

SAMSUNG

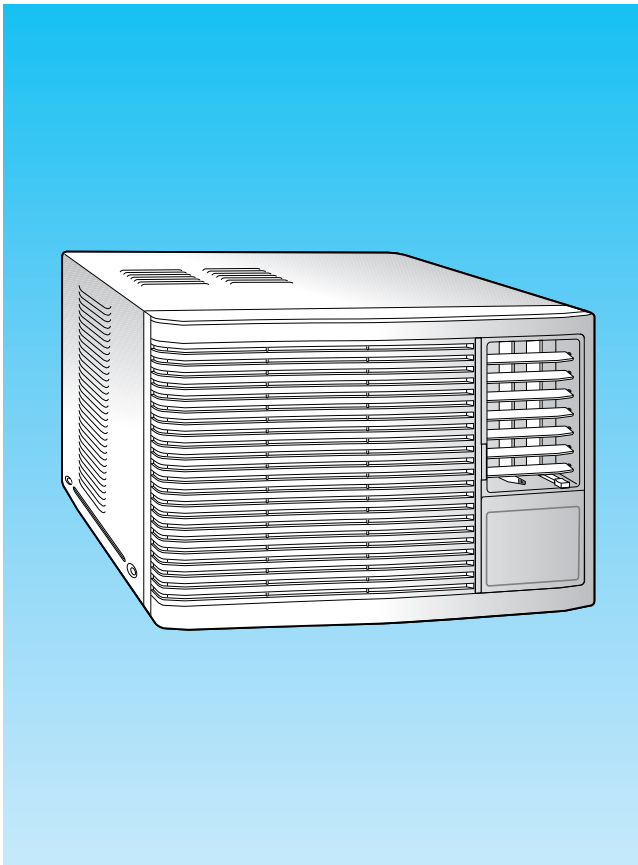
ROOM AIR CONDITIONER

AW0719

AW0819

SERVICE *Manual*

AIR CONDITIONER



CONTENTS

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3. Operating Instructions and Installation
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1. Precautions

1. Warning: Prior to repair, disconnect the power cord from the circuit breaker.
2. Use proper parts: Use only exact replacement parts. (Also, we recommend replacing parts rather than repairing them.)
3. Use the proper tools: Use the proper tools and test equipment, and know how to use equipment may cause problems later-intermittent contact, for example.
4. Power Cord: Prior to repair, check the power cord and replace it if necessary.
5. Avoid using an extension cord, and avoid tapping into a power cord. This practice may result in malfunction or fire.
6. After completing repairs and reassembly, check the insulation resistance, Procedure: Prior to applying power, measure the resistance between the power cord and the ground terminal. The resistance must be greater than 30 megohms.
7. Make sure that the grounds are adequate.
8. Make sure that the installation conditions are satisfactory. Relocate the unit if necessary.
9. Keep children away from the unit while it is being repaired.
10. Be sure to clean the unit and its surrounding area.

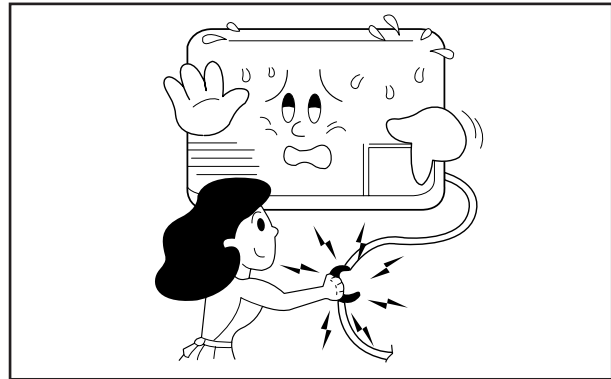


Fig. 1-1 Avoid Dangerous Contact

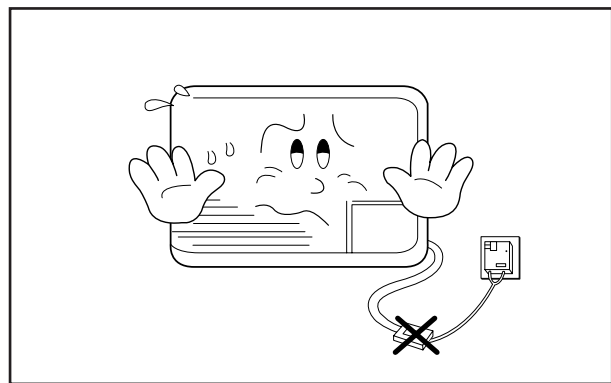


Fig. 1-2 No Tapping and No Extension Cords

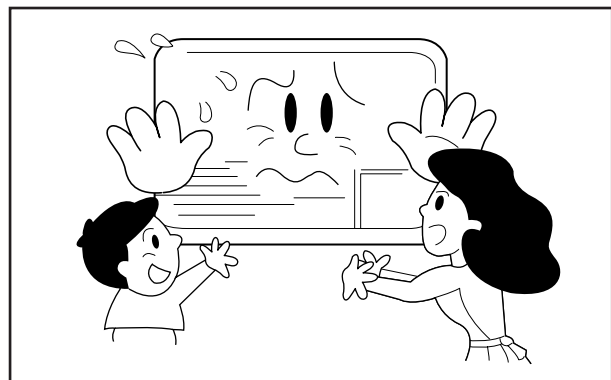


Fig. 1-3 No Kids Nearby!

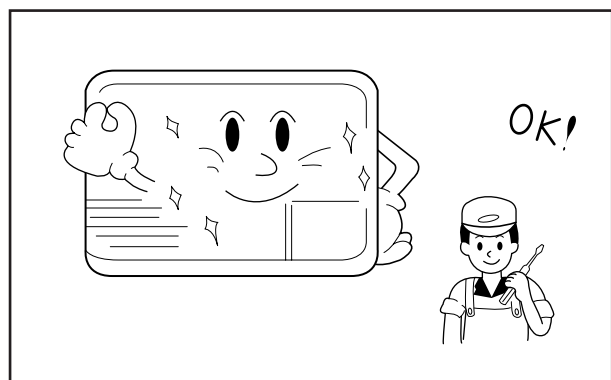


Fig. 1-4 Clean the Unit

2. Product Specifications

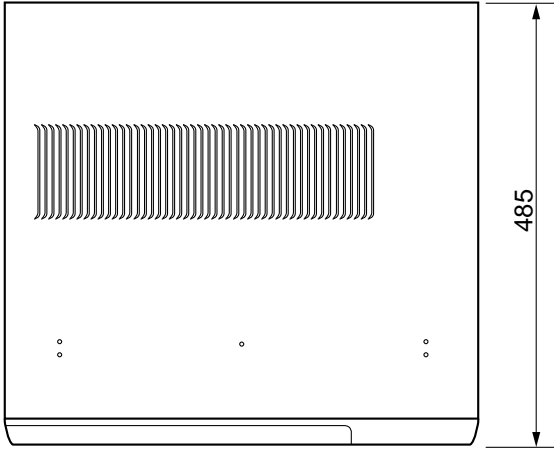
2-1 Table

Item	Unit of Measure	AW0719	AW0819	Remarks
Type	-	Window		
Dimensions: (Width x Height x Depth)	mm (inch)	520 x 345 x 485 (20.5 x 13.6 x 19.1)		
Packing Size (Width x Height x Depth)	mm (inch)	571 x 449 x 546 (22.5 x 17.7 x 21.5)		
Voltage:	Volt	115		
Phase	-	Single		
Frequency	Hz	60		
Operating Current	A	7.0	7.5	
Power Consumption	W	740	840	
Refrigerant Type	FREON	R-22		
Refrigerant Charge	g	420	420	
Cooling Capacity	BTU/h	7,000	8,000	
EER	BTU/h.W	9.5	9.5	
Net Weight	kg	29	29	
Condenser	Row	2 x 15		
Condenser Fan	Type	Propeller Fan		
Evaporator	Row	2 x 14		
Evaporator Fan	Type	Blower		
Fan Motor	W	IC-9630SWD6D		
Compressor(Rotary)	Model	44A072HW1E1	44A080HW1E1	
Overload Protect	-	MRA98706-12008	MRA12083-12008	
Compressor Capacitor Fan Motor Capacitor	μF/ VAC	25 / 370 Dual Type 6 / 370	30 / 370 Dual Type 6 / 370	
Fan Speed	-	2 Speeds		
Thermo Control	-	Thermostat		

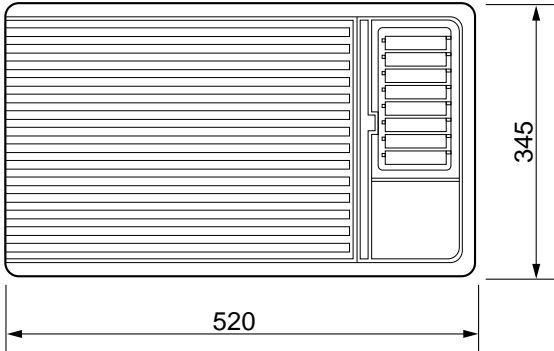
2-2 Dimensions

2-2-1 Main Unit

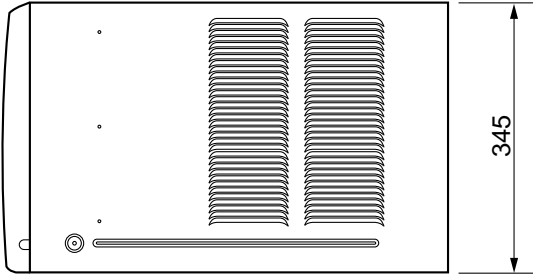
Unit : mm



Front view



Side view



3. Installation and Operating Instructions

3-1 Installation

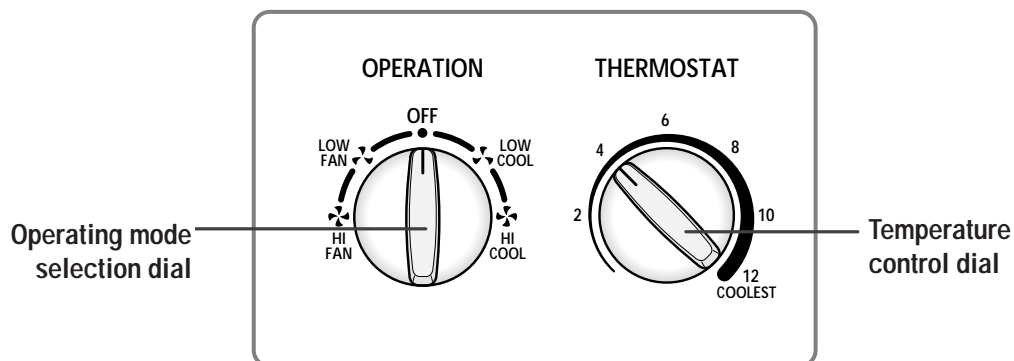
3-1-1 Selecting Area for Installation

1. Make sure that you install the unit in an area providing good ventilation. The air conditioner must not be blocked by any obstacles affecting the airflow near the air inlet and the air outlet.
2. Make sure that you install the unit in an area that allows good air handling. The installation area must be able to endure vibration from the unit.
3. Make sure that you install the unit away from heat or vapor.
4. Make sure that you install the unit in an area which is cool and has adequate space.
5. Make sure that you install the unit in an area away from TVs, audio units, cordless phones, fluorescent lighting fixtures and other electrical appliances (at least 1 meter clearance).
6. Make sure that you install the unit in an area which provides easy drainage for condensed water.
7. Make sure that you install the unit in area not exposed to the rain or direct sunlight. (Install a separate sunblind if exposed to direct sunlight).
8. Make sure that you install the unit in an area allowing good air movement. Do not install it in a space that would cause noise amplification of noise.
9. Fix the unit firmly if mounted in a high place.

Caution:

Do not use the air conditioner in the following environments : greasy areas (including areas near machines), or marine areas. Contact your local dealer for advice.

3-2 Controls and Components



3-2-1 Thermostat

OFF :

When room temperature is lowered by the air conditioner, the gas within the thermostat will contract and cause a break in the electrical contact. The compressor will then stop. After the compressor stops, the room temperature will rise.

ON :

As the room temperature increases to a selected level, the gas within the thermostat expands causing electrical contact, which provides the source of electric power to the compressor. The room temperature will fall and the cycle will repeat.

Control Operation :

By turning the control knob clockwise (toward higher numbers), the temperature will be cooler. By turning the control knob counterclockwise (toward lower numbers), the temperature will be warmer.

Level 1 : Cool air will be supplied above 30~35°C
Cool air will cease below 28~32.5°C

Level 10 : Cool air will be supplied above 17.4~20.4°C
Cool air will cease below 14.4~17.4°C


3-2-2 Fan Selector Switch & Operation Switch

The fan selector switch offers high and low fan cooling control levels to assure maximum comfort. The two fan speeds allow you to economically circulate room air flow on days when intense cooling is not required. When combined with the thermostat (set to call for conditioned air), these controls cool, dehumidify, filter, and circulate room air, with the fan continuing to circulate air even when the compressor is turned off.

3-2-3 Ventilation Control

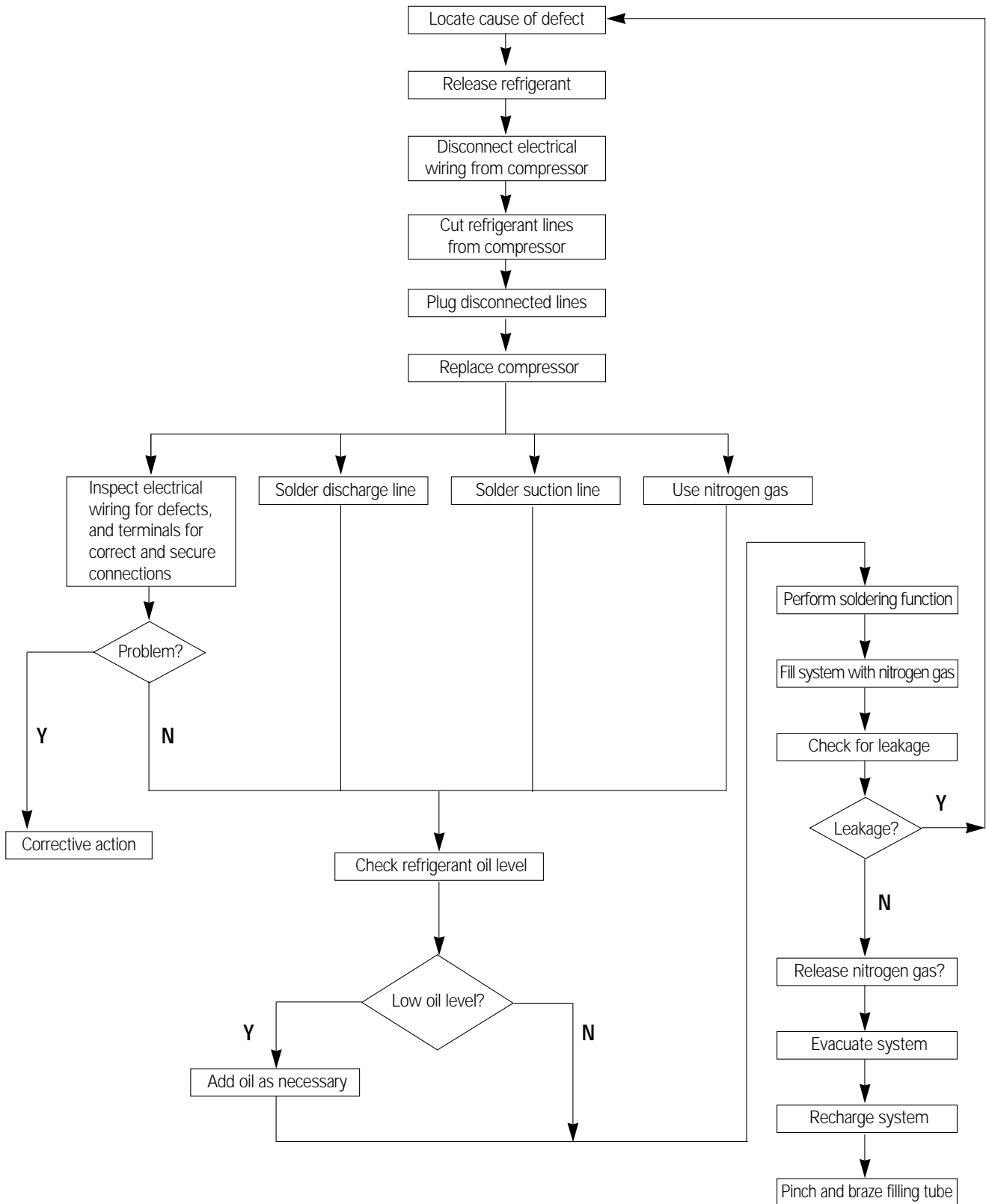
Use the ventilation switch to exhaust unrefresh air.

Open position  : The air inside the room circulates, while exhausted is sent outside.

Closed position  : The air inside the room circulates without exhaust.

4. Disassembly and Reassembly

4-1. Compressor Replacement Flow Chart



4-2 Checking the oil

Put approximately 10cc oil into a transparent container and test it.

4-2-1 Oil quality

Condition of Refrigerant Cycle	Oil Condition		Remarks
	Color	Odor	
Normal	Straw Yellow	No Odor	Return with the system
Over-heated	Brown Color	-	Change the oil
Motor Damage	Dark Brown	Pungent oil	Change the oil

4-2-2 Changing and adding refrigerant oil

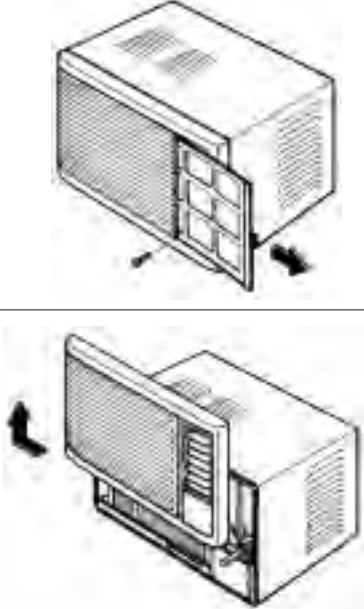
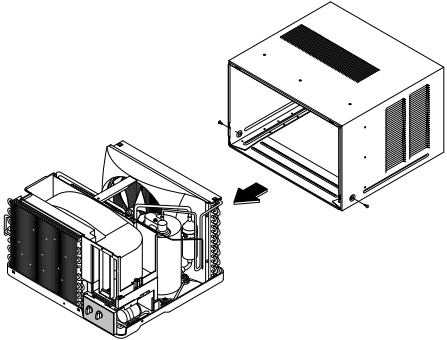
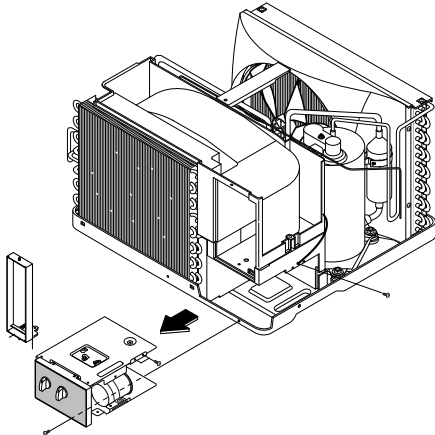
1. Change the compressor - DO NOT recharge the oil as the compressor itself is already charged.
2. Change the condenser add 50cc
3. Change the evaporator add 50cc
4. When the refrigerant is replaced add 30cc oil.
5. After vacuum is completed, the oil is filled through the high pressure side.
6. In the event of a refrigerant leak, generally it is not necessary to add oil.
(unless the oil has leaked significantly).

4-3 Refrigerant Oil Specifications

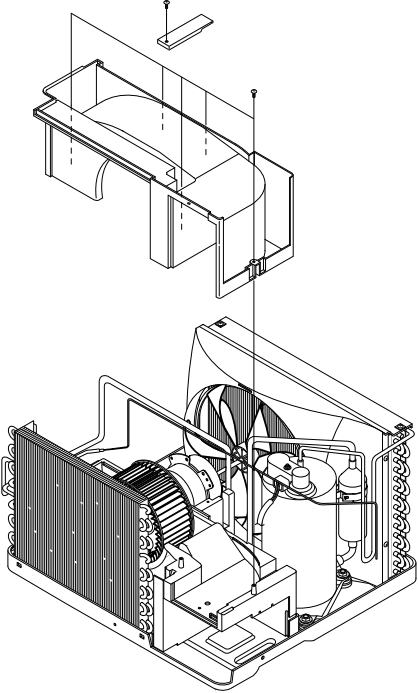
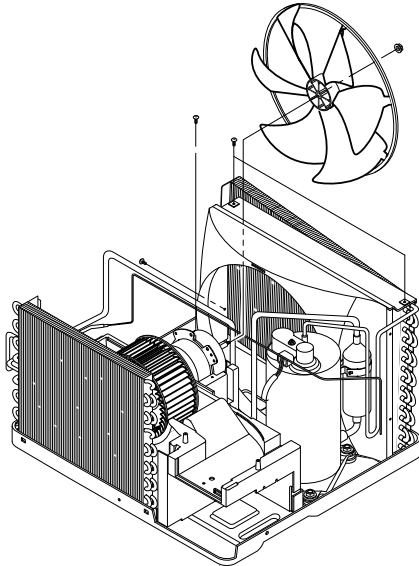
Model	Oil Charge	Oil specification
AW0719 AW0819	280cc	SONTEX 200LT

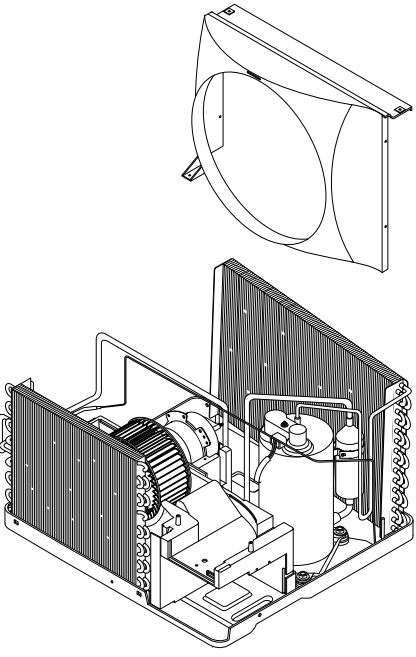
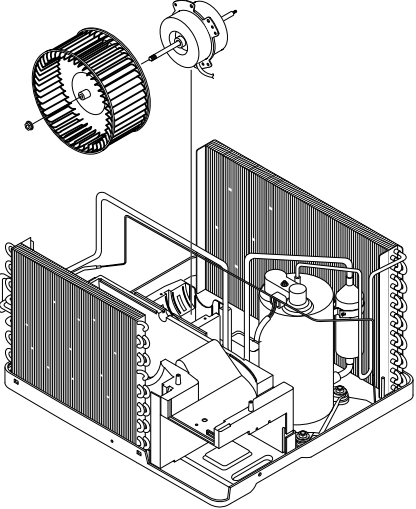
4-3 Disassembly and Reassembly Procedure

Stop operating the air conditioner, and pull out the power cord before repair.

No.	Part name	Procedures	Remarks
①	Ass'y Grill	<ol style="list-style-type: none"> 1. Pull out the Guard-air filter on the front grille. 2. Remove the Screw on the front grille. 3. Push the front grille left side and pull up. 	
②	Ass'y Cabinet	<ol style="list-style-type: none"> 1. Remove the two screws both side cabinet. 2. Pull the front both side, and remove the unit from the cabinet. 	
③	Ass'y Control	<ol style="list-style-type: none"> 1. Remove the blade V and arm blade 2. Remove 2 screws, and earth wire screw. 3. Remove two lead wire assemblies. 4. Take out the control box forward. 	

Disassembly and Reassembly

No.	Part name	Procedures	Remarks
④	Frame Up	1. Remove 6 screws on the Frame up and remove the Frame up and the reinf from case cond.	
⑤	Case Cond & Propeller Fan	1. Remove two screws on the bottom side, and 4 screws on the case cond. 2. Pull up the case cond and separate the cond case from the cond. 3. Remove the nut flange, and remove the propeller fan	

No.	Part name	Procedures	Remarks
⑥	Cond Casing	1. Remove the cond casing	
⑦	Blower & Motor	1. Move the motor & blower toward the evap, and lift up the motor & blower from the frame low.	

5. Troubleshooting

5-1 Special Precautions

5-1-1 Check the voltage of the of power source.

The input voltage shall be 115V/60Hz (AW0719, AW0819) .

The air conditioner may not operate properly if the voltage is out of this range.

5-1-2 Check weak and fragile parts.

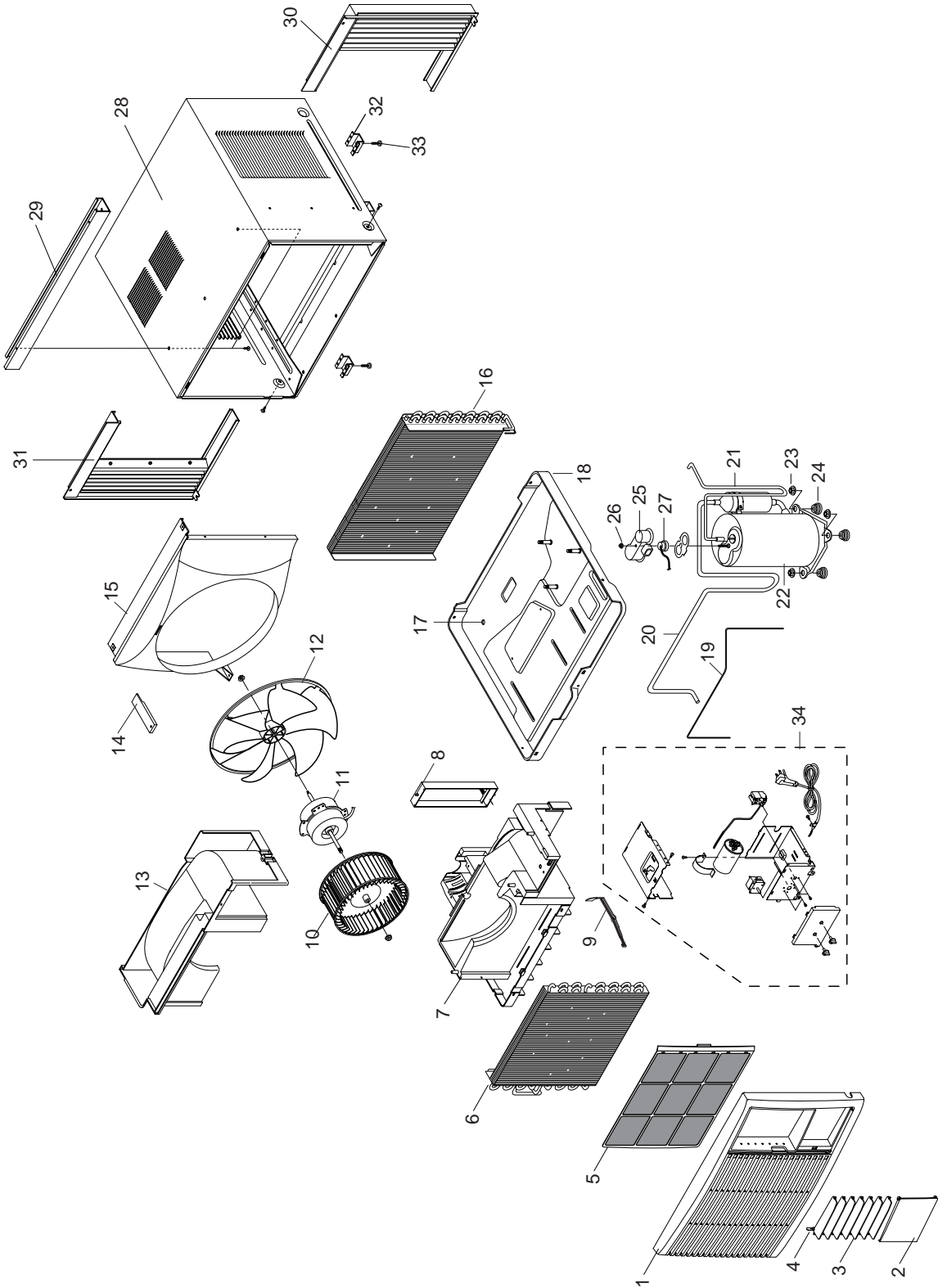
5-1-3 Check the connection of terminals.

5-1-4 When a malfunction occurs:

No	Malfunction	Check point	Causes
①	Compressor does not run.	1. check the thermostat position. 2. check the connection of the lead wire. 3. check the over load protector. 4. check the compressor.	1. Setting temp is lower than room temp. 2. Disconnection of the lead wire. 3. O.L.P is faulty 4. Compressor is faulty
②	Motor does not run.	1. check the connection of the lead wire & switch. 2. check the motor	1. disconnection of the lead wire 2. switch is faulty. 3. motor is faulty
③	Low cooling capacity	1. check the refrigerant leakage. 2. check the evaporator condition (freezing, blocked with dusts, etc.) ※ Difference of temp. exists between the suction side and the discharge side at least 12°C ※ Standard condition Indoor : 27°C outdoor : 35°C	1. Caused by the pipe crack 2. shortage of refrigerant 3. clean the evaporator & air filter.
④	Noise	1. check vibration of the pipe 2. check the propeller fan and blower (not loose or broken). 3. check bearing noise of the motor 4. check the compressor noise against	1. pipes are contact with the other parts. 2. the hex. nut is loose 3. the parts are broken 4. motor is faulty 5. compressor is faulty that of other compressors.

6. Exploded View and Parts List

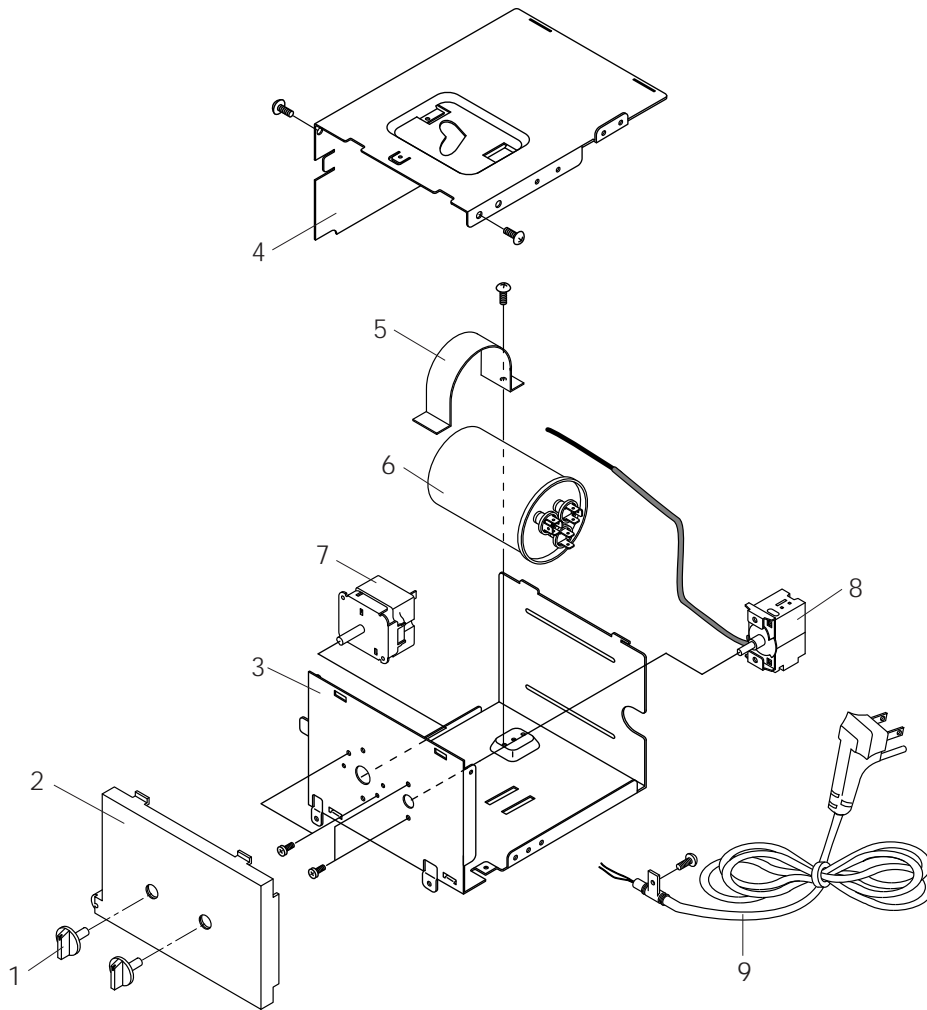
6-1 Main unit



■ Part List

No.	Code No.	Description	Specification	Q'TY		Remarks
				AW0719	AW0819	
1	DB92 - 10006P	ASS'Y Grille	ABS(SC-94445R)	1	1	
2	DB64 - 20036B	DOOR CONTROL	ABS(SC-94445R)	1	1	
3	DB66 - 30037B	BLADE H	ABS(SC-94445R)	7	7	
4	DB66 - 60010B	Link BLADE - H	ABS(SC-94445R)	1	1	
5	DB63 - 30021B	GUARD AIR FILTER	ABS(SC-94445R)			
6	DB75 - 00001A	ASS'Y EVAP	2 X 14	1	1	
7	DB90 - 00002B	ASS'Y FRAME LOW	ASS'Y	1	1	
8	DB66 - 30212A	BLADE V, M	HIPS	1	1	
9	DB66 - 70030A	DAMPER	PP	1	1	
10	DB67 - 50078A	BLOWER	ABS	1	1	
11	DB31 - 00004F	MOTOR	IC9630SWD6D	1	1	
12	DB67 - 50077A	FAN PROPELLER	ABS	1	1	
13	DB90 - 00013B	ASS'Y CASE COND	PP	1	1	
14	DB90 - 00014C	ASS'Y FRAME UP	ASS'Y	1	1	
15	DB61 - 00027B	FRAME PEINF	PP			
16	DB75 - 00002A	ASS'Y COND	2 x 15	1	1	
17	DB63 - 10388A	CAP DRAIN	CR	1	1	
18	DB90 - 00049A	ASS'Y BASE	ASS'Y	1	1	
19	DB96 - 00070A	TUBE CAPILLARY ASS'Y	ID1.42L1300	-	1	▲▲
	DB96 - 00077A	TUBE CAPILLARY ASS'Y	ID 1.3 L900	1	-	▲▲
20	DB96 - 00008A	ASS'Y TUBE-SUCTION	ASS'Y	1	1	
21	DB62 - 00009A	TUBE-DISCHARGE	ASS'Y	1	1	
22	DB95 - 10065U	ASS'Y COMP	44A072HWIE1	1	-	▲▲
	DB95 - 10065Y	ASS'Y COMP	44A080HWIE1	-	1	▲▲
23	DB60 - 30028A	NUT WASHER	M8, ZPC	3	3	
24	DB73 - 10027A	GROMMET-ISOLATOR	EPDM	3	3	
25	DB63 - 10504A	COVER TERMINAL	NORYL, BLK	1	1	
26	DB60 - 30018A	NUT-FLANGE	M5, SM20C	1	1	
27	DB47 - 20001V	OLP-POLYESTER	MRA98706-12008	1	-	▲▲
	DB47 - 20066B	OLP-POLYESTER	MRA12083-12008	-	1	▲▲
28	DB90 - 00001B	ASS'Y CABINET	ASS'Y	1	1	
29	DB64 - 20029H	SHUTTER ANGLE UP	SC - 94445T	1	1	
30	DB92 - 30006E	ASSY SHUTTER RH	ASS'Y	1	1	
31	DB92 - 30006F	ASSY SHUTTER LF	ASS'Y	1	1	
32	DB61 - 30219A	BRK - INSTALL	SCP, PAINTED	2	2	
33	DB60 - 20015B	BOLT	M10 x 20(ZPC3)	2	2	
34	DB93 - 00104A	ASS'Y CONTROL M	AW0719	1	-	▲▲
	DB93 - 00104B	ASS'Y CONTROL M	AW0819	-	1	▲▲

6-2 Ass'y Control

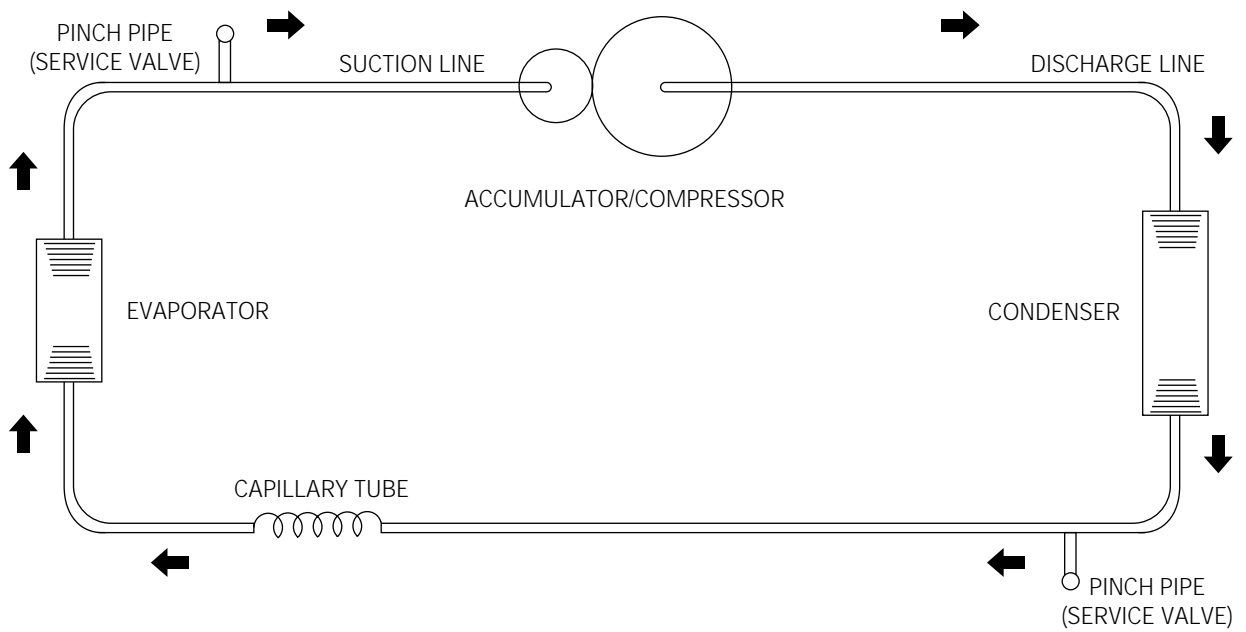


Part List

No.	Code No.	Description	Specification	Q'TY		Remarks
				AW0719	AW0819	
0	DB93 - 00104A	ASS'Y CONTROL	AW0719	1	-	
	DB93 - 00104B	ASS'Y CONTROL M	AW0819	-	1	
1	DB64 - 50138B	KNOB TIMER ASS'Y	ASS'Y	2	2	
2	DB64 - 70111A	PANEL CONTROL	PS	1	1	
3	DB61 - 10204A	CASE CONTROL	SGCC - M	1	1	
4	DB61 - 10203A	CASE CONTROL UP	SGCC - M	1	1	
5	DB65 - 10008B	CLIP - CAPACITOR	SECC - P, TO.8	1	1	
6	2501 - 001167	C - OIL	6/25uF, 370VAC	1	-	⚠
	2501 - 001166	C - OIL	6/30uF, 370VAC	-	1	⚠
7	DB34 - 90027C	SELECTOR SWITCH	SRB 315-4-8D	1	1	
8	DB47 - 20074A	THERMOSTAT	PFA 606S	1	1	
9	DB39 - 10038G	POWER LORD	DR - 13	1	1	

7. Block Diagram

7-1 Refrigerating Cycle Block Diagram



8. Wiring Diagram

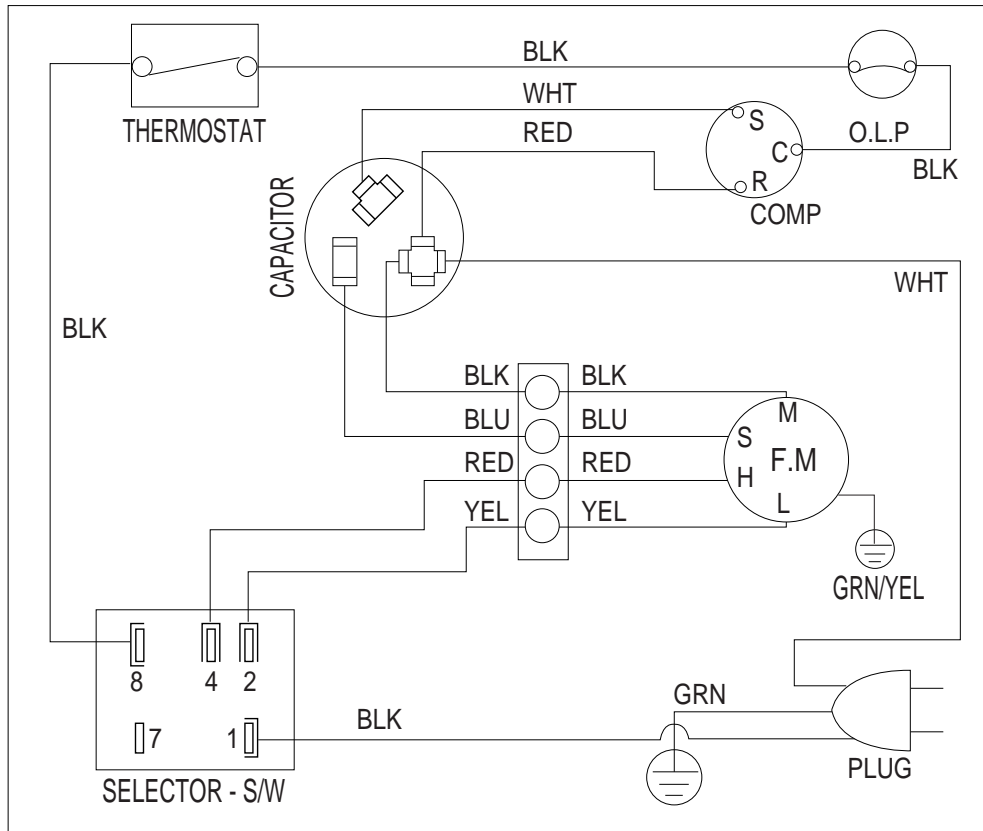


DIAGRAM - ELECTRIC (DB68 - 00259A)	AW0719	CAPACITOR : 6/25uF x 370VAC
	AW0819	CAPACITOR : 6/30uF x 370VAC

