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.

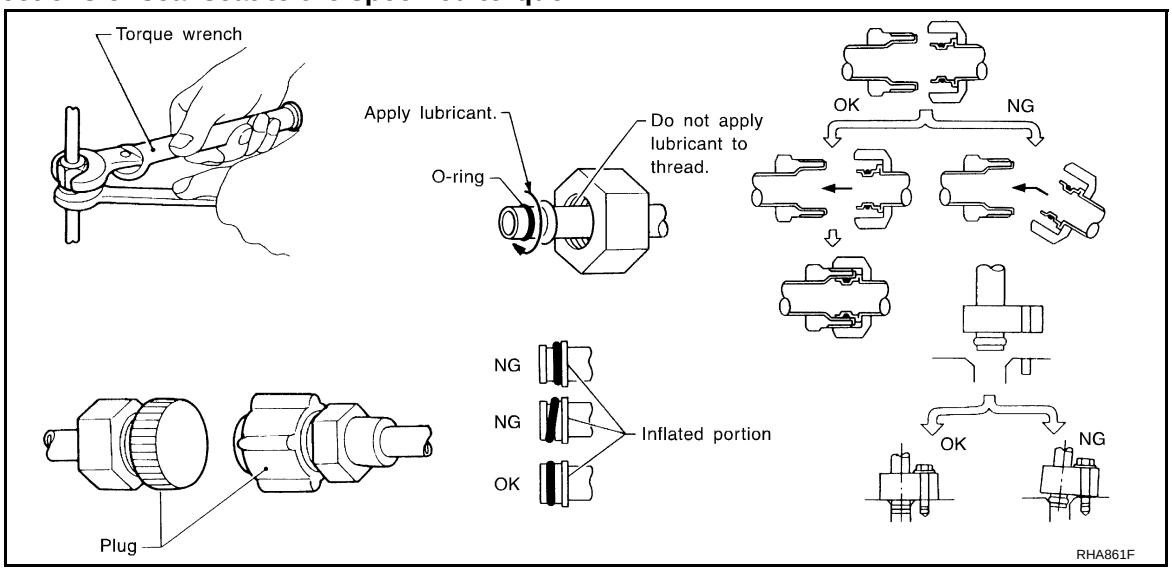
CAUTION:

Observe the following when replacing or cleaning refrigerant cycle components.

- **Store it in the same way at it is when mounted on the car when the compressor is removed. Failure to do so causes lubricant to enter the low-pressure chamber.**
- **Use always a torque wrench and a back-up wrench when connecting tubes.**
- **Plug immediately all openings to prevent entry of dust and moisture after disconnecting tubes.**
- **Connect the pipes at the final stage of the operation when installing an air conditioner in the vehicle. 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.**
- **Remove thoroughly moisture from the refrigeration system before charging the refrigerant.**
- **Replace always used O-rings.**
- **Apply lubricant to circle of the O-rings shown in illustration when connecting tube. 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.**
- **Be careful not to damage O-ring and tube when replacing the O-ring.**
- **Connect tube until a click can be heard. Then tighten the nut or bolt by hand. Check that the O-ring is installed to tube correctly.**
- **Perform leakage test and make sure that there is no leakage from connections after connecting line. Disconnect that line and replace the O-ring when the refrigerant leaking point is found. Then tighten connections of seal seat to the specified torque.**



Service Equipment

INFOID:0000000001280573

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

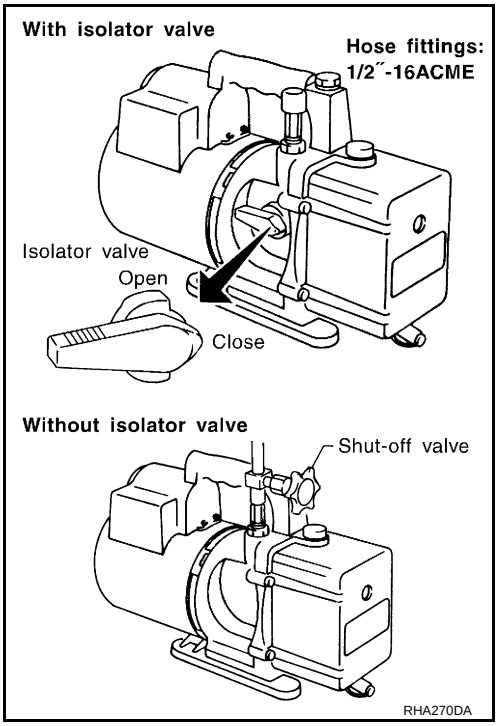
Be certain to follow the manufacturer’s instructions for tester operation and tester maintenance.

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 per the following.

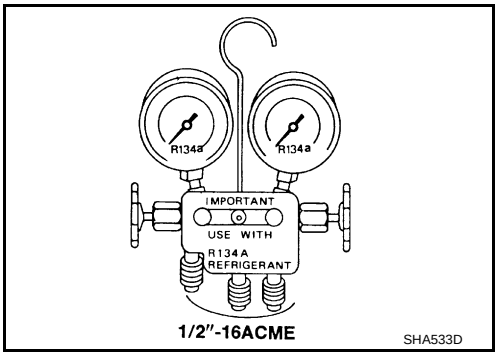
- Vacuum pumps usually have a manual isolator valve as part of the pump. Close this valve to isolate the service hose from the pump.
- Use a hose equipped with a manual shut-off valve near the pump end for pumps without an isolator. Close the valve to isolate the hose from the pump.
- Disconnect the hose from the pump if the hose has an automatic shut-off valve. 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.



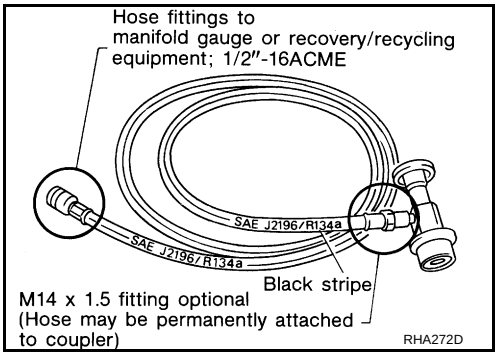
MANIFOLD GAUGE SET

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

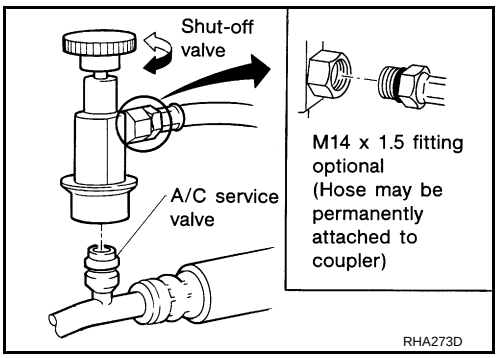
Be certain that the service hoses display the markings described (colored hose with black stripe). All hoses must equip positive shut-off devices (either manual or automatic) near the end of the hoses opposite to the manifold gauge.



SERVICE COUPLERS

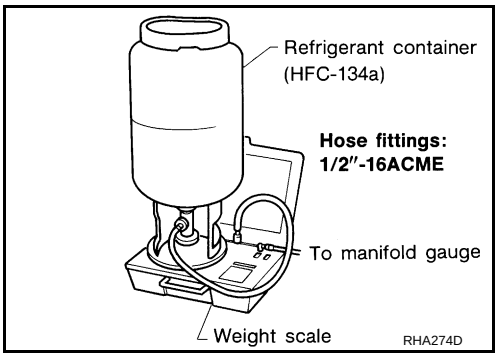
Never attempt to connect HFC-134a (R-134a) service couplers to a CFC-12 (R-12) A/C system. The HFC-134a (R-134a) couplers do not properly connect to the CFC-12 (R-12) system. However, if an improper connection is attempted, discharging and contamination may occur.

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. The hose fitting must be 1/2″-16 ACME if the scale controls refrigerant flow electronically.



CALIBRATING ACR4 WEIGHT SCALE

Calibrate the scale each three month.
To calibrate the weight scale on the ACR4:

1. Press **“Shift/Reset”** and **“Enter”** at the same time.
2. Press **“8787”**. **“A1”** is displayed.
3. Remove all weight from the scale.
4. Press **“0”**, then press **“Enter”**. **“0.00”** is displayed and change to **“A2”**.
5. Place a known weight (dumbbell or similar weight), between 4.5 and 8.6 kg (10 and 19 lb.) on the center of the weight scale.
6. Enter the known weight using four digits. (Example 10 lb. = 10.00, 10.5 lb. = 10.50)
7. Press **“Enter”**— the display returns to the vacuum mode.
8. Press **“Shift/Reset”** and **“Enter”** at the same time.
9. Press **“6”**— the known weight on the scale is displayed.
10. Remove the known weight from the scale. **“0.00”** is displayed.
11. Press **“Shift/Reset”** to return the ACR4 to the program mode.

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:0000000001280574

CAUTION:

- **Plug all openings to prevent moisture and foreign matter from entering.**
- **Store it in the same way at it is when mounted on the car when the compressor is removed.**
- **Follow “LUBRICANT ADJUSTING PROCEDURE FOR COMPRESSOR REPLACEMENT” exactly when replacing or repairing compressor. Refer toHA-25, "Adjustment".**
- **Keep friction surfaces between clutch and pulley clean. Wipe it off by using a clean waste cloth moistened with thinner if the surface is contaminated with lubricant.**
- **Turn the compressor shaft by hand more than five turns in both directions after compressor service operation. This distributes equally lubricant inside the compressor. Let the engine idle and operate the compressor for one hour after the compressor is installed.**
- **Apply voltage to the new one and check for normal operation after replacing the compressor magnet clutch.**

FLUORESCENT LEAK DETECTOR

General Precautions

INFOID:0000000001280575

CAUTION:

- **The A/C system contains a fluorescent leak detection dye used for locating refrigerant leakages. An ultraviolet (UV) lamp is required to illuminate the dye when inspecting for leakages.**
- **Wear always fluorescence enhancing UV safety goggles to protect eyes and enhance the visibility of the fluorescent dye.**
- **The fluorescent dye leak detector is not a replacement for an electrical leak detector (SST). The fluorescent dye leak detector should be used in conjunction with an electrical leak detector (SST) to pinpoint refrigerant leakages.**
- **Read and follow all manufacture's operating instructions and precautions prior to performing the work for the purpose of safety and customer's satisfaction.**
- **A compressor shaft seal should not necessarily be repaired because of dye seepage. The compressor shaft seal should only be repaired after confirming the leakage with an electrical leak detector (SST).**
- **Remove always any remaining dye from the leakage 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. Clean immediately with the approved dye cleaner if dye is spilled. 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 remains 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

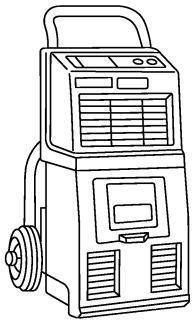
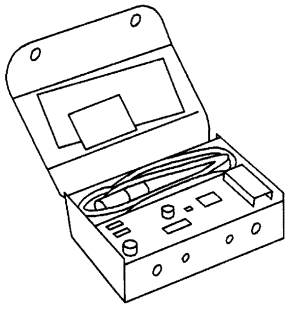
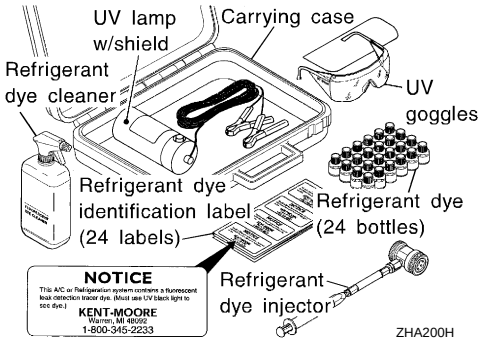
PREPARATION

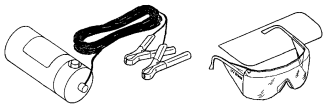
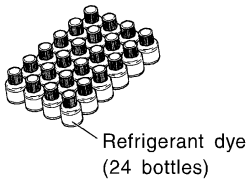
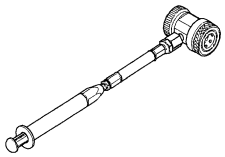
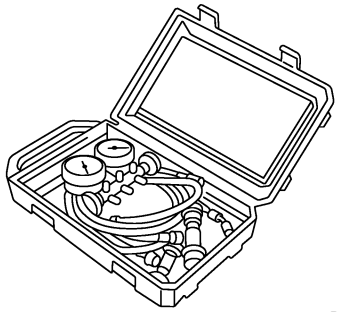
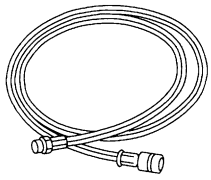
Special Service Tool

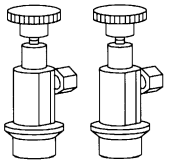
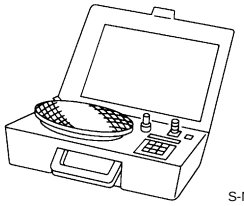
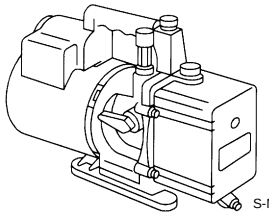
INFOID:0000000001318053

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 number Tool name		Description
Recovery/recycling/recharging equipment (ACR4)	 RJIA0195E	Function: Refrigerant recovery, recycling and recharging
Electrical leak detector	 A/C leak detector SHA705EB	Power supply: DC 12 V (Cigarette lighter)
(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 12 V (Battery terminal)

Tool number Tool name		Description
(J-42220) UV lamp and UV safety goggles	 SHA438F	Power supply: DC 12 V (Battery terminal) For checking refrigerant leakage when fluorescent dye is equipped 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
Service hoses • High-pressure side hose • Low-pressure side hose • Utility hose	 S-NT201	Hose color: • Low-pressure side hose: Blue with black stripe • High-pressure side hose: Red with black stripe • Utility hose: Yellow with black stripe or green with black stripe Hose fitting to gauge: • 1/2″-16 ACME

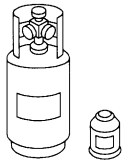
Tool number Tool name		Description
Service couplers • High-pressure side coupler • Low-pressure side coupler	 S-NT202	Hose fitting to service hose: M14 x 1.5 fitting is optional or permanently attached.
Refrigerant weight scale	 S-NT200	For measuring of refrigerant Fitting size: Thread size 1/2″-16 ACME
Vacuum pump (Including the isolator valve)	 S-NT203	Capacity: • Air displacement: 4 CFM • Micron rating: 20 microns • Oil capacity: 482 g (17 oz.) Fitting size: Thread size • 1/2″-16 ACME

Sealant or/and Lubricant

INFOID:0000000001318055

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.

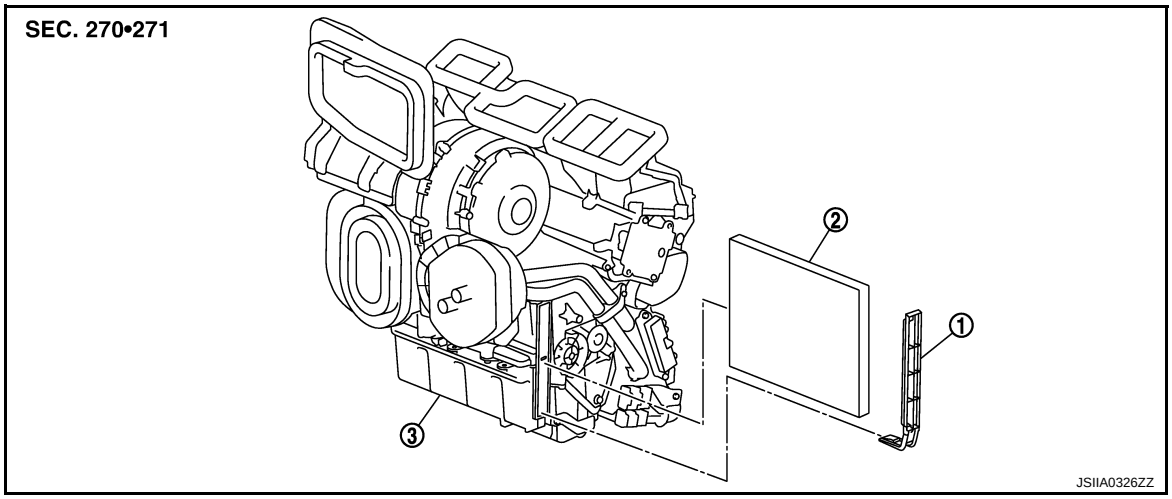
Tool name		Description
HFC-134a (R-134a) refrigerant	 S-NT196	Container color: Light blue Container marking: HFC-134a (R-134a) Fitting size: Thread size • Large container 1/2″-16 ACME
Nissan A/C System Oil Type S (DH-PS)	 S-NT197	Type: Polyalkylene glycol oil (PAG), type S (DH-PS) Application: HFC-134a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

ON-VEHICLE MAINTENANCE

AIR CONDITIONER FILTER

Exploded View

INFOID:0000000001162026



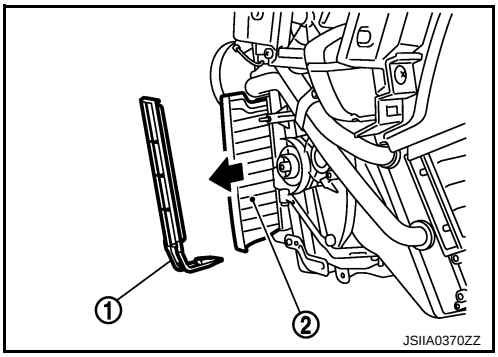
1. Filter cover
2. Air conditioner filter
3. A/C unit assembly

Removal and Installation

INFOID:0000000001162027

REMOVAL

1. Remove instrument driver lower panel. Refer to IP-11, "Exploded View".
2. Remove accelerator pedal assembly. Refer to ACC-3, "Exploded View".
3. Remove filter cover (1), and then remove air conditioner filter (2).



INSTALLATION

Installation is basically the reverse order of removal.

Replacement

INFOID:0000000001162028

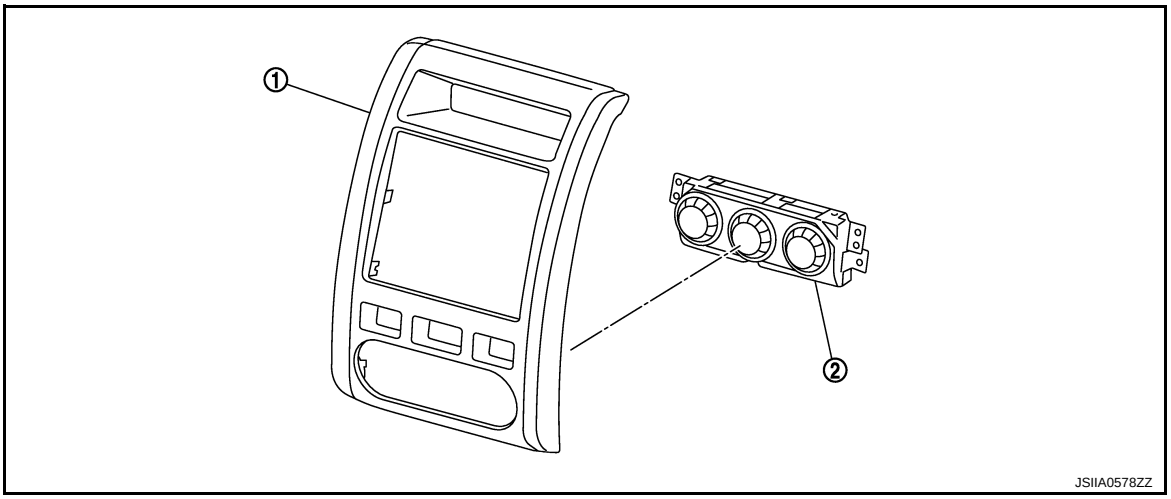
Replace air conditioner filter.
Refer to MA-7, "Periodic Maintenance".
Affix a caution label inside the glove box when replacing filter.

ON-VEHICLE REPAIR

CONTROLLER (AUTO AMP.)

Exploded View

INFOID:0000000001297550



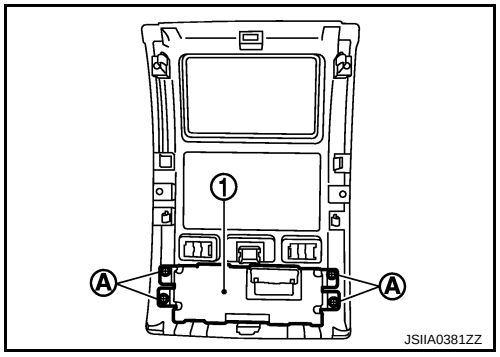
1. Cluster lid C
2. Controller

Removal and Installation

INFOID:0000000001162030

REMOVAL

1. Remove cluster lid C. Refer to IP-11, "Exploded View".
2. Remove mounting screws (A), and then remove controller (1).



INSTALLATION

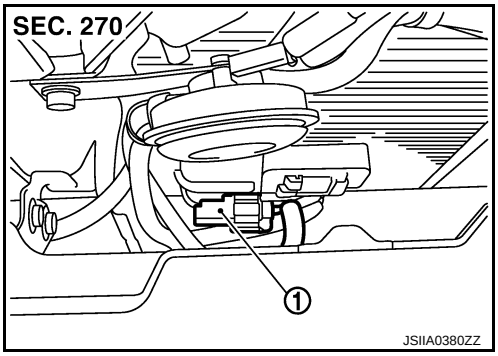
Installation is basically the reverse order of removal.

OAT SENSOR

Exploded View

INFOID:0000000001162033

1. OAT sensor

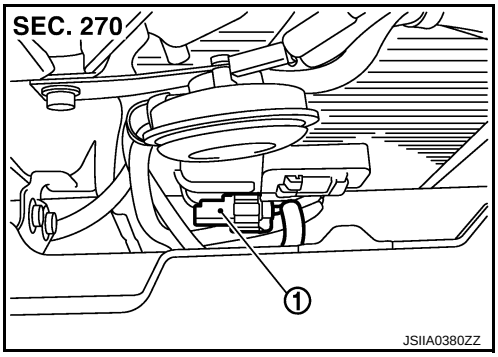


Removal and Installation

INFOID:0000000001162034

REMOVAL

1. Disconnect OAT sensor connector, and then remove OAT sensor (1).



INSTALLATION

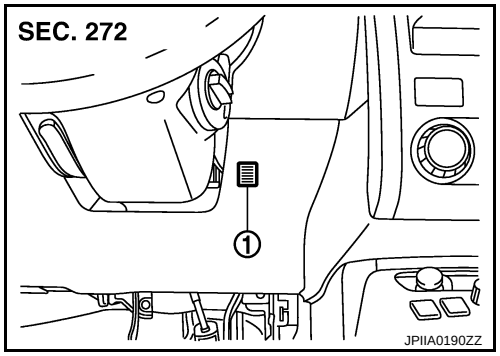
Installation is basically the reverse order of removal.

IN-VEHICLE SENSOR

Exploded View

INFOID:0000000001162035

1. In-vehicle sensor

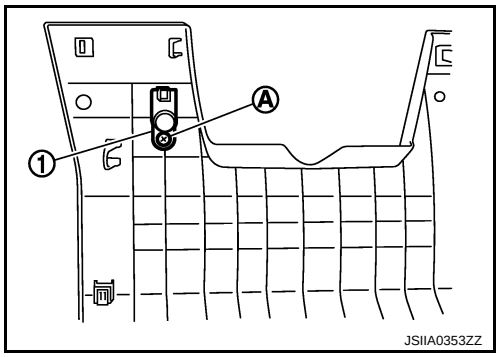


Removal and Installation

INFOID:0000000001162036

REMOVAL

1. Remove instrument driver lower panel. Refer to IP-11, "Exploded View".
2. Remove mounting screw (A), and then remove in-vehicle sensor (1).



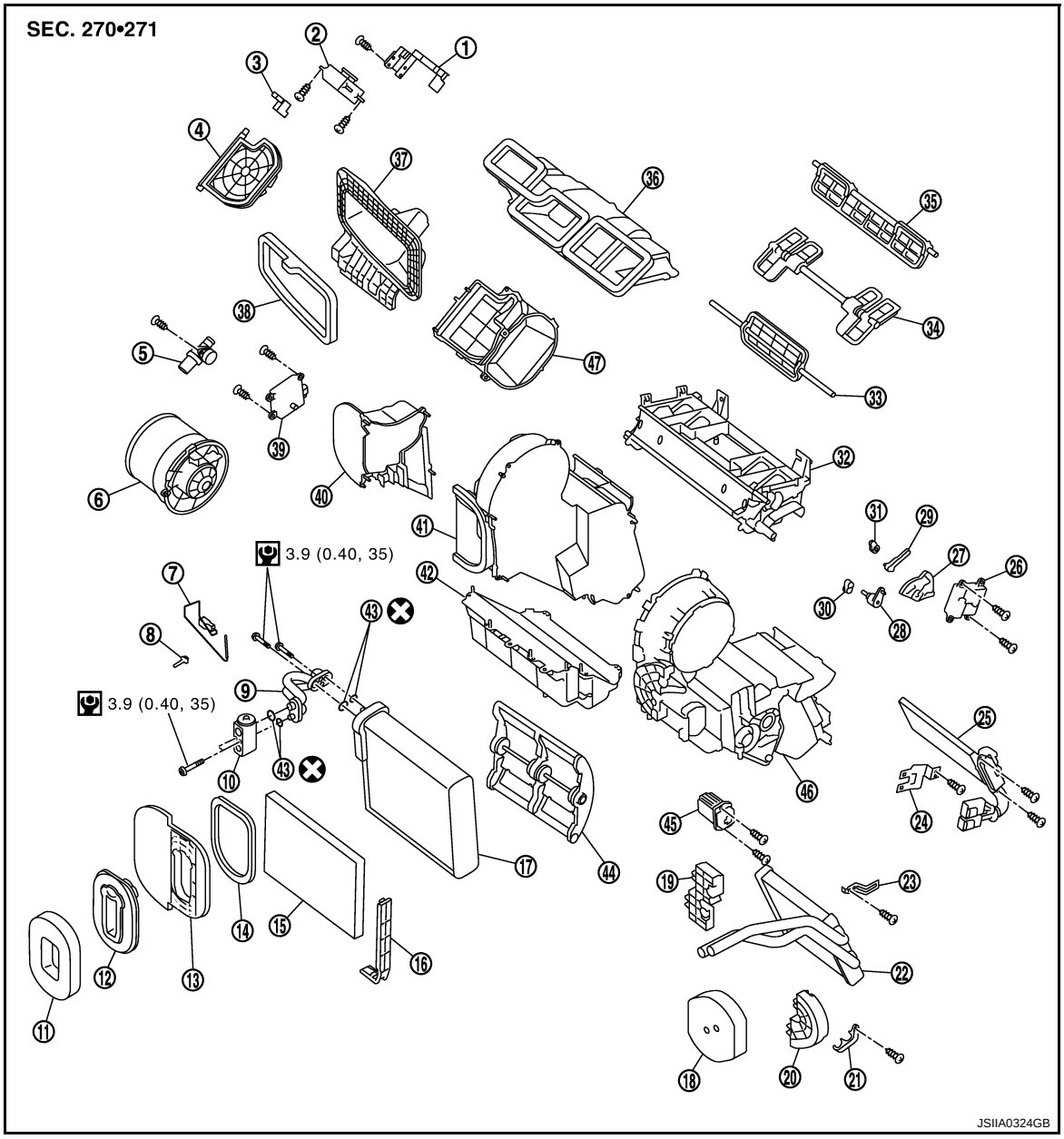
INSTALLATION

Installation is basically the reverse order of removal.

INTAKE SENSOR

Exploded View

INFOID:0000000001277866



1. Intake door motor bracket
2. Intake door motor
3. Intake door lever
4. Intake door
5. Aspirator
6. Blower motor
7. Intake sensor
8. Intake sensor bracket
9. Pipe assembly
10. Expansion valve
11. Expansion valve packing
12. Expansion valve grommet
13. Grommet adaptor
14. Adaptor packing
15. Air conditioner filter
16. Air conditioner filter cover
17. Evaporator
18. Heater packing
19. Heater adapter
20. Heater pipe flange
21. Heater pipe clamp
22. Heater core
23. Case bracket
24. PTC harness bracket (M9R)
25. PTC heater (M9R)
26. Mode door motor
27. Main link
28. Ventilator door lever
29. Foot door link
30. Defroster door lever
31. Foot door lever
32. Distributor module case
33. Defroster door
34. Ventilator door
35. Foot door
36. Adaptor duct

37. Attachment panel
38. Attachment panel packing
39. Air mix door motor
40. Side case
41. Main case RH
42. Lower case
43. O-ring
44. Air mix door (Slide door)
45. Fan control amp.
46. Main case LH
47. Intake box case

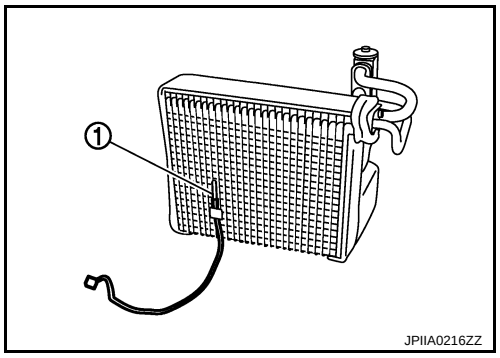
Refer to GI-4, "Components" for symbols in the figure.

Removal and Installation

INFOID:0000000001162040

REMOVAL

1. Remove evaporator with expansion valve attached. Refer to HA-69, "Exploded View".
   CAUTION:
   Cap or wrap the joint of the A/C piping and expansion valve with suitable material such as vinyl tape to avoid the entry of air.
2. Remove intake sensor (1) from evaporator.



INSTALLATION

Installation is basically the reverse order of removal.

CAUTION:

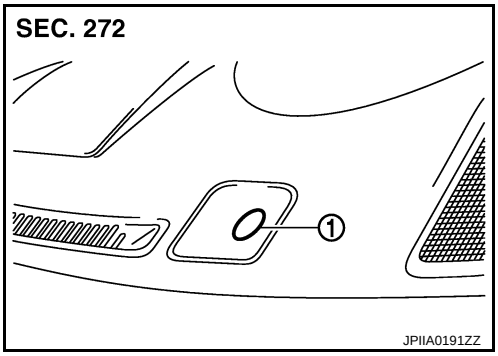
- **Replace O-rings with new ones. Then apply compressor oil to them when installing.**
- **Mark the mounting position of intake sensor bracket prior to removal so that the reinstalled sensor can be located in the same position.**
- **Check for leakages when recharging refrigerant.**

SUNLOAD SENSOR

Exploded View

INFOID:0000000001162037

1. Sunload sensor

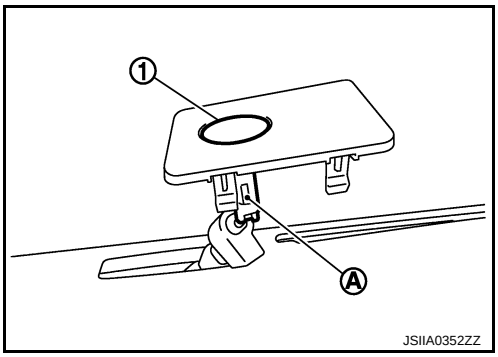


Removal and Installation

INFOID:0000000001162038

REMOVAL

1. Remove instrument upper panel. Refer to IP-11, "Exploded View".
2. Disconnect sunload sensor connector (A), and then remove sunload sensor (1).



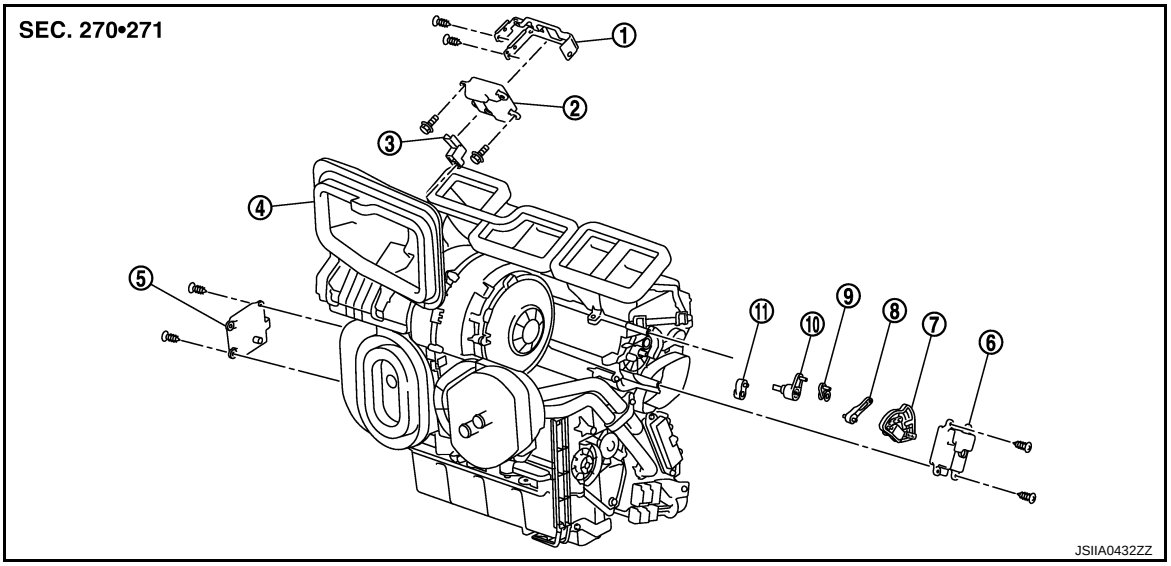
INSTALLATION

Installation is basically the reverse order of removal.

MODE DOOR MOTOR

Exploded View

INFOID:0000000001306482



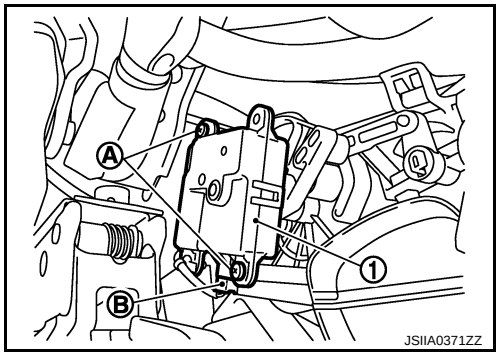
1. Intake door motor bracket
2. Intake door motor
3. Intake door lever
4. A/C unit assembly
5. Air mix door motor
6. Mode door motor
7. Main link
8. Foot door link
9. Foot door lever
10. Ventilator door lever
11. Defroster door lever

Removal and Installation

INFOID:0000000001162050

REMOVAL

1. Remove foot duct LH. Refer to VTL-43, "FOOT DUCTS : Exploded View".
2. Remove mounting screws (A), and then remove mode door motor (1).
3. Disconnect mode door motor connector (B).



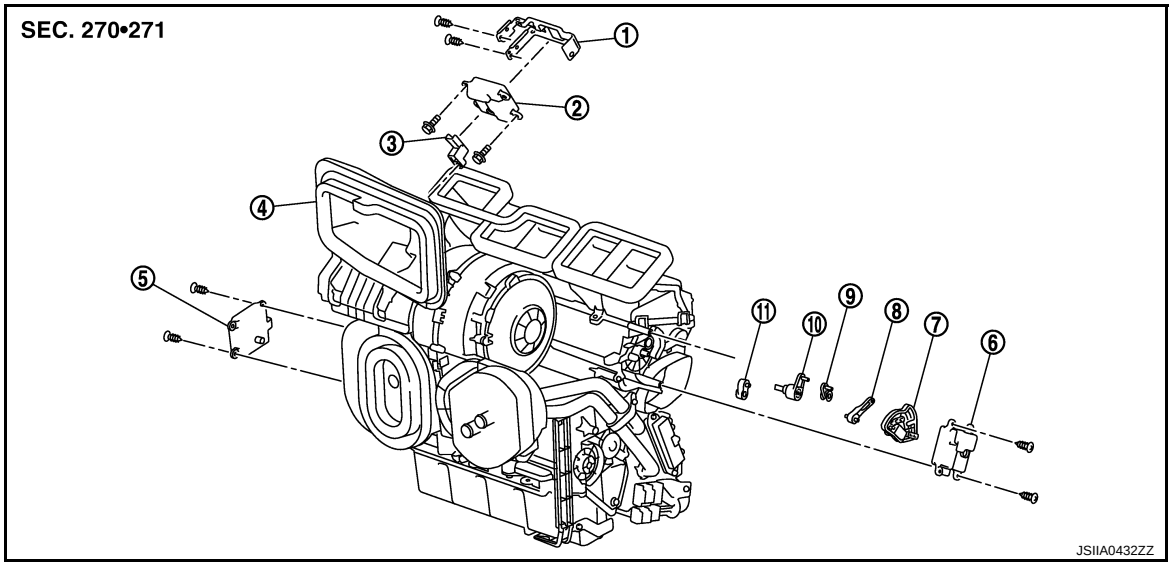
INSTALLATION

Installation is basically the reverse order of removal.

AIR MIX DOOR MOTOR

Exploded View

INFOID:0000000001306483



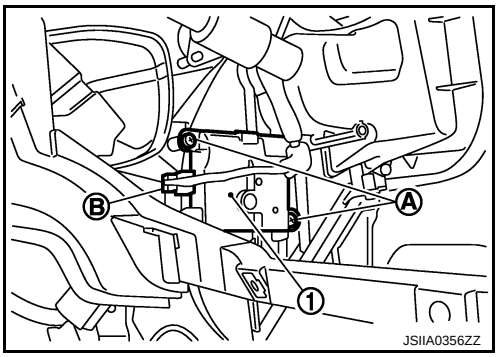
1. Intake door motor bracket
2. Intake door motor
3. Intake door lever
4. A/C unit assembly
5. Air mix door motor
6. Mode door motor
7. Main link
8. Foot door link
9. Foot door lever
10. Ventilator door lever
11. Defroster door lever

Removal and Installation

INFOID:0000000001162052

REMOVAL

1. Set the temperature at 16°C. Then disconnect the battery cable from the negative terminal.
2. Remove foot duct RH. Refer to VTL-43, "FOOT DUCTS : Exploded View".
3. Remove mounting screws (A), and then remove air mix door motor (1).
4. Disconnect air mix door motor connector (B).



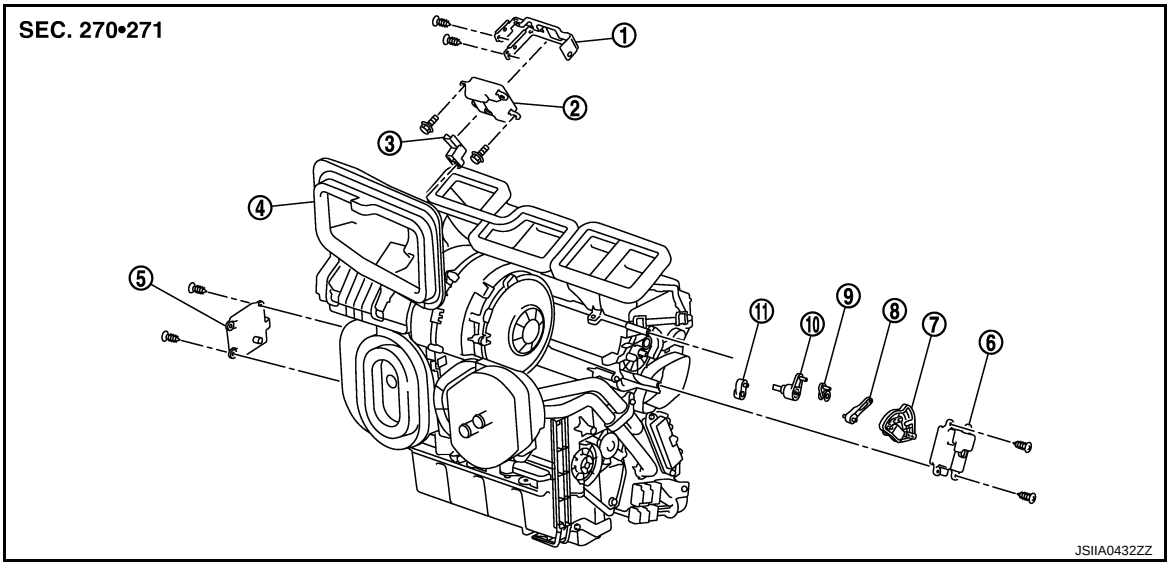
INSTALLATION

Installation is basically the reverse order of removal.

INTAKE DOOR MOTOR

Exploded View

INFOID:0000000001306484



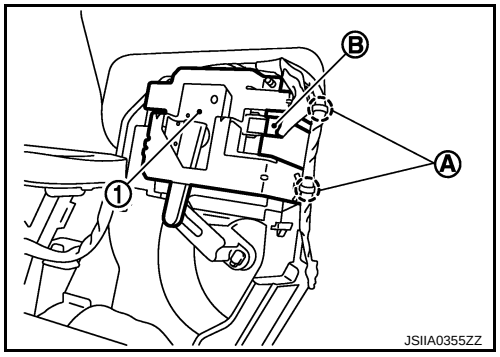
1. Intake door motor bracket
2. Intake door motor
3. Intake door lever
4. A/C unit assembly
5. Air mix door motor
6. Mode door motor
7. Main link
8. Foot door link
9. Foot door lever
10. Ventilator door lever
11. Defroster door lever

Removal and Installation

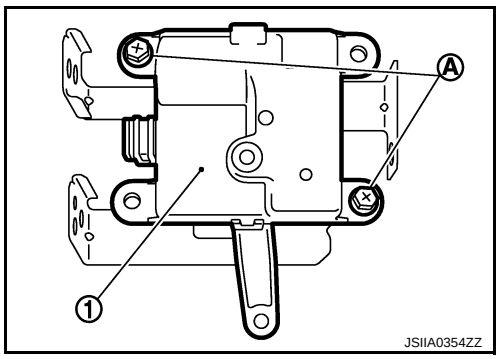
INFOID:0000000001162046

REMOVAL

1. Remove instrument panel. Refer to IP-11, "Exploded View".
2. Remove mounting screws (A), and then remove intake door motor (1) with intake door motor bracket attached.
3. Disconnect intake door motor connector (B).



4. Remove mounting screws (A), and then remove intake door motor (1) from intake door motor bracket.



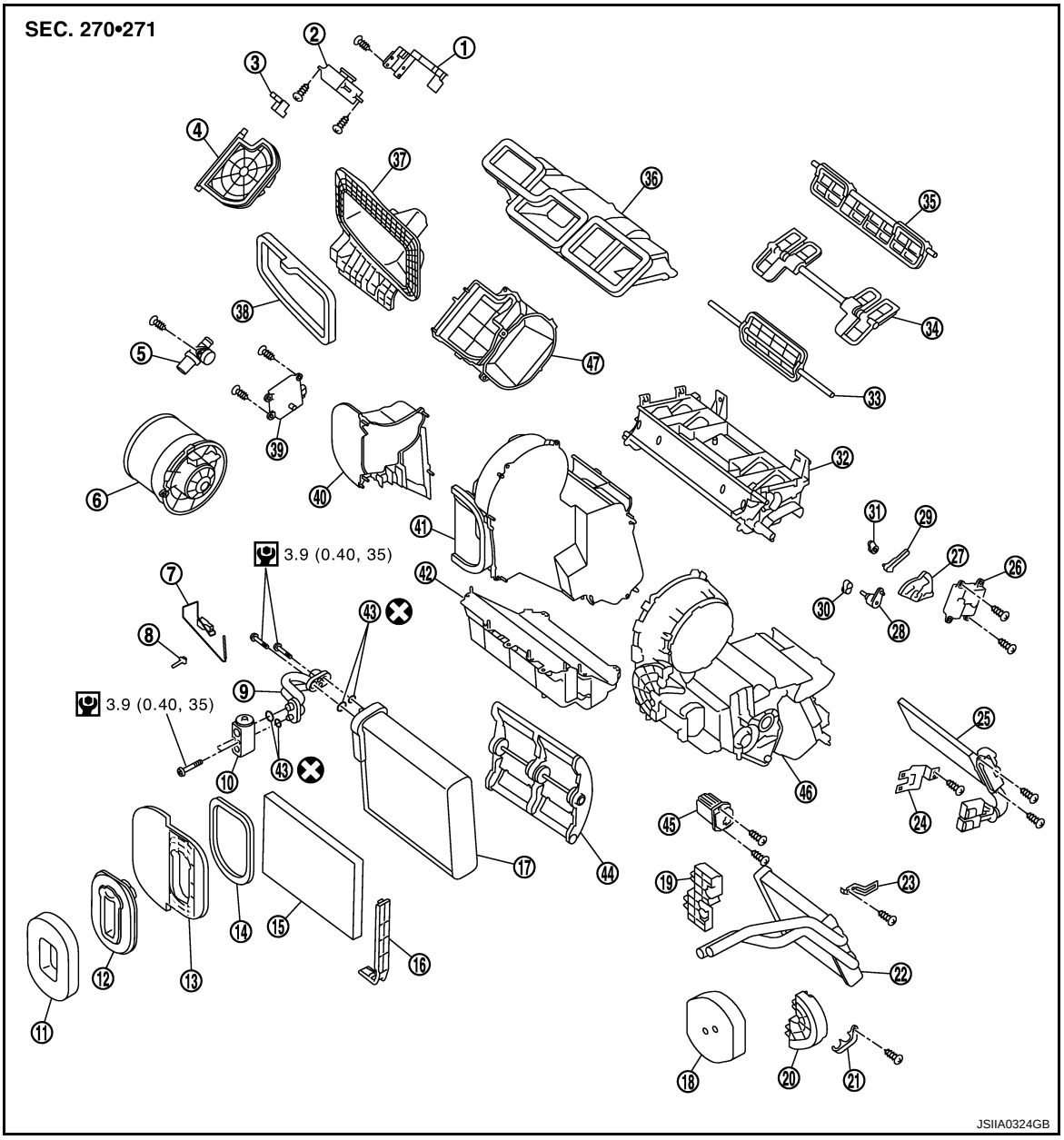
INSTALLATION

Installation is basically the reverse order of removal.

A/C UNIT ASSEMBLY

Exploded View

INFOID:0000000001162047



1. Intake door motor bracket
2. Intake door motor
3. Intake door lever
4. Intake door
5. Aspirator
6. Blower motor
7. Intake sensor
8. Intake sensor bracket
9. Pipe assembly
10. Expansion valve
11. Expansion valve packing
12. Expansion valve grommet
13. Grommet adaptor
14. Adaptor packing
15. Air conditioner filter
16. Air conditioner filter cover
17. Evaporator
18. Heater packing
19. Heater adapter
20. Heater pipe flange
21. Heater pipe clamp
22. Heater core
23. Case bracket
24. PTC harness bracket (M9R)
25. PTC heater (M9R)
26. Mode door motor
27. Main link
28. Ventilator door lever
29. Foot door link
30. Defroster door lever
31. Foot door lever
32. Distributor module case
33. Defroster door
34. Ventilator door
35. Foot door
36. Adaptor duct

37. Attachment panel
38. Attachment panel packing
39. Air mix door motor
40. Side case
41. Main case RH
42. Lower case
43. O-ring
44. Air mix door (Slide door)
45. Fan control amp.
46. Main case LH
47. Intake box case

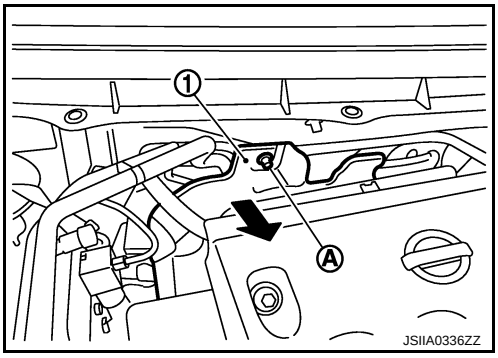
Refer to GI-4, "Components" for symbols in the figure.

Removal and Installation

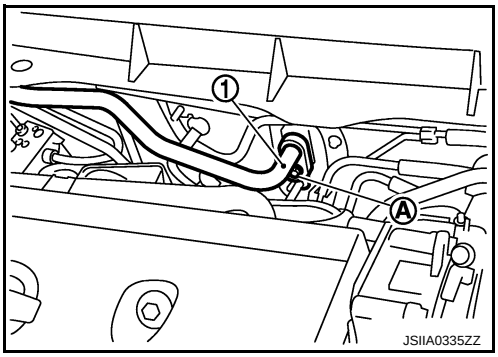
INFOID:0000000001162048

REMOVAL

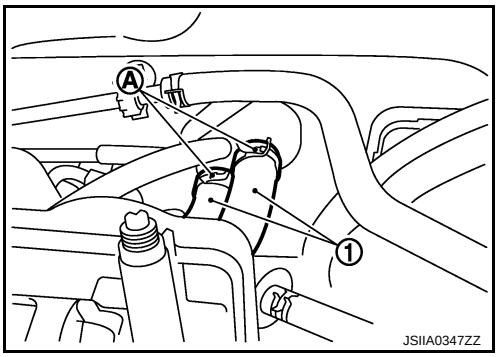
1. Use a refrigerant collecting equipment (for HFC-134a) to discharge the refrigerant.
2. Drain engine coolant from cooling system. Refer to CO-10, "Draining" (MR20DE), CO-41, "Draining" (QR25DE) or CO-68, "Draining" (M9R).
3. Remove engine cover (M9R). Refer to EM-265, "Exploded View".
4. Remove cowl top cover (QR25DE). Refer to EXT-19, "Exploded View".
5. Remove mounting nut (A), and lower dash insulator (1) a position without the hindrance for work (as shown in the figure).



6. Remove mounting bolt (A) from low-pressure flexible hose (1) (MR20DE/QR25DE) or low-pressure pipe (1) (M9R).
CAUTION:
Cap or wrap the joint of the A/C piping and expansion valve with suitable material such as vinyl tape to avoid the entry of air.

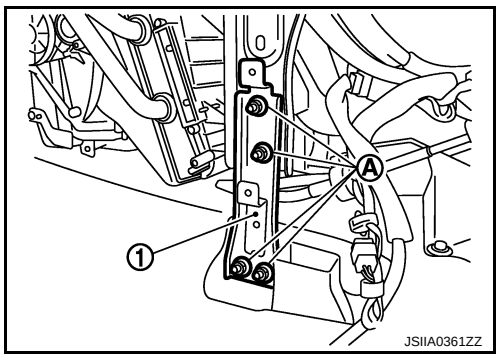


7. Remove clamps (A), and then disconnect heater hoses (1).

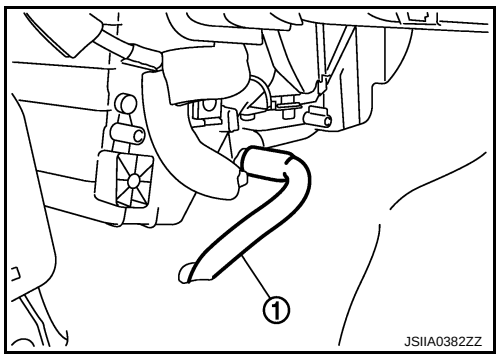


8. Remove instrument panel. Refer to IP-11, "Exploded View".

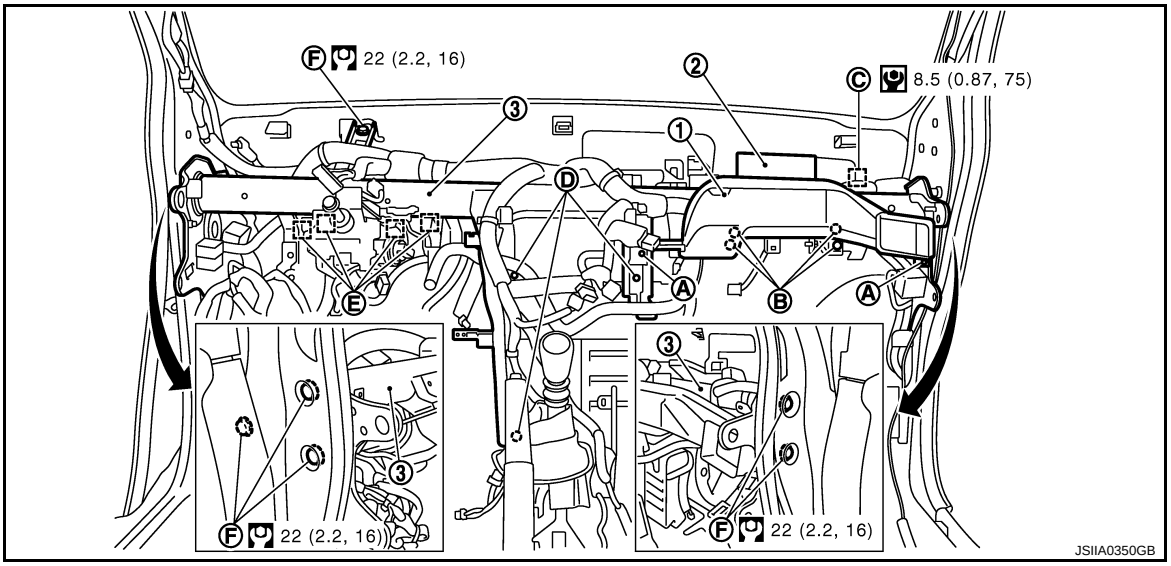
9. Remove mounting nuts (A), and then remove instrument stay (1).



10. Disconnect drain hose (1).



11. Remove mounting screws (A), and then remove side ventilator duct RH (1).



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

12. Remove mounting screws (B), and then remove BCM (2) with bracket attached.
13. Remove mounting bolt (C) from steering member (3).
14. Remove clips of vehicle harness from steering member.
15. Remove mounting screws (D) from A/C unit assembly.
16. Remove steering column mounting nuts (E). Refer to ST-10, "Exploded View".
17. Remove steering member mounting bolts (F), and then remove steering member.
18. Remove A/C unit assembly.

INSTALLATION

Installation is basically the reverse order of removal.

CAUTION:

- **Replace O-rings with new ones. Then apply compressor oil to them when installing.**

- **Check for leakages when recharging refrigerant.**

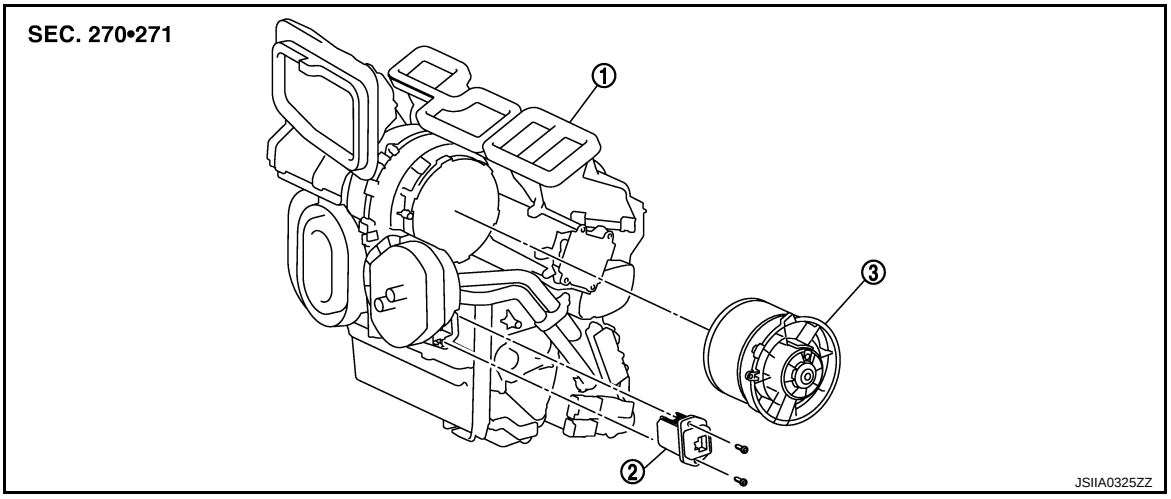
NOTE:

- Refer to CO-11, "Refilling" (MR20DE), CO-42, "Refilling" (QR25DE) or CO-69, "Refilling" (M9R) when filling radiator with engine coolant.
- Recharge the refrigerant.

BLOWER MOTOR

Exploded View

INFOID:0000000001162043



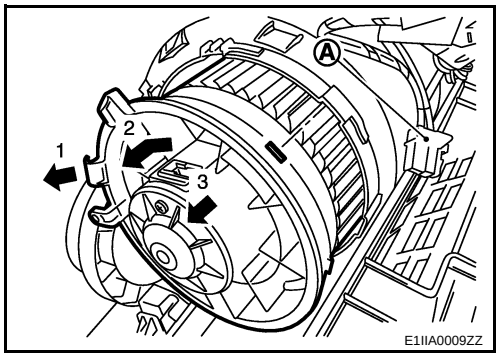
1. A/C unit assembly
2. Fan control amp.
3. Blower motor

Removal and Installation

INFOID:0000000001162044

REMOVAL

1. Remove A/C unit assembly. Refer to VTL-29, "Exploded View".
2. Disconnect blower motor connector (A).
3. Press flange holding hook (1). Then turn blower motor counter-clockwise (2).
4. Pull outside (3) and remove blower motor.
   CAUTION:
   The balance is adjusted when blower fan and blower motor are assembled, so do not replace the individual parts.



INSTALLATION

Installation is basically the reverse order of removal.

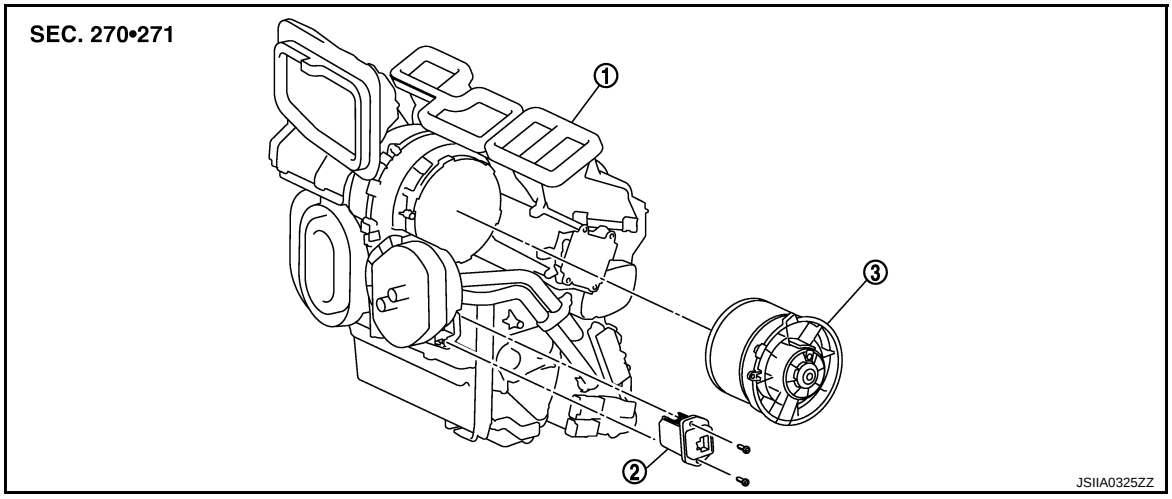
CAUTION:

Install Correctly blower motor flange holding hook in A/C unit assembly.

FAN CONTROL AMPLIFIER

Exploded View

INFOID:0000000001277862



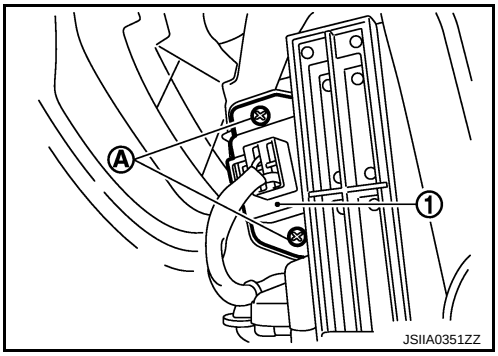
1. A/C unit assembly
2. Fan control amp.
3. Blower motor

Removal and Installation

INFOID:0000000001306474

REMOVAL

1. Remove instrument driver lower panel. Refer to IP-11, "Exploded View".
2. Remove accelerator pedal assembly. Refer to ACC-3, "Exploded View".
3. Disconnect fan control amp. connector.
4. Remove mounting screws (A), and then remove fan control amp. (1).



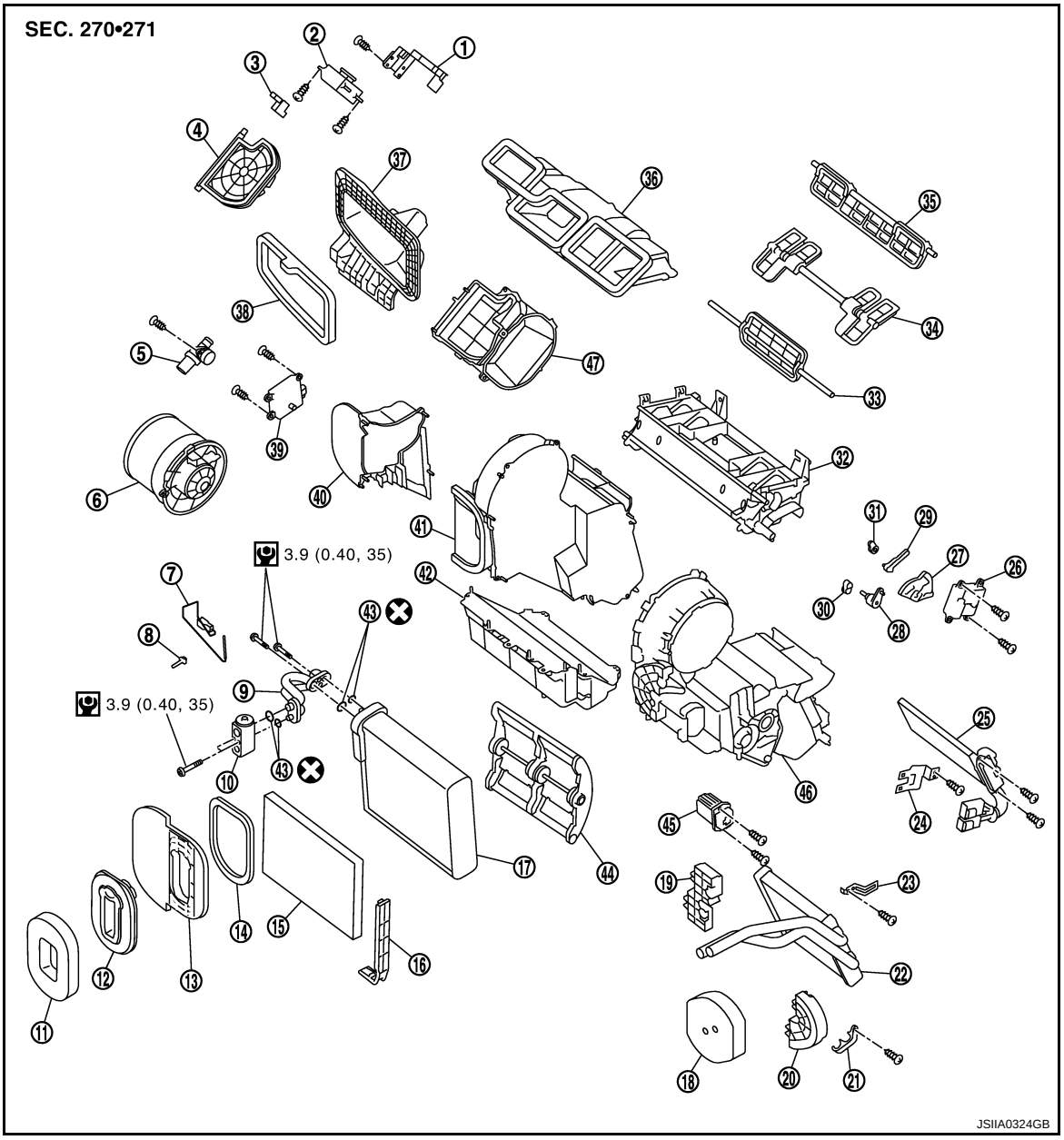
INSTALLATION

Installation is basically the reverse order of removal.

HEATER CORE

Exploded View

INFOID:0000000001277865



1. Intake door motor bracket
2. Intake door motor
3. Intake door lever
4. Intake door
5. Aspirator
6. Blower motor
7. Intake sensor
8. Intake sensor bracket
9. Pipe assembly
10. Expansion valve
11. Expansion valve packing
12. Expansion valve grommet
13. Grommet adaptor
14. Adaptor packing
15. Air conditioner filter
16. Air conditioner filter cover
17. Evaporator
18. Heater packing
19. Heater adapter
20. Heater pipe flange
21. Heater pipe clamp
22. Heater core
23. Case bracket
24. PTC harness bracket (M9R)
25. PTC heater (M9R)
26. Mode door motor
27. Main link
28. Ventilator door lever
29. Foot door link
30. Defroster door lever
31. Foot door lever
32. Distributor module case
33. Defroster door
34. Ventilator door
35. Foot door
36. Adaptor duct

37. Attachment panel
38. Attachment panel packing
39. Air mix door motor
40. Side case
41. Main case RH
42. Lower case
43. O-ring
44. Air mix door (Slide door)
45. Fan control amp.
46. Main case LH
47. Intake box case

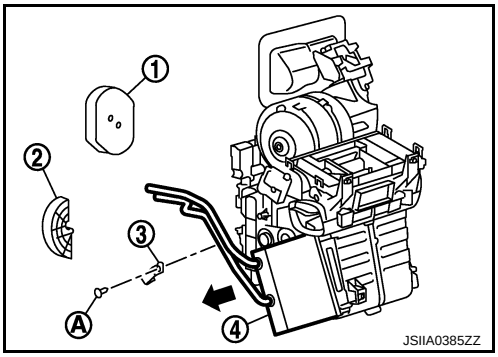
Refer to GI-4, "Components" for symbols in the figure.

Removal and Installation

INFOID:0000000001162054

REMOVAL

1. Remove A/C unit assembly. Refer to VTL-29, "Exploded View".
2. Remove PTC harness bracket (M9R). Refer to VTL-37, "M9R : Exploded View".
3. Remove heater packing (1).
4. Remove heater pipe flange (2).
5. Remove mounting screws (A), and then remove heater pipe clamp (3).
6. Slide heater core (4) to leftward (as shown in the figure).



INSTALLATION

Installation is basically the reverse order of removal.

NOTE:

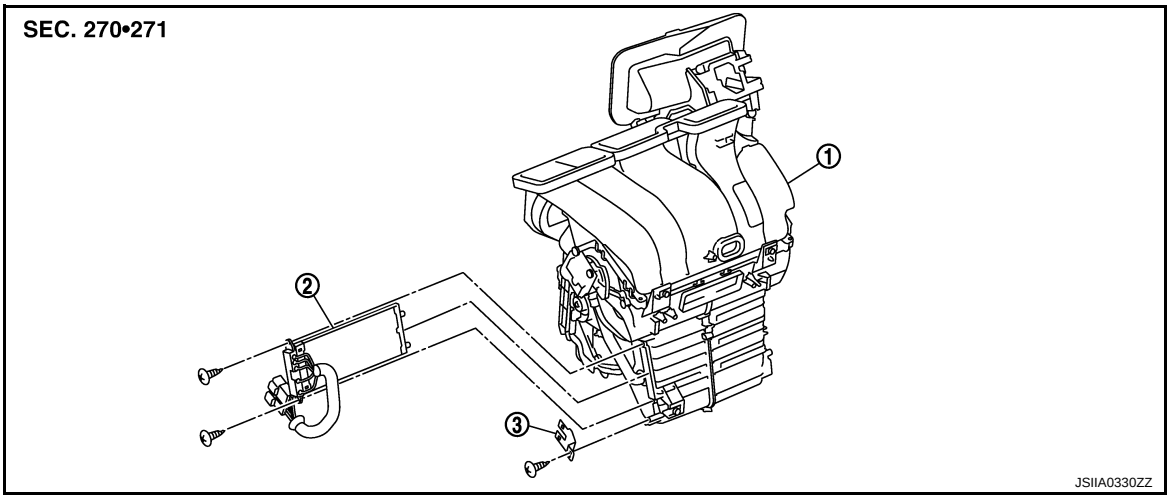
Refer to CO-11, "Refilling" (MR20DE), CO-42, "Refilling" (QR25DE) or CO-69, "Refilling" (M9R) when filling radiator with engine coolant.

PTC HEATER

M9R

M9R : Exploded View

INFOID:0000000001162041



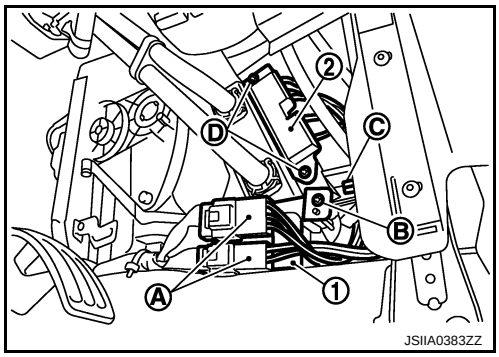
1. A/C unit assembly
2. PTC heater
3. PTC harness bracket

M9R : Removal and Installation

INFOID:0000000001162042

REMOVAL

1. Remove instrument lower cover LH. Refer to IP-11, "Exploded View".
2. Disconnect PTC heater connectors (A).
3. Remove mounting screw (B), and then remove PTC harness bracket (1).
4. Remove PTC heater connectors from PTC harness bracket.
5. Remove clip (C).
6. Remove mounting screws (D), and then remove PTC heater (2).



INSTALLATION

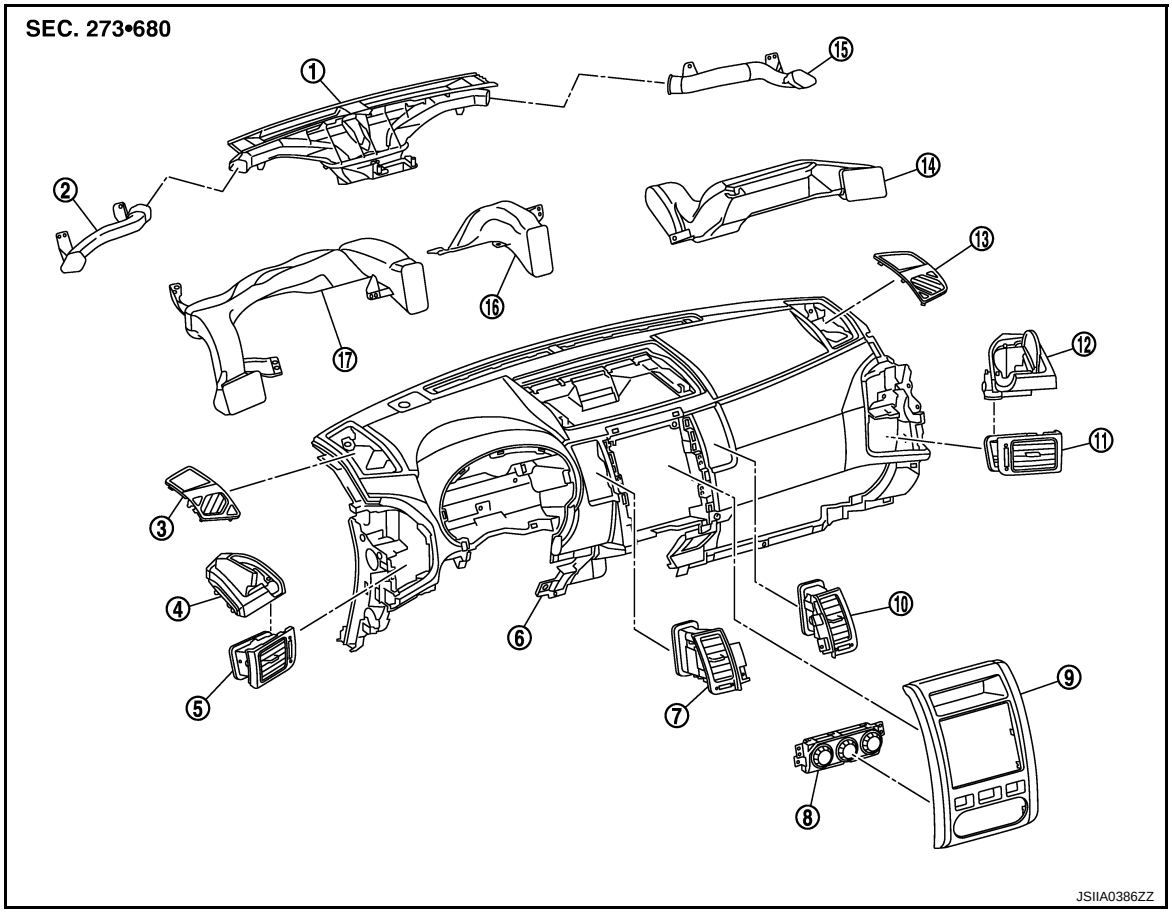
Installation is basically the reverse order of removal.

DUCTS AND GRILLES

CENTER VENTILATOR GRILLES

CENTER VENTILATOR GRILLES : Exploded View

INFOID:0000000001162055



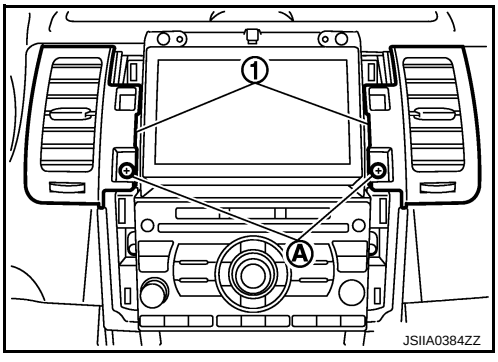
1. Defroster nozzle
2. Side defroster nozzle LH
3. Speaker grille LH
4. Cup holder assembly LH
5. Side ventilator grille LH
6. Instrument panel
7. Center ventilator grille LH
8. Controller
9. Cluster lid C
10. Center ventilator grille RH
11. Side ventilator grille RH
12. Cup holder assembly RH
13. Speaker grille RH
14. Side ventilator duct RH
15. Side defroster nozzle RH
16. Center ventilator duct
17. Side ventilator duct LH

CENTER VENTILATOR GRILLES : Removal and Installation

INFOID:0000000001162056

REMOVAL

1. Remove cluster lid C. Refer to IP-11, "Exploded View".
2. Remove screws (A), and then remove center ventilator grilles (1).



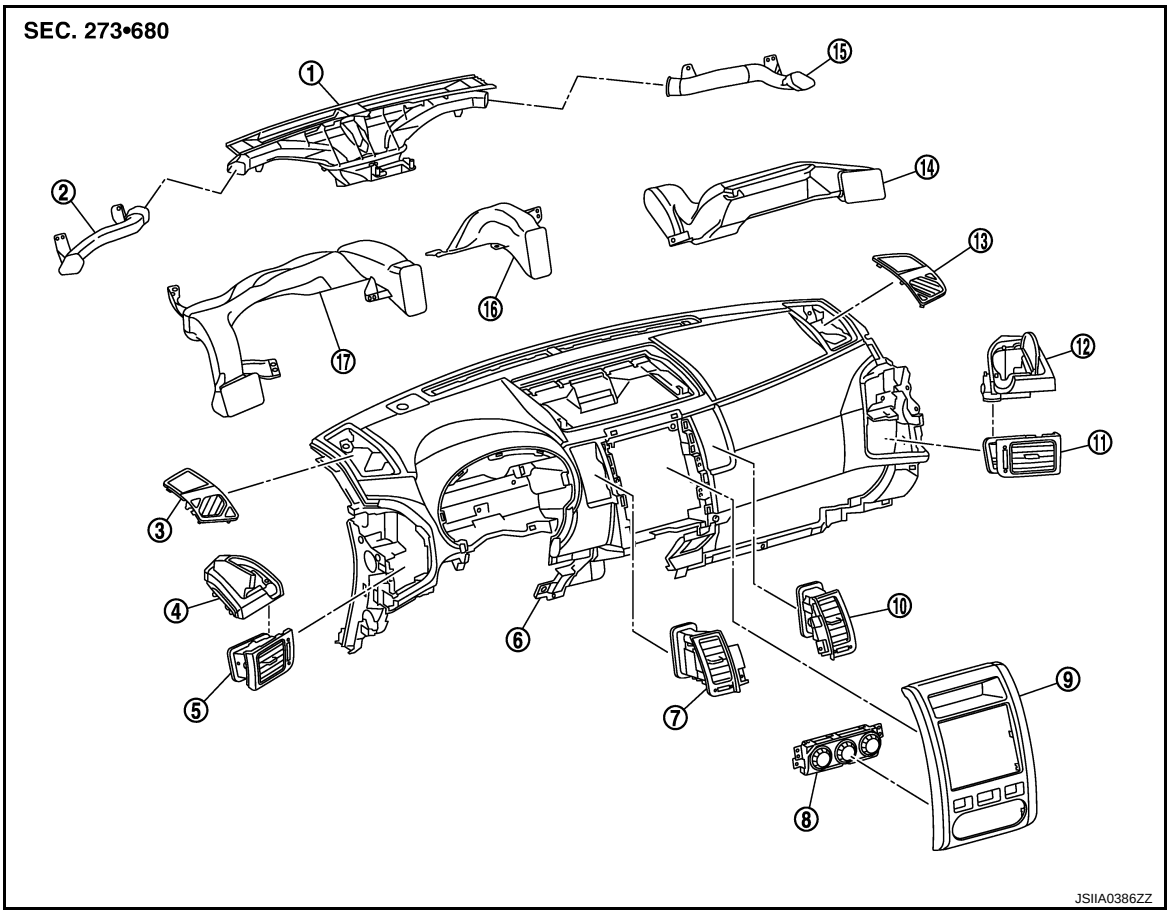
INSTALLATION

Installation is basically the reverse order of removal.

SIDE VENTILATOR GRILLES

SIDE VENTILATOR GRILLES : Exploded View

INFOID:0000000001298142



1. Defroster nozzle
2. Side defroster nozzle LH
3. Speaker grille LH
4. Cup holder assembly LH
5. Side ventilator grille LH
6. Instrument panel
7. Center ventilator grille LH
8. Controller
9. Cluster lid C
10. Center ventilator grille RH
11. Side ventilator grille RH
12. Cup holder assembly RH
13. Speaker grille RH
14. Side ventilator duct RH
15. Side defroster nozzle RH
16. Center ventilator duct
17. Side ventilator duct LH

SIDE VENTILATOR GRILLES : Removal and Installation

INFOID:0000000001162058

REMOVAL

1. Remove cup holder assembly. Refer to IP-11, "Exploded View".
2. Remove side ventilator grilles.

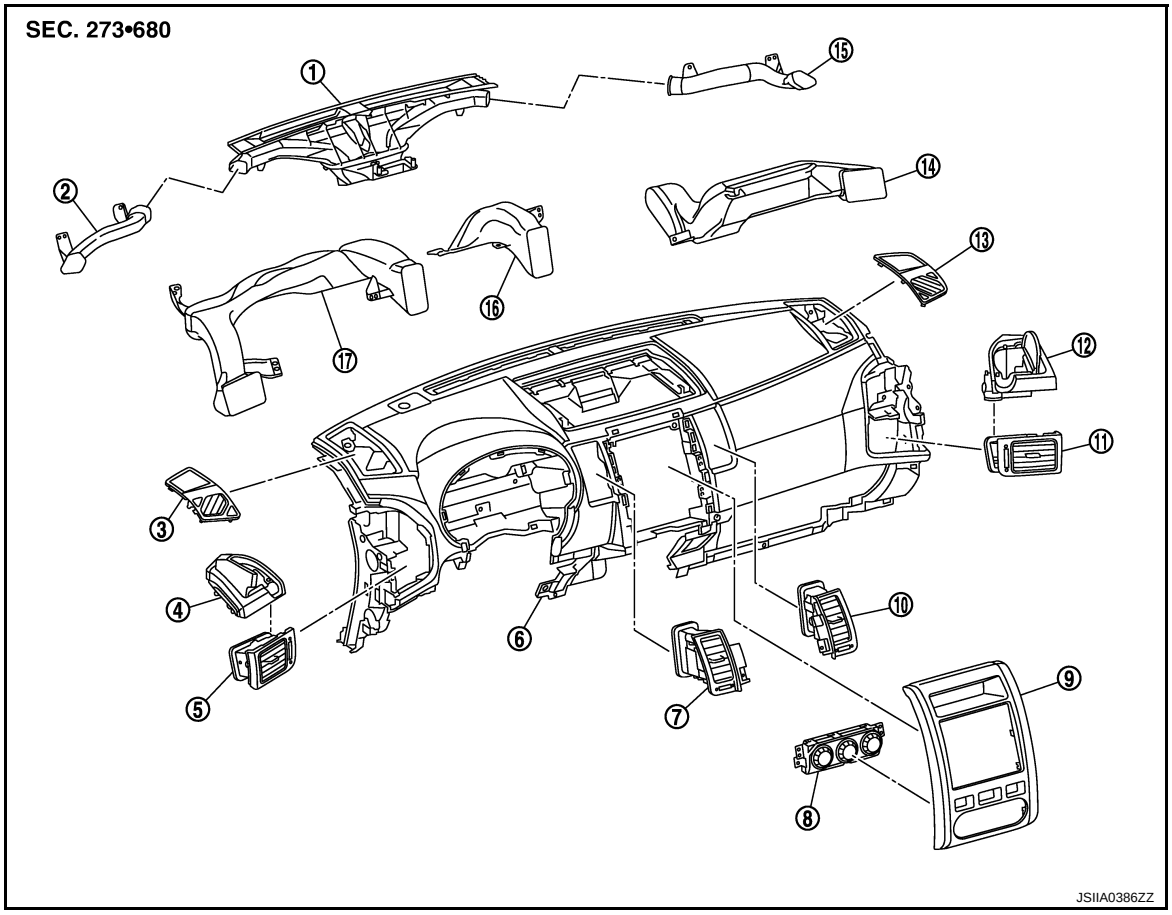
INSTALLATION

Installation is basically the reverse order of removal.

VENTILATOR DUCTS

VENTILATOR DUCTS : Exploded View

INFOID:0000000001298143



1. Defroster nozzle
2. Side defroster nozzle LH
3. Speaker grille LH
4. Cup holder assembly LH
5. Side ventilator grille LH
6. Instrument panel
7. Center ventilator grille LH
8. Controller
9. Cluster lid C
10. Center ventilator grille RH
11. Side ventilator grille RH
12. Cup holder assembly RH
13. Speaker grille RH
14. Side ventilator duct RH
15. Side defroster nozzle RH
16. Center ventilator duct
17. Side ventilator duct LH

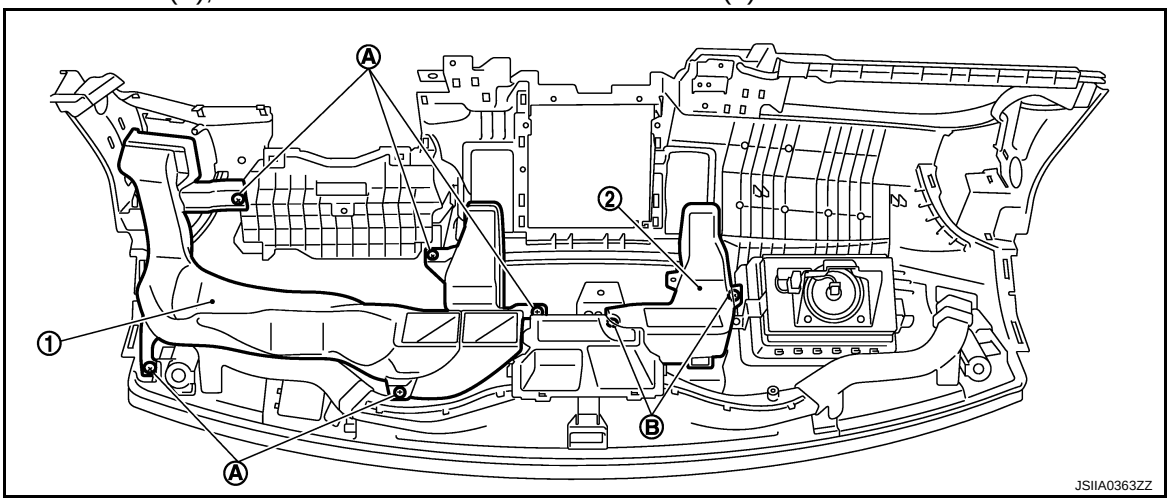
VENTILATOR DUCTS : Removal and Installation

INFOID:0000000001181398

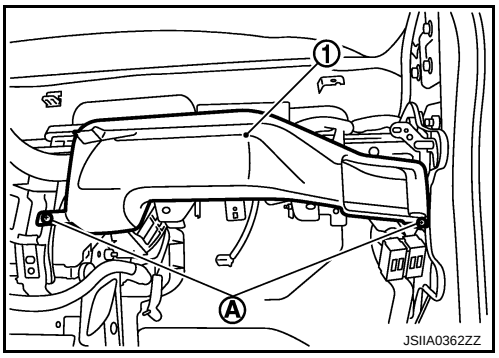
REMOVAL

1. Remove instrument panel. Refer to IP-11, "Exploded View".

2. Remove screws (A), and then remove side ventilator duct LH (1).



3. Remove screws (B), and then remove center ventilator duct (2).
4. Remove screws (A), and then remove side ventilator duct RH (1).



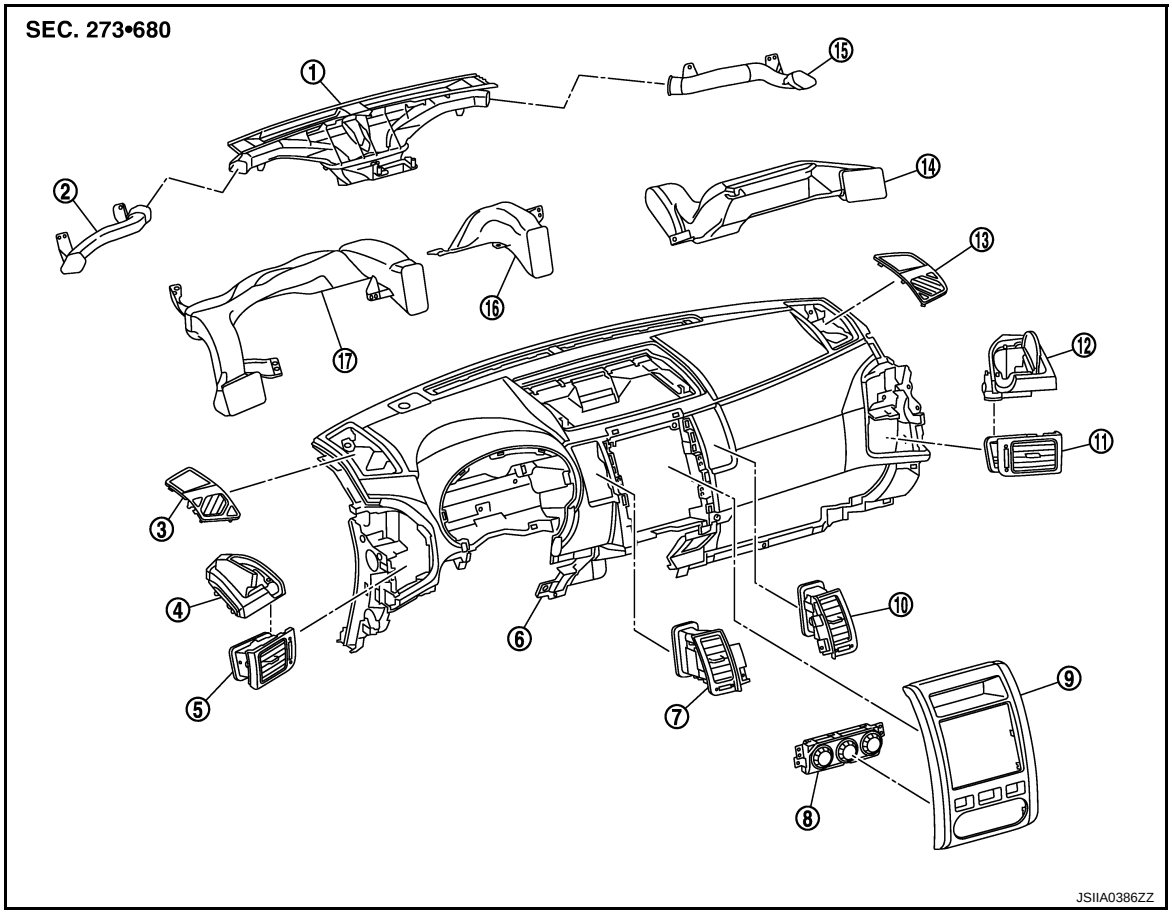
INSTALLATION

Installation is basically the reverse order of removal.

SIDE DEFROSTER NOZZLES

SIDE DEFROSTER NOZZLES : Exploded View

INFOID:0000000001298146



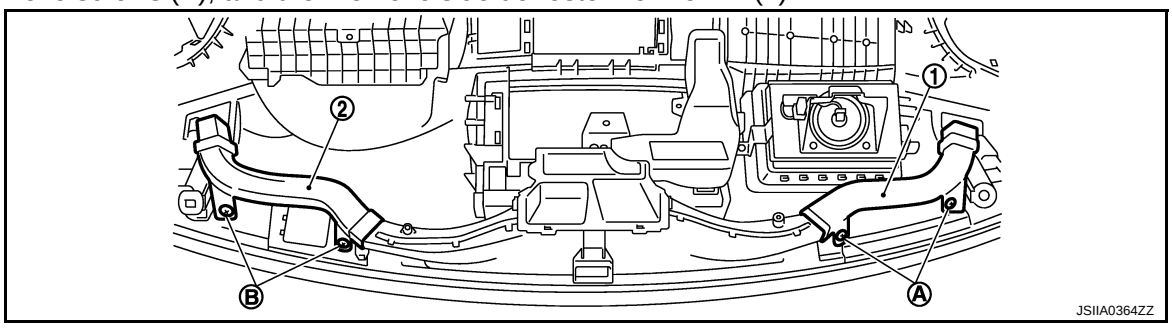
1. Defroster nozzle
2. Side defroster nozzle LH
3. Speaker grille LH
4. Cup holder assembly LH
5. Side ventilator grille LH
6. Instrument panel
7. Center ventilator grille LH
8. Controller
9. Cluster lid C
10. Center ventilator grille RH
11. Side ventilator grille RH
12. Cup holder assembly RH
13. Speaker grille RH
14. Side ventilator duct RH
15. Side defroster nozzle RH
16. Center ventilator duct
17. Side ventilator duct LH

SIDE DEFROSTER NOZZLES : Removal and Installation

INFOID:0000000001162062

REMOVAL

1. Remove side ventilator duct LH. Refer to VTL-40, "VENTILATOR DUCTS : Exploded View".
2. Remove screws (A), and then remove side defroster nozzle RH (1).



3. Remove screws (B), and then remove side defroster nozzle LH (2).

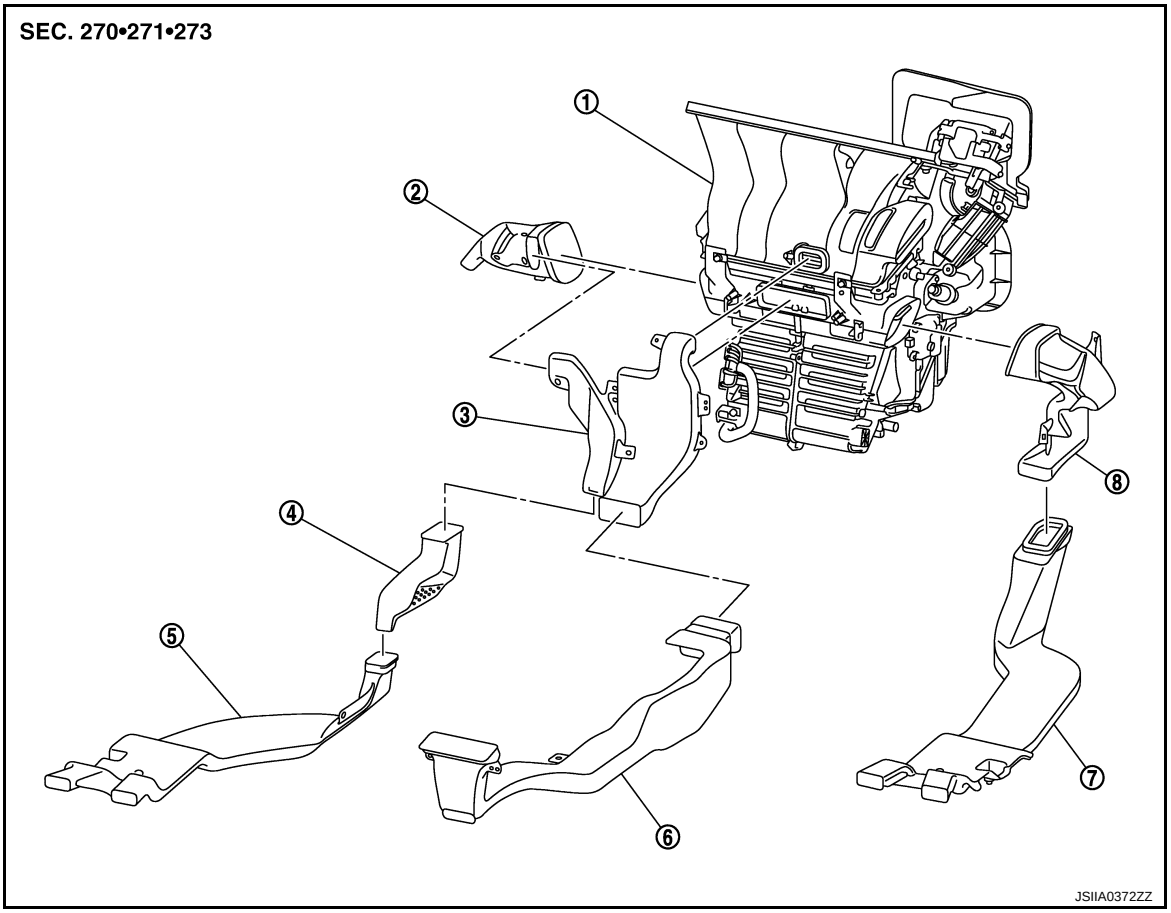
INSTALLATION

Installation is basically the reverse order of removal.

FOOT DUCTS

FOOT DUCTS : Exploded View

INFOID:0000000001162069



1. A/C unit assembly
2. Foot duct LH
3. Rear floor duct 1
4. Front floor duct 1
5. Front floor duct 2 LH
6. Rear floor duct 2
7. Front floor duct 2 RH
8. Foot duct RH

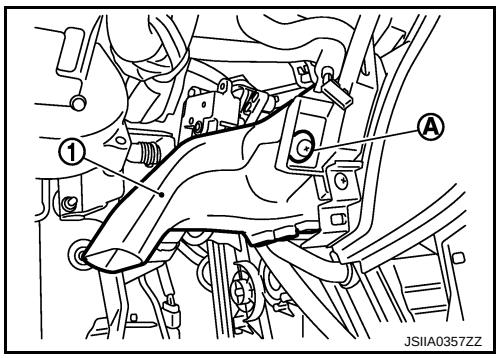
FOOT DUCTS : Removal and Installation

INFOID:0000000001162070

REMOVAL

Driver side

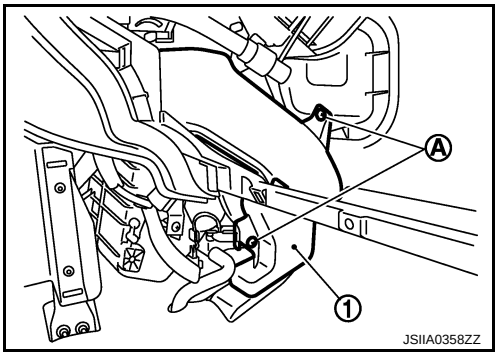
1. Remove instrument driver lower panel. Refer to IP-11, "Exploded View".
2. Remove clip (A), and then remove foot duct LH (1).



Passenger side

1. Remove glove box cover assembly. Refer to IP-11, "Exploded View".

2. Remove mounting screws (A), and then remove foot duct RH (1).



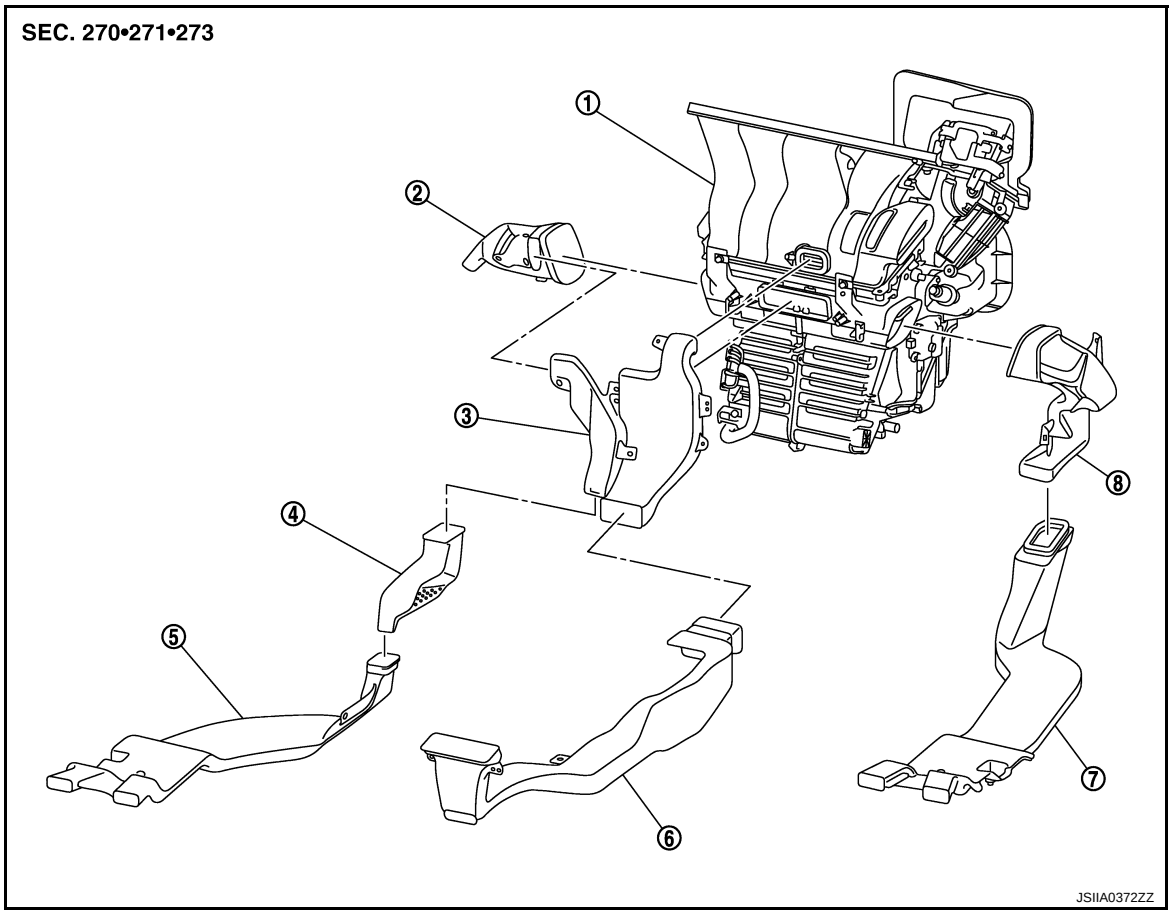
INSTALLATION

Installation is basically the reverse order of removal.

FRONT FLOOR DUCT 1

FRONT FLOOR DUCT 1 : Exploded View

INFOID:0000000001277870



1. A/C unit assembly
2. Foot duct LH
3. Rear floor duct 1
4. Front floor duct 1
5. Front floor duct 2 LH
6. Rear floor duct 2
7. Front floor duct 2 RH
8. Foot duct RH

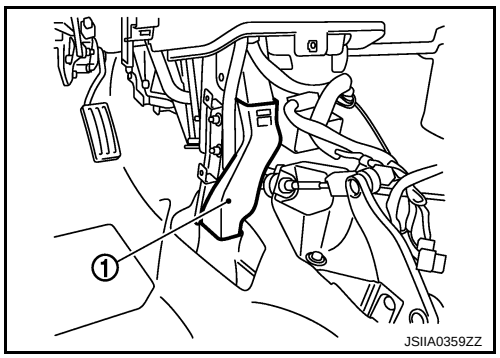
FRONT FLOOR DUCT 1 : Removal and Installation

INFOID:0000000001162066

REMOVAL

1. Remove instrument lower cover LH. Refer to IP-21, "Exploded View".
2. Remove center console assembly. Refer to IP-21, "Exploded View".

3. Remove front floor duct 1 (1).



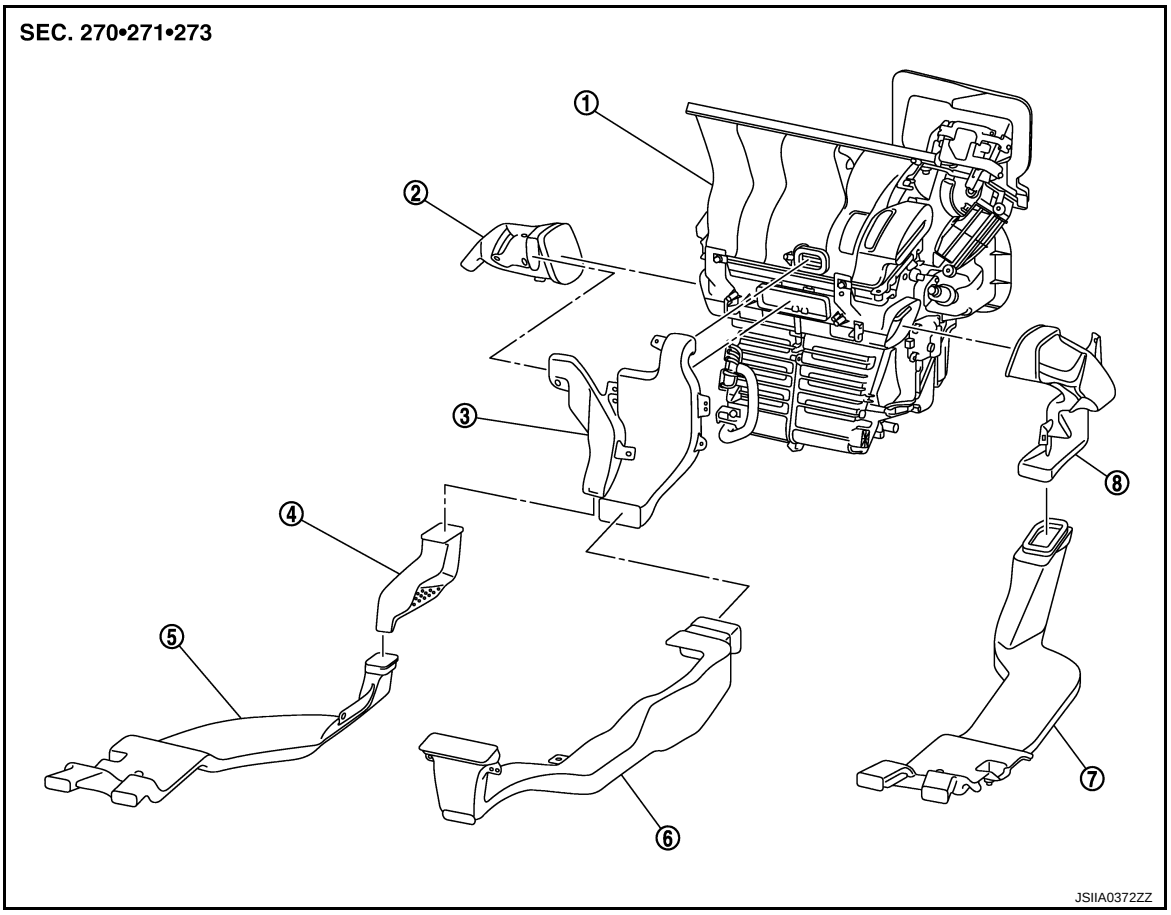
INSTALLATION

Installation is basically the reverse order of removal.

FRONT FLOOR DUCT 2

FRONT FLOOR DUCT 2 : Exploded View

INFOID:0000000001279169



1. A/C unit assembly
2. Foot duct LH
3. Rear floor duct 1
4. Front floor duct 1
5. Front floor duct 2 LH
6. Rear floor duct 2
7. Front floor duct 2 RH
8. Foot duct RH

FRONT FLOOR DUCT 2 : Removal and Installation

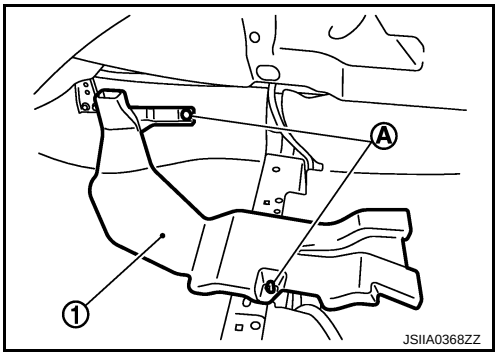
INFOID:0000000001279150

REMOVAL

Driver side

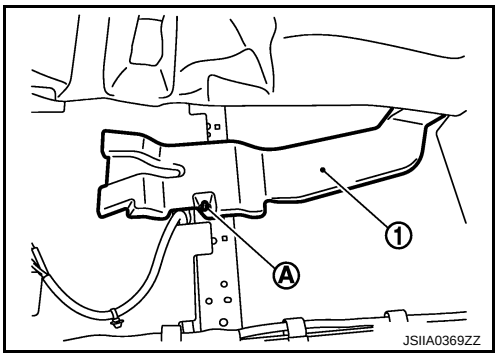
1. Peel back floor carpet to a point where front floor duct 2 LH is visible. Refer to INT-19, "Exploded View".

2. Remove clips (A), and then remove front floor duct 2 LH (1).



Passenger side

1. Peel back floor carpet to a point where front floor duct 2 RH is visible. Refer to INT-19, "Exploded View".
2. Remove clip (A), and then remove front floor duct 2 RH (1).



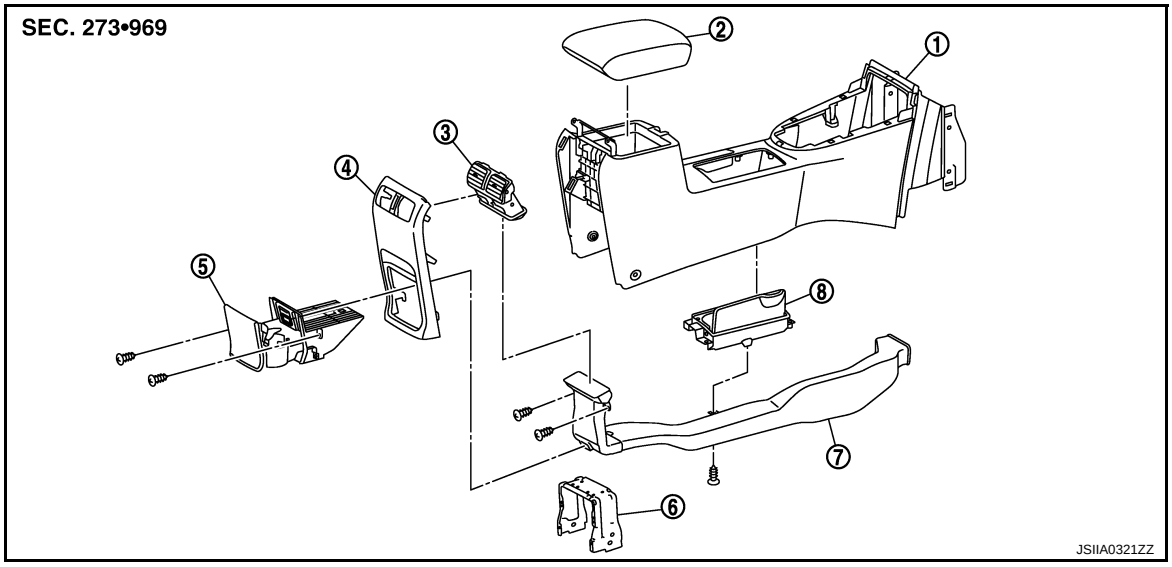
INSTALLATION

Installation is basically the reverse of removal.

REAR VENTILATOR GRILLE

REAR VENTILATOR GRILLE : Exploded View

INFOID:0000000001297544



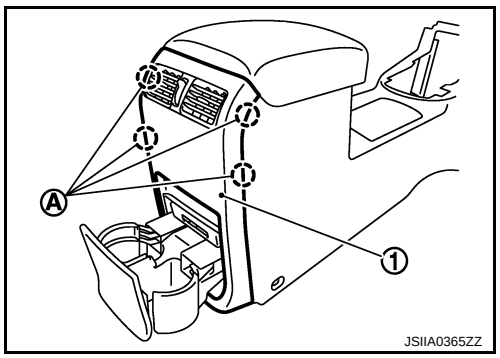
1. Console body
2. Console lid assembly
3. Rear ventilator grille
4. Console rear cover
5. Rear cup holder assembly
6. Console rear bracket
7. Rear floor duct 2
8. Cup holder assembly

REAR VENTILATOR GRILLE : Removal and Installation

INFOID:0000000001162064

REMOVAL

1. Remove pawls (A), and then remove console rear cover (1). Refer to IP-21, "Exploded View".
2. Remove rear ventilator grille.



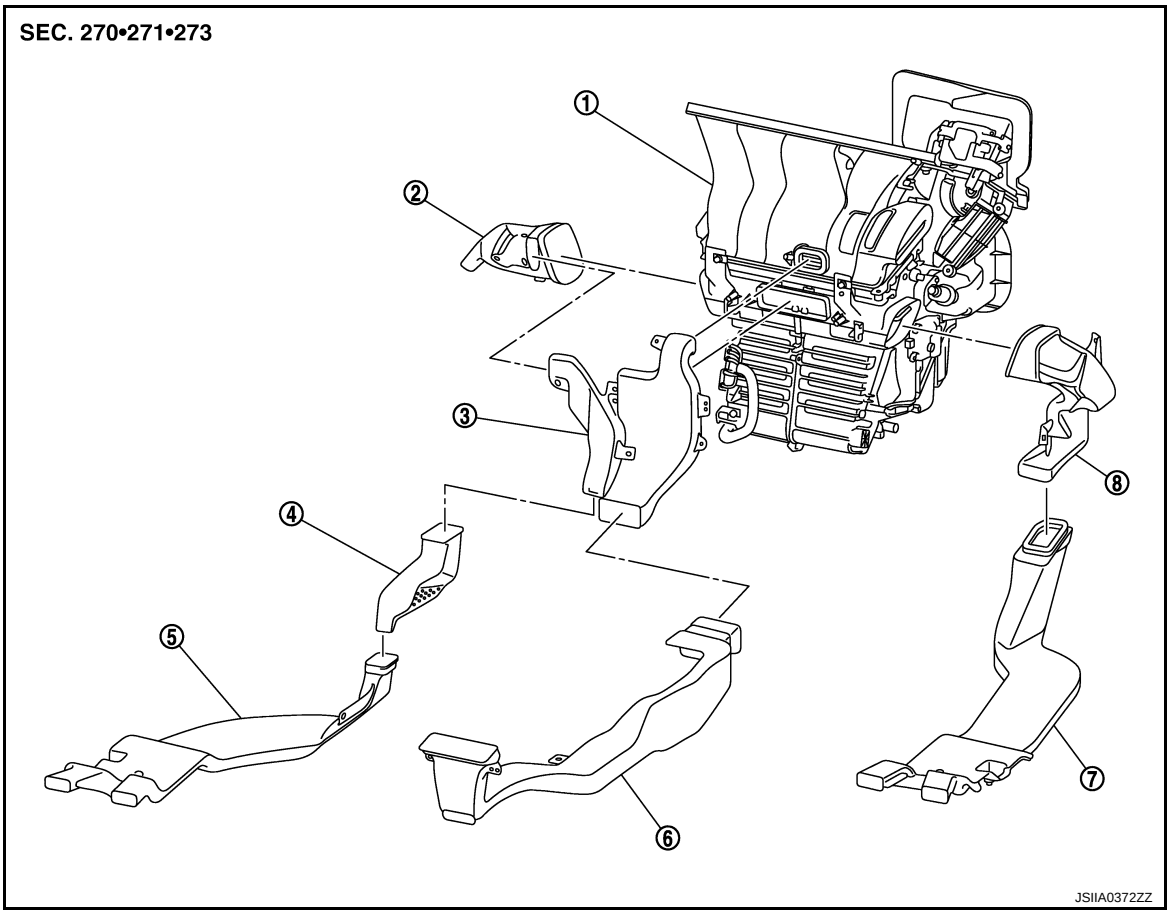
INSTALLATION

Installation is basically the reverse order of removal.

REAR FLOOR DUCT 1

REAR FLOOR DUCT 1 : Exploded View

INFOID:0000000001277871



1. A/C unit assembly
2. Foot duct LH
3. Rear floor duct 1
4. Front floor duct 1
5. Front floor duct 2 LH
6. Rear floor duct 2
7. Front floor duct 2 RH
8. Foot duct RH

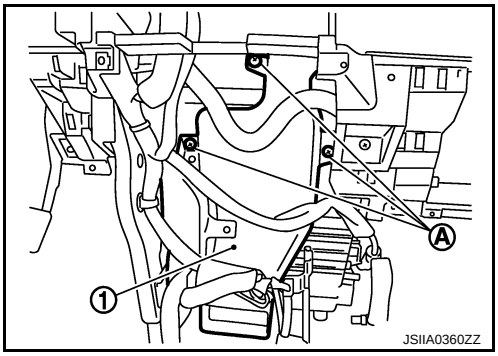
REAR FLOOR DUCT 1 : Removal and Installation

INFOID:0000000001162072

REMOVAL

1. Remove center console assembly. Refer to IP-21, "Exploded View".
2. Remove cluster lid C. Refer to IP-11, "Exploded View".
3. Remove instrument center lower panel. Refer to IP-11, "Exploded View".

4. Remove mounting screws (A), and then remove rear floor duct 1 (1).



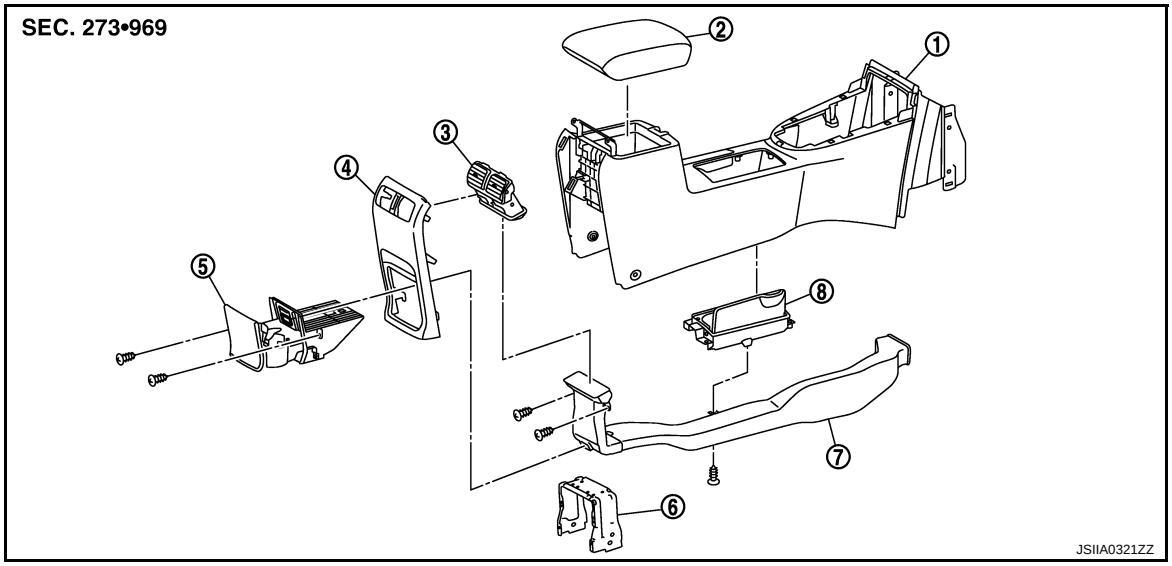
INSTALLATION

Installation is basically the reverse order of removal.

REAR FLOOR DUCT 2

REAR FLOOR DUCT 2 : Exploded View

INFOID:0000000001297545



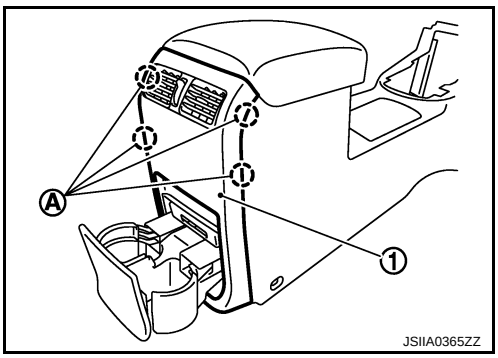
1. Console body
2. Console lid assembly
3. Rear ventilator grille
4. Console rear cover
5. Rear cup holder assembly
6. Console rear bracket
7. Rear floor duct 2
8. Cup holder assembly

REAR FLOOR DUCT 2 : Removal and Installation

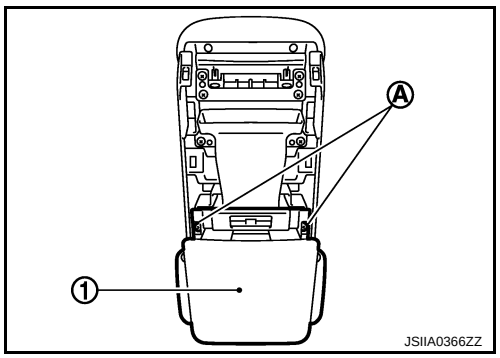
INFOID:0000000001279152

REMOVAL

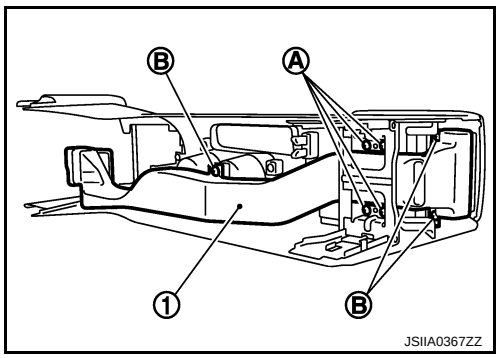
1. Remove center console assembly. Refer to IP-21, "Exploded View".
2. Remove pawls (A), and then remove console rear cover (1). Refer to IP-21, "Exploded View".



3. Remove mounting screws (A), and then remove rear cup holder assembly (1). Refer to IP-21, "Exploded View".



4. Remove mounting screws (A), and then remove console rear bracket.
5. Remove mounting screws (B), and then remove rear floor duct 2 (1).



INSTALLATION

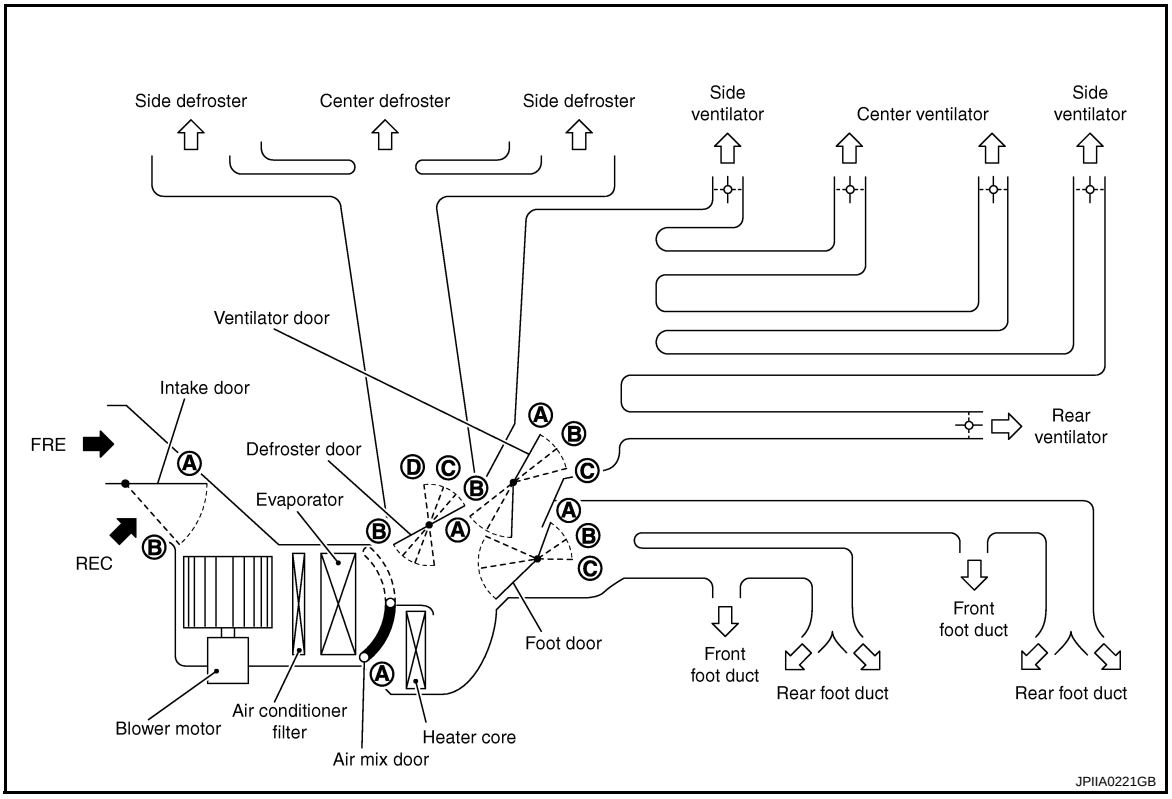
Installation is basically the reverse of removal.

FUNCTION DIAGNOSIS

SWITCHES AND THEIR CONTROL FUNCTION

System Description

INFOID:0000000001283061



Position or switch / Door	MODE control dial								Intake SW		Temperature control dial		
	VENT	B/L	FOOT	FOOT2	D/F	D/F2	DEF	AUTO					
				—		—		—			16°C	⇔	28°C
Ventilator door	Ⓐ	Ⓑ	Ⓒ	Ⓒ	Ⓒ	Ⓒ	Ⓒ	AUTO	—		—		
Foot door	Ⓐ	Ⓑ	Ⓒ	Ⓑ	Ⓒ	Ⓑ	Ⓐ		—		—		
Defroster door	Ⓐ	Ⓐ	Ⓐ or Ⓑ *1	Ⓑ–Ⓒ	Ⓒ	Ⓒ–Ⓓ	Ⓓ		—		—		
Intake door	—						Ⓑ	—	Ⓐ *2 AUTO	Ⓑ *2 AUTO	—		
Air mix door	—						—	AUTO	—		Ⓐ	AUTO	Ⓑ

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

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AIR DISTRIBUTION

System Description

INFOID:0000000001283062

Discharge air flow

Mode door position	Air outlet/distribution		
	Vent	Foot	Defroster
	100%	–	–
	60%	40%	–
	18% (22%)	62% (78%)	20% (–)
	15%	40%	45%
	22%	–	78%

( ) :Manually control

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PRECAUTION

PRECAUTIONS

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

INFOID:0000000001557119

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the “SRS 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:0000000001557120

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.

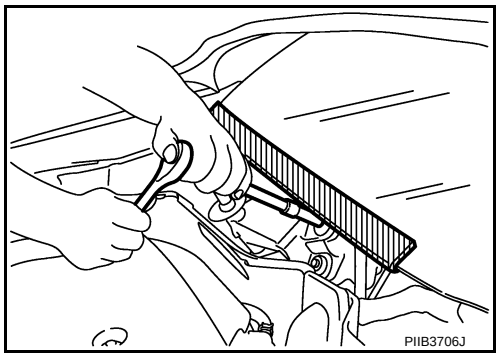
OPERATION PROCEDURE

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:0000000001557122

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



Precautions For Xenon Headlamp Service

INFOID:0000000001557123

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:0000000001283067

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. Compressor malfunction is likely occur if the refrigerants are mixed.**
- **Use only specified lubricant for the HFC-134a (R-134a) A/C system and HFC-134a (R-134a) components. Compressor malfunction is likely to occur if lubricant other than that specified is used.**
- **The specified HFC-134a (R-134a) lubricant rapidly absorbs moisture from the atmosphere. The following handling precautions must be observed:**
- **Cap (seal) immediately the component to minimize the entry of moisture from the atmosphere when removing refrigerant components from a vehicle.**
- **Never remove the caps (unseal) until just before connecting the components when installing refrigerant components to a vehicle. Connect all refrigerant loop components as quickly as possible to minimize the entry of moisture into system.**
- **Use only the specified lubricant from a sealed container. Reseal immediately containers of lubricant. Lubricant becomes moisture saturated and should not be used without proper sealing.**
- **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:0000000001283068

WARNING:

- **Never breath 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.**

Ventilate work area before resuming service if accidental system discharge occurs. 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 each time an air conditioning system is discharged.**
- **Wear always 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; Place the bottom of the container in a warm pail of water if container warming is required.**
- **Never intentionally drop, puncture, or incinerate refrigerant containers.**
- **Keep refrigerant away from open flames: poisonous gas is produced if refrigerant burns.**
- **Refrigerant displaces oxygen, therefore be certain to work in well ventilated areas to prevent suffocation.**
- **Never pressure test or leakage 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

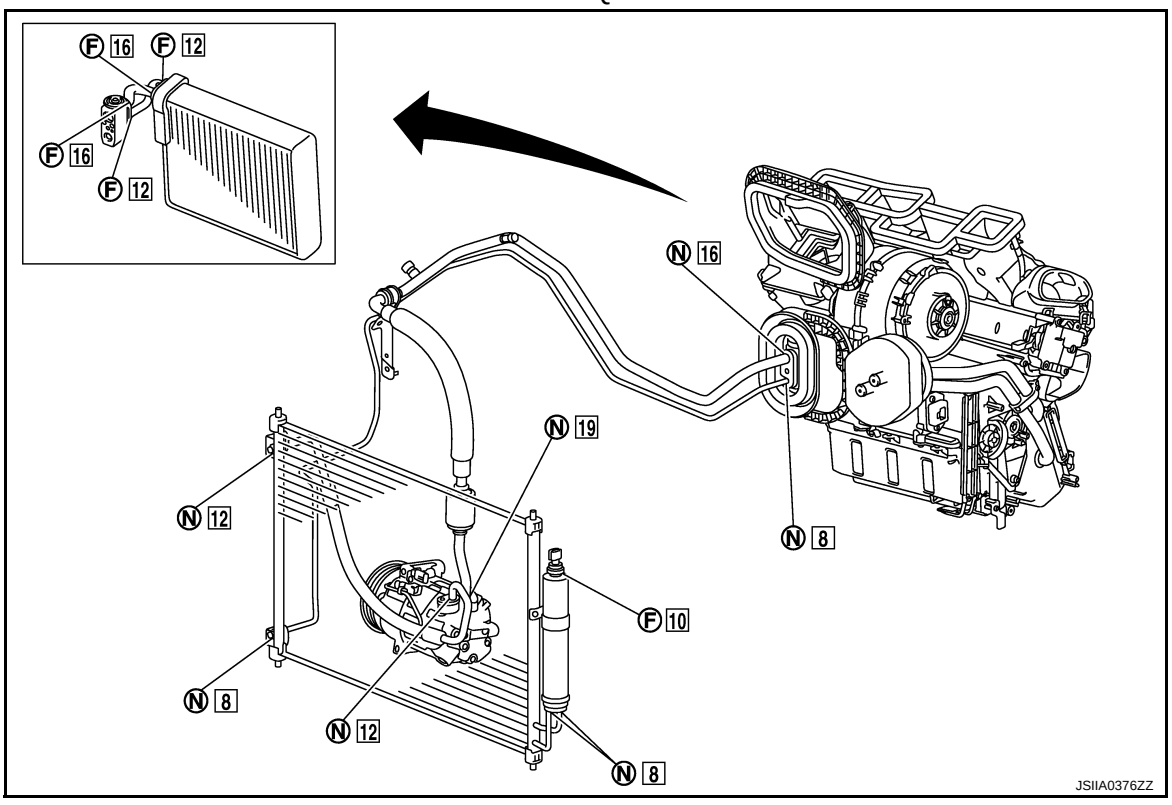
INFOID:0000000001283069

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

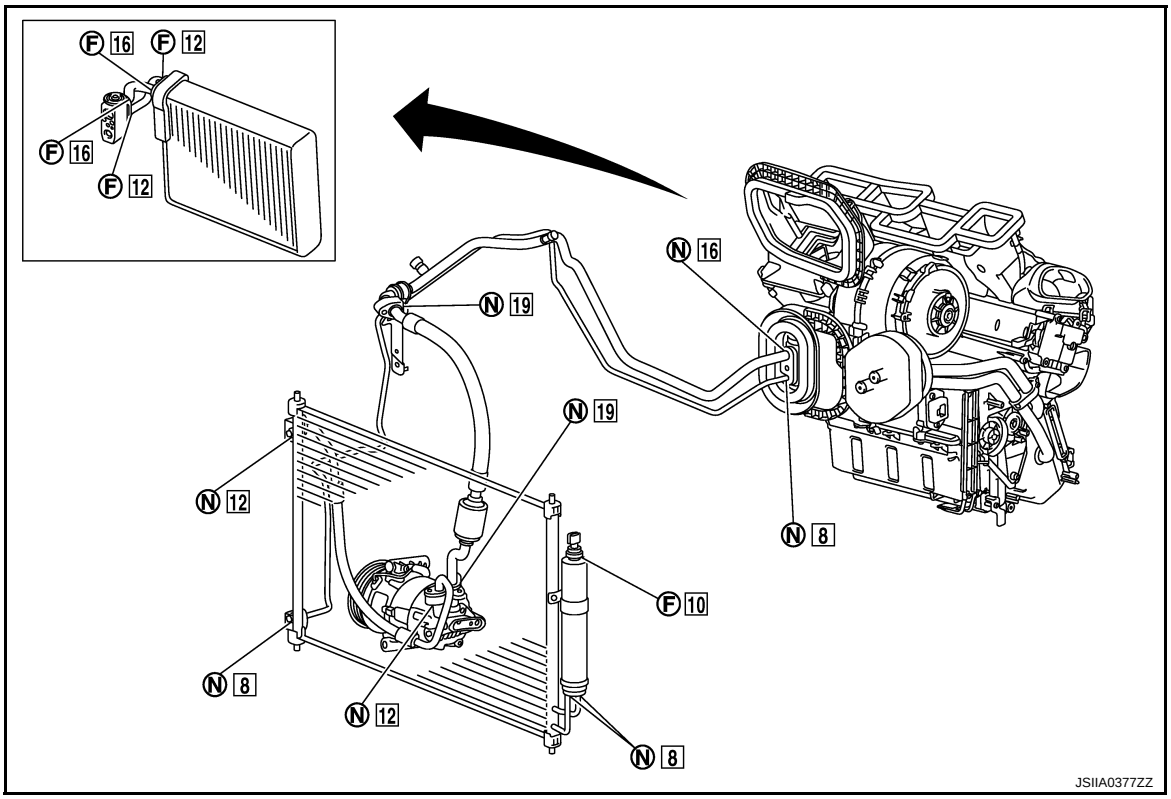
MR20DE/QR25DE



F. Former type refrigerant connection N. New type refrigerant connection

□: O-ring size

M9R



F. Former type refrigerant connection N. New type refrigerant connection

□: O-ring size

CAUTION:

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

O-Ring Part Numbers and Specifications

Connection type	Piping connection point		Part number	QTY	O-ring size
New	Low-pressure flexible hose to expansion valve		92473 N8210	1	16
	Low-pressure flexible hose to low-pressure pipe (M9R)		92474 N8210	1	19
	Low-pressure pipe to expansion valve (M9R)		92473 N8210	1	16
	Compressor to low-pressure flexible hose		92474 N8210	1	19
	Compressor to high-pressure flexible hose		92472 N8210	1	12
	Condenser to high-pressure flexible hose		92472 N8210	1	12
	Condenser to high-pressure pipe		92471 N8210	1	8
	High-pressure pipe to expansion valve		92471 N8210	1	8
	Liquid tank to condenser	Inlet	92471 N8210	1	8
		Outlet		1	
Former	Refrigerant pressure sensor to liquid tank		J2476 89956	1	10
	Cooler pipe assembly	High-pressure side	92475 71L00	1	12
		Low-pressure side	92475 72L00	1	16

WARNING:

Check that 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.

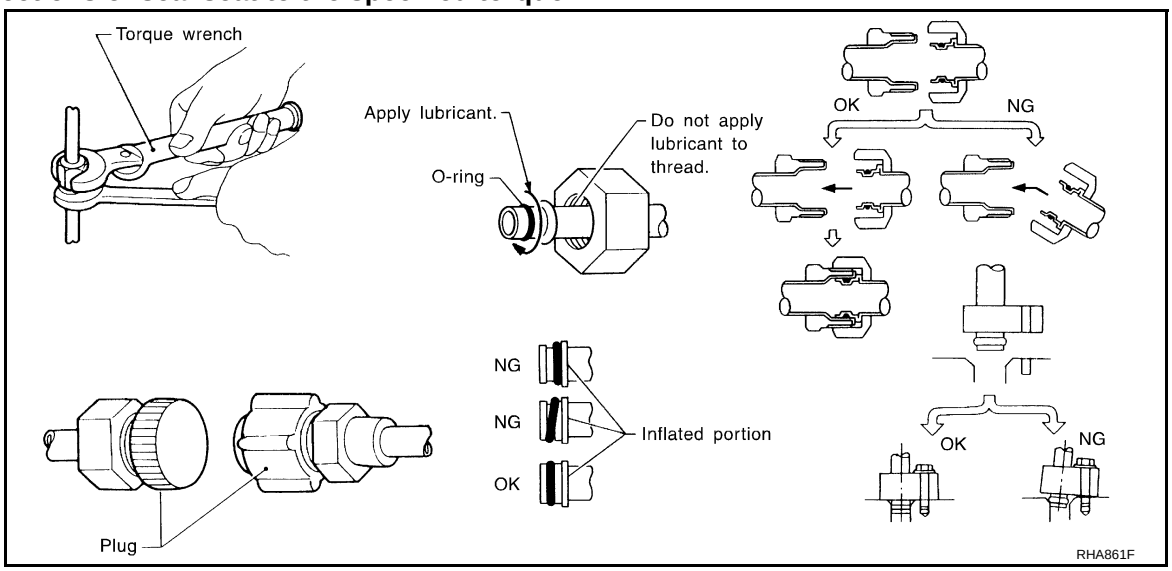
CAUTION:

Observe the following when replacing or cleaning refrigerant cycle components.

- **Store it in the same way at it is when mounted on the car when the compressor is removed. Failure to do so causes lubricant to enter the low-pressure chamber.**
- **Use always a torque wrench and a back-up wrench when connecting tubes.**
- **Plug immediately all openings to prevent entry of dust and moisture after disconnecting tubes.**
- **Connect the pipes at the final stage of the operation when installing an air conditioner in the vehicle. 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.**
- **Remove thoroughly moisture from the refrigeration system before charging the refrigerant.**
- **Replace always used O-rings.**
- **Apply lubricant to circle of the O-rings shown in illustration when connecting tube. 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.**
- **Be careful not to damage O-ring and tube when replacing the O-ring.**
- **Connect tube until a click can be heard. Then tighten the nut or bolt by hand. Check that the O-ring is installed to tube correctly.**
- **Perform leakage test and make sure that there is no leakage from connections after connecting line. Disconnect that line and replace the O-ring when the refrigerant leaking point is found. Then tighten connections of seal seat to the specified torque.**



Service Equipment

INFOID:0000000001283070

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

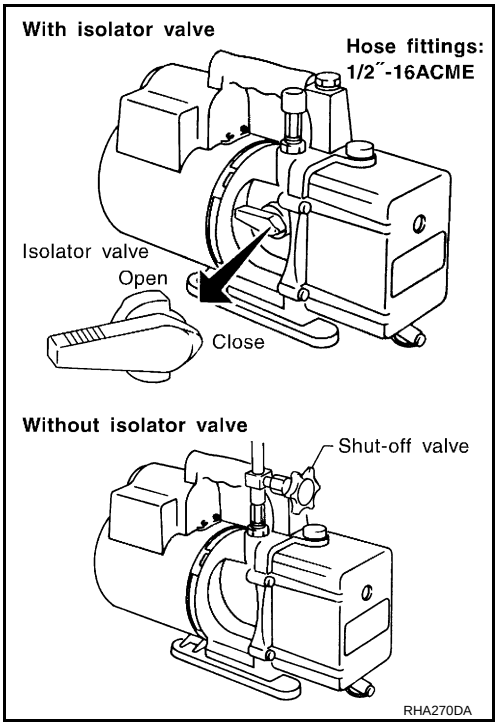
Be certain to follow the manufacturer’s instructions for tester operation and tester maintenance.

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 per the following.

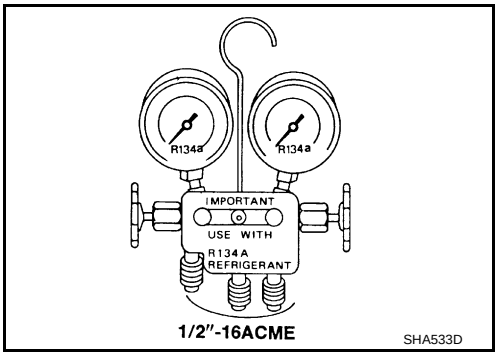
- Vacuum pumps usually have a manual isolator valve as part of the pump. Close this valve to isolate the service hose from the pump.
- Use a hose equipped with a manual shut-off valve near the pump end for pumps without an isolator. Close the valve to isolate the hose from the pump.
- Disconnect the hose from the pump if the hose has an automatic shut-off valve. 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.



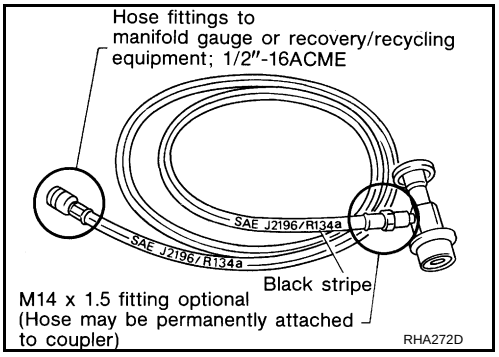
MANIFOLD GAUGE SET

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

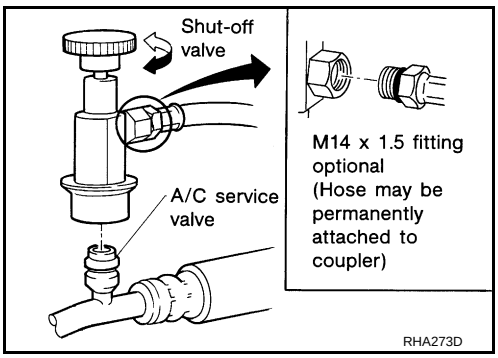
Be certain that the service hoses display the markings described (colored hose with black stripe). All hoses must equip positive shut-off devices (either manual or automatic) near the end of the hoses opposite to the manifold gauge.



SERVICE COUPLERS

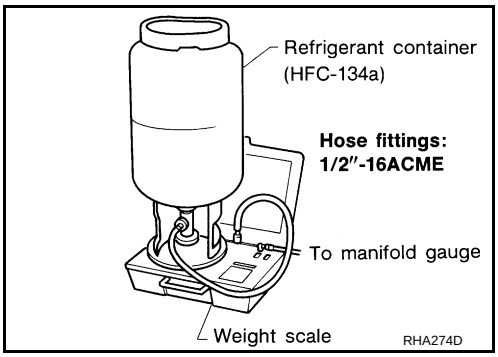
Never attempt to connect HFC-134a (R-134a) service couplers to a CFC-12 (R-12) A/C system. The HFC-134a (R-134a) couplers do not properly connect to the CFC-12 (R-12) system. However, if an improper connection is attempted, discharging and contamination may occur.

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. The hose fitting must be 1/2″-16 ACME if the scale controls refrigerant flow electronically.



CALIBRATING ACR4 WEIGHT SCALE

Calibrate the scale each three month.
To calibrate the weight scale on the ACR4:

1. Press **“Shift/Reset”** and **“Enter”** at the same time.
2. Press **“8787”**. **“A1”** is displayed.
3. Remove all weight from the scale.
4. Press **“0”**, then press **“Enter”**. **“0.00”** is displayed and change to **“A2”**.
5. Place a known weight (dumbbell or similar weight), between 4.5 and 8.6 kg (10 and 19 lb.) on the center of the weight scale.
6. Enter the known weight using four digits. (Example 10 lb. = 10.00, 10.5 lb. = 10.50)
7. Press **“Enter”**— the display returns to the vacuum mode.
8. Press **“Shift/Reset”** and **“Enter”** at the same time.
9. Press **“6”**— the known weight on the scale is displayed.
10. Remove the known weight from the scale. **“0.00”** is displayed.
11. Press **“Shift/Reset”** to return the ACR4 to the program mode.

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:0000000001283071

CAUTION:

- **Plug all openings to prevent moisture and foreign matter from entering.**
- **Store it in the same way at it is when mounted on the car when the compressor is removed.**
- **Follow “LUBRICANT ADJUSTING PROCEDURE FOR COMPRESSOR REPLACEMENT” exactly when replacing or repairing compressor. Refer toHA-25, "Adjustment".**
- **Keep friction surfaces between clutch and pulley clean. Wipe it off by using a clean waste cloth moistened with thinner if the surface is contaminated with lubricant.**
- **Turn the compressor shaft by hand more than five turns in both directions after compressor service operation. This distributes equally lubricant inside the compressor. Let the engine idle and operate the compressor for one hour after the compressor is installed.**
- **Apply voltage to the new one and check for normal operation after replacing the compressor magnet clutch.**

FLUORESCENT LEAK DETECTOR

General Precautions

INFOID:0000000001283072

CAUTION:

- **The A/C system contains a fluorescent leak detection dye used for locating refrigerant leakages. An ultraviolet (UV) lamp is required to illuminate the dye when inspecting for leakages.**
- **Wear always fluorescence enhancing UV safety goggles to protect eyes and enhance the visibility of the fluorescent dye.**
- **The fluorescent dye leak detector is not a replacement for an electrical leak detector (SST). The fluorescent dye leak detector should be used in conjunction with an electrical leak detector (SST) to pinpoint refrigerant leakages.**
- **Read and follow all manufacture's operating instructions and precautions prior to performing the work for the purpose of safety and customer's satisfaction.**
- **A compressor shaft seal should not necessarily be repaired because of dye seepage. The compressor shaft seal should only be repaired after confirming the leakage with an electrical leak detector (SST).**
- **Remove always any remaining dye from the leakage 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. Clean immediately with the approved dye cleaner if dye is spilled. 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 remains 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

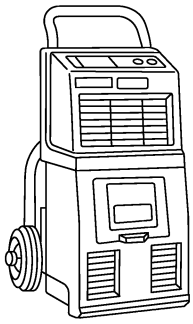
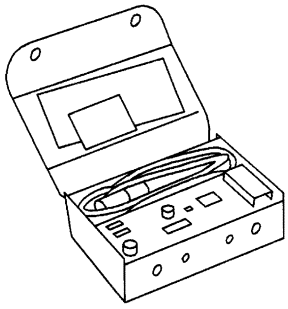
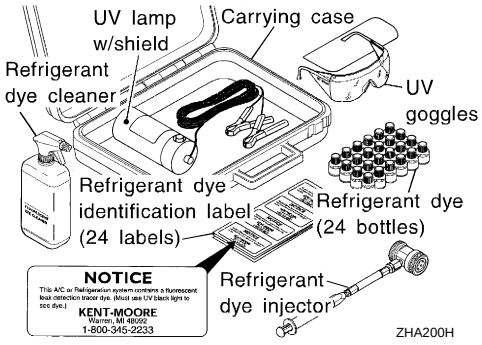
PREPARATION

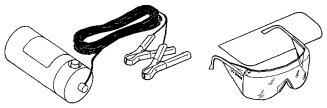
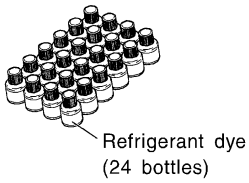
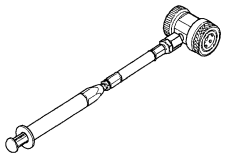
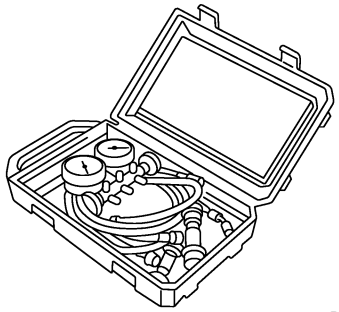
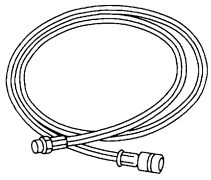
Special Service Tool

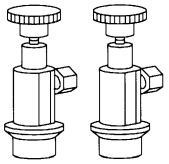
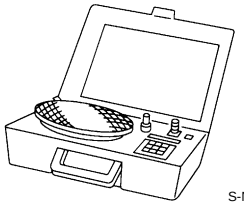
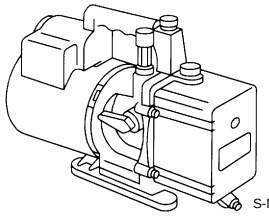
INFOID:0000000001318050

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 number Tool name		Description
Recovery/recycling/recharging equipment (ACR4)	 RJIA0195E	Function: Refrigerant recovery, recycling and recharging
Electrical leak detector	 A/C leak detector SHA705EB	Power supply: DC 12 V (Cigarette lighter)
(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 12 V (Battery terminal)

Tool number Tool name		Description
(J-42220) UV lamp and UV safety goggles	 SHA438F	Power supply: DC 12 V (Battery terminal) For checking refrigerant leakage when fluorescent dye is equipped 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
Service hoses • High-pressure side hose • Low-pressure side hose • Utility hose	 S-NT201	Hose color: • Low-pressure side hose: Blue with black stripe • High-pressure side hose: Red with black stripe • Utility hose: Yellow with black stripe or green with black stripe Hose fitting to gauge: • 1/2″-16 ACME

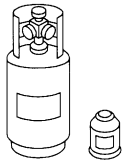
Tool number Tool name		Description
Service couplers • High-pressure side coupler • Low-pressure side coupler	 S-NT202	Hose fitting to service hose: M14 x 1.5 fitting is optional or permanently attached.
Refrigerant weight scale	 S-NT200	For measuring of refrigerant Fitting size: Thread size 1/2″-16 ACME
Vacuum pump (Including the isolator valve)	 S-NT203	Capacity: • Air displacement: 4 CFM • Micron rating: 20 microns • Oil capacity: 482 g (17 oz.) Fitting size: Thread size • 1/2″-16 ACME

Sealant or/and Lubricant

INFOID:0000000001318052

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.

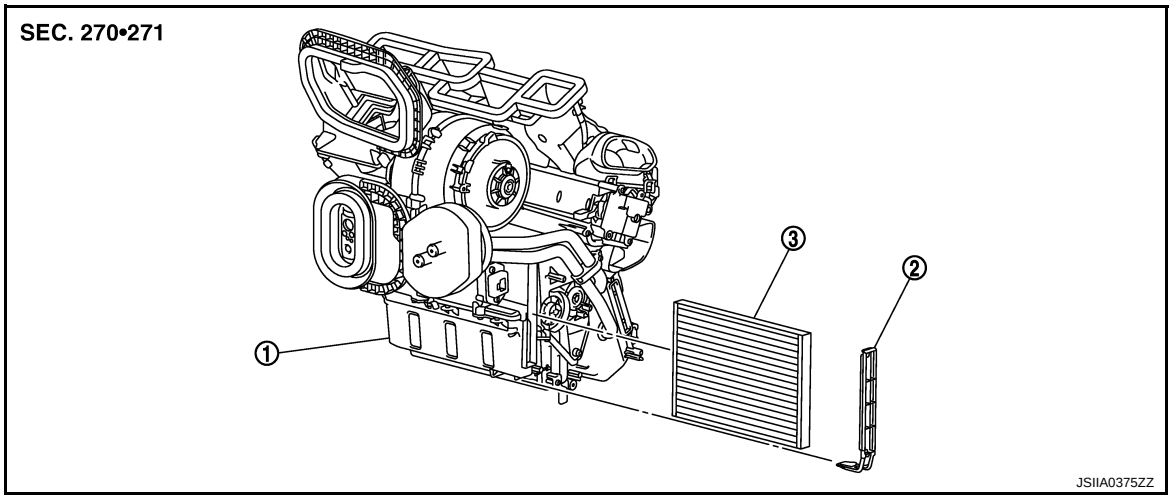
Tool name		Description
HFC-134a (R-134a) refrigerant	 S-NT196	Container color: Light blue Container marking: HFC-134a (R-134a) Fitting size: Thread size • Large container 1/2″-16 ACME
Nissan A/C System Oil Type S (DH-PS)	 S-NT197	Type: Polyalkylene glycol oil (PAG), type S (DH-PS) Application: HFC-134a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

ON-VEHICLE MAINTENANCE

AIR CONDITIONER FILTER

Exploded View

INFOID:0000000001283076



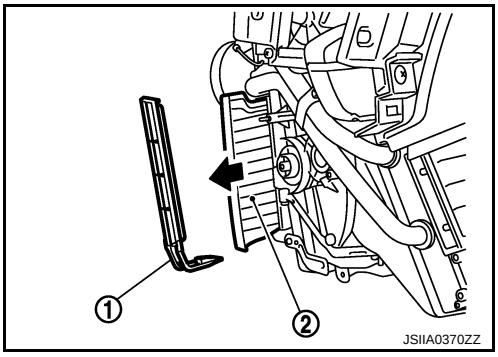
1. A/C unit assembly
2. Filter cover
3. Air conditioner filter

Removal and Installation

INFOID:0000000001283077

REMOVAL

1. Remove glove box cover assembly. Refer to IP-11, "Exploded View".
2. Remove filter cover (1), and then remove air conditioner filter (2).



INSTALLATION

Installation is basically the reverse order of removal.

Replacement

INFOID:0000000001283078

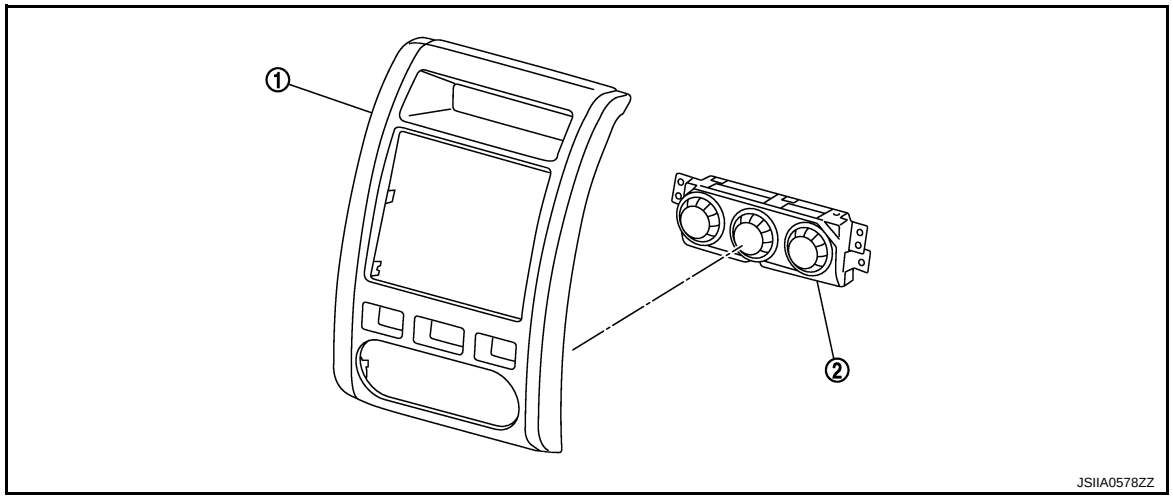
Replace air conditioner filter.
Refer to MA-7, "Periodic Maintenance".
Affix a caution label inside the glove box when replacing filter.

ON-VEHICLE REPAIR

CONTROLLER (AUTO AMP.)

Exploded View

INFOID:0000000001454780



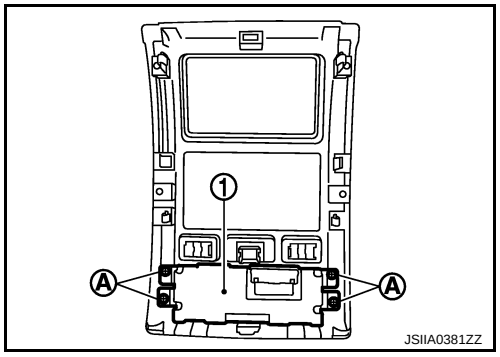
1. Cluster lid C
2. Controller

Removal and Installation

INFOID:0000000001283080

REMOVAL

1. Remove cluster lid C. Refer to IP-11, "Exploded View".
2. Remove mounting screws (A), and then remove controller (1).



INSTALLATION

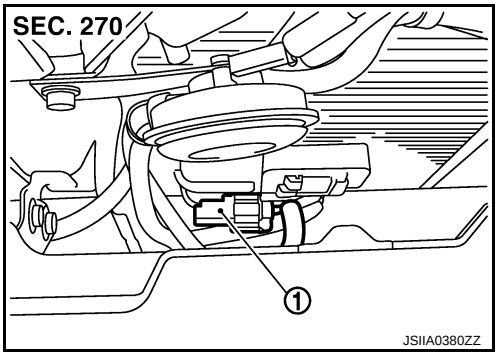
Installation is basically the reverse order of removal.

OAT SENSOR

Exploded View

INFOID:0000000001283081

1. OAT sensor

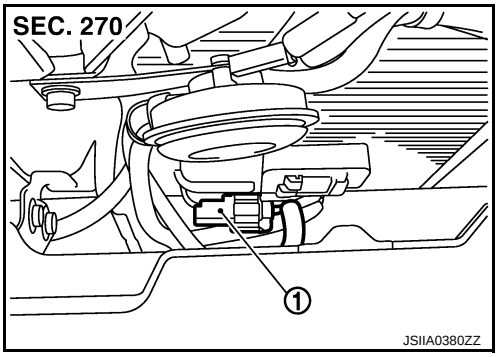


Removal and Installation

INFOID:0000000001283082

REMOVAL

1. Disconnect OAT sensor connector, and then remove OAT sensor (1).



INSTALLATION

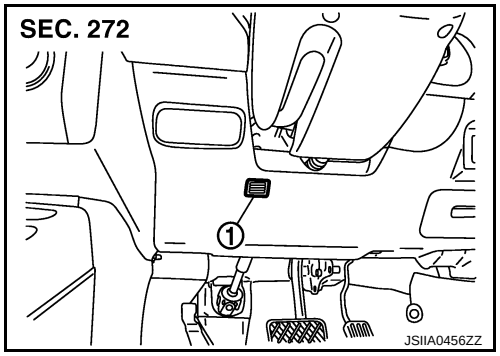
Installation is basically the reverse order of removal.

IN-VEHICLE SENSOR

Exploded View

INFOID:0000000001283083

1. In-vehicle sensor

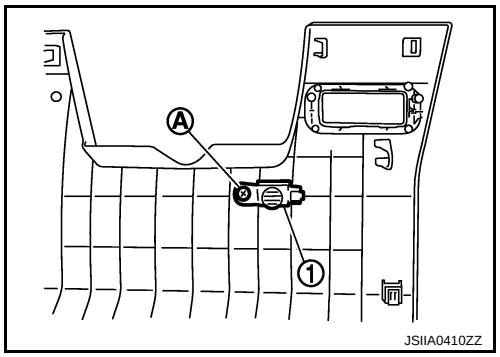


Removal and Installation

INFOID:0000000001283084

REMOVAL

1. Remove instrument driver lower panel. Refer to IP-11, "Exploded View".
2. Remove mounting screw (A), and then remove in-vehicle sensor (1).



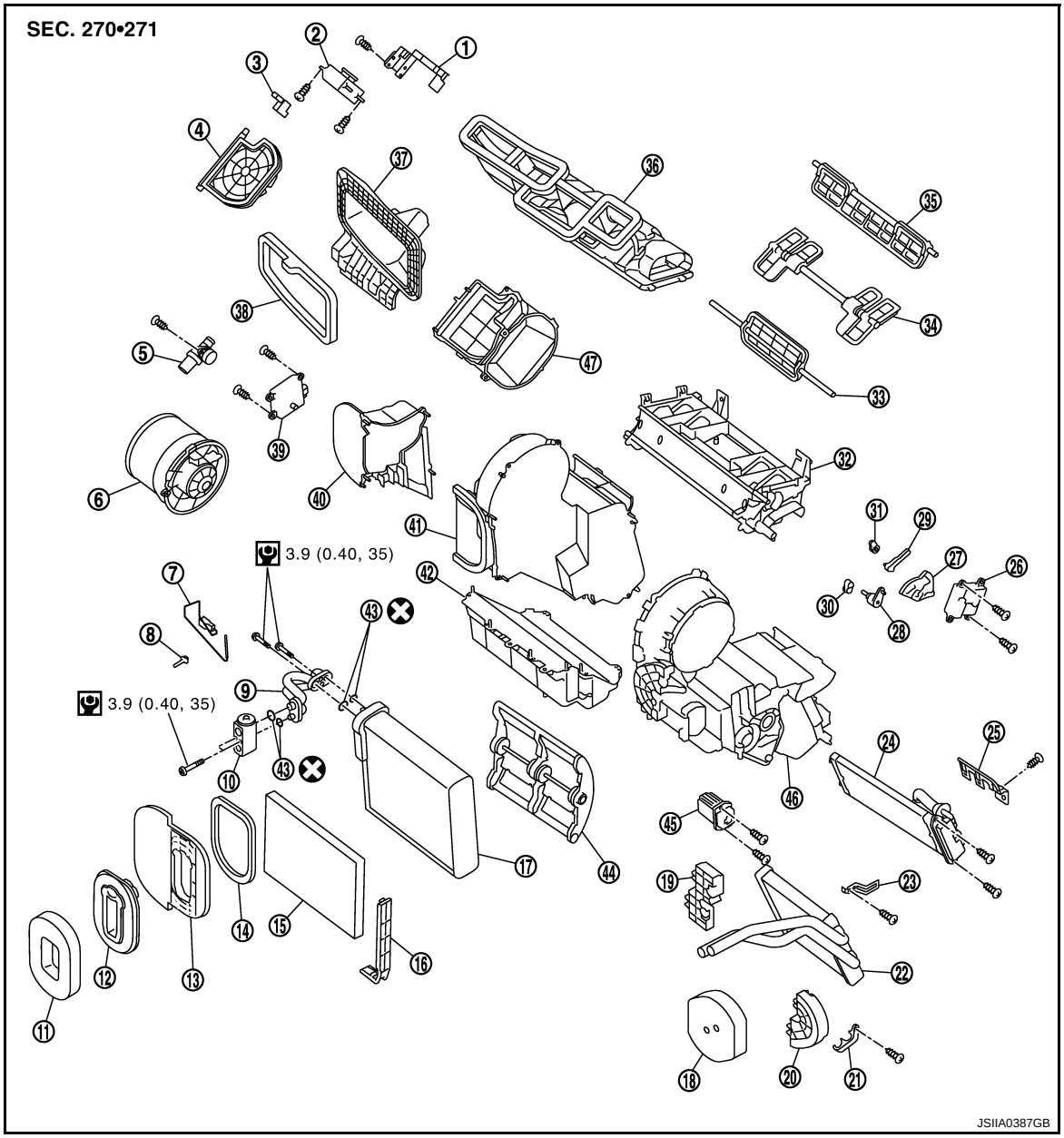
INSTALLATION

Installation is basically the reverse order of removal.

INTAKE SENSOR

Exploded View

INFOID:0000000001298062



1. Intake door motor bracket
2. Intake door motor
3. Intake door lever
4. Intake door
5. Aspirator
6. Blower motor
7. Intake sensor
8. Intake sensor bracket
9. Pipe assembly
10. Expansion valve
11. Expansion valve packing
12. Expansion valve grommet
13. Grommet adaptor
14. Adaptor packing
15. Air conditioner filter
16. Air conditioner filter cover
17. Evaporator
18. Heater packing
19. Heater adapter
20. Heater pipe flange
21. Heater pipe clamp
22. Heater core
23. Case bracket
24. PTC heater (M9R)
25. PTC harness bracket (M9R)
26. Mode door motor
27. Main link
28. Ventilator door lever
29. Foot door link
30. Defroster door lever
31. Foot door lever
32. Distributor module case
33. Defroster door
34. Ventilator door
35. Foot door
36. Adaptor duct

37. Attachment panel
38. Attachment panel packing
39. Air mix door motor
40. Side case
41. Main case RH
42. Lower case
43. O-ring
44. Air mix door (Slide door)
45. Fan control amp.
46. Main case LH
47. Intake box case

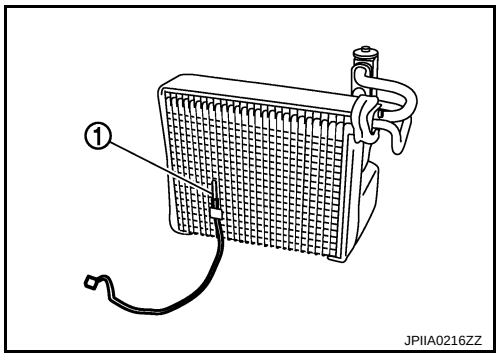
Refer to GI-4, "Components" for symbols in the figure.

Removal and Installation

INFOID:0000000001283086

REMOVAL

1. Remove evaporator with expansion valve attached. Refer to HA-69, "Exploded View".
   CAUTION:
   Cap or wrap the joint of the A/C piping and expansion valve with suitable material such as vinyl tape to avoid the entry of air.
2. Remove intake sensor (1) from evaporator.



INSTALLATION

Installation is basically the reverse order of removal.

CAUTION:

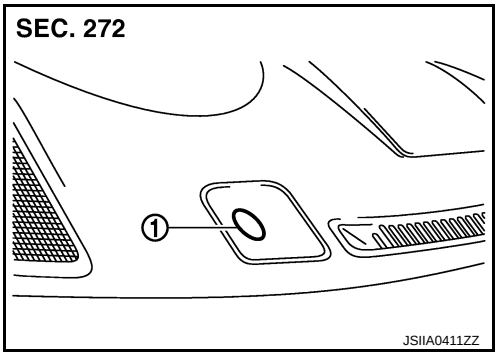
- **Replace O-rings with new ones. Then apply compressor oil to them when installing.**
- **Mark the mounting position of intake sensor bracket prior to removal so that the reinstalled sensor can be located in the same position.**
- **Check for leakages when recharging refrigerant.**

SUNLOAD SENSOR

Exploded View

INFOID:0000000001283087

1. Sunload sensor

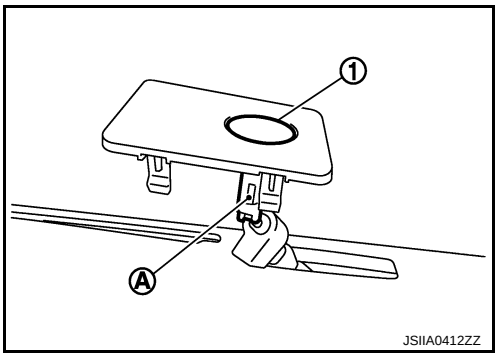


Removal and Installation

INFOID:0000000001283088

REMOVAL

1. Remove instrument upper panel. Refer to IP-11, "Exploded View".
2. Disconnect sunload sensor connector (A), and then remove sunload sensor (1).



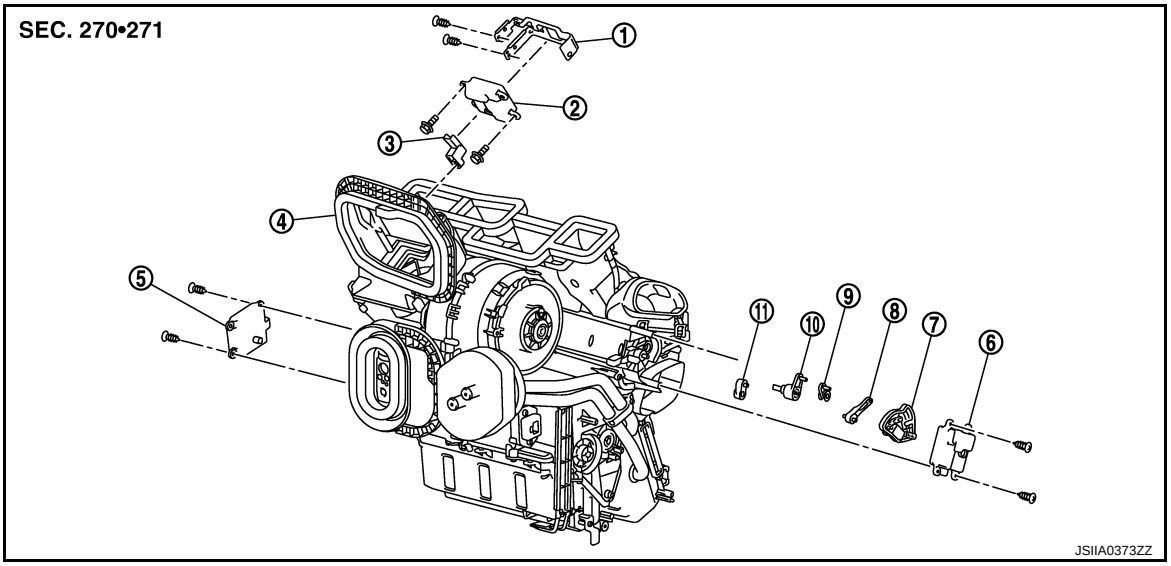
INSTALLATION

Installation is basically the reverse order of removal.

MODE DOOR MOTOR

Exploded View

INFOID:0000000001283089



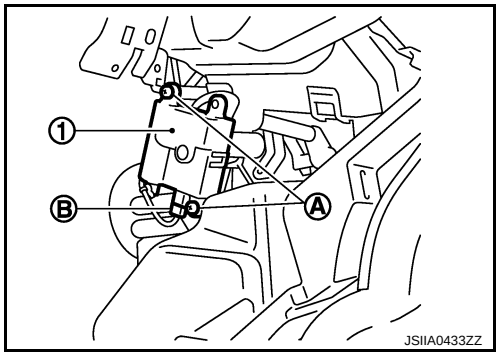
1. Intake door motor bracket
2. Intake door motor
3. Intake door lever
4. A/C unit assembly
5. Air mix door motor
6. Mode door motor
7. Main link
8. Foot door link
9. Foot door lever
10. Ventilator door lever
11. Defroster door lever

Removal and Installation

INFOID:0000000001283090

REMOVAL

1. Remove glove box cover assembly. Refer to IP-11, "Exploded View".
2. Remove mounting screws (A), and then remove mode door motor (1).
3. Disconnect mode door motor connector (B).



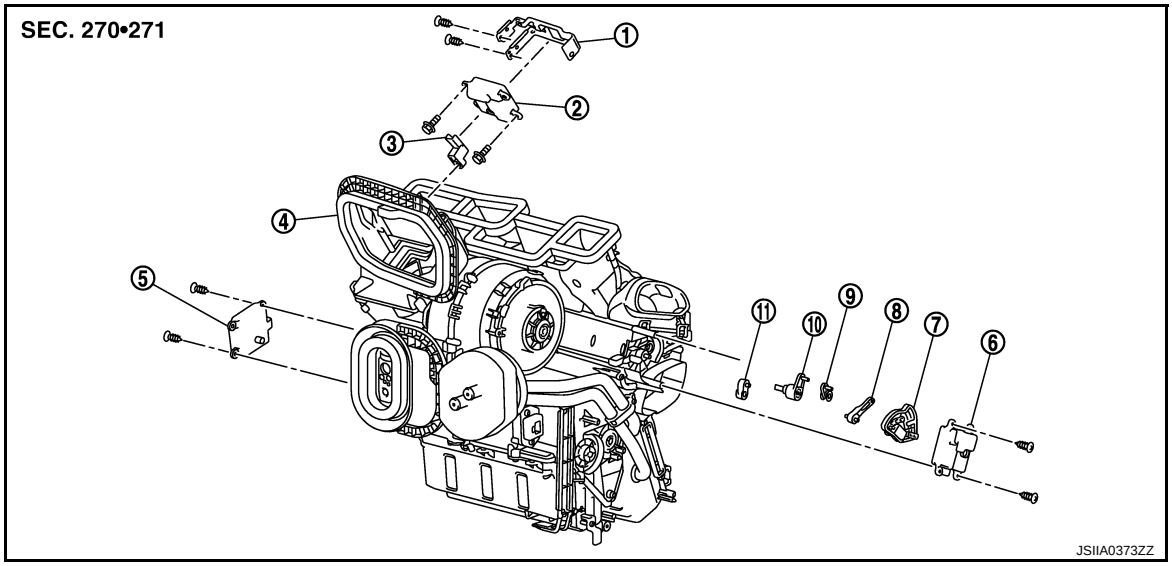
INSTALLATION

Installation is basically the reverse order of removal.

AIR MIX DOOR MOTOR

Exploded View

INFOID:0000000001298037



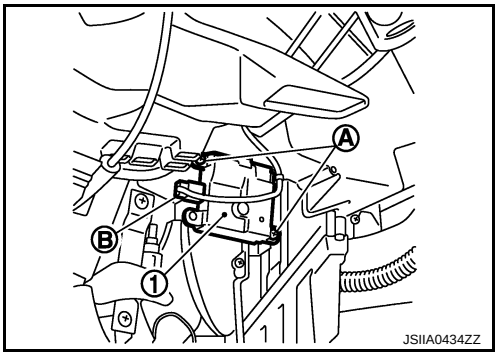
1. Intake door motor bracket
2. Intake door motor
3. Intake door lever
4. A/C unit assembly
5. Air mix door motor
6. Mode door motor
7. Main link
8. Foot door link
9. Foot door lever
10. Ventilator door lever
11. Defroster door lever

Removal and Installation

INFOID:0000000001283092

REMOVAL

1. Set the temperature at 16°C. Then disconnect the battery cable from the negative terminal.
2. Remove instrument driver lower panel. Refer to IP-11, "Exploded View".
3. Remove mounting screws (A), and then remove air mix door motor (1).
4. Disconnect air mix door motor connector (B).



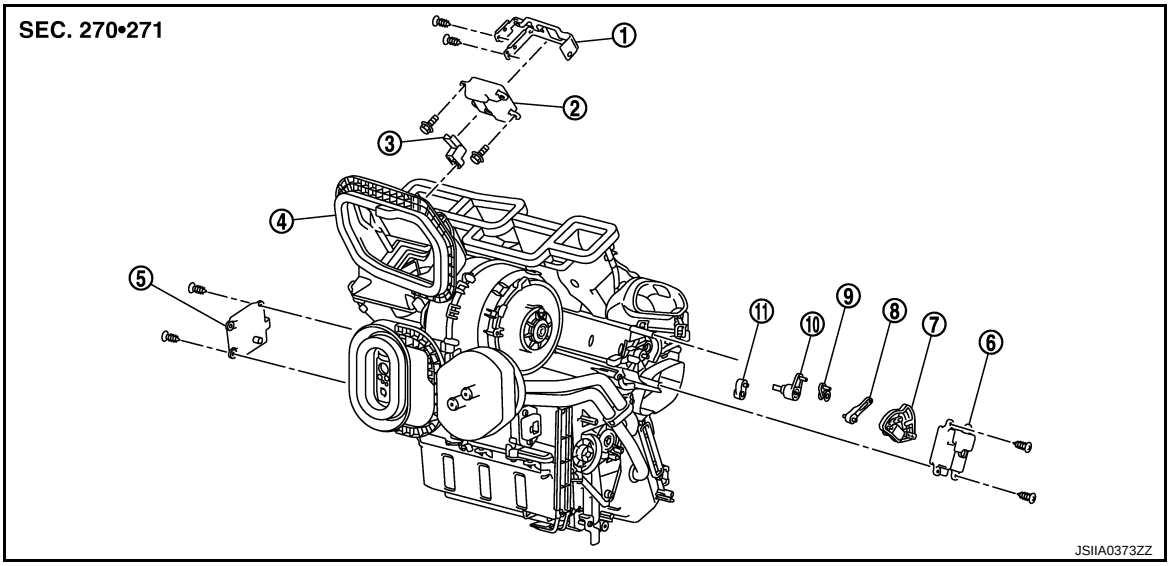
INSTALLATION

Installation is basically the reverse order of removal.

INTAKE DOOR MOTOR

Exploded View

INFOID:0000000001298038



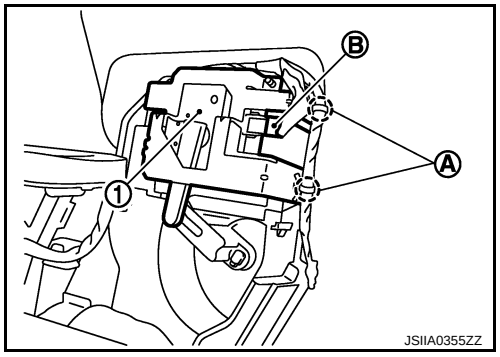
1. Intake door motor bracket
2. Intake door motor
3. Intake door lever
4. A/C unit assembly
5. Air mix door motor
6. Mode door motor
7. Main link
8. Foot door link
9. Foot door lever
10. Ventilator door lever
11. Defroster door lever

Removal and Installation

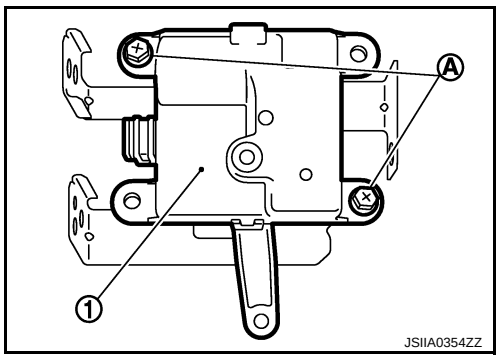
INFOID:0000000001283094

REMOVAL

1. Remove instrument panel assembly. Refer to IP-11, "Exploded View".
2. Remove mounting screws (A), and then remove intake door motor (1) with intake door motor bracket attached.
3. Disconnect intake door motor connector (B).



4. Remove mounting screws (A), and then remove intake door motor (1) from intake door motor bracket.



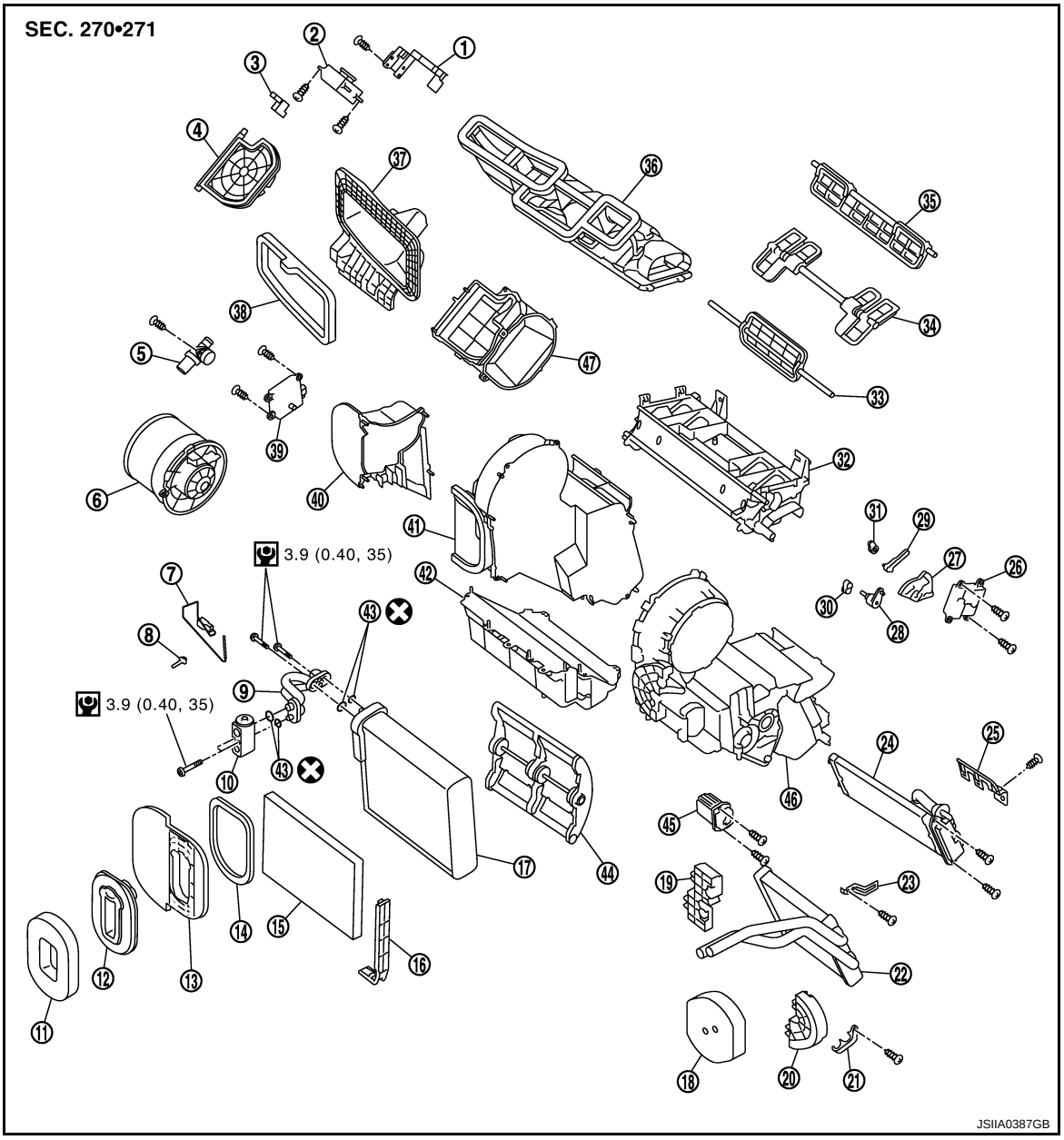
INSTALLATION

Installation is basically the reverse order of removal.

A/C UNIT ASSEMBLY

Exploded View

INFOID:0000000001283095



1. Intake door motor bracket
2. Intake door motor
3. Intake door lever
4. Intake door
5. Aspirator
6. Blower motor
7. Intake sensor
8. Intake sensor bracket
9. Pipe assembly
10. Expansion valve
11. Expansion valve packing
12. Expansion valve grommet
13. Grommet adaptor
14. Adaptor packing
15. Air conditioner filter
16. Air conditioner filter cover
17. Evaporator
18. Heater packing
19. Heater adapter
20. Heater pipe flange
21. Heater pipe clamp
22. Heater core
23. Case bracket
24. PTC heater (M9R)
25. PTC harness bracket (M9R)
26. Mode door motor
27. Main link
28. Ventilator door lever
29. Foot door link
30. Defroster door lever
31. Foot door lever
32. Distributor module case
33. Defroster door
34. Ventilator door
35. Foot door
36. Adaptor duct

37. Attachment panel
38. Attachment panel packing
39. Air mix door motor
40. Side case
41. Main case RH
42. Lower case
43. O-ring
44. Air mix door (Slide door)
45. Fan control amp.
46. Main case LH
47. Intake box case

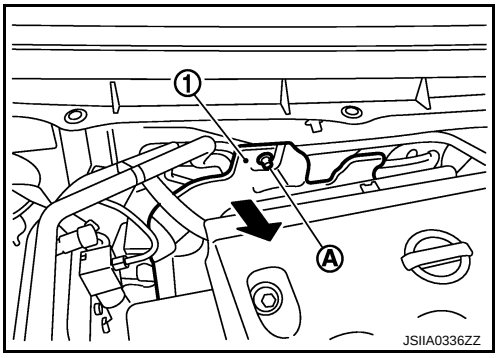
Refer to GI-4, "Components" for symbols in the figure.

Removal and Installation

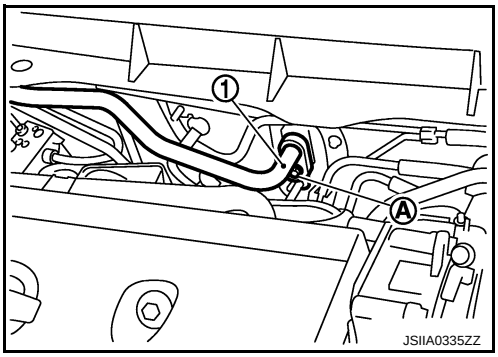
INFOID:0000000001283096

REMOVAL

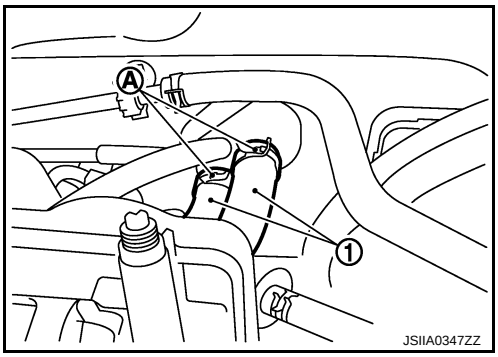
1. Use a refrigerant collecting equipment (for HFC-134a) to discharge the refrigerant.
2. Drain engine coolant from cooling system. Refer to CO-10, "Draining" (MR20DE), CO-41, "Draining" (QR25DE) or CO-68, "Draining" (M9R).
3. Remove engine cover (M9R). Refer to EM-265, "Exploded View".
4. Remove cowl top cover (QR25DE). Refer to EXT-19, "Exploded View".
5. Remove mounting nut (A), and lower dash insulator (1) a position without the hindrance for work (as shown in the figure).



6. Remove mounting bolt (A) from low-pressure flexible hose (1) (MR20DE/QR25DE) or low-pressure pipe (1) (M9R).
CAUTION:
Cap or wrap the joint of the A/C piping and expansion valve with suitable material such as vinyl tape to avoid the entry of air.

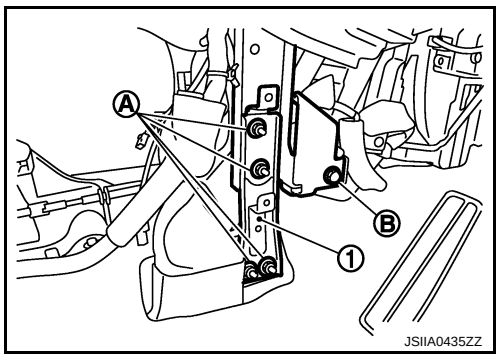


7. Remove clamps (A), and then disconnect heater hoses (1).

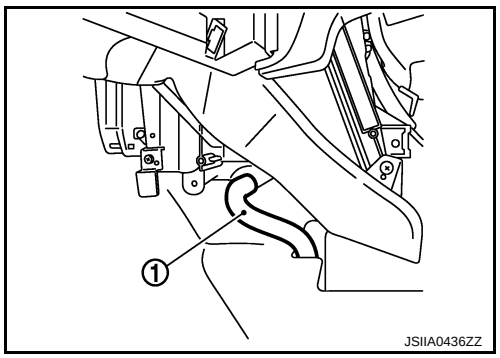


8. Remove instrument panel. Refer to IP-11, "Exploded View".

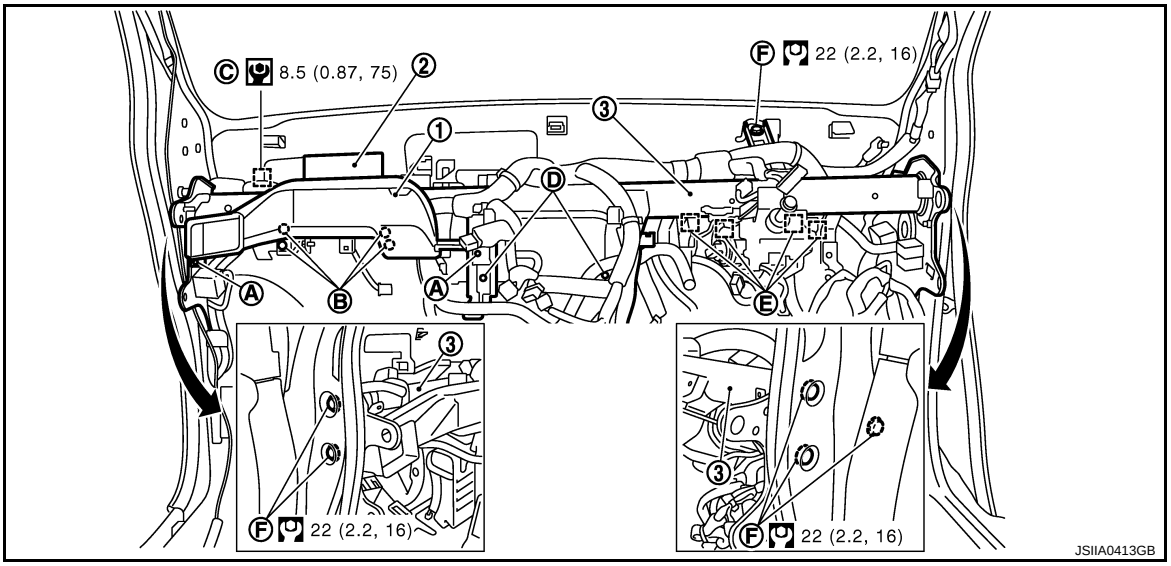
9. Remove mounting nuts (A), and then remove instrument stay (1).
10. Remove mounting bolt (B).



11. Disconnect drain hose (1).



12. Remove mounting screws (A), and then remove side ventilator duct LH (1).



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

13. Remove mounting screws (B), and then remove BCM (2) with bracket attached.
14. Remove mounting bolt (C) from steering member (3).
15. Remove clips of vehicle harness from steering member.
16. Remove mounting screws (D) from A/C unit assembly.
17. Remove steering column mounting nuts (E). Refer to ST-10, "Exploded View".
18. Remove steering member mounting bolts (F), and then remove steering member.
19. Remove A/C unit assembly.

INSTALLATION

Installation is basically the reverse order of removal.

CAUTION:

- **Replace O-rings with new ones. Then apply compressor oil to them when installing.**

- **Check for leakages when recharging refrigerant.**

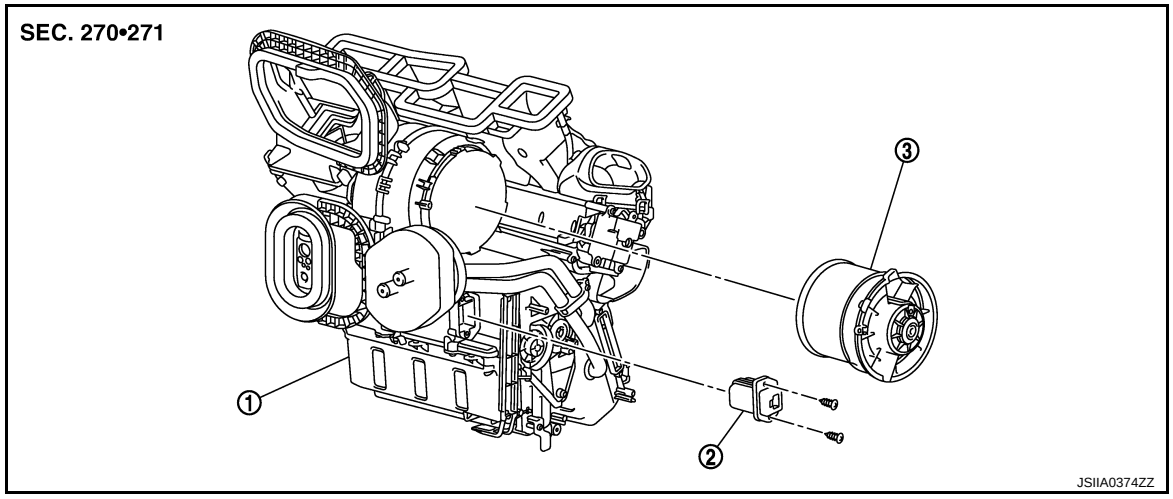
NOTE:

- Refer to CO-11, "Refilling" (MR20DE), CO-42, "Refilling" (QR25DE) or CO-69, "Refilling" (M9R) when filling radiator with engine coolant.
- Recharge the refrigerant.

BLOWER MOTOR

Exploded View

INFOID:0000000001283097



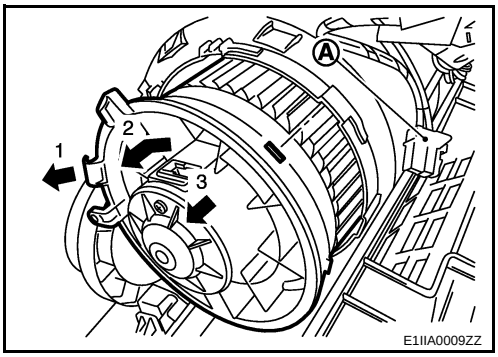
1. A/C unit assembly
2. Fan control amp.
3. Blower motor

Removal and Installation

INFOID:0000000001283098

REMOVAL

1. Remove glove box cover assembly. Refer to IP-11, "Exploded View".
2. Disconnect blower motor connector (A).
3. Press flange holding hook (1) and then turn blower motor counterclockwise (2).
4. Pull outside (3) and remove blower motor.
   CAUTION:
   The balance is adjusted when blower fan and blower motor are assembled, so do not replace the individual parts.



INSTALLATION

Installation is basically the reverse order of removal.

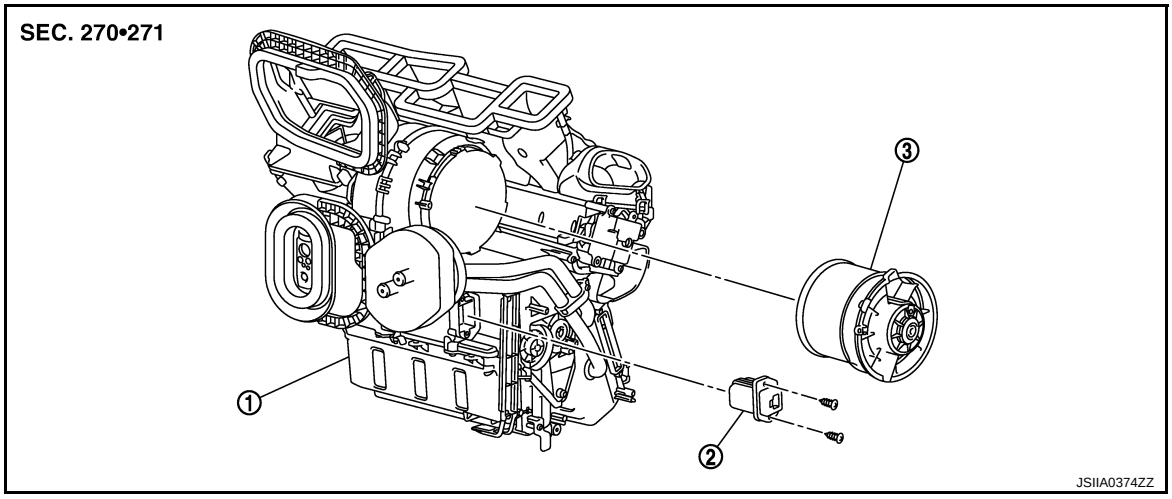
CAUTION:

Install correctly blower motor flange holding hook in A/C unit assembly.

FAN CONTROL AMPLIFIER

Exploded View

INFOID:0000000001298076



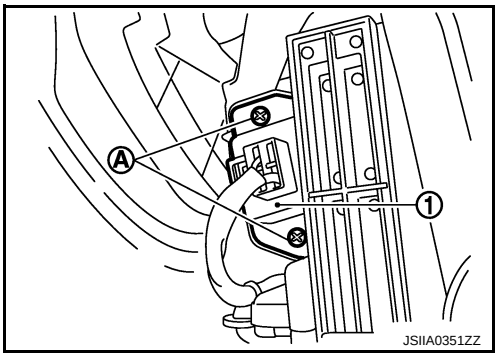
1. A/C unit assembly
2. Fan control amp.
3. Blower motor

Removal and Installation

INFOID:0000000001283100

REMOVAL

1. Remove glove box cover assembly. Refer to IP-11, "Exploded View".
2. Disconnect fan control amp. connector.
3. Remove mounting screws (A), and then remove fan control amp. (1).



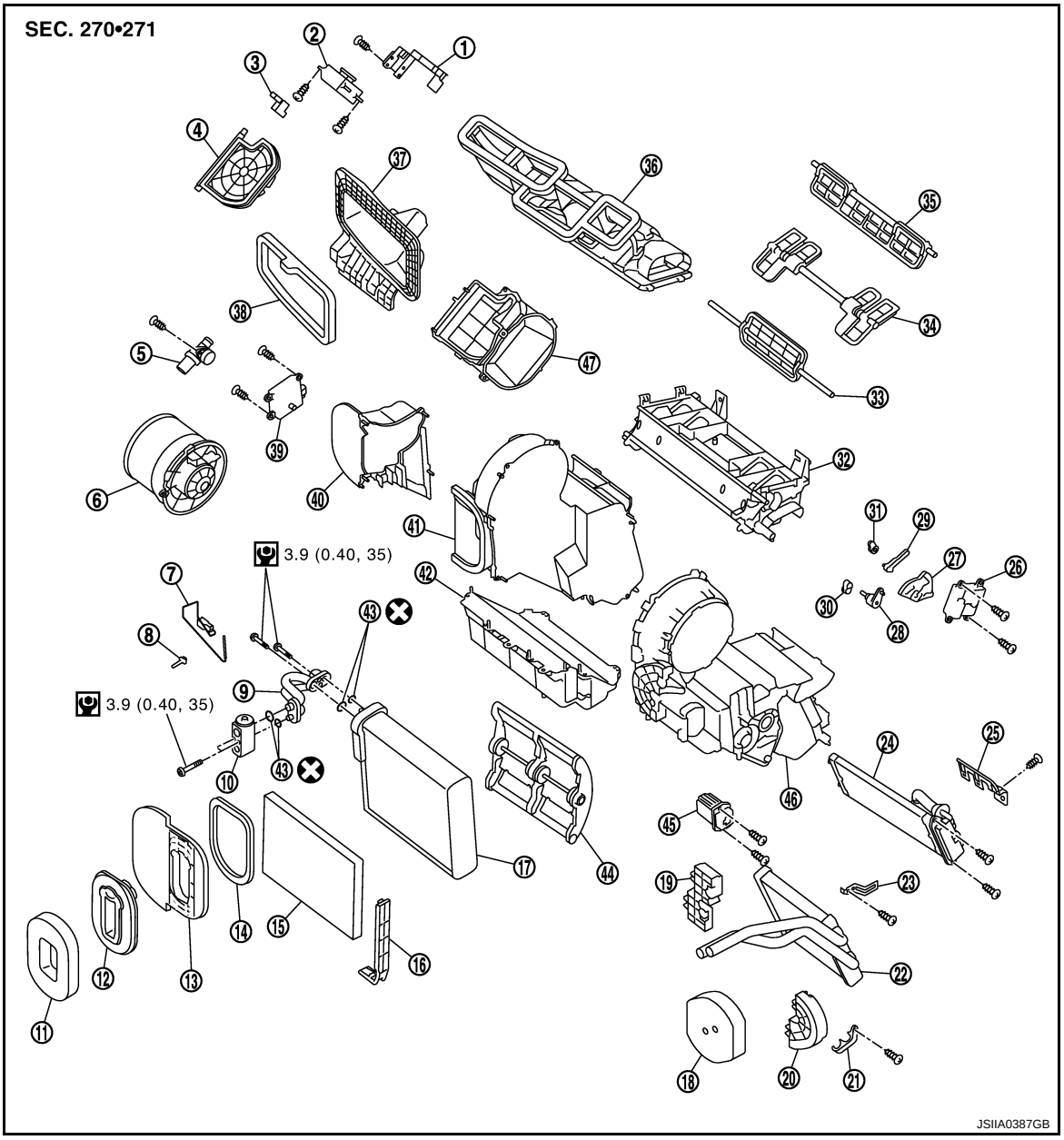
INSTALLATION

Installation is basically the reverse order of removal.

HEATER CORE

Exploded View

INFOID:0000000001298082



1. Intake door motor bracket
2. Intake door motor
3. Intake door lever
4. Intake door
5. Aspirator
6. Blower motor
7. Intake sensor
8. Intake sensor bracket
9. Pipe assembly
10. Expansion valve
11. Expansion valve packing
12. Expansion valve grommet
13. Grommet adaptor
14. Adaptor packing
15. Air conditioner filter
16. Air conditioner filter cover
17. Evaporator
18. Heater packing
19. Heater adapter
20. Heater pipe flange
21. Heater pipe clamp
22. Heater core
23. Case bracket
24. PTC heater (M9R)
25. PTC harness bracket (M9R)
26. Mode door motor
27. Main link
28. Ventilator door lever
29. Foot door link
30. Defroster door lever
31. Foot door lever
32. Distributor module case
33. Defroster door
34. Ventilator door
35. Foot door
36. Adaptor duct

37. Attachment panel
38. Attachment panel packing
39. Air mix door motor
40. Side case
41. Main case RH
42. Lower case
43. O-ring
44. Air mix door (Slide door)
45. Fan control amp.
46. Main case LH
47. Intake box case

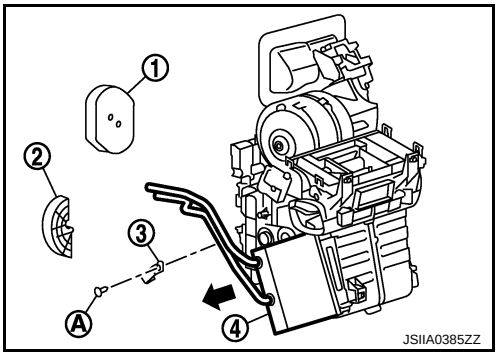
Refer to GI-4, "Components" for symbols in the figure.

Removal and Installation

INFOID:0000000001283102

REMOVAL

1. Remove A/C unit assembly. Refer to VTL-75, "Exploded View".
2. Remove heater packing (1).
3. Remove heater pipe flange (2).
4. Remove mounting screws (A), and then remove heater pipe clamp (3).
5. Slide heater core (4) to leftward (shown in the figure).



INSTALLATION

Installation is basically the reverse order of removal.

NOTE:

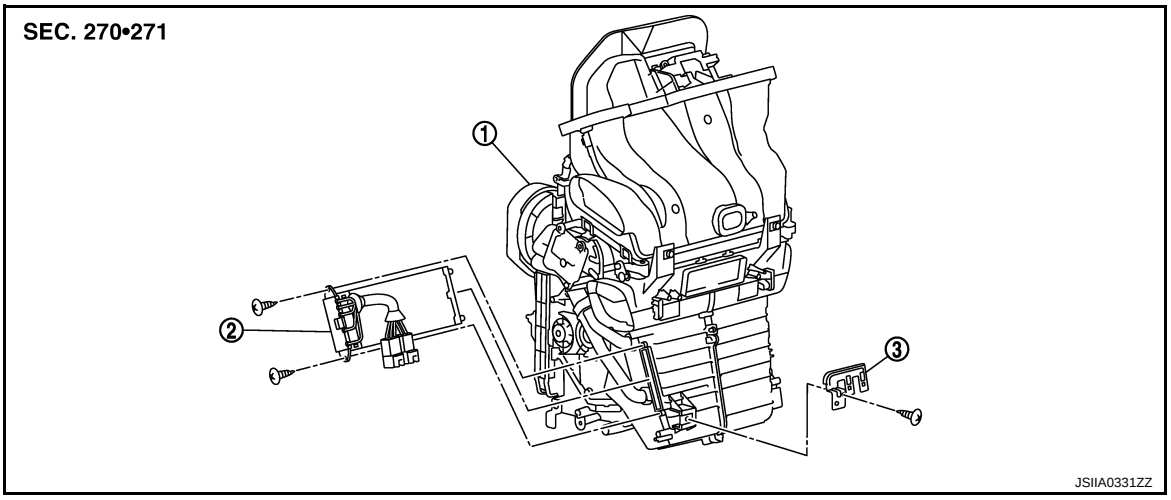
Refer to CO-11, "Refilling" (MR20DE), CO-42, "Refilling" (QR25DE) or CO-69, "Refilling" (M9R) when filling radiator with engine coolant.

PTC HEATER

M9R

M9R : Exploded View

INFOID:0000000001283103



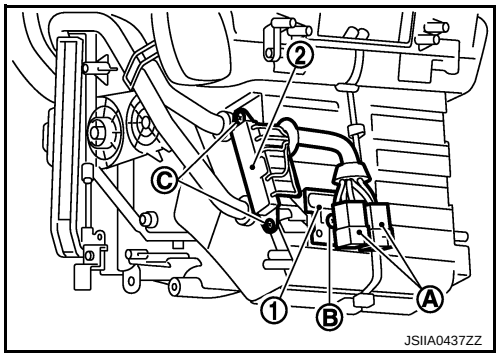
1. A/C unit assembly
2. PTC heater
3. PTC harness bracket

M9R : Removal and Installation

INFOID:0000000001283104

REMOVAL

1. Remove center console assembly. Refer to IP-21, "Exploded View".
2. Remove instrument center lower panel. Refer to IP-11, "Exploded View".
3. Disconnect PTC heater connectors (A).
4. Remove mounting screw (B), and then remove PTC harness bracket (1).
5. Remove PTC heater connectors from PTC harness bracket.
6. Remove mounting screws (C), and then remove PTC heater (2).



INSTALLATION

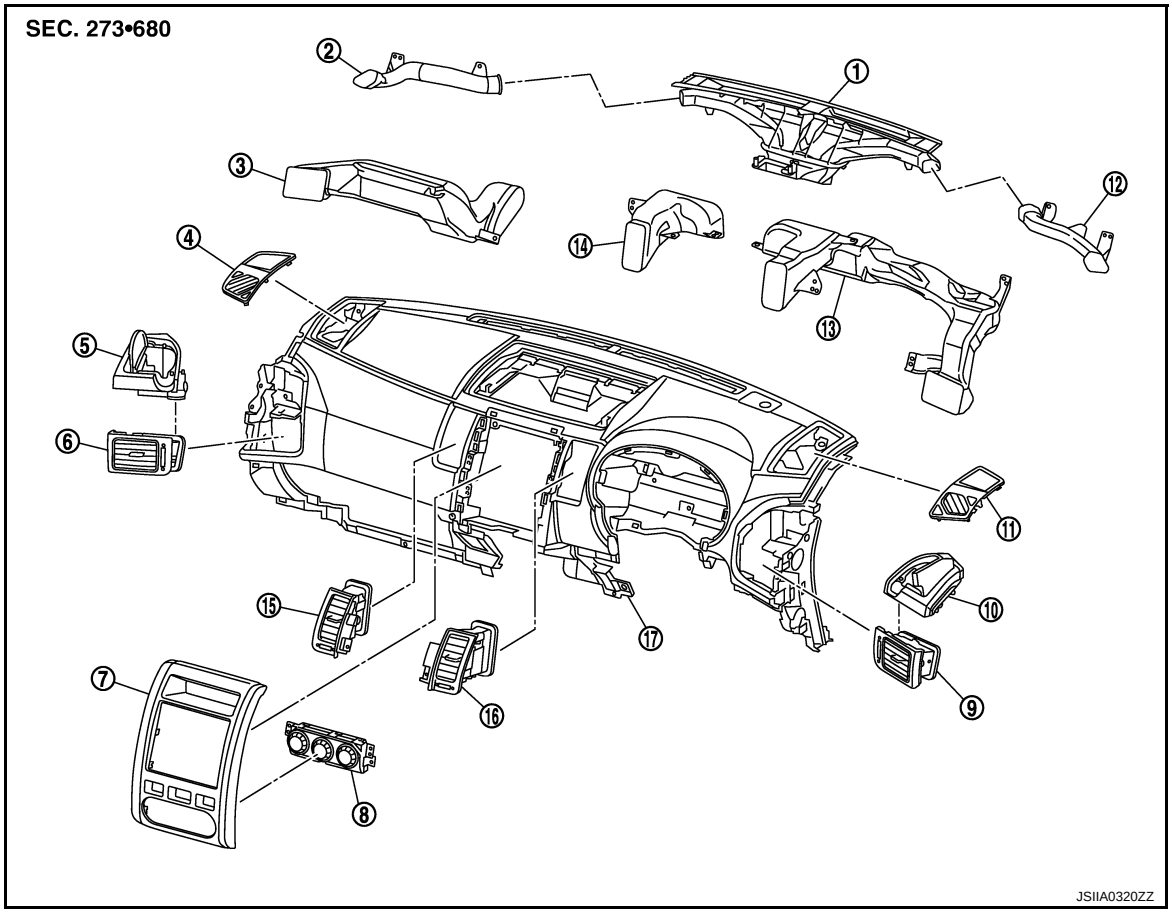
Installation is basically the reverse order of removal.

DUCTS AND GRILLES

CENTER VENTILATOR GRILLES

CENTER VENTILATOR GRILLES : Exploded View

INFOID:0000000001283105



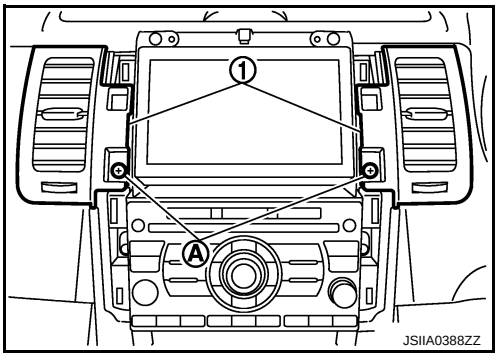
1. Defroster nozzle
2. Side defroster nozzle LH
3. Side ventilator duct LH
4. Speaker grille LH
5. Cup holder assembly LH
6. Side ventilator grille LH
7. Cluster lid C
8. Controller
9. Side ventilator grille RH
10. Cup holder assembly RH
11. Speaker grille RH
12. Side defroster nozzle RH
13. Side ventilator duct RH
14. Center ventilator duct
15. Center ventilator grille LH
16. Center ventilator grille RH
17. Instrument panel

CENTER VENTILATOR GRILLES : Removal and Installation

INFOID:0000000001283106

REMOVAL

1. Remove cluster lid C. Refer to IP-11, "Exploded View".
2. Remove screws (A), and then remove center ventilator grilles (1).



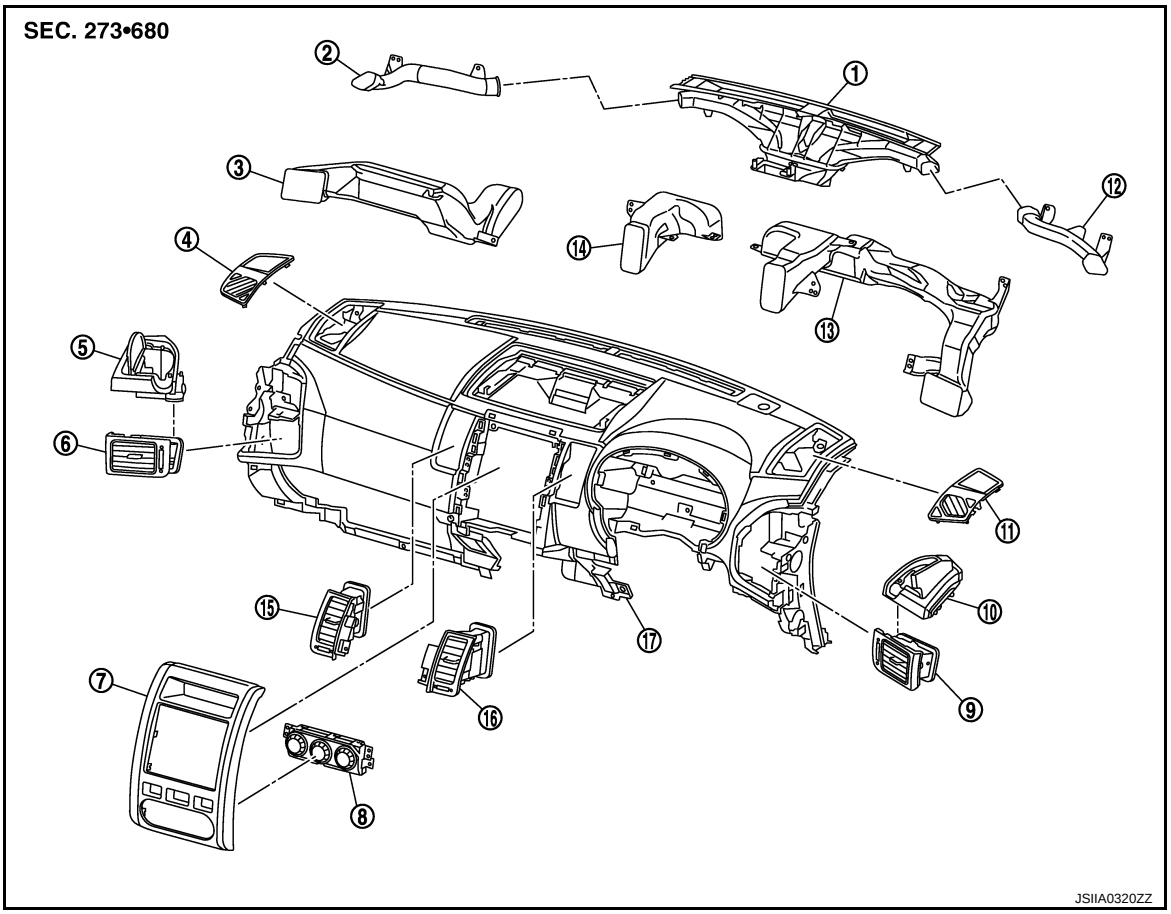
INSTALLATION

Installation is basically the reverse order of removal.

SIDE VENTILATOR GRILLES

SIDE VENTILATOR GRILLES : Exploded View

INFOID:0000000001297537



1. Defroster nozzle
2. Side defroster nozzle LH
3. Side ventilator duct LH
4. Speaker grille LH
5. Cup holder assembly LH
6. Side ventilator grille LH
7. Cluster lid C
8. Controller
9. Side ventilator grille RH
10. Cup holder assembly RH
11. Speaker grille RH
12. Side defroster nozzle RH
13. Side ventilator duct RH
14. Center ventilator duct
15. Center ventilator grille LH
16. Center ventilator grille RH
17. Instrument panel

SIDE VENTILATOR GRILLES : Removal and Installation

INFOID:0000000001283108

REMOVAL

1. Remove cup holder assembly. Refer to IP-11, "Exploded View".
2. Remove side ventilator grilles.

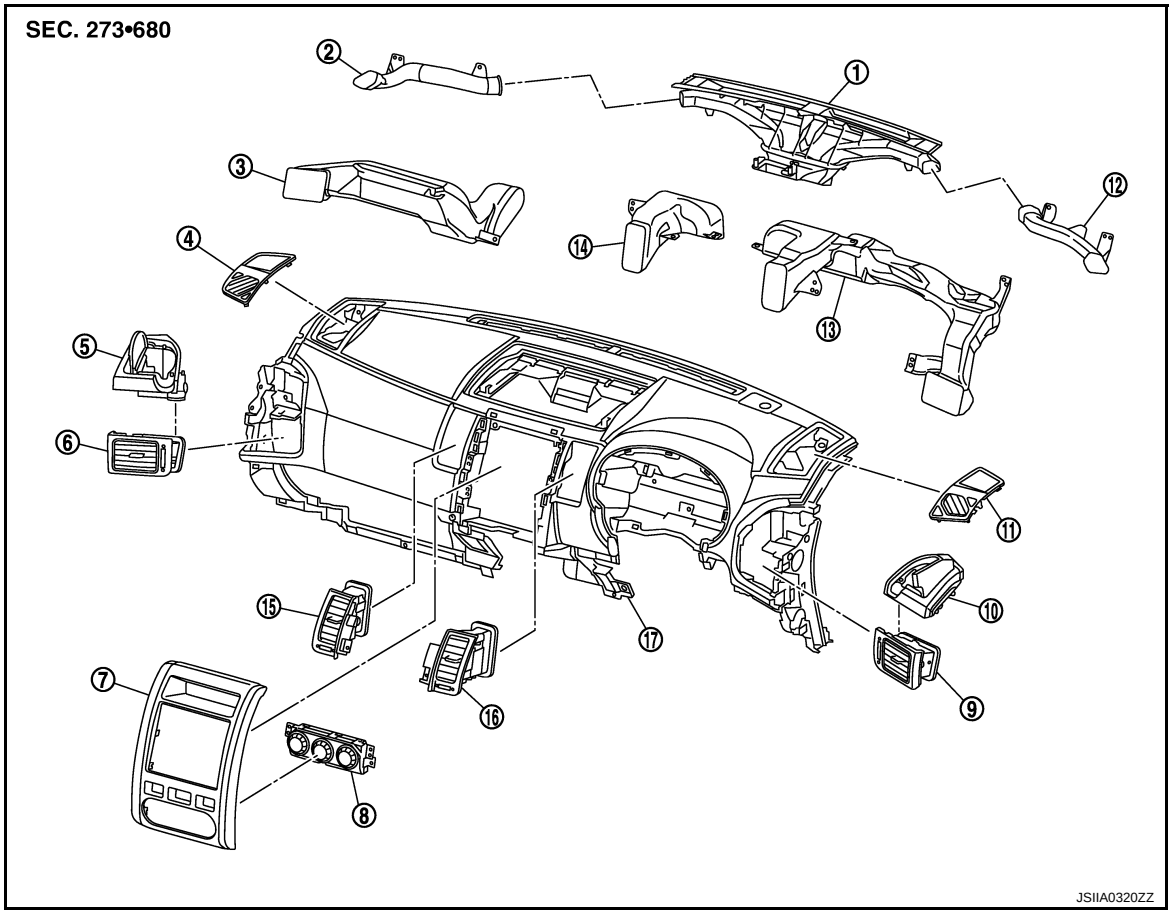
INSTALLATION

Installation is basically the reverse order of removal.

VENTILATOR DUCTS

VENTILATOR DUCTS : Exploded View

INFOID:0000000001297538



1. Defroster nozzle
2. Side defroster nozzle LH
3. Side ventilator duct LH
4. Speaker grille LH
5. Cup holder assembly LH
6. Side ventilator grille LH
7. Cluster lid C
8. Controller
9. Side ventilator grille RH
10. Cup holder assembly RH
11. Speaker grille RH
12. Side defroster nozzle RH
13. Side ventilator duct RH
14. Center ventilator duct
15. Center ventilator grille LH
16. Center ventilator grille RH
17. Instrument panel

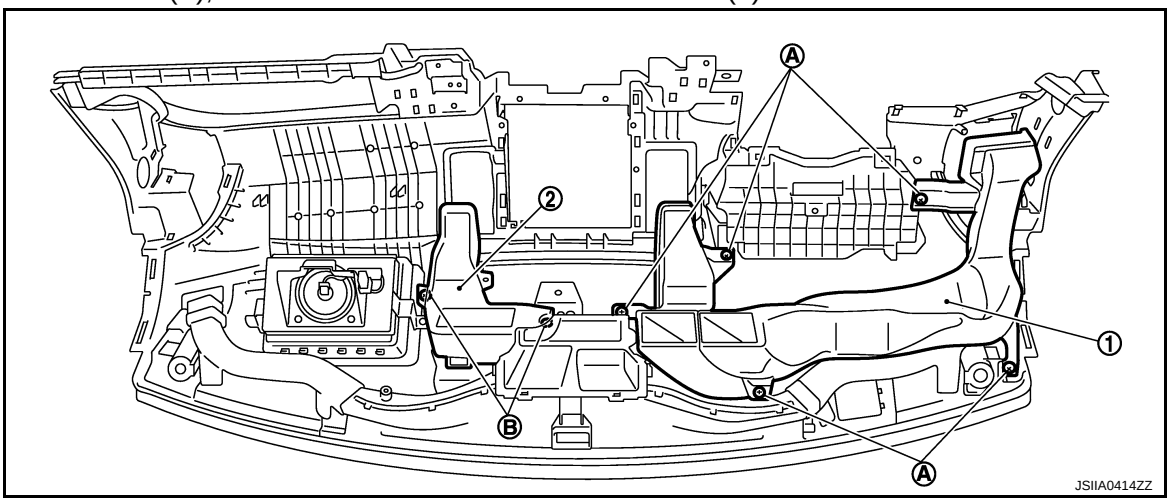
VENTILATOR DUCTS : Removal and Installation

INFOID:0000000001283110

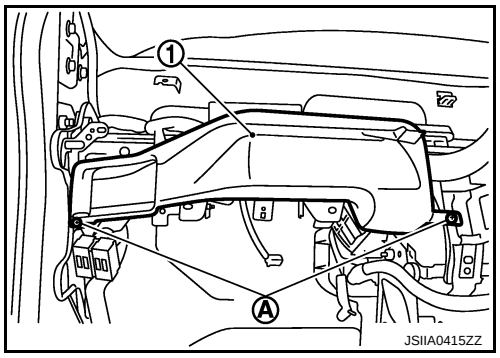
REMOVAL

1. Remove instrument panel. Refer to IP-11, "Exploded View".

2. Remove screws (A), and then remove side ventilator duct RH (1).



3. Remove screws (B), and then remove center ventilator duct (2).
4. Remove screws (A), and then remove side ventilator duct LH (1).



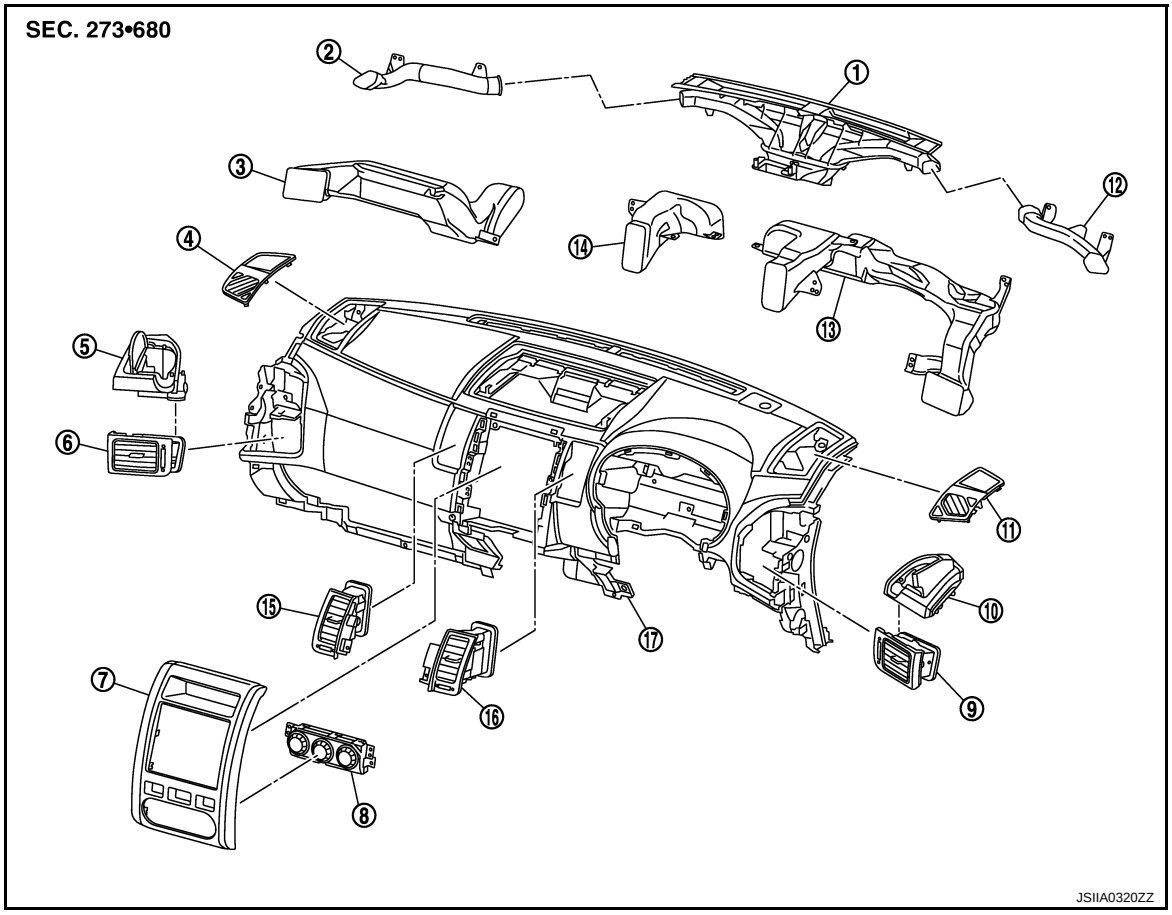
INSTALLATION

Installation is basically the reverse order of removal.

SIDE DEFROSTER NOZZLES

SIDE DEFROSTER NOZZLES : Exploded View

INFOID:0000000001297539



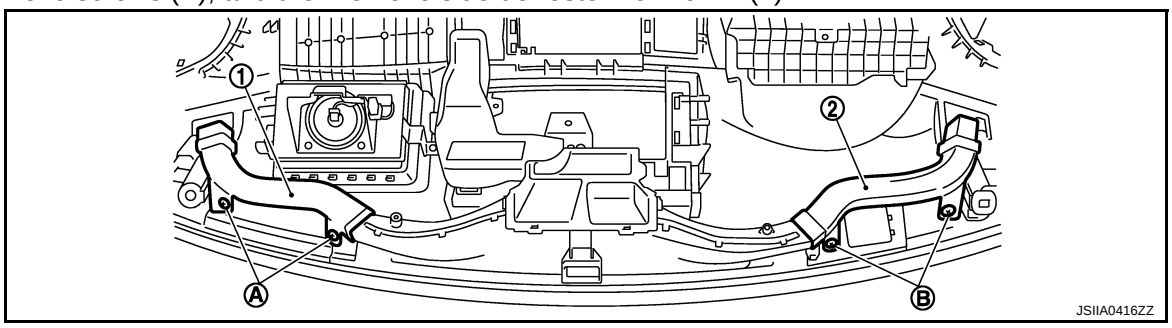
1. Defroster nozzle
2. Side defroster nozzle LH
3. Side ventilator duct LH
4. Speaker grille LH
5. Cup holder assembly LH
6. Side ventilator grille LH
7. Cluster lid C
8. Controller
9. Side ventilator grille RH
10. Cup holder assembly RH
11. Speaker grille RH
12. Side defroster nozzle RH
13. Side ventilator duct RH
14. Center ventilator duct
15. Center ventilator grille LH
16. Center ventilator grille RH
17. Instrument panel

SIDE DEFROSTER NOZZLES : Removal and Installation

INFOID:0000000001283112

REMOVAL

1. Remove side ventilator duct RH. Refer to VTL-86, "VENTILATOR DUCTS : Exploded View".
2. Remove screws (A), and then remove side defroster nozzle LH (1).



3. Remove screws (B), and then remove side defroster nozzle RH (2).

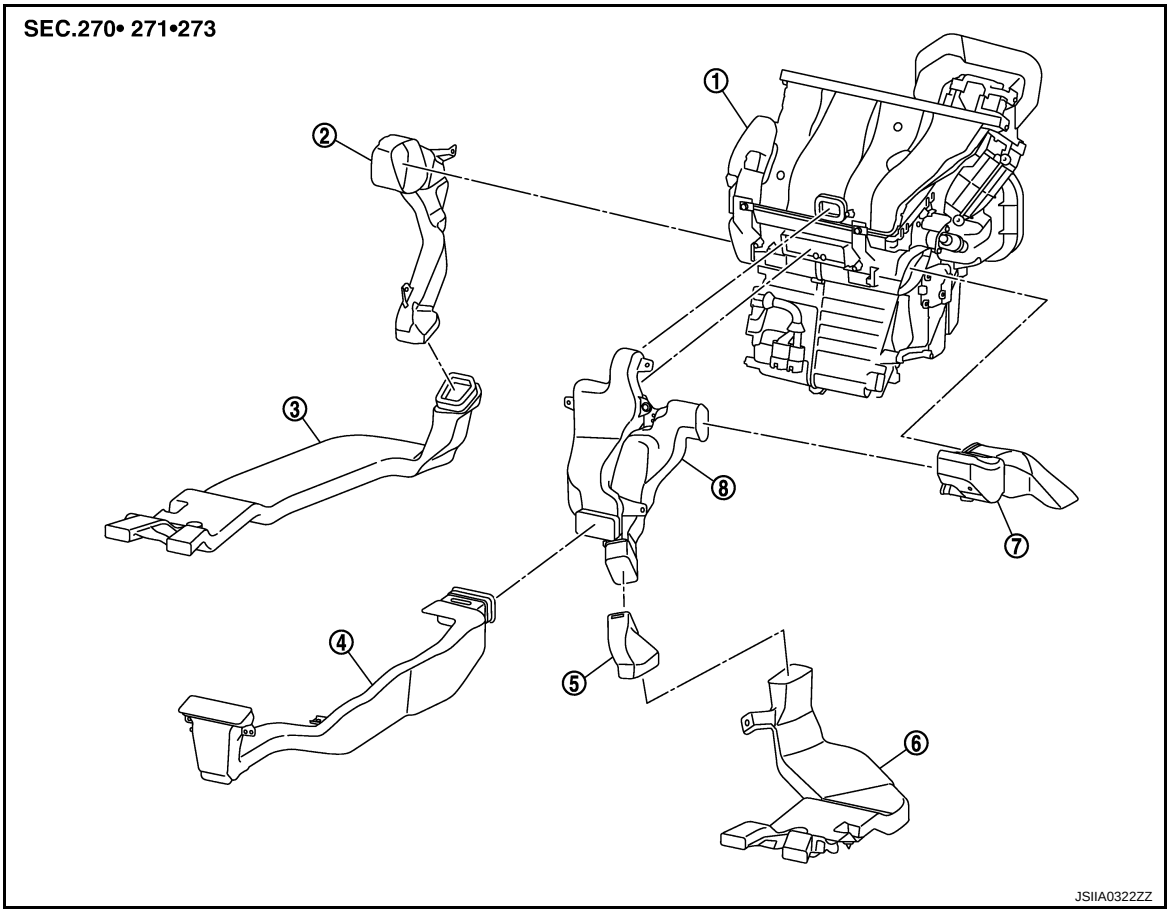
INSTALLATION

Installation is basically the reverse order of removal.

FOOT DUCTS

FOOT DUCTS : Exploded View

INFOID:0000000001283113



1. A/C unit assembly
2. Foot duct LH
3. Front floor duct 2 LH
4. Rear floor duct 2
5. Front floor duct 1 RH
6. Front floor duct 2 RH
7. Foot duct RH
8. Rear floor duct 1

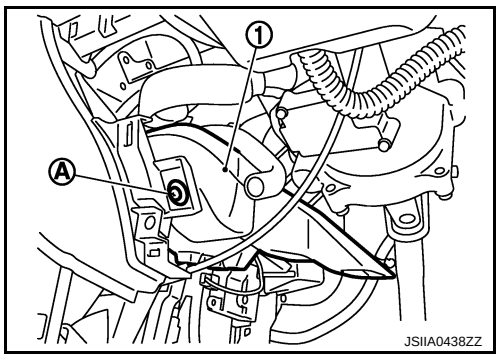
FOOT DUCTS : Removal and Installation

INFOID:0000000001283114

REMOVAL

Driver side

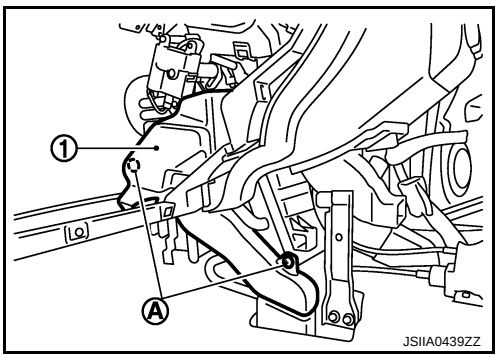
1. Remove instrument driver lower panel. Refer to IP-11, "Exploded View".
2. Remove clip (A), and then remove foot duct RH (1).



Passenger side

1. Remove glove box cover assembly. Refer to IP-11, "Exploded View".

2. Remove mounting screws (A), and then remove foot duct LH (1).



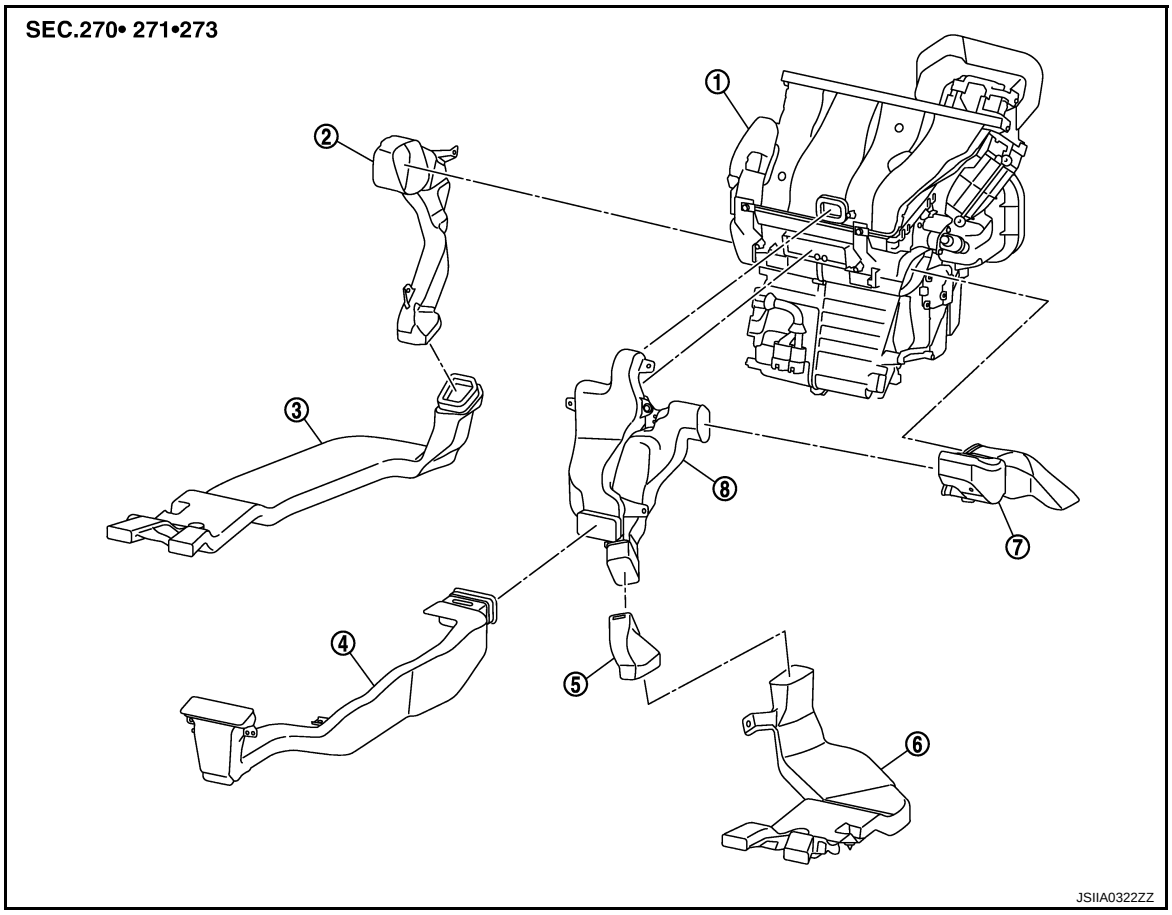
INSTALLATION

Installation is basically the reverse order of removal.

FRONT FLOOR DUCT 1

FRONT FLOOR DUCT 1 : Exploded View

INFOID:0000000001297540



1. A/C unit assembly
2. Foot duct LH
3. Front floor duct 2 LH
4. Rear floor duct 2
5. Front floor duct 1 RH
6. Front floor duct 2 RH
7. Foot duct RH
8. Rear floor duct 1

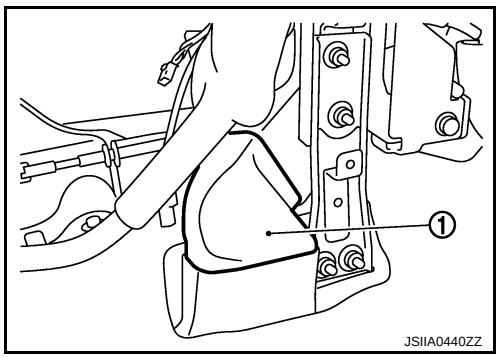
FRONT FLOOR DUCT 1 : Removal and Installation

INFOID:0000000001283116

REMOVAL

1. Remove instrument lower cover RH. Refer to IP-21, "Exploded View".
2. Remove center console assembly. Refer to IP-21, "Exploded View".

3. Remove front floor duct 1 (1).



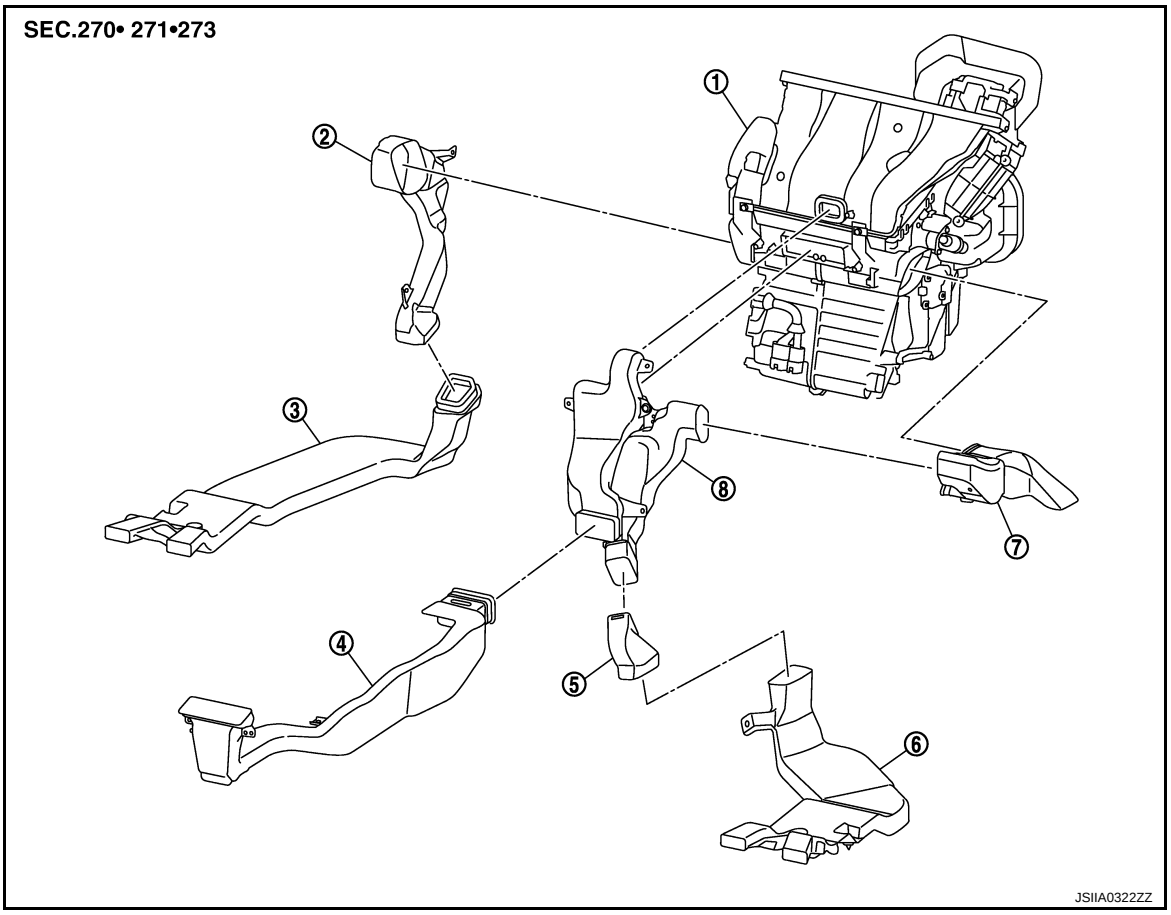
INSTALLATION

Installation is basically the reverse order of removal.

FRONT FLOOR DUCT 2

FRONT FLOOR DUCT 2 : Exploded View

INFOID:0000000001297541



1. A/C unit assembly
2. Foot duct LH
3. Front floor duct 2 LH
4. Rear floor duct 2
5. Front floor duct 1 RH
6. Front floor duct 2 RH
7. Foot duct RH
8. Rear floor duct 1

FRONT FLOOR DUCT 2 : Removal and Installation

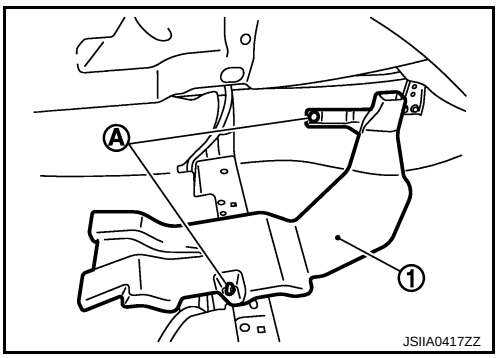
INFOID:0000000001283118

REMOVAL

Driver side

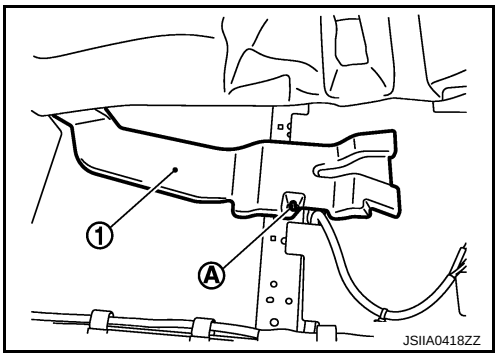
1. Peel back floor carpet to a point where front floor duct 2 RH is visible. Refer to INT-19, "Exploded View".

2. Remove clips (A), and then remove front floor duct 2 RH (1).



Passenger side

1. Peel back floor carpet to a point where front floor duct 2 LH is visible. Refer to INT-19, "Exploded View".
2. Remove clip (A), and then remove front floor duct 2 LH (1).



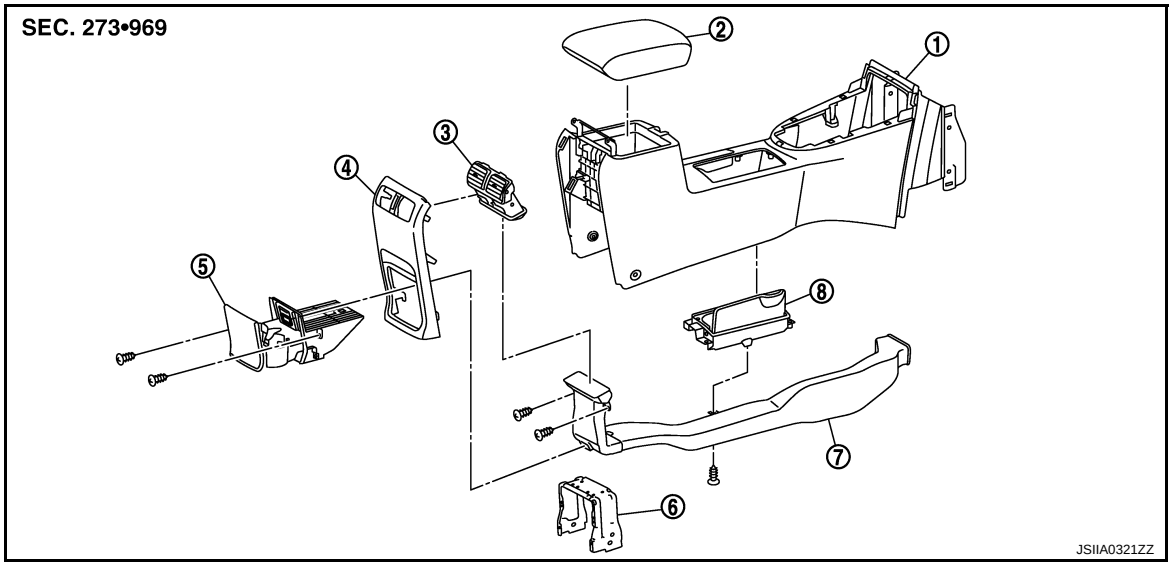
INSTALLATION

Installation is basically the reverse of removal.

REAR VENTILATOR GRILLE

REAR VENTILATOR GRILLE : Exploded View

INFOID:0000000001306480



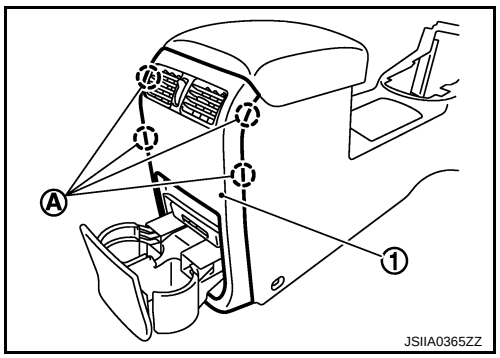
1. Console body
2. Console lid assembly
3. Rear ventilator grille
4. Console rear cover
5. Rear cup holder assembly
6. Console rear bracket
7. Rear floor duct 2
8. Cup holder assembly

REAR VENTILATOR GRILLE : Removal and Installation

INFOID:0000000001283120

REMOVAL

1. Remove pawls (A), and then remove console rear cover (1). Refer to IP-21, "Exploded View".
2. Remove rear ventilator grille.



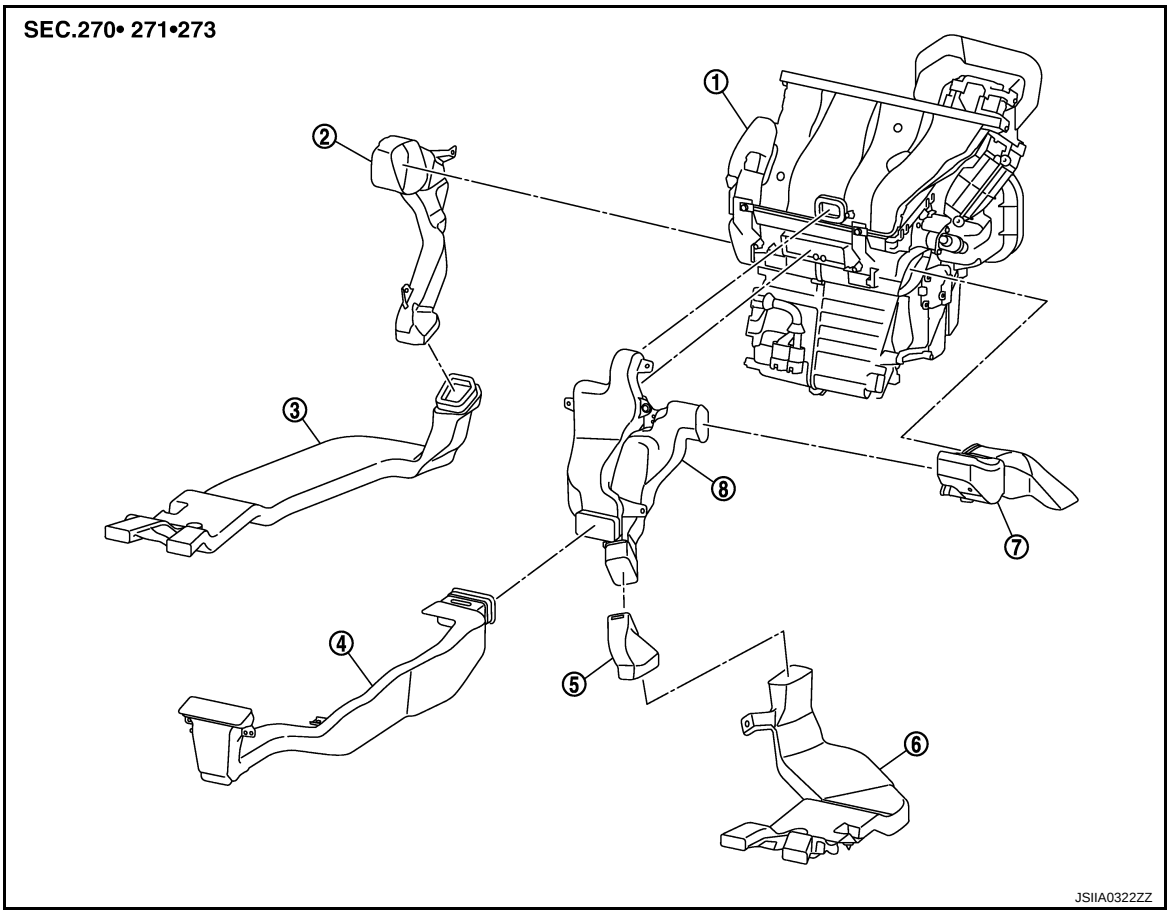
INSTALLATION

Installation is basically the reverse order of removal.

REAR FLOOR DUCT 1

REAR FLOOR DUCT 1 : Exploded View

INFOID:0000000001297543



1. A/C unit assembly
2. Foot duct LH
3. Front floor duct 2 LH
4. Rear floor duct 2
5. Front floor duct 1 RH
6. Front floor duct 2 RH
7. Foot duct RH
8. Rear floor duct 1

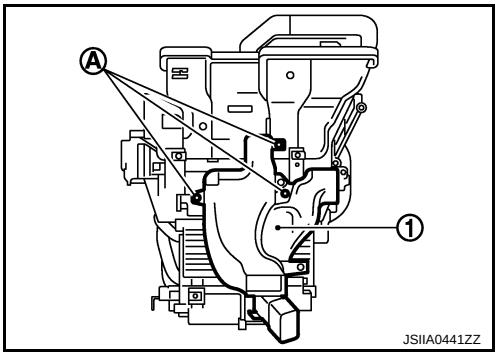
REAR FLOOR DUCT 1 : Removal and Installation

INFOID:0000000001283122

REMOVAL

1. Remove center console assembly. Refer to IP-21, "Exploded View".
2. Remove cluster lid C. Refer to IP-11, "Exploded View".
3. Remove instrument center lower panel. Refer to IP-11, "Exploded View".

4. Remove mounting screws (A), and then remove rear floor duct 1 (1).



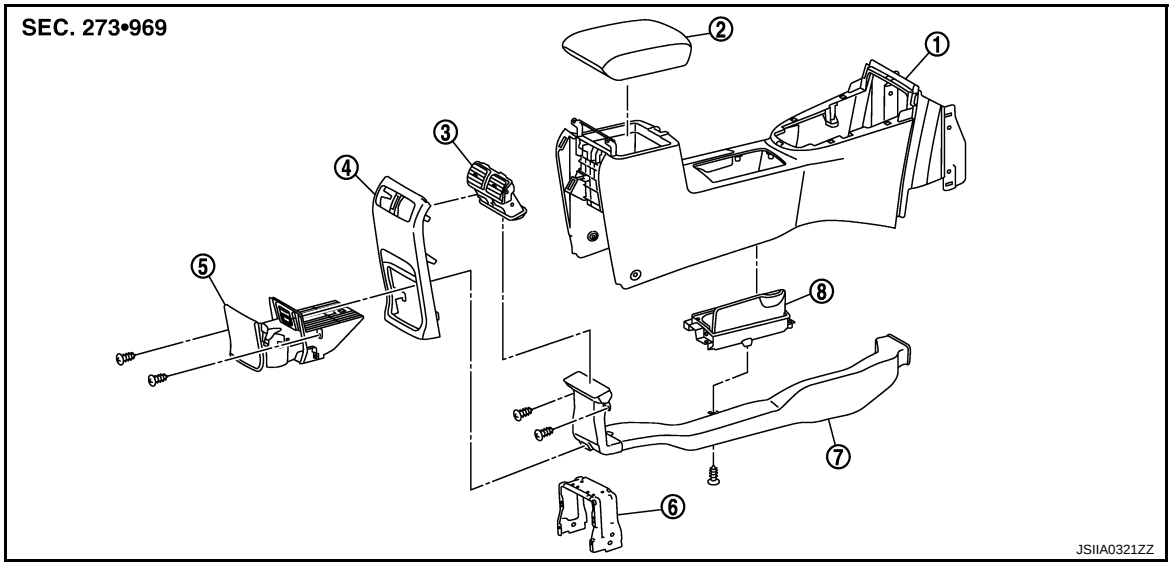
INSTALLATION

Installation is basically the reverse order of removal.

REAR FLOOR DUCT 2

REAR FLOOR DUCT 2 : Exploded View

INFOID:0000000001306479



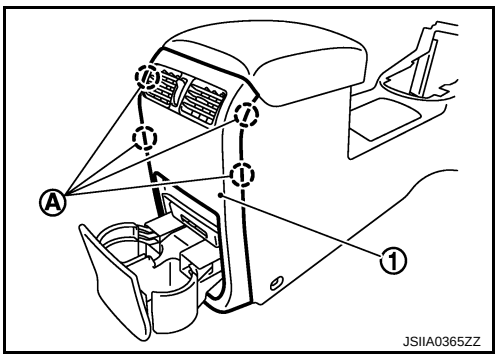
1. Console body
2. Console lid assembly
3. Rear ventilator grille
4. Console rear cover
5. Rear cup holder assembly
6. Console rear bracket
7. Rear floor duct 2
8. Cup holder assembly

REAR FLOOR DUCT 2 : Removal and Installation

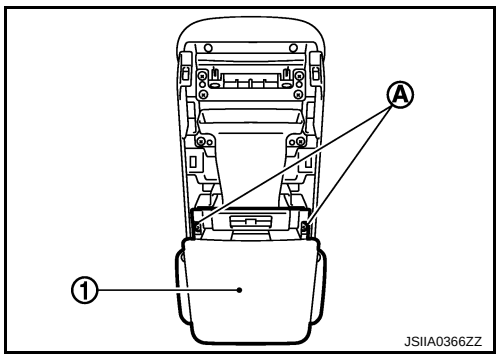
INFOID:0000000001283124

REMOVAL

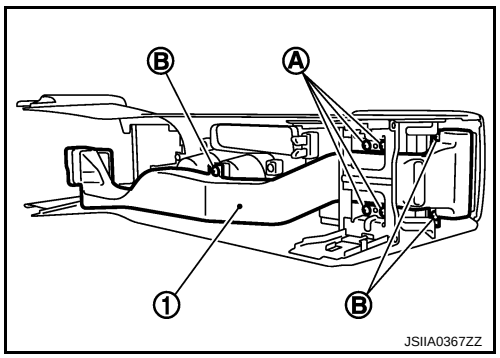
1. Remove center console assembly. Refer to IP-21, "Exploded View".
2. Remove pawls (A), and then remove console rear cover (1). Refer to IP-21, "Exploded View".



3. Remove mounting screws (A), and then remove rear cup holder assembly (1). Refer to IP-21, "Exploded View".



4. Remove mounting screws (A), and then remove console rear bracket.
5. Remove mounting screws (B), and then remove rear floor duct 2 (1).



INSTALLATION

Installation is basically the reverse of removal.