

SECTION **VTL**
VENTILATION SYSTEM

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SWITCHES AND THEIR CONTROL FUNCTION

< FUNCTION DIAGNOSIS >

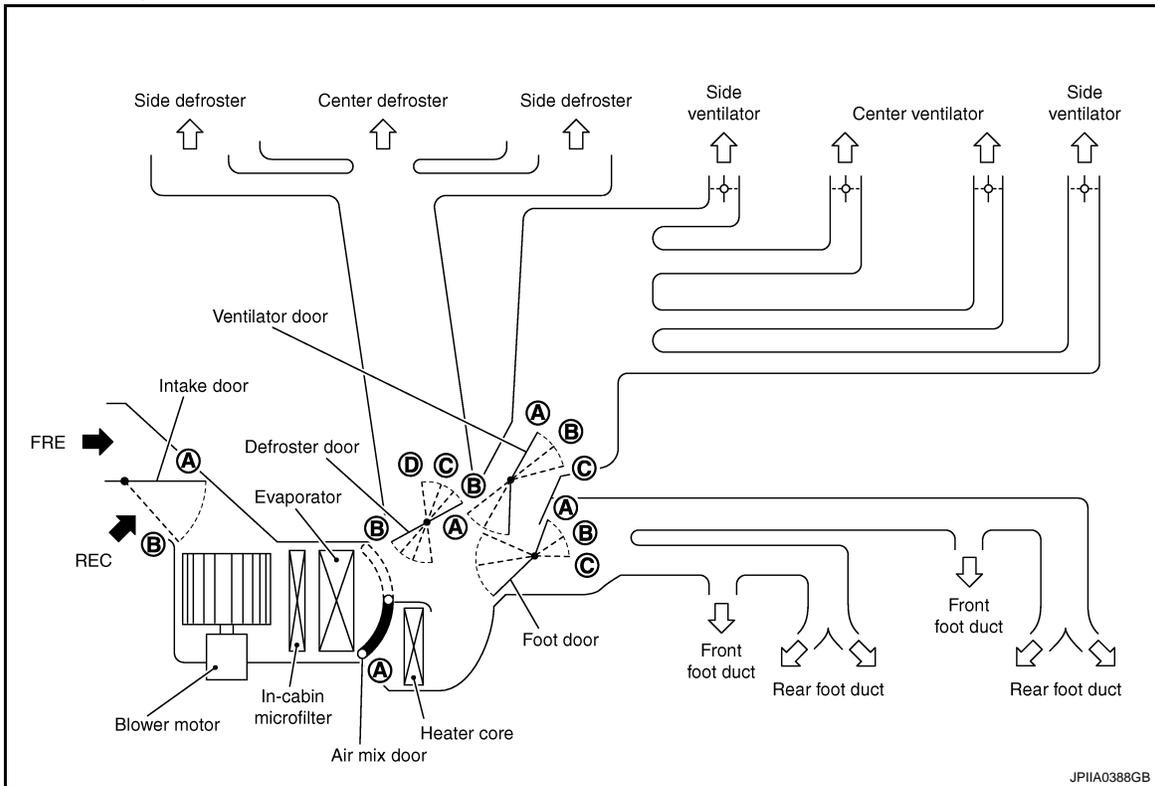
[MANUAL AIR CONDITIONER]

FUNCTION DIAGNOSIS

SWITCHES AND THEIR CONTROL FUNCTION

System Description

INFOID:000000001722504



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NOTE:

Ventilator door has center ventilator openings and side ventilator openings, side ventilator opening cannot be completely closed.

Door	Position or switch	Mode control dial							Intake switch		Temperature control dial			
		MAX A/C	VENT	B/L	FOOT	FOOT2	D/F	D/F2	DEF	ON	OFF	Full cold ↔ Full hot		
		MAX A/C				—		—						
Ventilator door	(A)	(A)	(B)	(C)	(C)	(C)	(C)	(C)	—	—	—			
Foot door	(A)	(A)	(B)	(C)	(C)	(B)	(B)	(A)	—	—	—			
Defroster door	(A)	(A)	(A)	(B)	(B-C)	(C)	(C-D)	(D)	—	—	—			
Intake door	(A)	—							(B)	(A)	(B)	—		
Air mix door	—		—							—		(A)	—	(B)

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AIR DISTRIBUTION

< FUNCTION DIAGNOSIS >

[MANUAL AIR CONDITIONER]

AIR DISTRIBUTION

System Description

INFOID:000000001722505

WITHOUT REAR FOOT DUCT

Discharge air flow			
Mode door position	Air outlet/distribution		
	VENT	FOOT	DEF
	100%	—	—
	63%	37%	—
	13%	63%	24%
	12%	41%	47%
	18%	—	82%

JPIIA0387GB

WITH REAR FOOT DUCT

Discharge air flow				
Mode door position	Air outlet/distribution			
	VENT	FOOT		DEF
		Front	Rear	
	100%	—	—	—
	60%	26%	14%	—
	13%	42%	24%	21%
	12%	28%	16%	44%
	18%	—	—	82%

JPIIA0386GB

PRECAUTION

PRECAUTIONS
FOR USA AND CANADA

FOR USA AND CANADA : Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

INFOID:000000003248375

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the "SRS AIRBAG" and "SEAT BELT" of this Service Manual.

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the "SRS AIRBAG".
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

FOR USA AND CANADA : Precaution Necessary for Steering Wheel Rotation After Battery Disconnect

INFOID:000000003248376

NOTE:

- This Procedure is applied only to models with Intelligent Key system and NVIS/IVIS (NISSAN/INFINITI VEHICLE IMMOBILIZER SYSTEM - NATS).
- 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 NVIS/IVIS, 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.

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PRECAUTIONS

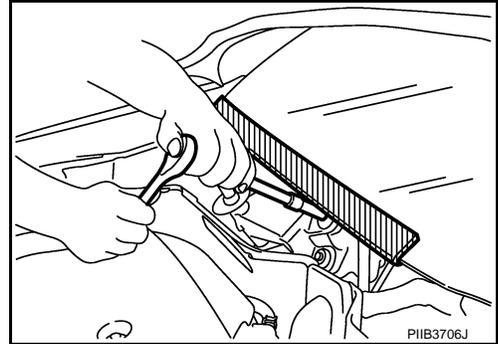
< PRECAUTION >

[MANUAL AIR CONDITIONER]

FOR USA AND CANADA : Precaution for Procedure without Cowl Top Cover

INFOID:000000003248377

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



FOR USA AND CANADA : Precautions For Xenon Headlamp Service

INFOID:000000003248378

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.).

FOR USA AND CANADA : Working with HFC-134a (R-134a)

INFOID:000000003248379

CAUTION:

- CFC-12 (R-12) refrigerant and HFC-134a (R-134a) refrigerant are not compatible. Compressor malfunction is likely to occur if the refrigerants are mixed, refer to "CONTAMINATED REFRIGERANT" below. To determine the purity of HFC-134a (R-134a) in the vehicle and recovery tank, use Refrigerant Recovery/Recycling Recharging equipment and Refrigerant Identifier.
- 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.

CONTAMINATED REFRIGERANT

Take appropriate steps shown below if a refrigerant other than pure HFC-134a (R-134a) is identified in a vehicle:

- Explain to the customer that environmental regulations prohibit the release of contaminated refrigerant into the atmosphere.

PRECAUTIONS

[MANUAL AIR CONDITIONER]

< PRECAUTION >

- Explain that recovery of the contaminated refrigerant could damage service equipment and refrigerant supply.
- Suggest the customer return the vehicle to the location of previous service where the contamination may have occurred.
- In case of repairing, recover the refrigerant using only **dedicated equipment and containers. Never recover contaminated refrigerant into the existing service equipment.** Contact a local refrigerant product retailer for available service if the facility does not have dedicated recovery equipment. This refrigerant must be disposed of in accordance with all federal and local regulations. In addition, replacement of all refrigerant system components on the vehicle is recommended.
- The air conditioner warranty is void if the vehicle is within the warranty period. Please contact Nissan Customer Affairs for further assistance.

FOR USA AND CANADA : General Refrigerant Precaution

INFOID:000000003248380

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.**

FOR USA AND CANADA : Refrigerant Connection

INFOID:000000003248381

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

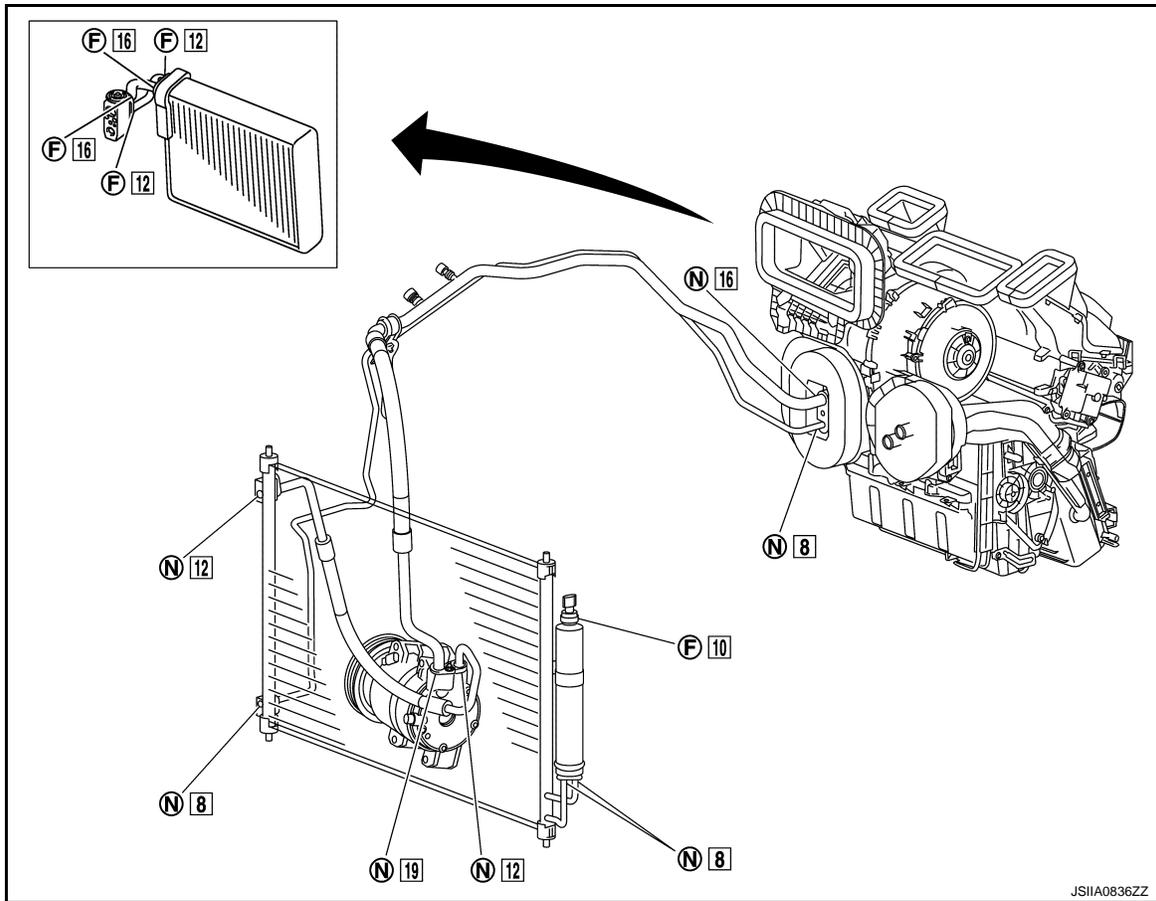
O-RING AND REFRIGERANT CONNECTION

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PRECAUTIONS

< PRECAUTION >

[MANUAL AIR CONDITIONER]



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
	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
		Outlet	1		
Former	Refrigerant pressure sensor to liquid tank		J2476 89956	1	10
	Evaporator 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.

PRECAUTIONS

< PRECAUTION >

[MANUAL AIR CONDITIONER]

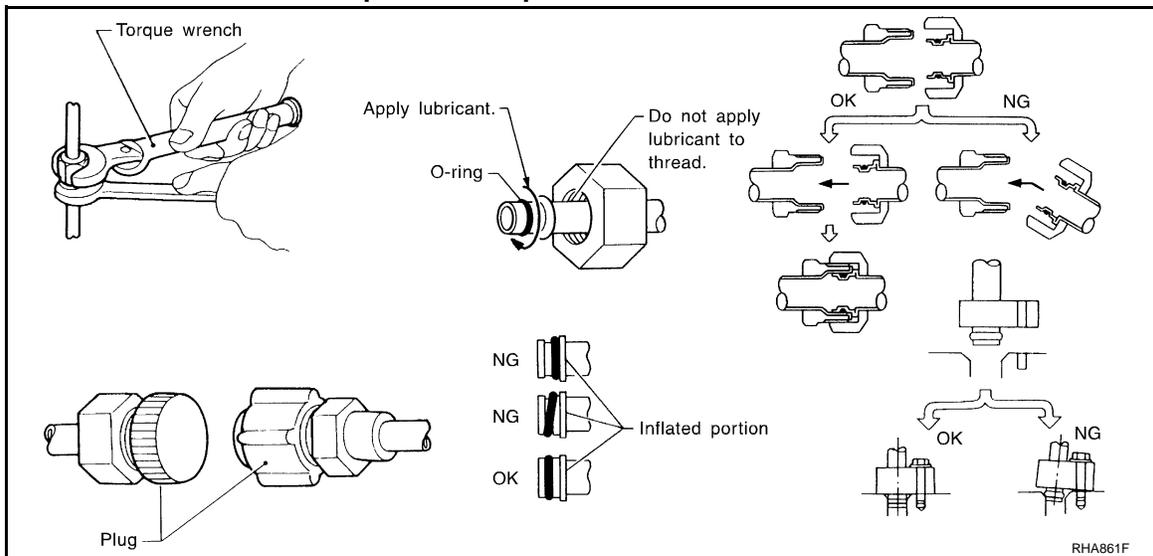
CAUTION:

Observe the following when replacing or cleaning refrigerant cycle components.

- Store it in the same way as 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.



FOR USA AND CANADA : Service Equipment

INFOID:000000003248382

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

PRECAUTIONS

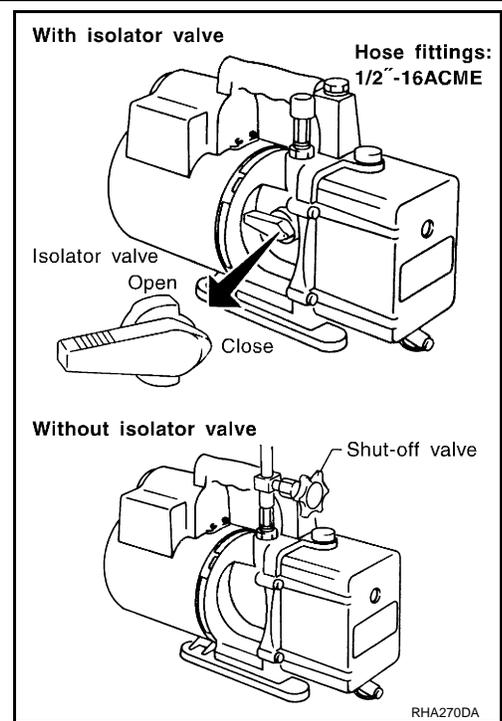
< PRECAUTION >

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.

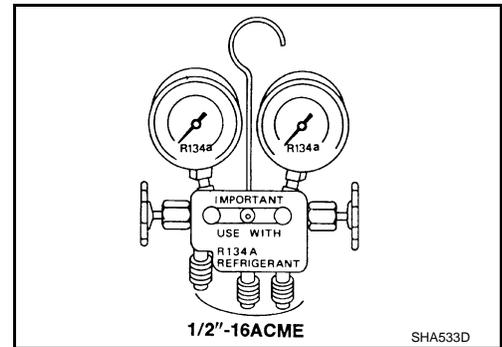
Some one-way valves open when vacuum is applied and close under no vacuum condition. Such valves may restrict the pump's ability to pull a deep vacuum and are not recommended.

[MANUAL AIR CONDITIONER]



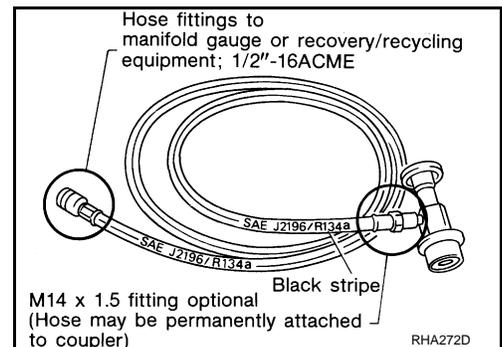
MANIFOLD GAUGE SET

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

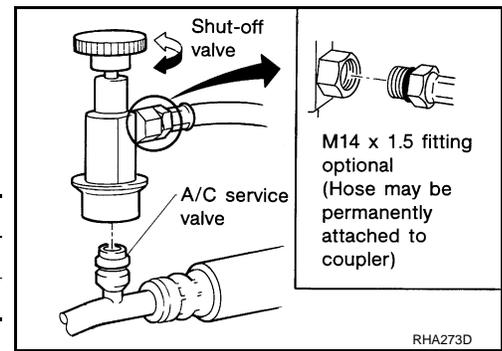
PRECAUTIONS

< PRECAUTION >

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.

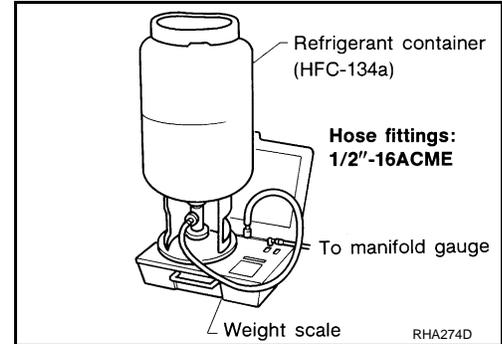
Shut-off valve rotation	A/C service valve
Clockwise	Open
Counterclockwise	Close

[MANUAL AIR CONDITIONER]



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.



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.

FOR MEXICO

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

INFOID:000000003248383

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.

FOR MEXICO : Precaution Necessary for Steering Wheel Rotation After Battery Disconnect

INFOID:000000003248384

NOTE:

- This Procedure is applied only to models with Intelligent Key system and NVIS/IVIS (NISSAN/INFINITI VEHICLE IMMOBILIZER SYSTEM - NATS).
- 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.

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PRECAUTIONS

[MANUAL AIR CONDITIONER]

< PRECAUTION >

For models equipped with the Intelligent Key system and NVIS/IVIS, 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:

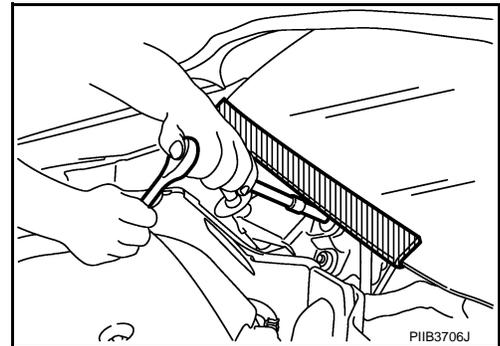
Supply power using jumper cables if battery is discharged.

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.

FOR MEXICO : Precaution for Procedure without Cowl Top Cover

INFOID:000000003248385

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



FOR MEXICO : Precautions For Xenon Headlamp Service

INFOID:000000003248386

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.).

FOR MEXICO : Working with HFC-134a (R-134a)

INFOID:000000003248387

CAUTION:

- CFC-12 (R-12) refrigerant and HFC-134a (R-134a) refrigerant are not compatible. Compressor malfunction is likely to occur if the refrigerants are mixed, refer to "CONTAMINATED REFRIGERANT"

PRECAUTIONS

[MANUAL AIR CONDITIONER]

< PRECAUTION >

- below. To determine the purity of HFC-134a (R-134a) in the vehicle and recovery tank, use Refrigerant Recovery/Recycling Recharging equipment and Refrigerant Identifier.
- 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.

CONTAMINATED REFRIGERANT

Take appropriate steps shown below if a refrigerant other than pure HFC-134a (R-134a) is identified in a vehicle:

- Explain to the customer that environmental regulations prohibit the release of contaminated refrigerant into the atmosphere.
- Explain that recovery of the contaminated refrigerant could damage service equipment and refrigerant supply.
- Suggest the customer return the vehicle to the location of previous service where the contamination may have occurred.
- In case of repairing, recover the refrigerant using only **dedicated equipment and containers. Never recover contaminated refrigerant into the existing service equipment.** Contact a local refrigerant product retailer for available service if the facility does not have dedicated recovery equipment. This refrigerant must be disposed of in accordance with all federal and local regulations. In addition, replacement of all refrigerant system components on the vehicle is recommended.
- The air conditioner warranty is void if the vehicle is within the warranty period. Please contact Nissan Customer Affairs for further assistance.

FOR MEXICO : General Refrigerant Precaution

INFOID:000000003248388

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.**

FOR MEXICO : Refrigerant Connection

INFOID:000000003248389

A new type refrigerant connection has been introduced to all refrigerant lines except the following location.

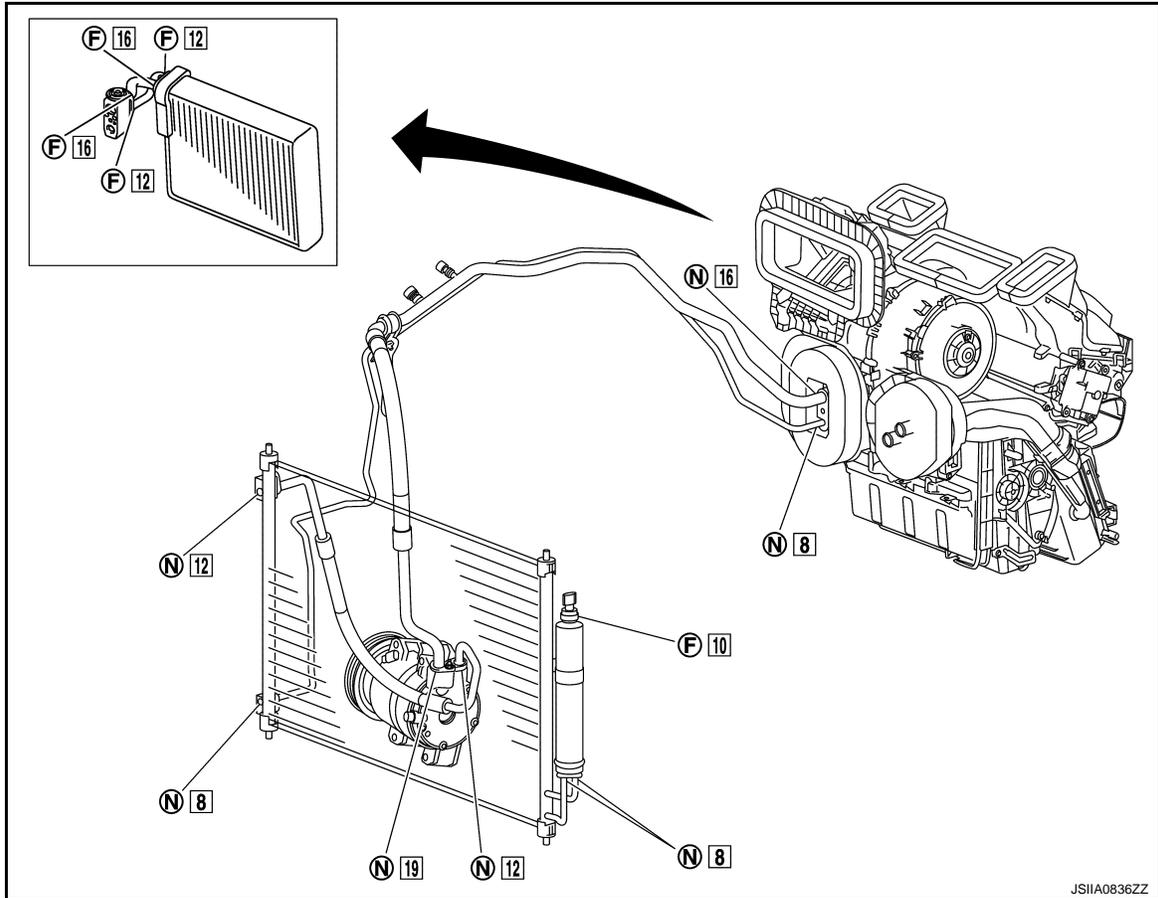
- Expansion valve to evaporator
- Refrigerant pressure sensor to liquid tank

PRECAUTIONS

< PRECAUTION >

[MANUAL AIR CONDITIONER]

O-RING AND REFRIGERANT CONNECTION



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
	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		92471 N8210	Inlet	1
		Outlet		1	
Former	Refrigerant pressure sensor to liquid tank		J2476 89956	1	10
	Evaporator pipe assembly	High-pressure side	92475 71L00	1	12
		Low-pressure side	92475 72L00	1	16

WARNING:

PRECAUTIONS

[MANUAL AIR CONDITIONER]

< PRECAUTION >

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.

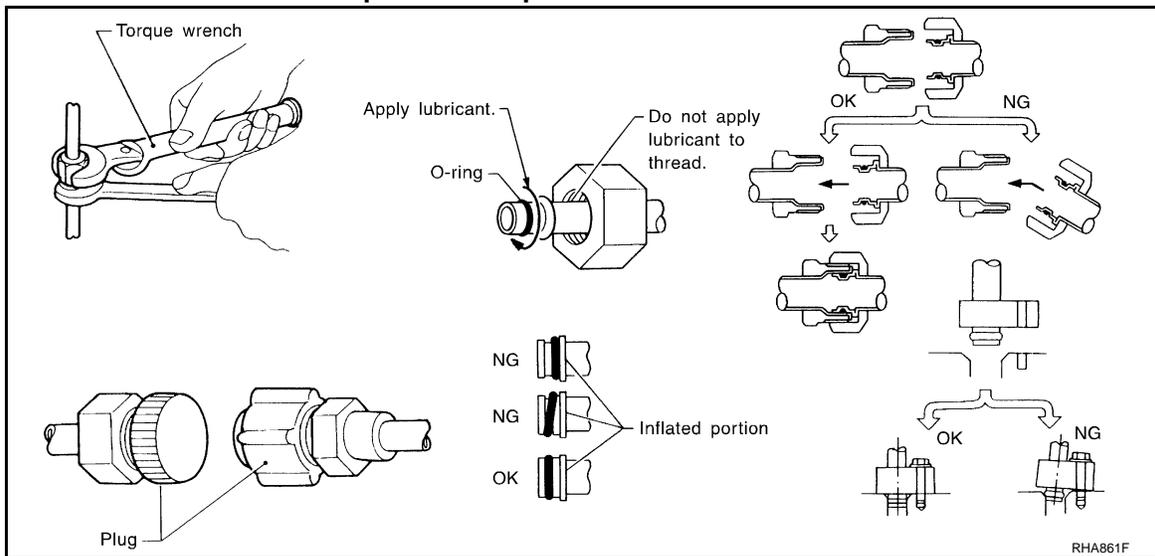
CAUTION:

Observe the following when replacing or cleaning refrigerant cycle components.

- Store it in the same way as 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.



FOR MEXICO : Service Equipment

INFOID:000000003248390

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

PRECAUTIONS

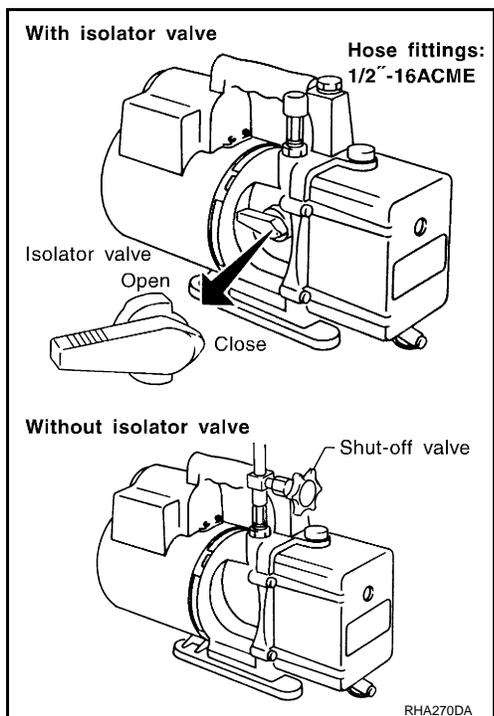
< PRECAUTION >

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.

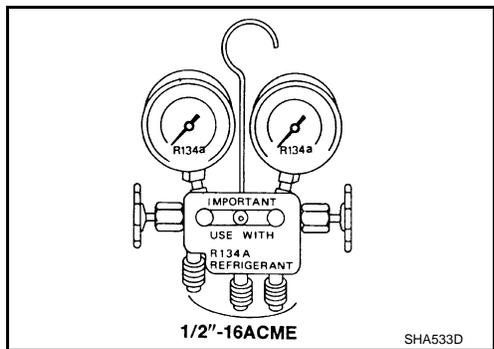
Some one-way valves open when vacuum is applied and close under no vacuum condition. Such valves may restrict the pump's ability to pull a deep vacuum and are not recommended.

[MANUAL AIR CONDITIONER]



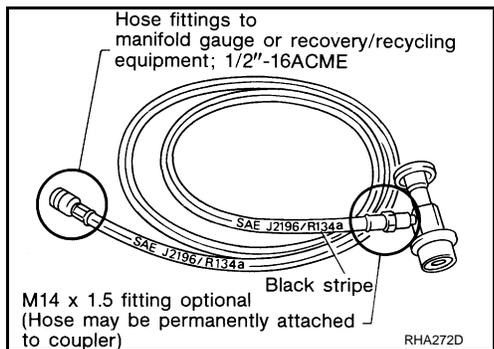
MANIFOLD GAUGE SET

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

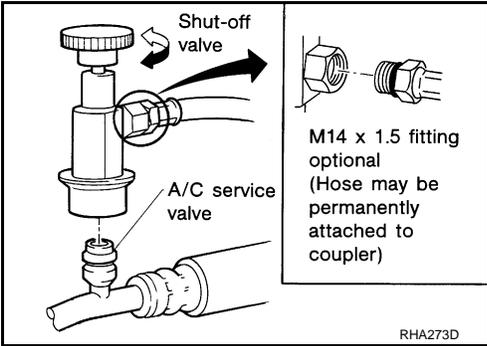
PRECAUTIONS

< PRECAUTION >

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.

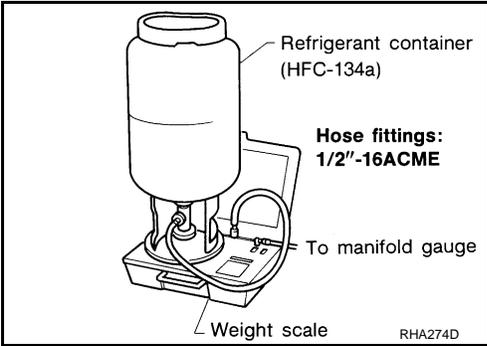
Shut-off valve rotation	A/C service valve
Clockwise	Open
Counterclockwise	Close

[MANUAL AIR CONDITIONER]



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.



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.

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< PRECAUTION >

COMPRESSOR

General Precautions

INFOID:000000001825931

CAUTION:

- Plug all openings to prevent moisture and foreign matter from entering.
- Store it in the same way as 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 to [HA-30, "Maintenance of Lubricant Quantity"](#).
- 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

< PRECAUTION >

[MANUAL AIR CONDITIONER]

FLUORESCENT LEAK DETECTOR

General Precautions

INFOID:000000001825932

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: J-41995). The fluorescent dye leak detector should be used in conjunction with an electrical leak detector (SST: J-41995) to pin-point 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: J-41995).
- 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.

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PREPARATION

PREPARATION

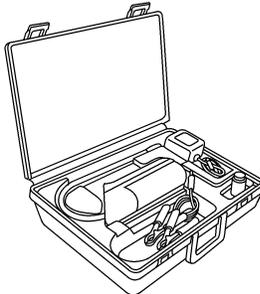
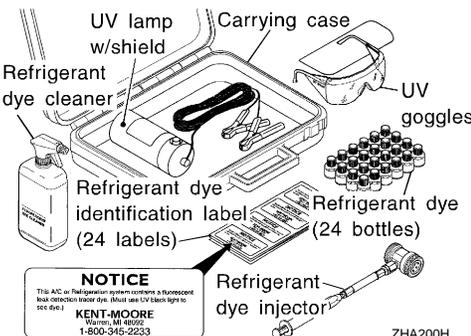
Special Service Tool

INFOID:000000001825934

The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

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

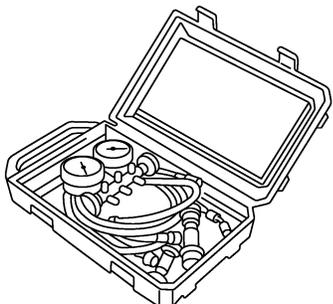
- Never mix HFC-134a (R-134a) refrigerant and/or its specified lubricant with CFC-12 (R-12) refrigerant and/or its lubricant.
- Separate and non-interchangeable service equipment must be used for handling each type of refrigerant/lubricant.
- Refrigerant container fittings, service hose fittings and 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 (Kent-Moore No.) Tool name	Description
<p>(ACR2005-NI) ACR5 A/C Service Center</p>  <p style="text-align: right; font-size: small;">WJIA0293E</p>	<p>Function: Refrigerant recovery, recycling and recharging</p>
<p>(J-41995) Electrical leak detector</p>  <p style="text-align: right; font-size: small;">AHA281A</p>	<p>Power supply: DC 12 V (Battery terminal)</p>
<p>(J-43926) Refrigerant dye leak detection kit</p> <p>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</p>  <p style="text-align: right; font-size: small;">ZHA200H</p>	<p>Power supply: DC 12 V (Battery terminal)</p>

PREPARATION

< PREPARATION >

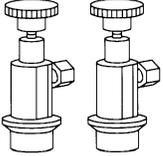
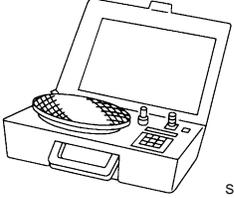
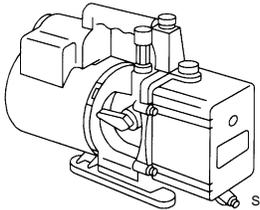
[MANUAL AIR CONDITIONER]

Tool number (Kent-Moore No.) Tool name	Description	A
(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	B C
(J-41447) HFC-134a (R-134a) fluorescent leak detection dye (Box of 24, 1/4 ounce bottles)  Refrigerant dye (24 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.)	D E F
(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	G H
(J-43872) Refrigerant dye cleaner  SHA441F	For cleaning dye spills	VTL J
(J-39183) Manifold gauge set (with hoses and couplers)  RJIA0196E	Identification: <ul style="list-style-type: none"> The gauge face indicates HFC-134a (R-134a). Fitting size: Thread size <ul style="list-style-type: none"> 1/2"-16 ACME 	K L M N
Service hoses <ul style="list-style-type: none"> High-pressure side hose (J-39501-72) Low-pressure side hose (J-39502-72) Utility hose (J-39476-72)  S-NT201	Hose color: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 1/2"-16 ACME 	O P

PREPARATION

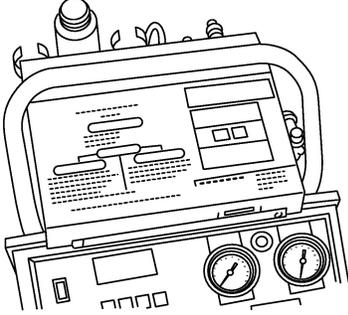
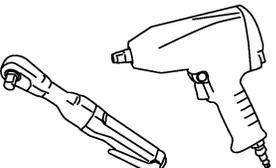
< PREPARATION >

[MANUAL AIR CONDITIONER]

Tool number (Kent-Moore No.) Tool name	Description
<p>Service couplers</p> <ul style="list-style-type: none"> • High-pressure side coupler (J-39500-20) • Low-pressure side coupler (J-39500-24)  <p style="text-align: right; font-size: small;">S-NT202</p>	<p>Hose fitting to service hose: M14 x 1.5 fitting is optional or permanently attached.</p>
<p>(J-39650) Refrigerant weight scale</p>  <p style="text-align: right; font-size: small;">S-NT200</p>	<p>For measuring of refrigerant Fitting size: Thread size 1/2"-16 ACME</p>
<p>(J-39649) Vacuum pump (Including the isolator valve)</p>  <p style="text-align: right; font-size: small;">S-NT203</p>	<p>Capacity:</p> <ul style="list-style-type: none"> • Air displacement: 4 CFM • Micron rating: 20 microns • Oil capacity: 482 g (17 oz.) <p>Fitting size: Thread size</p> <ul style="list-style-type: none"> • 1/2"-16 ACME

Commercial Service Tool

INFOID:000000001825935

Tool name	Description
<p>Remover tool</p>  <p style="text-align: right; font-size: x-small;">PIIB7923J</p>	<p>Remove clips, pawls, metal clips</p>
<p>Refrigerant identifier equipment</p>  <p style="text-align: right; font-size: x-small;">RJIA0197E</p>	<p>Checking for refrigerant purity and system contamination</p>
<p>Power tool</p>  <p style="text-align: right; font-size: x-small;">PBIC0190E</p>	<p>For loosening bolts and nuts</p>

PREPARATION

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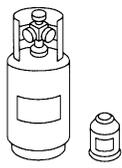
[MANUAL AIR CONDITIONER]

Sealant or/and Lubricant

INFOID:000000001825936

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
<p>HFC-134a (R-134a) refrigerant</p> <div style="text-align: center;">  <p style="font-size: small;">S-NT196</p> </div>	<p>Container color: Light blue Container marking: HFC-134a (R-134a) Fitting size: Thread size</p> <ul style="list-style-type: none"> • Large container 1/2"-16 ACME
<p>Nissan A/C System Oil Type S (DH-PS)</p> <div style="text-align: center;">  <p style="font-size: small;">S-NT197</p> </div>	<p>Type: Polyalkylene glycol oil (PAG), type S (DH-PS) Application: HFC-134a (R-134a) swash plate compressors (Nissan only) Capacity: 40 mℓ (1.4 US fl oz., 1.4 Imp fl oz.)</p>

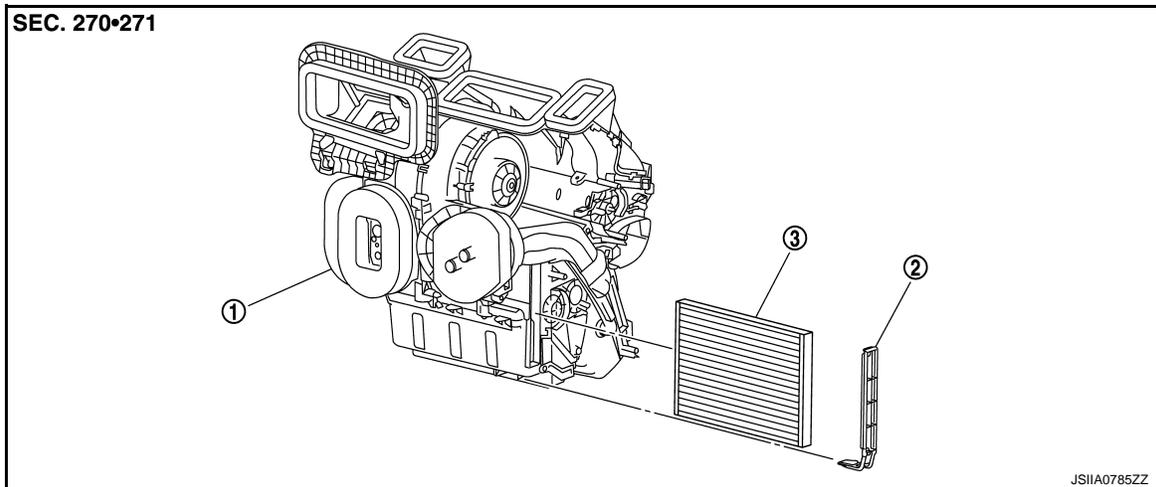
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ON-VEHICLE MAINTENANCE

IN-CABIN MICROFILTER

Exploded View

INFOID:000000003067845



1. A/C unit assembly

2. Filter cover

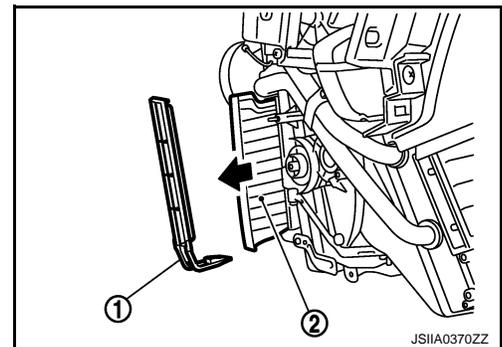
3. In-cabin microfilter

Removal and Installation

INFOID:000000003067846

REMOVAL

1. Remove instrument driver lower cover. Refer to [IP-12, "Exploded View"](#).
2. Remove accelerator pedal assembly. Refer to [ACC-3, "Exploded View"](#).
3. Remove filter cover (1), and then remove in-cabin microfilter (2).



INSTALLATION

Installation is basically the reverse order of removal.

Replacement

INFOID:000000003067847

Replace in-cabin microfilter.

Refer to [MA-10, "FOR NORTH AMERICA : Schedule 1"](#) (FOR NORTH AMERICA), [MA-12, "FOR NORTH AMERICA : Schedule 2"](#) (FOR NORTH AMERICA) or [MA-13, "FOR MEXICO : Periodic Maintenance"](#) (FOR MEXICO).

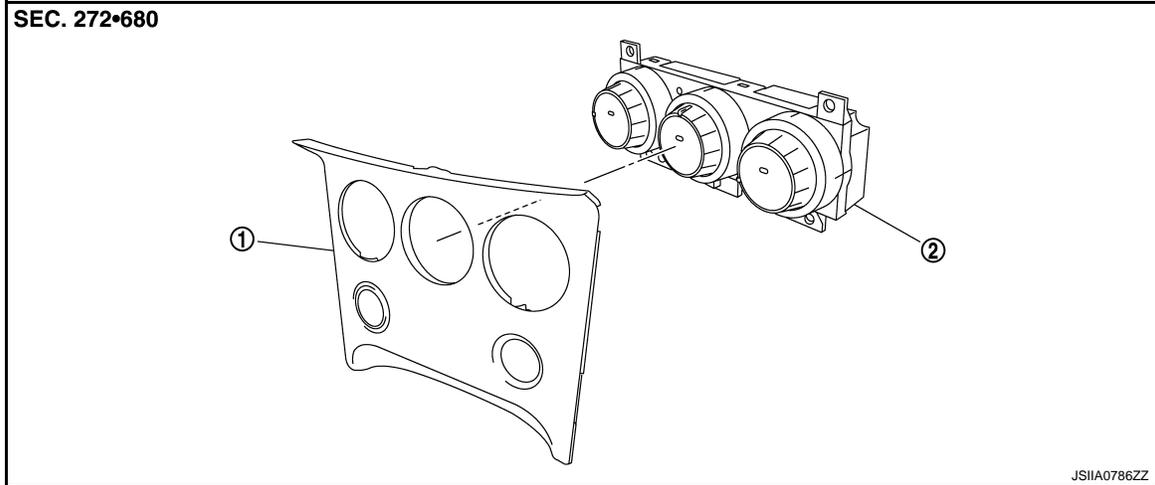
Affix a caution label inside the glove box when replacing filter.

ON-VEHICLE REPAIR

A/C CONTROL

Exploded View

INFOID:000000001722521



1. Cluster lid D

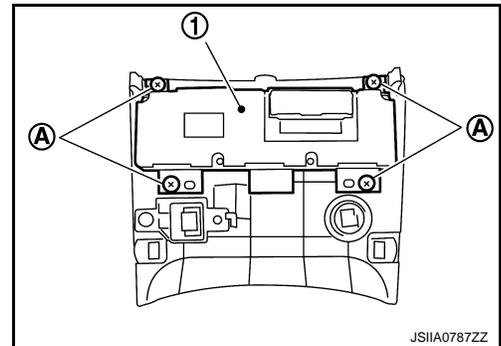
2. A/C Control (A/C amp.)

Removal and Installation

INFOID:000000001722522

REMOVAL

1. Remove cluster lid D. Refer to [IP-12. "Exploded View"](#).
2. Remove mounting screws (A), and then remove A/C control (1).



INSTALLATION

Installation is basically the reverse order of removal.

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INTAKE SENSOR

< ON-VEHICLE REPAIR >

[MANUAL AIR CONDITIONER]

- | | | |
|------------------|-------------------------------|----------------------|
| 37. Side case | 38. Main case RH | 39. Lower case |
| 40. O-ring | 41. Air mix door (Slide door) | 42. Fan control amp. |
| 43. Main case LH | 44. Intake box case | |

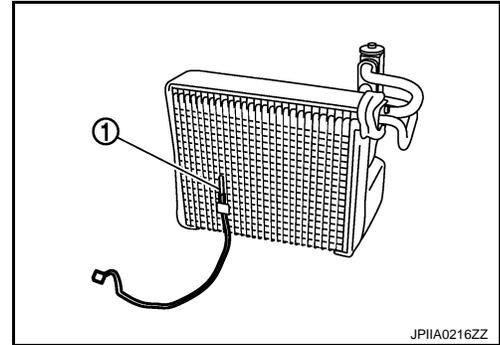
Refer to [GI-4. "Components"](#) for symbols in the figure.

Removal and Installation

INFOID:000000001722528

REMOVAL

1. Remove evaporator with expansion valve attached. Refer to [HA-54. "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.

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MODE DOOR MOTOR

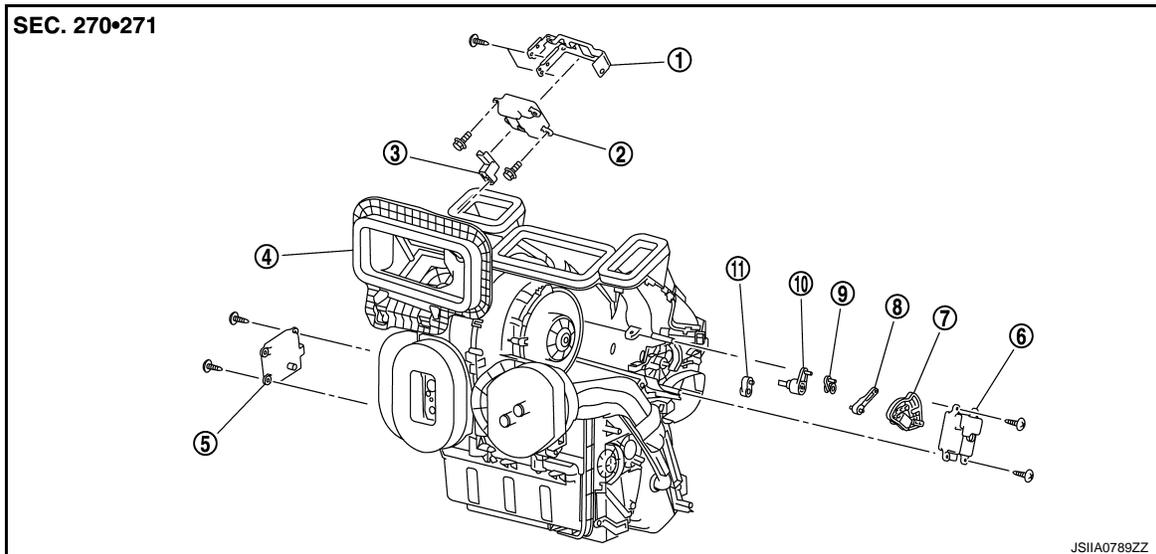
< ON-VEHICLE REPAIR >

[MANUAL AIR CONDITIONER]

MODE DOOR MOTOR

Exploded View

INFOID:000000001722531



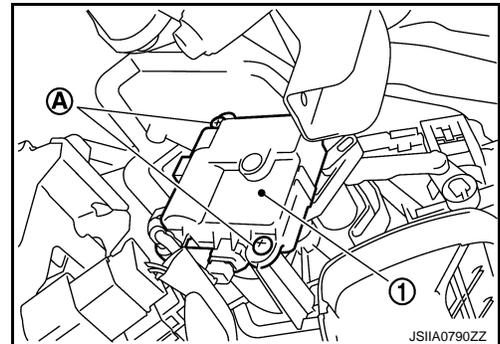
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| 1. Intake door motor bracket | 2. Intake door motor | 3. Intake door lever |
| 4. A/C unit assembly | 5. Air mix door motor | 6. Mode door motor |
| 7. Main link | 8. Foot door link | 9. Foot door lever |
| 10. Ventilator door lever | 11. Defroster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

Removal and Installation

INFOID:000000001722532

REMOVAL

1. Remove front foot duct LH. Refer to [VTL-48, "FRONT FOOT DUCT : Exploded View"](#).
2. Remove knee protector. Refer to [IP-12, "Exploded View"](#).
3. Remove mounting screws (A), and then remove mode door motor (1).
4. Disconnect mode door motor connector.



INSTALLATION

Installation is basically the reverse order of removal.

AIR MIX DOOR MOTOR

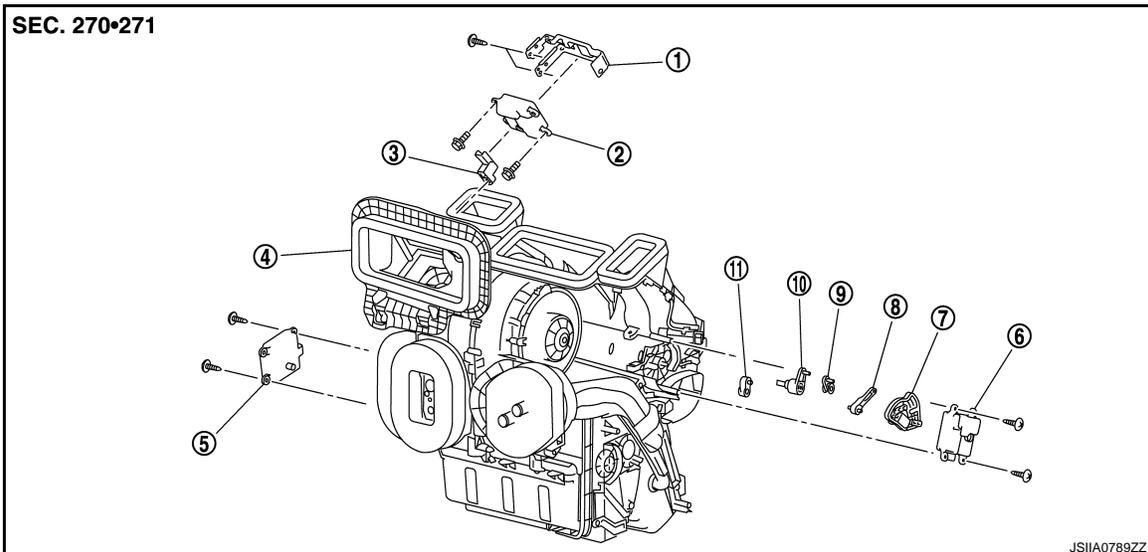
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[MANUAL AIR CONDITIONER]

AIR MIX DOOR MOTOR

Exploded View

INFOID:000000001751315



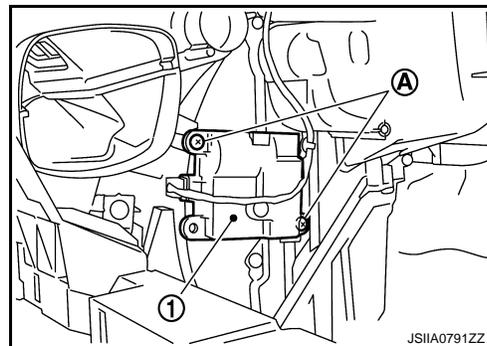
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|------------------------------|--------------------------|----------------------|
| 1. Intake door motor bracket | 2. Intake door motor | 3. Intake door lever |
| 4. A/C unit assembly | 5. Air mix door motor | 6. Mode door motor |
| 7. Main link |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

Removal and Installation

INFOID:000000001722534

REMOVAL

1. Set the temperature to full cold position. Then disconnect the battery cable from the negative terminal.
2. Remove front foot duct RH. Refer to [VTL-48. "FRONT FOOT DUCT : Exploded View"](#).
3. Remove mounting screws (A), and then remove air mix door motor (1).
4. Disconnect air mix door motor connector.



INSTALLATION

Installation is basically the reverse order of removal.

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INTAKE DOOR MOTOR

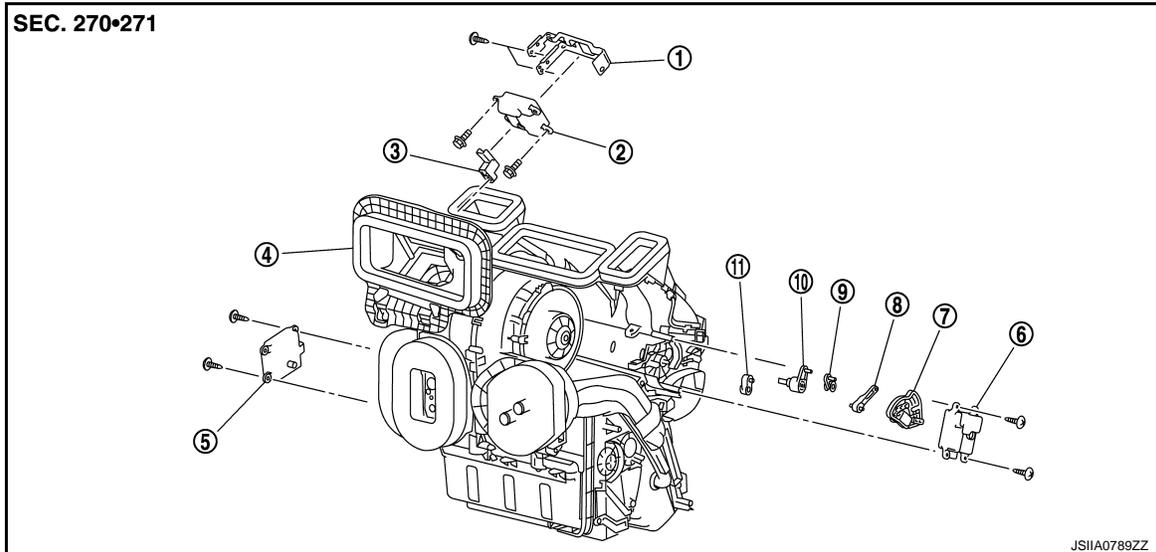
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[MANUAL AIR CONDITIONER]

INTAKE DOOR MOTOR

Exploded View

INFOID:000000001751316



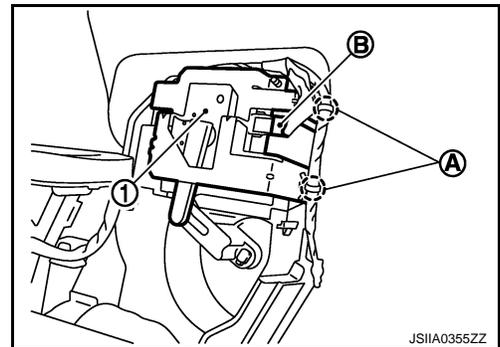
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|------------------------------|--------------------------|----------------------|
| 1. Intake door motor bracket | 2. Intake door motor | 3. Intake door lever |
| 4. A/C unit assembly | 5. Air mix door motor | 6. Mode door motor |
| 7. Main link |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

Removal and Installation

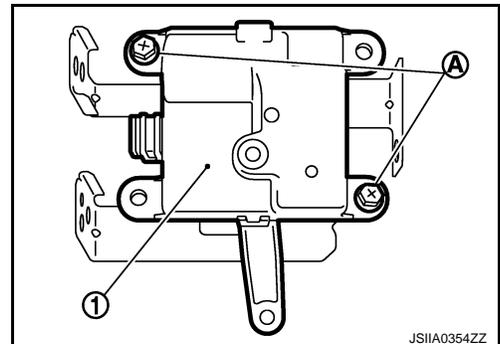
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REMOVAL

1. Remove instrument panel. Refer to [IP-12, "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

INTAKE DOOR MOTOR

< ON-VEHICLE REPAIR >

[MANUAL AIR CONDITIONER]

Installation is basically the reverse order of removal.

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A/C UNIT ASSEMBLY

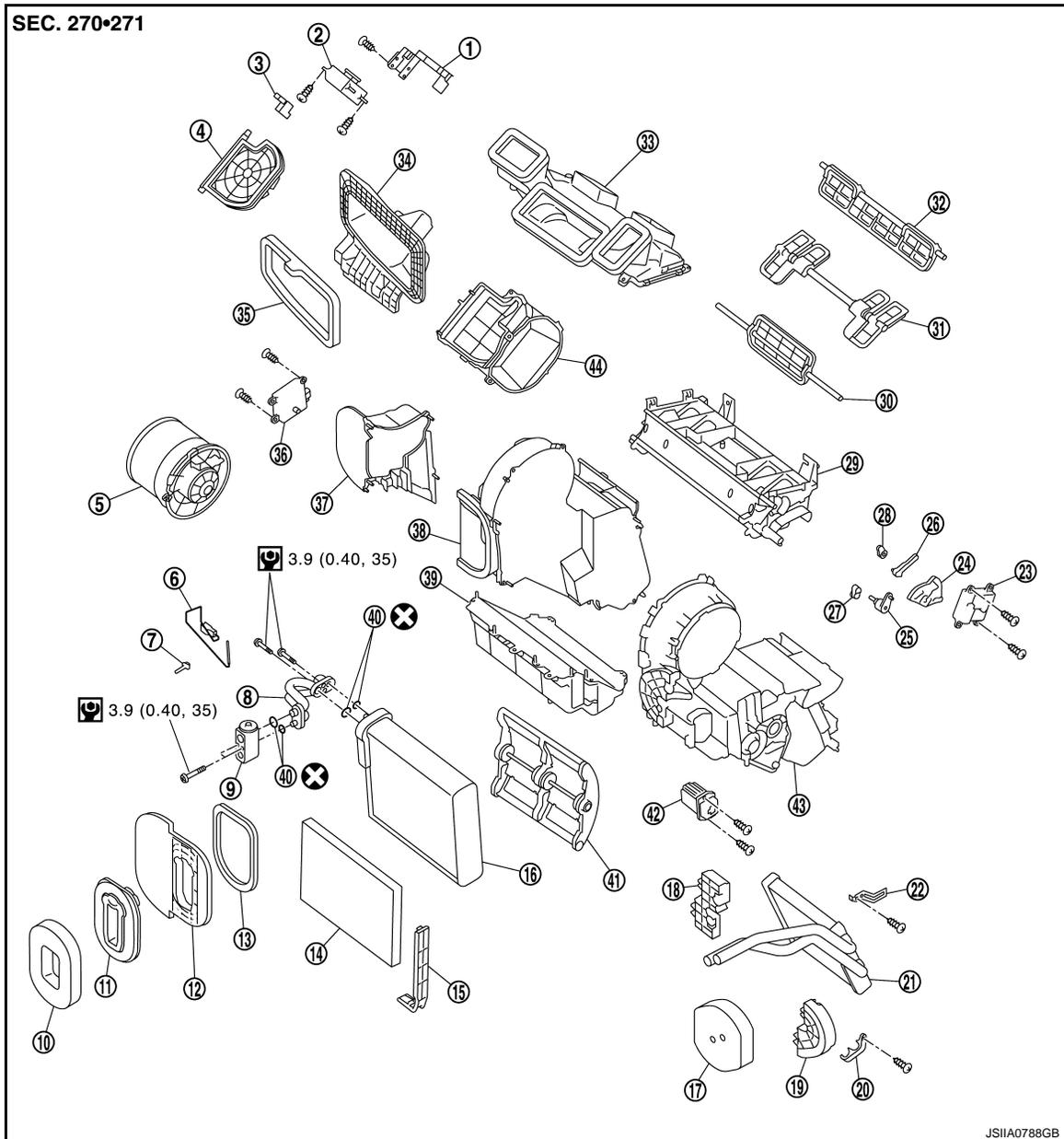
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[MANUAL AIR CONDITIONER]

A/C UNIT ASSEMBLY

Exploded View

INFOID:000000001746931



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|------------------------------|------------------------------|--------------------------|
| 1. Intake door motor bracket | 2. Intake door motor | 3. Intake door lever |
| 4. Intake door | 5. Blower motor | 6. Intake sensor |
| 7. Intake sensor bracket | 8. Evaporator pipe assembly | 9. Expansion valve |
| 10. Expansion valve packing | 11. Expansion valve grommet | 12. Grommet adaptor |
| 13. Adaptor packing | 14. In-cabin microfilter | 15. Filter cover |
| 16. Evaporator | 17. Heater packing | 18. Heater adapter |
| 19. Heater pipe flange | 20. Heater pipe clamp | 21. Heater core |
| 22. Case bracket | 23. Mode door motor | 24. Main link |
| 25. Ventilator door lever | 26. Foot door link | 27. Defroster door lever |
| 28. Foot door lever | 29. Distributor module case | 30. Defroster door |
| 31. Ventilator door | 32. Foot door | 33. Adaptor duct |
| 34. Attachment panel | 35. Attachment panel packing | 36. Air mix door motor |

A/C UNIT ASSEMBLY

< ON-VEHICLE REPAIR >

[MANUAL AIR CONDITIONER]

- | | | |
|------------------|-------------------------------|----------------------|
| 37. Side case | 38. Main case RH | 39. Lower case |
| 40. O-ring | 41. Air mix door (Slide door) | 42. Fan control amp. |
| 43. Main case LH | 44. Intake box case | |

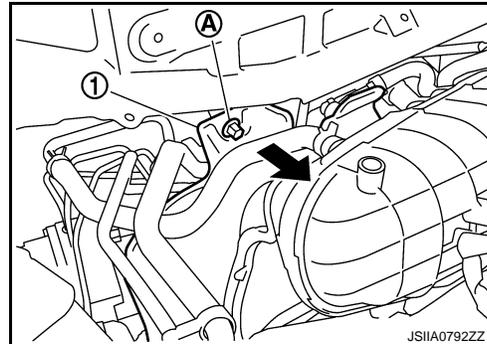
Refer to [GI-4. "Components"](#) for symbols in the figure.

Removal and Installation

INFOID:000000001722538

REMOVAL

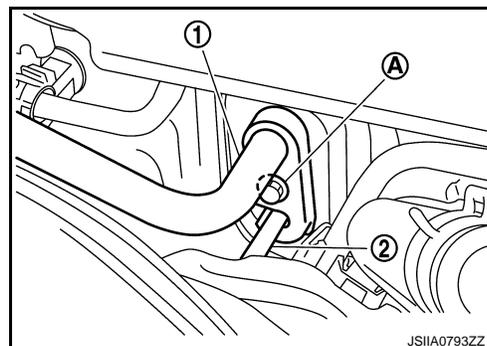
1. Use a refrigerant collecting equipment (for HFC-134a) to discharge the refrigerant.
2. Drain engine coolant from cooling system. Refer to [CO-9. "Draining"](#).
3. Remove cowl top cover. Refer to [EXT-20. "Exploded View"](#).
4. Remove mounting nut (A), and lower dash insulator (1) a position without the hindrance for work (as shown in the figure).



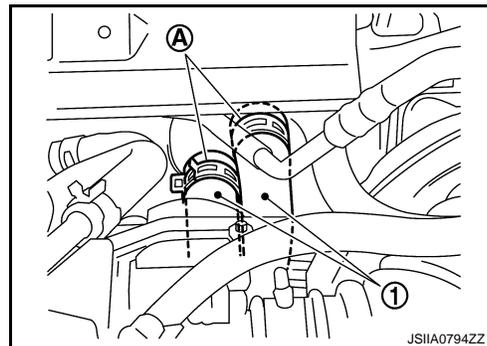
5. Remove mounting bolt (A), and then disconnect low-pressure flexible hose (1) and high-pressure pipe (2) from expansion valve.

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.



6. Remove clamps (A), and then disconnect heater hoses (1) from heater core.



7. Remove instrument panel. Refer to [IP-12. "Exploded View"](#).
8. Remove center ventilator duct. Refer to [VTL-41. "CENTER VENTILATOR DUCT : Exploded View"](#).
9. Remove rear foot duct 1. Refer to [VTL-49. "REAR FOOT DUCT 1 : Exploded View"](#).
10. Remove rear foot duct 2. Refer to [VTL-50. "REAR FOOT DUCT 2 : Exploded View"](#).

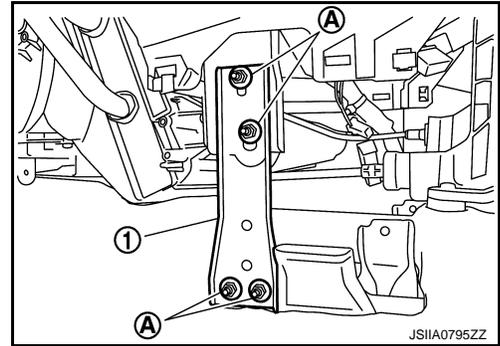
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A/C UNIT ASSEMBLY

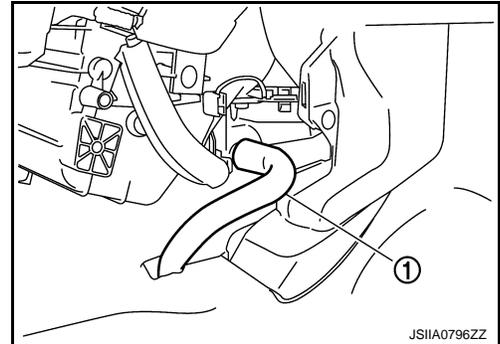
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[MANUAL AIR CONDITIONER]

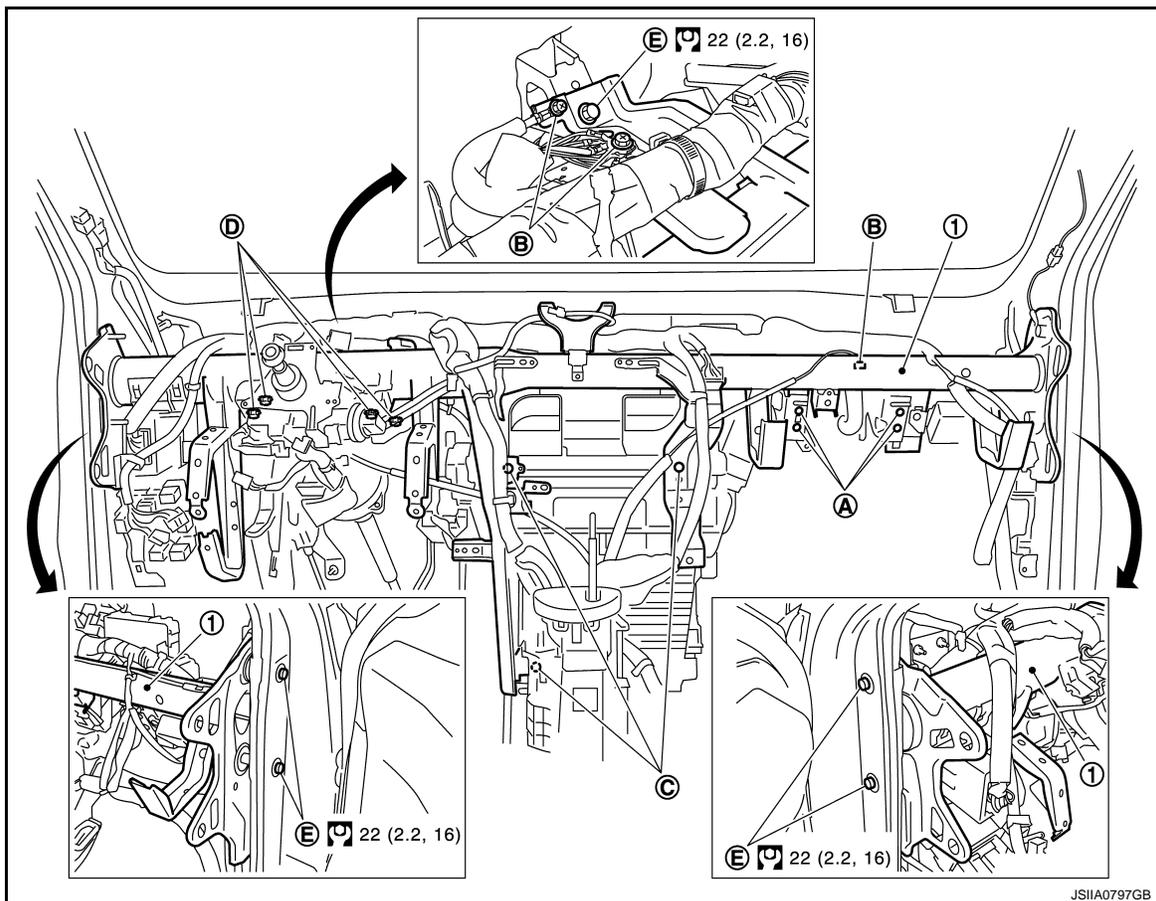
11. Remove mounting nuts (A), and then remove instrument stay (1).



12. Disconnect drain hose (1).



13. Remove mounting screws (A), and then remove BCM with bracket attached.



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

14. Remove ground bolts (B) from steering member (1).
15. Remove mounting screws (C) from A/C unit assembly.

A/C UNIT ASSEMBLY

< ON-VEHICLE REPAIR >

[MANUAL AIR CONDITIONER]

16. Remove steering column mounting nuts (D). Refer to [ST-11. "Exploded View"](#).
17. Remove steering member mounting bolts (E), 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-10. "Refilling"](#), when filling radiator with engine coolant.
- Recharge the refrigerant.

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BLOWER MOTOR

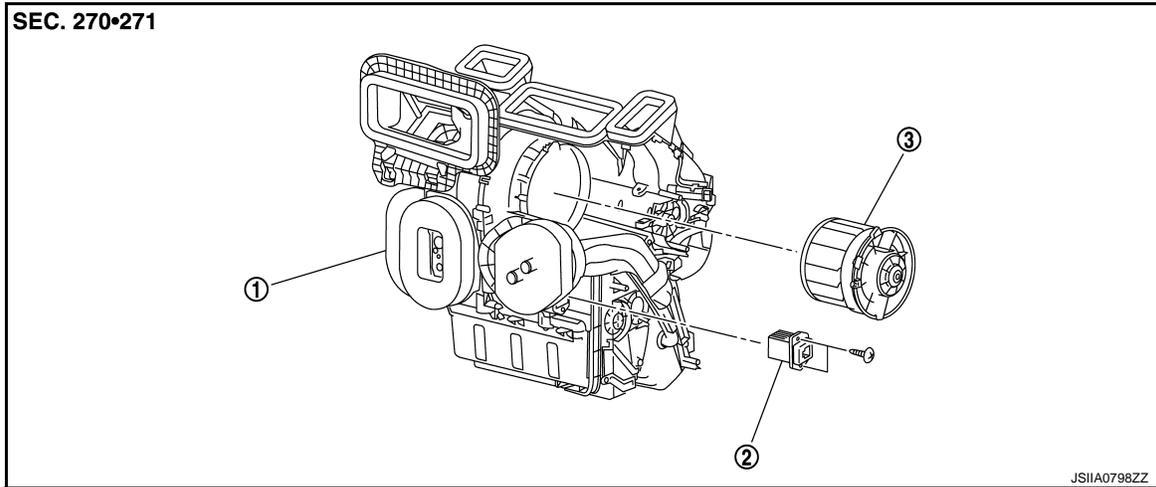
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[MANUAL AIR CONDITIONER]

BLOWER MOTOR

Exploded View

INFOID:000000001722539



1. A/C unit assembly

2. Fan control amp.

3. Blower motor

Removal and Installation

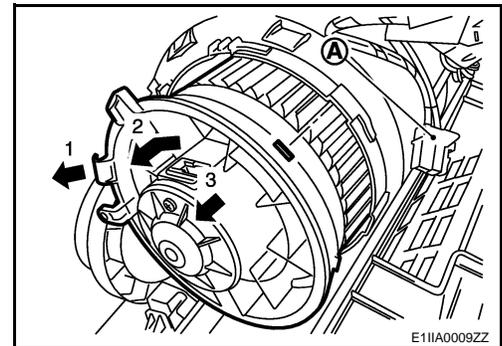
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REMOVAL

1. Remove A/C unit assembly. Refer to [VTL-32, "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

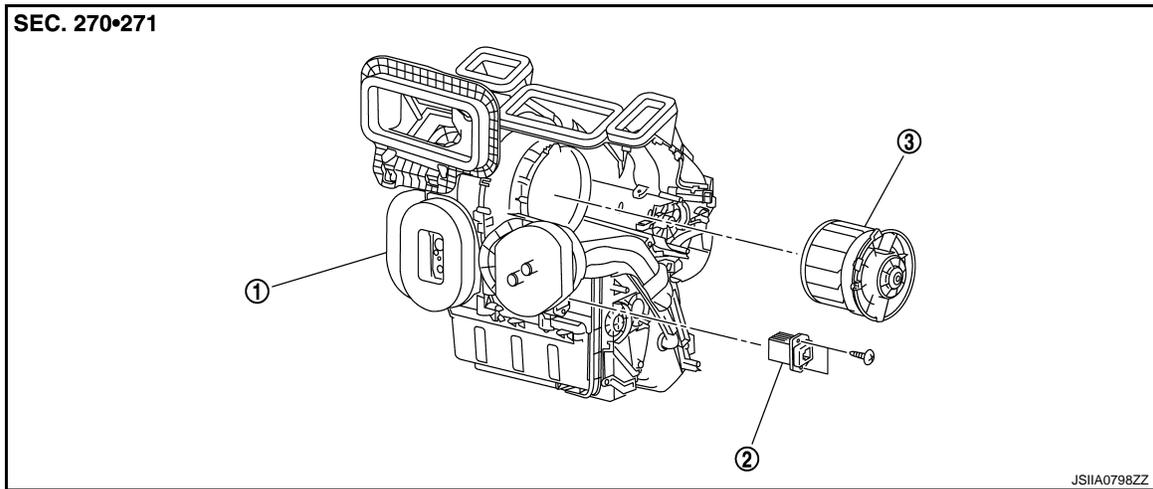
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[MANUAL AIR CONDITIONER]

FAN CONTROL AMPLIFIER

Exploded View

INFOID:000000001751317



1. A/C unit assembly

2. Fan control amp.

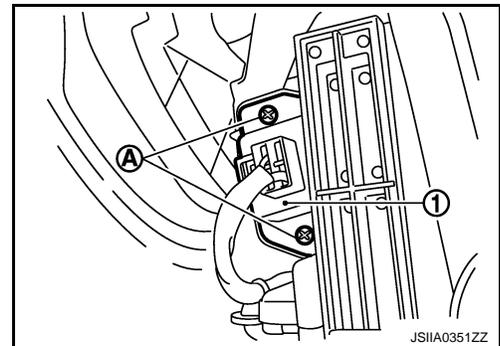
3. Blower motor

Removal and Installation

INFOID:000000001722542

REMOVAL

1. Remove instrument driver lower cover. Refer to [IP-12, "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

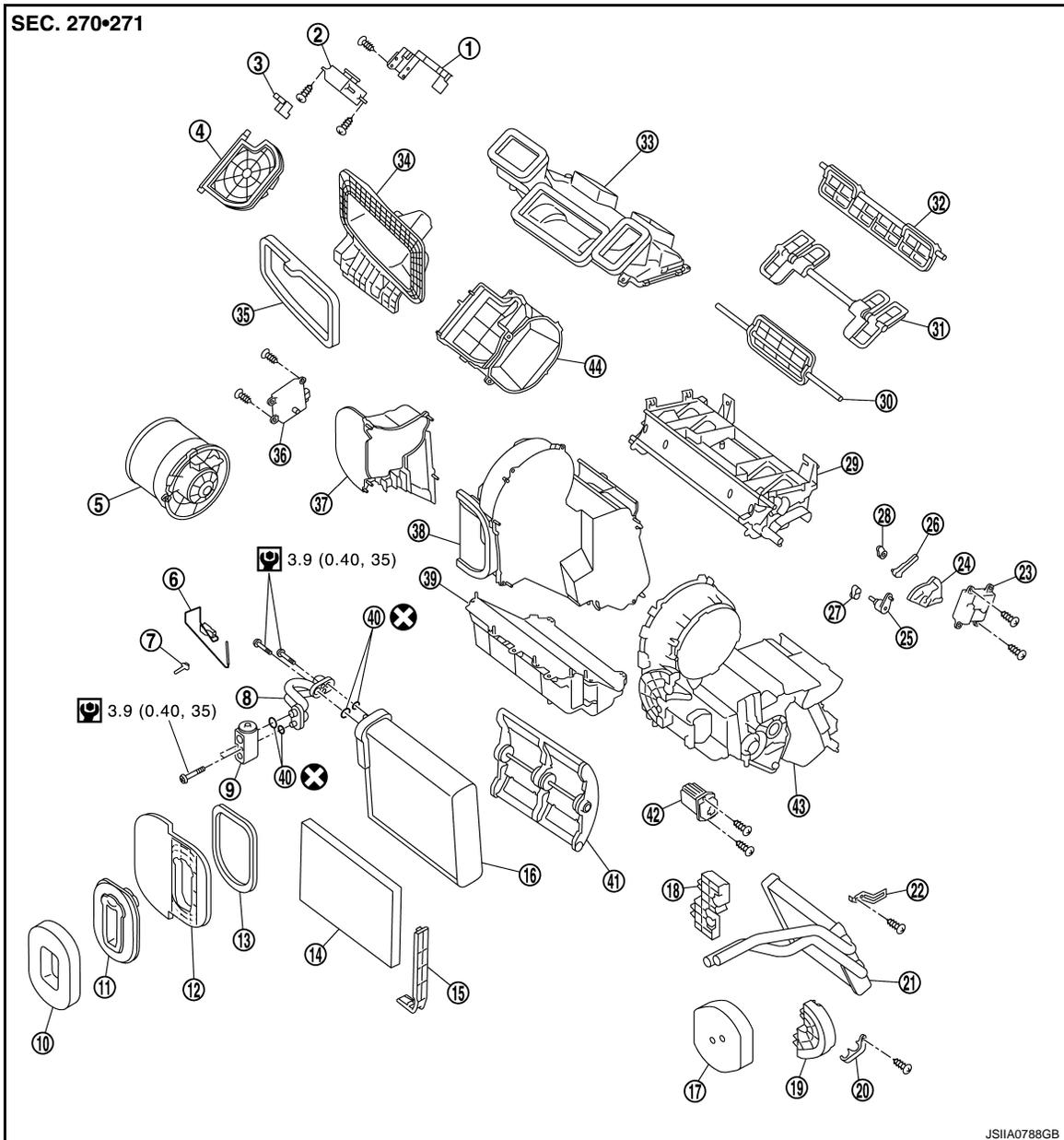
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[MANUAL AIR CONDITIONER]

HEATER CORE

Exploded View

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|------------------------------|------------------------------|--------------------------|
| 1. Intake door motor bracket | 2. Intake door motor | 3. Intake door lever |
| 4. Intake door | 5. Blower motor | 6. Intake sensor |
| 7. Intake sensor bracket | 8. Evaporator pipe assembly | 9. Expansion valve |
| 10. Expansion valve packing | 11. Expansion valve grommet | 12. Grommet adaptor |
| 13. Adaptor packing | 14. In-cabin microfilter | 15. Filter cover |
| 16. Evaporator | 17. Heater packing | 18. Heater adapter |
| 19. Heater pipe flange | 20. Heater pipe clamp | 21. Heater core |
| 22. Case bracket | 23. Mode door motor | 24. Main link |
| 25. Ventilator door lever | 26. Foot door link | 27. Defroster door lever |
| 28. Foot door lever | 29. Distributor module case | 30. Defroster door |
| 31. Ventilator door | 32. Foot door | 33. Adaptor duct |
| 34. Attachment panel | 35. Attachment panel packing | 36. Air mix door motor |

HEATER CORE

< ON-VEHICLE REPAIR >

[MANUAL AIR CONDITIONER]

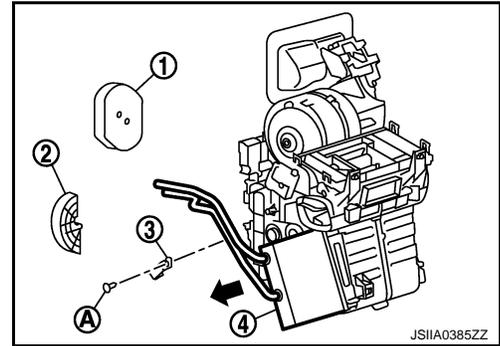
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| 37. Side case | 38. Main case RH | 39. Lower case |
| 40. O-ring | 41. Air mix door (Slide door) | 42. Fan control amp. |
| 43. Main case LH | 44. Intake box case | |
- Refer to [GI-4. "Components"](#) for symbols in the figure.

Removal and Installation

INFOID:000000001722544

REMOVAL

1. Remove A/C unit assembly. Refer to [VTL-32. "Exploded View"](#).
2. Remove heater packing (1).
3. Remove heater pipe flange (2).
4. Remove mounting screw (A), and then remove heater pipe clamp (3).
5. Slide heater core (4) to leftward (as shown in the figure).



INSTALLATION

Installation is basically the reverse order of removal.

NOTE:

Refer to [CO-10. "Refilling"](#), when filling radiator with engine coolant.

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DUCT AND GRILLE

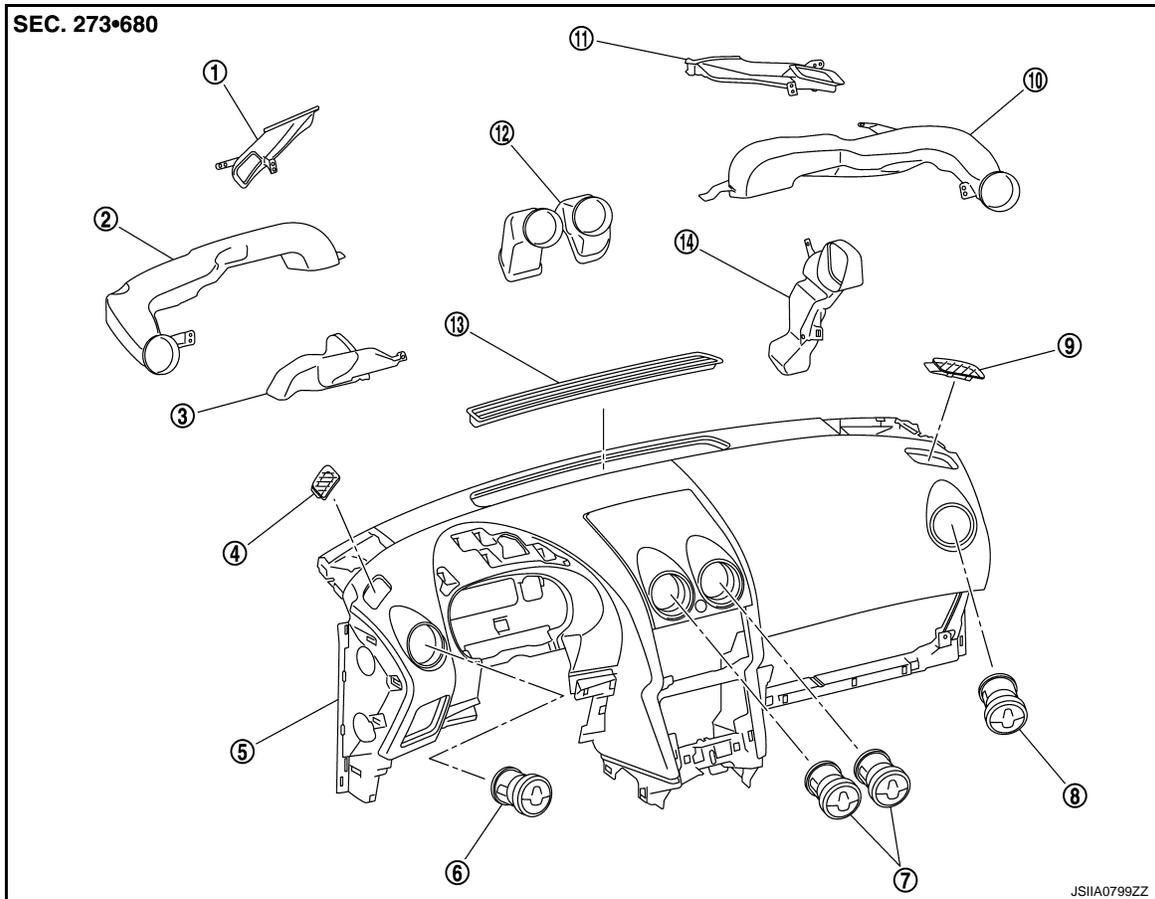
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[MANUAL AIR CONDITIONER]

DUCT AND GRILLE CENTER VENTILATOR GRILLE

CENTER VENTILATOR GRILLE : Exploded View

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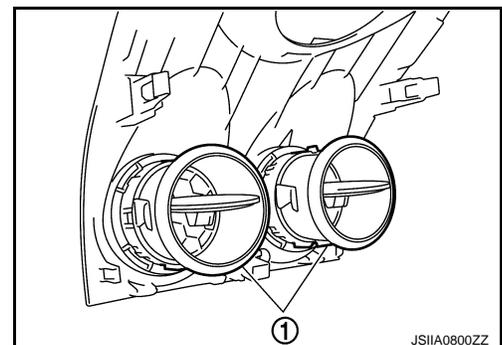
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| 1. Side defroster duct LH | 2. Side ventilator duct LH | 3. Front foot duct LH |
| 4. Side defroster grille LH | 5. Instrument panel | 6. Side ventilator grille LH |
| 7. Center ventilator grille | 8. Side ventilator grille RH | 9. Side defroster grille RH |
| 10. Side ventilator duct RH | 11. Side defroster duct RH | 12. Center ventilator duct |
| 13. Front defroster grille | 14. Front foot duct RH | |

CENTER VENTILATOR GRILLE : Removal and Installation

INFOID:000000001722548

REMOVAL

1. Remove cluster lid C. Refer to [IP-12. "Exploded View"](#).
2. Remove center ventilator grilles (1).
 - Using flat screwdriver to push the pawls.
 - Pull to remove center ventilator grilles from cluster lid C.



DUCT AND GRILLE

< ON-VEHICLE REPAIR >

[MANUAL AIR CONDITIONER]

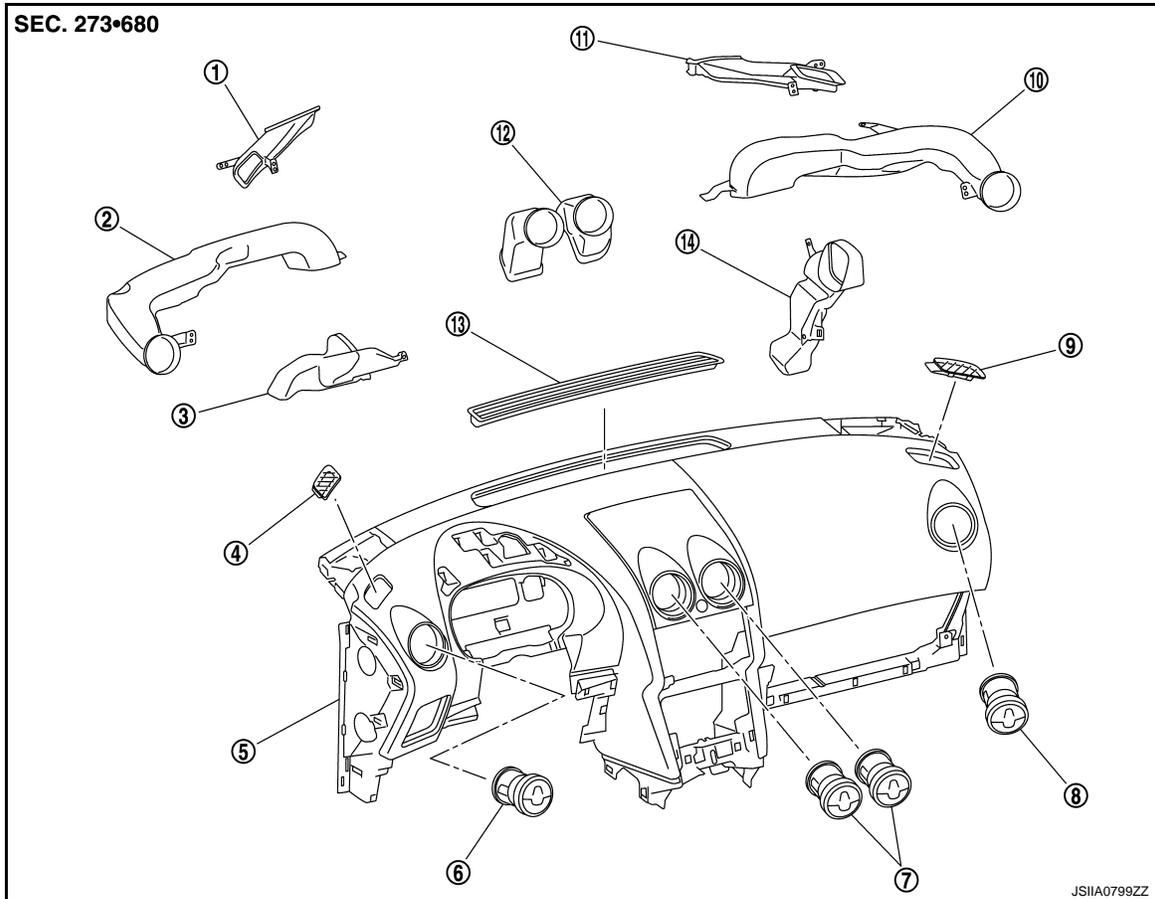
INSTALLATION

Installation is basically the reverse order of removal.

CENTER VENTILATOR DUCT

CENTER VENTILATOR DUCT : Exploded View

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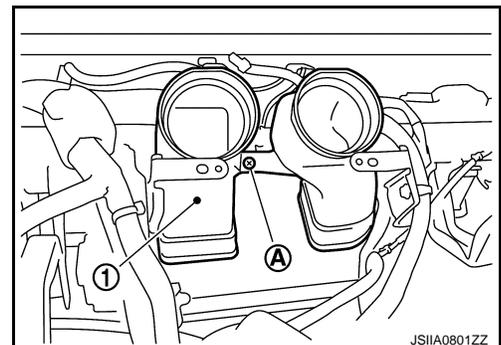
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| 1. Side defroster duct LH | 2. Side ventilator duct LH | 3. Front foot duct LH |
| 4. Side defroster grille LH | 5. Instrument panel | 6. Side ventilator grille LH |
| 7. Center ventilator grille | 8. Side ventilator grille RH | 9. Side defroster grille RH |
| 10. Side ventilator duct RH | 11. Side defroster duct RH | 12. Center ventilator duct |
| 13. Front defroster grille | 14. Front foot duct RH | |

CENTER VENTILATOR DUCT : Removal and Installation

INFOID:000000001751525

REMOVAL

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



DUCT AND GRILLE

< ON-VEHICLE REPAIR >

[MANUAL AIR CONDITIONER]

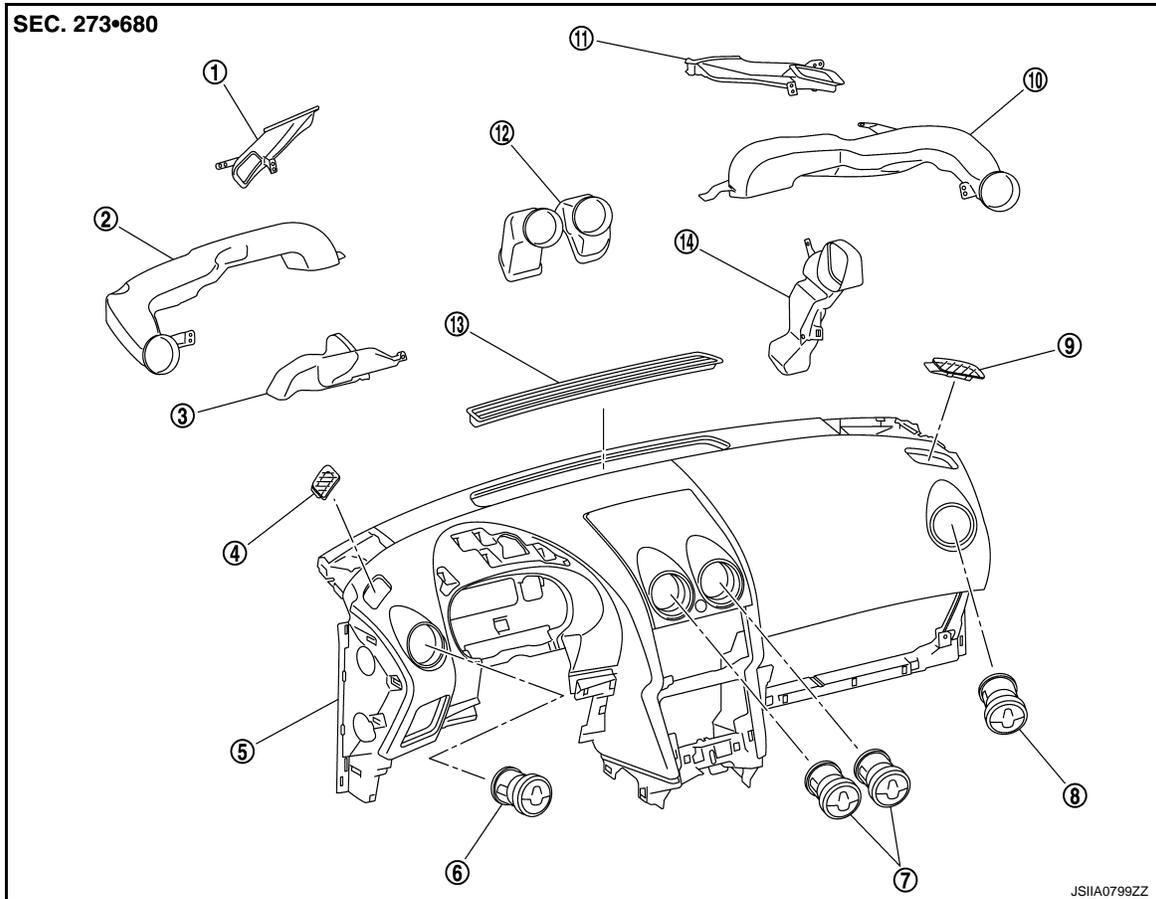
INSTALLATION

Installation is basically the reverse order of removal.

SIDE VENTILATOR GRILLE

SIDE VENTILATOR GRILLE : Exploded View

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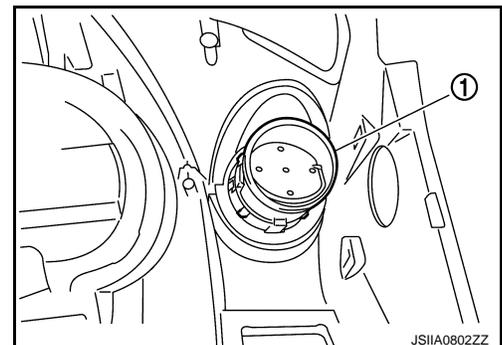
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|-----------------------------|------------------------------|------------------------------|
| 1. Side defroster duct LH | 2. Side ventilator duct LH | 3. Front foot duct LH |
| 4. Side defroster grille LH | 5. Instrument panel | 6. Side ventilator grille LH |
| 7. Center ventilator grille | 8. Side ventilator grille RH | 9. Side defroster grille RH |
| 10. Side ventilator duct RH | 11. Side defroster duct RH | 12. Center ventilator duct |
| 13. Front defroster grille | 14. Front foot duct RH | |

SIDE VENTILATOR GRILLE : Removal and Installation

INFOID:000000001722550

REMOVAL

1. Remove side ventilator duct. Refer to [VTL-43, "SIDE VENTILATOR DUCT : Exploded View"](#).
2. Remove side ventilator grilles (1).
 - Using flat screwdriver to push the pawls.
 - Pull to remove center ventilator grilles from instrument panel.



DUCT AND GRILLE

< ON-VEHICLE REPAIR >

[MANUAL AIR CONDITIONER]

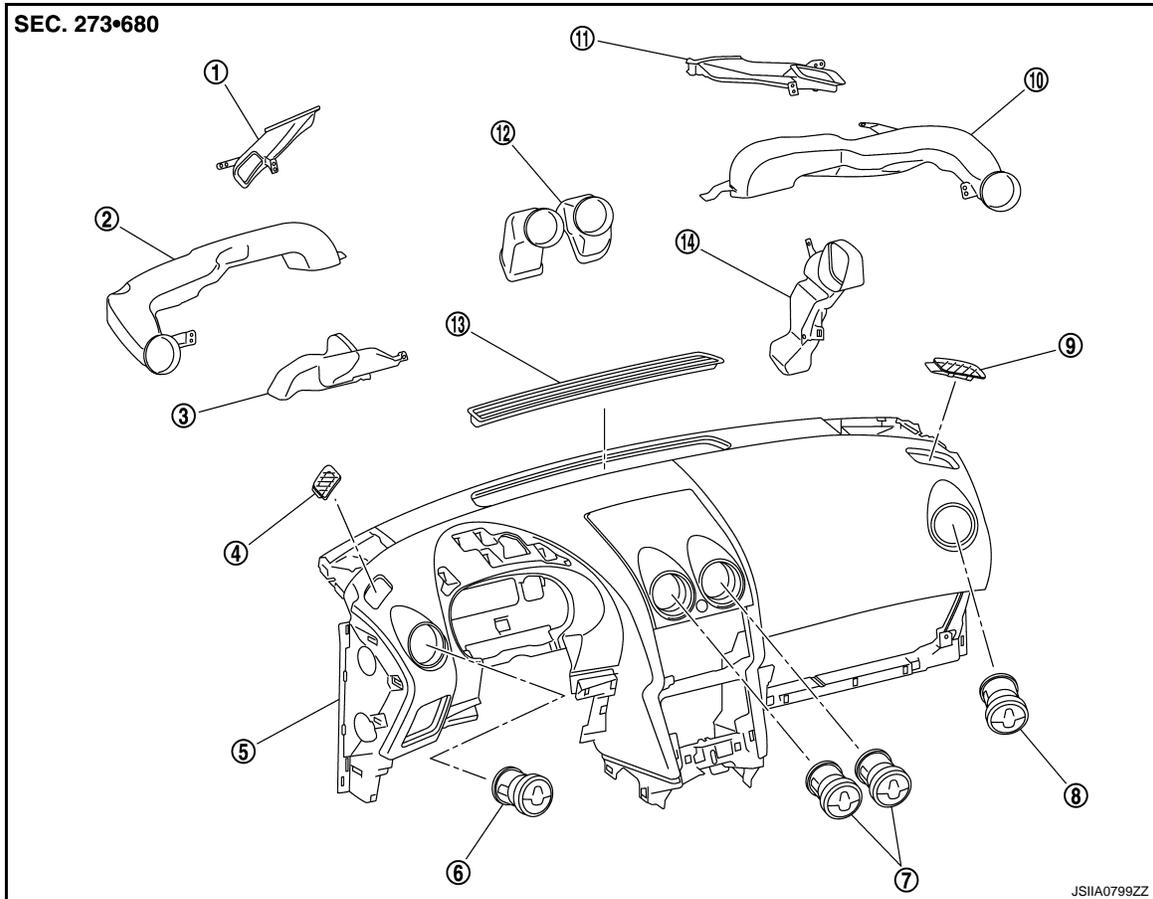
INSTALLATION

Installation is basically the reverse order of removal.

SIDE VENTILATOR DUCT

SIDE VENTILATOR DUCT : Exploded View

INFOID:000000001751563



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|-----------------------------|------------------------------|------------------------------|
| 1. Side defroster duct LH | 2. Side ventilator duct LH | 3. Front foot duct LH |
| 4. Side defroster grille LH | 5. Instrument panel | 6. Side ventilator grille LH |
| 7. Center ventilator grille | 8. Side ventilator grille RH | 9. Side defroster grille RH |
| 10. Side ventilator duct RH | 11. Side defroster duct RH | 12. Center ventilator duct |
| 13. Front defroster grille | 14. Front foot duct RH | |

SIDE VENTILATOR DUCT : Removal and Installation

INFOID:000000001722552

REMOVAL

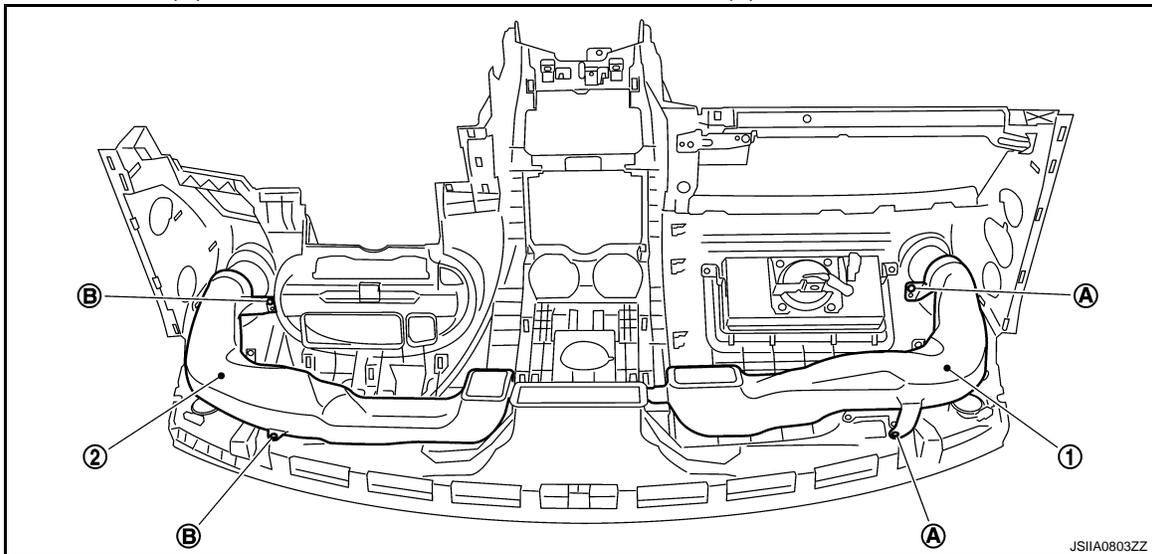
1. Remove instrument panel. Refer to [IP-12, "Exploded View"](#).

DUCT AND GRILLE

< ON-VEHICLE REPAIR >

[MANUAL AIR CONDITIONER]

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



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

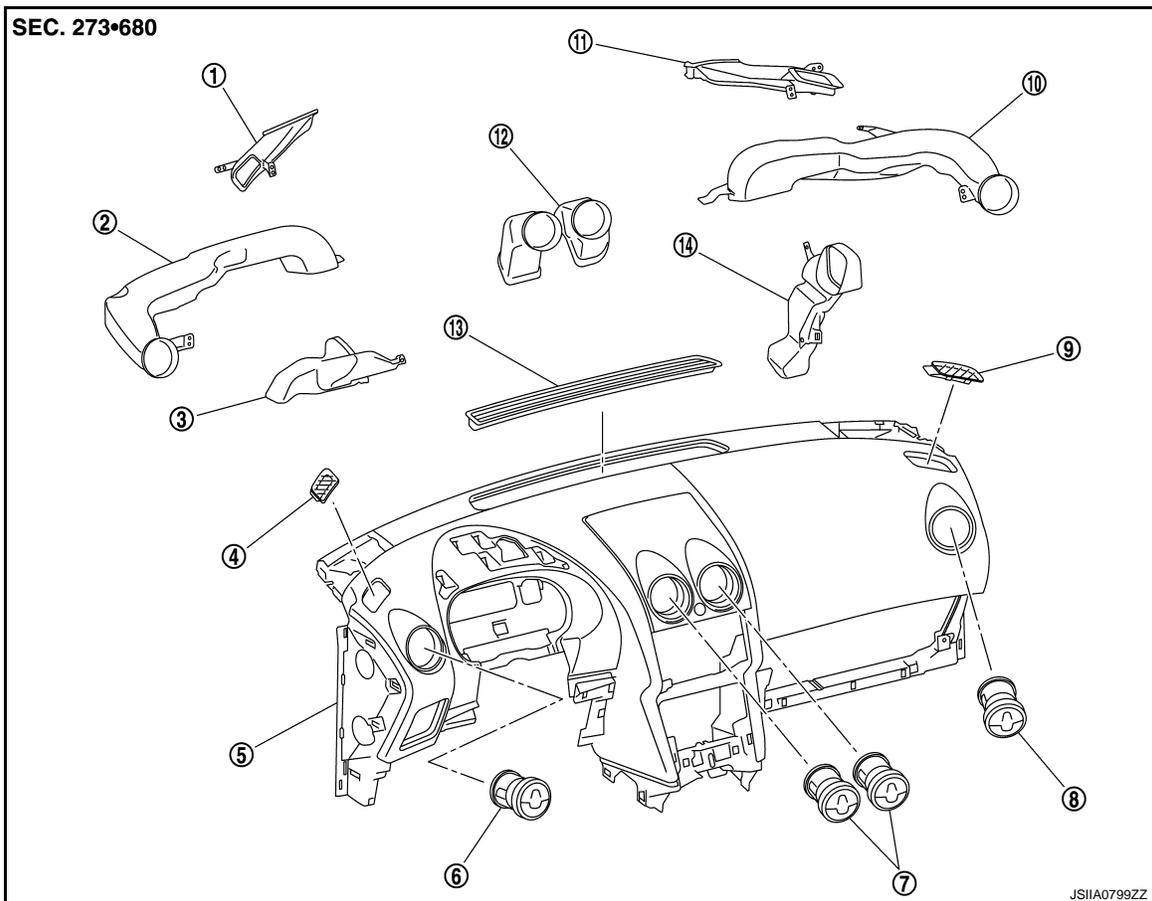
INSTALLATION

Installation is basically the reverse order of removal.

SIDE DEFROSTER GRILLE

SIDE DEFROSTER GRILLE : Exploded View

INFOID:000000001751566



- 1. Side defroster duct LH
- 4. Side defroster grille LH

- 2. Side ventilator duct LH
- 5. Instrument panel

- 3. Front foot duct LH
- 6. Side ventilator grille LH

DUCT AND GRILLE

< ON-VEHICLE REPAIR >

[MANUAL AIR CONDITIONER]

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| 7. Center ventilator grille | 8. Side ventilator grille RH | 9. Side defroster grille RH |
| 10. Side ventilator duct RH | 11. Side defroster duct RH | 12. Center ventilator duct |
| 13. Front defroster grille | 14. Front foot duct RH | |

SIDE DEFROSTER GRILLE : Removal and Installation

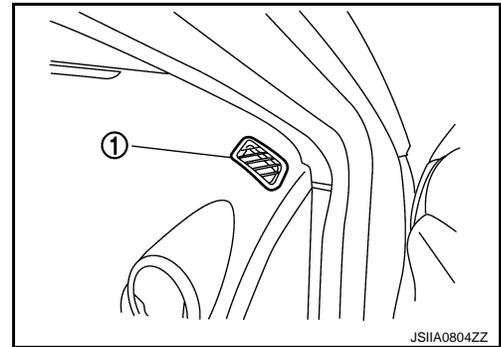
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REMOVAL

- Using remover tool, remove side defroster grilles.

CAUTION:

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



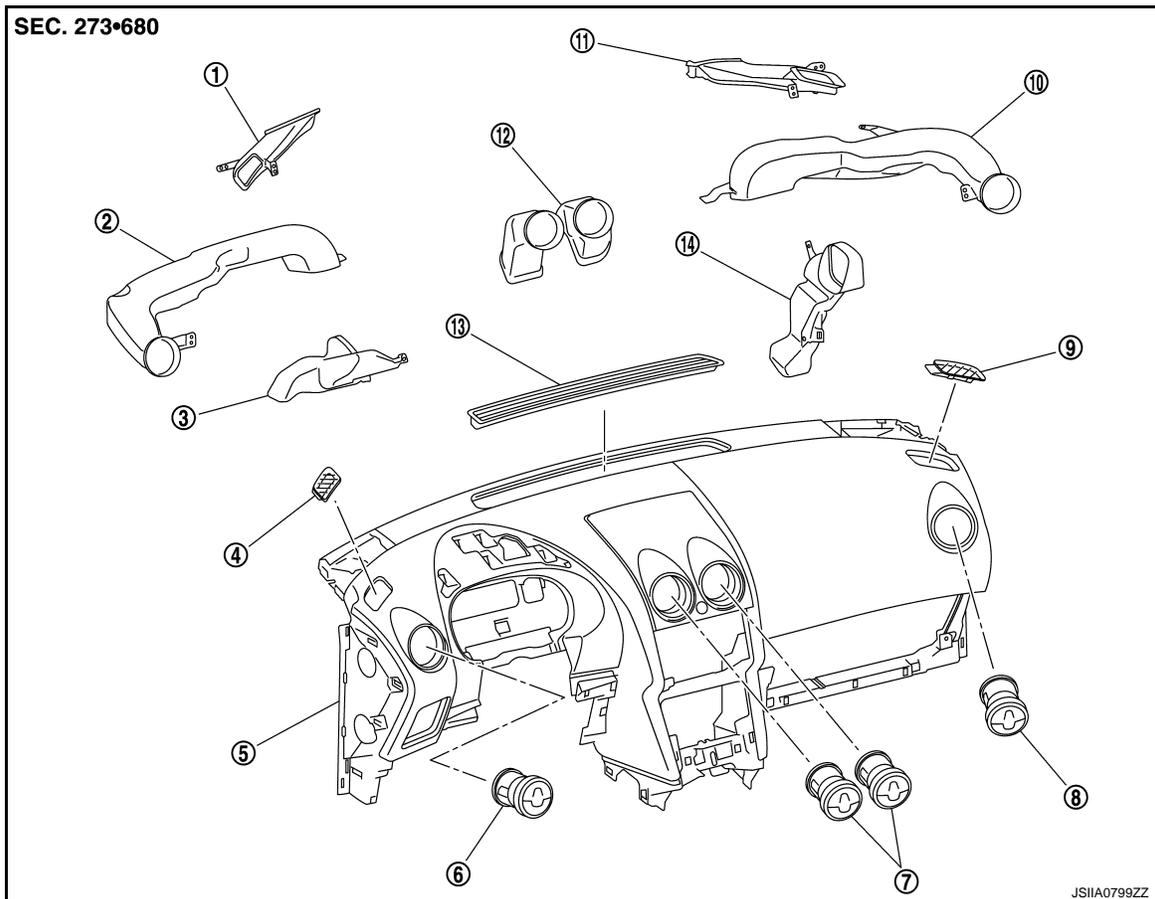
INSTALLATION

Installation is basically the reverse order of removal.

SIDE DEFROSTER DUCT

SIDE DEFROSTER DUCT : Exploded View

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| 1. Side defroster duct LH | 2. Side ventilator duct LH | 3. Front foot duct LH |
| 4. Side defroster grille LH | 5. Instrument panel | 6. Side ventilator grille LH |
| 7. Center ventilator grille | 8. Side ventilator grille RH | 9. Side defroster grille RH |

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DUCT AND GRILLE

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[MANUAL AIR CONDITIONER]

10. Side ventilator duct RH

11. Side defroster duct RH

12. Center ventilator duct

13. Front defroster grille

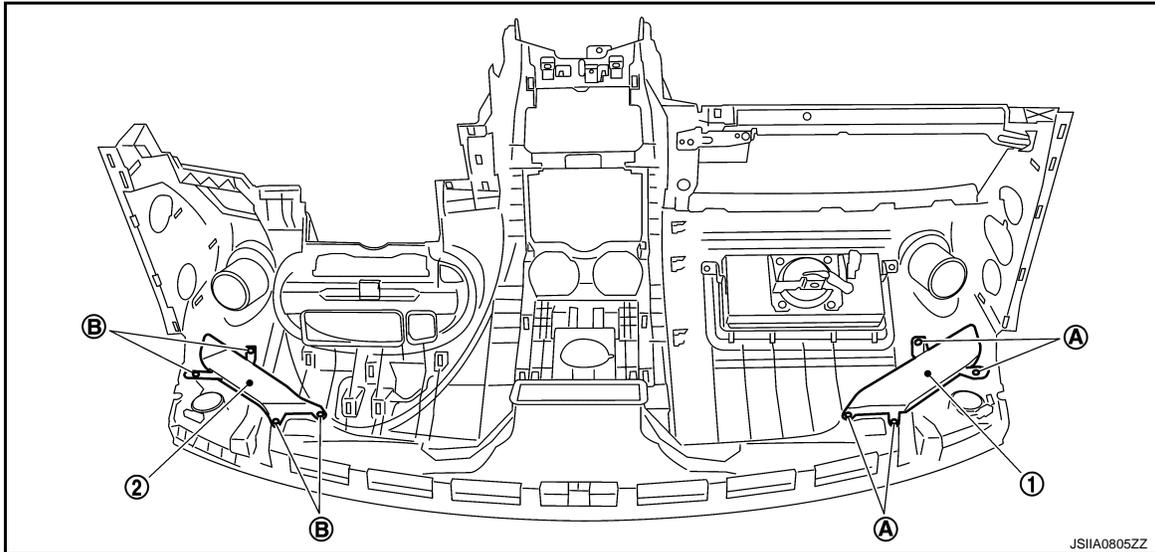
14. Front foot duct RH

SIDE DEFROSTER DUCT : Removal and Installation

INFOID:000000001722554

REMOVAL

1. Remove side ventilator duct. Refer to [VTL-43, "SIDE VENTILATOR DUCT : Exploded View"](#).
2. Remove screws (A), and then remove side defroster duct RH (1).



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

INSTALLATION

Installation is basically the reverse order of removal.

FRONT DEFROSTER GRILLE

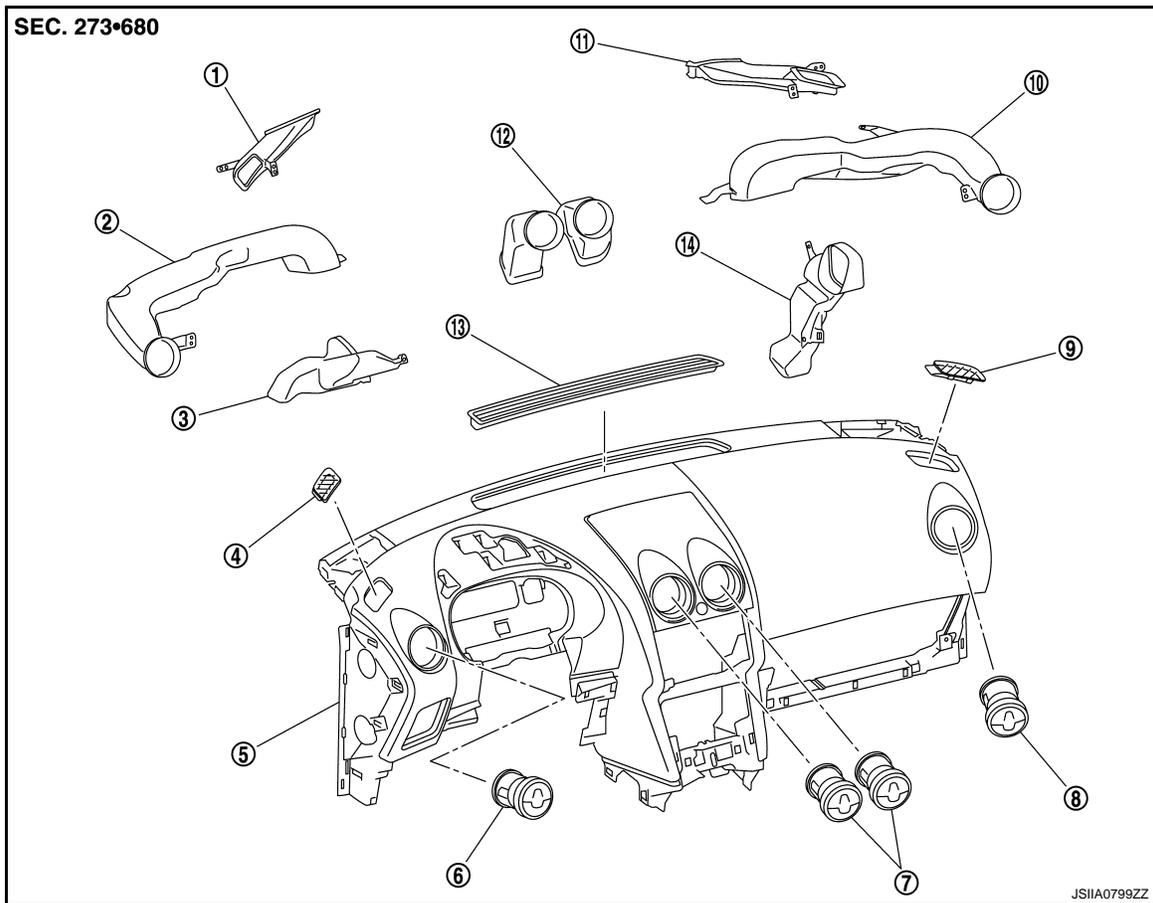
DUCT AND GRILLE

< ON-VEHICLE REPAIR >

[MANUAL AIR CONDITIONER]

FRONT DEFROSTER GRILLE : Exploded View

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|-----------------------------|------------------------------|------------------------------|
| 1. Side defroster duct LH | 2. Side ventilator duct LH | 3. Front foot duct LH |
| 4. Side defroster grille LH | 5. Instrument panel | 6. Side ventilator grille LH |
| 7. Center ventilator grille | 8. Side ventilator grille RH | 9. Side defroster grille RH |
| 10. Side ventilator duct RH | 11. Side defroster duct RH | 12. Center ventilator duct |
| 13. Front defroster grille | 14. Front foot duct RH | |

FRONT DEFROSTER GRILLE : Removal and Installation

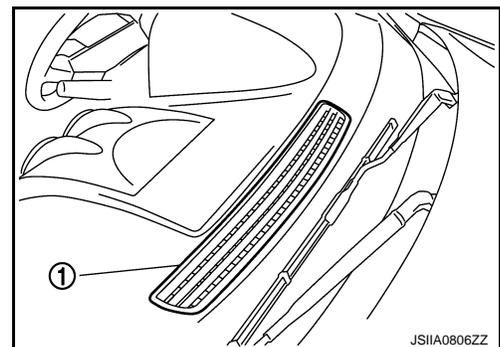
INFOID:000000001751529

REMOVAL

1. Using remover tool, remove front defroster grille (1).

CAUTION:

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



INSTALLATION

Installation is basically the reverse order of removal.

FRONT FOOT DUCT

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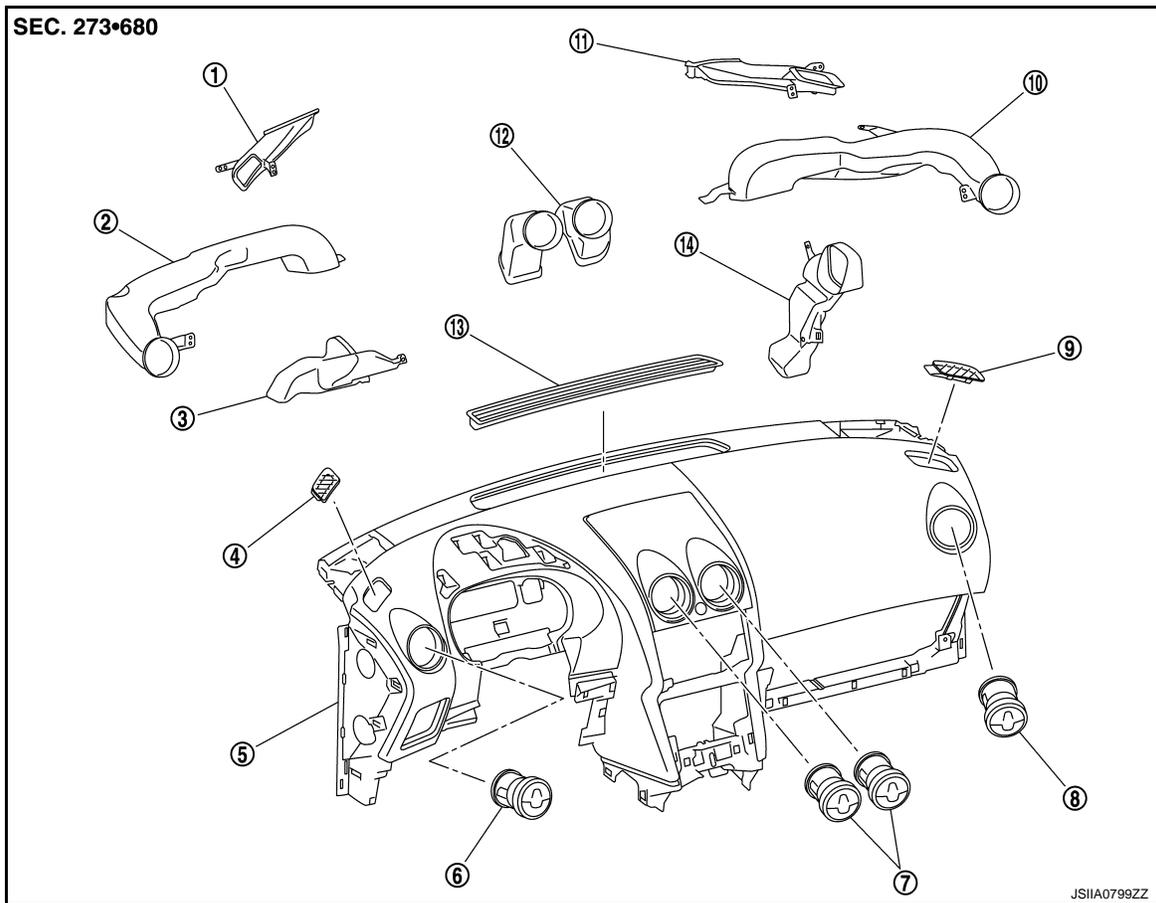
DUCT AND GRILLE

< ON-VEHICLE REPAIR >

[MANUAL AIR CONDITIONER]

FRONT FOOT DUCT : Exploded View

INFOID:000000001871932



- | | | |
|-----------------------------|------------------------------|------------------------------|
| 1. Side defroster duct LH | 2. Side ventilator duct LH | 3. Front foot duct LH |
| 4. Side defroster grille LH | 5. Instrument panel | 6. Side ventilator grille LH |
| 7. Center ventilator grille | 8. Side ventilator grille RH | 9. Side defroster grille RH |
| 10. Side ventilator duct RH | 11. Side defroster duct RH | 12. Center ventilator duct |
| 13. Front defroster grille | 14. Front foot duct RH | |

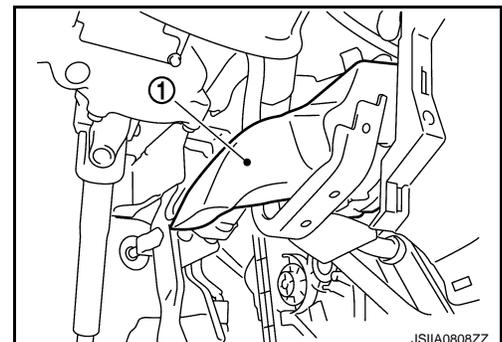
FRONT FOOT DUCT : Removal and Installation

INFOID:000000001722556

REMOVAL

Driver side

1. Remove instrument driver lower cover. Refer to [IP-12, "Exploded View"](#).
2. Remove knee protector. Refer to [IP-12, "Exploded View"](#).
3. Remove rear foot duct 1 (with rear foot duct). Refer to [VTL-49, "REAR FOOT DUCT 1 : Exploded View"](#).
4. Remove front foot duct LH (1).



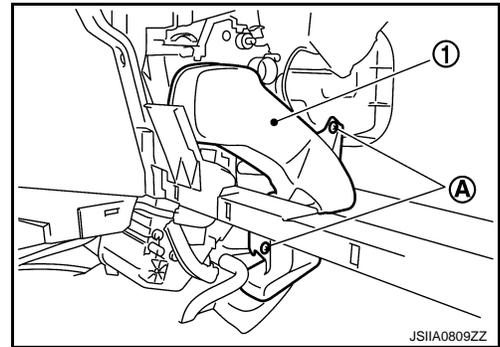
DUCT AND GRILLE

< ON-VEHICLE REPAIR >

[MANUAL AIR CONDITIONER]

Passenger side

1. Remove glove box assembly. Refer to [IP-12, "Exploded View"](#).
2. Remove mounting screws (A), and then remove front foot duct RH (1).



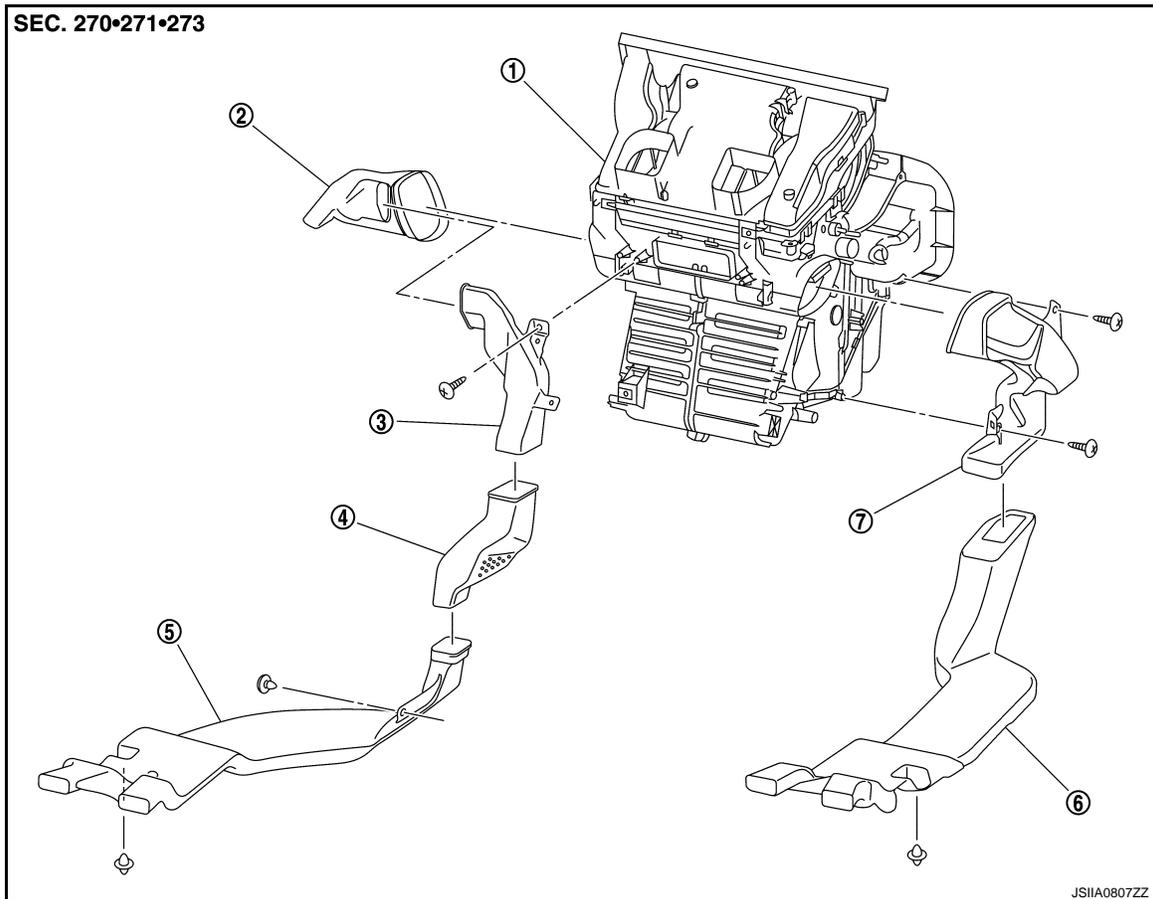
INSTALLATION

Installation is basically the reverse order of removal.

REAR FOOT DUCT 1

REAR FOOT DUCT 1 : Exploded View

INFOID:000000001754014



- | | | |
|-----------------------|------------------------|------------------------|
| 1. A/C unit assembly | 2. Front foot duct LH | 3. Rear foot duct 1 |
| 4. Rear foot duct 2 | 5. Rear foot duct 3 LH | 6. Rear foot duct 3 RH |
| 7. Front foot duct RH | | |

REAR FOOT DUCT 1 : Removal and Installation

INFOID:000000001722558

REMOVAL

1. Remove cluster lid C. Refer to [IP-12, "Exploded View"](#).

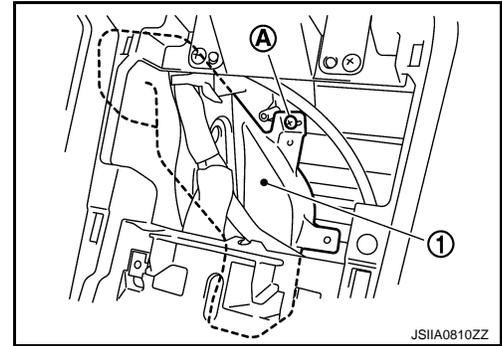
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DUCT AND GRILLE

< ON-VEHICLE REPAIR >

[MANUAL AIR CONDITIONER]

2. Remove screw (A), and then remove rear foot duct 1 (1).



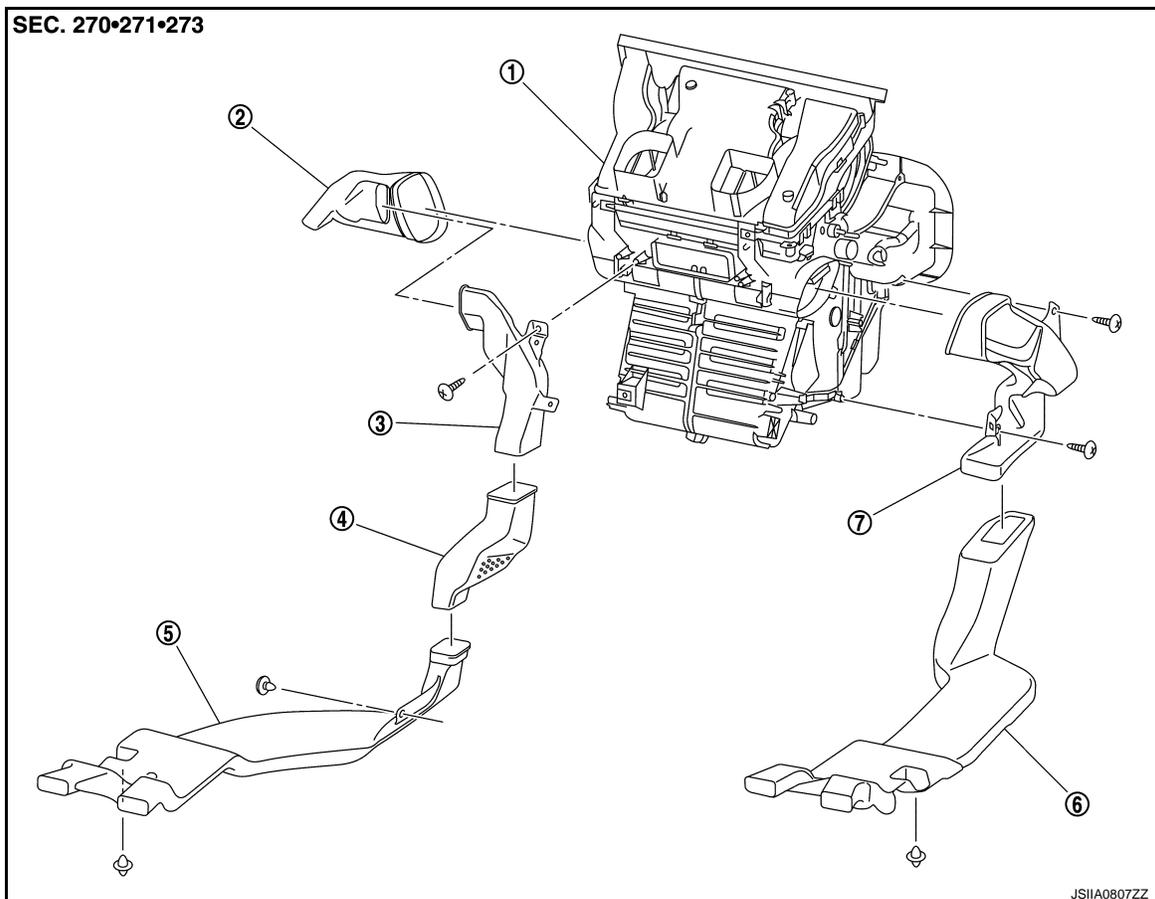
INSTALLATION

Installation is basically the reverse order of removal.

REAR FOOT DUCT 2

REAR FOOT DUCT 2 : Exploded View

INFOID:000000001754015



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|-----------------------|------------------------|------------------------|
| 1. A/C unit assembly | 2. Front foot duct LH | 3. Rear foot duct 1 |
| 4. Rear foot duct 2 | 5. Rear foot duct 3 LH | 6. Rear foot duct 3 RH |
| 7. Front foot duct RH | | |

REAR FOOT DUCT 2 : Removal and Installation

INFOID:000000001751534

REMOVAL

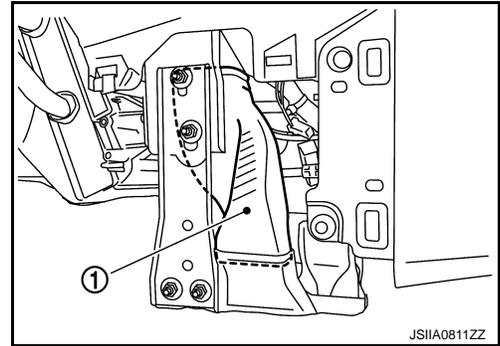
1. Remove instrument lower cover LH. Refer to [IP-12, "Exploded View"](#).

DUCT AND GRILLE

< ON-VEHICLE REPAIR >

[MANUAL AIR CONDITIONER]

2. Remove rear foot duct 2 (1). Refer to [VTL-50. "REAR FOOT DUCT 2 : Exploded View"](#).



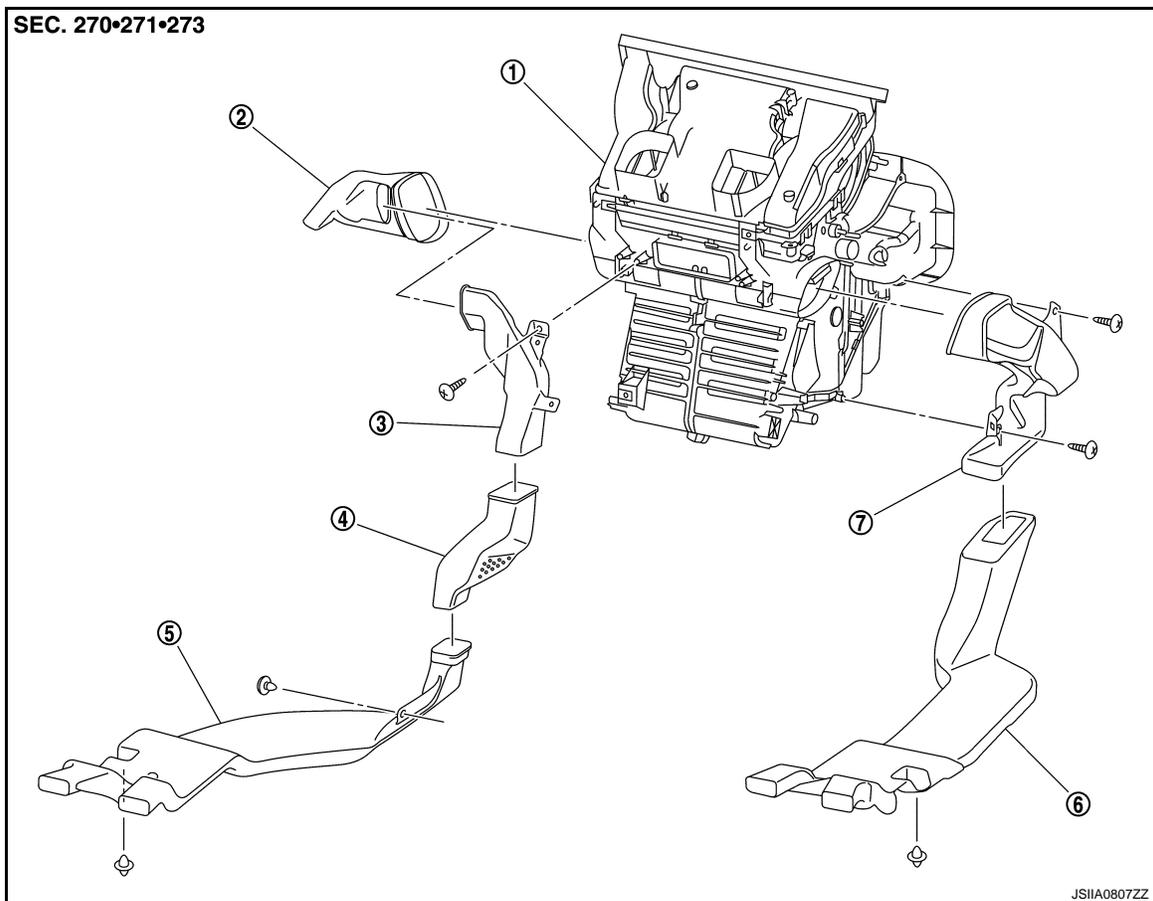
INSTALLATION

Installation is basically the reverse of removal.

REAR FOOT DUCT 3

REAR FOOT DUCT 3 : Exploded View

INFOID:000000001754016



- | | | |
|-----------------------|------------------------|------------------------|
| 1. A/C unit assembly | 2. Front foot duct LH | 3. Rear foot duct 1 |
| 4. Rear foot duct 2 | 5. Rear foot duct 3 LH | 6. Rear foot duct 3 RH |
| 7. Front foot duct RH | | |

REAR FOOT DUCT 3 : Removal and Installation

INFOID:000000001722560

REMOVAL

Driver side

1. Peel back floor carpet to a point where rear foot duct 3 LH is visible. Refer to [INT-21. "Exploded View"](#).

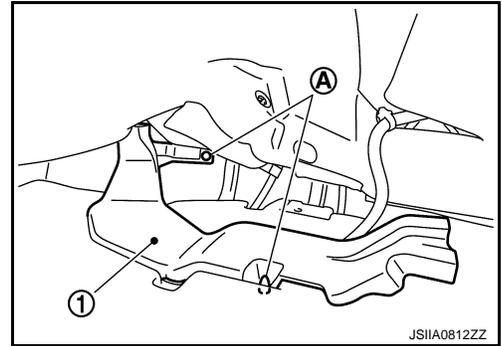
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DUCT AND GRILLE

< ON-VEHICLE REPAIR >

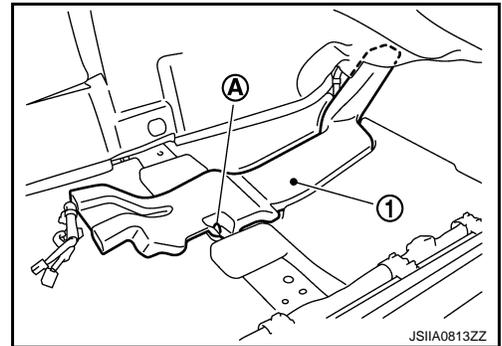
[MANUAL AIR CONDITIONER]

2. Remove clips (A), and then remove rear foot duct 3 LH (1).



Passenger side

1. Peel back floor carpet to a point where rear foot duct 3 RH is visible. Refer to [INT-21, "Exploded View"](#).
2. Remove clip (A), and then remove rear foot duct 3 RH (1).



INSTALLATION

Installation is basically the reverse of removal.