

# **INSTALLATION INSTRUCTIONS**

## **WALL MOUNTED PACKAGE AIR CONDITIONERS**

**20WA4**

**24WA6**

COPYRIGHT APRIL, 1989  
BARD MANUFACTURING COMPANY  
BRYAN, OHIO

## INDEX

Important . . . . .	1
Shipping Damage . . . . .	1
General . . . . .	1
Installation . . . . .	2
Duct Work . . . . .	2
Filter . . . . .	2
Fresh Air Intake . . . . .	2
Wall Mounting . . . . .	2
Wiring--Main Power . . . . .	3
Fan Blade Setting Dimensions . . . . .	3
Refrigerant Charge . . . . .	4
Pressure Service Ports . . . . .	4
Important Installer Note . . . . .	5
Crankcase Heaters . . . . .	5

## INDEX OF FIGURES AND TABLES

Figure 1	3
Figure 2	5
Figure 3	6
Figure 4	7
Table 1	1
Table 2	4
Table 3	4
Table 4	4
Table 5	19

TABLE 1

ELECTRICAL INFORMATION								WIRING INFORMATION**		
Model	Rated Volts/Ph	Operating Voltage Range	Heater KW*	Max Unit Amps	No. Field Power Circuits	Internal Fuses Ckt. A/B	Required ① Overcurrent Protection	Min. Ckt. Ampacity Ckt. A/B	Field Power Wiring Ckt. A/B	Ground Wire Size Ckt. A/B
20WA4	230/208-1	197-253	0	11.0	1		25	15	14	14
			5	22.1	1		30	28	10	10
			8	34.6	1		45	44	6	10
			10	42.9	1		60	54	6	10
24WA6	230/208-1	197-253	0	12.5	1		25	17	12	10
			5	22.1	1		30	28	10	10
			8	34.6	1		45	44	6	10
			10	42.9	1		60	54	6	10

\*Electric heaters are nominal KW @ 240V or 480V.  
 \*\*Based on 60 degree C copper wire. Other wiring materials must be rated for marked "Minimum Circuit Ampacity" or greater. Not all models approved for aluminum wire.

① Time delay fuses or "BACR Type" circuit breakers must be used for 60 and smaller sizes. Standard fuses or circuit breakers are suitable for sizes 70 or larger.

### IMPORTANT

The equipment covered in this manual is to be installed by trained, experienced service and installation technicians. Any heat pump is more critical of proper operating, charge and an adequate duct system than a straight air conditioning unit. All duct work supply and return, must be properly sized for design air flow requirement of the equipment. ACCA is an excellent guide to proper sizing. All duct work or portions thereof not in the conditioned space should be properly insulated in order to both conserve energy and prevent condensation or moisture damage.

### SHIPPING DAMAGE

Upon receipt of equipment, the carton should be checked for external signs of shipping damage. If damage is found, the receiving party must contact the last carrier immediately, preferably in writing, requesting inspection by the carrier's agent.

### GENERAL

The refrigerant system is completely assembled and charged. All internal wiring is complete.

The unit is designed for use with or without duct work. Flanges are provided for attaching the supply and return ducts.

These instructions explain the recommended method to install the air cooled self-contained unit and the electrical wiring connections to the unit.

These instructions and any instructions packaged with any separate equipment required to make up the entire air conditioning system should be carefully read before beginning the installation. Note particularly "Starting Procedure" and any tags and/or labels attached to the equipment.

While these instructions are intended as a general recommended guide, they do not supersede any national and/or local codes in any way. Authorities having jurisdiction should be consulted before the installation is made.

## INSTALLATION

Size of unit for a proposed installation should be based on heat loss calculation made according to methods of Air Conditioning Contractors of America (ACCA). The air duct should be installed in accordance with the Standards of the National Fire Protection Association for the Installation of Air Conditioning and Ventilating systems of Other Than Residence Type, NFPA No. 90A, and Residence Type Warm Air Heating and Air Conditioning Systems, NFPA No. 90B. Where local regulations are at a variance with instructions, installer should adhere to local codes.

## DUCT WORK

Design the duct work according to methods given by the Air Conditioning Contractors of America. When duct runs through unheated spaces, it should be insulated with a minimum of one inch of insulation. Use insulation with a vapor barrier on the outside of the insulation. Flexible joints should be used to connect the duct work to the equipment in order to keep the noise transmission to a minimum.

A one-inch clearance to combustible material for the first three feet of duct attached to the outlet air frame is required. See Figure 4, Page 7 for further details.

## FILTER

A one-inch throwaway filter is supplied with each unit. The filter slides into position making it easy to service. This filter can be serviced from the outside by removing the service door.

## FRESH AIR INTAKE

All units are built with a fresh air inlet hole punched in the service panel. The fresh air damper assembly is shipped with each unit, and must be attached at the installation site. See Figure 3, Page 7 for typical installation procedure.

The fresh air damper assembly is standard equipment with the unit because of the variety of state or local codes requiring fresh air capability.

All capacity, efficiency and cost of operation information as required for Department of Energy "Energyguide" Fact Sheets is based upon the fresh air blank-off plate in place and is recommended for maximum energy efficiency.

The blank-off plate is available upon request from the factory and is installed in place of the fresh air damper shipped with each unit.

## WALL MOUNTING

1. Two holes, for the supply and return air openings must be cut through the wall as shown in Figure 4, Page 7.
2. On wood-frame walls, the wall construction must be strong and rigid enough to carry the weight of the unit without transmitting any unit vibration. **WARNING:** Fire hazard can result if one inch clearance to combustible materials for supply air duct is not maintained. See Figure 7.
3. Concrete block walls must be thoroughly inspected to insure that they are capable of carrying the weight of the installing unit.
4. Ducts through the walls must be insulated and all joints taped or sealed to prevent air or moisture entering the wall cavity.

5. Some installations may not require any return air duct. It is recommended that on this type of installation that a filter grille be located in the wall. Filters must be of sufficient size to allow a maximum velocity of 400 FPM.

NOTE: If no return air duct is used, applicable installation codes may limit this cabinet to installation only in a single story structure.

### WIRING--MAIN POWER

Refer to the unit rating plate for wire sizing information and maximum fuse or "HACR Type" circuit breaker size. Each outdoor unit is marked with a "Minimum Circuit Ampacity." This means that the field wiring used must be sized to carry that amount of current. Depending on the installed KW of electric heat, there may be two field power circuits required. If this is the case, the unit serial plate will so indicate. Some models are suitable only for connection with copper wire, while others can be wired with either copper or aluminum wire. Each unit and/or wiring diagram will be marked "Use Copper Conductors Only" or "Use Copper or Aluminum Conductors." These instructions MUST BE adhered to. Refer to the National Electrical Code for complete current carrying capacity data on the various insulation grades of wiring material.

The electrical data lists fuse and wire sizes (60 degree F copper) for all models, including the most commonly used heater sizes. Also shown are the number of field power circuits required for the various models with heaters.

The unit rating plate lists a "Maximum Time Delay Fuse" or "HACR Type" circuit breaker that is to be used with the equipment. The correct size must be used for proper circuit protection and also to assure that there will be no nuisance tripping due to the momentary high starting current of the compressor motor.

### FAN BLADE SETTING DIMENSIONS

Shown in the drawing below are the correct fan blade setting dimensions for proper air delivery across the outdoor coil.

Any service work requiring removal or adjustment in the fan and/or motor area will require that the dimensions below be checked and blade adjusted in or out on the motor shaft accordingly.

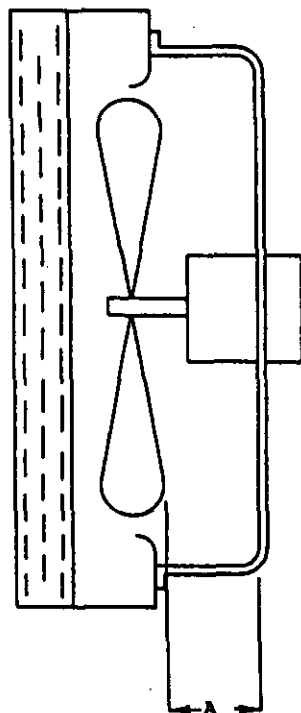


FIGURE 1

Model	Dim. A
20WA4	1/2
24WA6	1/2

## REFRIGERANT CHARGE

The correct system R-22 charge is shown on the unit rating plate. Optimum unit performance will occur with a refrigerant charge resulting in a suction line temperature (6" from compressor) as shown in the following table:

TABLE 2

Model	Rated Airflow	95 degree F OD Temp.	82 degree F OD Temp.
20WA4	650	55 - 57	64 - 66
24WA6	800	57 - 59	63 - 65

The above suction line temperatures are based upon 80 degree F dry bulb/67 degree F wet bulb (50% R.H.) temperature and rated airflow across evaporator during cooling cycle.

TABLE 3

Indoor Blower Performance CFM--Dry Coil With Filter	
E.S.P. Inches H <sub>2</sub> O	Model 20WA4-24WA6
.0	1000
.1	935
.2	870
.3	800
.4	715
.5	630

## PRESSURE SERVICE PORTS

High and low pressure service ports are installed on all units so that the system operating pressures can be observed. Pressure curves can be found later in the manual covering all models on both cooling and heating cycles. It is imperative to match the correct pressure curve to the unit by model number.

TABLE 4

RATED CFM E.S.P. (WET COIL--COOLING)			
Model	Rated CFM	Rated E.S.P.	Recommended Airflow Range
20WA4	650	.35	585 - 725
24WA6	825	.15	725 - 900



## IMPORTANT INSTALLER NOTE

For improved start-up performance, wash the indoor coil with a dishwasher detergent.

## CRANKCASE HEATERS

All units are provided with some form of compressor crankcase heat. Some single phase units utilize the compressor motor start winding in series with a portion of the run capacitor to generate heat within the compressor shell to prevent liquid refrigerant migration.

Some three phase units utilize a wraparound type of crankcase heater that warms the compressor oil from the outside.

Some single and three phase models have an insertion well-type heater located in the lower section of the compressor housing. This is a self-regulating type heater that draws only enough power to maintain the compressor at a safe temperature.

Some form of crankcase heat is essential to prevent liquid refrigerant from migrating to the compressor, causing oil pump out on compressor start-up and possible valve failure due to compressing a liquid.

Refer to unit wiring diagram to find exact type of crankcase heater used.

The following decal is affixed to all outdoor units detailing start-up procedure. This is very important. Please read carefully.

FIGURE 2

**IMPORTANT**

**THESE PROCEDURES MUST BE FOLLOWED AT INITIAL START-UP AND AT ANY TIME POWER HAS BEEN REMOVED FOR 12 HOURS OR LONGER.**

**TO PREVENT COMPRESSOR DAMAGE WHICH MAY RESULT FROM THE PRESENCE OF LIQUID REFRIGERANT IN THE COMPRESSOR CRANKCASE**

1. MAKE CERTAIN THE ROOM THERMOSTAT IS IN THE "OFF" POSITION. (THE COMPRESSOR IS NOT TO OPERATE).
2. APPLY POWER BY CLOSING THE SYSTEM DISCONNECT SWITCH. THIS ENERGIZES THE COMPRESSOR HEATER WHICH EVAPORATES THE LIQUID REFRIGERANT IN THE CRANKCASE.
3. ALLOW 4 HOURS OR 60 MINUTES PER POUND OF REFRIGERANT IN THE SYSTEM AS NOTED ON THE UNIT RATING PLATE, WHICHEVER IS GREATER.
4. AFTER PROPERLY ELAPSED TIME THE THERMOSTAT MAY BE SET TO OPERATE THE COMPRESSOR.
5. EXCEPT AS REQUIRED FOR SAFETY WHILE SERVICING — **DO NOT OPEN SYSTEM DISCONNECT SWITCH.**

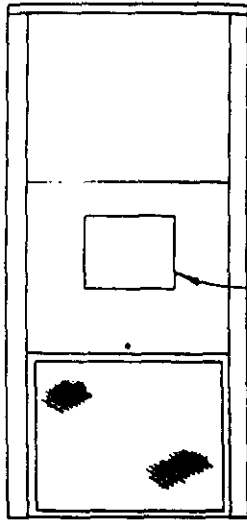
7961-061

**NOTE:** If this unit is operated in cooling below a 65 degree outdoor ambient temperature, the installation of low ambient control module is required. Use control module CGA-5 for air conditioner models.

FIGURE 3

UNIT MODELS

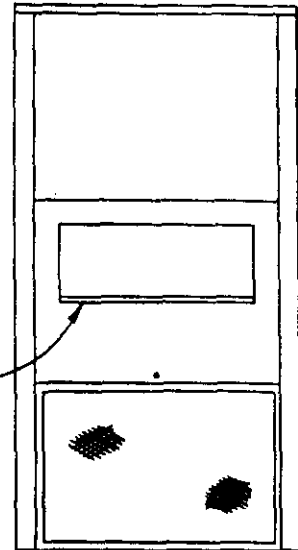
20WA  
24WA  
18WH  
24WH



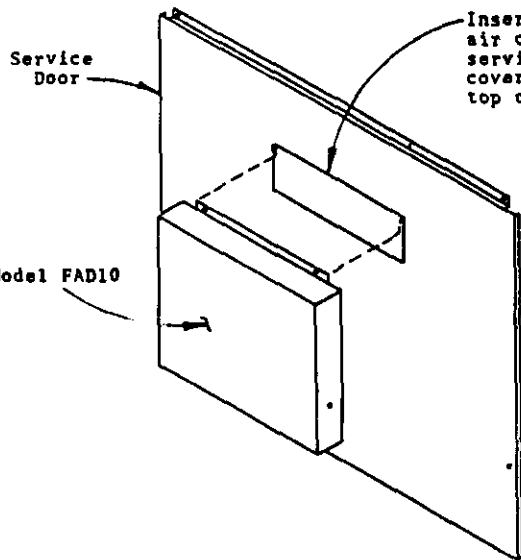
Model FAD10  
Fresh Air Cover  
With Adjustable  
Damper

UNIT MODELS

30WA  
36WA  
30WH  
36WH  
42WA  
49WA  
60WA  
48WH  
60WH



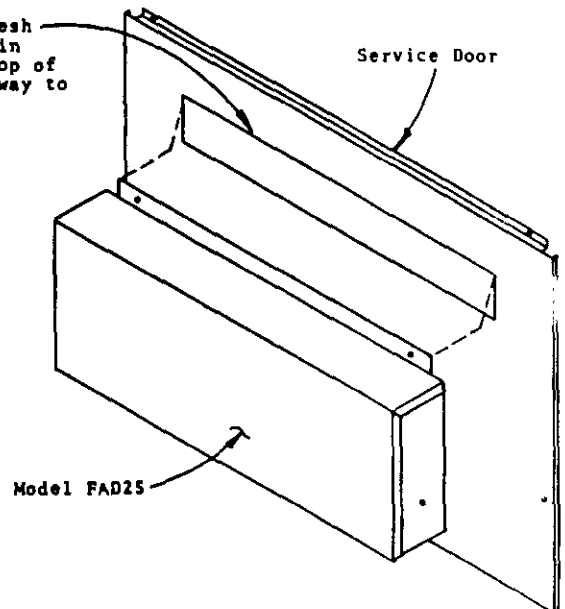
MODEL FAD25  
Fresh Air Cover  
With Adjustable  
Damper



Service Door

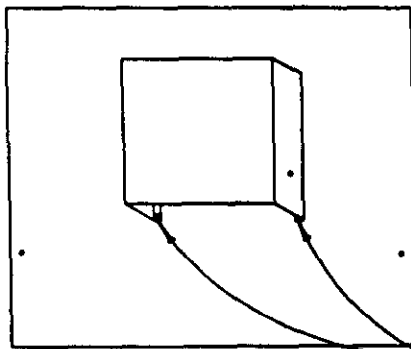
Model FAD10

Insert top flange of fresh air cover into opening in service door and push top of cover assembly all the way to top of opening.

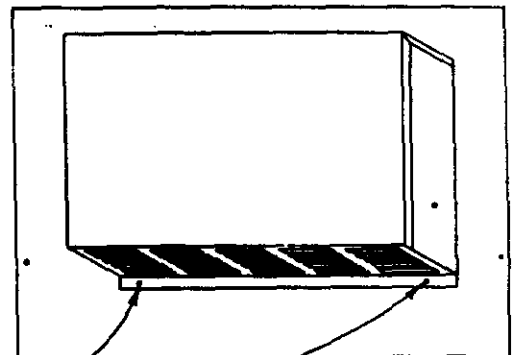


Service Door

Model FAD25



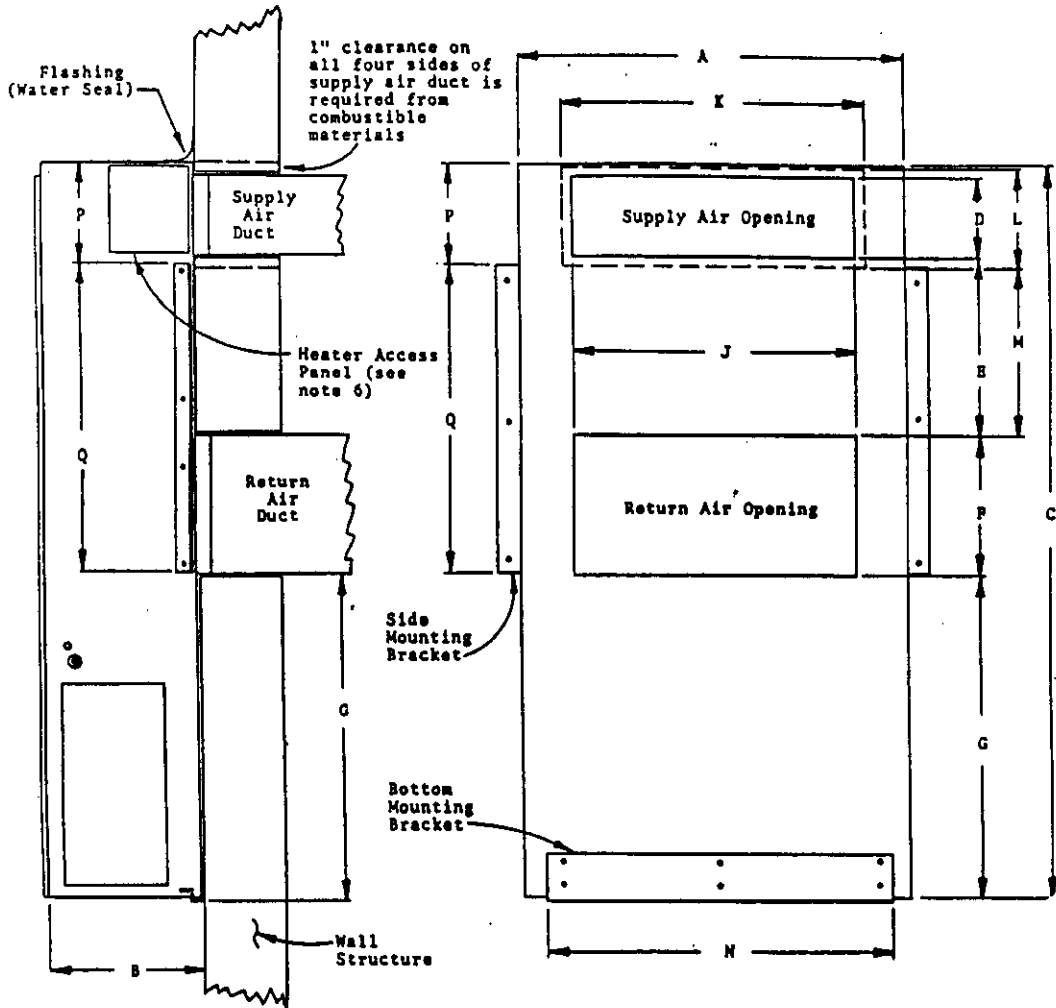
Secure bottom of  
Fresh Air Cover Assembly  
with two screws.



RIGHT SIDE VIEW

WALL VIEW

FIGURE 4



Model	A	B	C	D	E	F	G	J	K	L	M	N	P	Q
20WA, 24WA 18WE, 24WE	32-1/4	13-1/2	69-3/8	8	20-1/2	12	27-1/2	20	22	10	19-1/2	24	10	31
30WA, 36WA 30WE, 36WE	38-1/4	15-1/4	74	8	18	14	32-5/8	28	30	10	17	34	10	31
42WA, 49WA, 60WA 48WE, 60WE	42	22	84	10	30	16	26-5/8	30	32	12	29	34	10	42

MOUNTING INSTRUCTIONS

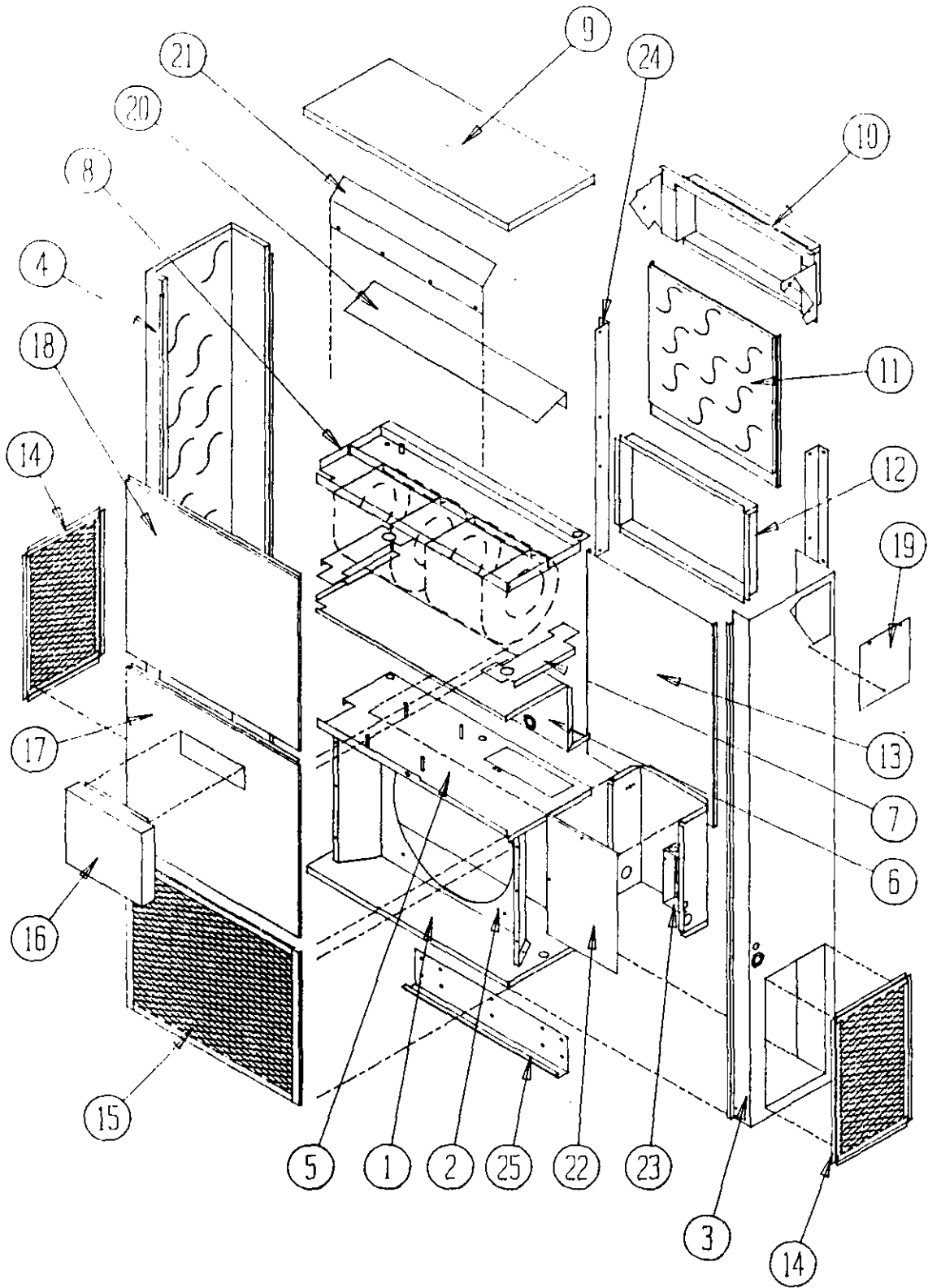
- These units are secured by wall mounting brackets which secure the unit to the outside wall surface at both sides and at the bottom.
- The unit itself is suitable for "0" inch clearance, but the supply air duct flange and the first three feet of supply air duct require 1 inch clearance to combustible material. If combustible wall, use 22" x 10" dimensions for sizing, if non-combustible, use 20" x 8" dimensions.
- After the wall opening positions have selected, lay out the position for the bottom and side brackets. Fasten the brackets securely to the wall (type of fasteners will depend on wall construction).
- Be sure to observe the 10" dimension when attaching the side brackets. This will assure that no screws are driven into the unit sides damaging any internal parts. One-half inch sheet metal screws are recommended.
- For additional mounting rigidity, the return air and supply air (depending upon wall construction) frames or collars can be drilled and screwed or welded to the structural wall itself. Be sure to observe required clearance if combustible wall.
- Maintain 30 inches minimum clearance right side of unit to allow access to heat strip and control panel.

\*\*\*\*\*  
**WARNING:** Failure to provide the one inch clearance for the first three feet between the supply duct and a combustible surface can result in fire.  
 \*\*\*\*\*

CABINET COMPONENTS  
 18WH6, 24WH6, 20WA2 and 24WA6  
 WALL MOUNT AIR CONDITIONERS AND HEAT PUMPS

Date: 12/20/88

Item No.	Part No.	Description	U S A G E
1	126-001	Lower Base	X
2	124-001	Fan Shroud	X
3	501-162	Right Side Assembly	X
4	501-163	Left Side Assembly	X
5	127-103	Compressor Base	X
6	520-096	Compressor Partition	X
7	130-001	Filter Support	X
8	121-089	Water Pan Assembly	X
9	506-094	Top	X
10	111-015	Supply Air Frame	X
11	508-054	Upper Back	X
12	111-016	Inlet Air Frame	X
13	108-055	Lower Back	X
14	119-002	Side Condenser Grille	X
15	119-001	Front Condenser Grille	X
16	FAD10	Fresh Air Damper	X
17	552-106	Service Door	X
18	514-045	Upper Front	X
19	542-001	Side Cover Plate	X
20	136-112	Evaporator Bottom Support Fill	X
21	134-004	Air Baffle	X
22	Control Panel Cvr	See Control Panel Assembly Drawing and Parts List	X
			X
23	Control Panel Asy	See Control Panel Assembly Drawing and Parts List	X
			X
24	112-002	Side Mounting Bracket	X
25	112-001	Bottom Support Bracket	X

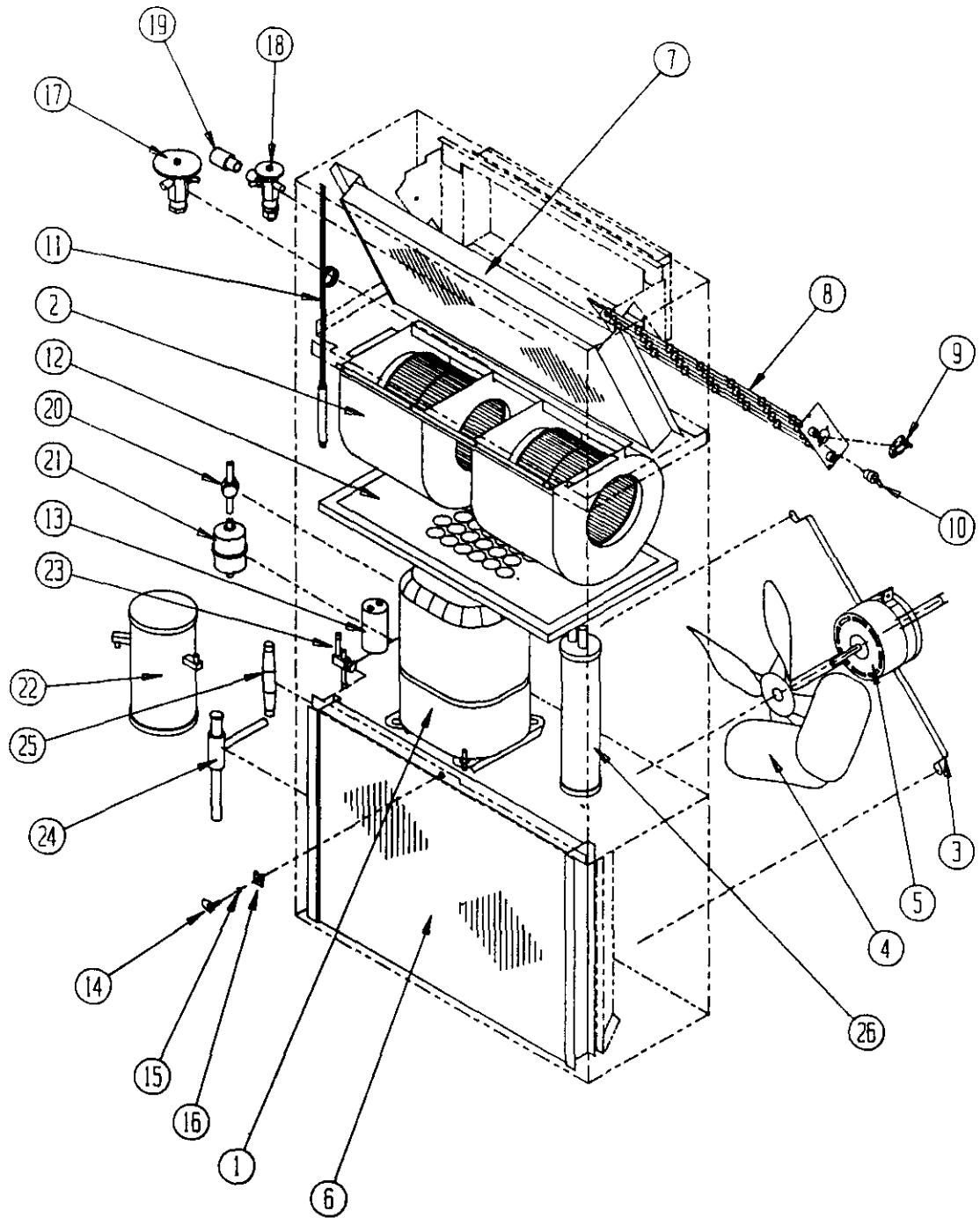


18-24 WA & WH

FUNCTIONAL COMPONENTS  
20WA4 WALL MOUNT AIR CONDITIONERS

Date: 12/20/88

Dwg. No.	Part No.	Description	2	2	2	2	2	2	2	2
			W	W	W	W	W	W	W	W
			A	A	A	A	A	A	A	A
			4	4	4	4	4	4	4	4
			-	-	-	-	-	-	-	-
			A	A	A	A	A	A	A	A
			0	0	0	1	0	0	0	1
			0	5	8	0	0	5	8	0
			N	N	N	N	C	C	C	C
1	8000-102	Compressor R23B173ABCA	X	X	X	X	X	X	X	X
2	900-038	Blower Assembly (Complete)	X	X	X	X	X	X	X	X
3	8200-023	Fan Motor Mount	X	X	X	X	X	X	X	X
4	5151-033	Fan Blade F10H8.7	X	X	X	X	X	X	X	X
5	8103-016	Condenser Motor	X	X	X	X	X	X	X	X
6	5051-036	Condenser Coil	X	X	X	X	X	X	X	X
7	5060-048	Evaporator Coil	X	X	X	X	X	X	X	X
8	8604-042	Heat Strip 5KW		X				X		
8	8604-043	Heat Strip 8KW			X				X	
8	8604-044	Heat Strip 10KW				X				X
9	8402-048	Limit Switch 160 Degree		X	X	X		X	X	X
10	8402-030	Thermal Cutoff		1	2	2		1	2	2
11	905-0063	Capillary Assembly (3/8" x .059)	X	X	X	X	X	X	X	X
12	7004-006	Filter 14x25	X	X	X	X	X	X	X	X
13	8552-027	Compressor Capacitor	X	X	X	X	X	X	X	X
14	1171-019	1/4 Turn Fastener	X	X	X	X	X	X	X	X
15	1171-021	Retainer Clip	X	X	X	X	X	X	X	X
16	1171-020	Fastener Receptacle	X	X	X	X	X	X	X	X

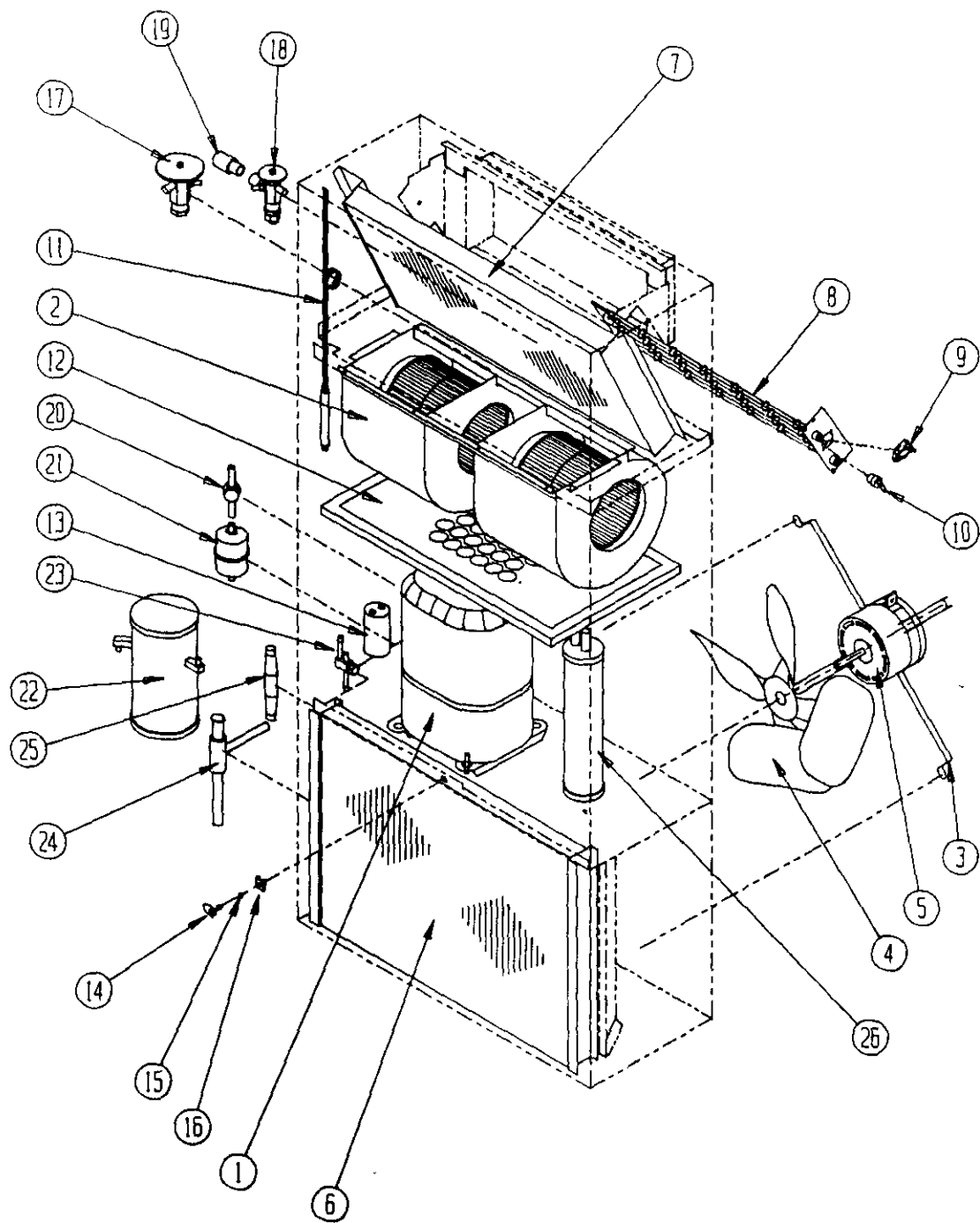


FUNCTIONAL COMPONENTS  
24WA6 WALL MOUNT AIR CONDITIONERS

Date: 05/18/89

Dwg. No.	Part No.	Description	2	2	2	2	2	2	2	2	2	2	2	2
			4	4	4	4	4	4	4	4	4	4	4	4
			W	W	W	W	W	W	W	W	W	W	W	W
			A	A	A	A	A	A	A	A	A	A	A	A
			6	6	6	6	6	6	6	6	6	6	6	6
			-	-	-	-	-	-	-	-	-	-	-	-
			A	A	A	A	A	A	A	A	A	A	A	A
			O	O	O	O	O	O	O	O	O	O	O	O
			O	5	8	0	0	5	8	0	0	5	8	0
			N	N	N	N	C	C	C	C	H	H	H	H
1	8000-098	Compressor H23B203ABCA	X	X	X	X	X	X	X	X	X	X	X	X
2	900-038	Blower Assembly (Complete)	X	X	X	X	X	X	X	X	X	X	X	X
3	8200-023	Motor Mount--Fan	X	X	X	X	X	X	X	X	X	X	X	X
4	5151-033	Fan Blade F10H8.7	X	X	X	X	X	X	X	X	X	X	X	X
5	8103-016	Motor--Fan 1/5 hp	X	X	X	X	X	X	X	X	X	X	X	X
6	5051-036	Condenser Coil	X	X	X	X	X	X	X	X	X	X	X	X
7	5060-048	Evaporator Coil	X	X	X	X	X	X	X	X	X	X	X	X
8	8604-089	Heat Strip 5KW		1				1				1		
8	8604-090	Heat Strip 8KW			1				1				1	
8	8604-091	Heat Strip 10KW				1				1				1
9	8402-048	Limit Switch 160 Degrees		X	X	X		X	X	X		X	X	X
10	8402-030	Thermal Cutoff		1	2	2		1	2	2		1	2	2
11	800-0085	Capillary Tube Assembly (37-1/2 x .064)	X	X	X	X	X	X	X	X				
12	7004-006	Filter 14x25	X	X	X	X	X	X	X	X	X	X	X	X
13	8552-027	Capacitor 25/370V	X	X	X	X	X	X	X	X	X	X	X	X
14	1171-019	1/4 Turn Fastener	X	X	X	X	X	X	X	X	X	X	X	X
15	1171-021	Retainer Clip	X	X	X	X	X	X	X	X	X	X	X	X
16	1171-020	Fastener Receptacle	X	X	X	X	X	X	X	X	X	X	X	X
17	5651-064	Hot Gas Bypass Valve									X	X	X	X
18	5651-038	TKV Expansion Valve									X	X	X	X
19	5651-018	Distributor									X	X	X	X
20	5201-014	Sight Glass									X	X	X	X
21	5201-001	Filter Drier									X	X	X	X
22	5203-004	Receiver									X	X	X	X
23	5651-051	Manual Shut Off Valve									X	X	X	X
24	5651-015	Head Pressure Control Valve									X	X	X	X
25	5651-016	Pressure Differential Valve									X	X	X	X
26	5202-013	Accumulator									X	X	X	X



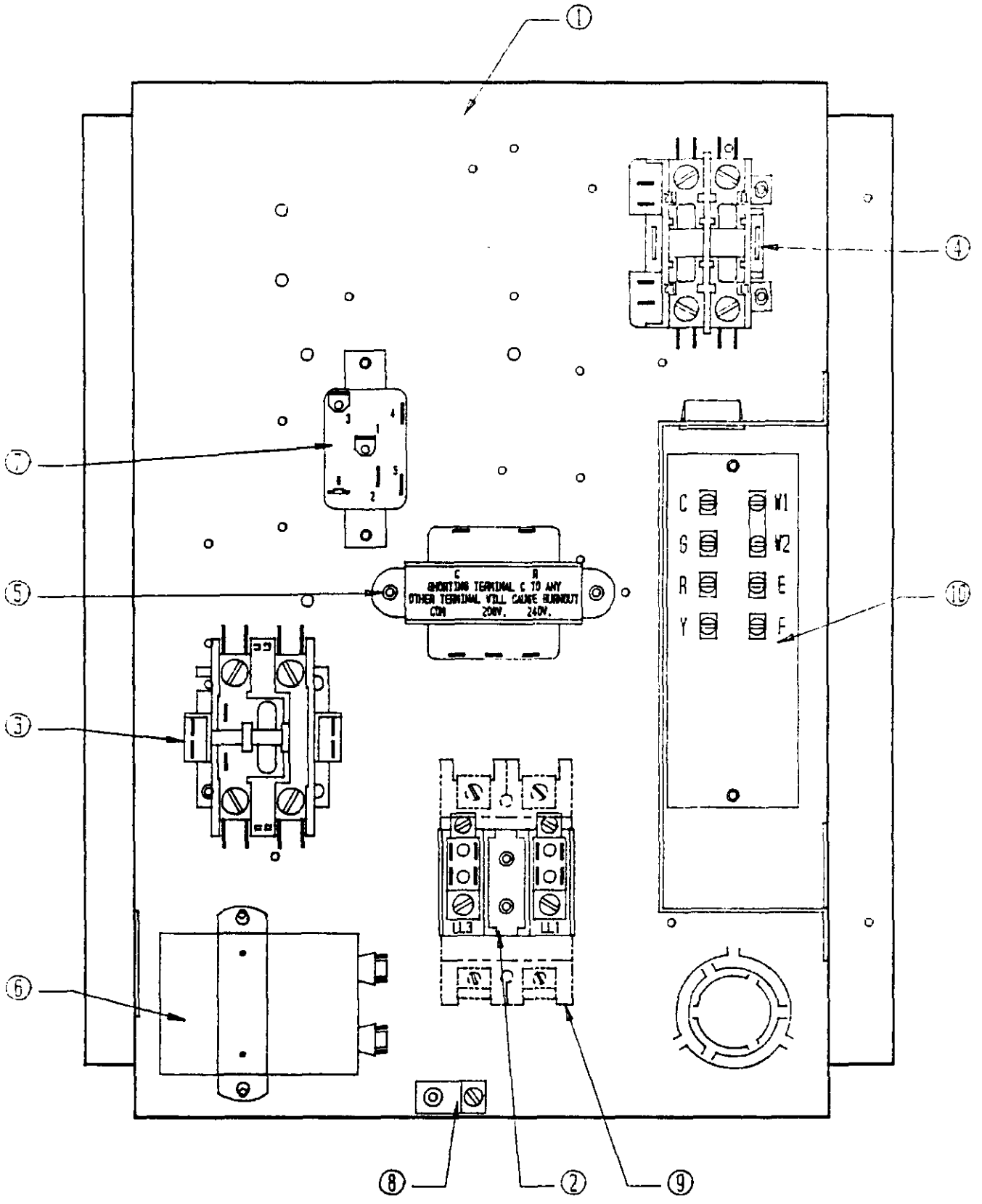


CONTROL PANEL  
20WA4 WALL MOUNT AIR CONDITIONERS

Date: 05/18/89

Dwg. No.	Part No.	Description	2 O W A 4 - A O O N	2 O W A 4 - A O 5 N	2 O W A 4 - A O 8 N	2 O W A 4 - A 1 O O N	2 O W A 4 - A O O C	2 O W A 4 - A O 5 C	2 O W A 4 - A O 8 C	2 O W A 4 - A O O C
	4007-110	Wiring Diagram	X							
	4007-120	Wiring Diagram		X						
	4007-130	Wiring Diagram			X	X				
	4007-111	Wiring Diagram					X			
	4007-121	Wiring Diagram						X		
	4007-131	Wiring Diagram							X	X
1	902-0249	Complete Control Panel Assembly	X							
1	902-0252	Complete Control Panel Assembly		X						
1	902-0256	Complete Control Panel Assembly			X	X				
1	902-0251	Complete Control Panel Assembly					X			
1	902-0254	Complete Control Panel Assembly						X		
1	902-0257	Complete Control Panel Assembly							X	
1	902-0258	Complete Control Panel Assembly								X
2	8607-013	Terminal Block 230V		X	X	X				
3	8401-007	Contactora--Comp. 25A	X	X	X	X	X	X	X	X
4	8401-006	Contactora--Heater 2P18		1	1	1		1	1	1
5	8407-034	Transformer 40VA	X	X	X	X	X	X	X	X
6	8552-002	Capacitor 5/370V	X	X	X	X	X	X	X	X
7	8201-009	Relay--Blower	X	X	X	X	X	X	X	X
8	8611-006	Ground Lug	X	X	X	X	X	X	X	X
9	8615-010	Circuit Breaker							X	
9	8615-012	Circuit Breaker					X			
9	8615-013	Circuit Breaker						X		
9	8615-016	Circuit Breaker								X
10	8607-018	Terminal Board 24V	X	X	X	X	X	X	X	X
	132-001	Control Panel Cover	X	X	X	X				
	132-068	Control Panel Cover					X	X	X	X

WB3/PARTSLIST/TEXTLIB

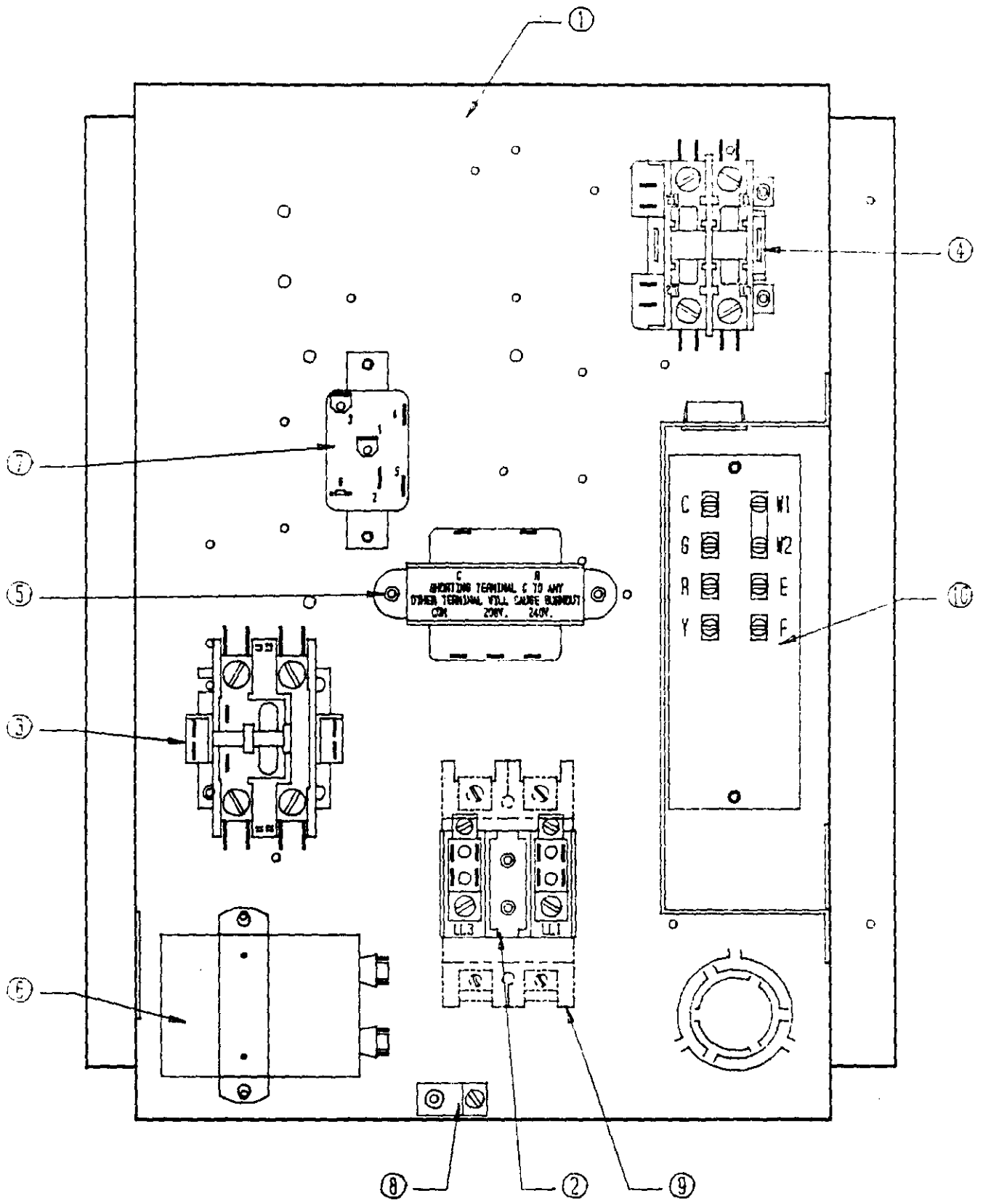


CONTROL PANEL  
24WA6 WALL MOUNT AIR CONDITIONERS

Date: 05/18/89

Dwg. No.	Part No.	Description	2	2	2	2	2	2	2	2	2	2	2	2	2
			4	4	4	4	4	4	4	4	4	4	4	4	4
			W	W	W	W	W	W	W	W	W	W	W	W	W
			A	A	A	A	A	A	A	A	A	A	A	A	A
			6	6	6	6	6	6	6	6	6	6	6	6	6
			-	-	-	-	-	-	-	-	-	-	-	-	-
			A	A	A	A	A	A	A	A	A	A	A	A	A
			0	0	0	1	0	0	0	1	0	0	0	0	1
			0	5	8	0	0	5	8	0	0	5	8	0	0
			N	N	N	N	C	C	C	C	H	H	H	H	H
	4007-110	Wiring Diagram	X								X				
	4007-120	Wiring Diagram		X								X			
	4007-130	Wiring Diagram			X	X							X	X	
	4007-111	Wiring Diagram					X								
	4007-121	Wiring Diagram						X							
	4007-131	Wiring Diagram							X	X					
1	902-0249	Complete Control Panel Assembly	X								X				
1	902-0252	Complete Control Panel Assembly		X								X			
1	902-0256	Complete Control Panel Assembly			X	X							X	X	
1	902-0251	Complete Control Panel Assembly					X								
1	902-0254	Complete Control Panel Assembly						X							
1	902-0257	Complete Control Panel Assembly							X						
1	902-0258	Complete Control Panel Assembly								X					
2	8607-013	Terminal Block 230V		X	X	X						X	X	X	
3	8401-007	Contacto--Comp. 25A	X	X	X	X	X	X	X	X	X	X	X	X	X
4	8401-006	Contacto--Heater 2P18		1	1	1		1	1	1		1	1	1	
5	8407-034	Transformer 40VA	X	X	X	X	X	X	X	X	X	X	X	X	X
6	8552-002	Capacitor 5/370V	X	X	X	X	X	X	X	X	X	X	X	X	X
7	8201-009	Relay--Blower	X	X	X	X	X	X	X	X	X	X	X	X	X
8	8611-006	Ground Lug	X	X	X	X	X	X	X	X	X	X	X	X	X
9	8615-012	Circuit Breaker					X								
9	8615-013	Circuit Breaker						X							
9	8615-016	Circuit Breaker								X					
9	8615-010	Circuit Breaker							X						
10	8607-018	Terminal Board 24V	X	X	X	X	X	X	X	X	X	X	X	X	X
	132-001	Control Panel Cover	X	X	X	X					X	X	X	X	
	132-068	Control Panel Cover					X	X	X	X					

WC3/PARTSLIST/TEXTLIB



20-24 VA

BLOWER ASSEMBLY  
 WALL MOUNT AIR CONDITIONERS AND HEAT PUMPS

Date: 12/20/88

Dwg. No.	Part No.	Description	900-038
1	5152-051	Blower Housing And Wheel Assembly	X
2	5152-028	Blower Wheel	X
3	5152-052	Blower Housing And Wheel Assembly	X
4	5152-029	Blower Wheel	X
5	104-001	Angle	X
6	102-300	Offset	X
7	104-505	Angle Back Brace	X
8	8102-009	Blower Motor	X
9	8200-031	Blower Motor Mount	X
10	5451-011	Grommet	X
11	8552-004	Capacitor 7.5/370V	X

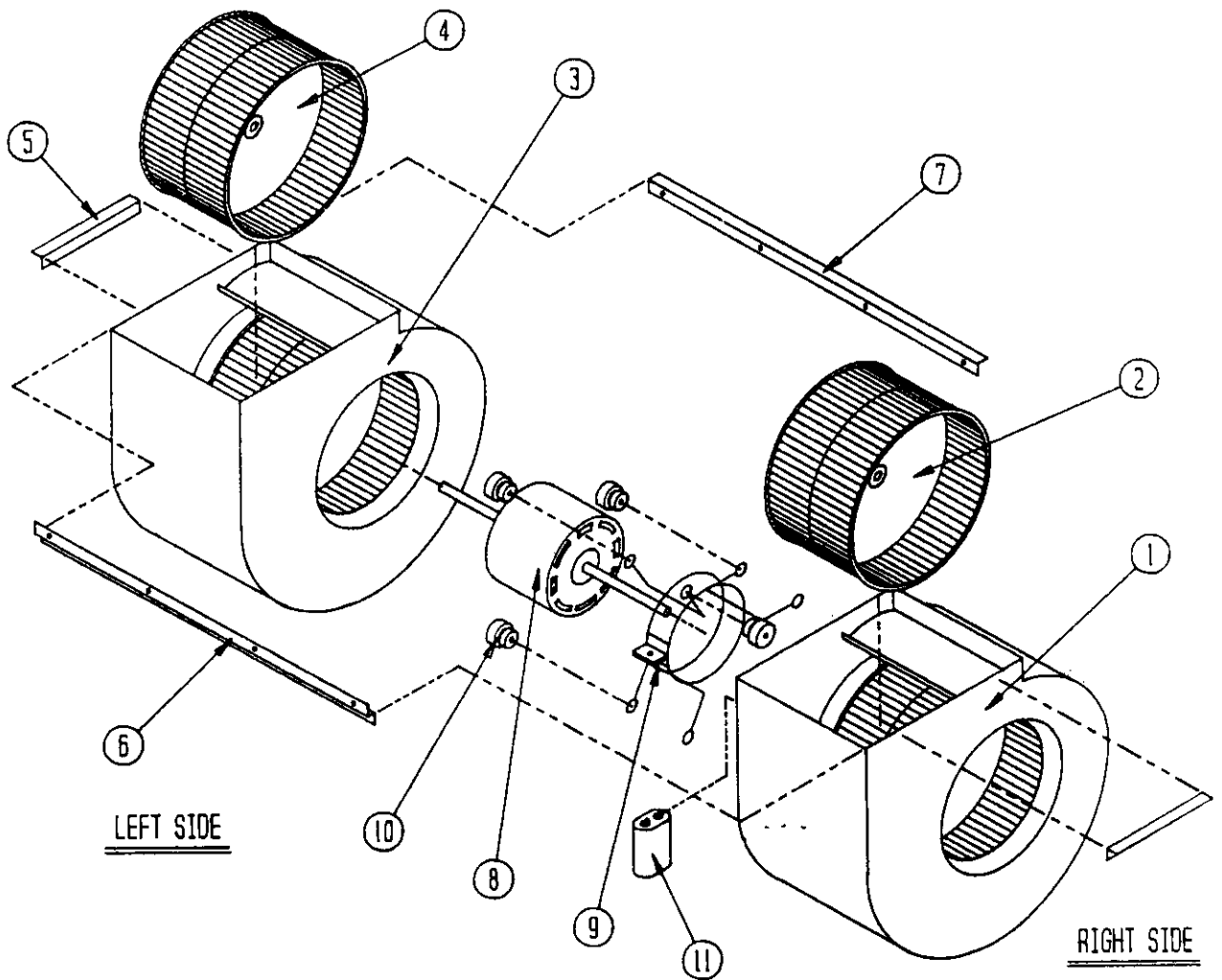
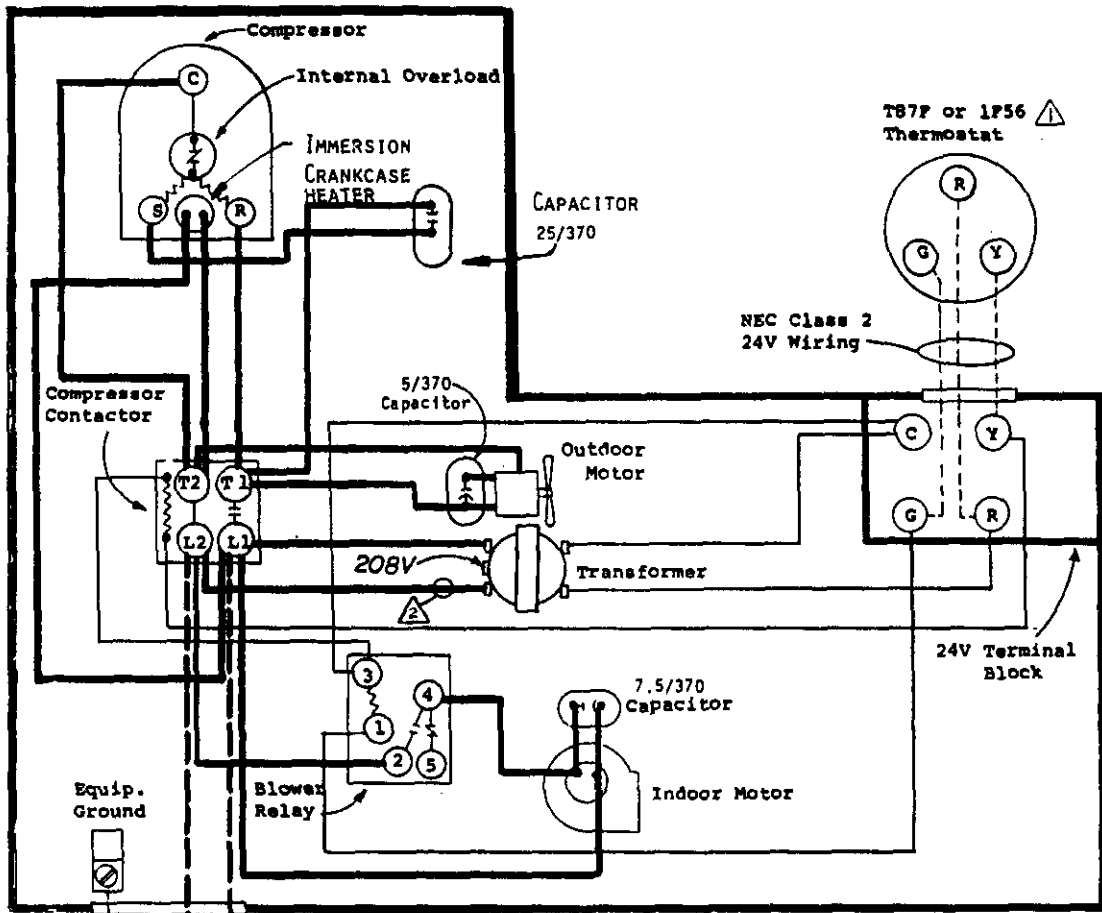


TABLE 5

COOLING		AIR TEMPERATURE ENTERING OUTDOOR COIL DEGREE F											
MODEL	RETURN AIR TEMPERATURE	PRESSURE	75°	80°	85°	90°	95°	100°	105°	110°	115°		
20WAA	75° DB	LOW SIDE	73	75	77	79	80	82	83	85	87		
	62° WB	HIGH SIDE	209	233	238	254	269	285	300	314	330		
	80° DB	LOW SIDE	78	80	82	84	86	88	89	91	93		
	67° WB	HIGH SIDE	214	239	244	260	276	292	308	322	338		
24WAG	85° WB	LOW SIDE	84	86	88	90	92	95	96	98	100		
	72° DB	HIGH SIDE	221	247	253	269	286	302	319	333	350		
	75° DB	LOW SIDE	73	75	76	78	79	81	82	84	85		
	62° WB	HIGH SIDE	210	227	245	259	278	293	310	324	337		
24WAG	80° DB	LOW SIDE	78	80	81	83	85	87	88	90	91		
	67° WB	HIGH SIDE	216	233	251	266	285	300	318	332	346		
	85° DB	LOW SIDE	84	86	87	89	91	94	95	97	98		
	72° WB	HIGH SIDE	224	241	260	275	295	311	329	344	358		

LOW SIDE PRESSURE ±2 PSIG  
 HIGH SIDE PRESSURE ±5 PSIG

TABLES ARE BASED UPON RATED CFM (AIRFLOW) ACROSS THE EVAPORATOR COIL. IF THERE IS ANY DOUBT AS TO CORRECT OPERATING CHARGE BEING IN THE SYSTEM, THE CHARGE SHOULD BE REMOVED, SYSTEM EVACUATED, AND RECHARGED TO SERIAL PLATE INSTRUCTIONS.



USE COPPER CONDUCTORS ONLY

⚠ See alternate thermostat sheet.

⚠ For 208V operation move this wire to 208V transformer tap.

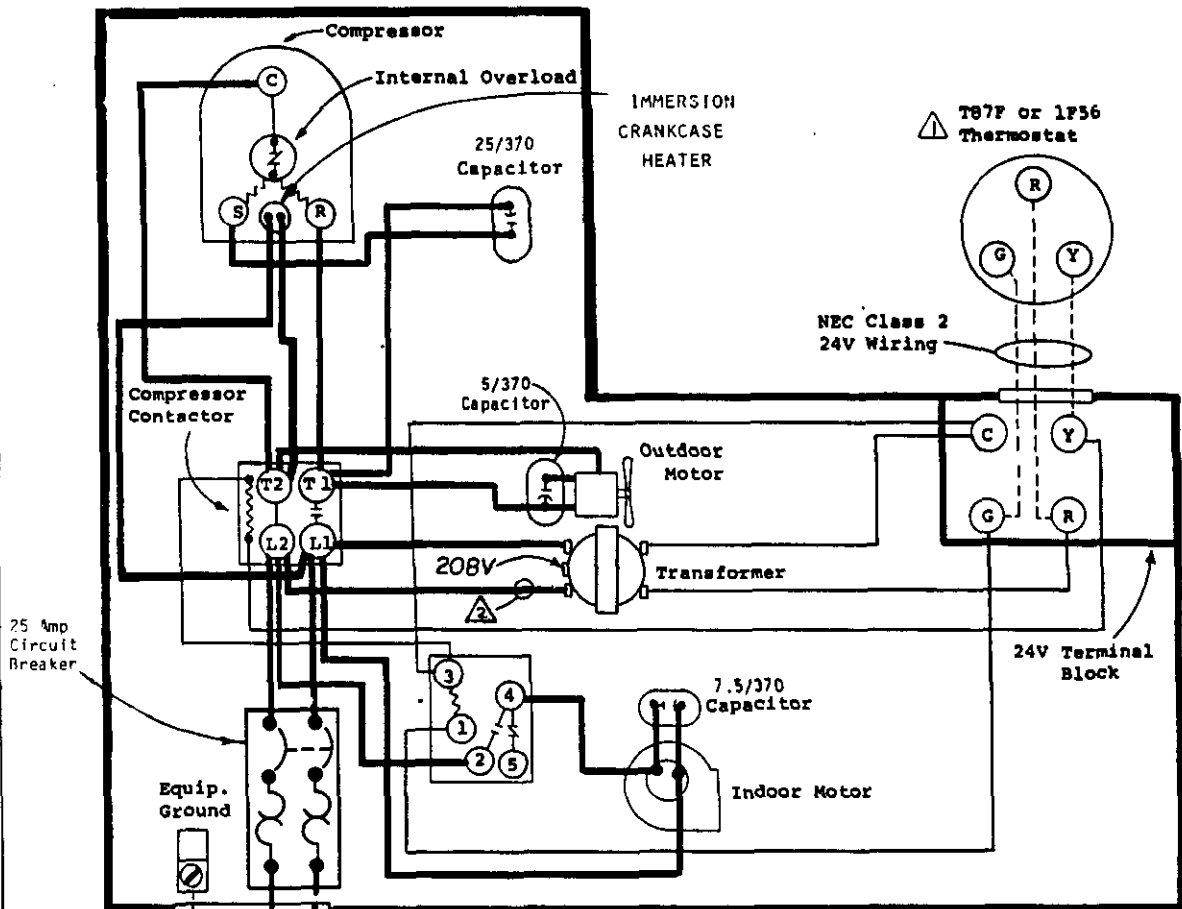
Fused Disconnect Switch

230/208-60-1

FACTORY WIRING	FIELD WIRING
Low Voltage ———	-----
High Voltage ———	-----

4007-110J



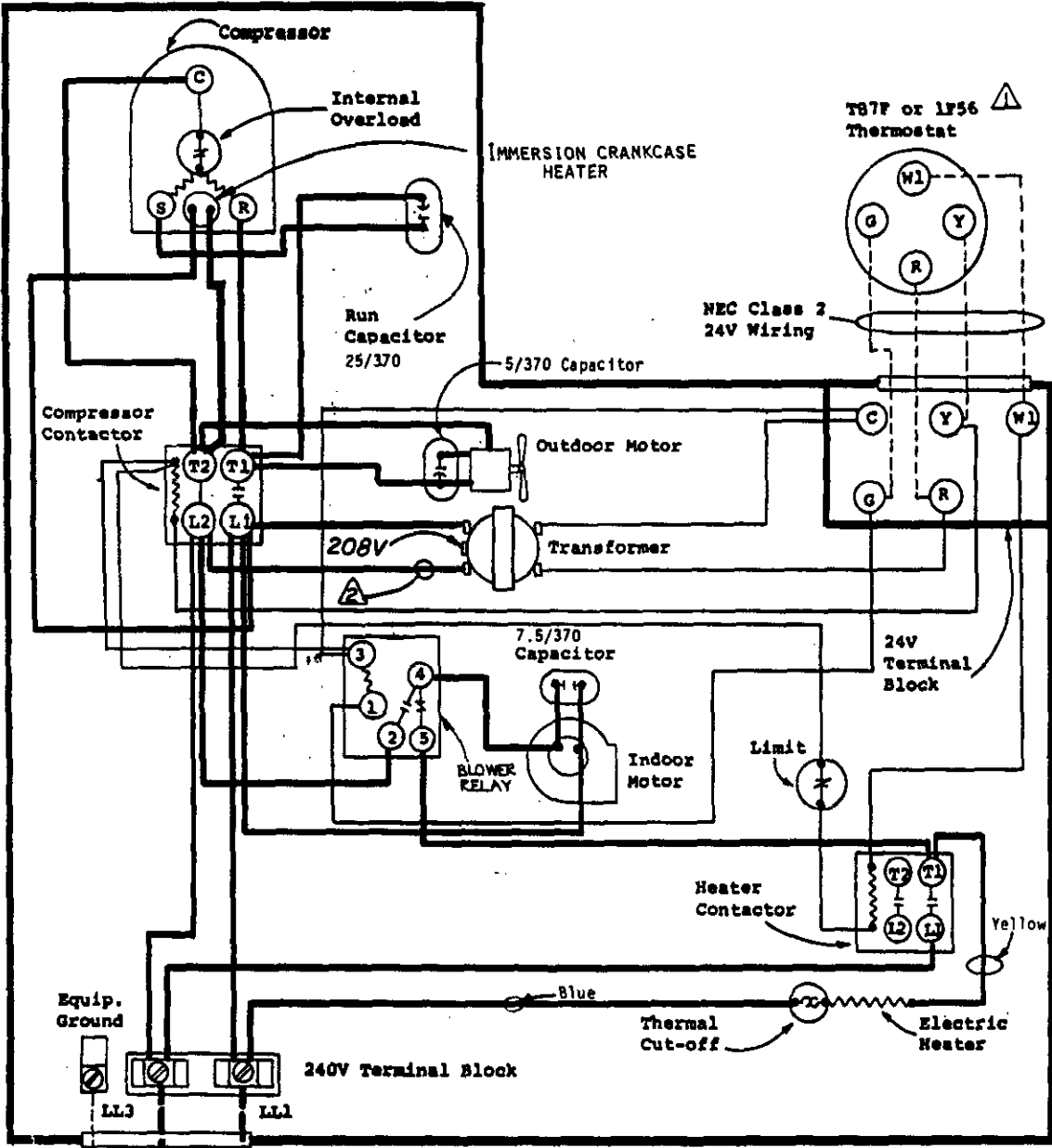


USE COPPER OR ALUMINUM WIRE

- ⚠ See alternate thermostat sheet.
- ⚠ For 208V operation move this wire to 208V transformer tap.

230/208-50-1

FACTORY WIRING	FIELD WIRING
Low Voltage ———	—————
High Voltage ———	—————



USE COPPER OR ALUMINUM WIRE

Fused Disconnect Switch

230/208-60-1

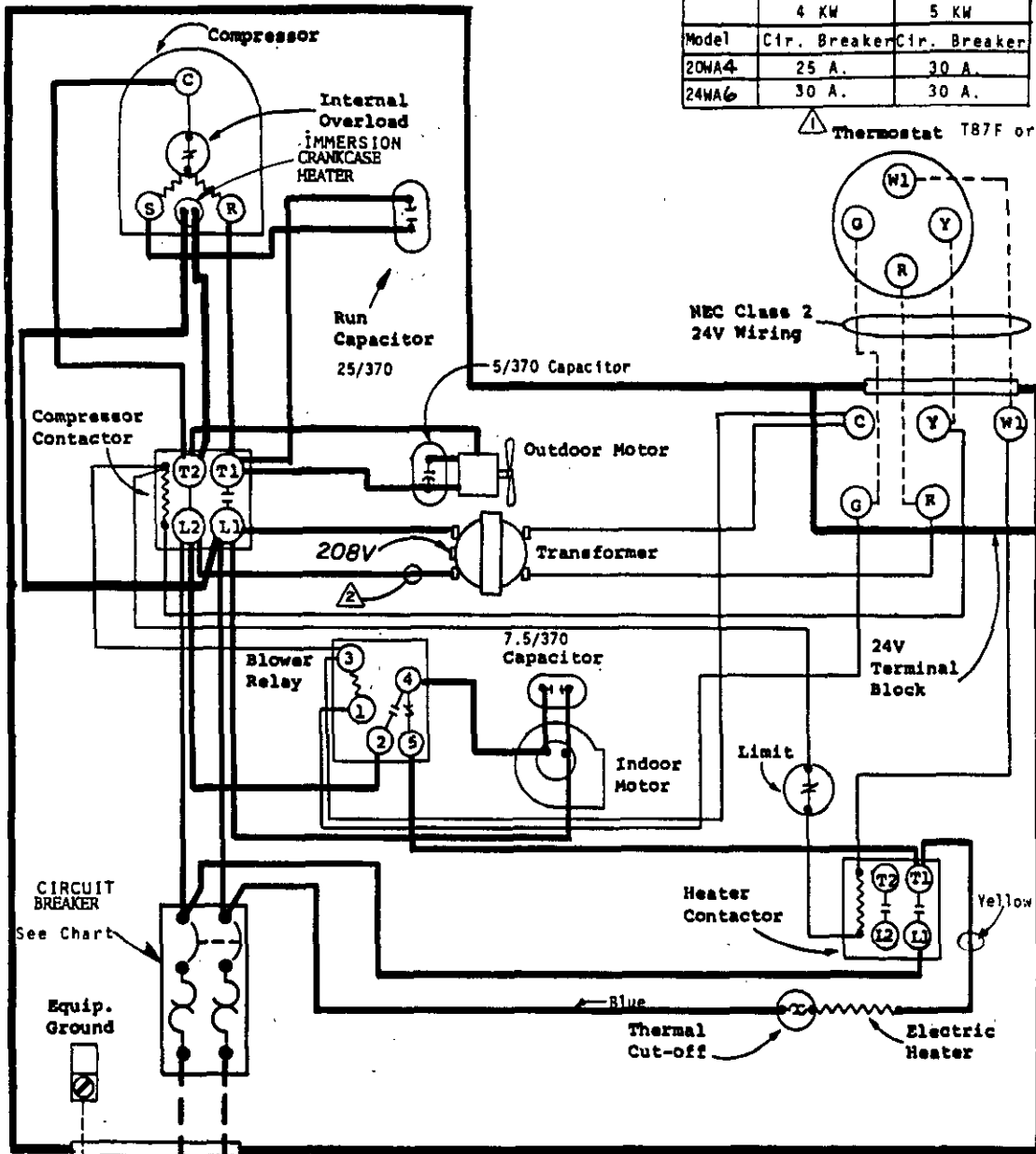
- ⚠ See alternate thermostat sheet. Set heat anticipator at .40A.
- ⚠ For 108V operation move this wire to 208V transformer tap.

FACTORY WIRING	FIELD WIRING
Low Voltage	-----
High Voltage	-----

4007-120K

	4 KW	5 KW
Model	Cir. Breaker	Cir. Breaker
20WA4	25 A.	30 A.
24WA6	30 A.	30 A.

⚠ Thermostat T87F or 1F56



USE COPPER OR ALUMINUM WIRE

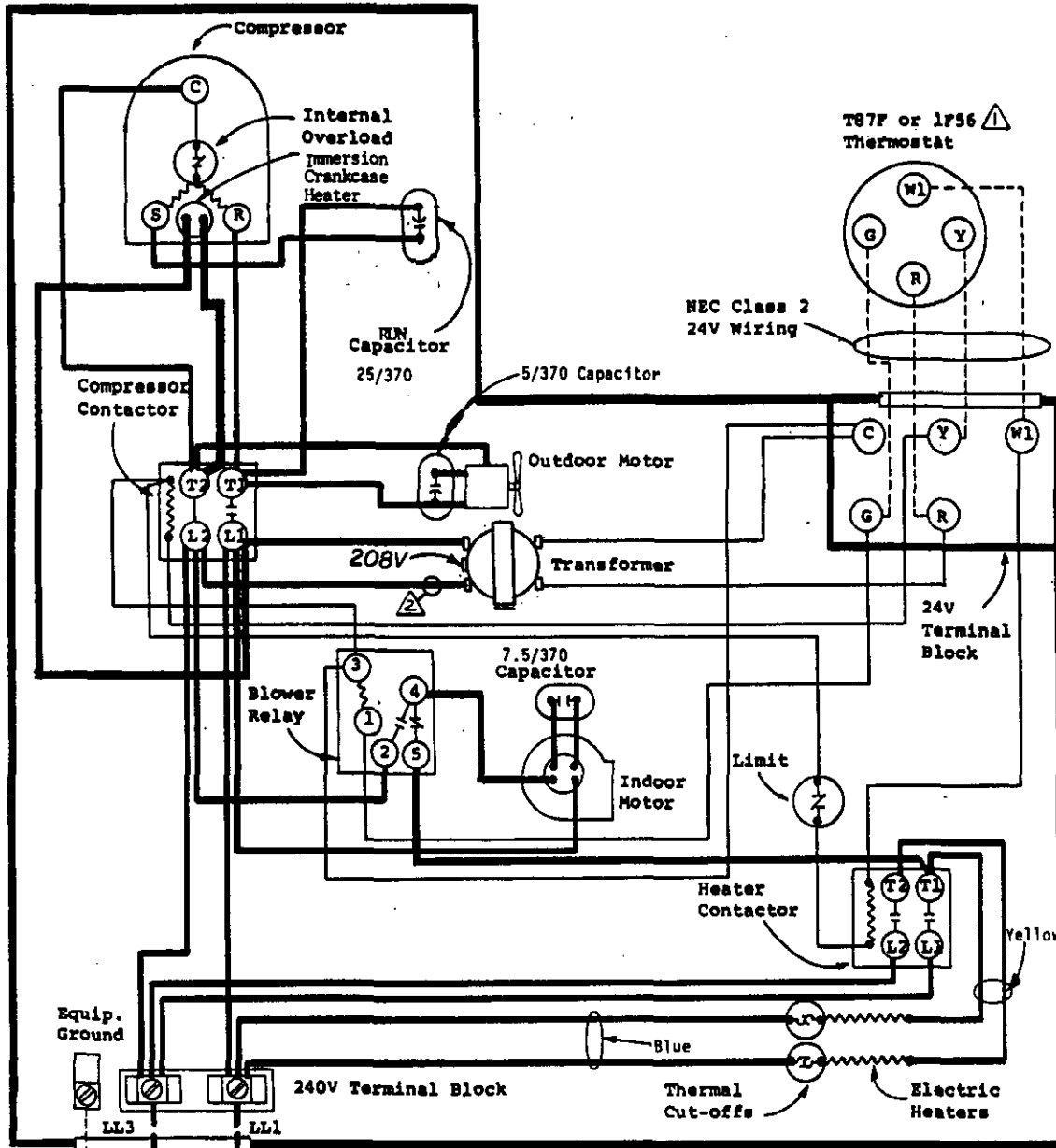
⚠ See alternate thermostat sheet. Set heat anticipator at .40A.

⚠ For 208V operation move this wire to 208V transformer tap.

230/208-60-1

FACTORY WIRING	FIELD WIRING
Low Voltage ———	-----
High Voltage ———	-----

4007-121D



USE COPPER OR ALUMINUM WIRE

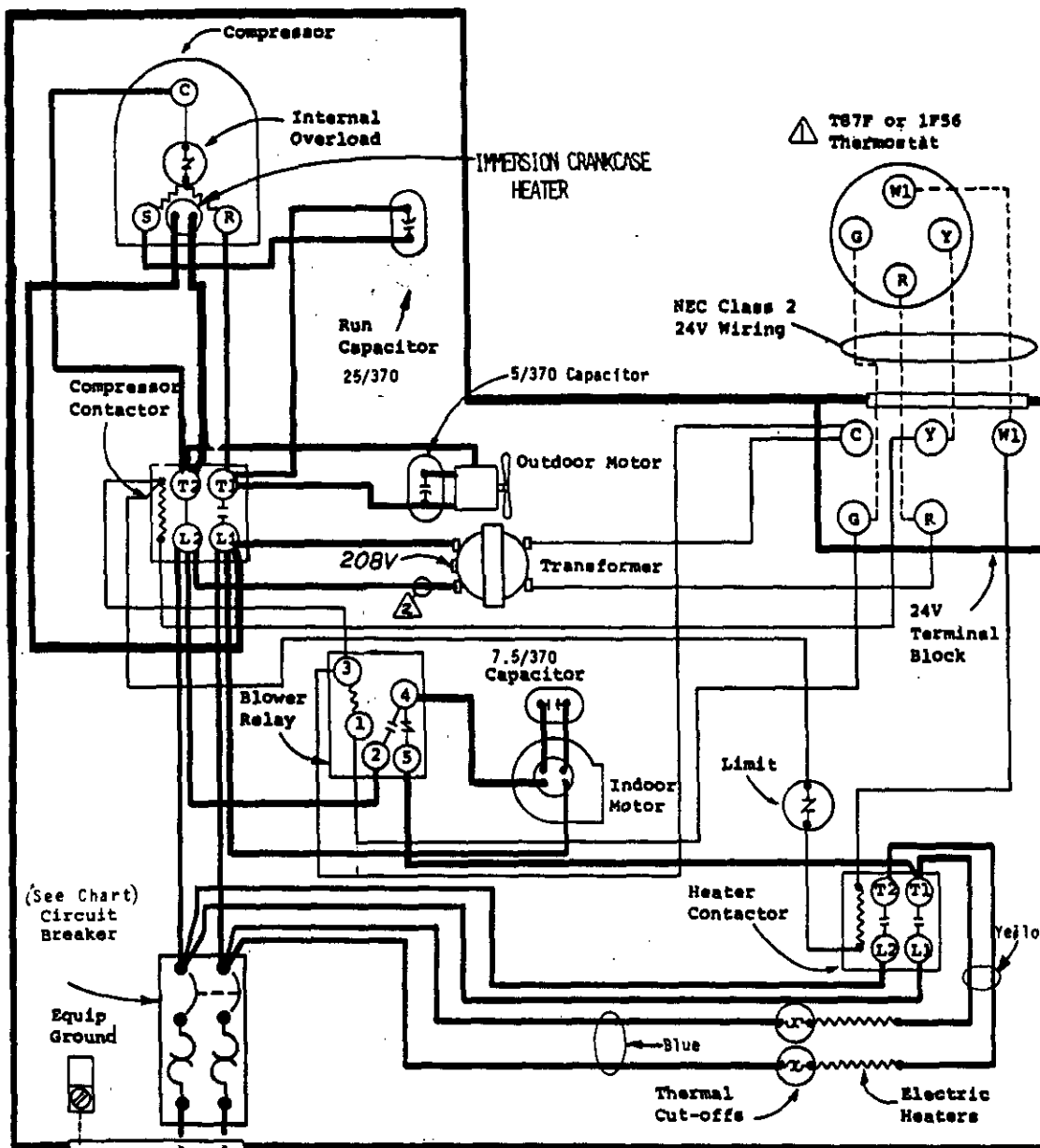
Fused Disconnect Switch

230/208-60-1

⚠ See alternate thermostat sheet. Set heat anticipator at .40A.

⚠ For 208V operation move this wire to 208V transformer top.

	8 KW	10 KW
Model	C. Breaker	C. Breaker
20NA4	45 A.	60 A.
24NA6	45 A.	60 A.



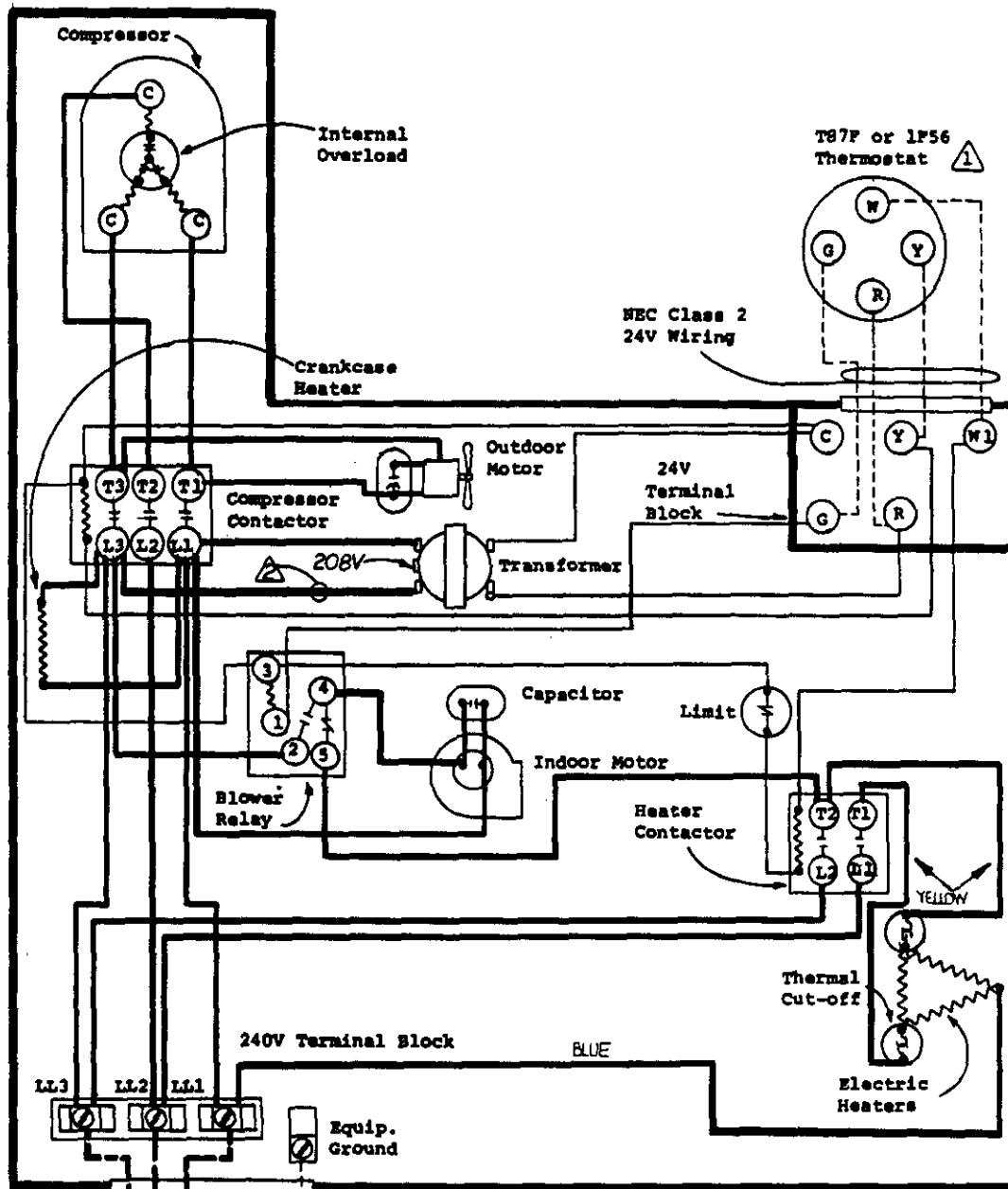
USE COPPER OR ALUMINUM WIRE

⚠ See alternate thermostat sheet. Set heat anticipator at .40A.

⚠ For 208V operation move this wire to 208V transformer tap.

230/208-60-1

4007-131D



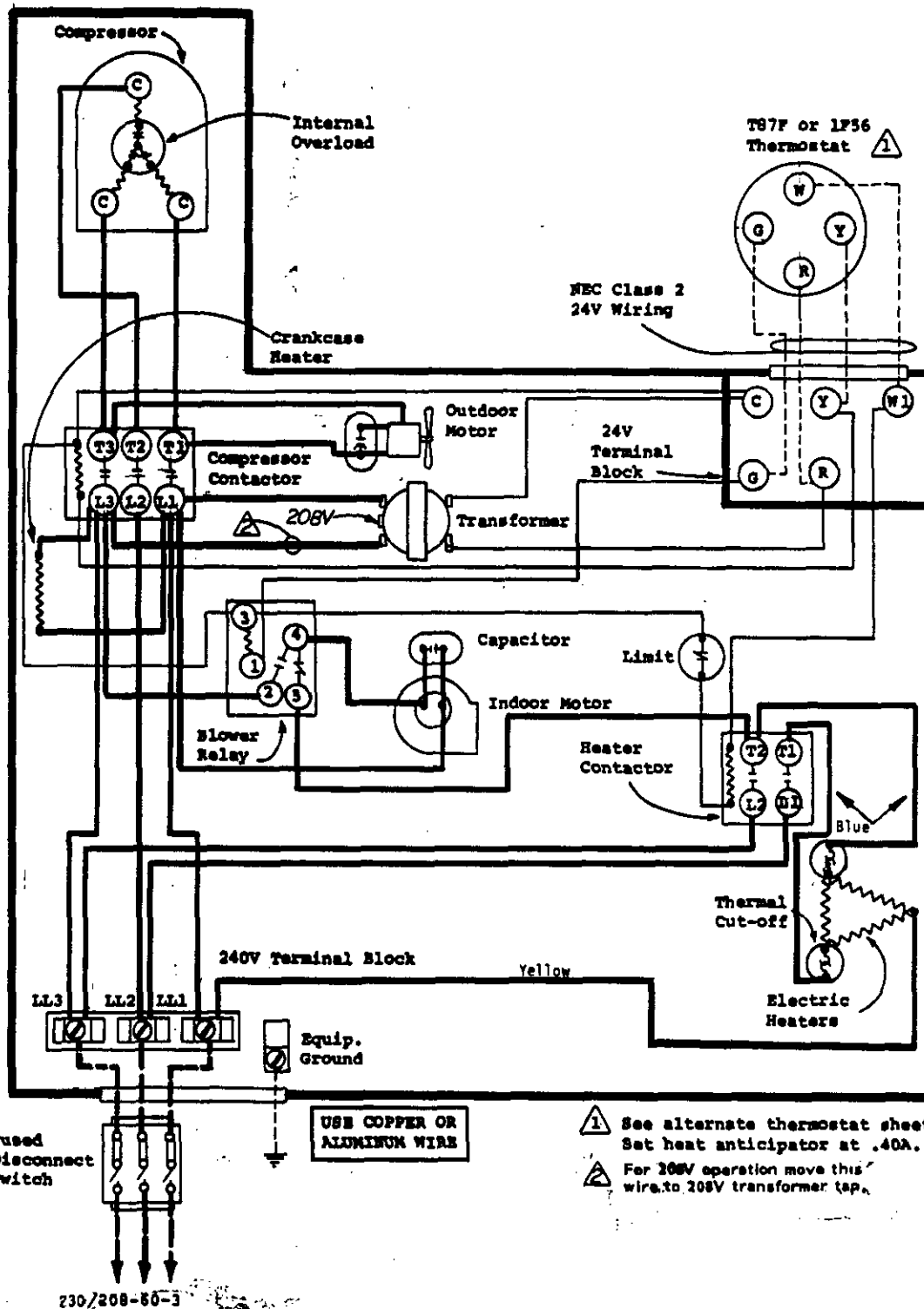
Fused Disconnect Switch

230/208-60-3

USE COPPER OR ALUMINUM WIRE

- ⚠ See alternate thermostat sheet. Set heat anticipator at .40A.
- ⚠ For 208V operation move this wire to 208V transformer tap.

FACTORY WIRING	FIELD WIRING
Low Voltage ———	-----
High Voltage ———	-----



FACTORY WIRING	FIELD WIRING
Low Voltage ———	-----
High Voltage ———	-----

- ⚠ See alternate thermostat sheet. Set heat anticipator at .40A.
- ⚠ For 208V operation move this wire to 208V transformer tap.

230/208-3

