Air conditioner

Item		Specification
Compressor	Type	10A17C
	Oil type & Capacity	FD46XG(PAG) 150 ± 15cc
	Pulley type	6PK-TYPE
	Displacement	180cc/rev
Condenser	Heat rejection	157,000 ± 5% kcal/hr
APT(A/C pressure transducer)	The method to measure the pressure	Voltage = 0.00878835 * Pressure + 0.5
Expansion valve	Type	Block
Refrigerant	Type	R-134a
	Capacity [oz.(g)]	20.1 ± 0.88 (570 ± 25)

Blower unit

Item		Specification
Fresh and recirculation	Operating method	Actuator
Blower	Type	Sirocco
	Speed step	Auto + 8 speed (Automatic) 1~8 (Manual)
	Speed control	Power mosfet
Air filter	Type	Particle filter

Heater and evaporator unit

Item		Specification
Heater	Type	Pin & Tube type
	Heating capacity	4,550 ± 5% kcal/hr
	Mode operating method	Actuator
	Temperature operating method	Actuator
Evaporator	Temperature control type	Evaporator temperature sensor
	A/C ON/OFF [°C(°F)]	ON : 2.1 ± 0.5 (35.7 ± 32.9), OFF: 0.6 ± 0.5 (33.0 ± 32.9)

Heating,Ventilation, Air Conditioning

Problem symptoms table

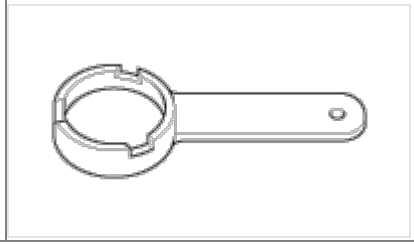
Before replacing or repairing air conditioning components, first determine if the malfunction is due to the refrigerant charge, air flow or compressor.
Use the table below to help you find the cause of the problem. The numbers indicate the priority of the likely cause of the problem. Check each part in order. If necessary, replace these parts.
After correcting the malfunction, check the complete system to ensure that performance is satisfactory.

Standard:

Symptom	Suspect Area
No blower operation	1.Blower fuse 2.Blower relay 3.Blower motor 4.Power mosfet 5.Blower speed control switch 6.Wire harness
No air temperature control	1.Engine coolant capacity 2.Heater control assembly
No compressor operation	1.Refrigerant capacity 2.A/C Fuse 3.Magnetic clutch 4.Compressor 5.A/C pressure transducer 6.A/C switch 7.Evaporator temperature sensor 8.Wire harness
No cool air	1.Refrigerant capacity 2.Refrigerant pressure 3.Drive belt 4.Magnetic clutch 5.Compressor 6.A/C pressure transducer 7.Evaporator temperature sensor 8.A/C switch 9.Heater control assemblyWire harness
Insufficient cooling	1.Refrigerant capacity 2.Drive belt 3.Magnetic clutch 4.Compressor 5.Condenser 6.7.8.Expansion valve 9.Evaporator

	10.Refrigerant lines 11.A/C pressure transducer 12.Heater control assembly
No engine idle-up when A/C switch ON	1.Engine ECM 2.Wire harness
No air inlet control	1. Heater control assembly
No mode control	1.Heater control assembly 2.Mode actuator
No cooling fan operation	1.Cooling fan fuse 2.Fan motor 3.Engine ECM 4.Wire harness

Heating,Ventilation, Air Conditioning

Tool (Number and name)	Illustration	Use
09977-29000 Disc & hub assembly bolt remover		Removal and installation of disc & hub assembly

Heating,Ventilation, Air Conditioning

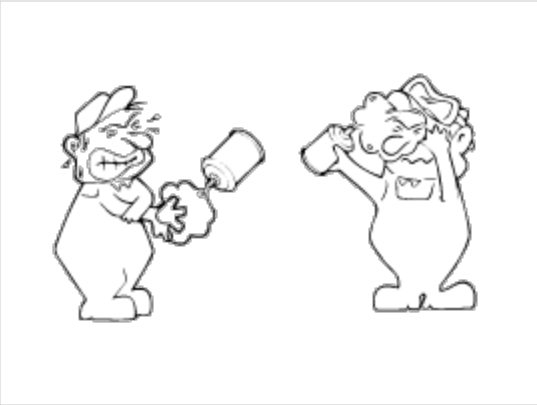
Instructions

When Handling Refrigerant

1. R-134a liquid refrigerant is highly volatile. A drop on the skin of your hand could result in localized frostbite. When handling the refrigerant, be sure to wear gloves.
2. It is standard practice to wear goggles or glasses to protect your eyes, and gloves to protect your hands. If the refrigerant splashes into your eyes, wash them with clean water immediately.
3. The R-134a container is highly pressurized. Never leave it in a hot place, and check storage temperature is below 52°C (126°F)
4. An electronic leak detector should be used to check the system for refrigerant leakage. Bear in mind that the R-134a, upon coming into contact with flame, produces phosgene, a highly toxic gas.
5. Use only recommended lubricant for R-134a systems. If lubricants other than the recommended one used, system failure may occur.
6. PAG lubricant absorbs moisture from the atmosphere at a rapid rate, therefore the following precautions must be observed:

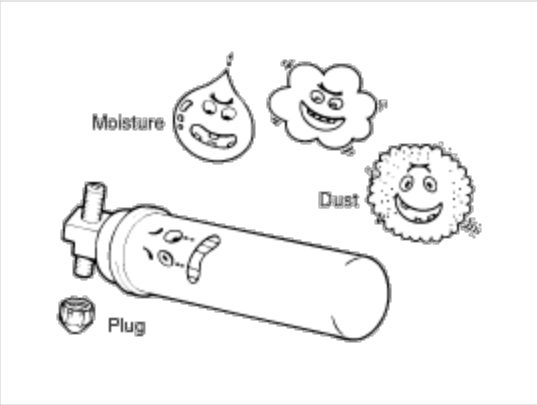
A. When removing refrigerant components from a vehicle, cap the components immediately to prevent entry of moisture.
B. When installing refrigerant components to a vehicle, do not remove the cap until just before connecting the components.
C. Complete the connection of all refrigerant tubes and hoses without delay to prevent the A/C system from taking on moisture.
D. Use the recommended lubricant from a sealed container only.

7. If an accidental discharge in the system occurs, ventilate the work area before resum of service.



When replacing parts ON A/C system

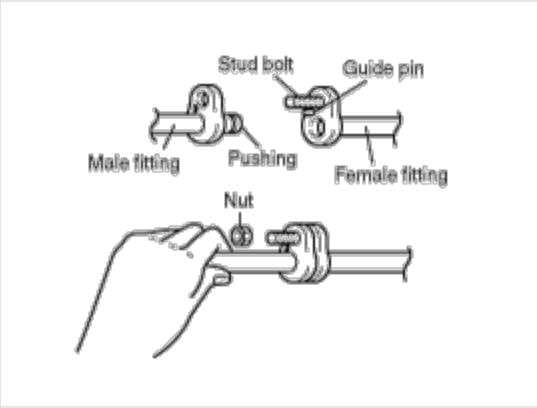
1. Never open or loosen a connection before discharging the system.
2. Seal the open fittings of components with a cap or plug immediately to prevent intrusion of moisture or dust.
3. Do not remove the sealing caps from a Replacement component until it is ready to be installed.
4. Before connecting an open fitting, always install a new sealing ring. Coat the fitting and seal with refrigerant oil before making the connection.



When Installing Connecting Parts

Flange with guide pin

Check the new O-ring for damage (use only the specified) and lubricate by using compressor oil. Tighten the nut to specified torque.



Size	Tightening torque [N.m (kg.m, lbf.ft)]	
	General bolt, nut	
	4T	7T
M6	5 - 6 (0.5 - 0.6, 3.6 - 4.3)	9 - 11 (0.9 - 1.1, 6.5 - 7.9)
M8	12 - 14 (1.2 - 1.4, 8.7 - 10)	20 - 26 (2.0 - 2.6, 14 - 18)
M10	25 - 28 (2.5 - 2.8, 18 - 20)	45 - 55 (4.5 - 5.5, 32 - 39)
Size	Flange bolt, nut	
	4T	7T
M6	5 - 7 (0.5 - 0.7, 3.6 - 5.0)	8 - 12 (0.8 - 1.2, 5.8 - 8.6)
M8	10 - 15 (1.0 - 1.5, 7 - 10)	19 - 28 (1.9 - 2.8, 14 - 20)
M10	21 - 31 (2.1 - 3.1, 15 - 22)	39 - 60 (3.9 - 6.0, 28 - 43)

NOTICE

- T means tensile intensity, which is stamped on the head of bolt only numeral.

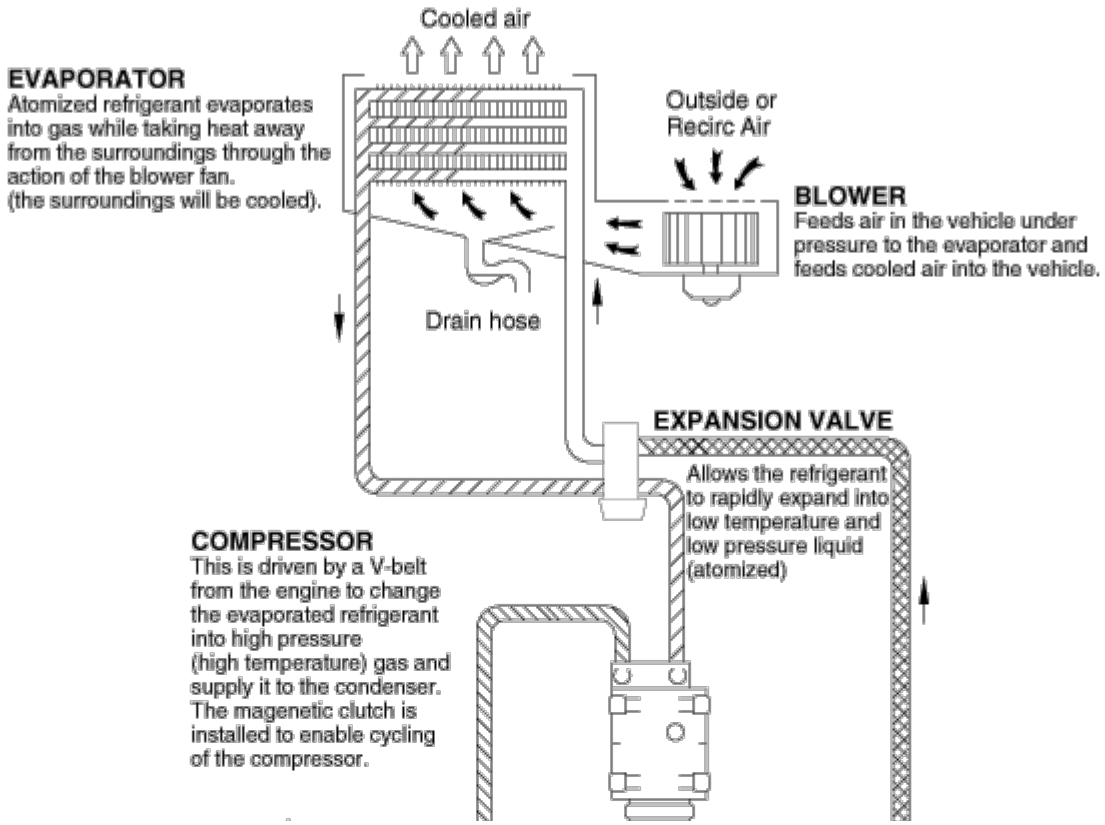
Handling tubing and fittings

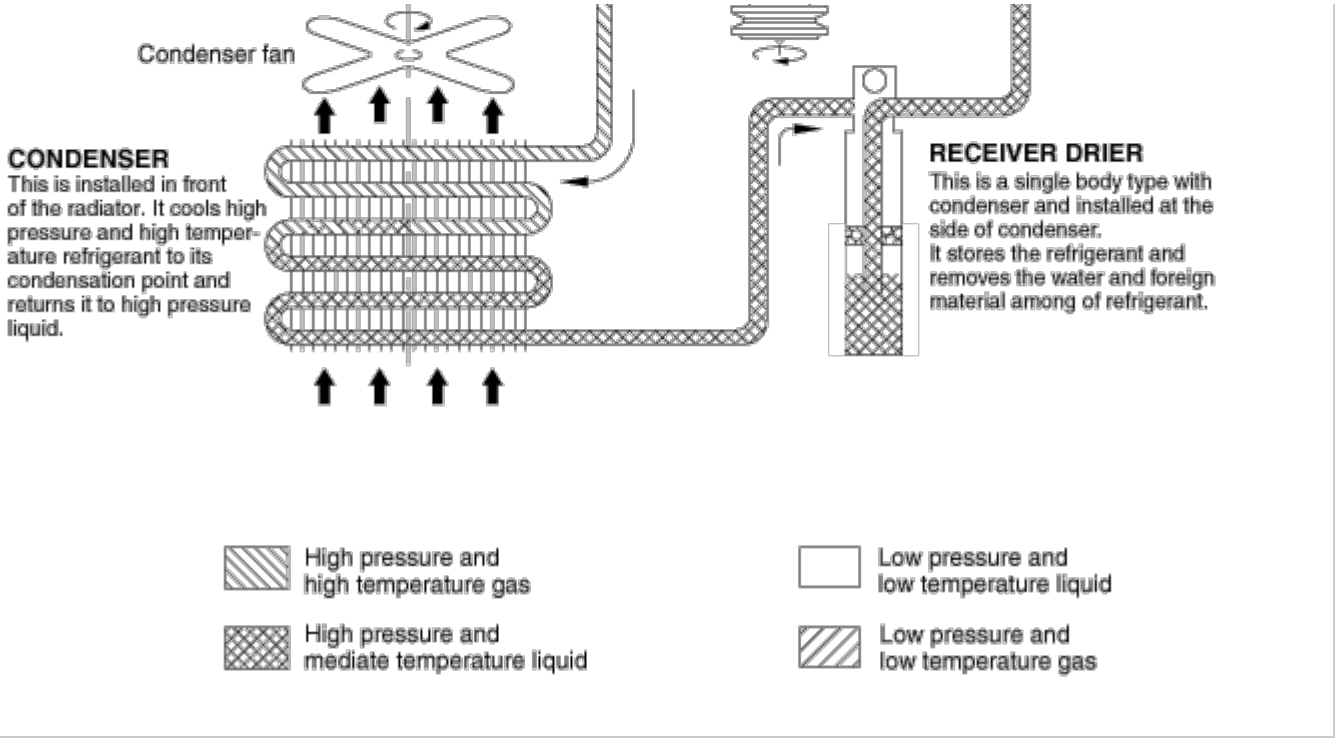
The internal parts of the refrigeration system will remain in a state of chemical stability as long as pure moisture-free refrigerant and refrigerant oil are used. Abnormal amounts of dirt, moisture or air can upset the chemical stability and cause problems or serious damage.

The Following precautions must be observed

1. When it is necessary to open the refrigeration system, have everything you will need to service the system ready so the system will not be left open any longer than necessary.
2. Cap or plug all lines and fittings as soon as they are opened to prevent the entrance of dirt and moisture.
3. All lines and components in parts stock should be capped or sealed until they are ready to be used.
4. Never attempt to rebind formed lines to fit. Use the correct line for the installation you are servicing.
5. All tools, including the refrigerant dispensing manifold, the gauge set manifold and test hoses, should be kept clean and dry.

Refrigeration cycle





Refrigerant system service basics

Refrigerant recovery

Use only service equipment that is U.L-listed and is certified to meet the requirements of SAE J2210 to remove HFC-134a(R-134a) from the air conditioning system.

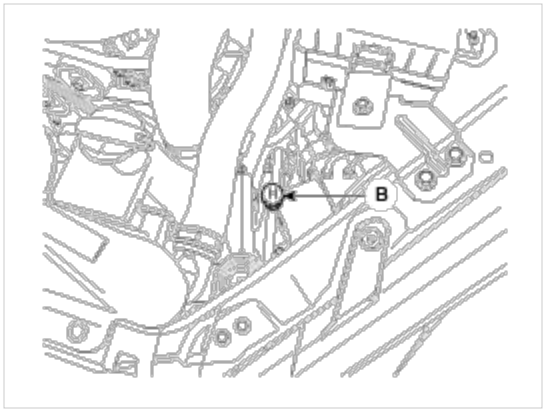
⚠ CAUTION

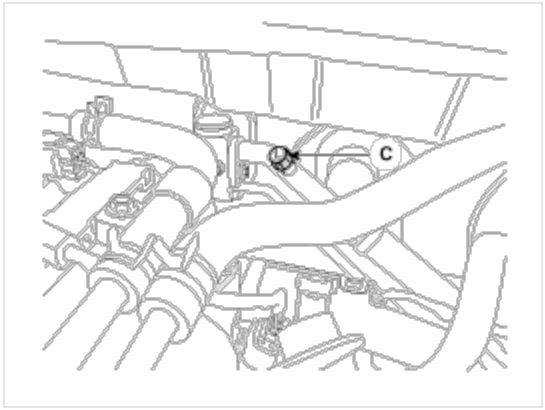
- Air conditioning refrigerant or lubricant vapor can irritate your eyes, nose, or throat.
- Be careful when connecting service equipment.
- Do not breathe refrigerant or vapor.

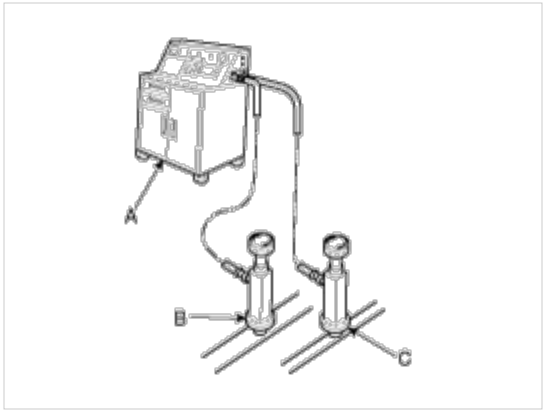
If accidental system discharge occurs, ventilate work area before resume of service.

Additional health and safety information may be obtained from the refrigerant and lubricant manufacturers.

1. Connect an R-134a refrigerant Recovery/Recycling/Charging System (A) to the high-pressure service port (B) and the low-pressure service port (C) as shown, following the equipment manufacturer's instructions.







2. Measure the amount of refrigerant oil removed from the A/C system after the recovery process is completed. Be sure to install the same amount of new refrigerant oil back into the A/C system before charging.

System evacuation

Use only service equipment that is U.L-listed and is certified to meet the requirements of SAE J2210 to remove HFC-134a(R-134a) from the air conditioning system.

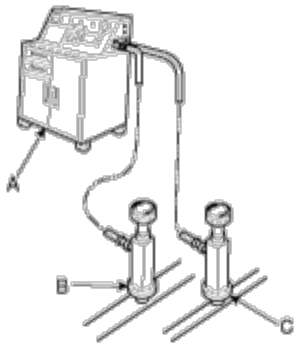
⚠ CAUTION

- Air conditioning refrigerant or lubricant vapor can irritate your eyes, nose, or throat.
- Be careful when connecting service equipment.
- Do not breathe refrigerant or vapor.

If accidental system discharge occurs, ventilate work area before resume of service.

Additional health and safety information may be obtained from the refrigerant and lubricant manufacturers.

1. When an A/C System has been opened to the atmosphere, such as during installation or repair, it must be evacuated using an R-134a refrigerant Recovery/Recycling/Charging System. (If the system has been open for several days, the receiver/dryer should be replaced, and the system should be evacuated for several hours.)
2. Connect an R-134a refrigerant Recovery/Recycling/Charging System (A) to the high-pressure service port (B) and the low-pressure service port (C) as shown, following the equipment manufacturer's instructions.



3. If the low-pressure does not reach more than 93.3 kPa (700 mmHg, 27.6 in.Hg) in 10 minutes, there is probably a leak in the system. Partially charge the system, and check for leaks (see Leak Test.).
4. Remove the low pressure valve from the low-pressure service port.

System charging

Use only service equipment that is U.L-listed and is certified to meet the requirements of SAE J2210 to remove HFC-134a(R-134a) from the air conditioning system.

⚠ CAUTION

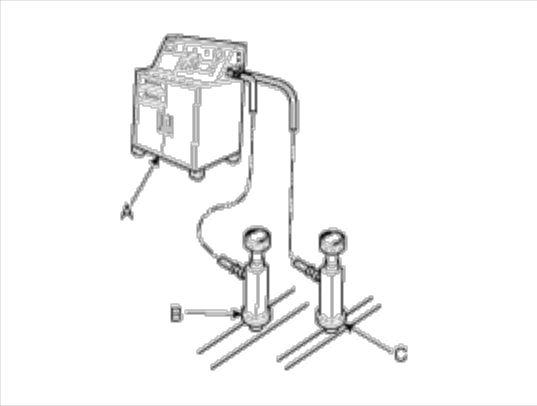
- Air conditioning refrigerant or lubricant vapor can irritate your eyes, nose, or throat.
- Be careful when connecting service equipment.
- Do not breathe refrigerant or vapor.

If accidental system discharge occurs, ventilate work area before resume of service.

Additional health and safety information may be obtained from the refrigerant and lubricant manufacturers.

1.

Connect an R-134a refrigerant Recovery/Recycling/Charging System (A) to the high-pressure service port (B) as shown, following the equipment manufacturer's instructions.



2. Add the same amount of new refrigerant oil to system that was removed during recovery. Use only specified refrigerant oil. Charge the system with 20.1 ± 0.88 oz. (570 ± 25g) of R-134a refrigerant. Do not overcharge the system the compressor will be damaged.

Refrigerant leak test

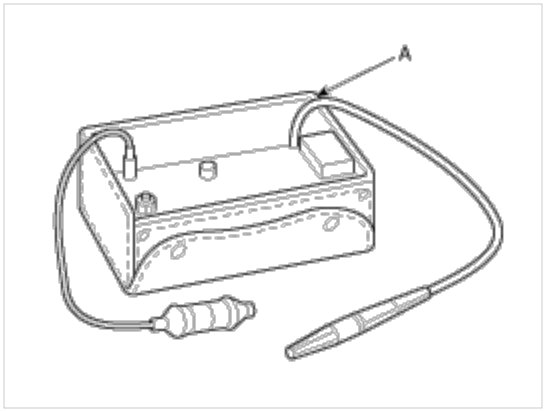
Always conduct a leak test with an electronic leak detector whenever leakage or refrigerant is suspected and when conducting service operations which are accompanied by disassembly or loosening or connection fittings.

NOTICE

In order to use the leak detector properly, read the manual supplied by the manufacturer.

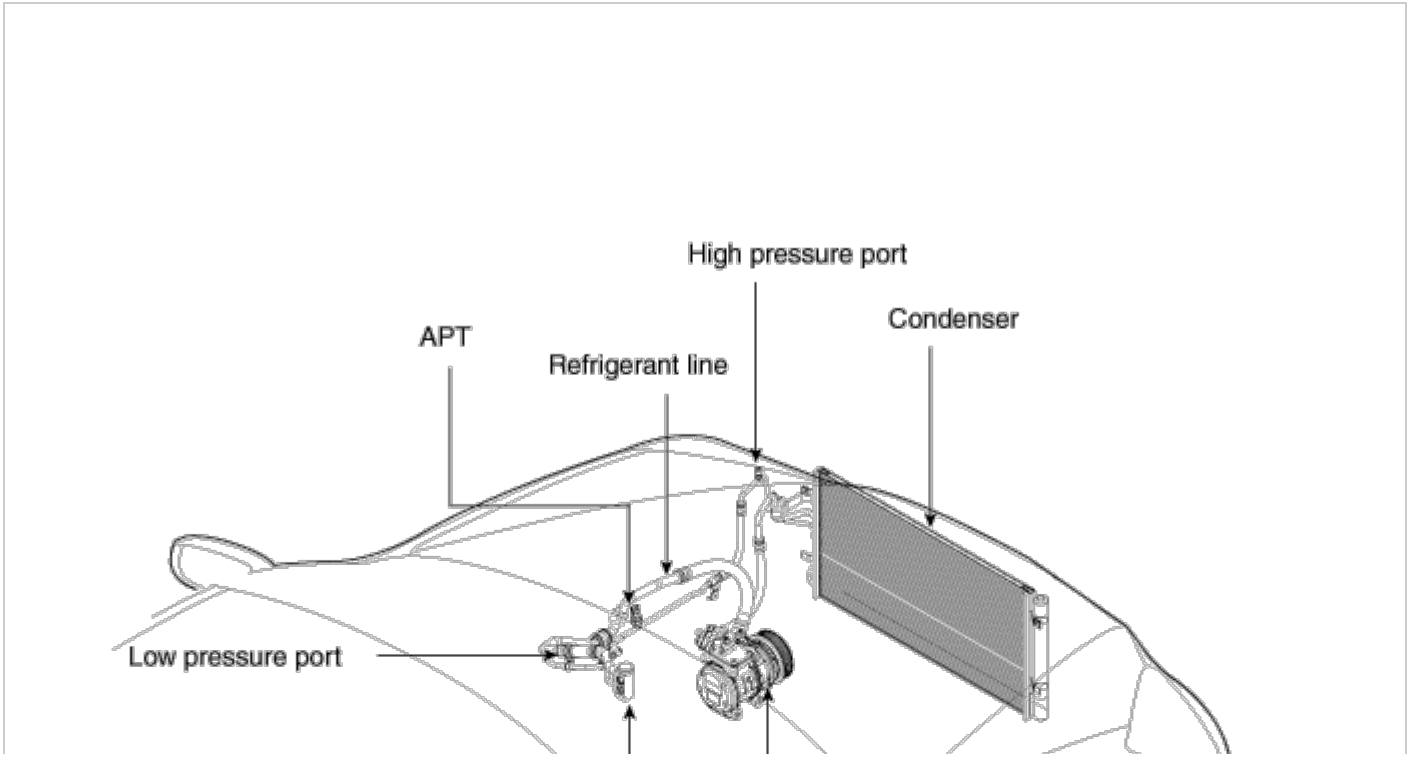
If a gas leak is detected, proceed as follows:

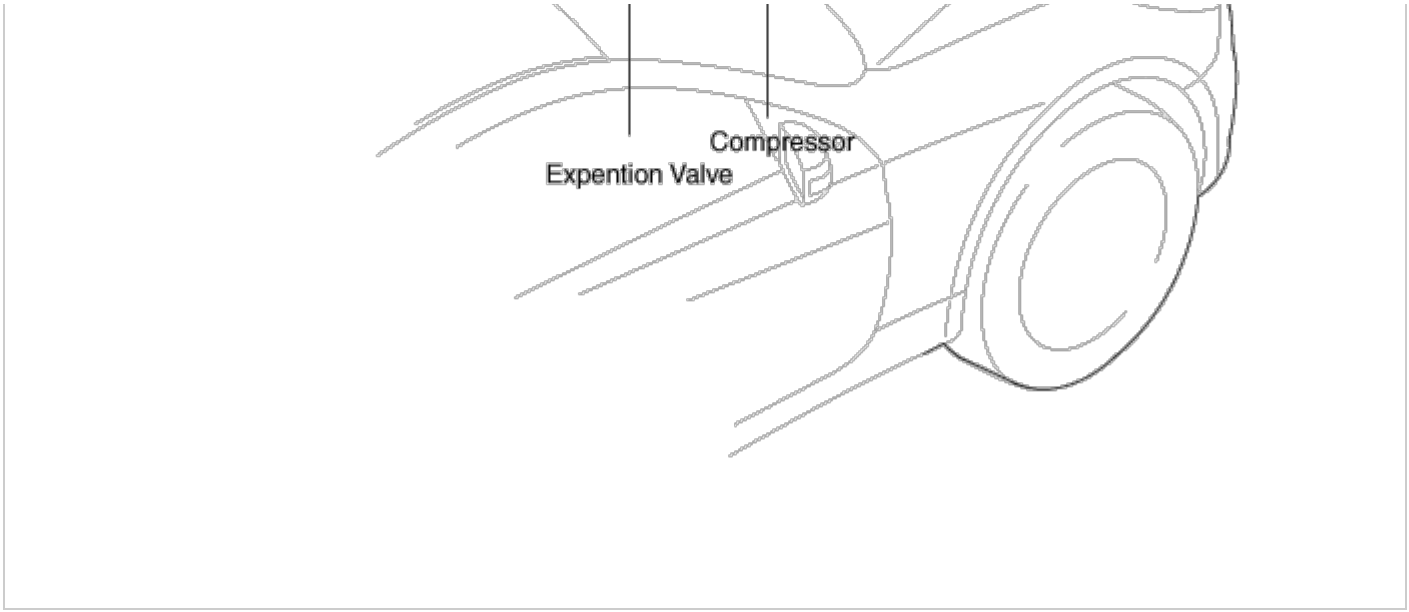
1. Check the torque on the connection fittings and, if too loose, tighten to the proper torque. Check for gas leakage with a leak detector (A).
2. If leakage continues even after the fitting has been tightened, discharge the refrigerant from the system, disconnect the fittings, and check their seating faces for damage. Always replace, even if the damage is slight.
3. Check the compressor oil and add oil if required.
4. Charge the system and recheck for gas leaks. If no leaks are found, evacuate and charge the system again.



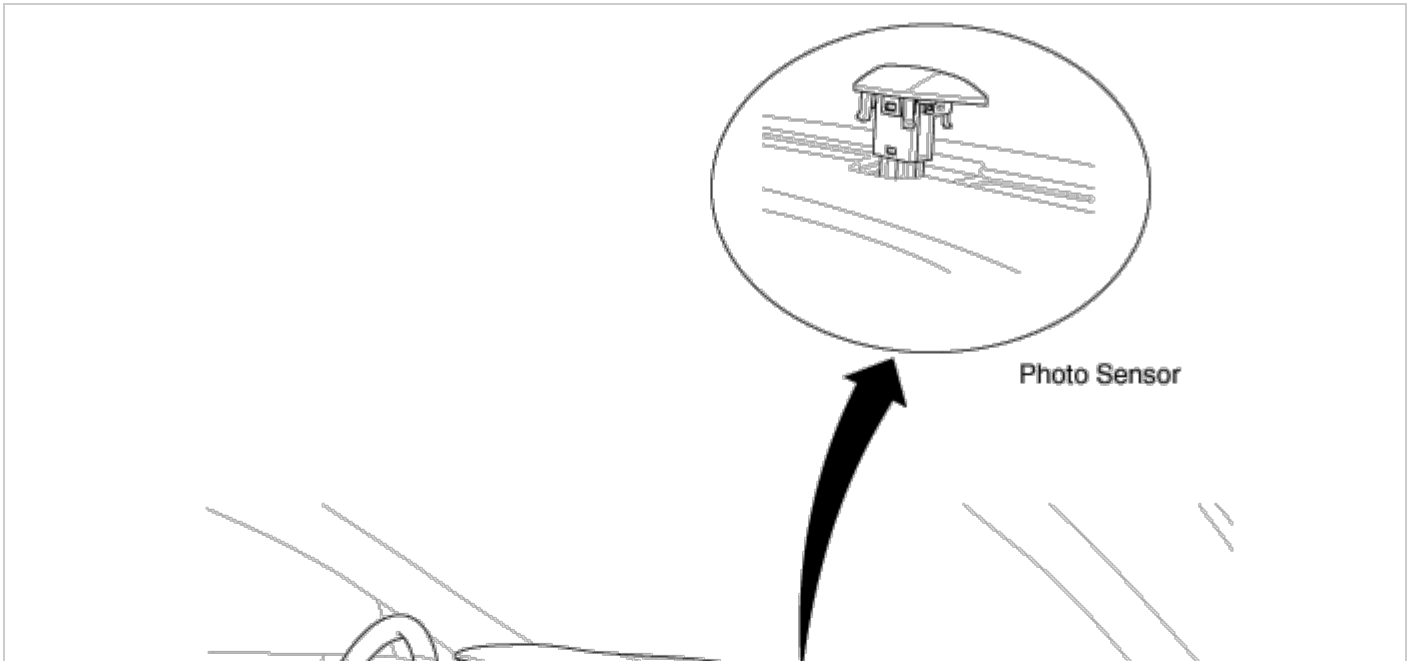
Component location index

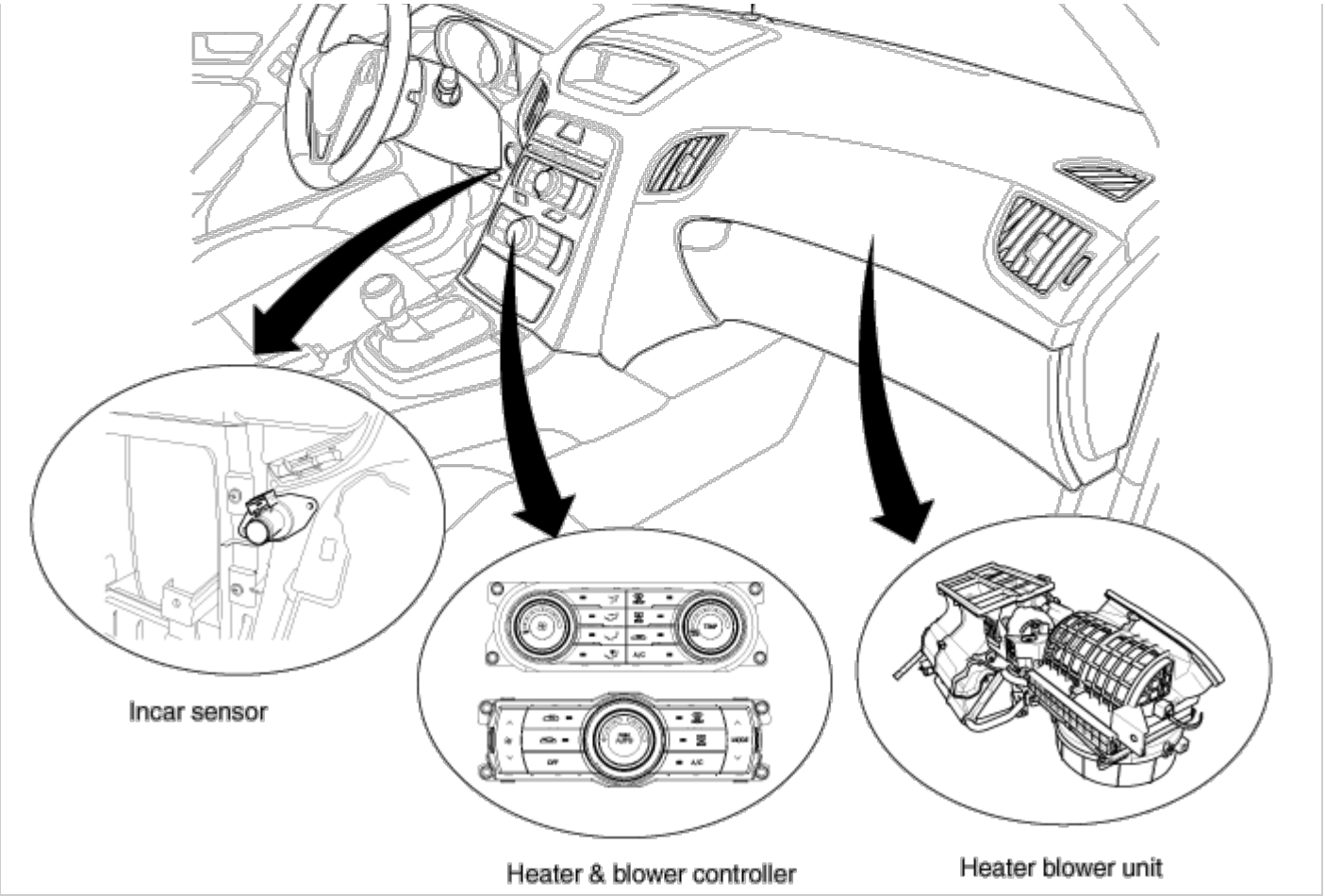
Engine room





Interior





Oil Specification

1. The HFC-134a system requires synthetic (PAG) compressor oil whereas the R-12 system requires mineral compressor oil. The two oils must never be mixed.
2. Compressor (PAG) oil varies according to compressor model. Be sure to use oil specified for the model of compressor.

Handling of Oil

1. The oil should be free from moisture, dust, metal powder, etc.
2. Do not mix with other oil.
3. The water content in the oil increases when exposed to the air. After use, seal oil from air immediately. (HFC-134a Compressor Oil absorbs moisture very easily.)

4. The compressor oil must be stored in steel containers, not in plastic containers.

Compressor oil check

The oil used to lubricate the compressor is circulating with the refrigerant.
Whenever replacing any component of the system or a large amount of gas leakage occurs, add oil to maintain the original amount of oil.

Oil total volume in system :150±15cc(5.3±0.53 fl.oz)

Oil Return Operation

There is close affinity between the oil and the refrigerant.
During normal operation, part of the oil recirculates with the refrigerant in the system. When checking the amount of oil in the system, or replacing any component of the system, the compressor must be run in advance for oil return operation. The procedure is as follows:

1. Open all the doors and the engine hood.
2. Start the engine and air conditioning switch to "ON" and set the blower motor control knob at its highest position.
3. Run the compressor for more than 20 minutes between 800 and 1,000 rpm in order to operate the system.
4. Stop the engine.

Replacement of Component Parts

When replacing the system component parts, supply the following amount of oil to the component parts to be installed.

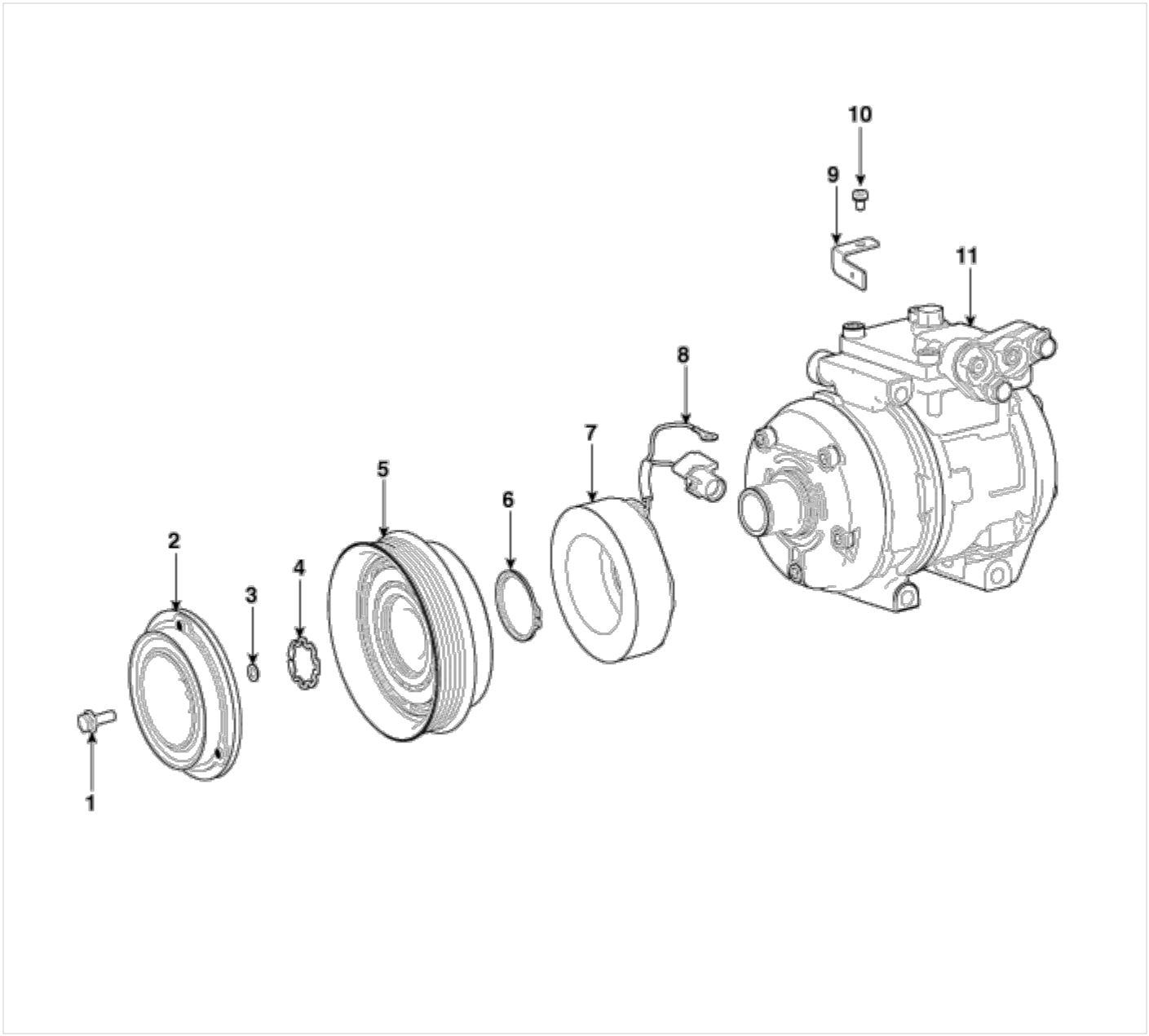
Component parts to be installed	Amount of Oil
Evaporator	50 cc (1.70 fl.oz)
Condenser	30 cc (1.02 fl.oz)
Receiver/dryer	30 cc (1.02 fl.oz)
Refrigerant line (One piece)	10 cc (0.34 fl.oz)

For compressor Replacement, subtract the volume of oil drained from the removed compressor from the specified volume, and drain the calculated volume of oil from the new compressor:
The specified volume - volume of removed compressor = volume to drain from the new compressor.

NOTICE

- Even if no oil is drained from the removed compressor, don’t drain more than 50cc from new compressor.

Components


10
9
11
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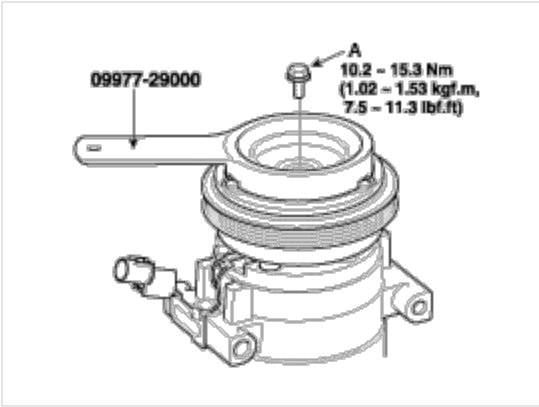
3
1

1. Bolt	6. Retainer ring
2. Disc & hub assembly	7. Field coil
3. Shim (Gap washer)	8. Connector
4. Retainer ring	9. Connector bracket
5.Pulley	10. Screw
	11. Compressor assembly

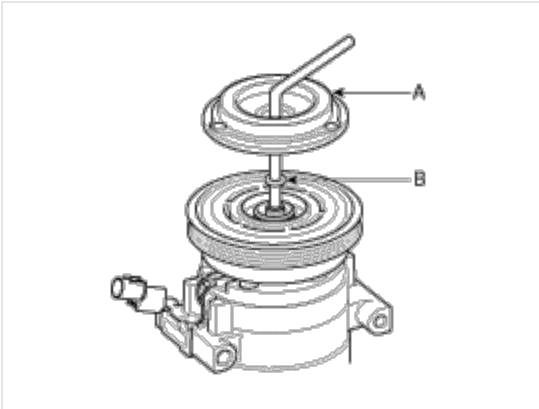
Disassembly

1. Remove the center bolt (A) while holding the disc & hub assembly with a commercially available disc & hub assembly bolt remover; Special tool number 09977-29000.

TORQUE :10~15N.m (1.02~1.53kgf.m, 7.37~11lbf.ft)



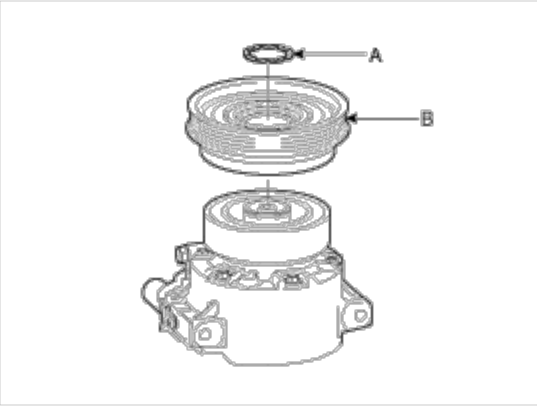
2. Remove the disc & hub assembly (A) and shim (gap washer) (B), taking care not to lose the shims. If the clutch needs adjustment, increase or decrease the number and thickness of shims as necessary, then reinstall the disc & hub assembly, and recheck its clearance.



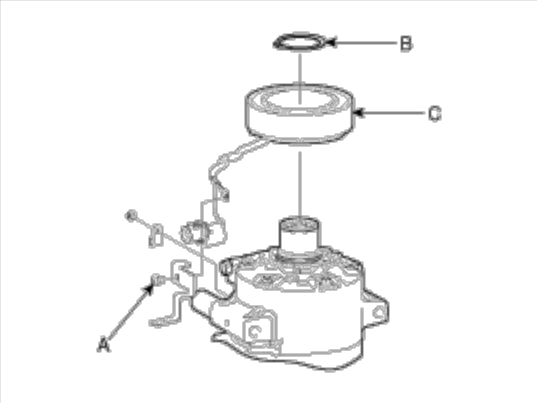
3. If you removal the field coil, remove retainer ring (A) with retainer ring pliers.

NOTICE

- Be careful not to damage the pulley (B) and compressor during removal/installation.
- Once retainer ring (A) is removed, replace it with a new one.

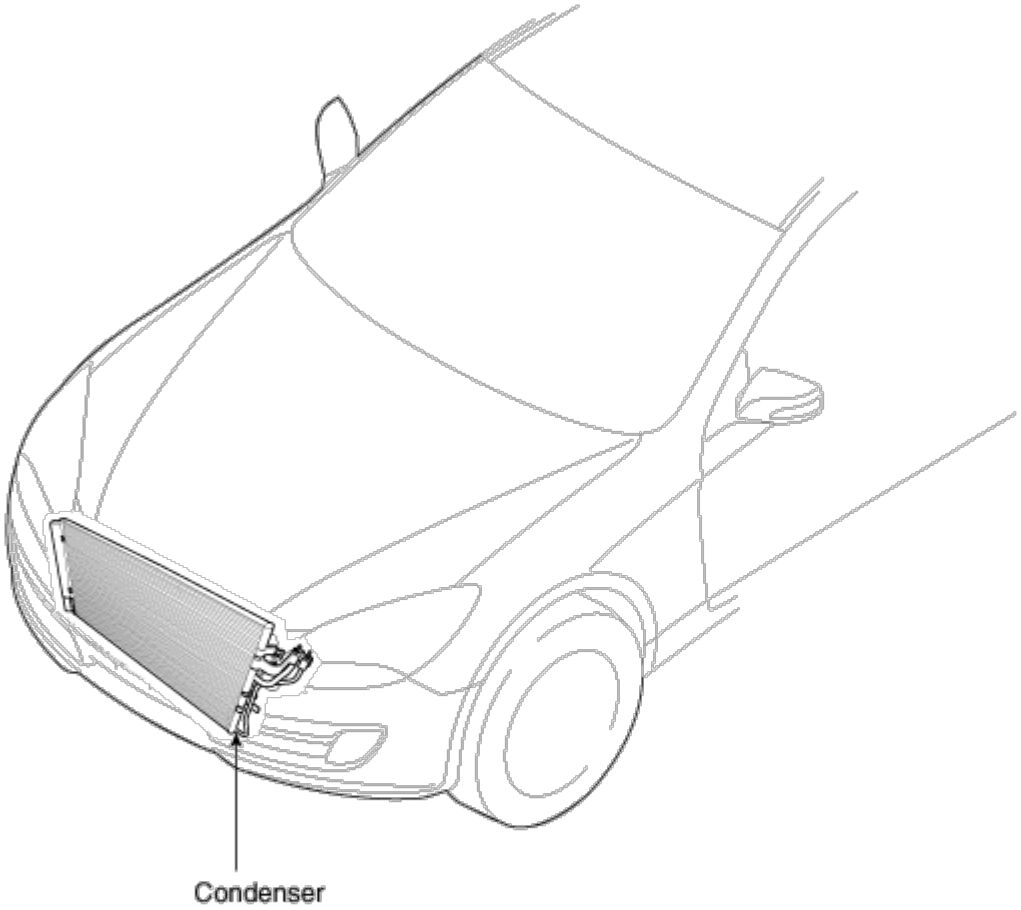


4. Remove the screw (A) from the field coil ground terminal. Remove the retainer ring (B) and then remove the field coil (C) from the shaft with a puller. Be careful not to damage the coil and compressor.



5. Reassemble the compressor clutch in the reverse order of disassembly, and note these items :
   A. Install new retainer rings, and make sure they are fully seated in the groove.
   B. Make sure that the pulley turns smoothly after its reassembled.

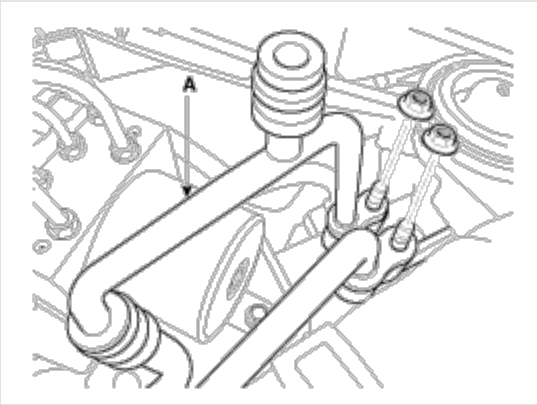
Component location


Condenser

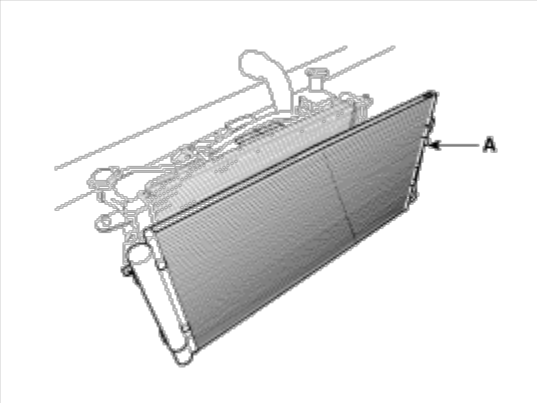
Replacement

Condenser Assembly

1. Recover the refrigerant with a recovery/ recycling/ charging station .
2. Disconnect the negative (-) battery terminal.
3. Remove 2 nuts, and then disconnect the discharge line and liquid line (A) from the condenser.



4. Remove the radiator. (Refer to EM group - Radiator)
5. Remove 2 bolts, and then remove the condenser (A) by lifting it up. Be careful not to damage the radiator and condenser fins when removing the condenser.



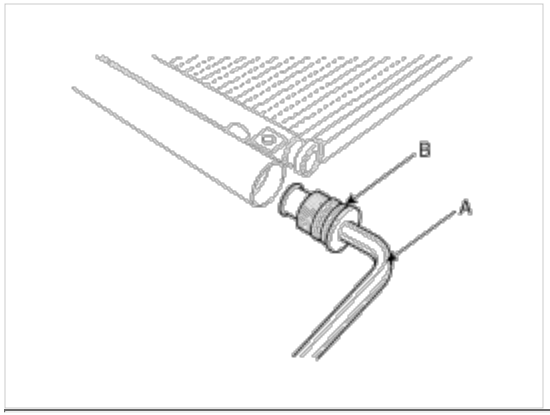
6. Install in the reverse order of removal, and note these items :
   A. If you're installing a new condenser, add refrigerant oil ND-OIL8.
   B. Replace the O-rings with new ones at each fitting, and apply a thin coat of refrigerant oil before installing them. Be sure to use the right O-rings for R-134a to avoid leakage.
   C. Be careful not to damage the radiator and condenser fins when installing the condenser.
   D. Be sure to install the lower mount cushions of condenser securely into the holes.

E. Charge the system, and test its performance.

Heating,Ventilation, Air Conditioning

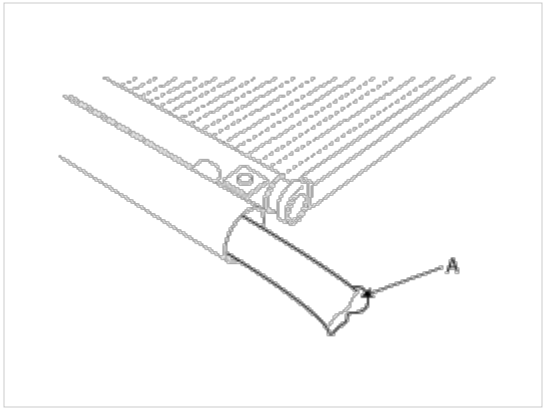
Replacement

1. Remove the condenser, and then remove the bottom cap (B) with L wrench (A) from the condenser.



TORQUE :20~25N.m (2.0~2.5kgf•m, 14.5~18.2lb-ft)

2. Remove the desiccant (A) from condenser using a long nose plier. Check for crumbled desiccant and clogged bottom cap filter.



3. Apply air conditioning compressor oil along the O-rings and threads of the new bottom cap.
4. Insert the new desiccant into the receiver drier tank. The desiccant must be sealed in vacuum before it is exposed to air for use.
5. Install the new bottom cap to the condenser.

NOTICE

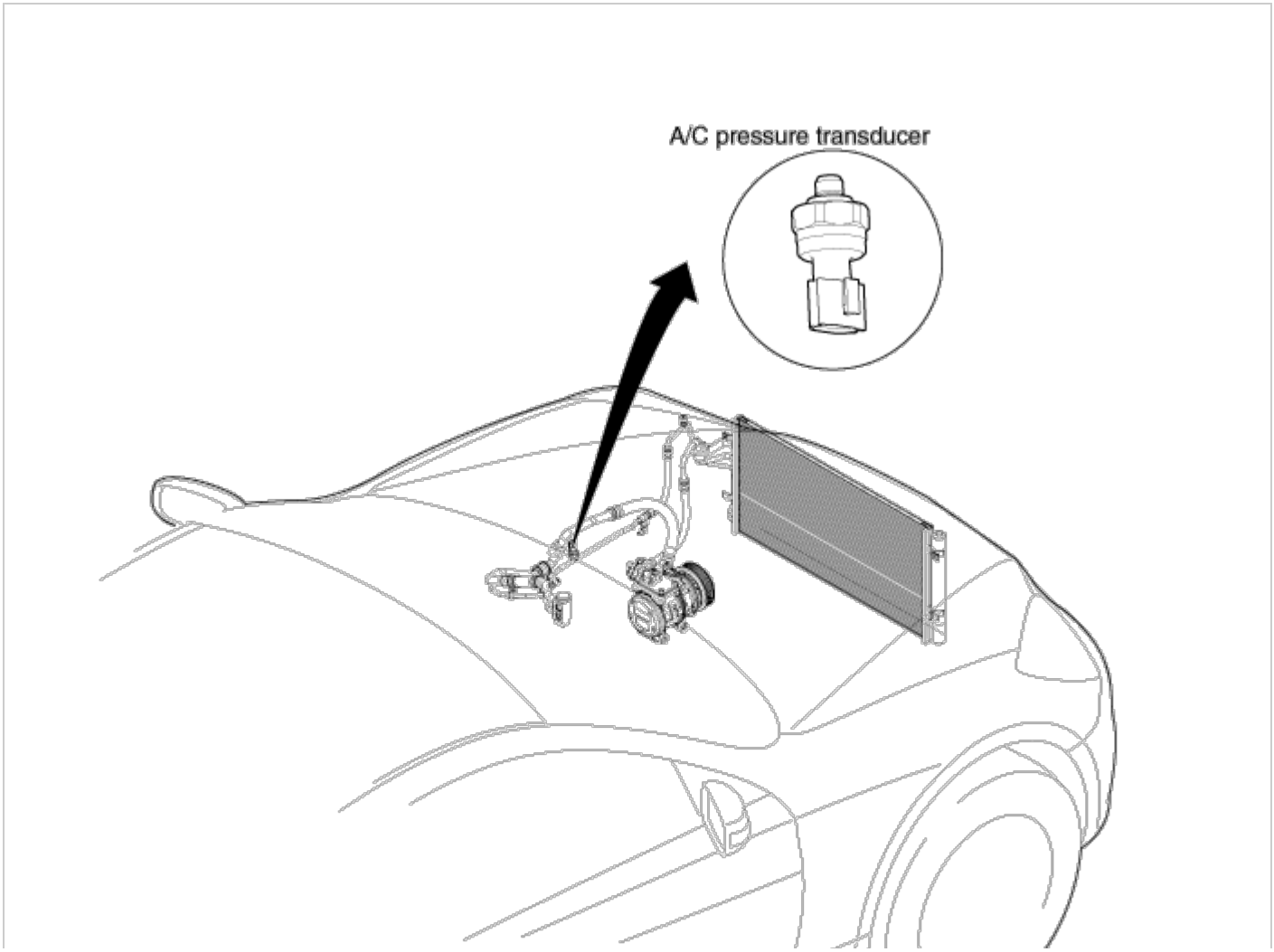
- Always replace the desiccant and bottom cap at the same time.
-

Replace the O-rings with new ones at each fitting, and apply a thin coat of refrigerant oil before installing them. Be sure to use the right O-rings for R-134a to avoid leakage.

- Be careful not to damage the radiator and condenser fins when installing the condenser.
- Be sure to install the lower mount cushions of condenser securely into the holes.
- Charge the system, and test its performance.

Heating,Ventilation, Air Conditioning

Component Location



Heating,Ventilation, Air Conditioning

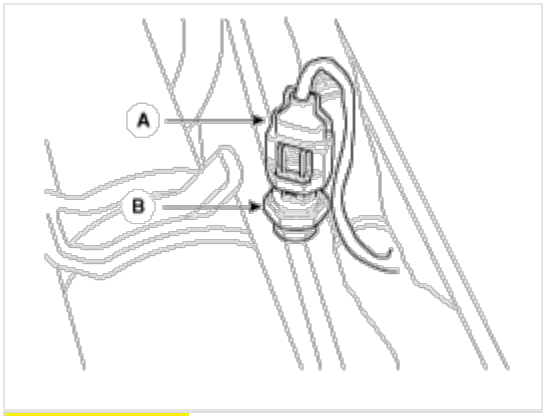
Description

A/C pressure transducer convert the pressure value of high pressure line into voltage value after measure. By converted voltage value, engine ECU controls cooling fan by operating high speed or low speed. Engine ECU stop the operation of compressor when the temperature of refrigerant line is too high or too low irregularly to optimize air conditioning system.

Heating,Ventilation, Air Conditioning

Replacement

1. Disconnect the negative (-) battery terminal.
2. Recover the refrigerant with a recovery/charging station.
3. Disconnect A/C pressure transducer connector (3P) (A).
4. Remove the A/C pressure transducer(B).



CAUTION

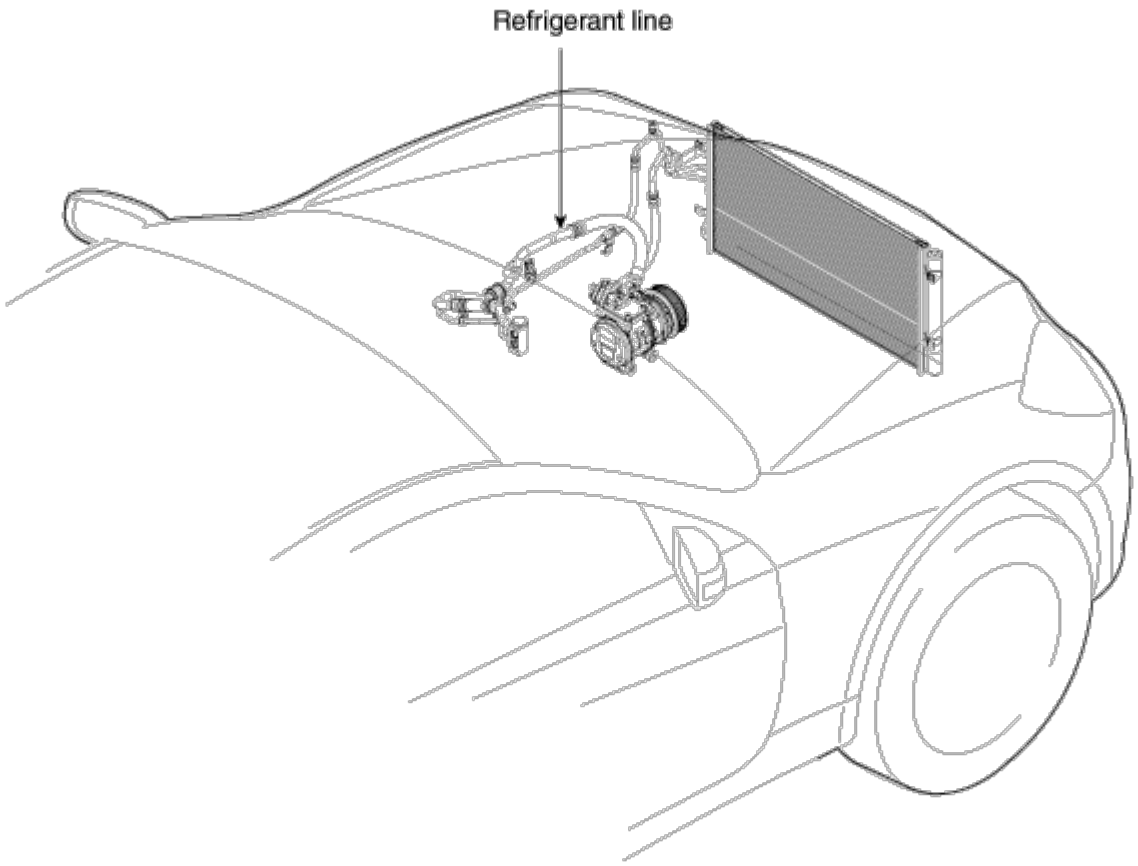
- Take care that liquid & suction pipe are not bent.

5. Installation is the reverse order of removal.

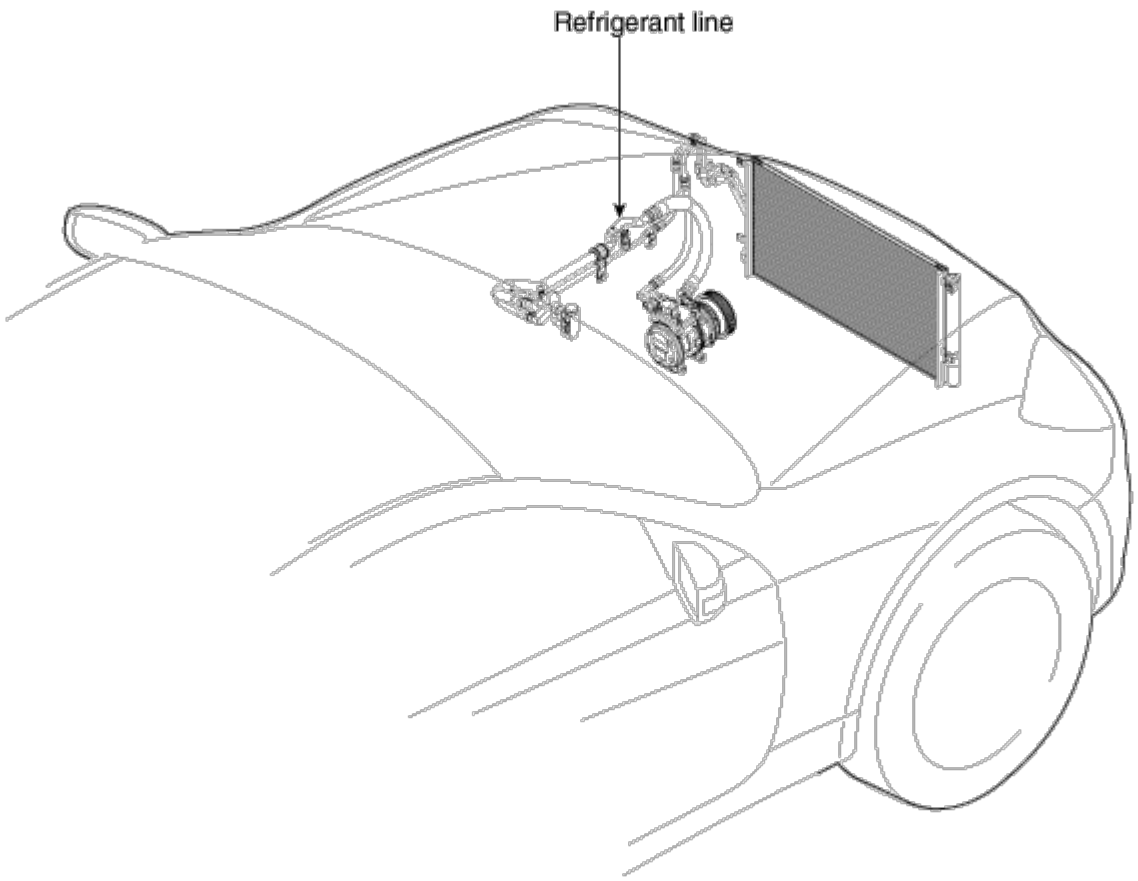
TORQUE :10~12N.m (1.0~1.2kgf.m, 7.4~8.8lbf.ft)

Component location

[Theta engine]



[Lambda engine]



Heating,Ventilation, Air Conditioning

Replacement

1. Discharge refrigerant from refrigeration system .
2. Replace faulty tube or hose.

⚠ CAUTION

- Cap the open fittings immediately to keep moisture or dirt out of the system.

3. Tighten joint of bolt or nut to specified torque

⚠ CAUTION

- Connections should not be torque tighter than the specified torque.

Part tightened	N.m	Kgf.m	lbf.ft
Condenser - Discharge hose	4.9~5.9	0.5~0.6	3.6~4.3
Condenser - Liquid tube			
Compressor - Discharge hose	4.9~5.9	0.5~0.6	3.6~4.3
Compressor - Suction hose			
Expansion valve - Evaporator	11.7~5.9	1.2~1.5	8.7~10.8

4. Evacuate air in refrigeration system and charge system with refrigerant.

   Specified amount: 570 ± 25g (20.1 ± 0.88 oz.)
5. Inspect for leakage of refrigerant.

   Using a gas leak detector, check for leakage of refrigerant .
6. Inspect A/C operation.

Heating,Ventilation, Air Conditioning

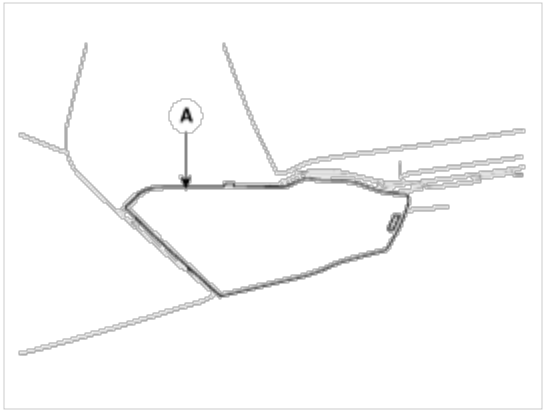
Description

The evaporator temperature sensor will detect the evaporator core temperature and interrupt compressor relay power in order to prevent evaporator freezing by excessive cooling.

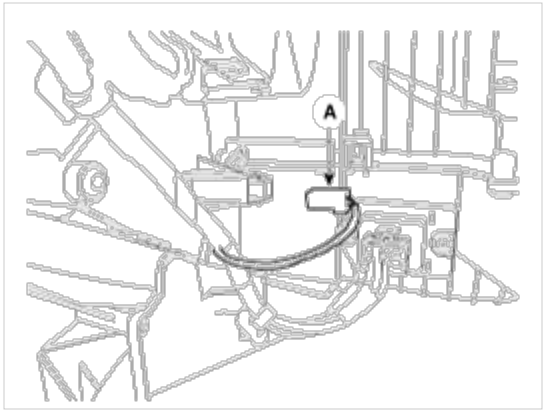
Heating,Ventilation, Air Conditioning

Replacement

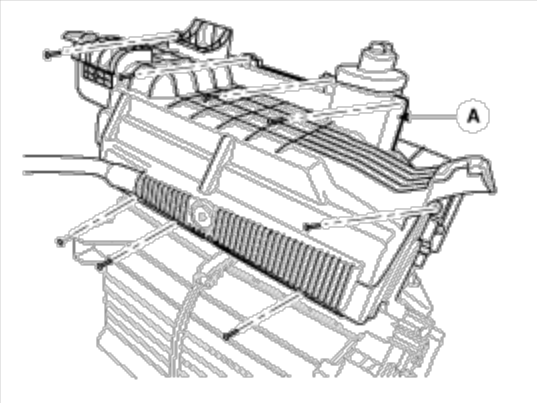
1. Disconnect the negative (-) battery terminal.
2. Remove the crash pad lower cover (A).



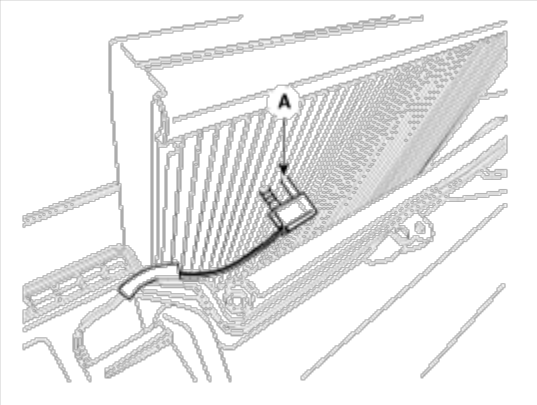
3. Disconnect the evaporator sensor connector (A).



4. Remove the heator unit lower cover (A).



5. Remove the evaporator temperature sensor (A) from evaporator core.



⚠ CAUTION

- Take care that evaporator core pins are not bent.

6. Installation is the reverse order of removal.

Heating,Ventilation, Air Conditioning

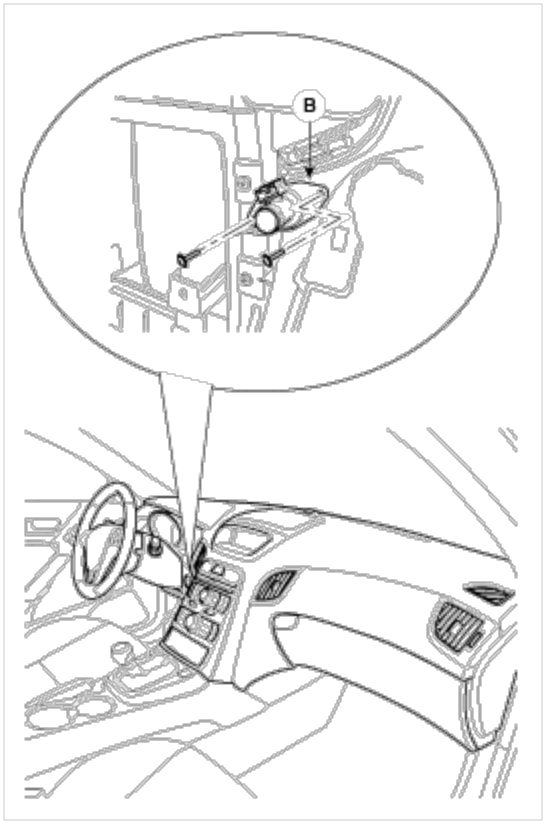
Description

1. In-car air temperature sensor is located at the center facia lower panel.
2. The sensor contains a thermistor which measures the temperature of the inside. The signal decided by the resistance value which changes in accordance with perceived inside temperature, is delivered to heater control unit and according to this signal the control unit regulates incar temperature to intended value.

Heating,Ventilation, Air Conditioning

Replacement

1. Disconnect the negative (-) battery terminal.
2. Remove the crash pad.
3. Disconnect the connector of in-car sensor. Loosen the mounting 2 screws and then remove the in-car sensor (B).



4. Installation is the reverse order of removal.

Heating,Ventilation, Air Conditioning

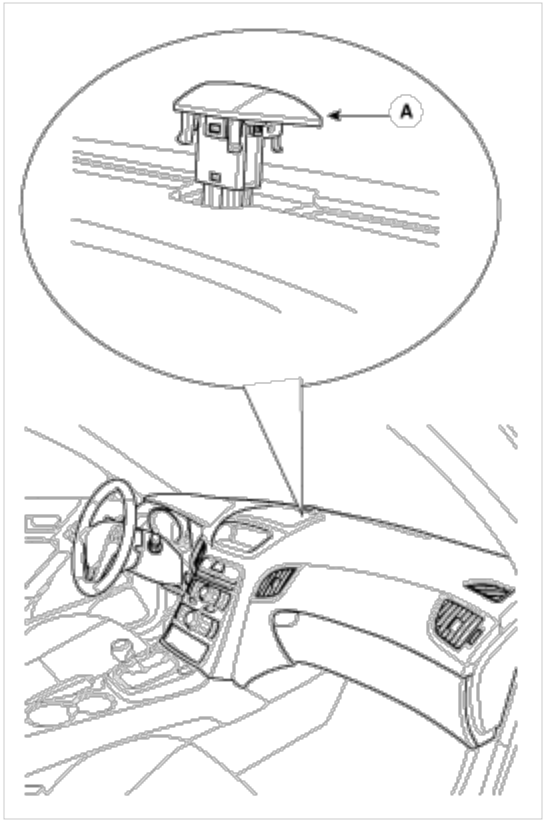
Description

1. The photo sensor is located at the center of defrost nozzle.
2. The photo sensor contains a photovoltaic (sensitive to sunlight) diode. The solar radiation received by its light receiving portion, generates an electromotive force in proportion to the amount of radiation received which is transferred to the automatic temperature control module so that the solar radiation compensation will be performed.

Heating,Ventilation, Air Conditioning

Replacement

1. Disconnect the negative (-) battery terminal.
2. With the (-) driver, remove the photo sensor (A) from the center of defrost nozzle.



3. Install in the reverse order of removal.

Heating,Ventilation, Air Conditioning

Description

1. The ambient temperature sensor is located at the front of the condenser and detects ambient air temperature. It is a negative type thermistor; resistance will increase with lower temperature, and decrease with higher temperatures.
2. The sensor output will be used for discharge temperature control, temperature regulation door control, blower motor level control, mix mode control and in-car humidity control.

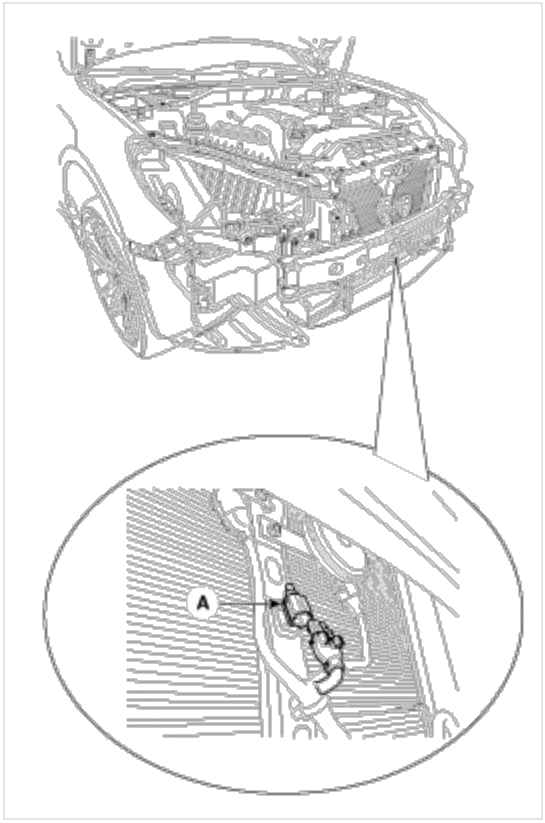
NOTICE

If the ambient temperature is below 2.0°C (35.6°F), the A/C compressor will be stopped.
The compressor will be operated by manual operating.

Heating,Ventilation, Air Conditioning

Replacement

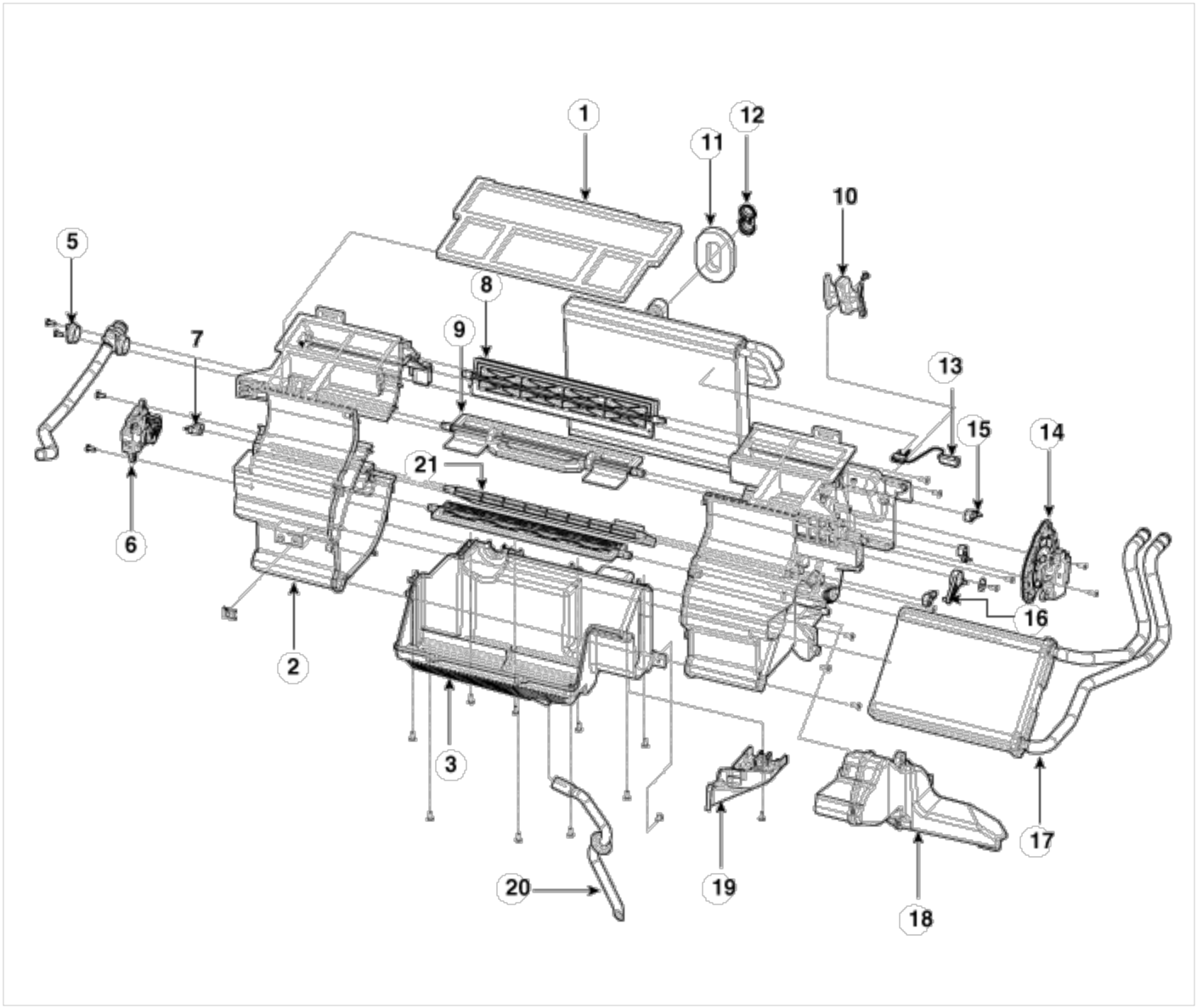
1. Disconnect the negative (-) battery terminal.
2. Remove the front bumper.
   (Refer to BD group-Front bumper)
3. Remove the ambient temperature sensor (A).



4. Installation is the reverse order of removal.

Heating,Ventilation, Air Conditioning

Compoment



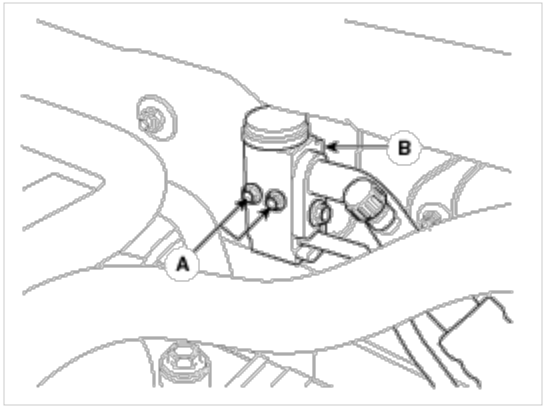
1. Duct	10. Heater pipe cover	18. Shower duct
2. Heater case (L)	11. Flange seal	19. Heater pipe cover
3. Heater lower case	12. Flange cap	20. Drain hose
4. Heater case (R)	13. Evaporator sensor	21. Temp door

5. Aspirator hose	14. Mode actuator	
6. Temp actuator	15. Vent lever	
7. Temp lever	16. Sub foot lever	
8. Foot door	17. Heater core	
9. Vent door		

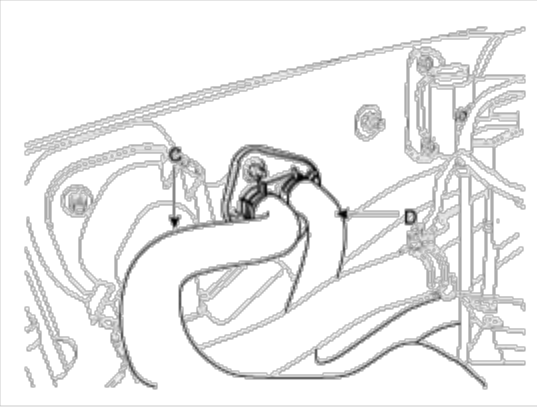
Heating,Ventilation, Air Conditioning

Replacement

1. Disconnect the negative (-) battery terminal.
2. Recover the refrigerant with a recovery/ recycling/ charging station.
3. When the engine is cool, drain the engine coolant from the radiator.
4. Remove the bolts (A) and the expansion valve (B) from the evaporator core.
   Plug or cap the lines immediately after disconnecting them to avoid moisture and dust contamination.



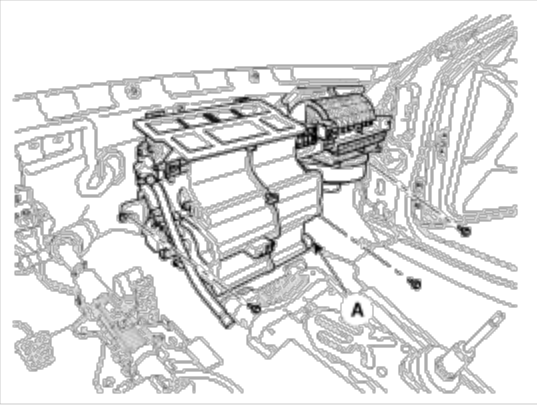
5. Disconnect the inlet (C) and outlet (D) heater hoses from the heater unit.



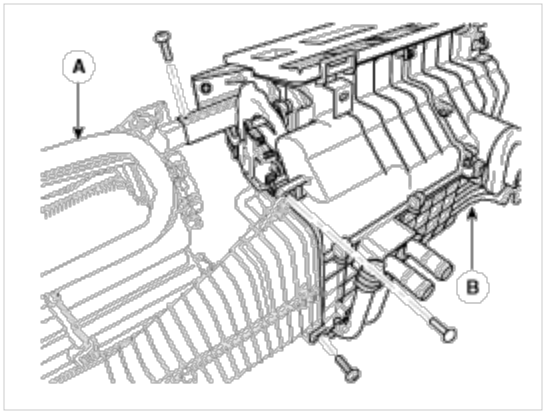
⚠ CAUTION

- Engine coolant will spill when the hoses are disconnected; drain it into a clean drip pan. Be sure not to let coolant spill on electrical parts or painted surfaces. If any coolant spills, rinse it off immediately.

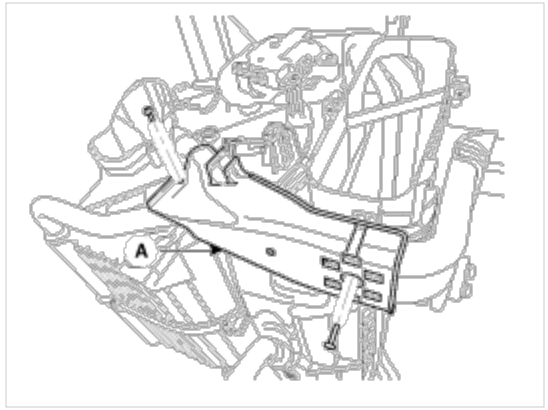
6. Remove the crash pad.
   (Refer to BD group-Crash pad)
7. Remove the cowl cross bar assembly.
   (Refer to BD group-Crash pad)
8. Remove the heater & blower unit after loosening 3 mounting bolts.

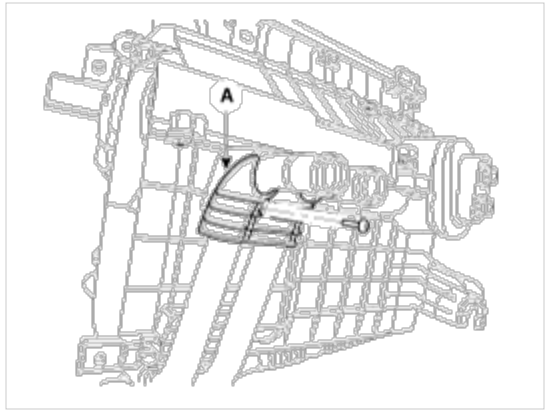


9. Remove the blower unit (A) from heater unit (B) after loosening 2 screws.

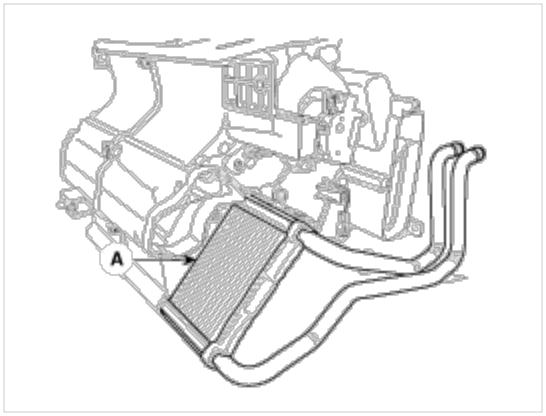


10. Remove the heater core cover after remove the cover (A).

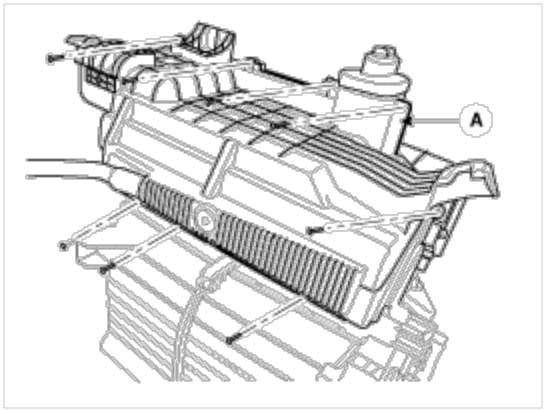




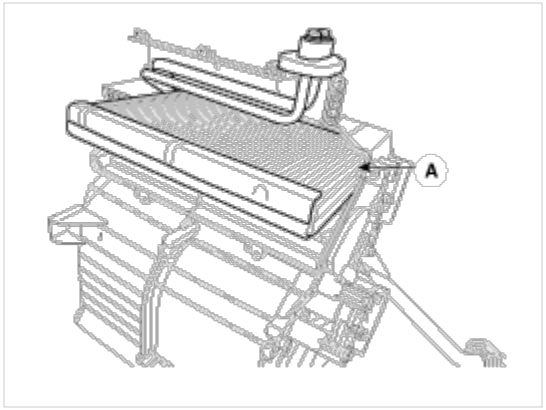
11. Be careful that the inlet and outlet pipe are not bent during heater core removal, and pull out the heater core (A).



12. Remove the heater unit lower case(A).



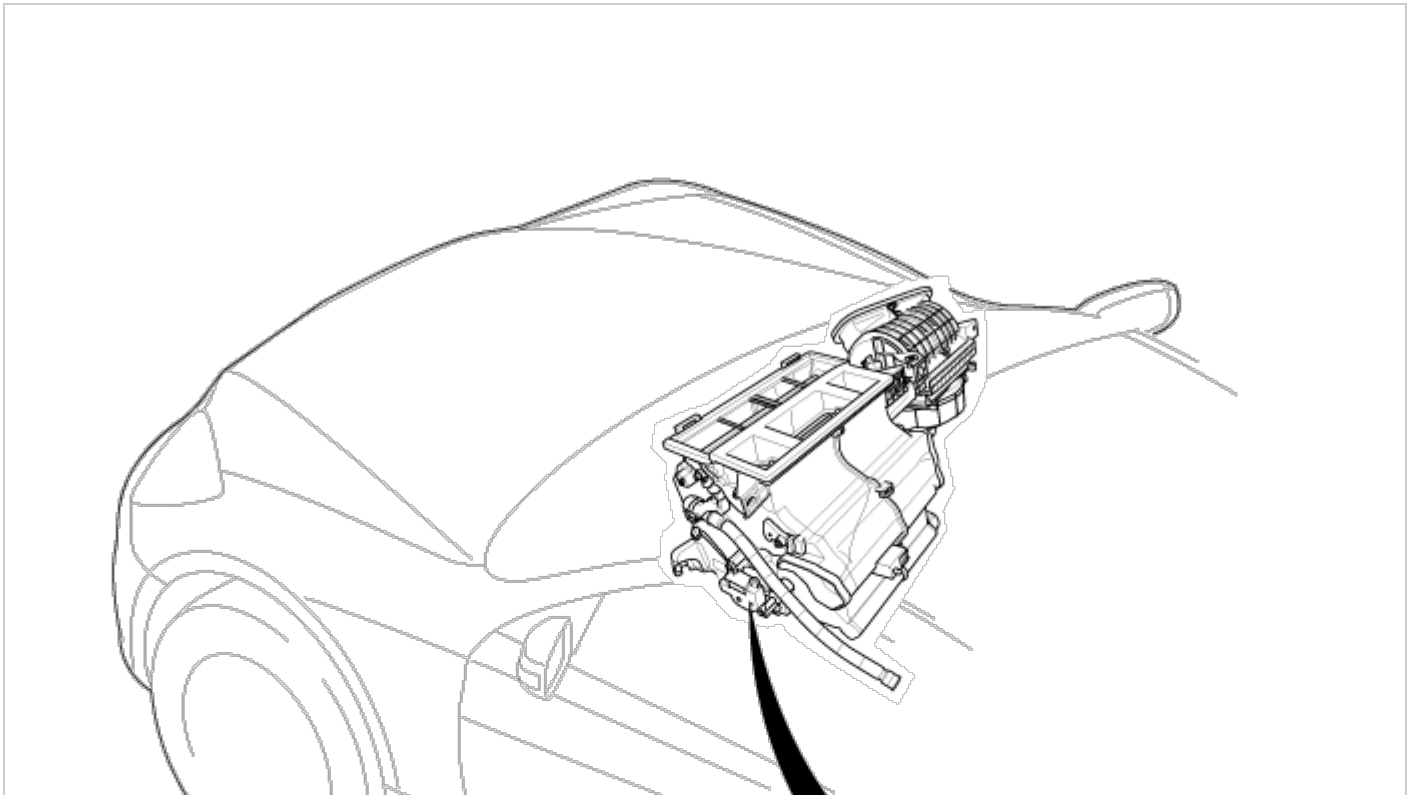
13. Remove the evaporator core(A).

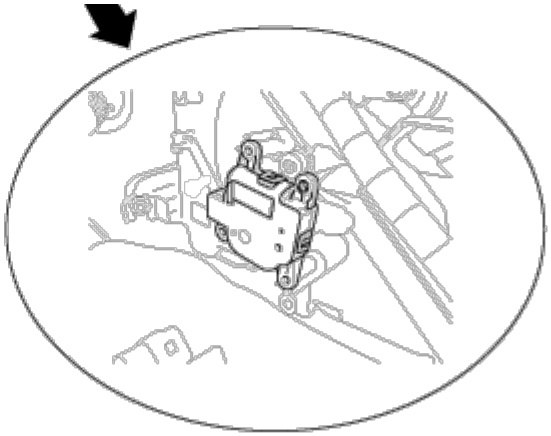


14. Be careful that the inlet and outlet pipe are not bent during heater core removal, and pull out the heater core.

15. Install the heater core in the reverse order of removal.
16. Installation is the reverse order of removal, and note these items :
    A. If you're installing a new evaporator, add refrigerant oil (ND-OIL8).
    B. Replace the O-rings with new ones at each fitting, and apply a thin coat of refrigerant oil before installing. Be sure to use the right O-rings for R-134a to avoid leakage.
    C. Immediately after using the oil, replace the cap on the container, and seal it to avoid moisture absorption.
    D. Do not spill the refrigerant oil on the vehicle ; it may damage paint ; if the refrigerant oil contacts the paint, wash off immediately.
    E. Apply sealant to the grommets.
    F. Make sure that there is no air leakage.
    G. Charge the system and test its performance.
    H. Do not interchange the inlet and outlet heater hoses and install the hose clamps securely.
    I. Refill the cooling system with engine coolant.

Component Location





Temperature control actuator

Heating,Ventilation, Air Conditioning

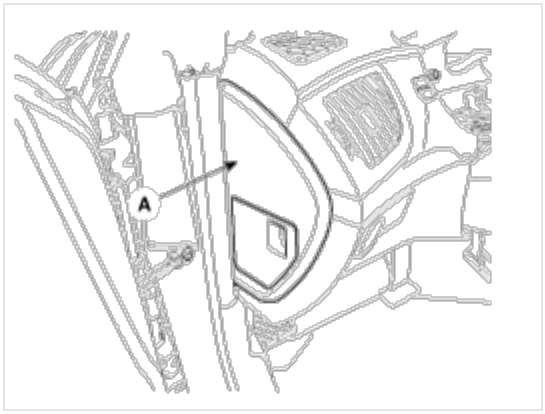
Description

1. Heater unit includes mode control actuator and temperature control actuator.
2. Temperature control actuator is located at the heater unit. It regulates the temperature by the procedure as follows. Signal from control unit adjusts position of temperature door by operating temperature switch and then temperature will be regulated by the hot/cold air ratio decided by position of temperature door

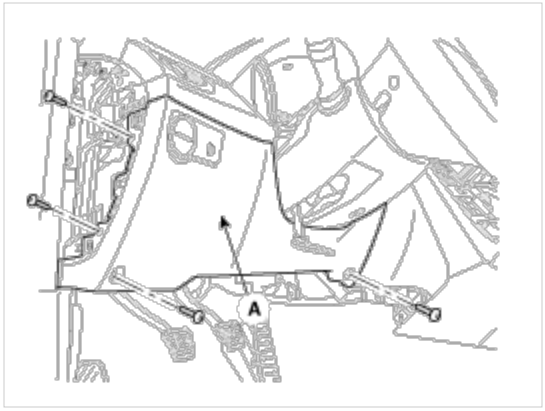
Heating,Ventilation, Air Conditioning

Replacement

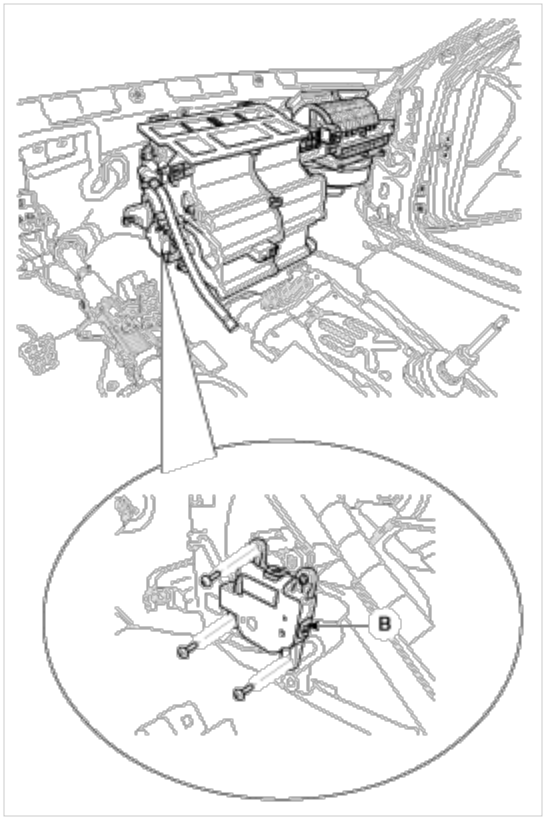
1. Disconnect the negative (-) battery terminal.
2. Remove the crash pad side cover (A).



3. After loosening the crash pad lower panel mounting screws, then remove the lower panel (A).



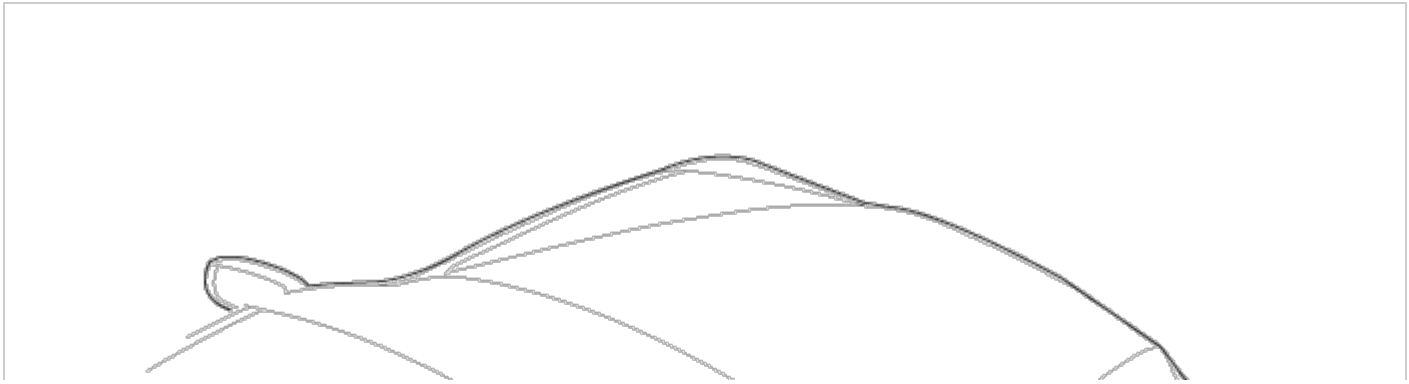
4. Disconnect the temperature control actuator connector after removing the air duct.
5. Loosen the mounting screw and then remove the temperature control actuator (B).

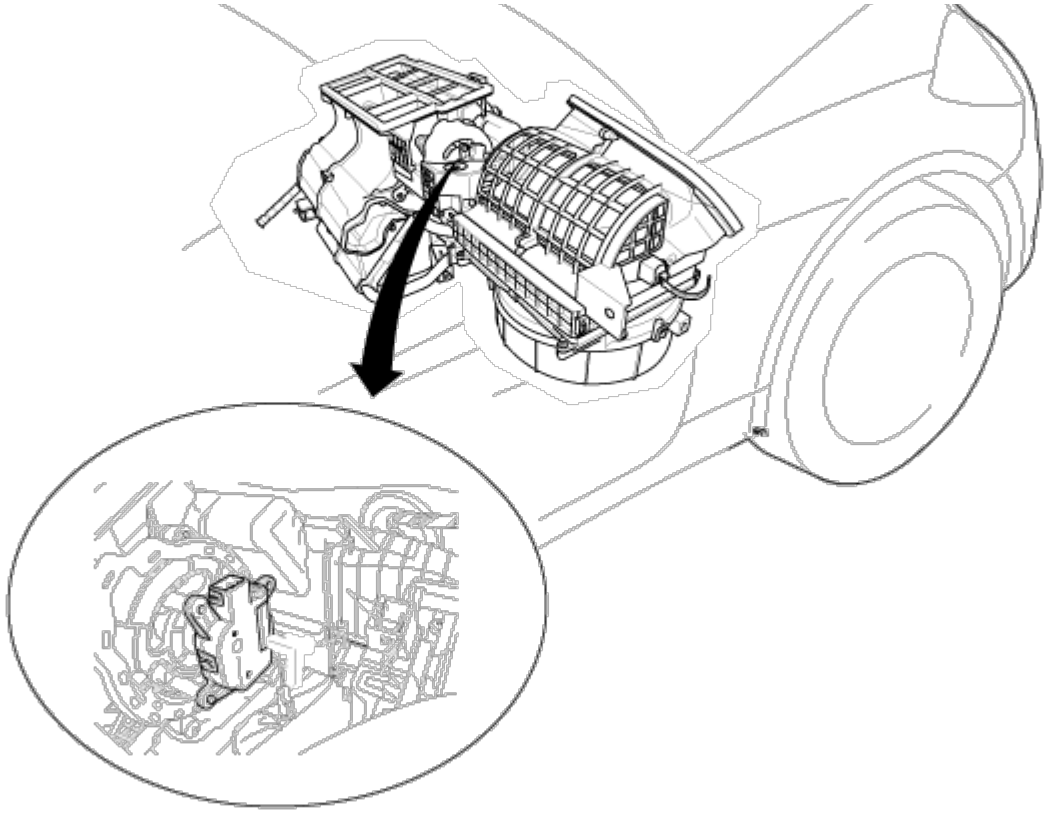


6. Installation is the reverse order of removal.

Heating,Ventilation, Air Conditioning

Component Location





Mode control actuator

Heating,Ventilation, Air Conditioning

Description

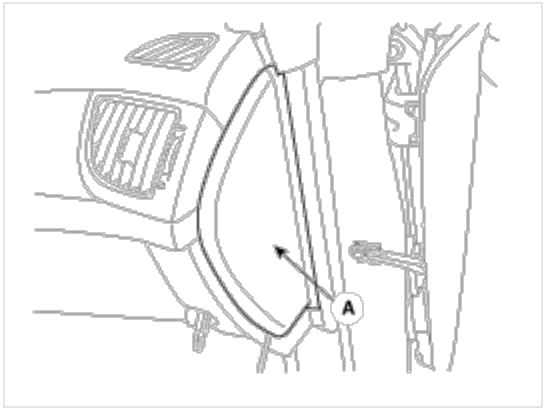
The mode control actuator is located at the heater unit.

It adjusts position of mode door by operating mode control actuator based on signal of A/C control unit. Pressing mode select switch makes the mode control actuator shift in order of vent→ B/L → floor → mix.

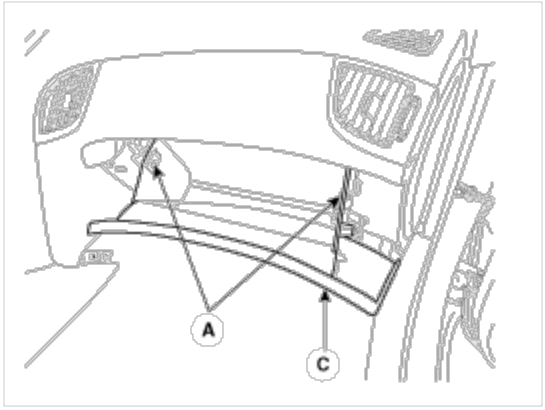
Heating,Ventilation, Air Conditioning

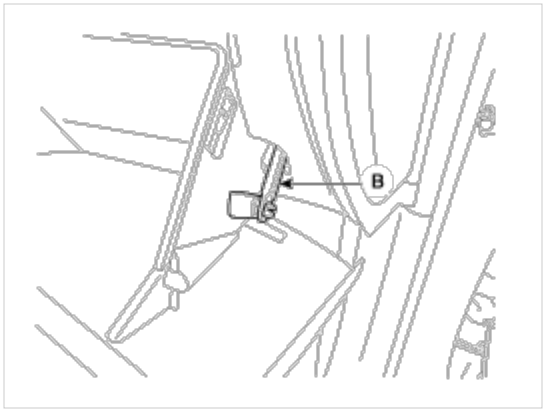
Replacement

1. Disconnect the negative (-) battery terminal.
2. Remove the crash pad side cover (A).

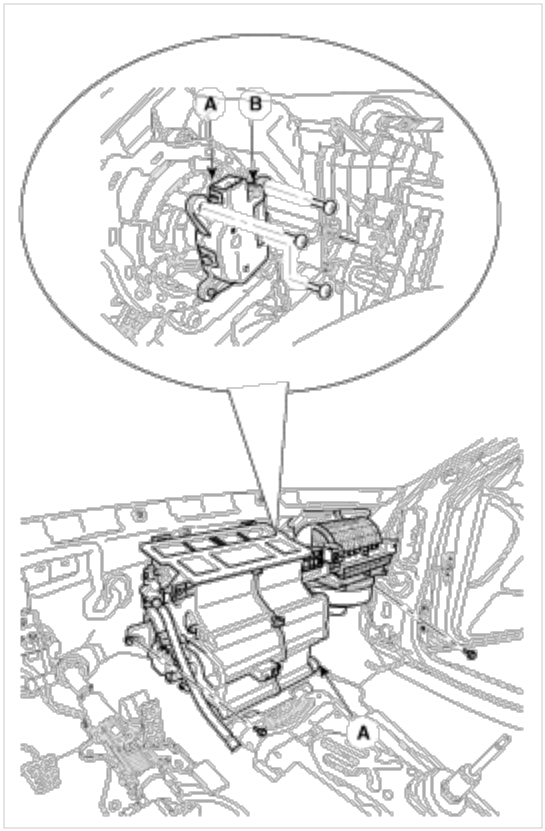


3. Open the glove box. Lower the glove box down completely by removing the glove box damper (A) and lift (B) to the glove box(C).



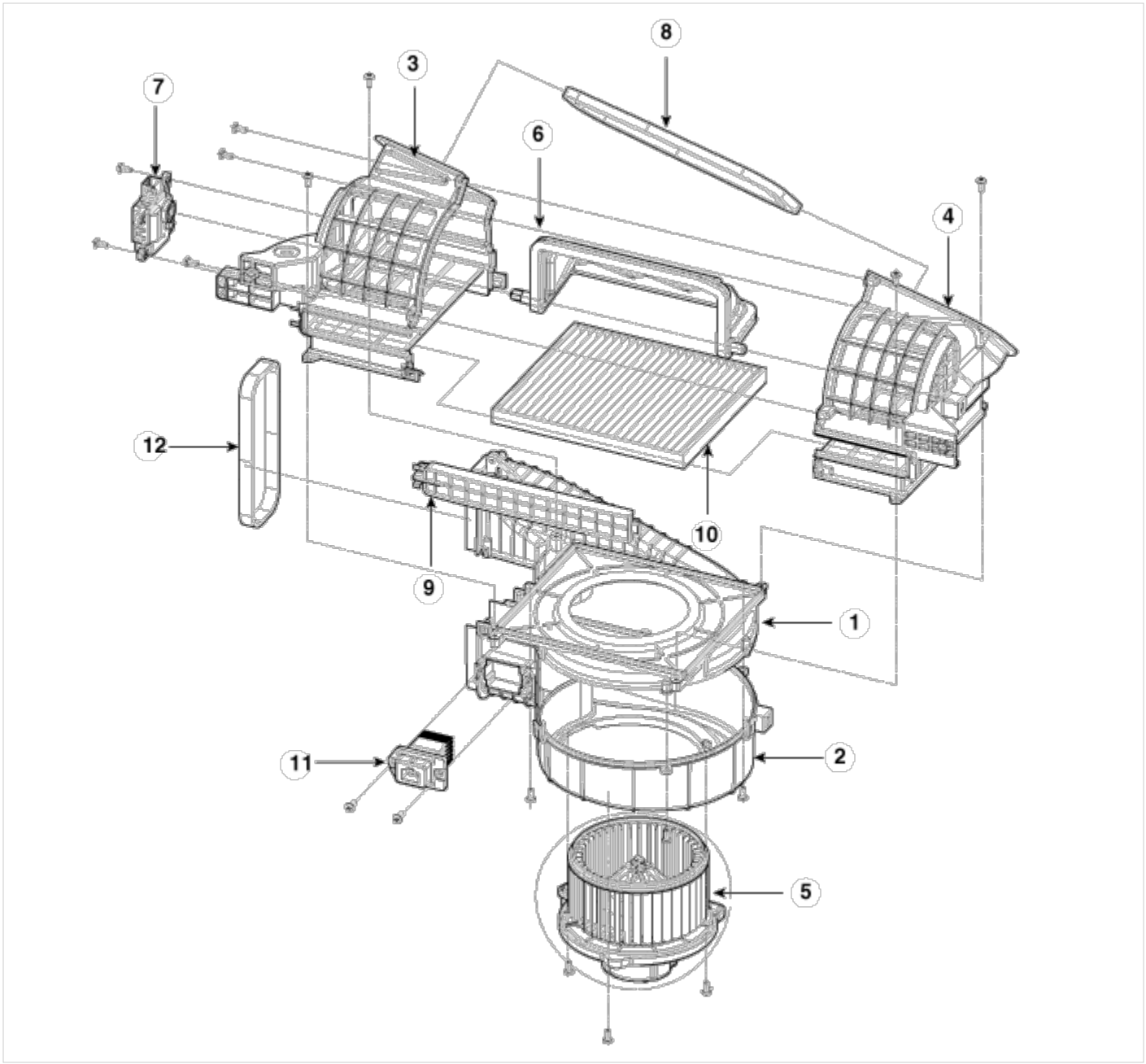


4. Disconnect the mode control actuator connector (A) after removing the air duct.
5. Loosen the mounting screws and then remove the mode control actuator (B).



6. Installation is the reverse order of removal.

Components


8
3
7
6
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1
11
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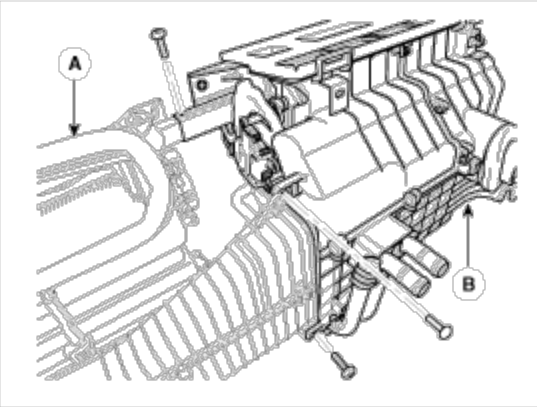
5

1. Blower upper case	5. Blower motor	9. Climate control air filter cover
2. Blower lower case	6. Intake door	10. Climate control air filter
3. Intake case (L)	7. Intake actuator	11. Power mosfet
4. Intake case (R)	8. Cowl seal	12. Heater matching lining

Heating,Ventilation, Air Conditioning

Replacement

1. Disconnect the negative (-) battery terminal.
2. Remove the crush pad.
   (Refer to BD group-crash pad)
3. Remove the cowl cross bar assembly.
   (Refer to BD group-crash pad)
4. Remove the heater & blower unit.
   (Refer to HA group-heater unit)
5. Remove the blower unit from the heater unit (B) after loosening a mounting bolt and 2 screws.



NOTICE

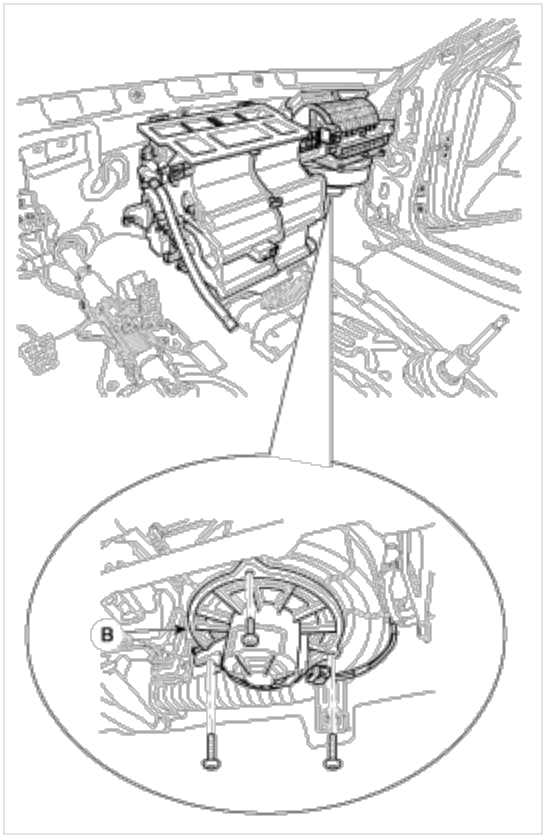
Make sure that there is no air leaking out of the blower and duct joints.

6. Installation is the reverse order of removal.

Heating,Ventilation, Air Conditioning

Replacement

1. Disconnect the negative (-) battery terminal.
2. Remove the crashpad under cover(Refer to BD group-Crash pad).
3. Disconnect the connector of the blower motor.
4. Remove the blower motor (B) after loosening the mounting screws.

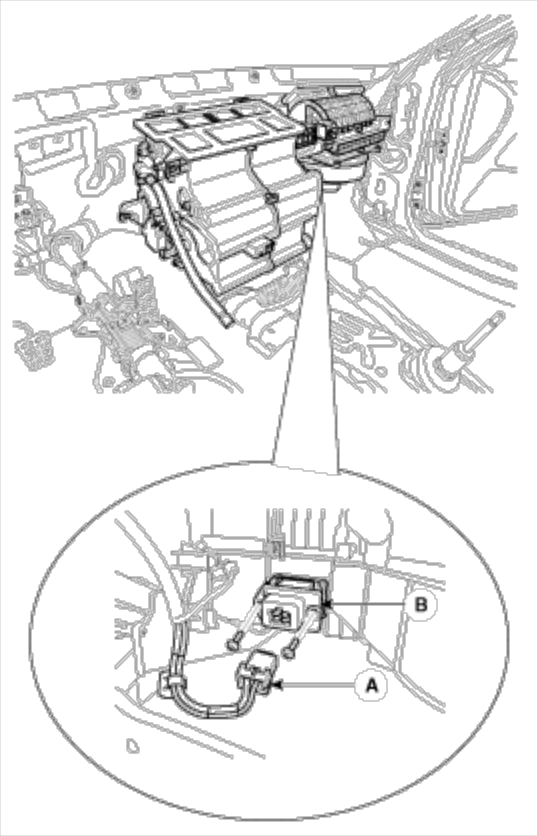


5. Installation is the reverse order of removal.

Heating,Ventilation, Air Conditioning

Replacement

1. Disconnect the negative (-) battery terminal.
2. Remove the crashpad under cover.
   (Refer to BD group-Crash pad)
3. Disconnect the power mosfet connector (A) at the connecting part between heater and blower unit.
4. Remove the power mosfet (B) after loosening the mounting screws.



5. Installation is the reverse order of removal.

Heating,Ventilation, Air Conditioning

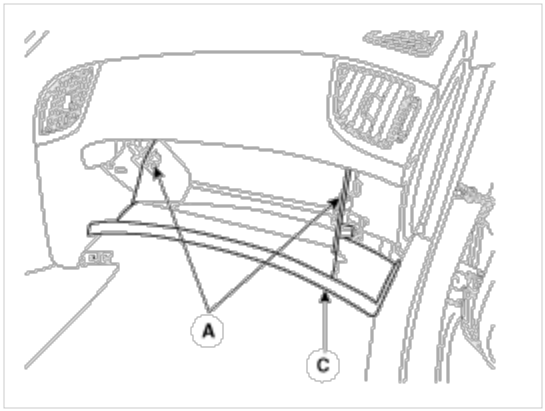
Description

This has particle filter which eliminates foreign materials and odor. The particle filter includes odor filter as well as conventional dust filter to ensure comfortable interior environment.

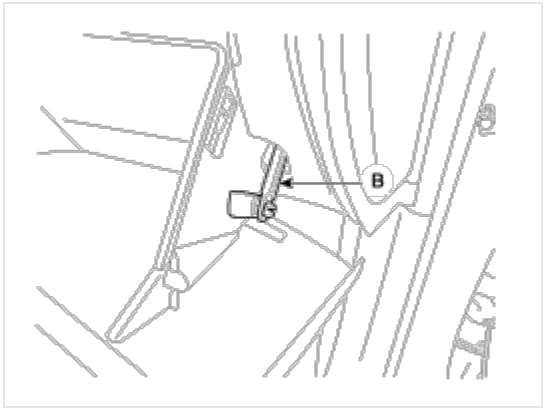
Heating,Ventilation, Air Conditioning

Replacement

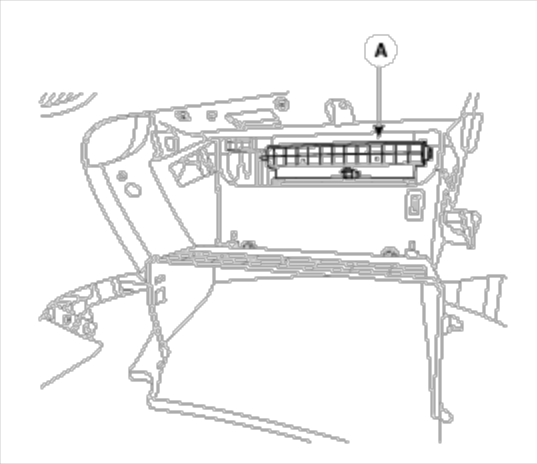
1. Open the glove box (A). Lower the glove box down completely by removing the glove box damper (B) to the glove box.



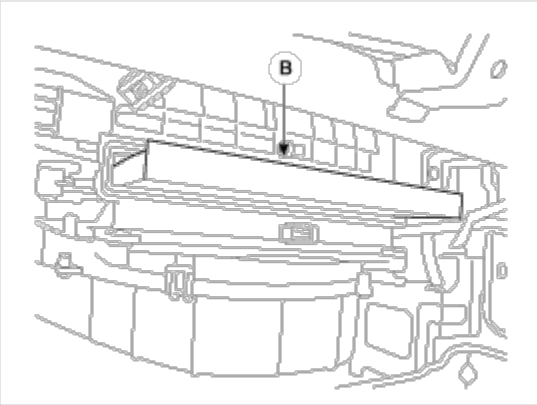
2. Remove the glove box lift(B).



3. Remove the filter cover (A) with pushing the knob.



4. Replace the air filter (B), install it after making sure of the direction of air filter.



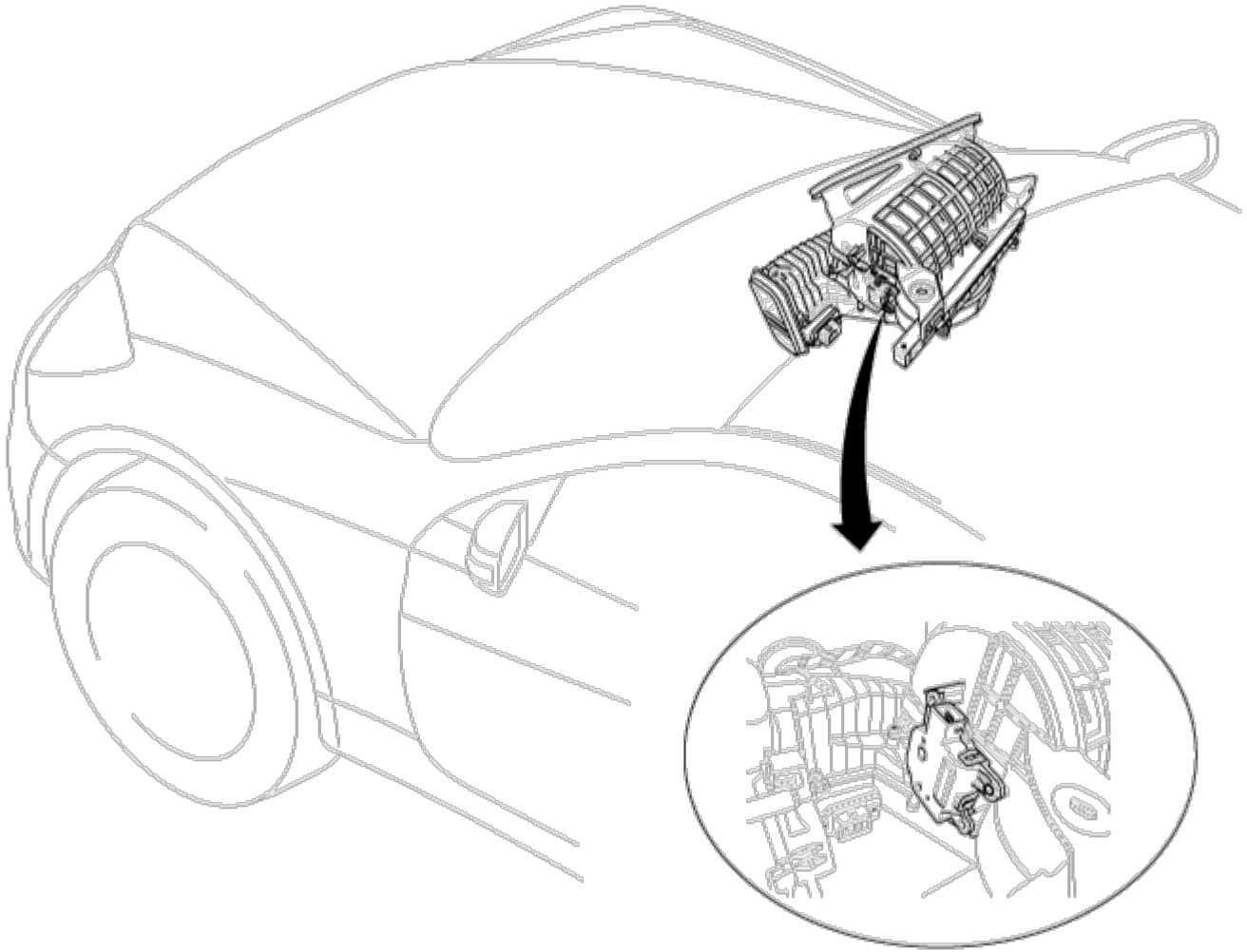
5. Installation is the reverse order of removal.

NOTICE

In case of driving in an air-polluted area or rugged terrain, check and replace the air filter as frequently as possible.

Heating,Ventilation, Air Conditioning

Component Location



Intake actuator