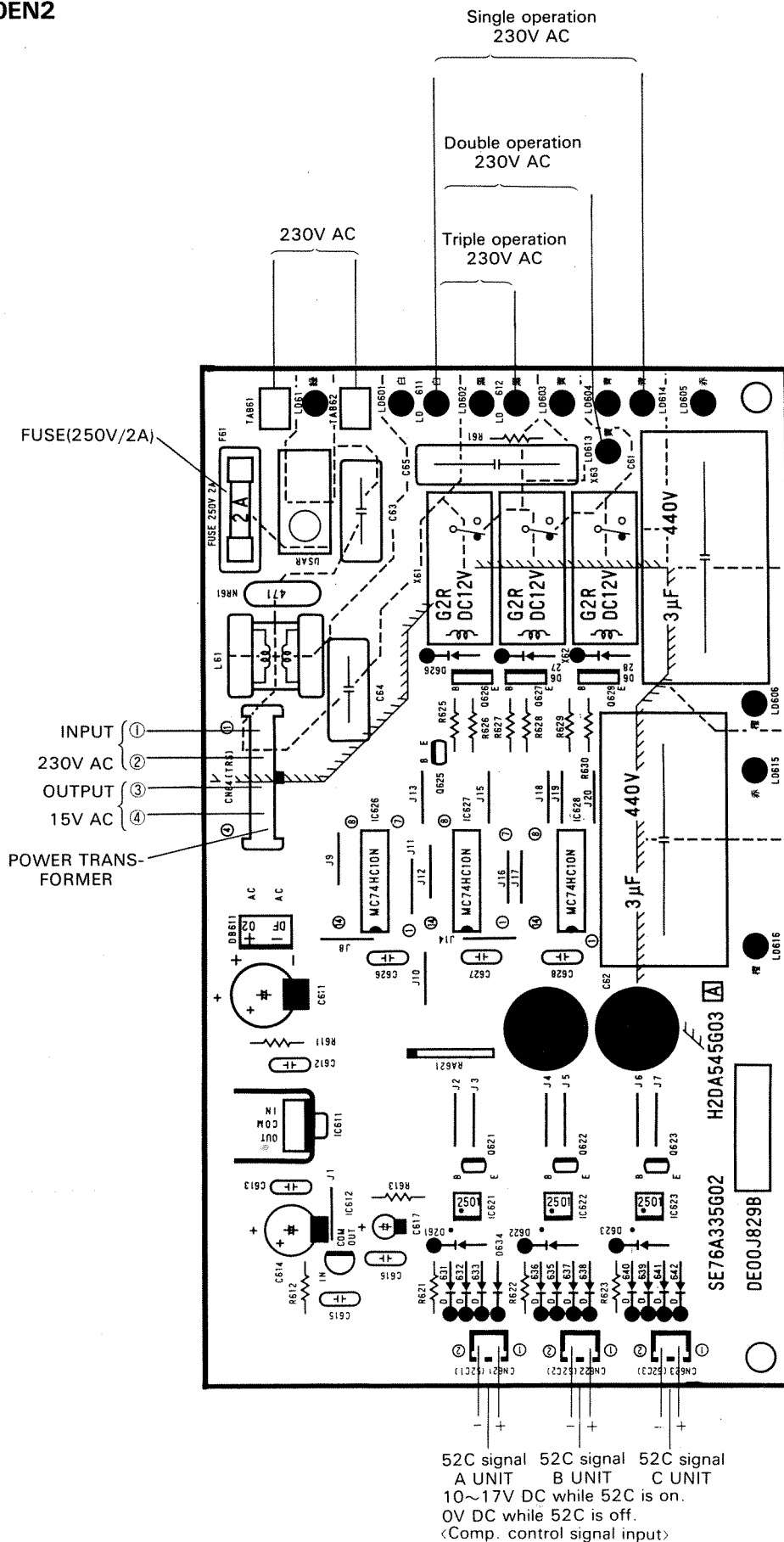
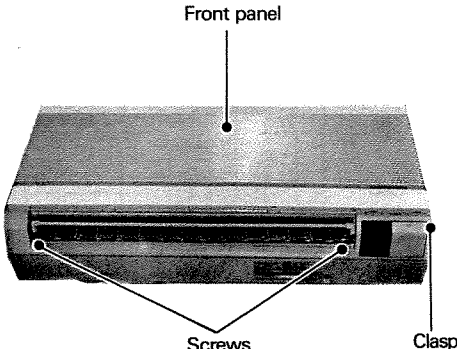
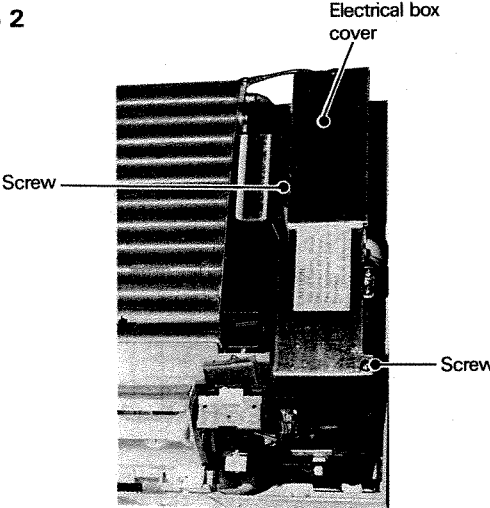
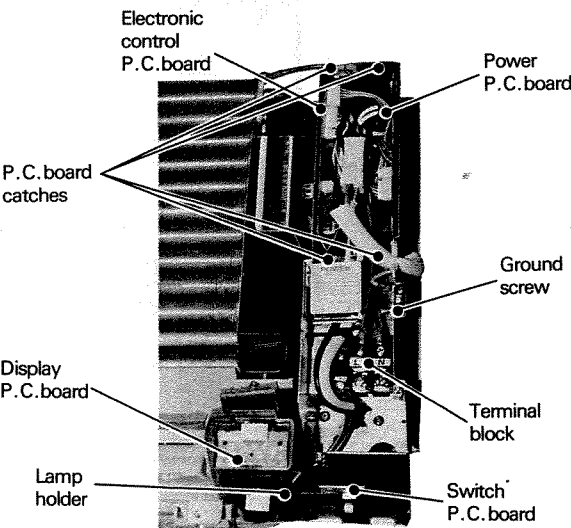


MUM30EN2



1. INDOOR UNIT MS09EW

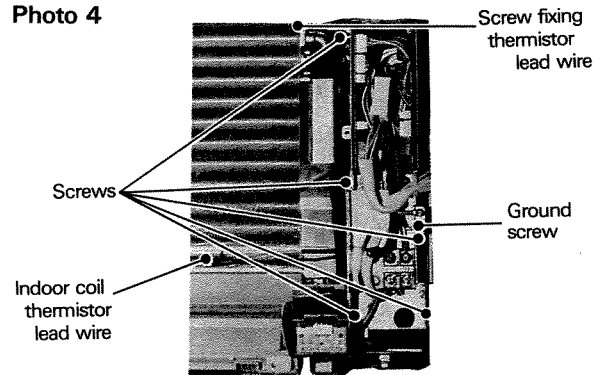
OPERATING PROCEDURE	PHOTOS
1. Removing the front panel (1) Remove the two screws fixing the front panel. (2) Unhook the clasp at the right. (3) Pull the bottom of the front panel toward you to remove the front panel.	Photo 1  Labels in Photo 1: Front panel, Screws, Clasp
2. Removing the electronic control P.C. board and the power P.C. board (1) Remove the front panel. (2) Remove the two screws fixing the electrical box cover. (3) Remove the electrical box cover. (4) Take out the noise shield from the electrical box. (5) Disconnect all the connectors. (6) Remove the two screws on the terminal block to disconnect the wires. (7) Remove the screws fixing the ground wire. (8) Remove the electronic control P.C. board and the power P.C. board. NOTE : When attaching the P.C. boards, fix the ends of the boards into the grooves in the electrical box.	Photo 2  Labels in Photo 2: Electrical box cover, Screw, Screw
3. Removing the display P.C. board and the switch P.C. board (1) Remove the front panel. (2) Remove the two screws fixing the lamp holder. (3) Disconnect the connector and unhook the catch to remove the display P.C. board. (4) Remove the screw to remove the switch P.C. board.	Photo 3  Labels in Photo 3: Electronic control P.C. board, Power P.C. board, P.C. board catches, Ground screw, Display P.C. board, Terminal block, Lamp holder, Switch P.C. board

OPERATING PROCEDURE

4. Removing the electrical box

- (1) Remove the front panel.
- (2) Remove the electrical box cover.
- (3) Remove the five screws fixing the electrical box.
- (4) Disconnect the two ground wires.
- (5) Disconnect the lead wire of the indoor coil thermistor from the electrical control P.C. board.

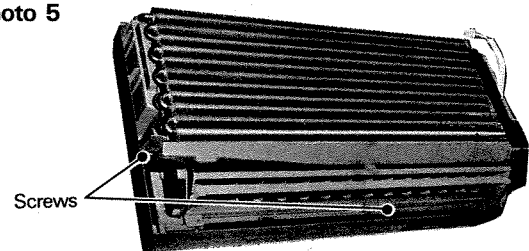
Photo 4



5. Removing the nozzle assembly

- (1) Remove the 2 screws fixing the nozzle assembly.
- (2) Remove the nozzle assembly.

Photo 5



6. Removing the fan motor

- (1) Remove the front panel.
- (2) Remove the electrical box.
- (3) Remove the nozzle assembly.
- (4) Remove the cooler support with a Philips screwdriver.
- (5) Remove the water shield from the heat exchanger.
- (6) Lift up the heat exchanger.
- (7) Take out the fan motor and the line flow fan from the box assembly.
- (8) Remove the fan motor from the line flow fan.

Photo 6

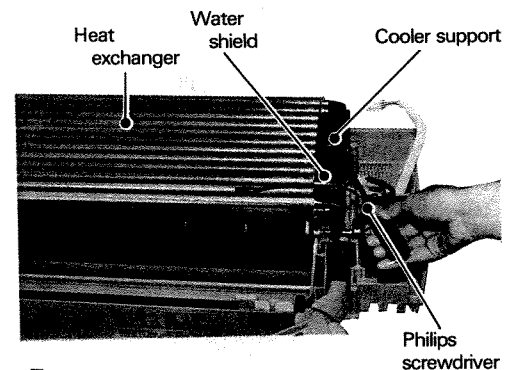
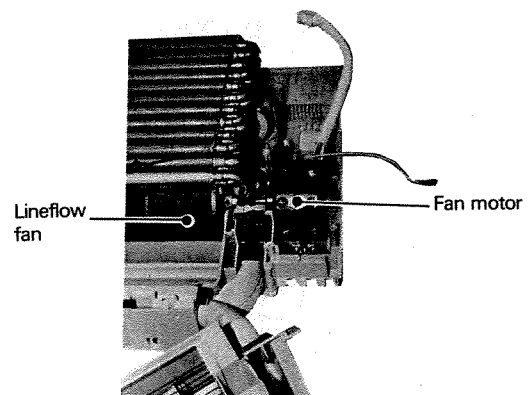


Photo 7



2. INDOOR UNIT MS12/15EN

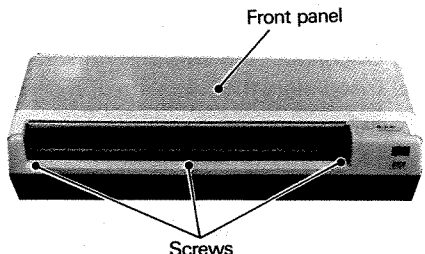
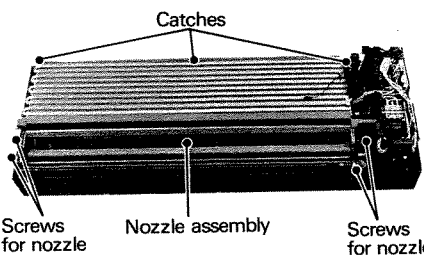
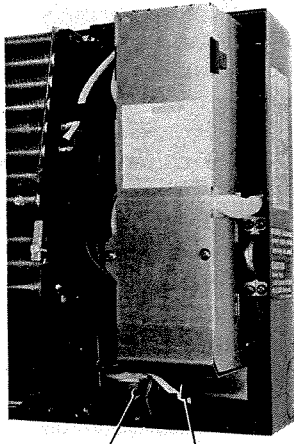
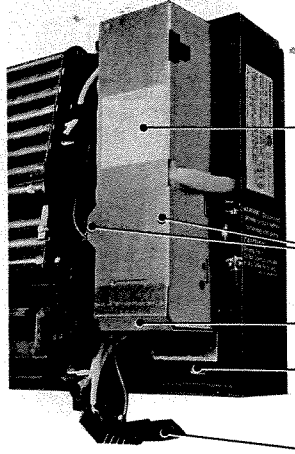
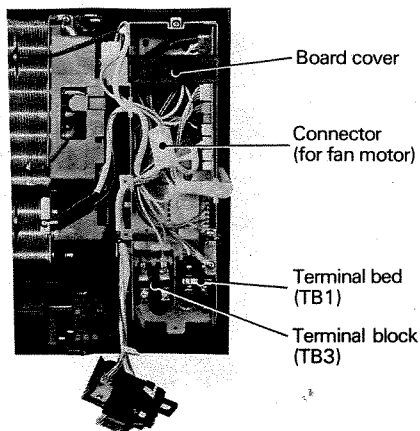
OPERATING PROCEDURE	PHOTOS
1. Removing the front panel (1) Open the 3 screw covers at the bottom of the front panel. (2) Remove the 3 screws. (3) Pull the bottom of the front panel to your side slightly and remove the 3 catches at the top of the front panel. (4) Remove the front panel.	Photo 1  Front panel Screws Photo 2  Catches Screws for nozzle Nozzle assembly Screws for nozzle
2. Removing of the electronic control P.C. board (1) Remove the front panel. (2) Push the catch of the switch holder to remove the holder. (See photo 3) (3) Remove the set screws of electrical covers (A) and (B). (See photo 4) - Screws are 2 pcs on (A) and 1 pc on (B). (4) Remove the both electrical covers (A) and (B). (5) Remove the catch of the board cover. (See photo 5) (6) Remove the fan motor connector. (7) Disconnect all connectors from the board. (8) Pull out the electronic control P.C. board.	Photo 3  Switch holder Catch is under here. Photo 4  Electrical cover (A) Set screws Electrical cover (B) Set screw Catch of Switch holder

Photo 5



OPERATING PROCEDURE

3. Removing of the nozzle assembly

- (1) Remove the front panel.
- (2) Remove the switch holder.
- (3) Remove the electrical covers (A) and (B).
- (4) Remove the thermistor from the heat exchanger.
(See photo 6)
- (5) Remove the fan motor connector and the fan motor ground screw. (See photo 7)
- (6) Remove the set screw of the electrical box.
- (7) Remove the electrical box.
- (8) Remove the set screws of the nozzle assembly. (See photo 8)
- (9) Take out the nozzle assembly.

PHOTOS

Photo 6

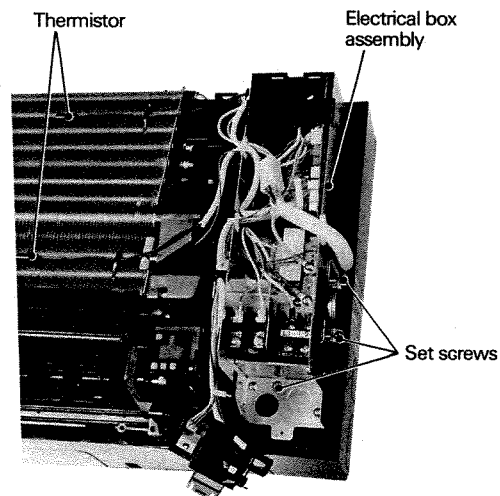


Photo 7

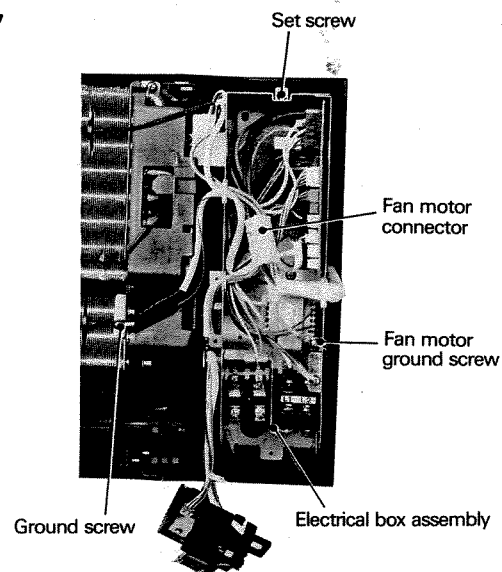


Photo 9

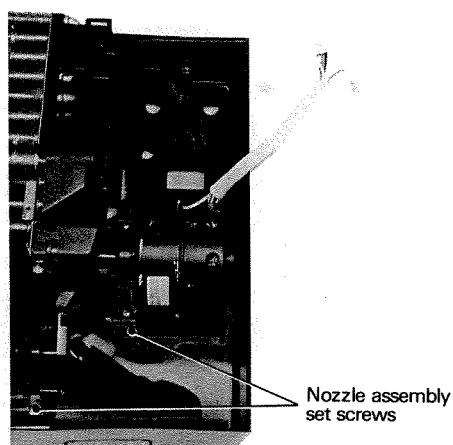
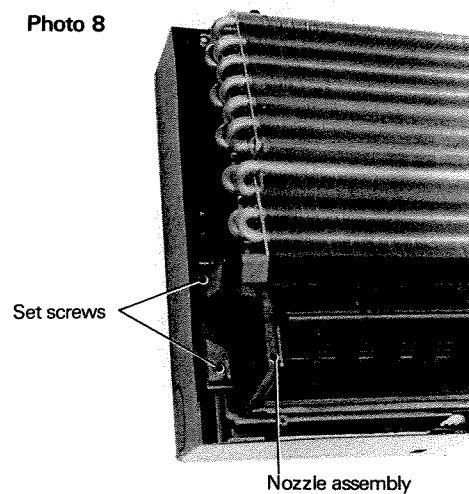


Photo 8



OPERATING PROCEDURE

4. Removing the fan motor and the line flow fan

- (1) Remove the front panel.
- (2) Remove the switch holder.
- (3) Remove the electrical box.
- (4) Remove the nozzle assembly.
- (5) Remove the set screws of the pipe support to remove the pipe support. (See photo 10)
- (6) Remove the set screws of the side cover to remove the side cover.
- (7) Remove the water shield. (See photo 11)
- (8) Loosen the set screw of the line flow fan.
- (9) Remove the set screws of the indoor heat exchanger. Draw out the heat exchanger to your side. (See photo 12)
- (10) Take out the line flow fan and the fan motor.

PHOTOS

Photo 10

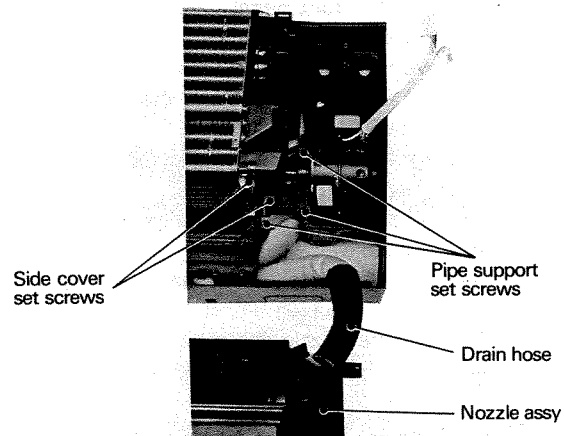


Photo 11

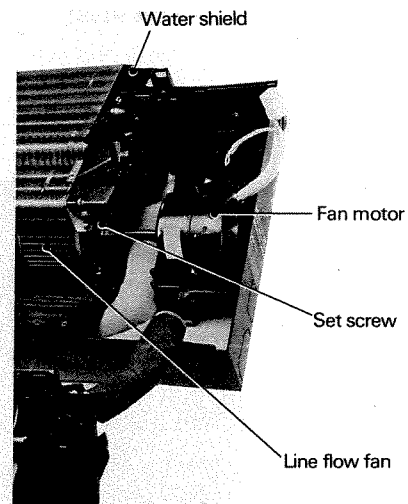
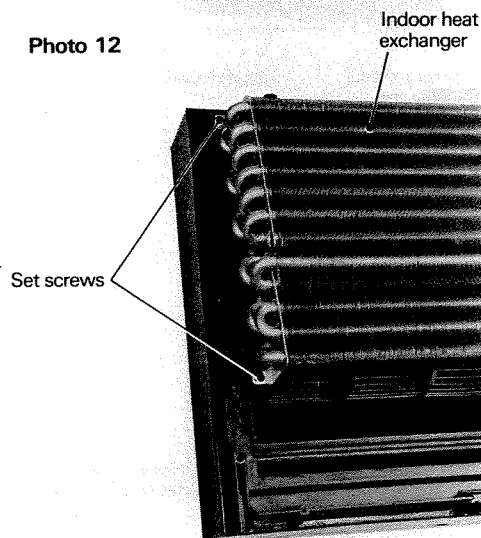
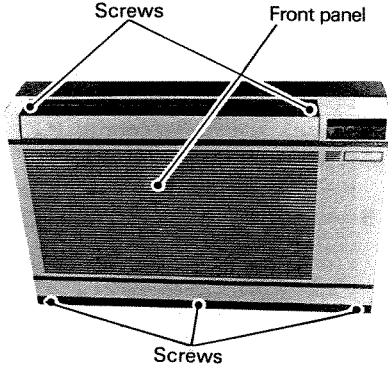
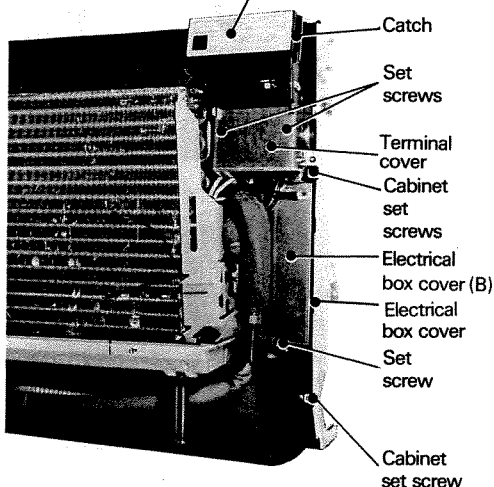
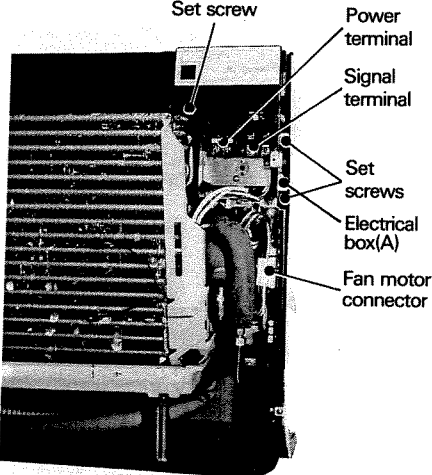


Photo 12



3. INDOOR UNIT MF15EN/MF15EN2

OPERATING PROCEDURE	PHOTOS
1. Removing the front panel (1) Remove the set screws (5 pcs) of the front panel. (2) After removing of the set screws, lift up the front panel and unclamp the catches. (3) Then pull out the panel to your side to remove.	Photo 1 
2. Removing the terminal cover (1) Remove the set screws (2 pcs) of terminal cover. (2) Remove the terminal cover. (Refer to photo 2) (3) The terminal blocks of the main power wire and the signal wire can be removed now.	Photo 2 
3. Removing the transformer and indoor fan capacitor After removing the front panel : (1) Push the set claw at the right side of the switch panel. The switch panel can be removed. (Refer to photo 2) (2) Remove the set screws (2 pcs) of the electrical box cover (A). (3) Remove the electrical box cover (A). (Refer to photo 4) (4) The transformer, indoor fan capacitor can be removed. (Refer to photo 5)	Photo 3 

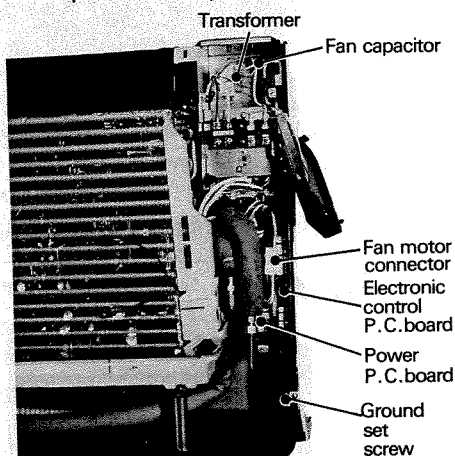
OPERATING PROCEDURE

4. Removing electronic control P.C. board

After removing of the front panel :

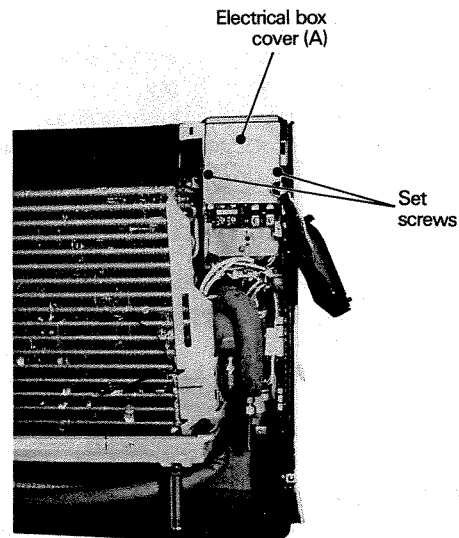
- (1) Remove the set screw of the electrical box cover (B).
- (2) Remove the electrical box cover (B). (Refer to photo 2)
- (3) Disconnect all connectors from the Electronic control P.C. board.
- (4) Pull out the electronic control P.C. board to your side. (Refer to photo 5 & 6)

Photo 5



PHOTOS

Photo 4



5. Removing the power P.C. board

After removing of the front panel :

- (1) Remove the electrical box cover (B).
- (2) Remove the electronic control P.C. board.
- (3) Disconnect the connector which is connected lead wires to the power P.C. board.
- (4) Disconnect all connectors from the power P.C. board. (Refer to photo 5 & 7)
- (5) Pull out the power P.C. board.

Photo 7

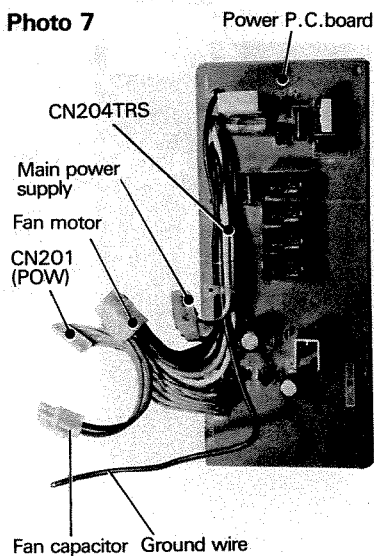
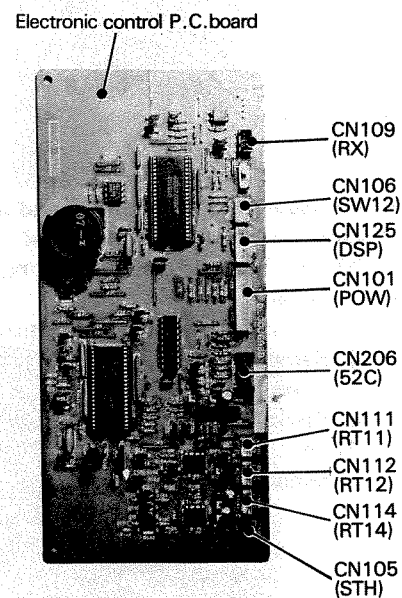


Photo 6



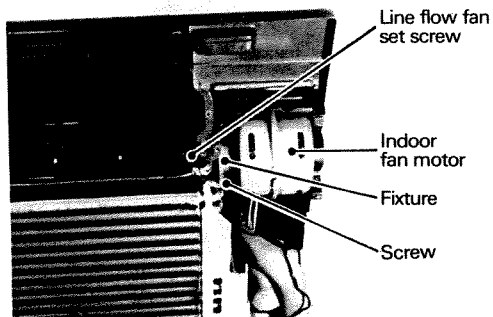
OPERATING PROCEDURE

6. Removing the line flow fan and indoor fan motor

After removing of the front panel :

- (1) Remove the electrical box cover (B) and the fan motor connector. (Refer to photo 2 &3)
- (2) Remove the cabinet set screws (4 pcs) and remove the cabinet. (Refer to photo 2 &8)
- (3) Remove the electrical box (A) set screws (3 pcs) and remove the electrical box (A). (Refer to photo3)
- (4) Remove the outlet grill set screws (4 pcs) (Refer to photo 9)
- (5) Remove the outlet grill.
- (6) Remove the set screw and the fixture of the indoor fan motor.
- (7) Remove the stabilizer set screws (1 p on each side) above the line flow fan. (Refer to photo 10)
- (8) Remove the stabilizer loose the line flow fan set screw. (Refer to photo 11)
- (9) Pull the indoor fan motor to the right, and remove the fan motor. (Refer to photo 11)
- (10) Remove the indoor coil set screws (2 pcs) on the left side. (Refer to photo 8)
- (11) Take out the line flow fan from the right above.

Photo 11



PHOTOS

Photo 8

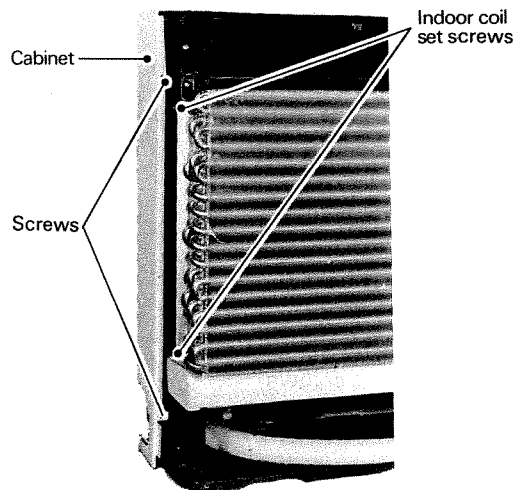


Photo 9

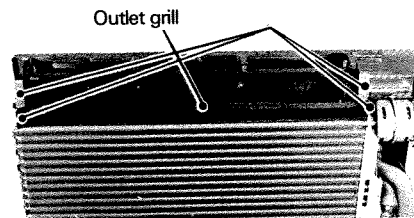
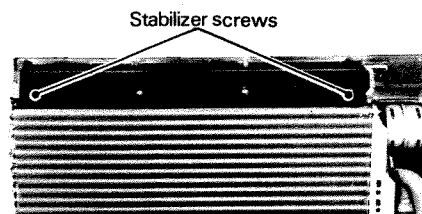
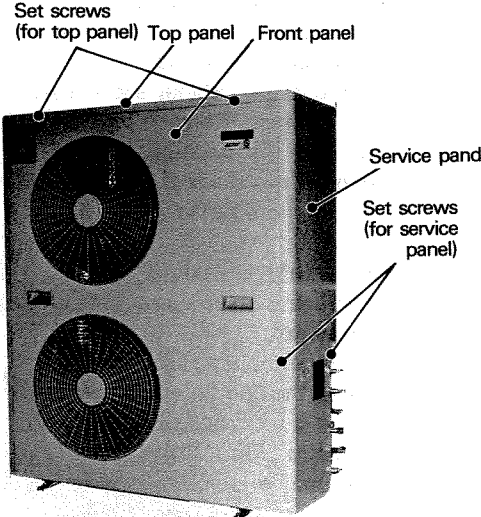
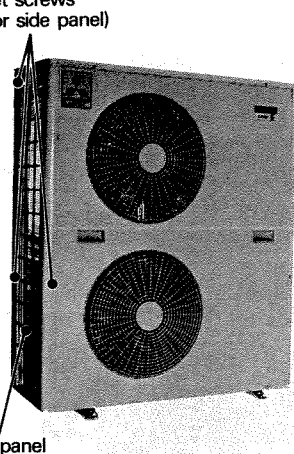
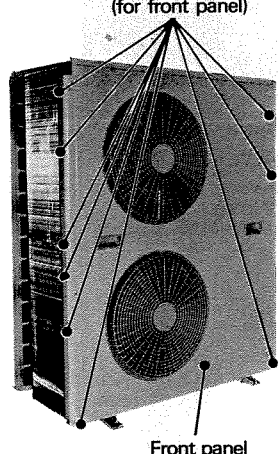


Photo 10



4. OUTDOOR UNIT MUM30EN2

OPERATING PROCEDURE	PHOTOS
REMOVING PANELS 1. Removing the top panel (1) Remove 4 screws. (2) Remove the top panel.	Photo 1  Set screws (for top panel) Top panel Front panel Service panel Set screws (for service panel)
2. Removing the service panel (1) Remove 2 screws. (2) Remove the service panel pulling to your side.	
3. Removing the side panel (Left) (1) Remove 3 screws. (2) Remove the side panel (Left) pulling to your side.	Photo 2  Set screws (for side panel) Side panel
4. Removing the front panel (1) Remove 10 screws. (4 screws for each side) (2) Remove the front panel holding the catches.	Photo 3  Set screws (for front panel) Front panel

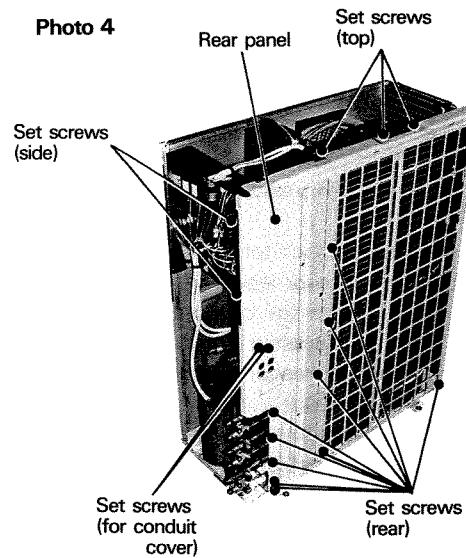
OPERATING PROCEDURE

5. Removing the rear panel

- (1) Remove 3 screws on the top.
- (2) Remove 2 screws on the service panel sides.
- (3) Remove 10 screws on the rear side.
- (4) Remove 2 screws of the conduit cover.
- (5) Disconnect connecting wires from the terminal block of In/Out door unit.
- (6) Remove the rear panel.

PHOTOS

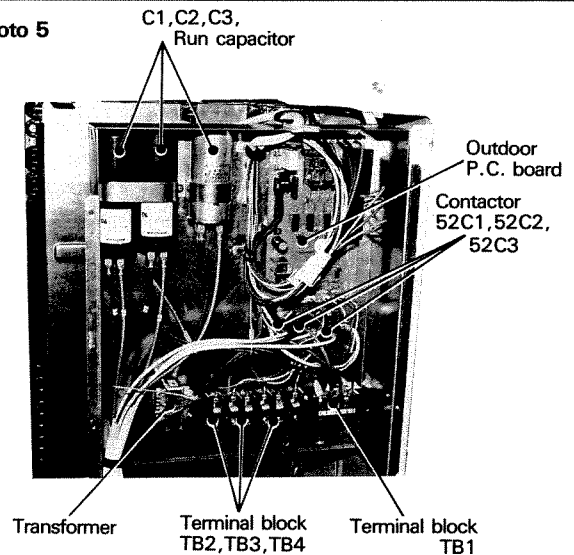
Photo 4



6. Removing electrical parts

- (1) Remove the service panel.
Remove 2 set screws.
Remove the service panel pulling to your side.
- (3) Electrical parts can be removed.

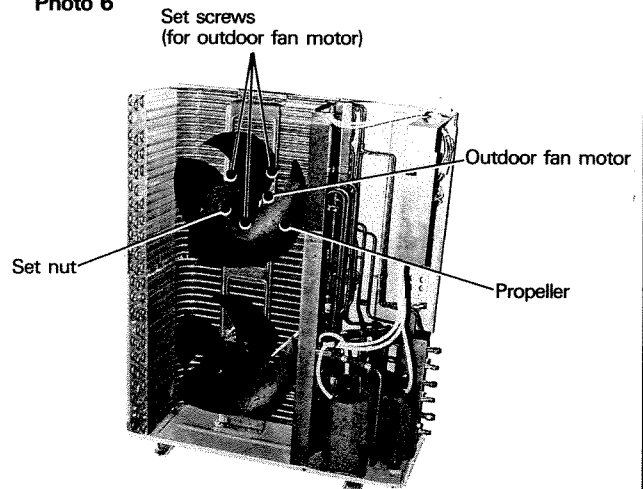
Photo 5



7. Removing the outdoor fan motor

- (1) Remove the top panel, service panel, side panel and front panel.
- (2) Remove the propeller set nut.
- (3) Remove the propeller.
- (4) Disconnect the connecting wires of the outdoor fan motor.
- (5) Remove the set screws of the outdoor fan motor.
- (6) Remove the outdoor fan motor.

Photo 6



OPERATING PROCEDURE

8. Removing the compressor

- (1) Remove the top panel.
- (2) Remove the service panel.
- (3) Remove the side panel.
- (4) Remove the front panel.
- (5) Disconnect the compressor lead wires from the clamp.
- (6) Remove the compressor terminal cover.
- (7) Remove the compressor lead wires and the thermal overcurrent 51C from the compressor terminals.
- (8) Disconnect the compressor discharge pipe.
- (9) Disconnect the compressor suction pipe.
- (10) Remove the compressor.

To remove MC3 comp., remove the separator.

The separator can be removed by removing 6 set screws.

PHOTOS

Photo 7

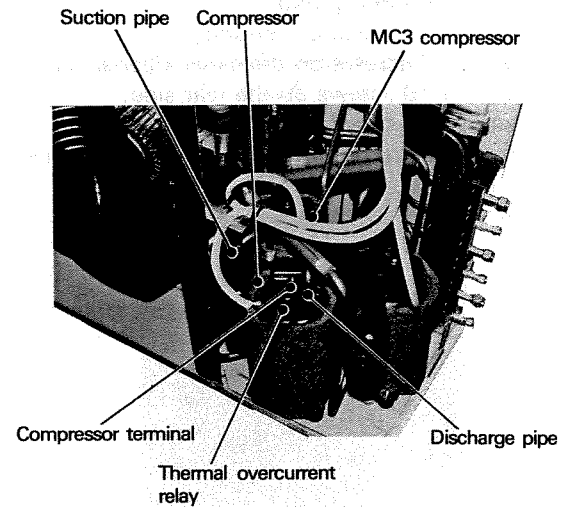
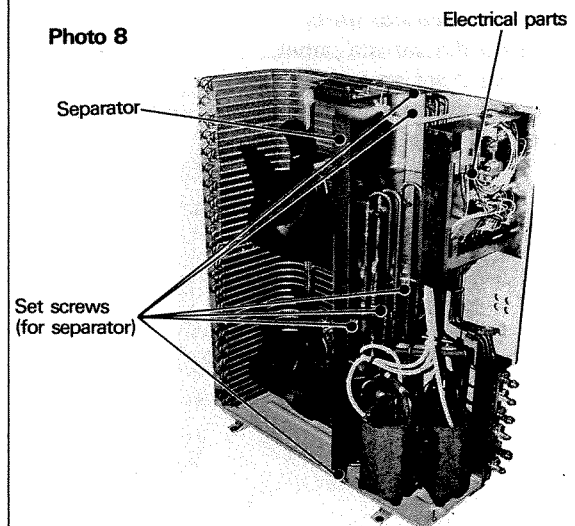


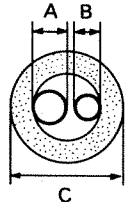
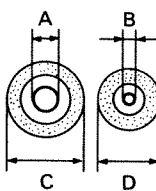
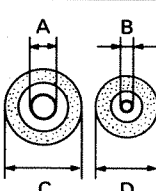
Photo 8



1. REFRIGERANT PIPES

The air conditioner has flared connections on its indoor and outdoor sides.

Please use the optional extension pipe as follows.

Applicable models	Parts No.	Pipe length	Pipe Size O.D				Additional refrigerant charge R-22 (OZ)
			Cross-section	A. Gas (in.)	B. Liquid (in.)	Insulation (in.)	
MS09EW	MAC645PI	10ft		3/8		C 1-3/8	0
	MAC646PI	16ft					1
	MAC647PI	23ft					3
	MAC648PI	33ft					
	MAC649PI	49ft					
MS15EN	MAC725PI	10ft		5/8	1/4	C 1-7/32 D 1-1/16	0
	MAC726PI	16ft					1
	MAC727PI	23ft					3
	MAC728PI	33ft					
	MAC729PI	49ft					
MF15EN MF15EN2	MAC-660PI-US	10ft		1/2		C 1-1/4 D 1	0
	MAC-661PI-US	16ft					1
	MAC-662PI-US	23ft					3
	MAC-663PI-US	33ft					
	MAC-664PI-US	49ft					

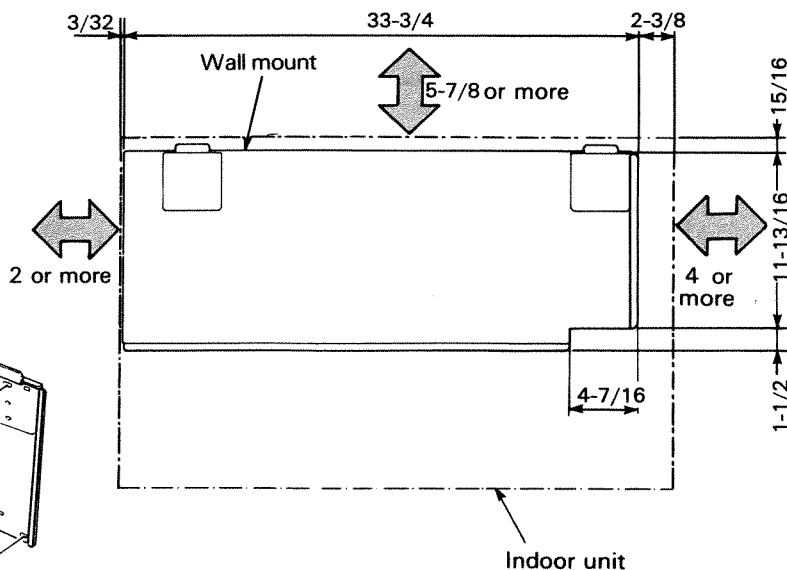
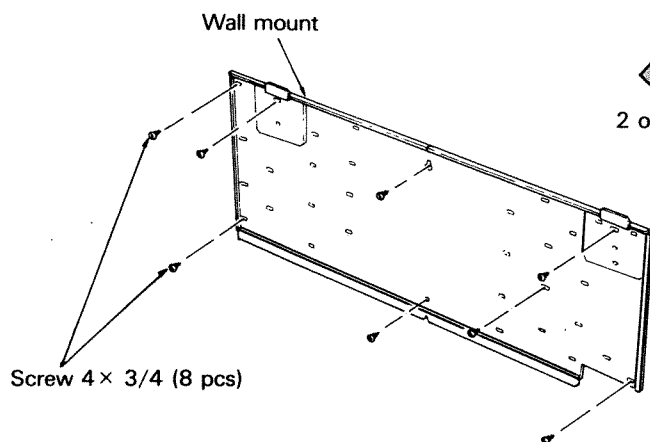
2. WALL MOUNT

When you install the indoor unit on the wall, and the baseboard is over 3-1/8inch high, use the optional WALL MOUNT.

Models	Parts No.
MF15EN/MF15EN2	MAC-761WS

REQUIRED SPACE

Unit : <inch>



Mr. SLIM



mitsubishi electric corporation

HEAD OFFICE MITSUBISHI DENKI BLDG MARUNOUCHI TOKYO100 TELEX J24532 CABLE MELCO TOKYO

U.S. OFFICE MITSUBISHI ELECTRONICS AMERICA, INC., 6100 ATLANTIC BLVD., NORCROSS, GA 30071-1305