MITSUBISHI ELECTRIC

Changes for the Better

SPLIT-TYPE, HEAT PUMP AIR CONDITIONERS

Revision A:
- Resistance of LEV (Expansion valve) has been modified.
- Power input and others have been added to SPECIFICATION.
- Method of check of R.V. coil has been modified.

Please void OB322.

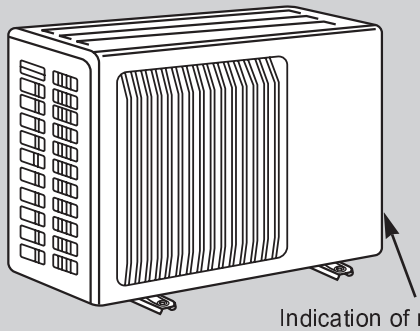
No. OB322
REVISED EDITION-A

HFC utilized R410A

SERVICE MANUAL

Wireless type Models

MUH-A18WV -E1
MUH-A24WV -E1
MUH-A30WV -E1



Indication of model name
MUH-A18WV -E1

CONTENTS

NOTE:
•This service manual describes technical data of outdoor units.
As for indoor units MSH-A18WV-E1, MSH-A24WV-E1 and MSH-A30V-E1, refer to the service manual OB321.

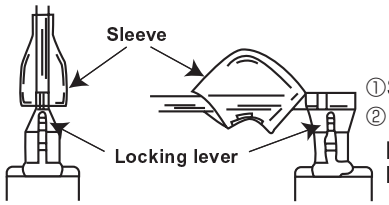
CE

12 DISASSEMBLY INSTRUCTIONS

<"Terminal with lock mechanism" Detaching points>

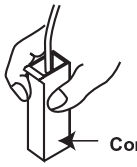
In case of terminal with lock mechanism, detach the terminal as shown below.
There are two types (Refer to (1) and (2)) of the terminal with lock mechanism.
The terminal with no lock mechanism can be removed by pulling it out.
Check the shape of the terminal and work.

(1) Slide the sleeve and check if there is a locking lever or not.



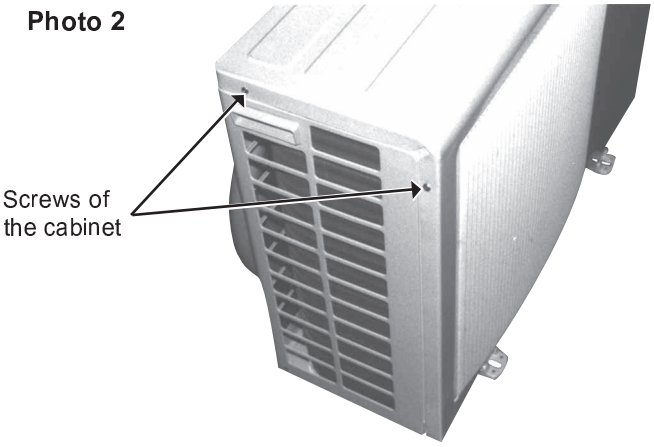
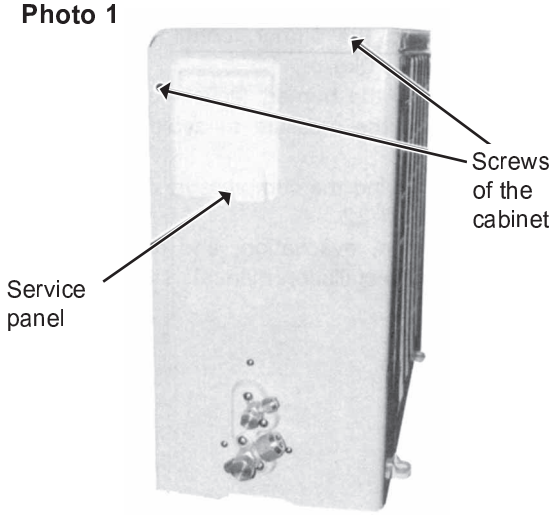
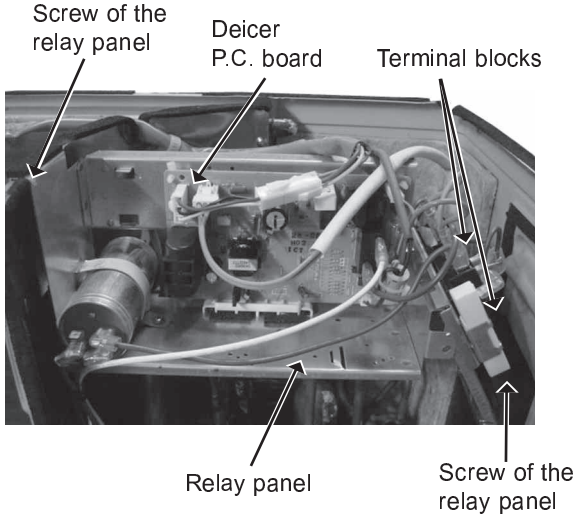
①Slide the sleeve.
②Pull the terminal while pushing the locking lever.

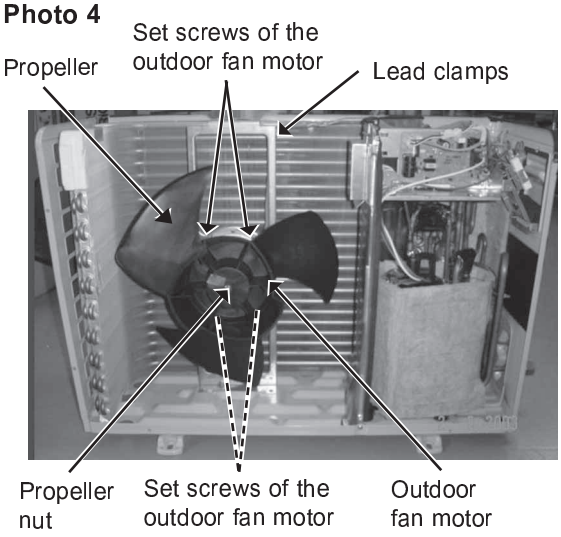
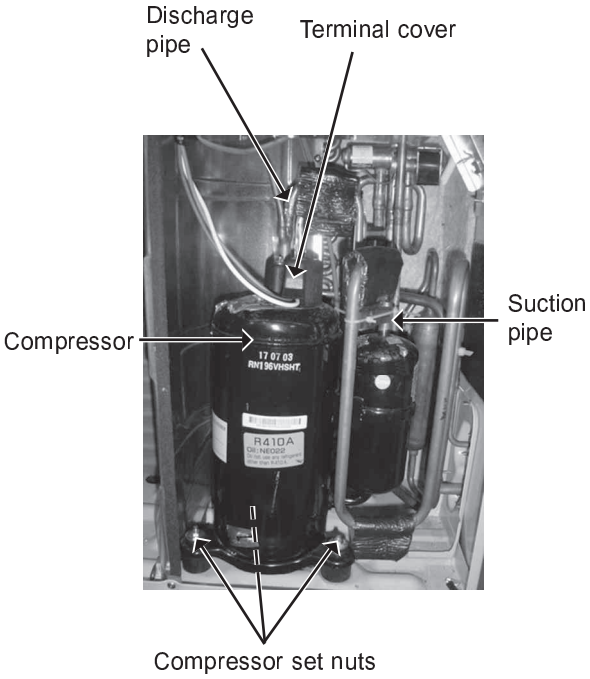
(2) The terminal with this connector is a terminal with lock mechanism



①Hold the sleeve, and pull out the terminal slowly.

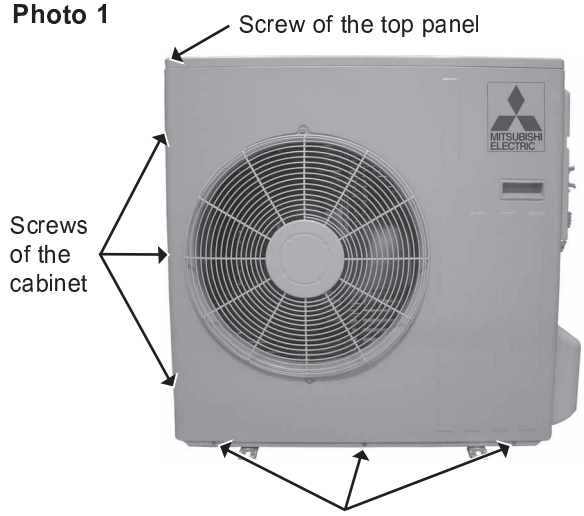
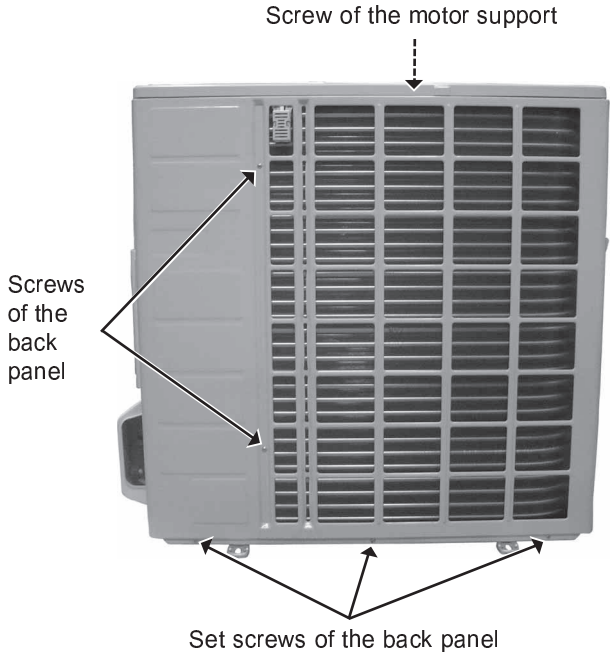
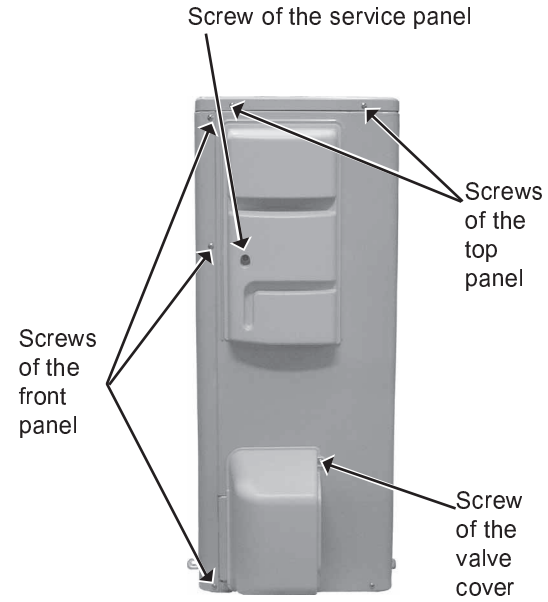
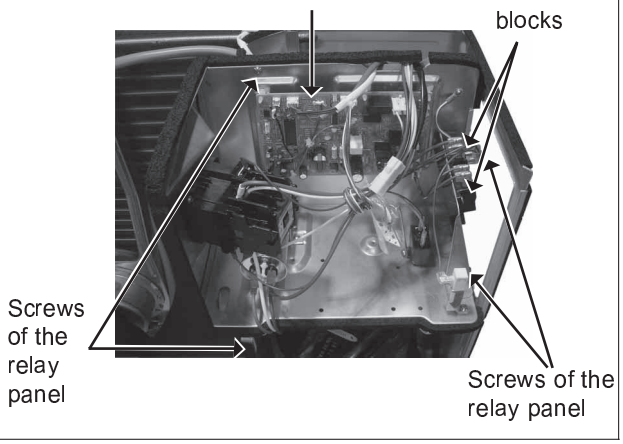
12-1. MUH-A18WV -E1 OUTDOOR UNIT

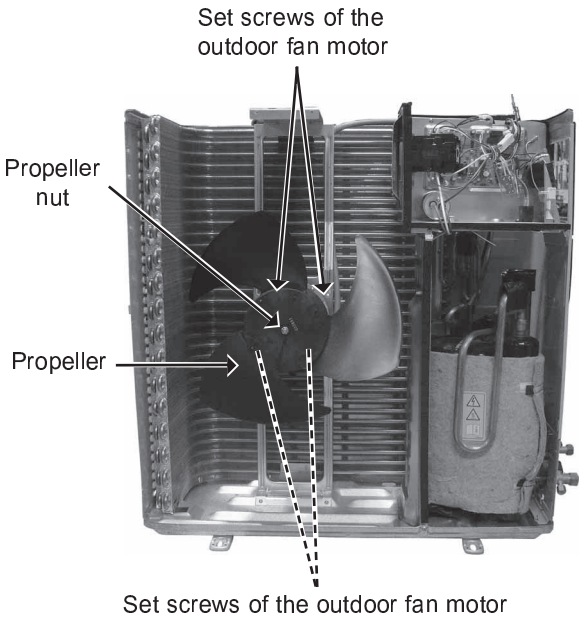
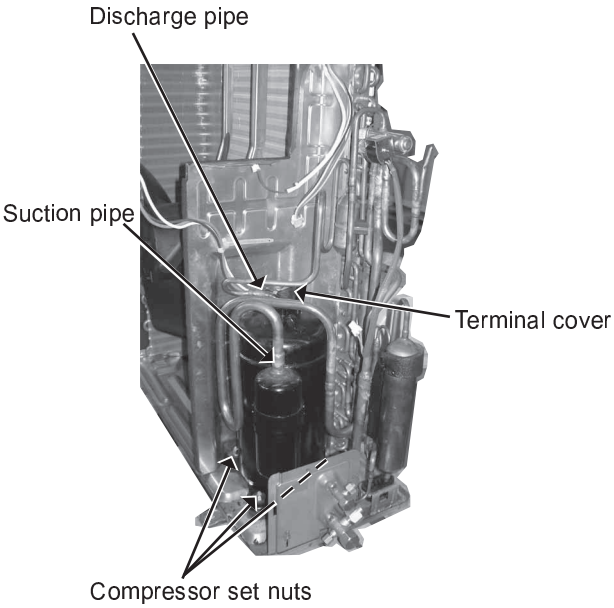
OPERATING PROCEDURE	PHOTOS
1. Removing the cabinet (1) Remove the screws of the cabinet. (2) Hold the down of the cabinet on the both side and remove the cabinet. **Photo 2**  	**Photo 1** 
2. Removing the deicer P.C. board (1) Remove the service panel and the cabinet. (2) Disconnect all the connectors and the terminals on the deicer P.C. board. (3) Remove the deicer P.C. board.	**Photo 3** 

OPERATING PROCEDURE	PHOTOS
3. Removing the propeller and the outdoor fan motor (1) Remove the cabinet. (Refer to 1.) (2) Remove the propeller nut and the propeller. **NOTE : Loose the propeller in the rotating direction for removal.** When attaching the propeller, align the mark on the propeller and the motor shaft cut section. Set the propeller fan in position by using the cut on the shaft and the mark on the propeller. (3) Remove the clamp of outdoor fan motor lead wire and disconnect the outdoor fan motor connector. (4) Remove the screws fixing the outdoor fan motor. (5) Remove the outdoor fan motor.	**Photo 4** 
4. Removing the compressor (1) Remove the cabinet. (Refer to 1.) (2) Remove the relay panel. (3) Remove the soundproof felt. (4) Remove the terminal cover on the compressor. (5) Disconnect lead wires from the compressor. (6) Recover gas from the refrigerant circuit. (7) Disconnect the welded part of the discharge pipe. (8) Disconnect the welded part of the suction pipe. (9) Remove nuts fixing the compressor. (10) Remove the compressor. **NOTE** ● Before using a burner, reclaim gas from the pipes until the pressure gauge shows 0 kg/cm^2 (0 MPa). ● Use the burner under the condition that gas can be recovered even when the inner pressure rises by heat.	**Photo 5** 

12-2. MUH-A24WV -E1 MUH-A30WV -E1 OUTDOOR UNIT

NOTE : These photos are MUH-A30WV.
MUH-A24WV is almost the same as MUH-A30WV.

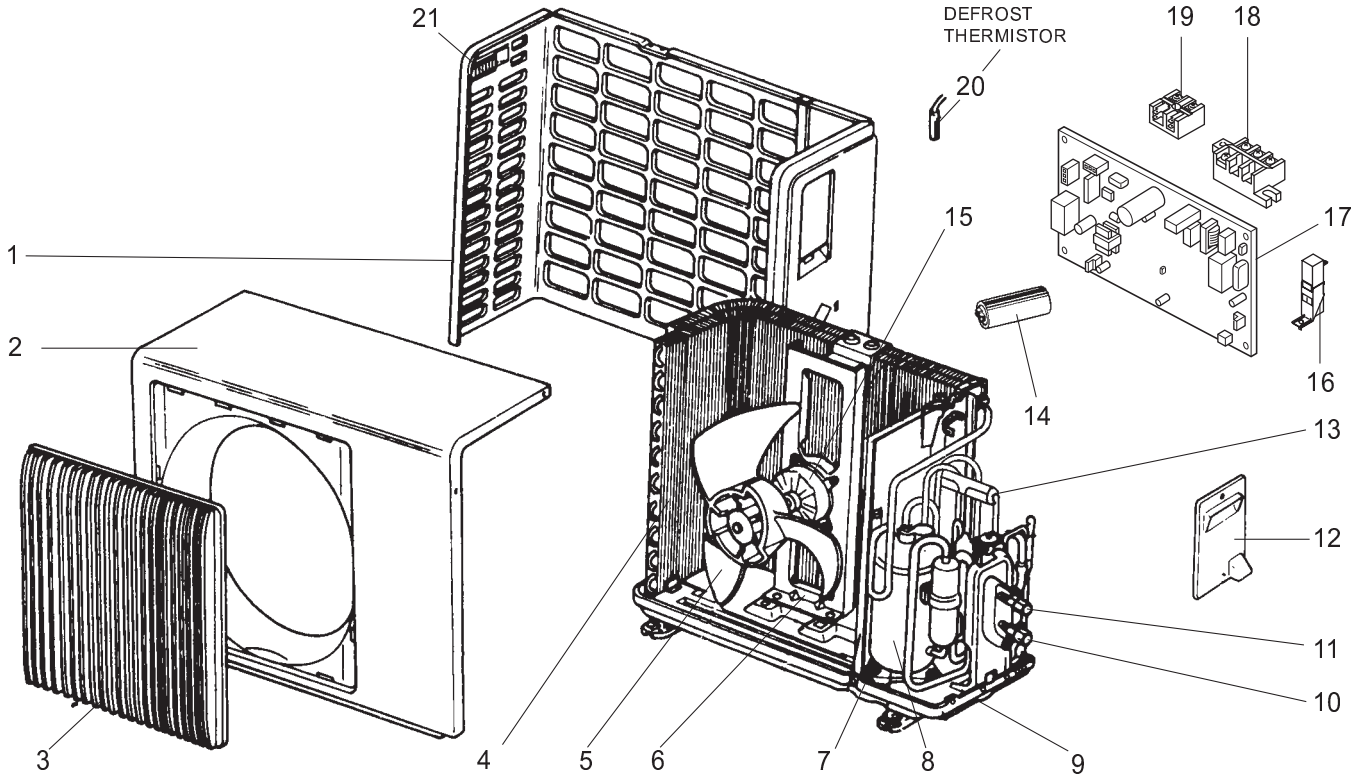
OPERATING PROCEDURE	PHOTOS
1.Removing the cabinet (1) Remove the screws of the service panel. (2) Remove the screws of the top panel. (3) Remove the screw of the valve cover. (4) Remove the service panel. (5) Remove the top panel. (6) Remove the valve cover. (7) Remove the screws of the front panel. (8) Remove the front panel. (9) Remove the screws of the back panel. (10) Remove the back panel.	**Photo 1** 
Photo 3  	**Photo 2** 
2. Removing the deicer P.C. board (1) Remove the service panel and the cabinet. (2) Disconnect all the connectors and the terminals on the deicer P.C. board. (3) Remove the deicer P.C. board.	**Photo 4** 

OPERATING PROCEDURE	PHOTOS
3. Removing the propeller and the outdoor fan motor (1) Remove the cabinet. (Refer to 1.) (2) Remove the propeller nut and the propeller. **NOTE : Loose the propeller in the rotating direction for removal.** When attaching the propeller, align the mark on the propeller and the motor shaft cut section. Set the propeller fan in position by using the cut on the shaft and the mark on the propeller. (3) Remove the clamp of outdoor fan motor lead wire and disconnect the outdoor fan motor connector. (4) Remove the screws fixing the outdoor fan motor. (5) Remove the outdoor fan motor.	**Photo 5** 
4. Removing the compressor (1) Remove the cabinet. (Refer to 1.) (2) Remove the relay panel. (3) Remove the soundproof felt. (4) Remove the terminal cover on the compressor. (5) Disconnect lead wires from the compressor. (6) Recover gas from the refrigerant circuit. (7) Disconnect the welded part of the discharge pipe. (8) Disconnect the welded part of the suction pipe. (9) Remove nuts fixing the compressor. (10) Remove the compressor. **NOTE** ● Before using a burner, reclaim gas from the pipes until the pressure gauge shows 0 kg/cm^2 (0 MPa). ● Use the burner under the condition that gas can be recovered even when the inner pressure rises by heat.	**Photo 6** 

13 PARTS LIST

MUH-A18WV -E1

13-1. OUTDOOR UNIT STRUCTURAL PARTS, ELECTRICAL PARTS AND FUNCTIONAL PARTS

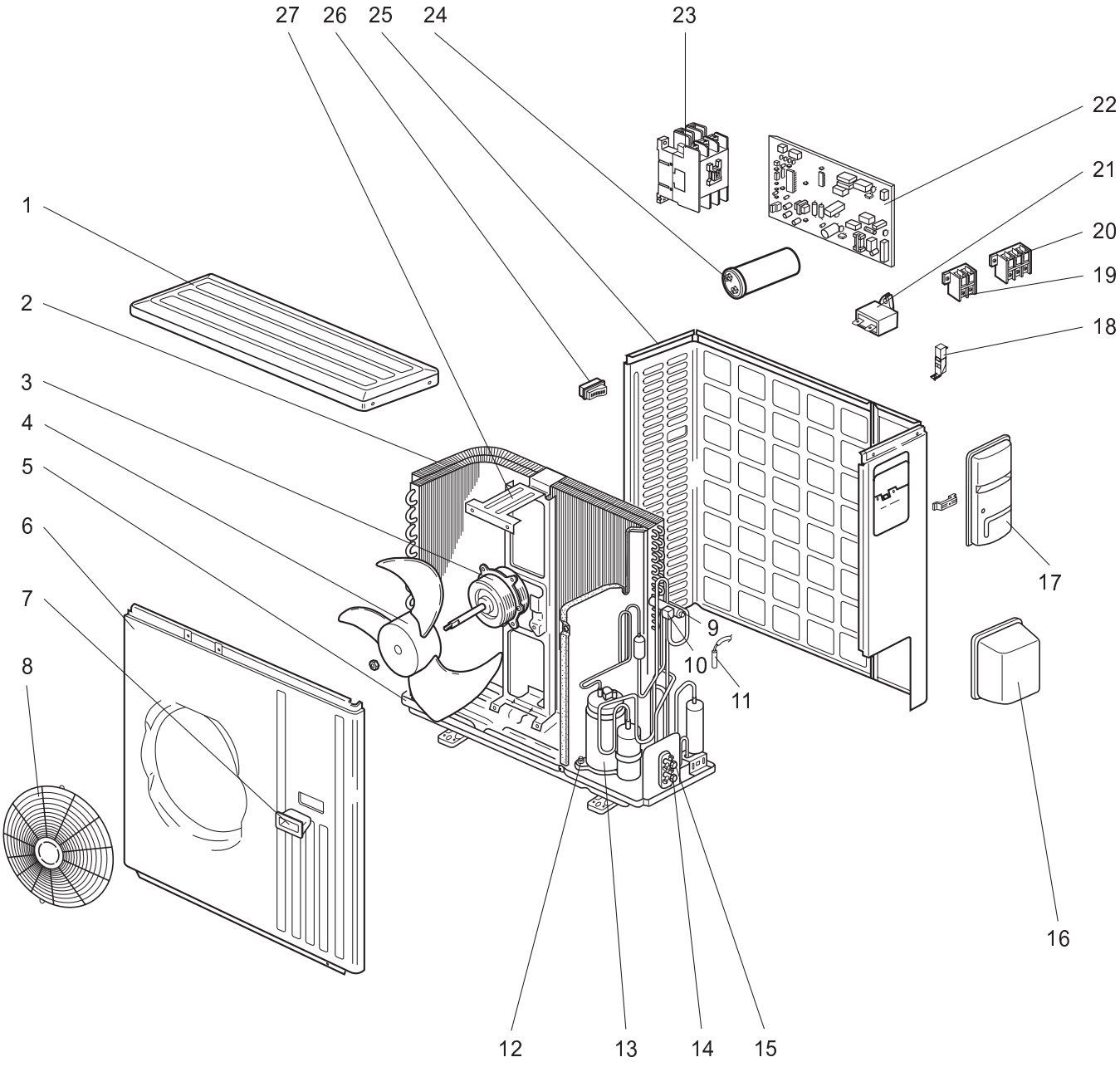


Part numbers that are circled are not shown in the illustration.

NO.	Part No.	Part Name	Symbol in Wiring Diagram	Q'ty/unit MUH-A18WV-E1	Remarks
1	E02 817 233	BACK PANEL		1	
2	E02 817 232	CABINET		1	
3	E02 817 521	GRILLE		1	
4	E02 643 630	OUTDOOR HEAT EXCHANGER		1	
5	E02 141 501	PROPELLER		1	
6	E02 139 515	MOTOR SUPPORT		1	
7	E02 075 506	COMPRESSOR RUBBER SET		3	3RUBBERS/SET
8	E02 817 900	COMPRESSOR	MC	1	RN196VHSHT
9	E02 817 290	BASE		1	
10	E02 817 661	STOP VALVE(GAS)		1	ϕ12.7
11	E02 820 662	STOP VALVE(LIQUID)		1	ϕ 6.35
12	E02 817 245	SERVICE PANEL		1	
13	E02 679 961	4-WAY VALVE		1	
14	E02 817 353	COMPRESSOR CAPACITOR	C1	1	40μF/440V AC
15	E02 144 301	OUTDOOR FAN MOTOR	MF	1	RA6V50 - □□
16	E02 466 383	SURGE ABSORBER	DSAR	1	
17	E02 820 451	DEICER P.C. BOARD		1	
18	E02 817 374	TERMINAL BLOCK	TB1	1	3P
19	E02 821 374	TERMINAL BLOCK	TB2	1	2P
20	E02 820 310	DEFROST THERMISTOR	RT61	1	
21	E02 817 009	HANDLE		1	
(22)	E02 139 936	CAPILLARY TUBE		2	ϕ3.0×ϕ1.6×750
	E02 340 936	CAPILLARY TUBE		1	ϕ3.0×ϕ1.6×450
	E02 414 936	CAPILLARY TUBE		1	ϕ3.0×ϕ1.6×300
	E02 820 936	CAPILLARY TUBE		1	ϕ2.5×ϕ0.6×1000
(23)	E02 095 382	FUSE	F61	1	250V / 2A
(24)	E02 821 490	R.V. COIL	21S4	1	
(25)	E02 154 642	CHECK VALVE		1	
(26)	E02 820 385	VARISTOR	NR61	1	

MUH-A24WV - E1

13-2. OUTDOOR UNIT STRUCTURAL PARTS, ELECTRICAL PARTS AND FUNCTIONAL PARTS



MUH-A24WV - E1

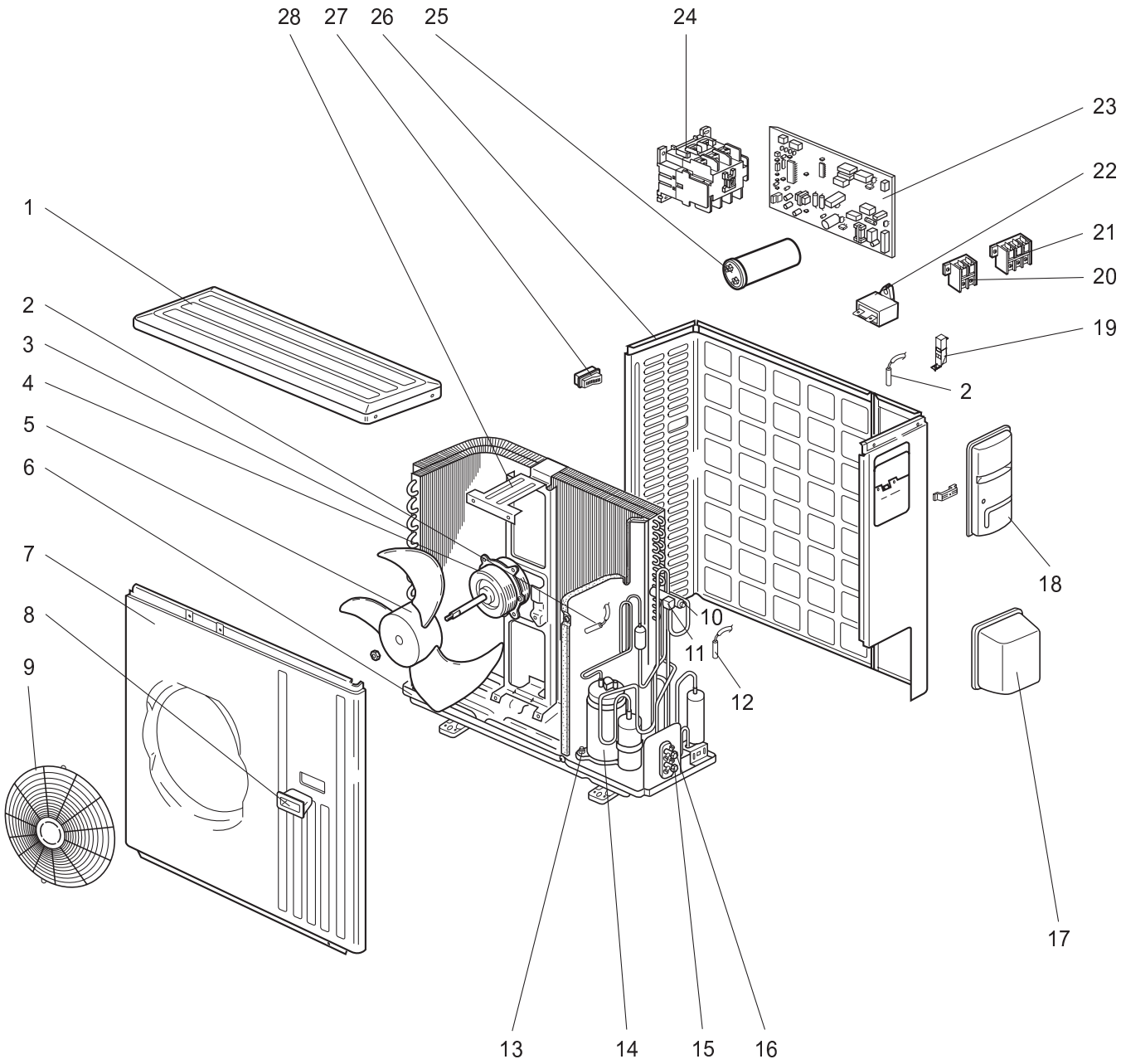
13-2. OUTDOOR UNIT STRUCTURAL PARTS, ELECTRICAL PARTS AND FUNCTIONAL PARTS

Part numbers that are circled are not shown in the illustration.

NO.	Part No.	Part Name	Symbol in Wiring Diagram	Q'ty/unit	Remarks
				MUH-A24WV - E1	
1	E02 819 297	TOP PANEL		1	
2	E02 821 630	OUTDOOR HEAT EXCHANGER		1	
3	E02 821 301	OUTDOOR FAN MOTOR	MF	1	RA6V85- □□
4	E02 214 501	PROPELLER		1	
5	E02 821 290	BASE		1	
6	E02 819 232	CABINET		1	
7	E02 819 009	HANDLE		1	
8	E02 819 521	FAN GUARD		1	
9	E02 679 961	4-WAY VALVE		1	
10	E02 821 490	R.V. COIL	21S4	1	
11	E02 821 310	DEFROST THERMISTOR	RT61	1	
12	E02 527 506	COMPRESSOR RUBBER SET		4	4RUBBERS/SET
13	E02 821 900	COMPRESSOR	MC	1	NN29VBAHT
14	E02 819 661	STOP VALVE(GAS)		1	ϕ15.88
15	E02 821 662	STOP VALVE(LIQUID)		1	ϕ6.35
16	E02 819 650	VALVE COVER		1	
17	E02 819 245	SERVICE PANEL		1	
18	E02 128 383	SURGE ABSORBER	DSAR	1	
19	E02 821 374	TERMINAL BLOCK	TB2	1	2P
20	E02 817 374	TERMINAL BLOCK	TB1	1	3P
21	E02 138 351	OUTDOOR FAN CAPACITOR	C2	1	3.0μF/440V AC
22	E02 821 451	DEICER P.C. BOARD		1	
23	E07 012 340	COMPRESSOR CONTACTOR	52C	1	
24	E02 818 353	COMPRESSOR CAPACITOR	C1	1	55μF/440V AC
25	E02 819 233	BACK PANEL(OUT)		1	
26	E02 817 009	HANDLE		1	
27	E02 726 515	MOTOR SUPPORT		1	
㉘	E02 127 382	FUSE	F61	1	250V/3.15A
㉙	E02 336 385	VARISTOR	NR61	1	
㉚	E02 154 642	CHECK VALVE		1	
㉛	E02 625 936	CAPILLARY TUBE		1	ϕ3.0xϕ2.0x550
	E02 010 936	CAPILLARY TUBE		1	ϕ3.0xϕ2.0x650

MUH-A30WV - E1

13-3. OUTDOOR UNIT STRUCTURAL PARTS, ELECTRICAL PARTS AND FUNCTIONAL PARTS



MUH-A30WV - E1

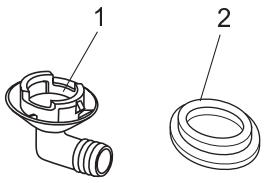
13-3. OUTDOOR UNIT STRUCTURAL PARTS, ELECTRICAL PARTS AND FUNCTIONAL PARTS

Part numbers that are circled are not shown in the illustration.

NO.	Part No.	Part Name	Symbol in Wiring Diagram	Q'ty/unit	Remarks
				MUH-A30WV - E1	
1	E02 819 297	TOP PANEL		1	
2	E02 819 309	THERMISTOR	RT62, RT63	1	DISCHARGE, AMBIENT
3	E02 822 630	OUTDOOR HEAT EXCHANGER		1	
4	E02 819 301	OUTDOOR FAN MOTOR	MF	1	RA6V75- □□
5	E02 214 501	PROPELLER		1	
6	E02 819 290	BASE		1	
7	E02 819 232	CABINET		1	
8	E02 819 009	HANDLE		1	
9	E02 819 521	FAN GUARD		1	
10	E02 679 961	4-WAY VALVE		1	
11	E02 821 490	R.V. COIL	21S4	1	
12	E02 821 310	DEFROST THERMISTOR	RT61	1	
13	E02 527 506	COMPRESSOR RUBBER SET		4	4RUBBERS/SET
14	E02 819 900	COMPRESSOR	MC	1	NN37VAAHT
15	E02 819 661	STOP VALVE(GAS)		1	ϕ15.88
16	E02 822 662	STOP VALVE(LIQUID)		1	ϕ9.52
17	E02 819 650	VALVE COVER		1	
18	E02 819 245	SERVICE PANEL		1	
19	E02 128 383	SURGE ABSORBER	DSAR	1	
20	E02 821 374	TERMINAL BLOCK	TB2	1	2P
21	E02 817 374	TERMINAL BLOCK	TB1	1	3P
22	E02 064 351	OUTDOOR FAN CAPACITOR	C2	1	4.0μF/440V AC
23	E02 822 451	DEICER P.C. BOARD		1	
24	E02 819 340	COMPRESSOR CONTACTOR	52C	1	
25	E02 819 353	COMPRESSOR CAPACITOR	C1	1	60μF/440V AC
26	E02 819 233	BACK PANEL(OUT)		1	
27	E02 817 009	HANDLE		1	
28	E02 726 515	MOTOR SUPPORT		1	
(29)	E02 819 640	EXPANSION VALVE		1	
(30)	E02 819 493	EXPANSION VALVE COIL	LEV	1	
(31)	E02 127 382	FUSE	F61	1	250V/3.15A
(32)	E02 336 385	VARISTOR	NR61	1	
(33)	E02 214 386	CZ SURGE ABSORBER	CZ	1	
(34)	E02 822 936	CAPILLARY TUBE(TAPER PIPE)		1	ϕ3.6xϕ2.4x50

MUH-A18WV -E1
MUH-A24WV -E1
MUH-A30WV -E1

13-4. ACCESSORY



NO.	Part No.	Part Name	Symbol in Wiring Diagram	Q'ty/unit			Remarks
				MUH-A18WV-E1	MUH-A24WV-E1	MUH-A30WV-E1	
1	E02 817 704	DRAIN SOCKET		1	1	1	
2	E02 444 705	DRAIN CAP		2	2	2	ϕ33
	E02 444 706	DRAIN CAP		1			ϕ16

MITSUBISHI ELECTRIC CORPORATION
HEAD OFFICE: MITSUBISHI DENKI BLDG.,2-2-3, MARUNOUCHI, CHIYODA-KU, TOKYO100-8310, JAPAN

Distributed in Feb. 2004. No.OB322 REVISED EDITION-A 6
Distributed in Nov. 2003. No.OB322 6
Made in Japan

New publication, effective Feb. 2004
Specifications subject to change without notice.