

07-11 BASIC SYSTEM

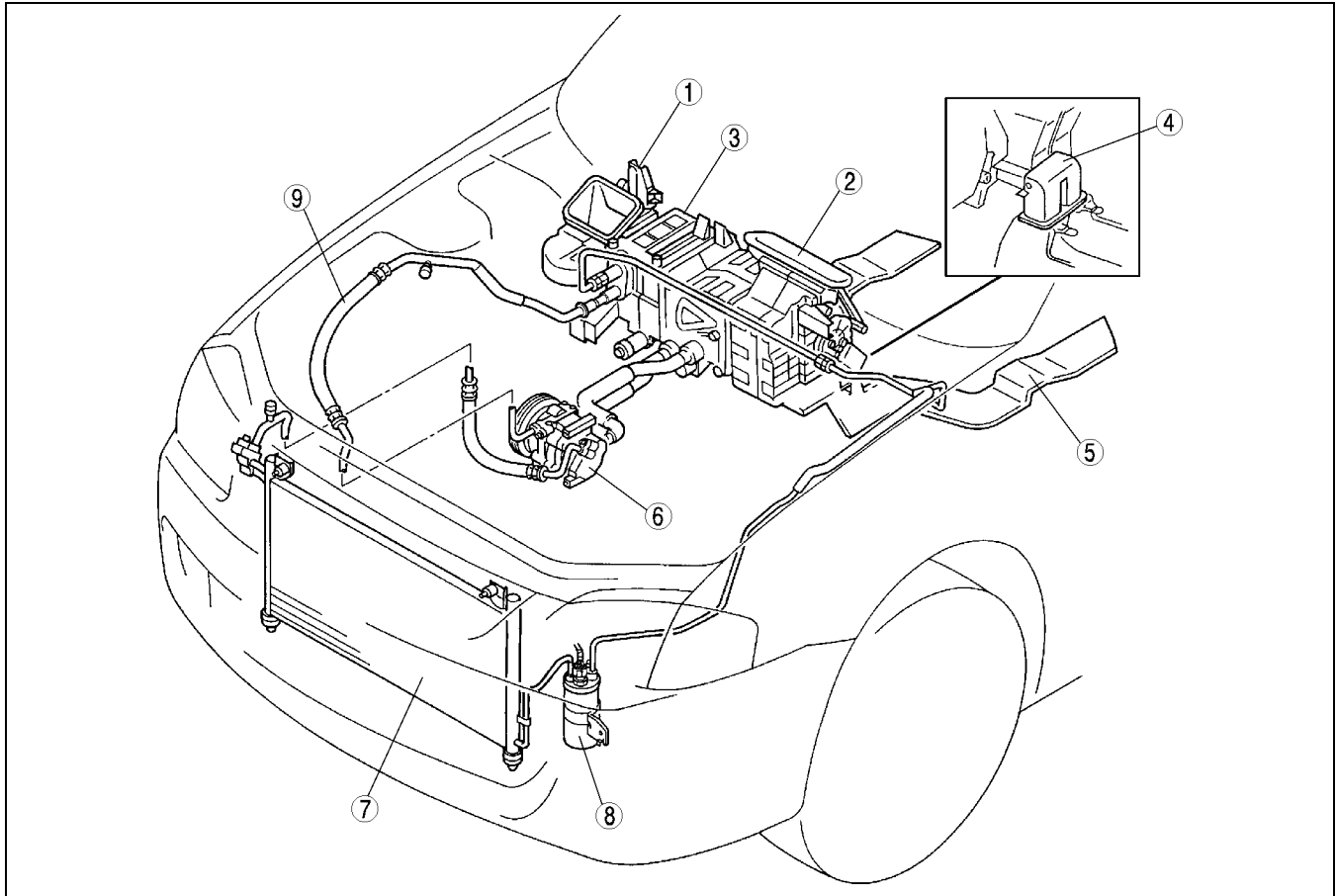
BASIC SYSTEM LOCATION INDEX . . .	07-11-2	HEATER CORE INSPECTION	07-11-10
BLOWER UNIT		AIRFLOW MODE MAIN LINK	
REMOVAL/INSTALLATION	07-11-3	REMOVAL/INSTALLATION	07-11-10
BLOWER UNIT		Airflow Mode Main Link	
DISASSEMBLY/ASSEMBLY	07-11-3	Installation Note	07-11-10
COOLING UNIT		REAR DUCT	
REMOVAL/INSTALLATION	07-11-3	REMOVAL/INSTALLATION	07-11-11
Cooling Unit Installation Note	07-11-4	REAR HEAT DUCT	
COOLING UNIT		REMOVAL/INSTALLATION	07-11-11
DISASSEMBLY/ASSEMBLY	07-11-4	A/C COMPRESSOR	
Expansion Valve Assembly Note	07-11-5	REMOVAL/INSTALLATION	07-11-11
Evaporator Assembly Note	07-11-6	A/C Compressor Installation Note	07-11-12
Adhesive Sponge Rubber		CONDENSER	
Assembly Note	07-11-6	REMOVAL/INSTALLATION	07-11-12
Insulator Assembly Note	07-11-6	Condenser Installation Note	07-11-13
A/C Amplifier Assembly Note	07-11-6	CONDENSER INSPECTION	07-11-13
Sensor Clamp Assembly Note	07-11-7	RECEIVER/DRIER	
Polyethylene Foam Assembly Note	07-11-7	REMOVAL/INSTALLATION	07-11-13
EVAPORATOR INSPECTION	07-11-7	Receiver/drier Installation Note	07-11-14
HEATER UNIT		REFRIGERANT	
REMOVAL/INSTALLATION	07-11-7	LINES REMOVAL/INSTALLATION	07-11-14
HEATER UNIT		Refrigerant Lines Removal Note	07-11-15
DISASSEMBLY/ASSEMBLY	07-11-9	Refrigerant Lines Installation Note	07-11-16

07-11

BASIC SYSTEM

BASIC SYSTEM LOCATION INDEX

A3U071101040W01



Z3U0711W001

1	Blower unit (See 07-11-3 BLOWER UNIT REMOVAL/ INSTALLATION) (See 07-11-3 BLOWER UNIT DISASSEMBLY/ ASSEMBLY)
2	Heater unit (See 07-11-7 HEATER UNIT REMOVAL/ INSTALLATION) (See 07-11-9 HEATER UNIT DISASSEMBLY/ ASSEMBLY)
3	Cooling unit (See 07-11-3 COOLING UNIT REMOVAL/ INSTALLATION) (See 07-11-4 COOLING UNIT DISASSEMBLY/ ASSEMBLY)
4	Rear duct (See 07-11-11 REAR DUCT REMOVAL/ INSTALLATION)

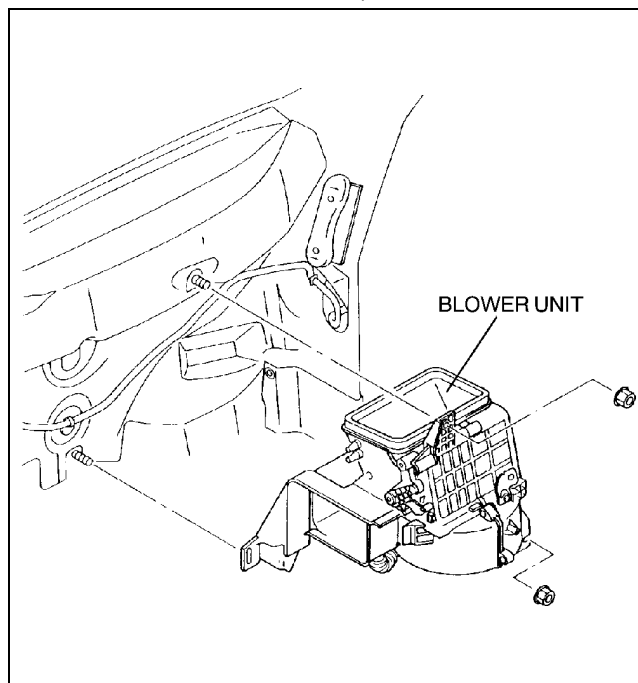
5	Rear heat duct (See 07-11-11 REAR HEAT DUCT REMOVAL/ INSTALLATION)
6	A/C compressor (See 07-11-11 A/C COMPRESSOR REMOVAL/ INSTALLATION)
7	Condenser (See 07-11-12 CONDENSER REMOVAL/ INSTALLATION) (See 07-11-13 CONDENSER INSPECTION)
8	Receiver/drier (See 07-11-13 RECEIVER/DRIER REMOVAL/ INSTALLATION)
9	Refrigerant lines (See 07-11-14 REFRIGERANT LINES REMOVAL/ INSTALLATION)

BASIC SYSTEM

BLOWER UNIT REMOVAL/INSTALLATION

A3U071161140W01

1. Disconnect the negative battery cable.
2. Remove the dashboard. (See 09-17-1 DASHBOARD REMOVAL/INSTALLATION.)
3. Remove the cooling unit. (See 07-11-3 COOLING UNIT REMOVAL/INSTALLATION.)
4. Remove the blower unit.
5. Install in the reverse order of removal.



Z3U0711W002

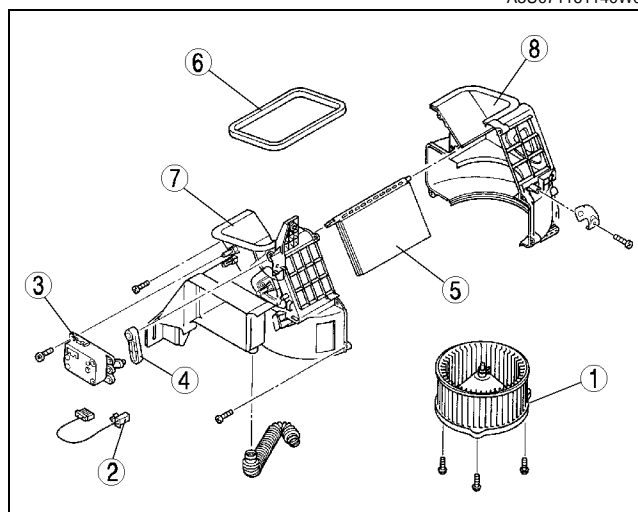
07-11

BLOWER UNIT DISASSEMBLY/ASSEMBLY

1. Disassemble in the order indicated in the table.

1	Blower motor
2	Blower harness
3	Air intake actuator
4	Air intake crank
5	Air intake door
6	Polyurethane protector
7	Blower case (1)
8	Blower case (2)

2. Assemble in the reverse order of disassembly.



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Z3U0711W003

COOLING UNIT REMOVAL/INSTALLATION

A3U071161520W01

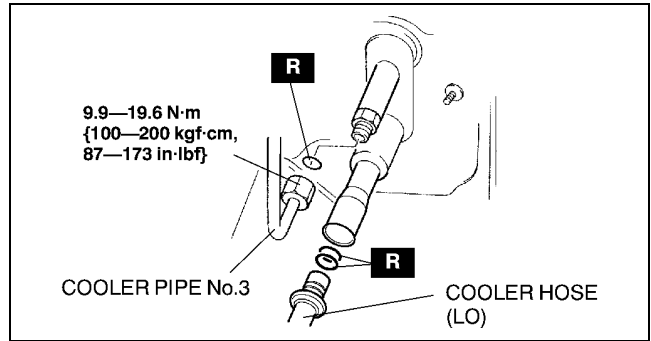
1. Disconnect the negative battery cable.
2. Discharge the refrigerant from the system. (See 07-10-3 REFRIGERANT CHARGING.)
3. Remove the passenger-side lower panel.
4. Remove the glove compartment and glove compartment cover.

Caution

- If moisture or foreign material enters the refrigeration cycle, cooling ability will be lowered and abnormal noise will occur. Always immediately plug all open fittings after removing any refrigeration cycle parts to keep moisture or foreign material out of the cycle.

BASIC SYSTEM

5. Disconnect cooler pipe No.3 and cooler hose (LO). (See 07-11-15 Refrigerant Lines Removal Note.) (See 07-11-16 Refrigerant Lines Installation Note.)

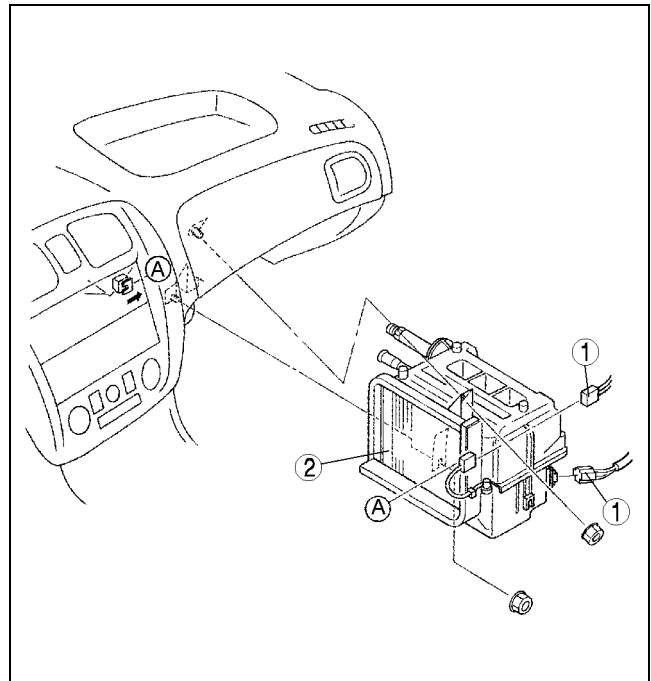


Z3U0711W004

6. Remove in the order indicated in the table. Do not allow compressor oil to spill.

1	Connector
2	Cooling unit (See 07-11-4 Cooling Unit Installation Note)

7. Install in the reverse order of removal.
8. Perform the refrigerant system performance test. (See 07-10-2 REFRIGERANT SYSTEM PERFORMANCE TEST.)



Z3U0711W005

Cooling Unit Installation Note

1. When installing a new cooling unit (evaporator), add a supplemental amount of ATMOS GU10 compressor oil into the refrigeration cycle.

Supplemental amount (approximate quantity)
30 ml {30 cc, 1.0 fl oz}

COOLING UNIT DISASSEMBLY/ASSEMBLY

A3U071161520W02

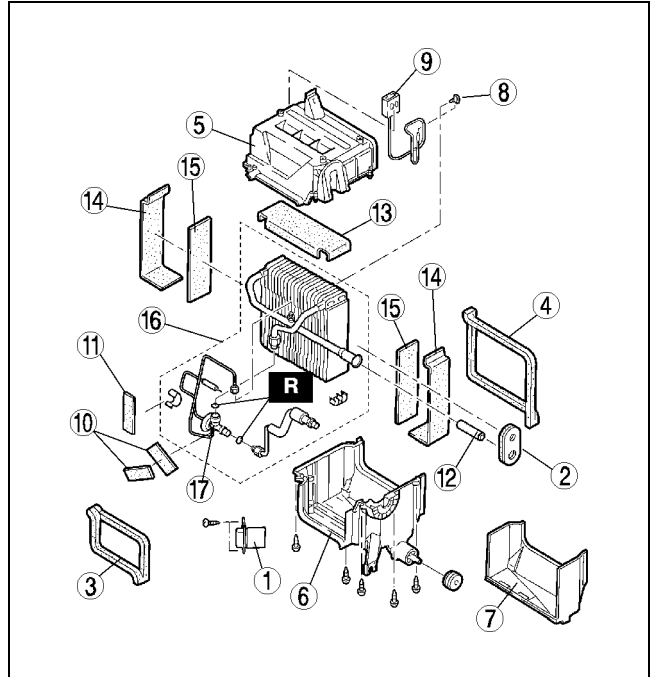
1. Disassemble in the order indicated in the table.

Caution

- If moisture or foreign material enters the refrigeration cycle, cooling ability will be lowered and abnormal noise will occur. Always immediately plug all open fittings after removing any refrigeration cycle parts to keep moisture or foreign material out of the cycle.

BASIC SYSTEM

1	Resistor
2	Polyurethane foam
3	Polyurethane protector (1)
4	Polyurethane protector (2)
5	Cooler case (1)
6	Cooler case (2)
7	Polyethylene foam (See 07-11-7 Polyethylene Foam Assembly Note)
8	Sensor clamp (See 07-11-7 Sensor Clamp Assembly Note)
9	A/C amplifier (See 07-11-6 A/C Amplifier Assembly Note)
10	Insulator (See 07-11-6 Insulator Assembly Note)
11	Adhesive sponge rubber (See 07-11-6 Adhesive Sponge Rubber Assembly Note)
12	Sponge rubber
13	Polyurethane protector (3)
14	Polyethylene protector
15	Polyurethane protector (4)
16	Evaporator (See 07-11-6 Evaporator Assembly Note)
17	Expansion valve (See 07-11-5 Expansion Valve Assembly Note)



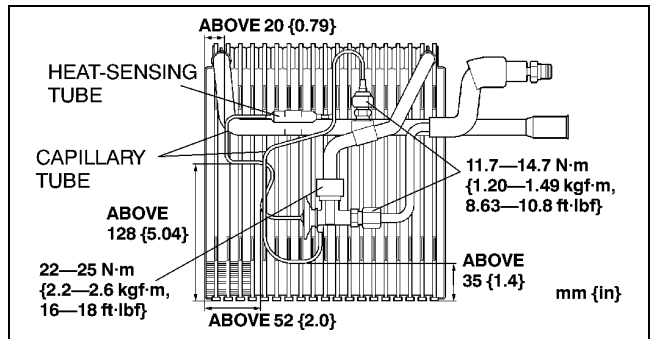
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07-11

2. Assemble in the reverse order of disassembly.

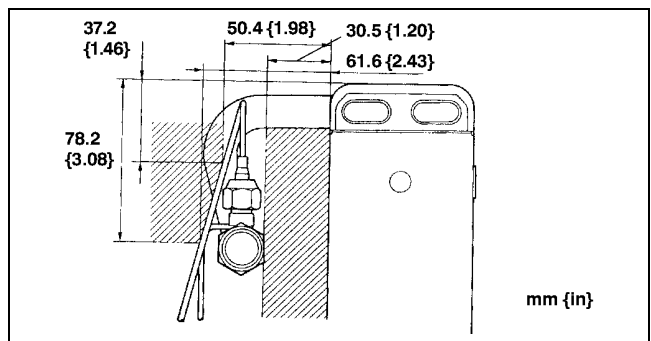
Expansion Valve Assembly Note

1. Apply compressor oil to the O-rings and connect the joint.
2. Tighten the nut of the joint by hand.
3. Tighten the joint with the specified torque with a spanner and torque wrench.
4. Assemble the heat-sensing tube as shown in the figure.
5. Route the capillary tube as shown in the figure.



Z3U0711W007

6. Verify that the capillary tube is not in the shaded zone

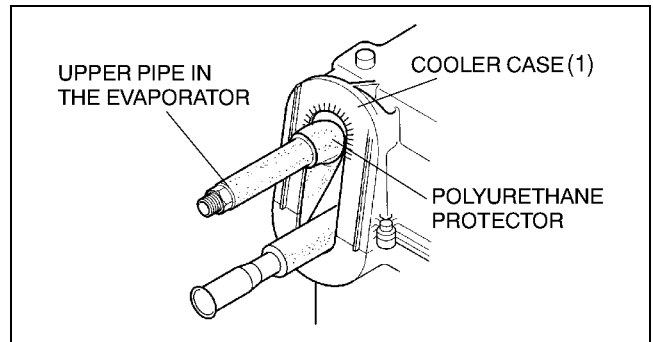


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BASIC SYSTEM

Evaporator Assembly Note

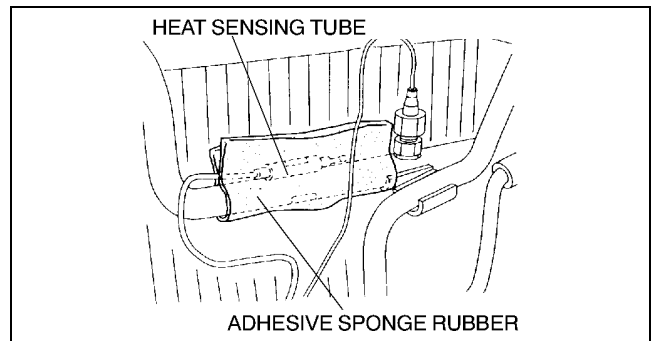
1. Verify that the dent caused by contact with the polyurethane protector and cooler case (1) in the shaded zone is 3 mm {0.12 in} or less.



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Adhesive Sponge Rubber Assembly Note

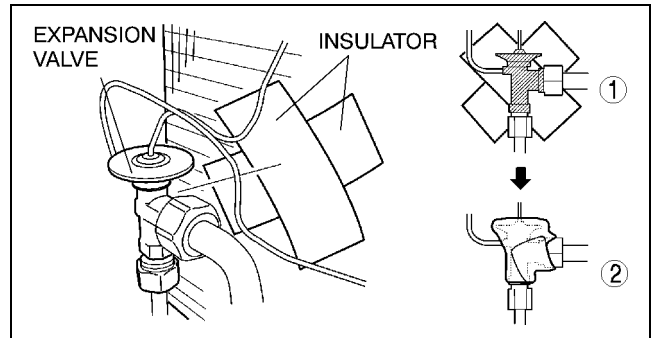
1. Attach the adhesive sponge rubber so that the heat sensing tube is hidden.



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Insulator Assembly Note

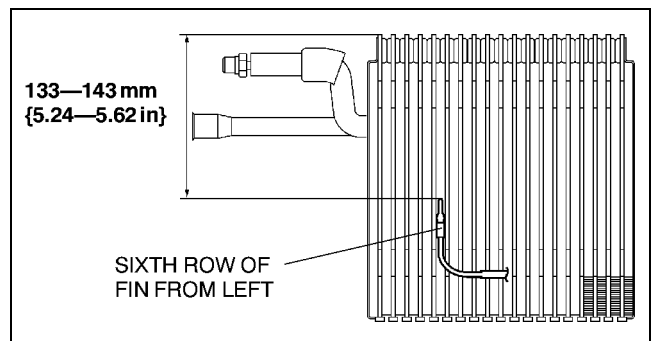
1. Make the two insulators cross.
2. Attach the insulator so that the shaded zone of expansion valve is hidden.



Z3U0711W011

A/C Amplifier Assembly Note

1. Assemble the evaporator temperature sensor as shown in the figure.

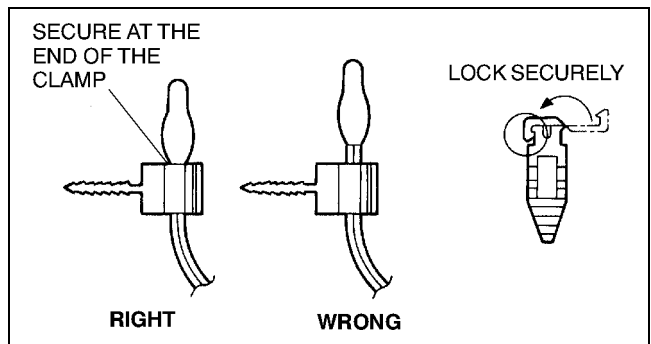


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BASIC SYSTEM

Sensor Clamp Assembly Note

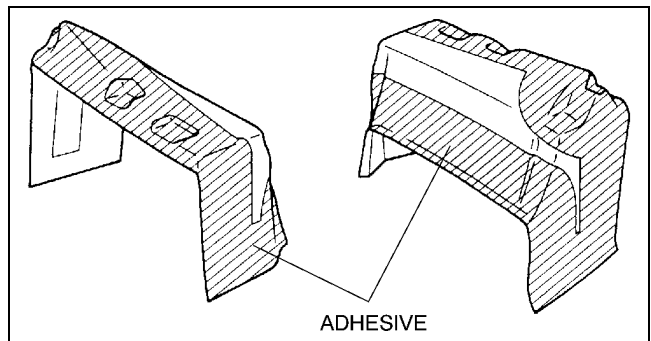
1. Assemble the sensor clamp as shown in the figure.



Z3U0711W013

Polyethylene Foam Assembly Note

1. Apply the adhesive to a range of **50 mm {1.97 in}** from the edge of polyethylene foam, and around the drain outlet. Apply the polyethylene foam to the cooler case (2).



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07-11

EVAPORATOR INSPECTION

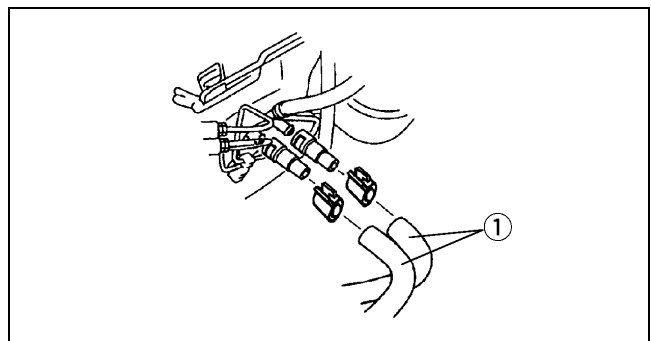
1. Remove the cooling unit. (See 07-11-3 COOLING UNIT REMOVAL/INSTALLATION.)
2. Remove the evaporator from the cooling unit.
3. Inspect for cracks, damage, and oil leakage.
 - If any problems are found, replace the evaporator.
4. Inspect for bent fins.
 - If any are bent, use a flathead screwdriver to straighten them.

A3U071161810W01

HEATER UNIT REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Drain the engine coolant. (See 01-12-3 ENGINE COOLANT REPLACEMENT.)
3. Remove the dashboard. (See 09-17-1 DASHBOARD REMOVAL/INSTALLATION.)
4. Remove the cooling unit. (See 07-11-3 COOLING UNIT REMOVAL/INSTALLATION.)
5. Remove in the order indicated in the table.

A3U071161130W01

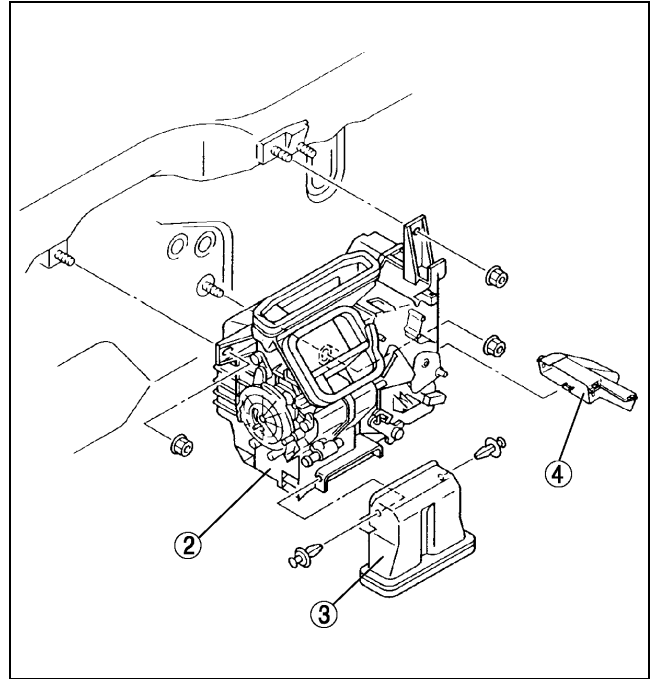


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BASIC SYSTEM

1	Heater hose
2	Heater unit
3	Rear duct
4	Heat duct

6. Install in the reverse order of removal.



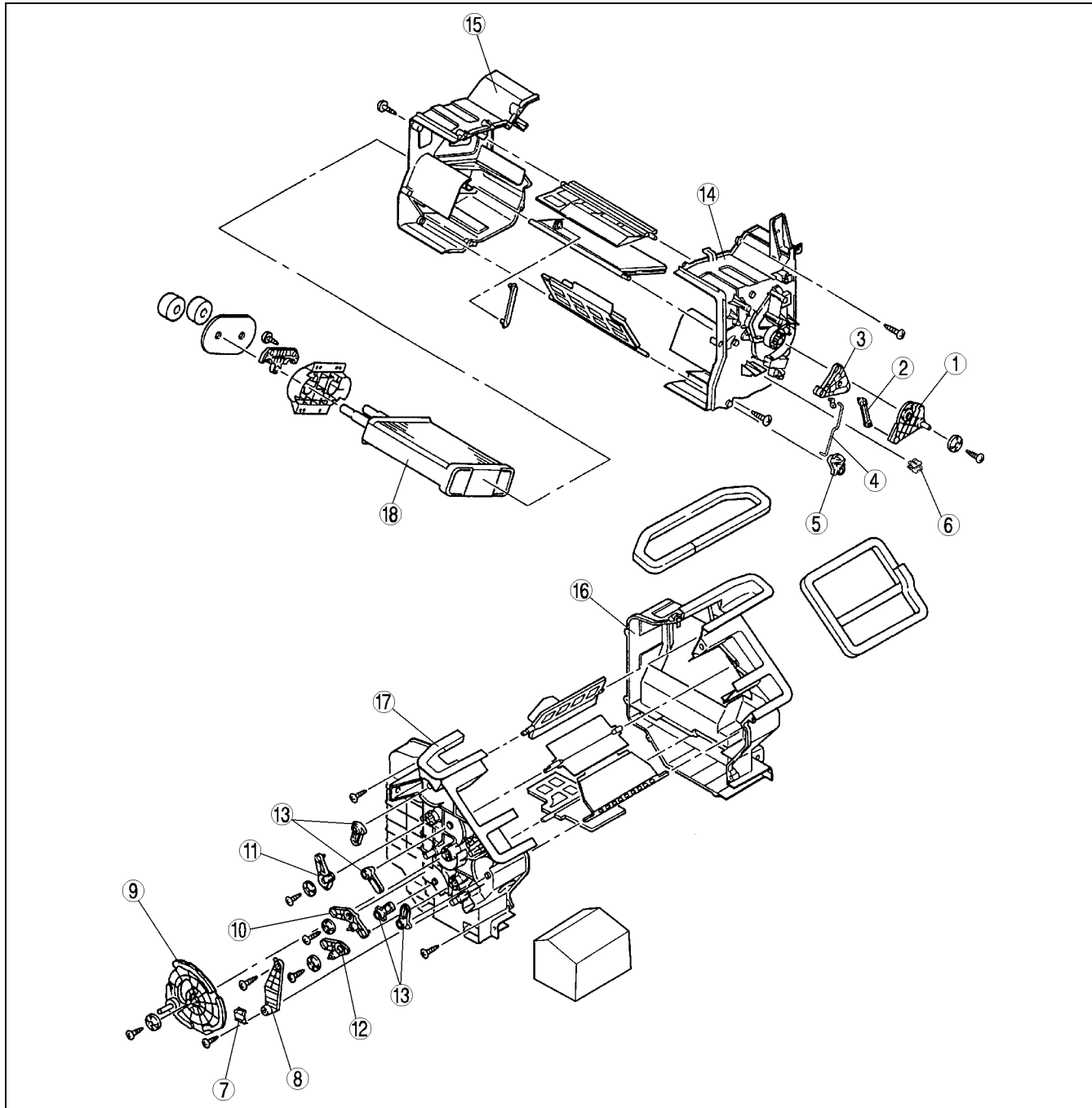
X3U711WAC

BASIC SYSTEM

HEATER UNIT DISASSEMBLY/ASSEMBLY

A3U071161130W02

1. Disassemble in the order indicated in the table.
2. Assemble in the reverse order of disassembly.



07-11

A3U0711W003

1	Air mix link
2	Air mix rod (2)
3	Air mix crank (1)
4	Air mix rod (1)
5	Air mix crank (2)
6	Wire clamp
7	Wire clamp
8	Bracket
9	Airflow mode main link (See 07-11-10 Airflow Mode Main Link Installation Note)

10	Airflow mode sub link (1)
11	Airflow mode sub link (2)
12	Airflow mode sub link (3)
13	Airflow mode crank
14	Heater case (1)
15	Heater case (2)
16	Heater case (3)
17	Heater case (4)
18	Heater core

BASIC SYSTEM

HEATER CORE INSPECTION

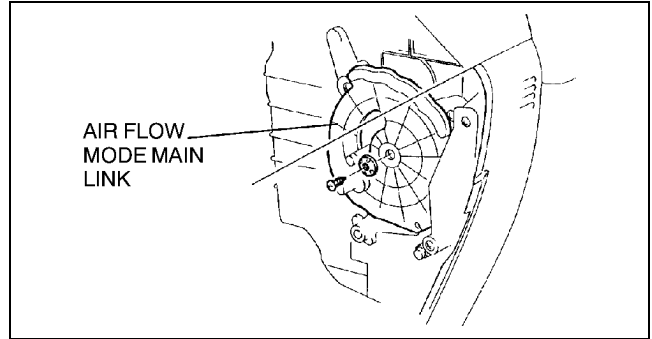
A3U071161910W01

1. Remove the heater unit. (See 07–11–7 HEATER UNIT REMOVAL/INSTALLATION.)
2. Remove the heater core from the heater unit.
3. Inspect for cracks, damage, and coolant leakage.
 - If any problems are found, replace the heater core.
4. Inspect for bent fins.
 - If any are bent, use a flathead screwdriver to straighten them.
5. Verify that the heater core inlet and outlet are not distorted or damaged. Repair with pliers if necessary.

AIRFLOW MODE MAIN LINK REMOVAL/INSTALLATION

A3U071161030W01

1. Disconnect the airflow mode wire from the airflow mode main link.
2. Remove in the airflow mode main link. (See 07–11–10 Airflow Mode Main Link Installation Note)
3. Install in the reverse order of removal.
4. Adjust the airflow mode wire. (See 07–40–11 CLIMATE CONTROL UNIT WIRE ADJUSTMENT.)



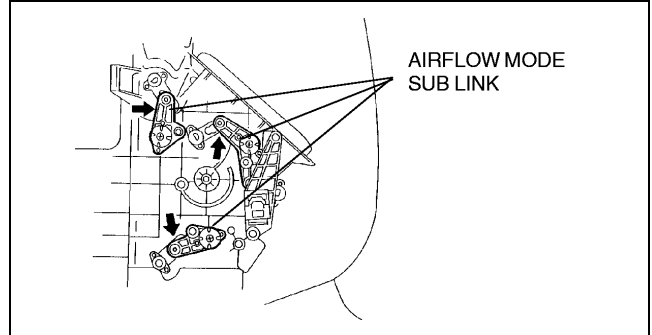
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Airflow Mode Main Link Installation Note

Caution

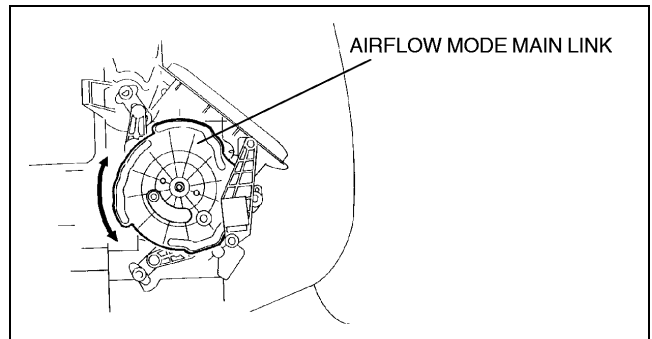
- If any grease other than the specified grease is applied to the links, abnormal noise will occur or the links will not properly operate. Therefore, do not apply any grease to the links.

1. Push and hold each airflow mode sub link in the direction shown by the arrow.



X3U711WAF

2. Set the airflow mode main link to the heater unit as shown in the figure.
3. Press the airflow mode main link lightly and rotate it in the direction shown by the arrow, then set the projections of each airflow mode sub link into the grooves of the airflow mode main link.
4. Rotate airflow mode main link and verify that each mode is accessed properly.



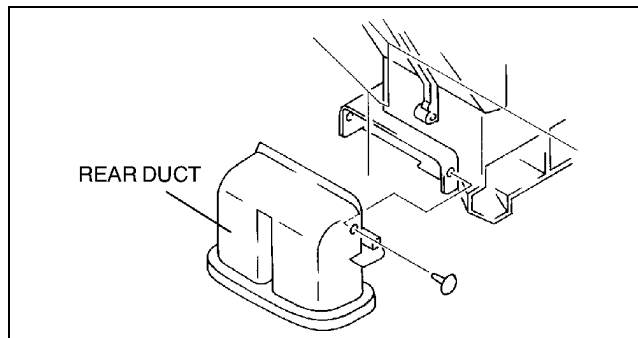
X3U711WAG

BASIC SYSTEM

REAR DUCT REMOVAL/INSTALLATION

A3U071161271W01

1. Remove the side wall.
2. Remove in the rear duct.
3. Install in the reverse order of removal.



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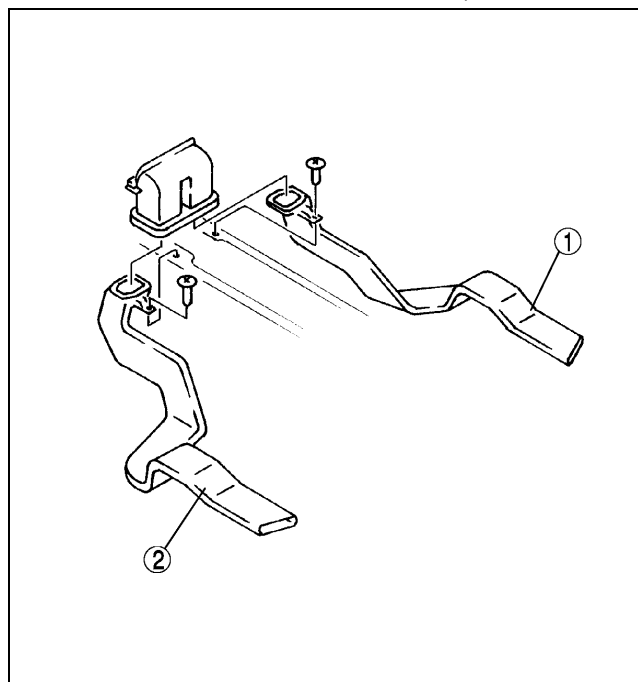
REAR HEAT DUCT REMOVAL/INSTALLATION

A3U071161273W01

1. Turn the floor covering over. (See 09-17-17 FLOOR COVERING REMOVAL/INSTALLATION.)
2. Remove in the order indicated in the table.

1	Rear heat duct (RH)
2	Rear heat duct (LH)

3. Install in the reverse order of removal.



X3U711WAJ

A/C COMPRESSOR REMOVAL/INSTALLATION

A3U071161450W01

1. Disconnect the negative battery cable.
2. Discharge the refrigerant from the system. (See 07-10-3 REFRIGERANT RECOVERY.) (See 07-10-3 REFRIGERANT CHARGING.)
3. Remove the splash shield (RH) and fresh-air duct.
4. Loosen the mounting bolts, nuts, and the adjusting lock bolt of the power steering oil pump.
5. Loosen the drive belt (P/S + A/C) and remove it. (See 01-10B-4 DRIVE BELT ADJUSTMENT [FS].)

Caution

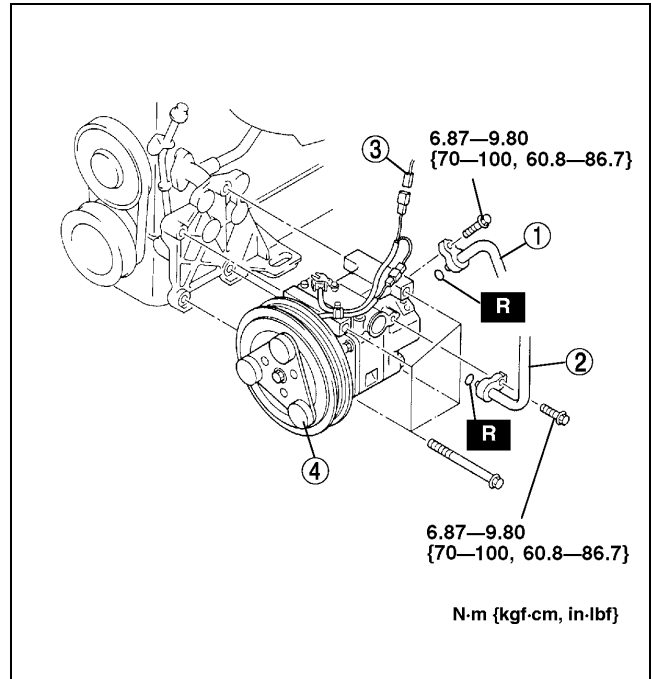
- If moisture or foreign material enters the refrigeration cycle, cooling ability will be lowered and abnormal noise will occur. Always immediately plug open fittings after removing any refrigeration cycle parts to keep moisture or foreign material out of the cycle.

BASIC SYSTEM

6. Remove in the order indicated in the table. Do not allow compressor oil to spill.

1	Cooler hose (HI) (See 07-11-16 Refrigerant Lines Installation Note)
2	Cooler hose (LO) (See 07-11-16 Refrigerant Lines Installation Note)
3	Connector
4	A/C compressor (See 07-11-12 A/C Compressor Installation Note)

7. Install in the reverse order of removal.
 8. Adjust the drive belt (P/S + A/C). (See 01-10B-4 DRIVE BELT ADJUSTMENT [FS].)
 9. Perform the refrigerant system performance test. (See 07-10-2 REFRIGERANT SYSTEM PERFORMANCE TEST.)



Y3U711WA1

A/C Compressor Installation Note

1. Remove the following amount of compressor oil from the new A/C compressor when replacing the A/C compressor.

Compressor oil to be removed (approximate quantity)

150 ml {150 cc, 5.07 fl oz} - [compressor oil from old A/C compressor + 15 ml {15 cc, 0.5 fl oz}]

CONDENSER REMOVAL/INSTALLATION

A3U071161480W01

1. Disconnect the negative battery cable.
2. Discharge the refrigerant from the system. (See 07-10-3 REFRIGERANT CHARGING.)
3. Pull up the coolant reservoir.
4. Remove the fresh-air duct, radiator bracket, air cleaner, resonance chamber, and mass airflow sensor connector.

Caution

- If moisture or foreign material enters the refrigeration cycle, cooling ability will be lowered and abnormal noise will occur. Always immediately plug all open fittings after removing any refrigeration cycle parts to keep moisture or foreign material out of the cycle.

Note

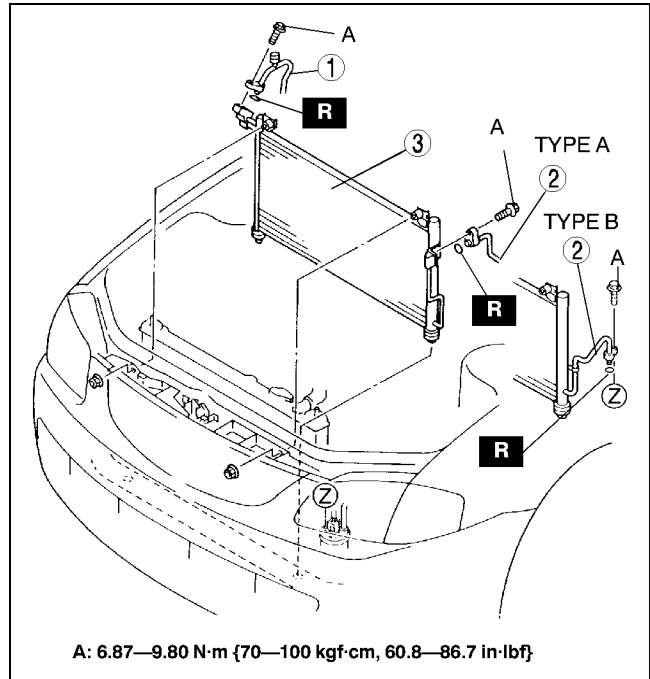
- Two kinds of condensers are used:
 - TYPE A (condenser without pipe)
 - TYPE B (condenser with pipe)

BASIC SYSTEM

5. Remove in the order indicated in the table. Do not allow compressor oil to spill.

1	Cooler hose (H1) (See 07-11-16 Refrigerant Lines Installation Note)
2	Cooler pipe No.1 (type A) or outlet pipe of condenser (type B) (See 07-11-16 Refrigerant Lines Installation Note)
3	Condenser (See 07-11-13 Condenser Installation Note)

6. Install in the reverse order of removal.
7. Perform the refrigerant system performance test.
(See 07-10-2 REFRIGERANT SYSTEM PERFORMANCE TEST.)



Z3U0711W016

07-11

Condenser Installation Note

1. When installing a new condenser, add a supplemental amount of ATMOS GU10 compressor oil into the refrigeration cycle.

Supplemental amount (approximate quantity)
30 ml {30 cc, 1.0 fl oz}

CONDENSER INSPECTION

1. Inspect for cracks, damage, and oil leakage.
 - If any are found, replace the condenser.
2. Inspect for fins clogged by dust.
 - If any are clogged, remove the dust from the fins.
3. Inspect for bent fins.
 - If any are bent, use a flathead screwdriver to straighten them.

A3U071161480W02

RECEIVER/DRIER REMOVAL/INSTALLATION

1. Disconnect the negative battery cable.
2. Discharge the refrigerant from the system. (See 07-10-3 REFRIGERANT RECOVERY.) (See 07-10-3 REFRIGERANT CHARGING.)
3. Pull up the coolant reservoir.
4. Remove the fresh-air duct, air cleaner, and resonance chamber.

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Caution

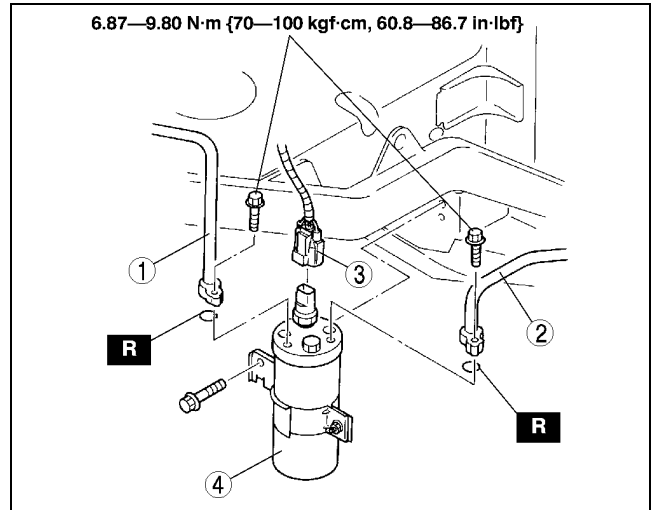
- If moisture or foreign material enters the refrigeration cycle, cooling ability will be lowered and abnormal noise will occur. Always immediately plug all open fittings after removing any refrigeration cycle parts to keep moisture or foreign material out of the cycle.

BASIC SYSTEM

5. Remove in the order indicated in the table. Do not allow compressor oil to spill.

1	Cooler pipe No.2 (See 07-11-16 Refrigerant Lines Installation Note)
2	Cooler pipe No.1 (type A) or outlet pipe of condenser (type B) (See 07-11-16 Refrigerant Lines Installation Note)
3	Connector
4	Receiver/drier (See 07-11-14 Receiver/drier Installation Note)

6. Install in the reverse order of removal.
7. Perform the refrigerant system performance test.
(See 07-10-2 REFRIGERANT SYSTEM PERFORMANCE TEST.)



A3U0711W001

Receiver/drier Installation Note

1. When installing a new receiver/drier, add a supplemental amount of ATMOS GU10 compressor oil into the refrigeration cycle.

Supplemental amount (approximate quantity)
10 ml {10 cc, 0.3 fl oz}

REFRIGERANT LINES REMOVAL/INSTALLATION

A3U071161460W01

1. Disconnect the negative battery cable.
2. Discharge the refrigerant from the system. (See 07-10-3 REFRIGERANT RECOVERY.) (See 07-10-3 REFRIGERANT CHARGING.)
3. Pull up the coolant reservoir.
4. Remove the fresh-air duct, radiator bracket, air cleaner, and resonance chamber.

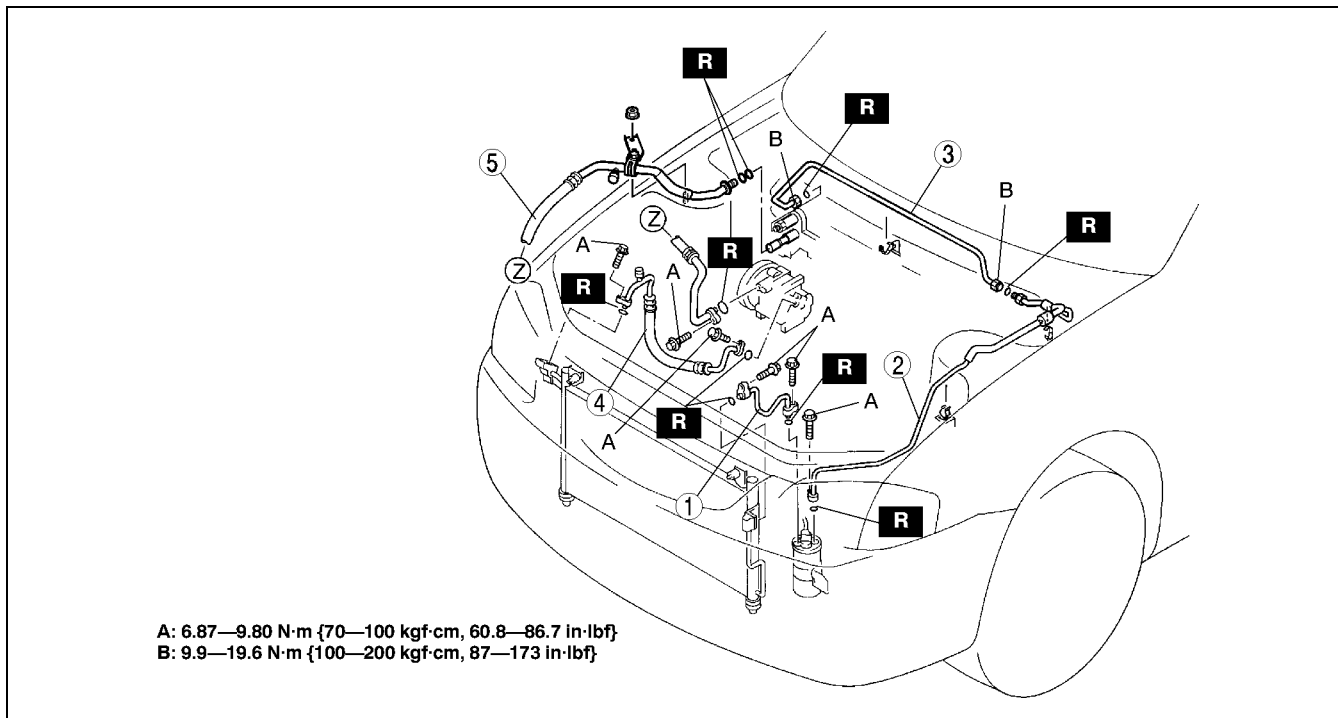
Caution

- If moisture or foreign material enters the refrigeration cycle, cooling ability will be lowered and abnormal noise will occur. Always immediately plug all open fittings after removing any refrigeration cycle parts to keep moisture or foreign material out of the cycle.

5. Remove in the order indicated in the table. Do not allow compressor oil to spill.
6. Install in the reverse order of removal.

BASIC SYSTEM

7. Perform the refrigerant system performance test. (See 07-10-2 REFRIGERANT SYSTEM PERFORMANCE TEST.)



Z3U0711W018

1	Cooler pipe No.1 (type A only) (See 07-11-16 Refrigerant Lines Installation Note)
2	Cooler pipe No.2 (See 07-11-15 Refrigerant Lines Removal Note) (See 07-11-16 Refrigerant Lines Installation Note)
3	Cooler pipe No.3 (See 07-11-15 Refrigerant Lines Removal Note) (See 07-11-16 Refrigerant Lines Installation Note)

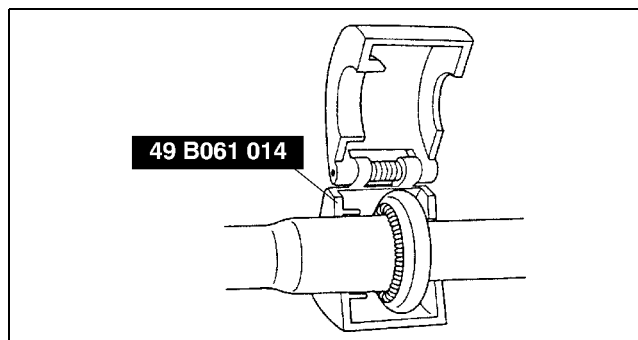
4	Cooler hose (HI) (See 07-11-16 Refrigerant Lines Installation Note)
5	Cooler hose (LO) (See 07-11-15 Refrigerant Lines Removal Note) (See 07-11-16 Refrigerant Lines Installation Note)

Refrigerant Lines Removal Note Nut joint type

1. Loosen the nut using 2 spanners, then remove the cooler pipe or hose.

Spring-lock coupling type

1. Set the SST.



Z3U0711W019

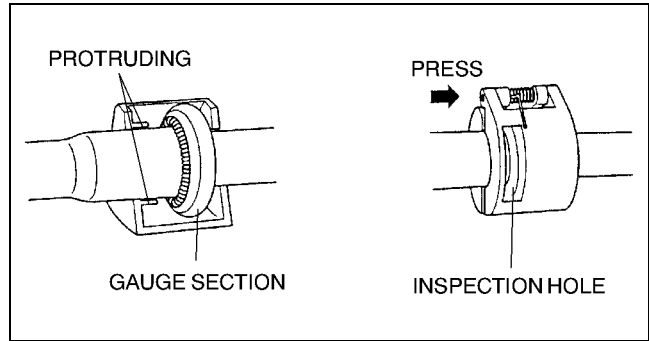
07-11

BASIC SYSTEM

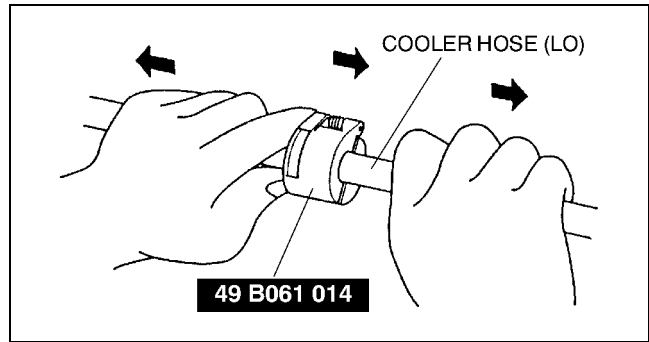
2. While looking through the inspection hole of the **SST**, insert the protruding part of the **SST** until it makes contact with the gauge section.
3. Use the **SST** to disconnect the cooler hose (LO) from cooling unit by pulling the cooler hose (LO) side.

Note

- The cooler hose (LO) can be disconnected easily from cooling unit by pulling from the cooler hose (LO) while maintaining the pressure of the protruding part of the **SST**.



Z3U0711W020



Z3U0711W021

Refrigerant Lines Installation Note

1. When installing a new cooler pipe or hose, add a supplemental amount of ATMOS GU10 compressor oil into the refrigeration cycle.

Supplemental amount (approximate quantity)

5 ml {5 cc, 0.2 fl oz}

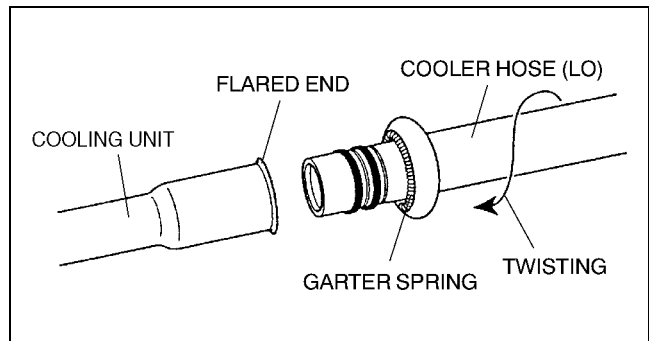
2. Apply compressor oil to the O-rings and connect the joints.
3. Tighten the joints.

Nut or block joint type

1. Tighten the nut or bolt of the joint by hand.
2. Tighten the joint to the specified torque wrench.

Spring-lock coupling type

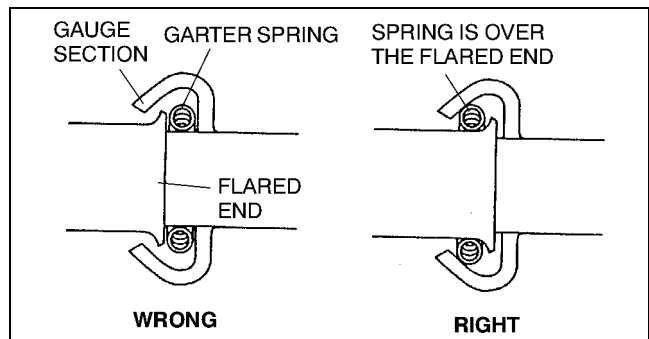
1. Connect the cooler hose (LO) by twisting it onto cooling unit until the garter spring at the cooler hose (LO) is over the flared end of cooling unit.



Z3U0711W022

Note

- When the cooler hose (LO) is replaced, the indicator ring comes out after connecting to indicate that it is locked.



Z3U0711W023