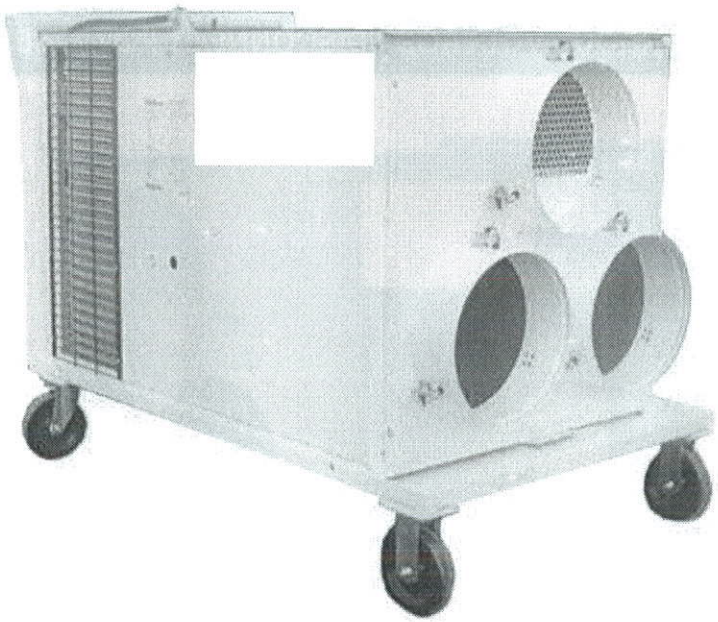
MOB-42-HP



Installation - Operation
Maintenance Instructions
and Parts List

READ INSTRUCTIONS PRIOR TO
STARTING AIR CONDITIONERS

PORTABLE AIR

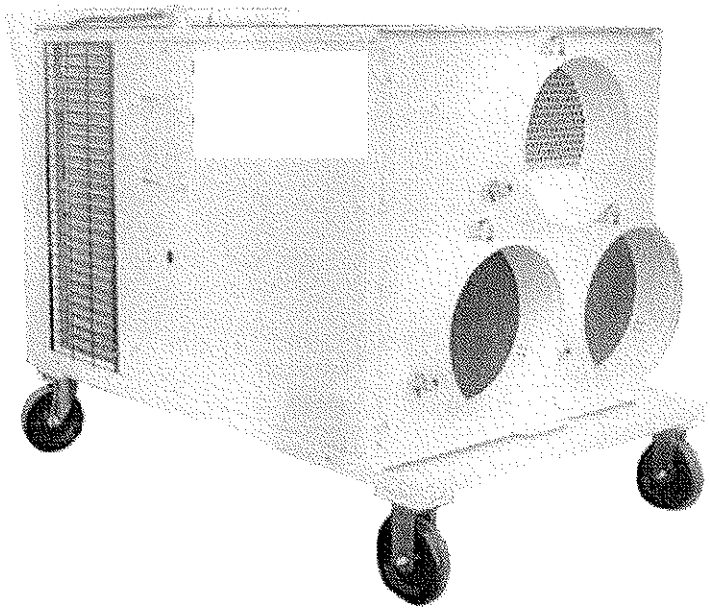
Installation / Operation / Maintenance

Including Technical Information and Service Parts List

MOB-42-HP-00

3-1/2 Ton Portable Air Conditioner/Heat Pump

⚠WARNING: HAZARDOUS VOLTAGE - DISCONNECT POWER BEFORE SERVICING



⚠ WARNING

THIS INFORMATION IS FOR USE BY INDIVIDUALS HAVING ADEQUATE BACKGROUNDS OF ELECTRICAL AND MECHANICAL EXPERIENCE. ANY ATTEMPT TO REPAIR A PORTABLE AIR PRODUCT MAY RESULT IN PERSONAL INJURY AND/OR PROPERTY DAMAGE. PORTABLE AIR OR THE SELLER CANNOT BE RESPONSIBLE FOR THE INTERPRETATION OF THIS INFORMATION, NOR CAN IT ASSUME ANY LIABILITY IN CONNECTION WITH ITS USE.

⚠ CAUTION

RECONNECT ALL GROUNDING DEVICES. ALL PARTS OF THIS PRODUCT THAT ARE CAPABLE OF CONDUCTING ELECTRICAL CURRENT ARE GROUNDED. IF GROUNDING WIRES, SCREWS, STRAPS, CLIPS, NUTS, OR WASHERS USED TO COMPLETE A PATH TO GROUND ARE REMOVED FOR SERVICE; THEY MUST BE RETURNED TO THEIR ORIGINAL POSITION AND PROPERLY FASTENED.

ALL PHASES OF THIS INSTALLATION MUST COMPLY WITH NATIONAL, STATE, AND LOCAL CODES.

The following warning complies with State of California law, Proposition 65.

⚠ WARNING: This product contains fiberglass wool insulation! Fiberglass dust and ceramic fibers are believed by the State of California to cause cancer through inhalation. Glasswool fibers may also cause respiratory, skin, or eye irritation.

PRECAUTIONARY MEASURES

- Avoid breathing fiberglass dust.
- Use a NIOSH approved dust/mist respirator
- Avoid contact with the skin or eyes. Wear long-sleeved, loose-fitting clothing, gloves, and eye protection.
- Wash clothes separately from other clothing: rinse washer thoroughly.
- Operations such as sawing, blowing, tear-out, and spraying may generate fiber concentration requiring additional respiratory protection. Use the appropriate NIOSH approved respirator in these situations.

FIRST AID MEASURES

Eye Contact - Flush eyes with water to remove dust. If symptoms persist, seek medical attention.

Skin Contact - Wash affected areas gently with soap and warm water after handling.

I. General Information

These instructions cover installation, operation, and maintenance of all **MOB-42 Portable Air Conditioner/ Heat Pumps**. For an easy and orderly installation, follow the sequence of instructions as they are outlined. Improper installation can result in unsatisfactory operation and/or dangerous conditions as well as make the related warranty inapplicable. Read this manual carefully before installing, operating, or performing maintenance on this unit. Installation and maintenance should be performed only by qualified service technicians.

-Unit Inspection-

The material in this shipment has been inspected at the factory and was released to the transportation agency without known damage.

Inspect the exterior of the carton for evidence of rough handling in shipment. If damage to the unit is found, report the nature of this damage immediately to the delivery agency. Check to be sure that the refrigerant charge has been retained during shipment. Each unit contains an operating charge of HCFC-22 when shipped

-Power Supply-

The power supply must be adequate for the unit. The MOB-42 requires a 230 volt, single-phase circuit with and amperage rating of 40 amps.

II. Locations and Recommendations

This unit was designed for portable air conditioning and heating. For proper installation, follow these guidelines:

- Select a location that will permit unobstructed airflow into the condenser coil and away from the fan discharge. The discharge air from the condender fan must be unrestricted for a minimum of three (3) feet above the unit. Any reduction of the unit clearances recommended may result in condenser coil starvation or the recirculation of warm condenser air. Actual clearances, if inadequate, should be reviewed with a local sales representative to decide if they are acceptable.

- Access and service clearances for the unit must be given careful consideration when locating the duct entrance openings. Figure 3 provides clearance specifications.

- Complete the installation according to the instructions in the following sections of this manual.

- Be sure any holes in the structure are large enough to accommodate a round 12" diameter duct.

- Attach 12" supply and return air ducts to the unit. See Figure 3. Select a location that will minimize the length of the supply and return ducts. The portion of the supply and return ducts located outdoors must be as short as possible.

- Make sure to deflect the warm discharge air from anything that may be heat sensitive.

- Make sure water does not pour directly onto the unit. The unit must also be situated to permit easy and unrestricted access for service.

- Select a location where water drainage will not collect around the unit and/or create a hazard.

CAUTION MUST ALWAYS BE TAKEN TO AVOID PERSONAL INJURIES AND/OR DAMAGE TO THE EQUIPMENT.

- Elevation minimums must be observed for drain line "trap" and ventilation to the under side of the unit.

- Give consideration to shade, appearance, and noise.

III. Installation Applications

Figure ①

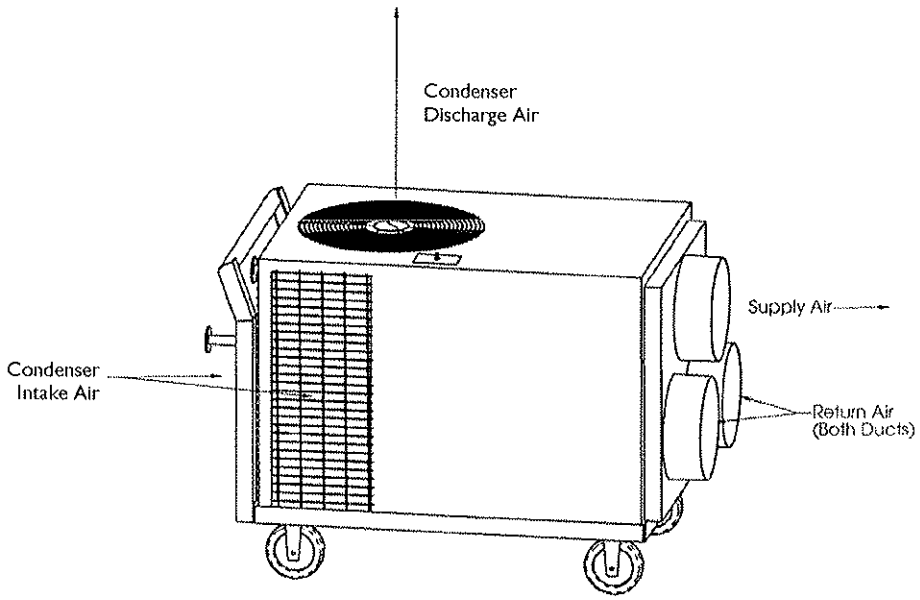
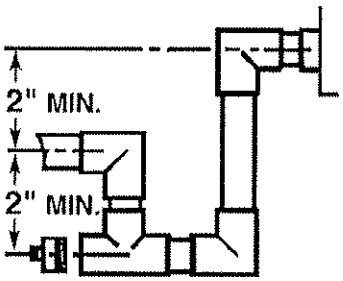


Figure ②

3/4" PVC OR COPPER TUBING AND FITTINGS



QTY.	MATERIALS
1	TEE
3	90° ELL
1	PLUG
1	4" NIPPLE
2	2" NIPPLE
1	3/4" NPT TO PVC OR COPPER ADAPTER

-Condensate Drain Piping-

A 3/4-inch female NPT condensate drain connection is provided on the evaporator end of the unit.

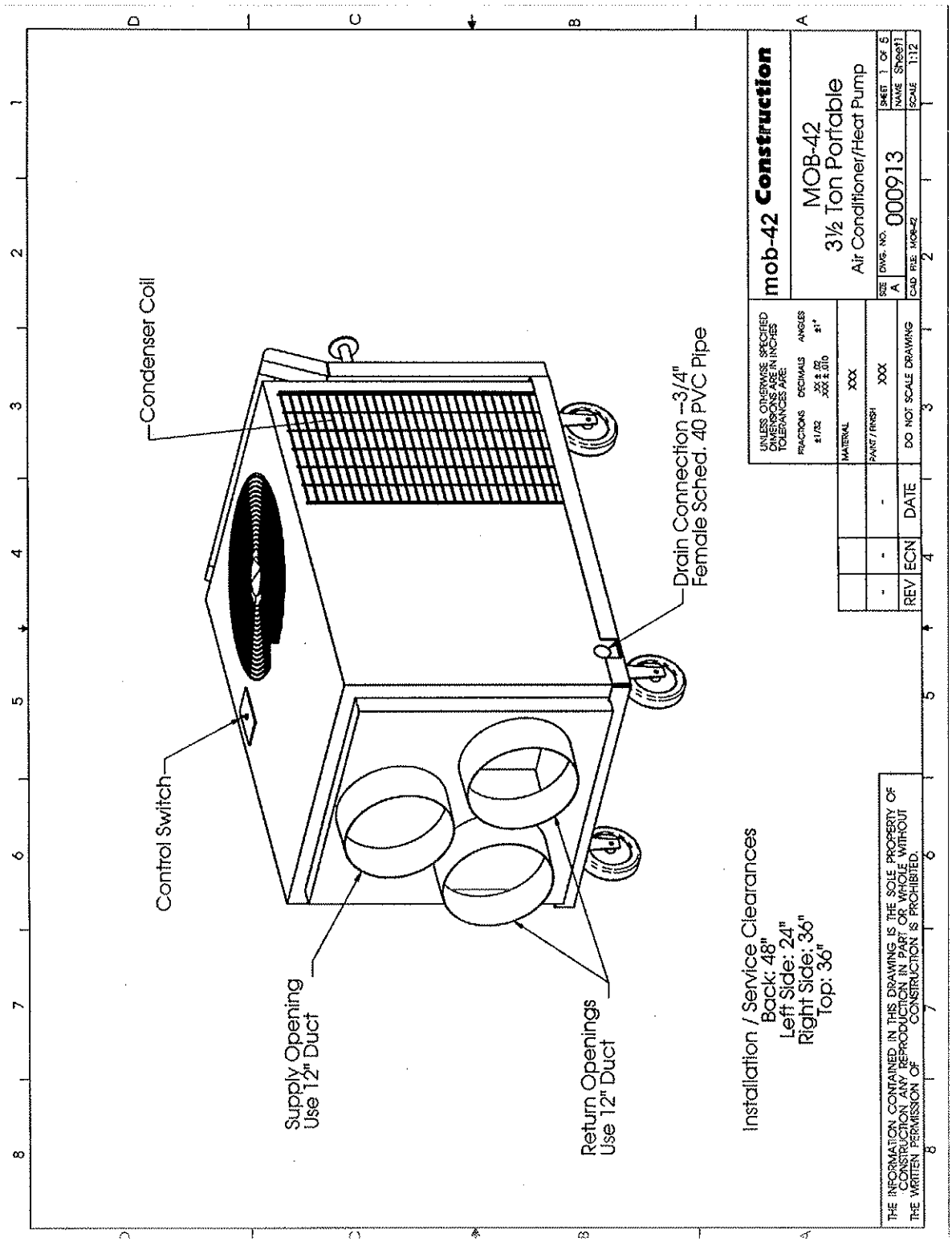
For Permanent Type Applications: Construct a trap and fill it with water to prevent air from being drawn through. (See figure 2).

For Portable Type Applications: Connect a 3/4" pipe or hose to the unit and drain condensate into optional drain pan or condensate pump.

Follow local codes and standard piping practices when running all drain lines. Pitch the line downward away from the unit at 1/4" per foot to provide drainage. Avoid long, horizontal runs.

III. Installation Applications (cont.)

Figure ③



IV. Final Installation Checklist

- Are the condenser fan and evaporator fan operating correctly and without abnormal noise?
- Is the compressor operating correctly?
- Have the operational voltage and current requirements been checked to determine if they are within limits?
- Has the ductwork been checked for proper installation?
- Are there any unusual noises?
- Are all covers and panels in place and properly fastened?
- Have the maintenance personnel been given this manual and the warranty? Have the maintenance personnel been instructed on proper operation and maintenance of this unit?

V. Start-Up

-Pre-Start Quick Check List-

- Are all cover and access panels in place to prevent air loss and to protect against safety hazards?
- Is the unit properly located and level with the proper clearance?
- Are all 12" ducts properly installed and securely attached to the unit?
- Is the condensate line properly sized, run, trapped (permanent-type application), and pitched? Does it drain freely?
- Is the filter of the correct size and number? Are the inlet and outlet ducts unobstructed?
- Has all work been done in accordance to the applicable local and national codes?
- Is the power supply correct for the unit's requirements?

NOTE: SEE THE SECTION ON "SEQUENCE OF OPERATION" FOR A DESCRIPTION OF THE COOLING AND HEATING OPERATING SEQUENCES.

-Starting the Unit In the Cooling Mode-

- Place the HEAT/OFF/COOL switch in the COOLING ON position

(If the optional thermostat is installed)

- Adjust the thermostat knob to a setting below room temperature. The condenser fan motor, compressor, and evaporator fan motor will operate automatically.

-Cooling Shut Down-

- Place the HEAT/OFF/COOL switch in the OFF position or adjust the thermostat (if installed) to a setting above the room temperature.

-Starting the Unit In the Heating Mode-

- Place the HEAT/OFF/COOL switch in the HEATING ON position.

(If the optional thermostat is installed)

- Adjust the thermostat knob to a setting above room temperature. The evaporator fan motor, compressor, and condenser fan motor will operate automatically.

-Heating Shut-Down-

- Place the HEAT/OFF/COOL switch in the OFF position or adjust the thermostat (if installed) to a setting below the room temperature.

VI. Sequence of Operation

-General-

When power is supplied to the MOB-42, voltage is automatically supplied to the sump heater and control transformer. The sump heater supplies heat to the unit's compressor, which prevents liquid refrigerant from accumulating in the compressor during the "OFF" cycle.

-Cooling Mode-

When the Control Switch (SW) is swtched to the "COOLING ON" position, 24 volts supplied at terminal "R" of the Low Voltage Terminal Board (LVTB), is connected to terminals "G" and "O" of the LVTB. This energizes the coil of the Switchover Valve Solenoid (SC), the Compressor Contactor (relay) (MS), and the Fan Delay Relay (FDR). The MS-1 and MS-2 contacts close simultaneously which energizes the compressor and condenser fan motor. The FDR-1 contact closes and energizes the evaporator fan motor

NOTE: If the MOB-42 is equipped with a room temperature thermostat (optional), the thermostat must first be set to a temperature LESS than the current room temperature before the unit will operate.

-Heating Mode-

When the Control Switch (SW) is switched to the "HEATING ON" position, 24 Volts supplied at terminal "R" of the Low Voltage Terminal Board (LVTB), is connected to only terminal "G" of the LVTB. This energizes the coil of the Compressor Contactor (relay) (MS), and the Fan Delay Relay (FDR). The MS-1 and MS-2 contacts close simultaneously which energizes the compressor, and condensor fan motor. The FDR-1 contact closes and energizes the evaporator fan motor.

NOTE: If the MOB-42 is equipped with a room temperature thermostat (optional), the thermostat must first be set to a temperature GREATER than the current room temperature before the unit will operate.

VII. Safety Features

Internal overload protectors are provided on the condenser and evaporator motors. All units are fully protected against the following abnormal conditions:

- Locked rotor current draw
- Sustained high current draw -Excessive heat buildup
- High discharge pressure
- Loss of refrigerant charge
- Excessive cycling on safety controls

The compressors are equipped with a combination winding thermostat/ current overload. An internal pressure relief is also provided. An internal winding thermostat senses the temperature of the motor windings. If inadequate cooling causes the winding temperature to exceed this thermostat's setting, the compressor motor is stopped. The thermostat will reset automatically after the motor winding temperature falls to a safe level. The reset time will vary from 15 to 45 minutes.

Operating on an excessively high suction and discharge pressure differential, an internal pressure relief valve will open allowing discharge gas to pass over the winding thermostat. The winding thermostat will sense the presence of hot gas and stop the compressor.

The pressure relief valve will reset automatically when the pressure differential is again normal. The compressor will not restart, however, until the winding thermostat has cooled sufficiently.

VIII. Maintenance

-Routine Maintenance by Owner-

You can do some of the periodic maintenance functions for your MOB-42-HP unit yourself. These functions include cleaning the air filters, cleaning the unit's cabinet, cleaning the condenser coil, and conducting a general inspection of the unit on a regular basis.

-Air Filters-

This unit requires a filter with adequate filter area be provided in the return air duct. Table 2 below gives filter data. The Filter Size (sq. ft.) is based on 300 ft/min. face velocity. If a permanent filter is used, size per mfg. recommendation with clean resistance of .05 iwg.

UNIT	*NOMINAL AIR FLOW (CFM)*	*FILTER DIMENSIONS*	*FILTER RESISTANCE (iwg)*	*CELL COUNT (ppi)*
MOB-42	1400	16.5" x 27.5" x ¼"	.05"	30

Table 2. Filter Data

- It is very important to keep the return air system filter clean. Be sure to inspect it at least once each month when the system is in constant operation. In new construction, check the filters every week for the first four (4) weeks.

VIII. Maintenance (Con't)

- Clean the filter by washing it with a mild detergent and water. Make sure that the filter is thoroughly dry before re-installing it in the unit.

- Replace filter as necessary if washing fails to clean it or if it shows signs of deterioration. Use the same type and size as was originally installed.

-Condenser Coil-

- Unfiltered air circulated through the unit's condenser coil can cause the coil's surface to become clogged with dust, dirt, etc. To clean the coil, stroke the coil surface with a soft-bristled brush vertically, that is, in the direction of the fins.

- Be sure to keep all materials away from the condenser coil area.

-Maintenance Performed by Service Tech-

To keep your unit operating as designed, TOPP Portable Air recommends that a qualified service technician check the entire system at least once each year as well as any other time that you feel that one is needed. Your service technician should examine and inspect:

- filter (for cleaning or replacement)
- motors and drive system components
- condenser coils (for cleaning)
- safety controls (for mechanical cleaning)
- electrical components and wiring (for possible replacement and/or connection tightness)
- condensate drain (for cleaning)
- unit duct connections to see that they are physically sound and attached tightly to the unit
- unit to make certain there is no obvious unit deterioration.

IX. Checkout Procedure with Power Supplied to Unit

Step #	*To Check*	*Control Switch Position*			*Component Operation*				*Outlet Air*	
		Heating ON	*OFF*	*Cooling ON*	*Evap. Fan*	*Cond. Fan*	*Comp.*	*Comp. Sump Heater*	*Warm*	*Cool*
1	Cooling Operation			X	X	X	X	X		X
2	Heating Operation	X			X	X	X	X	X	
3	Compressor Sump Heater		X					X		
4	(Optional) Thermostat Operation	X↑		X↓				X		
↑	Adjust the thermostat knob to a setting ABOVE the current room temperature.									
↓	Adjust the thermostat knob to a setting LESS that the current room temperature.									

X. Technical Information

Product Specifications

MODEL	MOB-42-HP
RATED Volts/Ph/Hz	230/1/60
RATINGS (COOLING) ①	
BTUH	41,000
Evaporator Airflow (CFM)	1400
Power Input (KW)	3.90
EER/SEER (BTU/Watt-Hr.) ⑤	10.50 / 12.05
Noise Rating ②	8.2
RATINGS (HEATING) ①	
(High Temp.) BTUH	40,000
Power Input (KW)	3.26
(Low Temp.) BTUH	21800
Power Input (KW)	2.80
HSPF (BTU/Watt-Hr.) ⑤	7.50
POWER CONN. - V/Ph/Hz	230/1/30
Input Current (Amps)	26
Fuse Size - Max. (Amps)	40
Fuse Size - Recmd. (Amps)	40
COMPRESSOR	
No. Used - No. Speeds	1 - 1
Volts/Ph/Hz	230/1/60
R.L. Amps - L.R. Amps	15.8 - 91
CONDENSER COIL - TYPE	PLATE FIN
Rows/F.P.I.	2 / 22
Face Area (sq.ft.)	11.2
Tube Size (in.)	0.375
Refrigerant Control	TXV-NB
EVAPORATOR COIL - TYPE	PLATE FIN
Rows/F.P.I.	5 / 12
Face Area (sq.ft.)	3.44
Tube Size (in.)	0.375
Refrigerant Control	TXV-NB
Drain Conn. Size (in.)	3/4 FEMALE PVC
Duct Connections	See outline Drawing

MODEL	MOB-42-HP
RATED Volts/Ph/Hz	230/1/60
CONDENSER FAN - TYPE	PROPELLER
No. Used Dia. (in.)	1 / 18
Drive Type	DIRECT
CFM @ 0.0 iwg.③	2100
No. Motors - HP	1 - 1/6
Motor Speed R.P.M.	1080
Volts/Ph/Hz	230/1/60
F.L. Amps - L.R. Amps	1.6 - 3.3
EVAPORATOR FAN - TYPE	CENTRIFUGAL
Dia x Width	10 x 9
No. Used	1
Drive Type	DIRECT
CFM vs. static press. (iwg.) ④	See Fan Perf. Table
No. Motors - HP	1 - 0.50
Motor Speed R.P.M.	1120
Volts/Ph/Hz	230/1/60
F.L. Amps - L.R. Amps	3.7 - 8.4
REFRIGERANT	
Charge (lbs. of HCFC-22)	9 lbs., 10 oz.
DIMENSIONS	H x W x D
overall	38 1/4 x 32 1/2 x 56
WEIGHT	
Shipping (lbs.)	470
Unit w/cord (lbs.)	445

① Rated in accordance with A.R.I. Standard 240.

② Rated in accordance with A.R.I. Standard 270.

③ Standard Air - Dry Coil - Condenser

④ Standard Air - Wet Coil - Evaporator

⑤ Rated in accordance with D.O.E. test procedure

X. Technical Information (cont.)

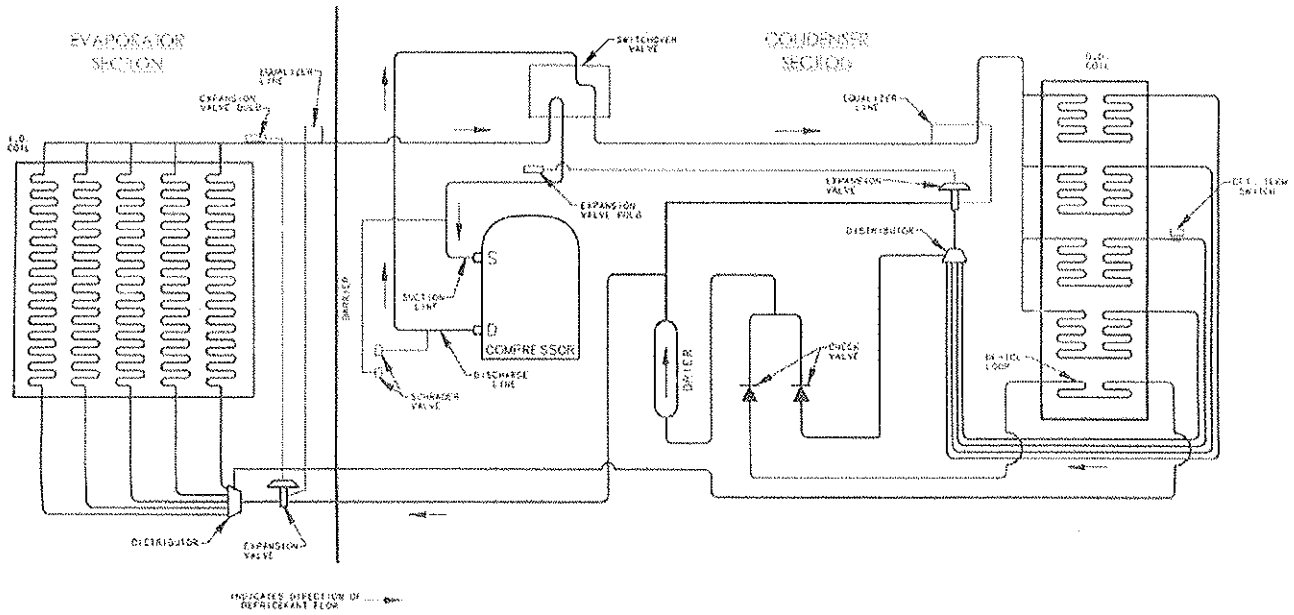
Evaporator Fan Performance
Standard Air Flow for MOB-42

EXTERNAL STATIC PRESSURE* (INCHES OF WATER GUAGE) & MOTOR POWER (WATTS)		
CFM	**Pressure**	**Power**
1000	0.81	400
1100	0.73	420
1200	0.63	450
1300	0.52	480
1400	0.38	520
1500	0.23	560

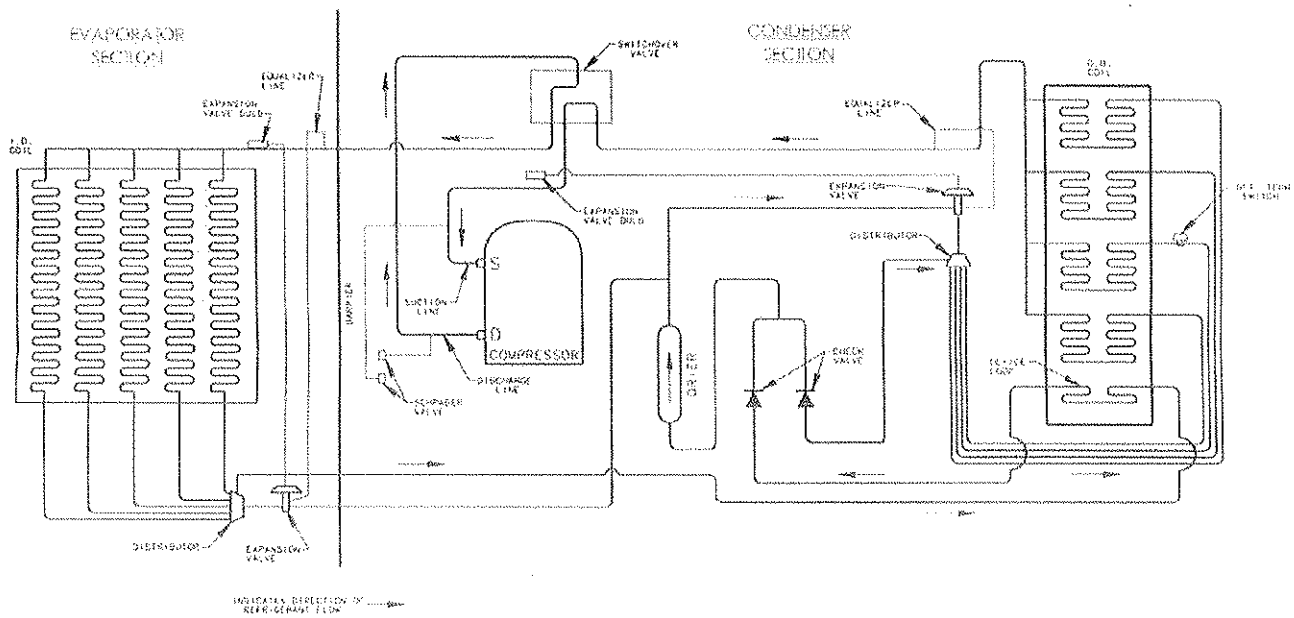
* Wet coil, no filter

X. Technical Information (cont.)

Refrigerant Cycles



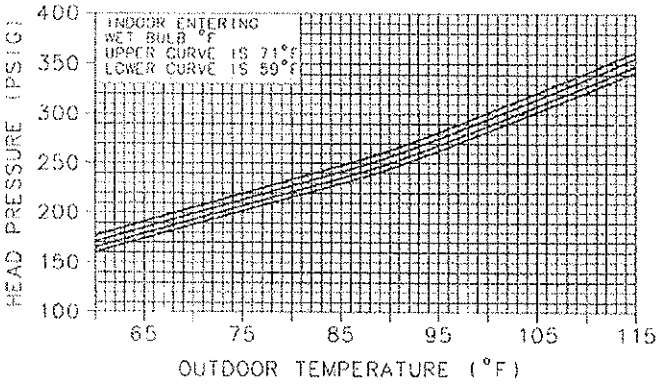
COOLING REFRIGERANT CYCLE

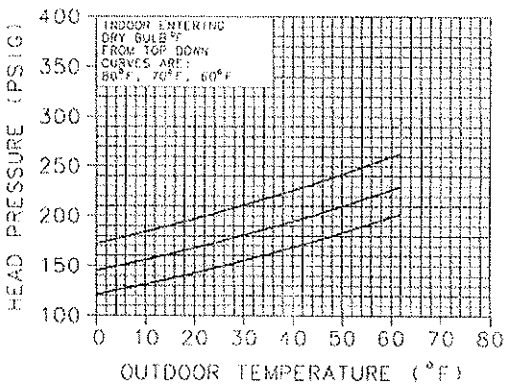


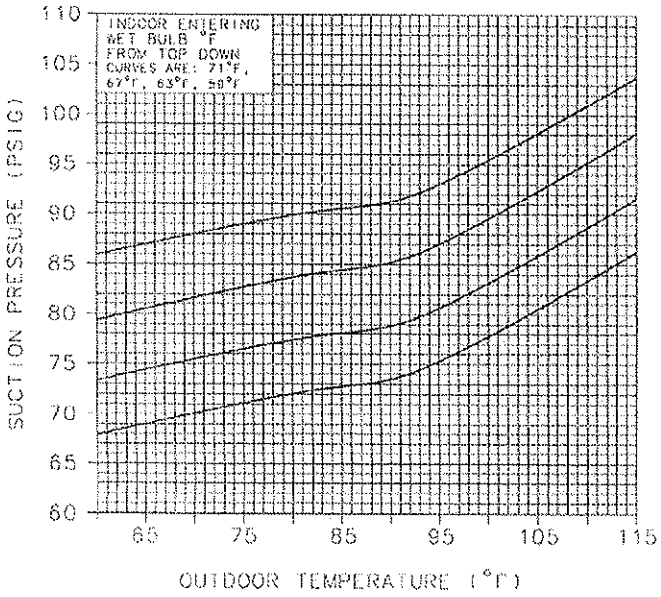
HEATING REFRIGERANT CYCLE

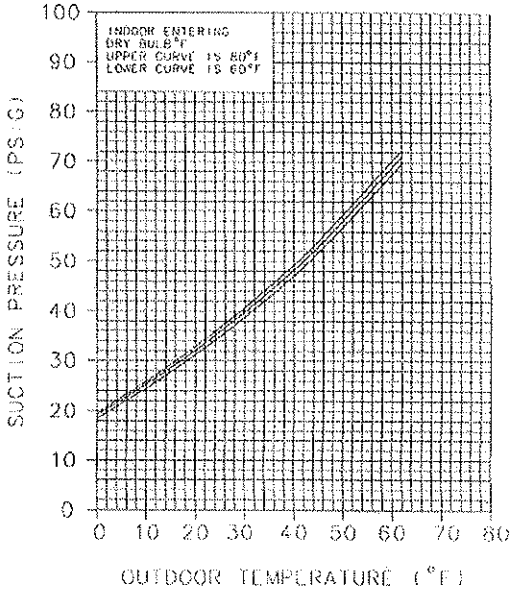
X. Technical Information (cont.)

Performance Curves
MOB-42 Air Conditioner & Heat Pump









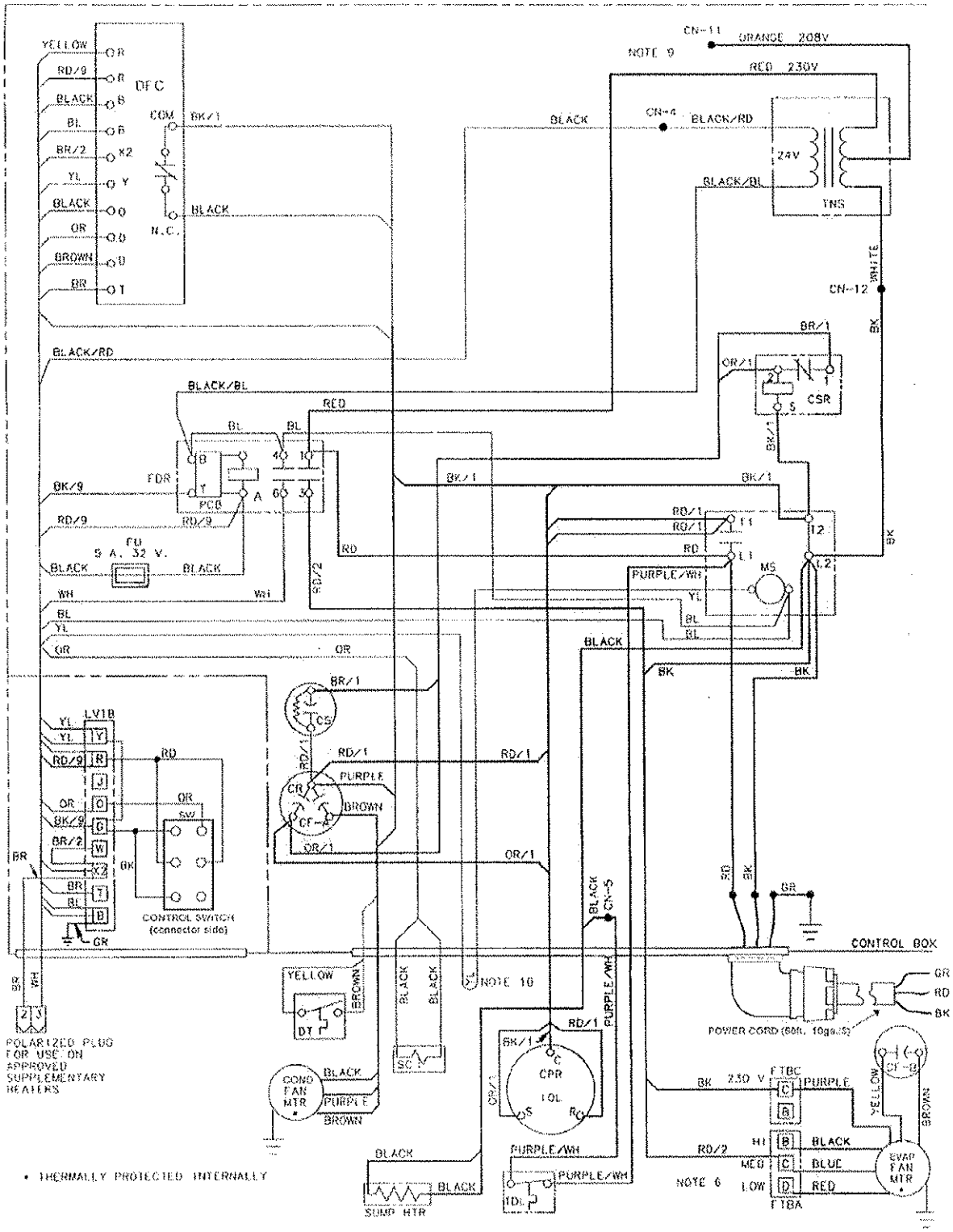
COOLING PERFORMANCE CAN BE CHECKED WHEN THE OUTDOOR TEMPERATURE IS ABOVE 75°F. TO CHECK THE COOLING PERFORMANCE, ALLOW PRESSURES TO STABILIZE AND MEASURE INDOOR WET BULB TEMPERATURE AND OUTDOOR TEMPERATURE, HEAD AND SUCTION PRESSURE.

① LOCATE OUTDOOR TEMP.
② LOCATE INDOOR WET BULB TEMP.
③ FIND INTERSECTION OF OD TEMP. AND ID WET BULB
④ READ HEAD OR SUCTION PRESSURE IN LEFT HAND COLUMN

ACTUAL HEAD PRESSURE SHOULD BE ±10 PSIG OF CHART.
SUCTION PRESSURE SHOULD BE ±3 PSIG OF CHART

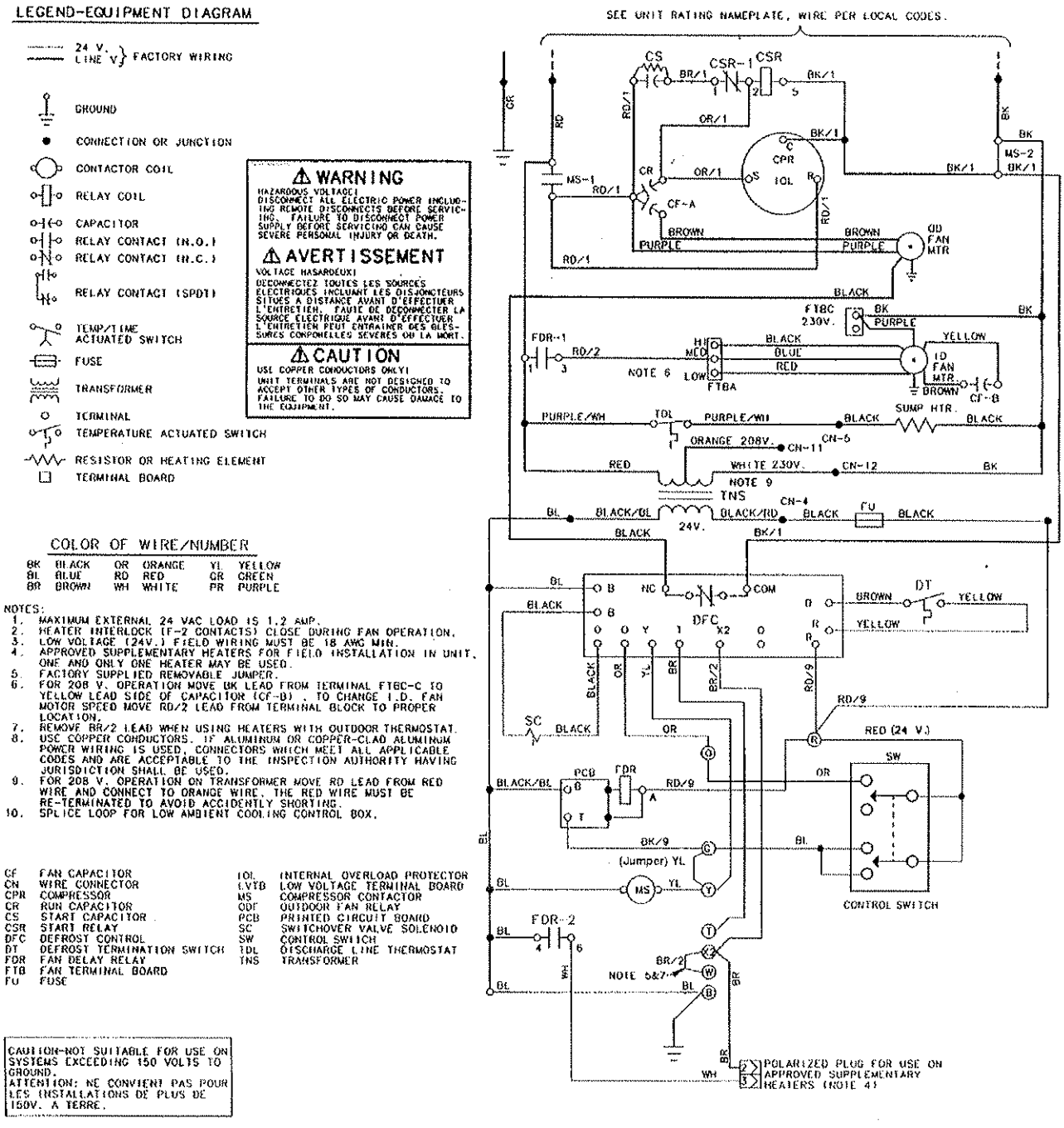
X. Technical Information (cont.)

Wiring Diagram



X. Technical Information (cont.)

Wiring Schematic



XI. Service Parts List

Part #	Description	Qty
BRD0383	BOARD, TERMINAL (LVTB)	1
BRD0385	BOARD, TERMINAL FAN, 24V (FTBA, FTBB)	2
COM3691	COMPRESSOR, GP393-GH1-G*, 3.4 HP, 200-230/60/1 (CPR)	1
CPT0180	CAPACITOR, RUN, 15 MFD, 370V, OVAL, W/O RESISTOR (CF-B)	1
CPT0266	CAPACITOR, RUN, 5 MFD, 370V, OVAL, W/O RESISTOR (CF-A)	1
CTR0516	CONTACTOR, 30 AMP, 24V COIL, 2 POLE (MS)	1
CTR0733	CONTACTOR, 30 AMP, 24V COIL, 1 POLE (MS)	1
DHY0179	DRIER, FILTER/SUCTION LINE, TYPE 45S7, 7/8" ODF CONN	1
DHY0220	DRIER, FILTER/LIQUID LINE, TYPE 083S, 3/8" ODF CONN	1
FAN1646	FAN, 3-BLADE, 18" DIA, 29° PITCH, 1/2" BORE, CW (OUTDOOR)	1
FUS0995	FUSE, 5 AMP, WITH HOLDER (FU)	1
HRT2060	HEATER, SUMP, 65W, 230V	1
MOT3006	MOTOR, EVAPORATOR, 1/2/ HP, 200-230/60/1, 1120 RPM, 39 FRAME, CCW, SLEEVE BEARING, 15 MFD CPT @ 370V (IDM)	1
MOT4104	MOTOR, CONDENSER, 1/5 HP, 200-230/60/1, 1080 RPM, 48 FRAME, CCWLE, SLEEVE BEARING, 5 MFD CPT @ 370V (ODM)	1
RLY1097	RELAY, START, SPST, 35 AMP, 230/60/1 (CSR)	1
RLY1169	RELAY, TIME DELAY, DPST, 6 AMP @ 240V, 24V COIL (FDR)	1
SLG0052	SLINGER, 1/2" BORE	1
THT0689	CONTROL, DEFROST TERMINATOR, SPST, OPEN-51°F, CLOSE-26°F, CLOSE (DT)	1
THT0811	THERMOSTAT, DISCHARGE LINE, OPEN 105°F, CLOSE 73°F, SPST (TDL)	1
TRR0710	TRANSFORMER, 50VA, 208-240V PRI 24V SEC (TNS)	1
VAL2189	VALVE, CHECK, 1/2" ID INLET X 1/2 OD OUTLET, 4.625" LENGTH	2
VAL4262	VALVE, REVERSING, 4 WAY, 6.2 TONS, 3/4" ODF X 7/8" ODF CONNECTION	1
VAL4941	VALVE, REFRIG, INDOOR, 3.0 TON, 3/8" INLET X 1/2" OUTLET	1
VAL4999	VALVE, REFRIG, OUTDOOR, 1.5 TON, 3/8" INLET X 1/2" OUTLET	1
WHL0324	WHEEL, BLOWER, 10 5/8" DIA, 9 1/2" WIDTH, 1/2" BORE, CW	1
	CORD, POWER, 50FT., 10 GA., 3 CONDUCTOR	1
	PAN, DUCT, 1 OUTLET, 2 INLET	1
	SWITCH, CONTROL, DPDT, CONTACTS RATED 10 AMPS @ 250 VAC	1

LIMITED WARRANTY
HIGH EFFICIENCY AIR CONDITIONER / HEAT PUMP
MOB 42
For Commercial Use*
(Parts Only)

This warranty is extended by PORTABLE AIR., to the original purchaser of the **Air Conditioner/ Heat Pump**, and applies to products purchased and retained for use within the U.S.A. and Canada. **There is no warranty against corrosion, erosion or deterioration.**

If any part of your **Air Conditioner/Heat Pump** fails because of a manufacturing defect within one year from the date of the original purchase, Warrantor will furnish without charge, the required replacement part.

In addition, if the sealed motor-compressor fails because of a manufacturing defect within the second through fifth year from the date of original purchase, Warrantor will furnish without charge the required replacement compressor. Warrantor's obligations and liabilities under this warranty are limited to furnishing F.O.B. Warrantor factory or warehouse replacement parts for Warrantor's products covered under this warranty. Warrantor shall not be obligated to pay for the cost of lost refrigerant. No liability shall attach to Warrantor until products have been paid for and then liability shall be limited solely to the purchase price of the equipment under warranty shown to be defective.

Some states do not allow limitations on how long an implied warranty lasts or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

THE WARRANTY AND LIABILITY SET FORTH HEREIN ARE IN LIEU OF ALL OTHER WARRANTIES AND LIABILITIES, WHETHER IN CONTRACT OR IN NEGLIGENCE, EXPRESS OR IMPLIED, IN LAW OR IN FACT, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR USE, IN NO EVENT SHALL WARRANTOR BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

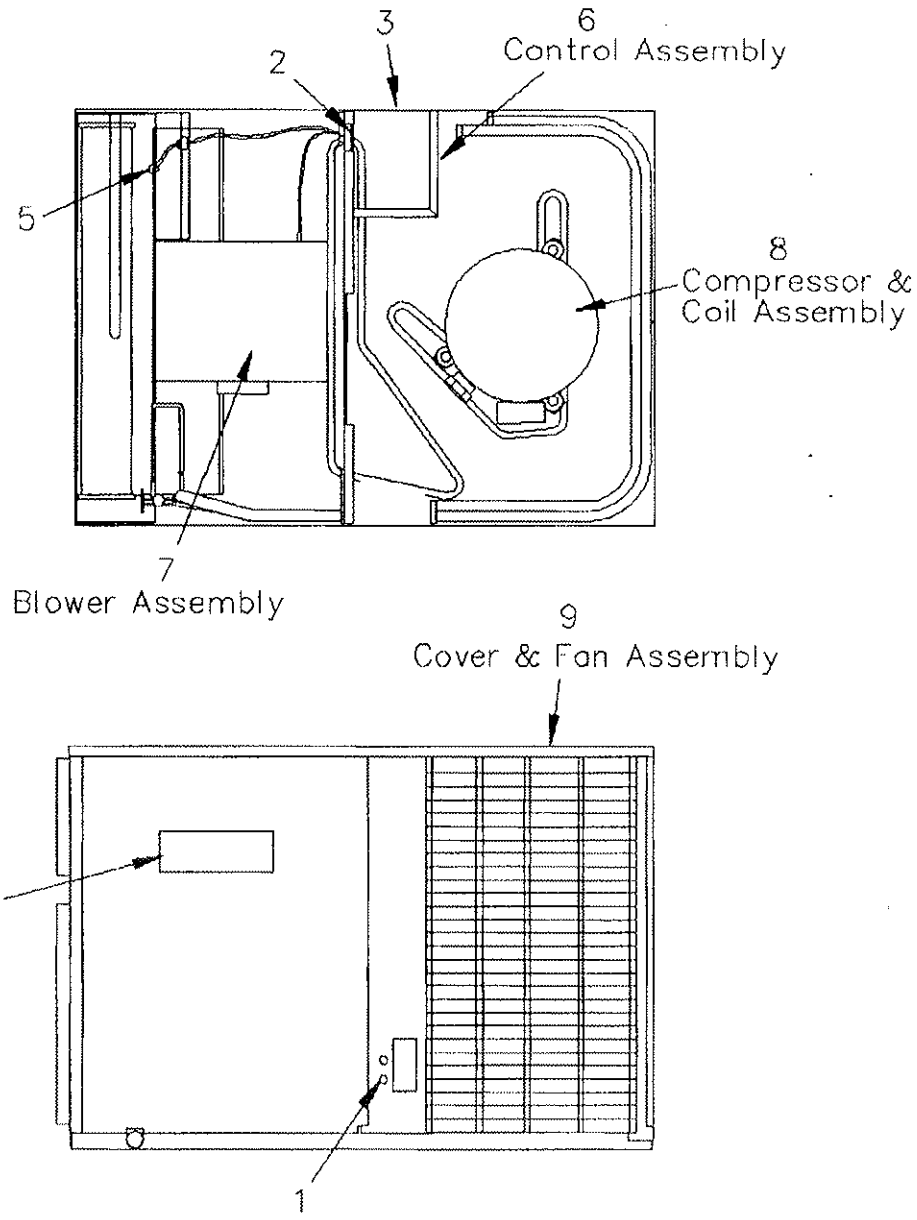
*Commercial use is any application where the end purchaser uses the product for other than personal, family or household purposes.

TOP LEVEL FOR WCH042B100CB
Parts List Number: WCHUP131
Model Number: WCH042B100CB

Reference #	Part Number	Description	Qty
SEC 1	75002786	GENERAL ASSEMBLY	0
SEC 2	75006140	CONTROLS	0
SEC 3	75002790	REFRIGERATION	0
SEC 4	75006139	FAN	0
SEC 5	75000336	BLOWER	0
SEC 6	75006660	CABINETRY	0
SEC 7	NGRAPHIC	OPTIONAL ROTOLOCK STUB TUBE KITS	0
SEC 8	75000431	MODEL NUMBER NOMENCLATURE	0

General Assembly

75002786 REV A



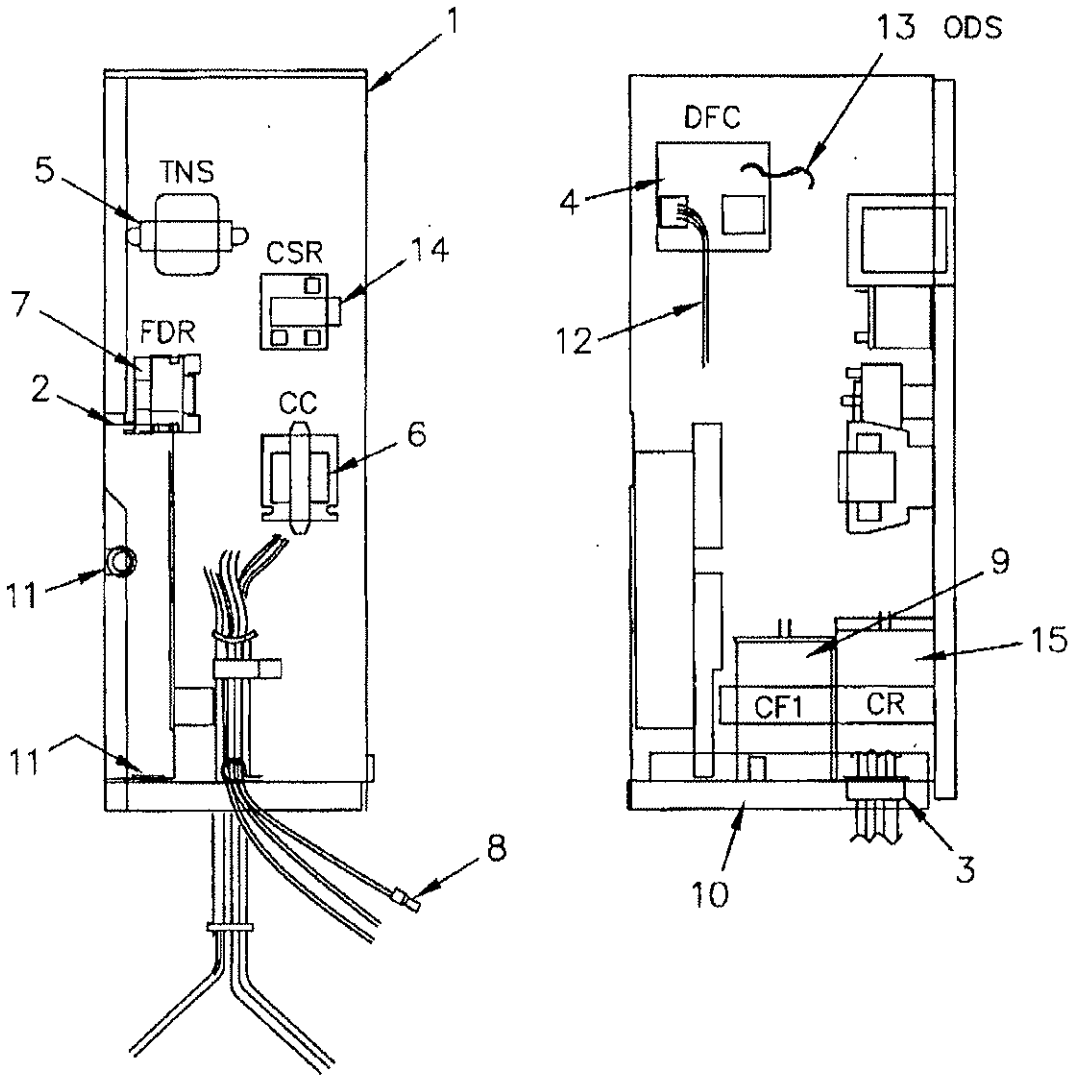
This is a typical illustration. The unit in the field may not appear exactly as shown.

Reference #	Part Number	Description	Qty
*	ANG00900	ANGLE; WITH GASKET	1
*	BOF01165	BLOCKOFF; BARRIER	1
*	CMP00257	CLAMP; CABLE	1
*	MNT01110	MOUNT, ISOLATOR, VIBRATION	4
*	SCR00980	SCREW; 10-16 B HX 3/8 S XT	3
*	SCR00999	SCREW; 10-16 B HXW 3/8 S	3
1	CAP00209	CAP; THREADED, 9/16	2
2	BUS00332	BUSHING;	1
3	GRM00118	GROMMET; 3/16IN.ID, NEOPRENE	1
4	PLT02732	PLATE; APPEARANCE NAMEPLATE, XE1200, 7.00 X 2.50	1
5	RCT00062	RECEPTACLE; CONNECTOR, 6 PIN, POLARIZED, MALE	1
6	75006140	CONTROLS	0
7	75000336	BLOWER	0
8	75002790	REFRIGERATION	0
9	75006139	FAN	0

Controls

75006140 REV A

Typical illustration. Unit may not appear exactly as shown.



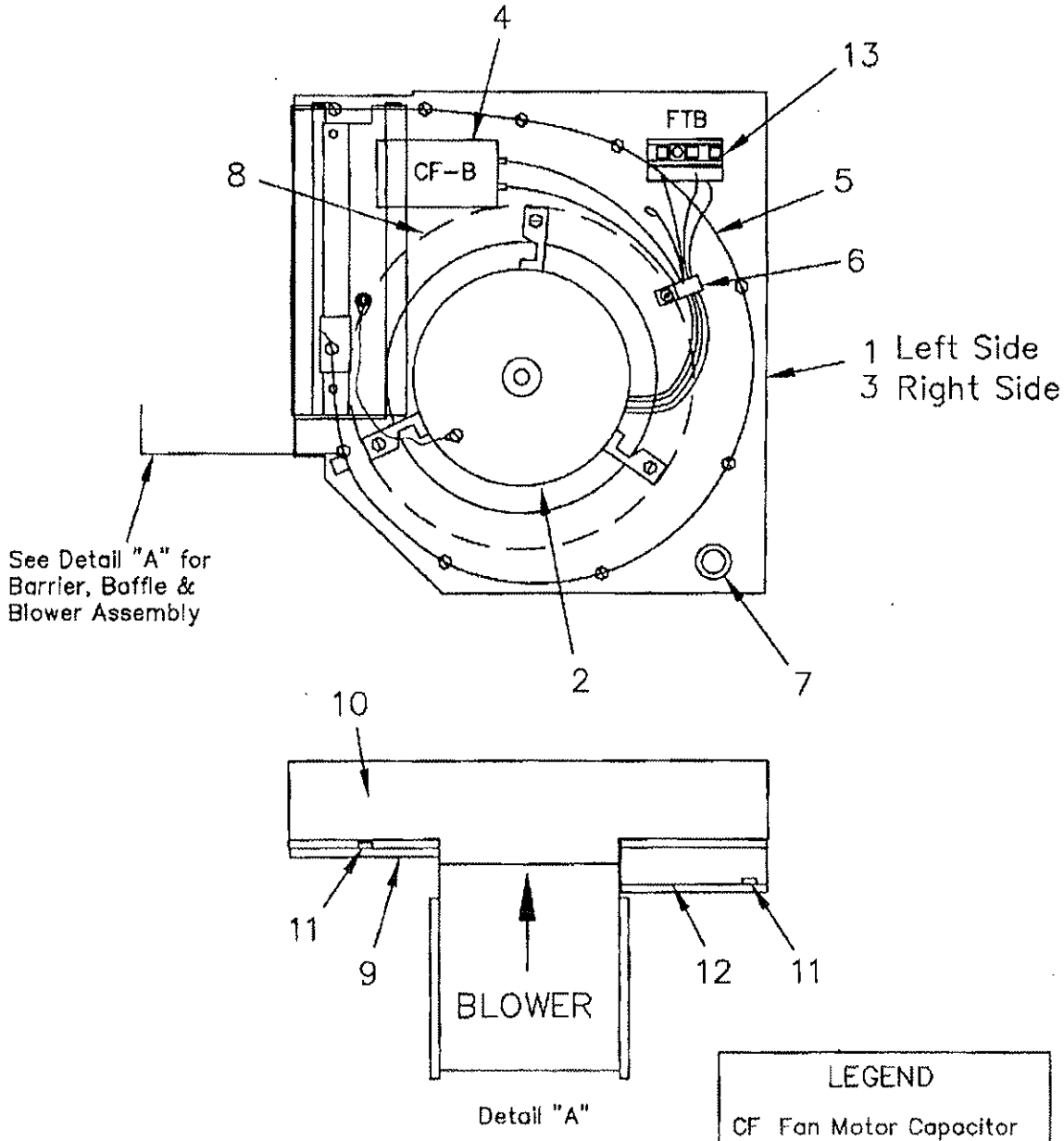
LEGEND	
CC	Compressor Contactor Coil
CF	Fan Motor Capacitor
CR	Compressor Start Capacitor
CSR	Compressor Start Relay
DFC	Defrost Control
FDR	Fan Delay Relay
ODS	Outdoor Ambient Sensor
TNS	Transformer

Reference #	Part Number	Description	Qty
*	SCR01022	SCREW; 6-20 B HXW 3/4 S	5
1	BOX01098	BOX; CONTROL	1
2	BOX01099	BOX; LVTB ENCLOSURE	1
3	BUS00318	BUSHING; SNAP	1
4	CNT02516	CONTROL; DEFROST	1
5	TRR01604	TRANSFORMER; 50VA, 208/240V PRI, 24V SEC	1
6	CTR01010	CONTACTOR; 35 AMP, 1 POLE W/ SHUNT, 24V COIL	1
7	RLY01169	RELAY; TIME DELAY, DPST, 80 SEC, 6A, 24VAC COIL	1
8	CON00241	CONNECTOR; WIRE	1
9	CPT00668	CAPACITOR; DUAL, 40/5 MFD, 440V, ROUND, W/O RESISTOR	1
10	BAS00501	BASE;CONTROL ASSEMBLY	1
11	BUS00317	BUSHING; SNAP	2
12	WIR03236	WIRE; HARNESS, 9 PIN	1
13	RES00171	RESISTOR; THERMISTOR, BLACK (OUTDOOR AIR SENSOR OR AMBIENT SENSOR)	1
14	RLY01570	RELAY; START, SPST, 35A COIL; 239V PICK UP, 135V DROP OUT	1
15	CPT00091	CAPACITOR; START, 135 MFD, 330V, ROUND, W/ RESISTOR	1

Blower Assembly

75000336 REV B

Typical illustration. Unit may not appear exactly as shown.

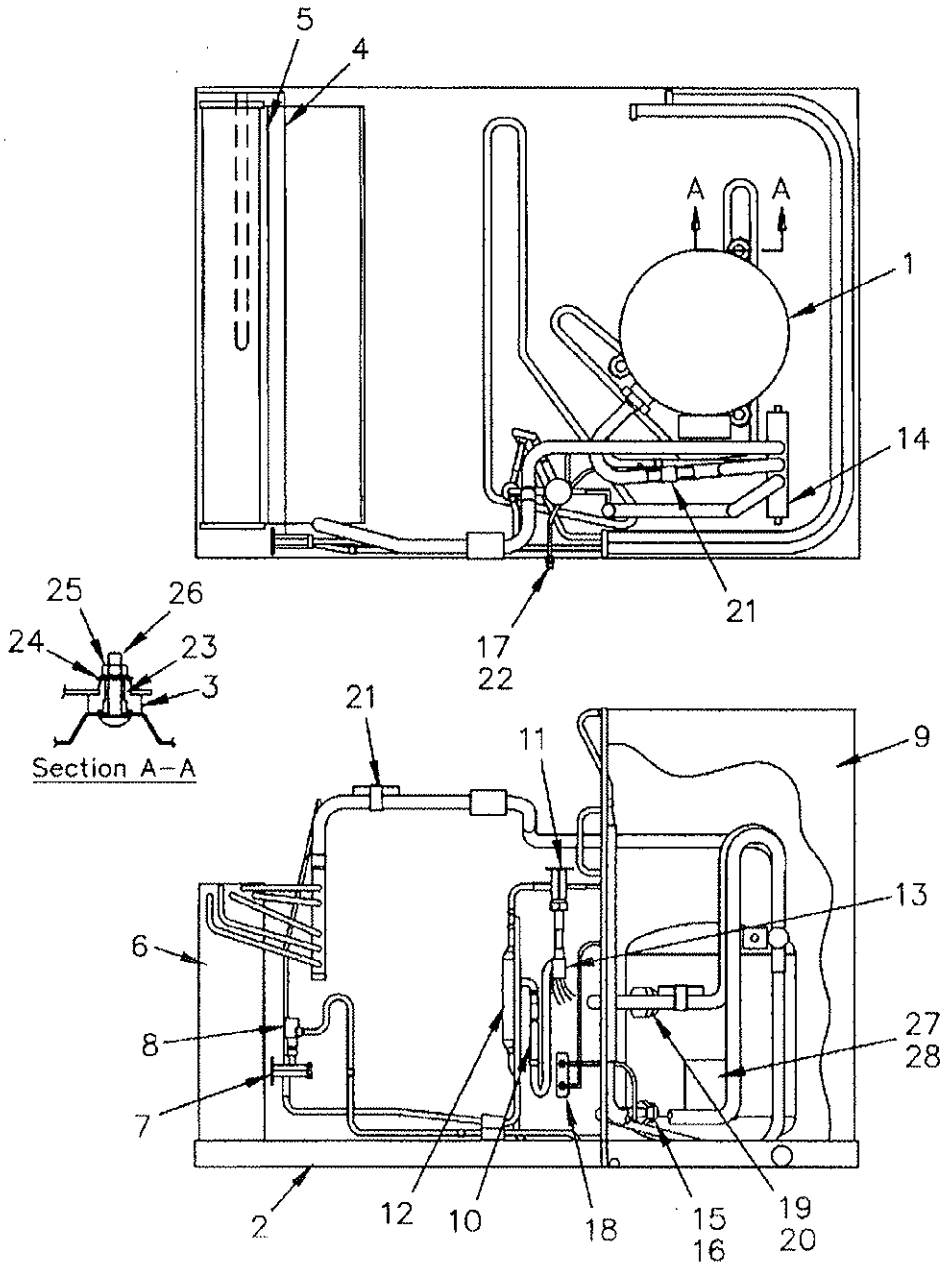


View is determined by facing Air Discharge.

Reference #	Part Number	Description	Qty
*	INS00298	INSULATOR;	2
*	SCR01000	SCREW; 6-20 B PH 1/2 S	2
*	SCR01009	SCREW; 10-16 A HXW 3/8 S	2
*	SCR01063	SCREW; 1/4-20 A HXW 3/4 SN	3
*	SEL00418	SEAL; 2.80 FLUID OZ. TUBE	0
1	HUS01310	HOUSING; BLOWER, LEFT HAND SIDE	1
2	MOT03006	MOTOR; 1/2 HP, 200-230/60/1, 1120 RPM, 39 FRAME, CCW, SLEEVE BEARING, 15 MFD CPT AT 370V	1
3	HUS01312	HOUSING; BLOWER, RIGHT HAND SIDE	1
4	CPT00665	CAPACITOR; 370V, 15 MFD, ROUND, W/O RESISTOR	1
5	HUS01313	HOUSING; WRAPPER, BLOWER	1
6	CMP00257	CLAMP; CABLE	1
7	BUS00314	BUSHING; SNAP	1
8	WHL00560	WHEEL; BLOWER	1
9	BOF00029	BLOCKOFF;BLOWER	1
10	BAF00110	BAFFLE;EVAPORATOR	1
11	BUS00315	BUSHING;SNAP	2
12	BOF00030	BLOCKOFF;BLOWER	1
13	BRD00385	BOARD; TERMINAL, FAN, 24V, 1 POLE	2

Compressor & Coil Assembly 75002790 REV B

Typical illustration. Unit may not appear exactly as shown.

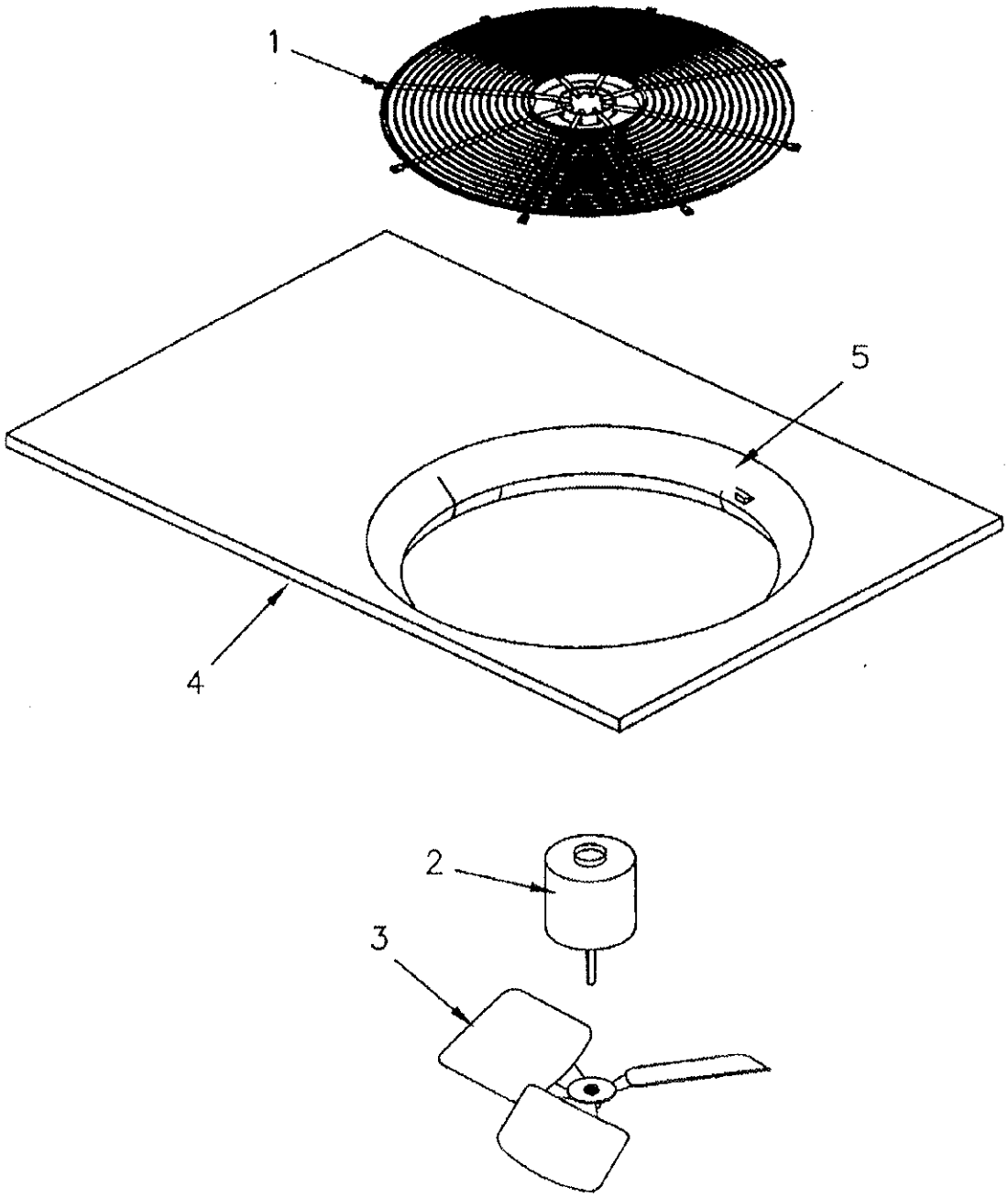


Reference #	Part Number	Description	Qty
*	CNT00913	CONTROL; DISCHARGE LINE THERMOSTAT, OPEN AT 105F, CLOSE AT 73F, SPST	1
*	DHY00179	DRIER; FILTER/SUCTION LINE, TYPE 45S7, 7/8 IN. ODF CONN (ASD45S7VV)	1
*	HTR04418	SEE PRIDE FOR DESCRIPTION	1
*	RES00171	RESISTOR; THERMISTOR, BLACK (OUTDOOR AIR SENSOR OR AMBIENT SENSOR)	1
*	SEN00266	SENSOR; COIL, YELLOW, WIRE LENGTHS ARE 73 IN .75 IN, INCLUDES RES00118	1
*	SPG00200	SPRING; SUMP HEATER	1
*	TUB10814	TUBE; ASSEMBLY, INDOOR EXPANSION VALVE	1
*	TUB10815	TUBE; ASSEMBLY, FLOW CONTROL	1
*	TUB10816	TUBE; ASSEMBLY, OUTDOOR EXPANSION VALVE	1
*	WIR03491	WIRE; ASSEMBLY, COMPRESSOR	1
1	COM03735	COMPRESSOR; GP373-GG1-G*, 3.1 HP NOMINAL, 200/230/60/1	1
3	MNT00479	MOUNT;VIBRATION ISOLATOR	3
4	PAN00898	PAN; DRAIN, PLASTIC, WITH GASKET, 31 X 6	1
5	GKT03404	GASKET; 29.00 X 1.50 X .19	1
6	COL11846	COIL; INDOOR, FLAT FIN	1
7	VAL04267	VALVE;EXPANSION, 3 TON, .375IN.ID INLET X.50IN.ID OUTLET	1
8	TUB10818	TUBE; ASSEMBLY, INDOOR DISTRIBUTOR	1
9	COL11847	COIL; OUTDOOR, FLAT FIN	1
10	VAL03522	VALVE; CHECK, .50 IN ID INLET X .50 IN OD OUTLET	2
11	VAL04999	VALVE; REFRIG, TXV, 1 1/2 TON, .50 ODS X .38 ODS, R-22 REFRIGERANT, CAPILLARY TUBE LENGTH: 30 INCH, SUPERHEAT: 50 PSIG	1
12	DHY00211	DRIER; FILTER/LIQUID LINE, TYPE 053S, 3/8 ODF	1
13	TUB10817	TUBE; ASSEMBLY, OUTDOOR DISTRIBUTOR	1
14	VAL07976	VALVE; REVERSING, 5 TON, 3/4 IN INLET X 7/8 IN OUTLET	1
15	NUT00671	NUT; SEAL, 1.75-12UNF-2B	1
16	SLV00062	SLEEVE; PLATED, 5/8IN.	1
17	VAL03522	VALVE; CHECK, .50 IN ID INLET X .50 IN OD OUTLET	4
18	BRK03006	SEE PRIDE FOR DESCRIPTION	1
19	NUT00679	NUT; SEAL, 1.25-12UNF-2B	1
20	SLV00067	SLEEVE; PLATED, 7/8IN.	1
21	CLP00181	CLIP; BULB	2
21	CLP00184	CLIP; TDL	1
21	CLP00223	CLIP; BULB	1
22	COR00046	CORE; VALVE	4
23	BLT00809	BOLT; CARRIAGE, 5/16-18 X 1-3/4	3
24	NUT00668	NUT; PALLET	3
25	WAS00638	WASHER; FLAT, 5/16"	3
26	NUT00669	NUT; MACHINE	3
27	GRM00103	GROMMET; SPLIT, COMPRESSOR	1
28	COV01011	COVER;TERMINAL BOX	1

Fan

75006139 REV A

Typical illustration. Unit may not appear exactly as shown.

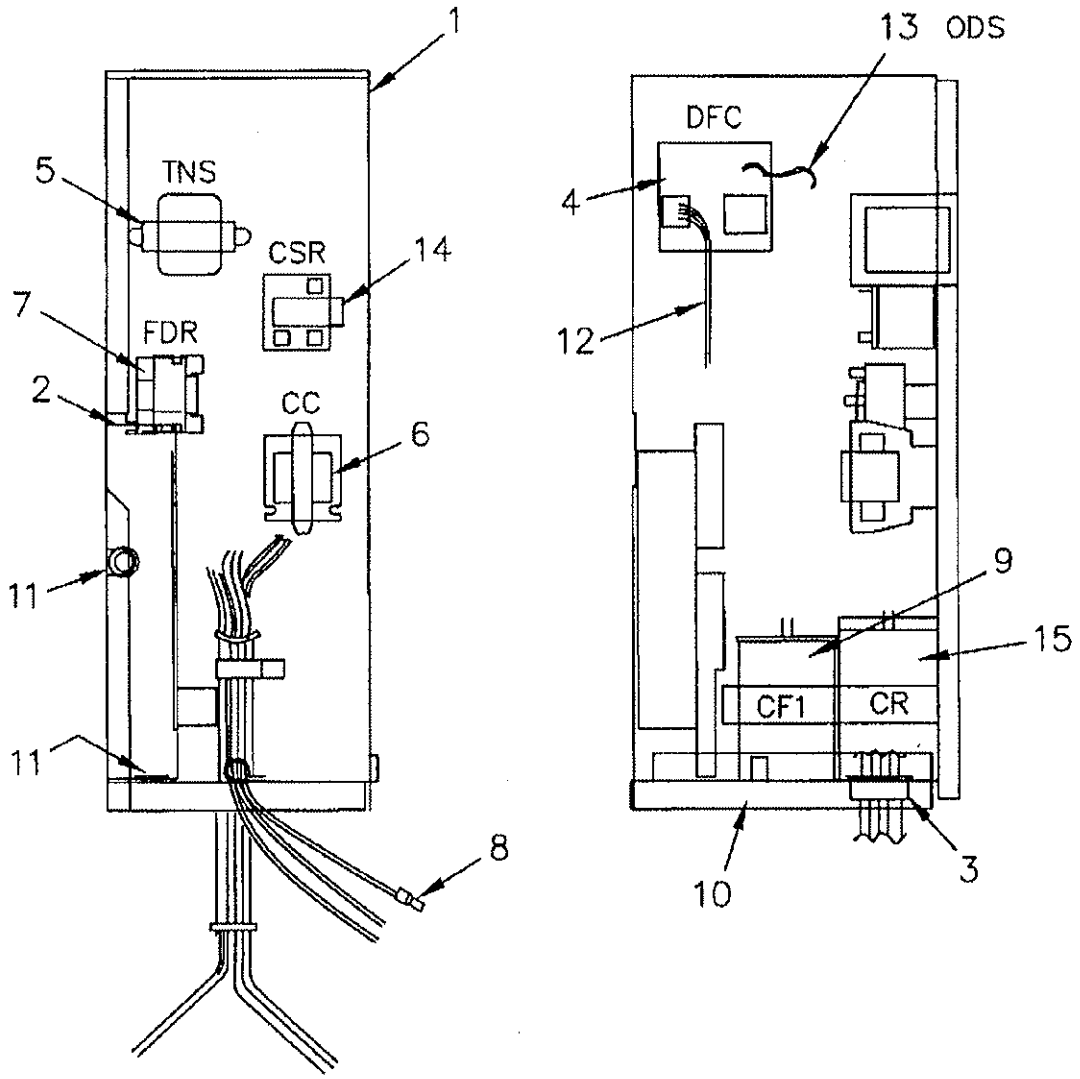


Reference #	Part Number	Description	Qty
1	GRD01410	GUARD; FAN, WIRE, 22.35 MOUNTING DIA	1
2	MOT10409	MOTOR; 1/5 HP, 200-230/50-60/1, 1080 RPM, 48 FRAME, CW, SLEEVE BEARING, 5 MFD CPT AT 370V, SHAFT DOWN ORIENTATION	1
3	FAN03053	FAN; 3 BLADE, 18 IN DIA, 29 DEG PITCH, .5 IN BORE, CW	1
4	COV03168	COVER; TOP, 44.10 X 31.72	1
5	ORF01322	ORIFICE; INLET, PLASTIC, 22.35 MOUNTING DIA	1

Controls

75006140 REV A

Typical illustration. Unit may not appear exactly as shown.

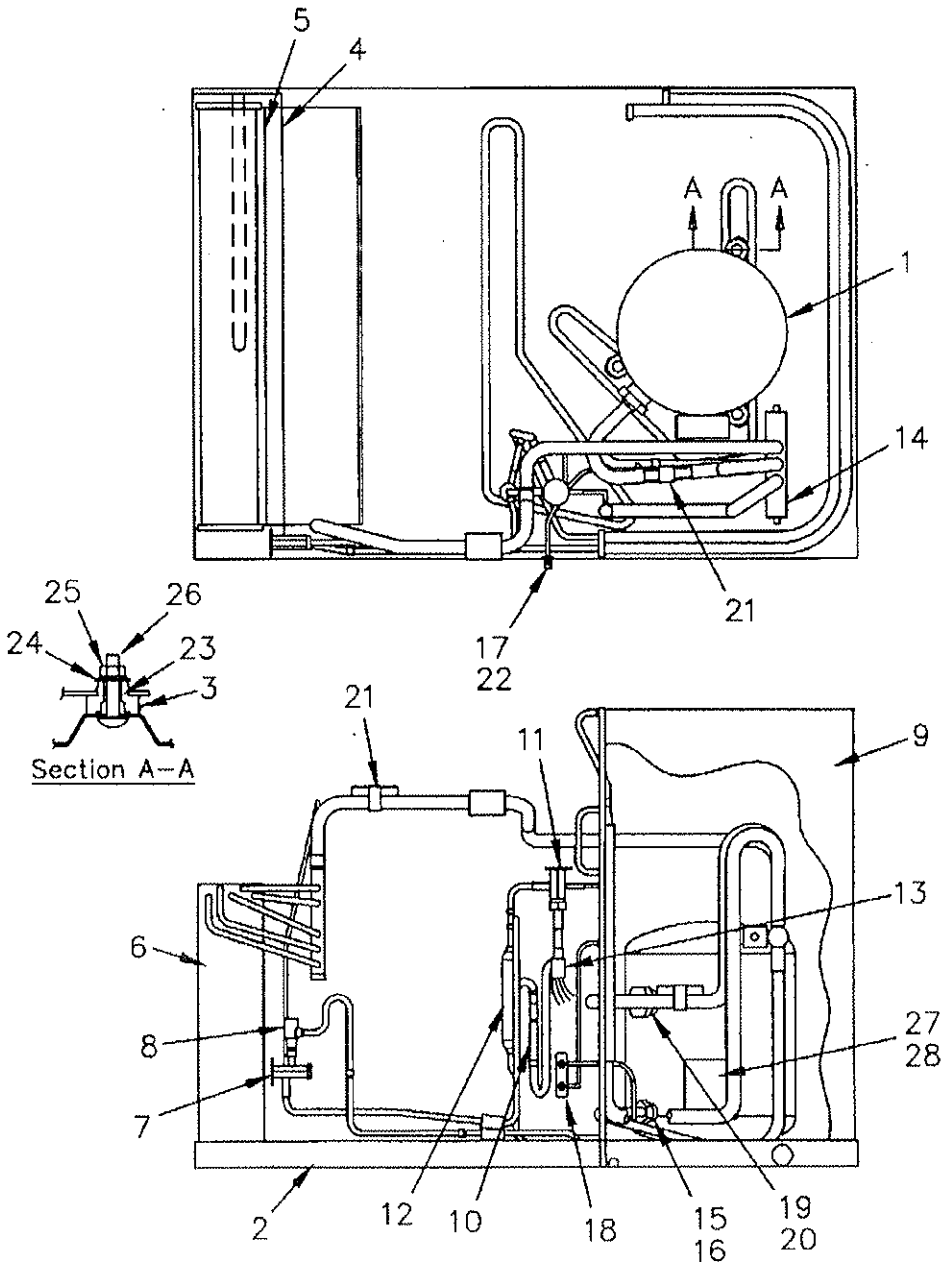


LEGEND	
CC	Compressor Contactor Coil
CF	Fan Motor Capacitor
CR	Compressor Start Capacitor
CSR	Compressor Start Relay
DFC	Defrost Control
FDR	Fan Delay Relay
ODS	Outdoor Ambient Sensor
TNS	Transformer

Reference #	Part Number	Description	Qty
*	SCR01022	SCREW; 6-20 B HXW 3/4 S	5
1	BOX01098	BOX; CONTROL	1
2	BOX01099	BOX; LVTB ENCLOSURE	1
3	BUS00318	BUSHING; SNAP	1
4	CNT02516	CONTROL; DEFROST	1
5	TRR01604	TRANSFORMER; 50VA, 208/240V PRI, 24V SEC	1
6	CTR01010	CONTACTOR; 35 AMP, 1 POLE W/ SHUNT, 24V COIL	1
7	RLY01169	RELAY; TIME DELAY, DPST, 80 SEC, 6A, 24VAC COIL	1
8	CON00241	CONNECTOR; WIRE	1
9	CPT00668	CAPACITOR; DUAL, 40/5 MFD, 440V, ROUND, W/O RESISTOR	1
10	BAS00501	BASE;CONTROL ASSEMBLY	1
11	BUS00317	BUSHING; SNAP	2
12	WIR03236	WIRE; HARNESS, 9 PIN	1
13	RES00171	RESISTOR; THERMISTOR, BLACK (OUTDOOR AIR SENSOR OR AMBIENT SENSOR)	1
14	RLY01570	RELAY; START, SPST, 35A COIL: 239V PICK UP, 135V DROP OUT	1
15	CPT00091	CAPACITOR; START, 135 MFD, 330V, ROUND, W/ RESISTOR	1

Compressor & Coil Assembly 75002790 REV B

Typical illustration. Unit may not appear exactly as shown.

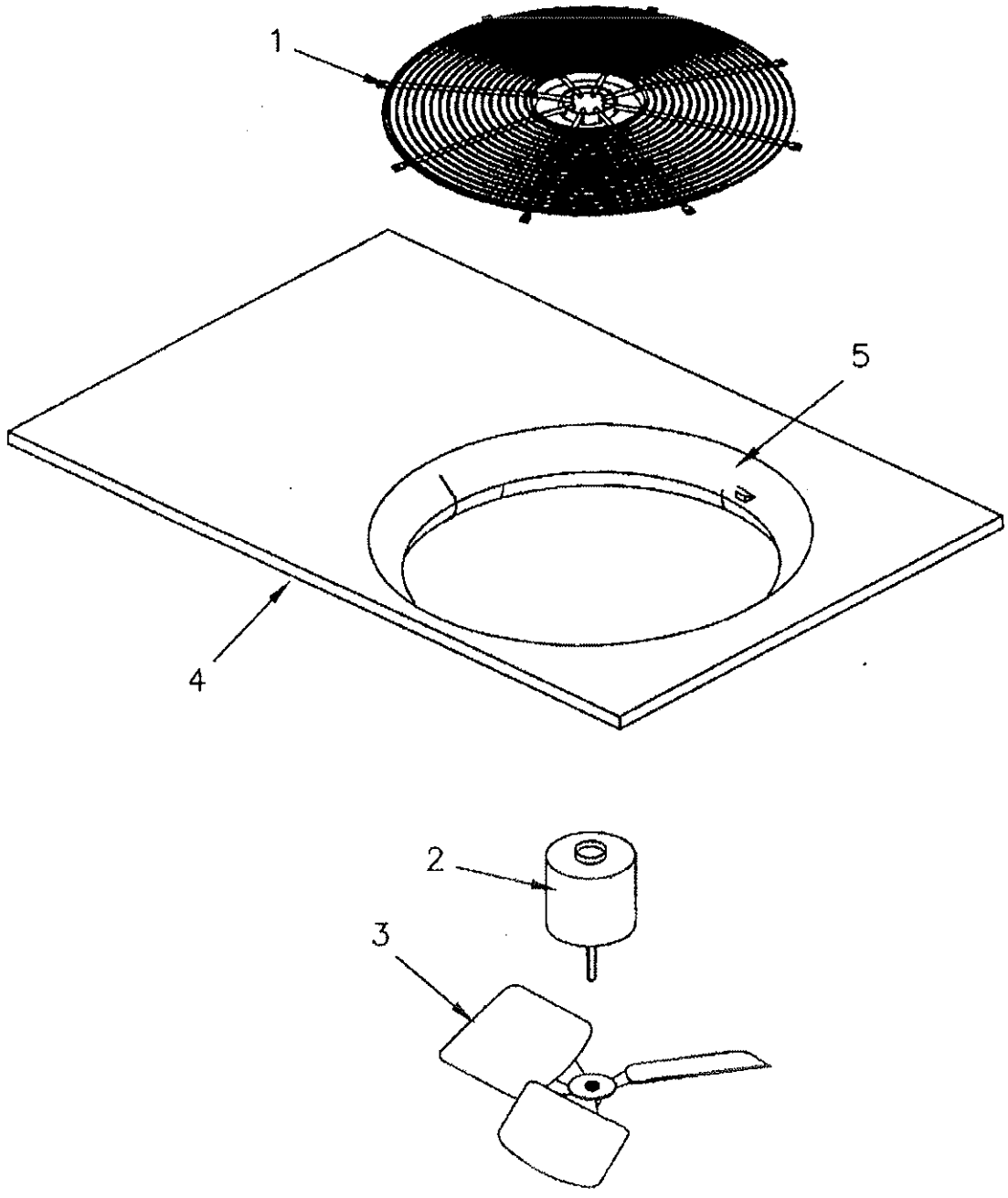


Reference #	Part Number	Description	Qty
*	CNT00913	CONTROL; DISCHARGE LINE THERMOSTAT, OPEN AT 105F, CLOSE AT 73F, SPST	1
*	DHY00179	DRIER; FILTER/SUCTION LINE, TYPE 45S7, 7/8 IN. ODF CONN (ASD45S7VV)	1
*	HTR04418	SEE PRIDE FOR DESCRIPTION	1
*	RES00171	RESISTOR; THERMISTOR, BLACK (OUTDOOR AIR SENSOR OR AMBIENT SENSOR)	1
*	SEN00266	SENSOR; COIL, YELLOW, WIRE LENGTHS ARE 73 IN .75 IN, INCLUDES RES00118	1
*	SPG00200	SPRING; SUMP HEATER	1
*	TUB10814	TUBE; ASSEMBLY, INDOOR EXPANSION VALVE	1
*	TUB10815	TUBE; ASSEMBLY, FLOW CONTROL	1
*	TUB10816	TUBE; ASSEMBLY, OUTDOOR EXPANSION VALVE	1
*	WIR03491	WIRE; ASSEMBLY, COMPRESSOR	1
1	COM03735	COMPRESSOR; GP373-GG1-G*, 3.1 HP NOMINAL, 200/230/60/1	1
3	MNT00479	MOUNT;VIBRATION ISOLATOR	3
4	PAN00898	PAN; DRAIN, PLASTIC, WITH GASKET, 31 X 6	1
5	GKT03404	GASKET; 29.00 X 1.50 X .19	1
6	COL11846	COIL; INDOOR, FLAT FIN	1
7	VAL04267	VALVE;EXPANSION, 3 TON,.375IN.ID INLET X.50IN.ID OUTLET	1
8	TUB10818	TUBE; ASSEMBLY, INDOOR DISTRIBUTOR	1
9	COL11847	COIL; OUTDOOR, FLAT FIN	1
10	VAL03522	VALVE; CHECK, .50 IN ID INLET X .50 IN OD OUTLET	2
11	VAL04999	VALVE; REFRIG, TXV, 1 1/2 TON, .50 ODS X .38 ODS, R-22 REFRIGERANT, CAPILLARY TUBE LENGTH; 30 INCH, SUPERHEAT; 50 PSIG	1
12	DHY00211	DRIER; FILTER/LIQUID LINE, TYPE 053S, 3/8 ODF	1
13	TUB10817	TUBE; ASSEMBLY, OUTDOOR DISTRIBUTOR	1
14	VAL07976	VALVE; REVERSING, 5 TON, 3/4 IN INLET X 7/8 IN OUTLET	1
15	NUT00671	NUT; SEAL, 1.75-12UNF-2B	1
16	SLV00062	SLEEVE; PLATED, 5/8IN.	1
17	VAL03522	VALVE; CHECK, .50 IN ID INLET X .50 IN OD OUTLET	4
18	BRK03006	SEE PRIDE FOR DESCRIPTION	1
19	NUT00679	NUT; SEAL, 1.25-12UNF-2B	1
20	SLV00067	SLEEVE; PLATED, 7/8IN.	1
21	CLP00181	CLIP; BULB	2
21	CLP00184	CLIP; TDL	1
21	CLP00223	CLIP; BULB	1
22	COR00046	CORE; VALVE	4
23	BLT00809	BOLT; CARRIAGE, 5/16-18 X 1-3/4	3
24	NUT00668	NUT; PALLET	3
25	WAS00638	WASHER; FLAT, 5/16"	3
26	NUT00669	NUT; MACHINE	3
27	GRM00103	GROMMET; SPLIT, COMPRESSOR	1
28	COV01011	COVER;TERMINAL BOX	1

Fan

75006139 REV A

Typical illustration. Unit may not appear exactly as shown.

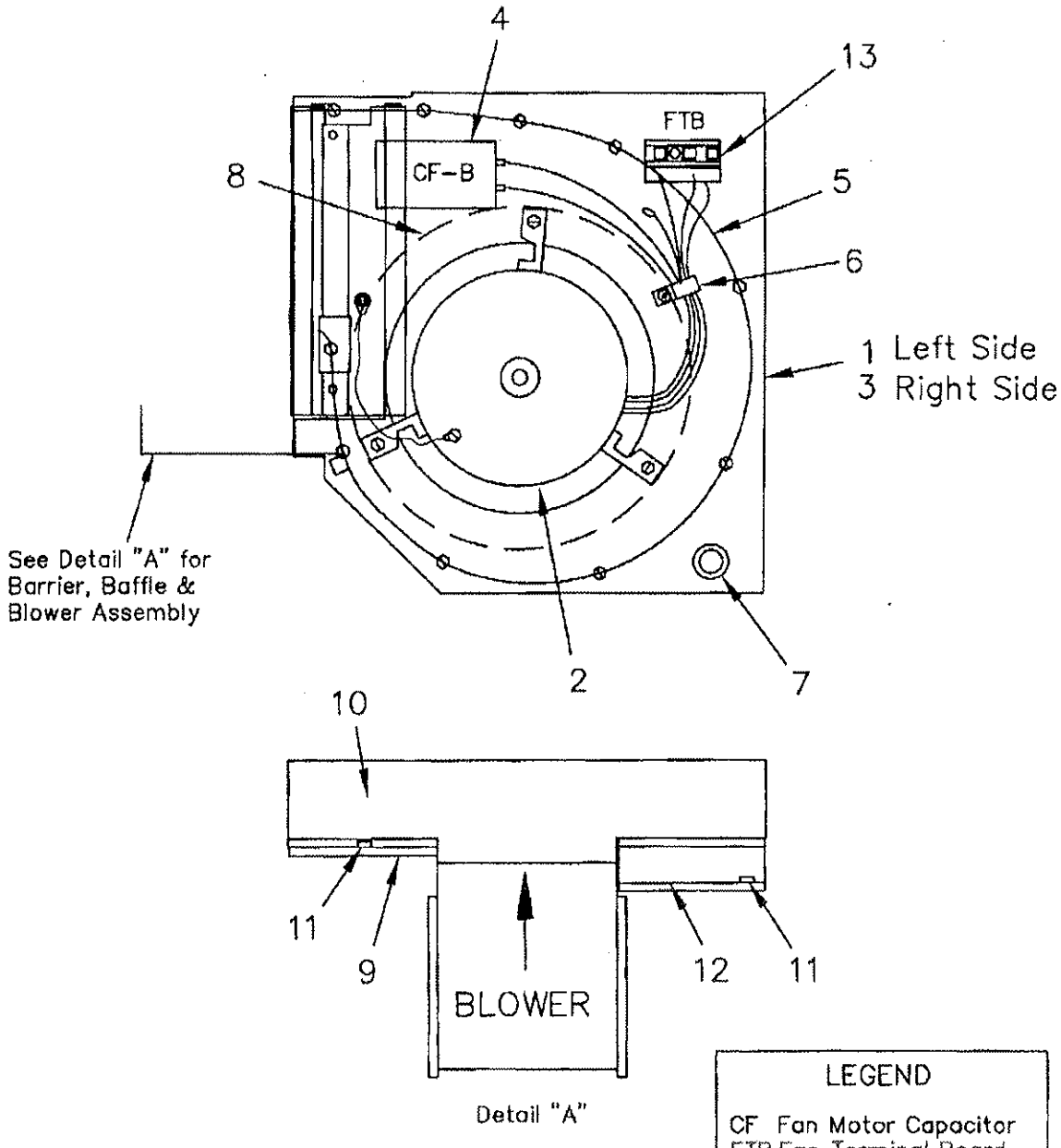


Reference #	Part Number	Description	Qty
1	GRD01410	GUARD; FAN, WIRE, 22.35 MOUNTING DIA	1
2	MOT10409	MOTOR; 1/5 HP, 200-230/50-60/1, 1080 RPM, 48 FRAME, CW, SLEEVE BEARING, 5 MFD CPT AT 370V, SHAFT DOWN ORIENTATION	1
3	FAN03053	FAN; 3 BLADE, 18 IN DIA, 29 DEG PITCH, .5 IN BORE, CW	1
4	COV03168	COVER; TOP, 44.10 X 31.72	1
5	ORF01322	ORIFICE; INLET, PLASTIC, 22.35 MOUNTING DIA	1

Blower Assembly

75000336 REV B

Typical illustration. Unit may not appear exactly as shown.



LEGEND

CF Fan Motor Capacitor
FTB Fan Terminal Board

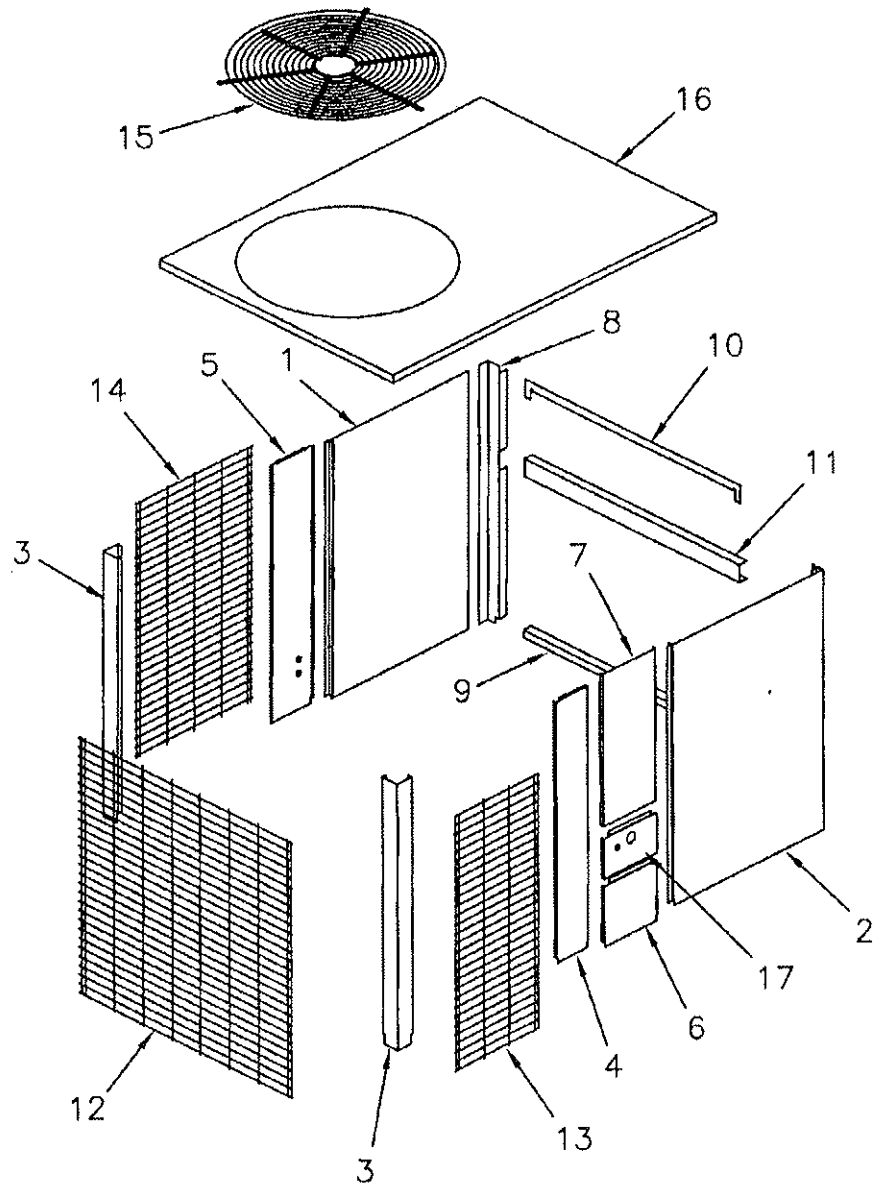
View is determined by facing Air Discharge.

Reference #	Part Number	Description	Qty
*	INS00298	INSULATOR;	2
*	SCR01000	SCREW; 6-20 B PH 1/2 S	2
*	SCR01009	SCREW; 10-16 A HXW 3/8 S	2
*	SCR01063	SCREW; 1/4-20 A HXW 3/4 SN	3
*	SEL00418	SEAL; 2.80 FLUID OZ. TUBE	0
1	HUS01310	HOUSING; BLOWER, LEFT HAND SIDE	1
2	MOT03006	MOTOR; 1/2 HP, 200-230/60/1, 1120 RPM, 39 FRAME, CCW, SLEEVE BEARING, 15 MFD CPT AT 370V	1
3	HUS01312	HOUSING; BLOWER, RIGHT HAND SIDE	1
4	CPT00665	CAPACITOR; 370V, 15 MFD, ROUND, W/O RESISTOR	1
5	HUS01313	HOUSING; WRAPPER, BLOWER	1
6	CMP00257	CLAMP; CABLE	1
7	BUS00314	BUSHING; SNAP	1
8	WHL00560	WHEEL; BLOWER	1
9	BOF00029	BLOCKOFF;BLOWER	1
10	BAF00110	BAFFLE;EVAPORATOR	1
11	BUS00315	BUSHING;SNAP	2
12	BOF00030	BLOCKOFF;BLOWER	1
13	BRD00385	BOARD; TERMINAL, FAN, 24V, 1 POLE	2

Cabinetry

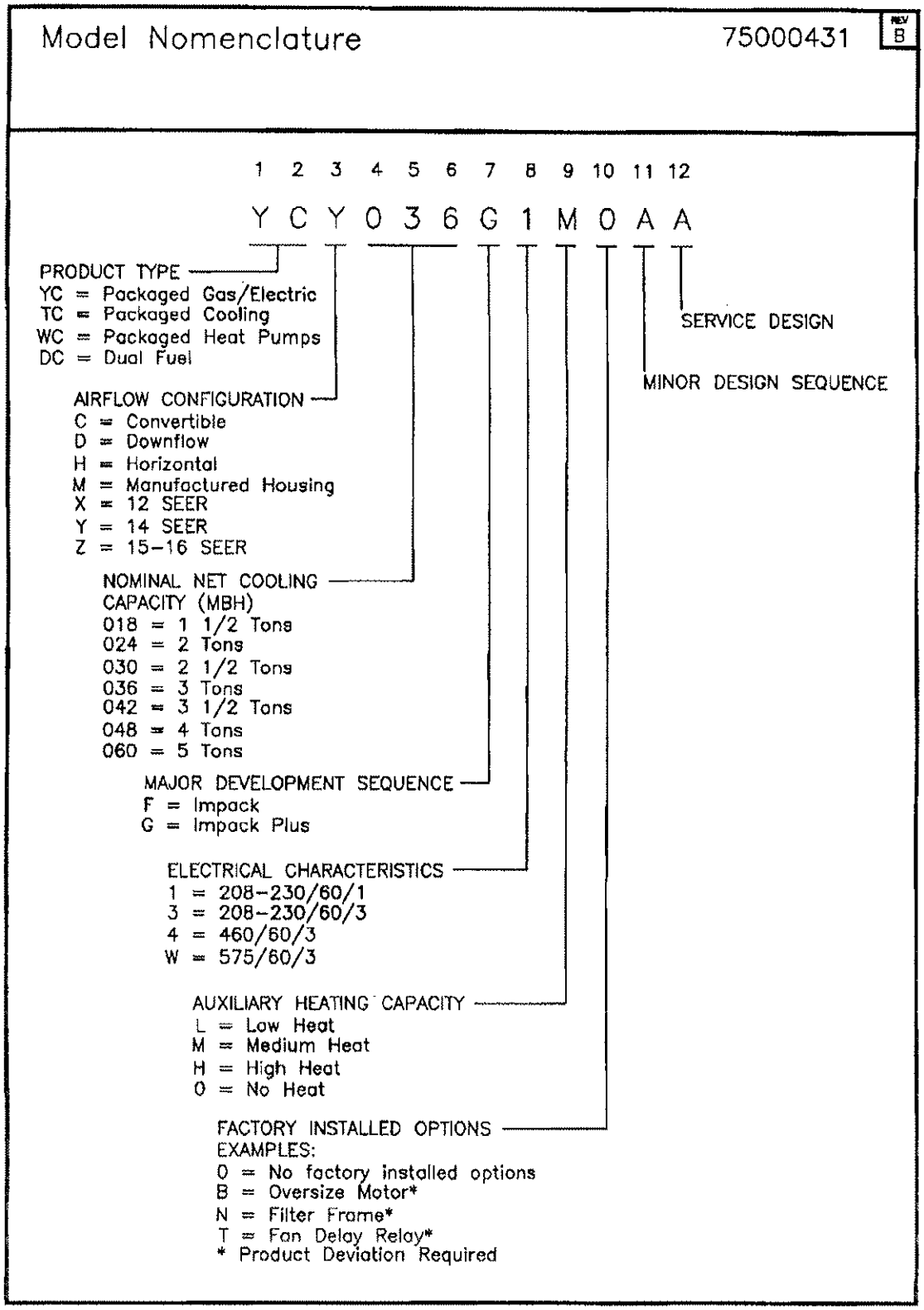
75006660 REV A

Typical illustration. Unit may not appear exactly as shown.



Reference #	Part Number	Description	Qty
*	PAI00074	PAINT; 12 OZ SPRAY, SLATE GREY	1
*	PLT02732	PLATE; APPEARANCE NAMEPLATE, XE1200, 7.00 X 2.50	1
*	SCR00999	SCREW; 10-16 B HXW 3/8 S	3
1	PNL14807	PANEL; INDOOR SIDE, 29.06 X 21.10	1
2	PNE06220	PANEL, SIDE, 28.87 X 22.07	1
3	PNE05909	PANEL, CORNER, 29.30 L	2
4	PNE05910	PANEL, REAR, 28.80 X 4.44	1
5	PNL14827	PANEL; SERVICE VALVE, 28.80 X 7.12	1
6	PNL14993	PANEL; 7.08 X 4.00	1
7	PNL14995	PANEL; CONTROL, 16.83 X 7.08	1
8	PNE06221	PANEL, CORNER, 28.87 X 2.48 X 1.94	1
9	ANG00176	ANGLE; DUCT	1
10	ANG00899	ANGLE;	1
11	CNL00047	CHANNEL;	1
12	GRD01419	GUARD; COIL, 28.10 X 28.00, BLACK	1
13	GRD01418	GUARD; COIL, WIRE, 28.60 X 11.34, BLACK	1
14	GRD01417	GUARD; COIL, WIRE, 28.60 X 15.69, BLACK	1
15	GRD01410	GUARD; FAN, WIRE, 22.35 MOUNTING DIA	1
16	COV03168	COVER; TOP, 44.10 X 31.72	1
17	PNL14994	PANEL; 8.97 X 7.08	1

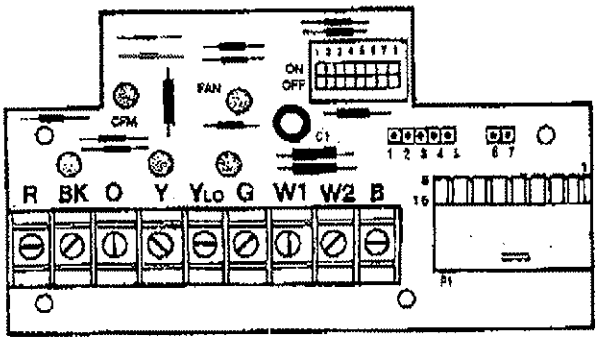
Reference #	Part Number	Description	Qty
*	GKT01533	GASKET; FITTING, TEFLON, SIZE 1.25-12	1
*	GKT01534	GASKET; FITTING, TEFLON, SIZE 1.75-12	1
*	KIT01163	KIT; STUB TUBE, SIZE 1.25-12, FOR 5/8 IN TUBE SIZE	1
*	KIT01166	KIT; STUB TUBE, SIZE 1.75-12, 90 DEG ANGLE FITTING, FOR 7/8 IN TUBE SIZE	1
*	KIT01167	KIT; STUB TUBE, SIZE 1.25-12, W/ 90 DEG ELL, FOR 1/2, 3/8, 5/8 IN, 3/4 TUBE SIZE	1
*	KIT01168	KIT; STUB TUBE, SIZE 1.75-12, FOR 7/8 IN TUBE SIZE	1
*	KIT01169	KIT; STUB TUBE, SIZE 1.75-12, W/ 90 DEG ELL, FOR 3/4, 7/8 IN TUBE SIZE	1


Model Nomenclature
75000431
REV B
1 2 3 4 5 6 7 8 9 10 11 12
Y C Y 0 3 6 G 1 M 0 A A
PRODUCT TYPE
YC = Packaged Gas/Electric
TC = Packaged Cooling
WC = Packaged Heat Pumps
DC = Dual Fuel
AIRFLOW CONFIGURATION
C = Convertible
D = Downflow
H = Horizontal
M = Manufactured Housing
X = 12 SEER
Y = 14 SEER
Z = 15-16 SEER
NOMINAL NET COOLING CAPACITY (MBH)
018 = 1 1/2 Tons
024 = 2 Tons
030 = 2 1/2 Tons
036 = 3 Tons
042 = 3 1/2 Tons
048 = 4 Tons
060 = 5 Tons
MAJOR DEVELOPMENT SEQUENCE
F = Impack
G = Impack Plus
ELECTRICAL CHARACTERISTICS
1 = 208-230/60/1
3 = 208-230/60/3
4 = 460/60/3
W = 575/60/3
AUXILIARY HEATING CAPACITY
L = Low Heat
M = Medium Heat
H = High Heat
0 = No Heat
FACTORY INSTALLED OPTIONS
EXAMPLES:
0 = No factory installed options
B = Oversize Motor*
N = Filter Frame*
T = Fan Delay Relay*
* Product Deviation Required
MINOR DESIGN SEQUENCE
SERVICE DESIGN

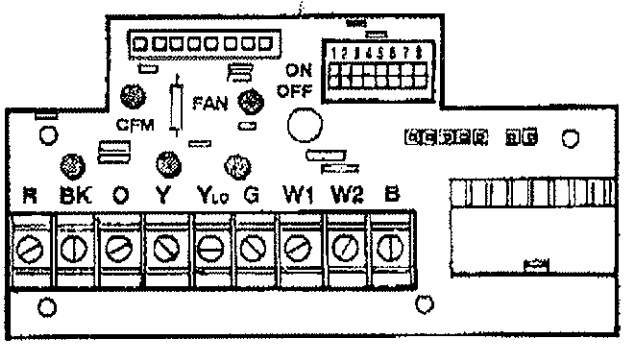
MOB-42HP VS Motor

Quick Check Motor Will Not Run

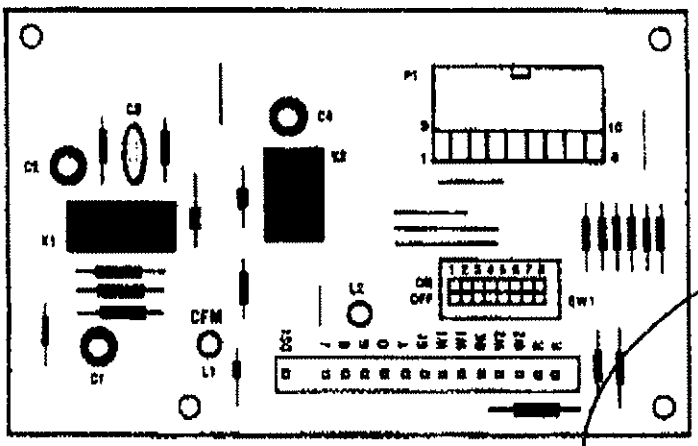
MOTOR CONTROL BOARDS



RETRO FIT KIT – CNT 1654



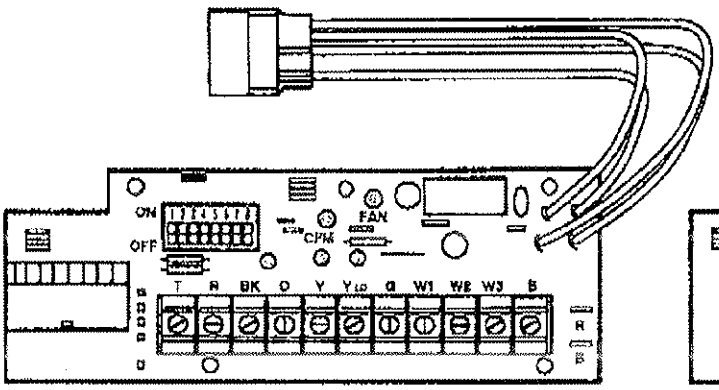
FURNACE – CNT 1537



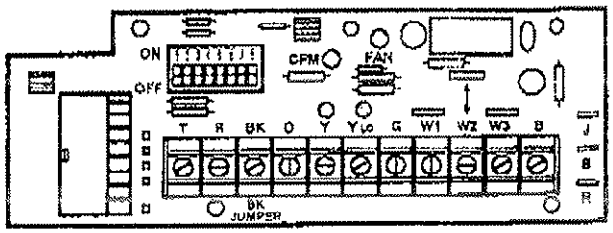
PACKAGE UNIT
BRD 0986

Your Board For S. V. Motor

AIR HANDLER



CNT 1538



CNT 1866

Quick Check Motor Will Not Run

ICM-2 QUICK CHECK

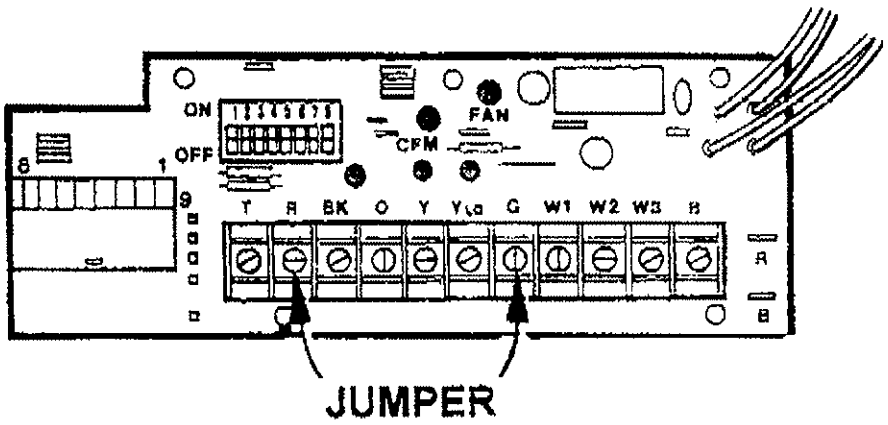
Blower Motor Will Not Run

1. Jumper 24 Volt A.C "R" Terminal to "G" terminal on the Low Voltage Terminal board.

Does motor run?

NO: Go to step #2.

YES: Motor runs, check thermostat and thermostat wire.



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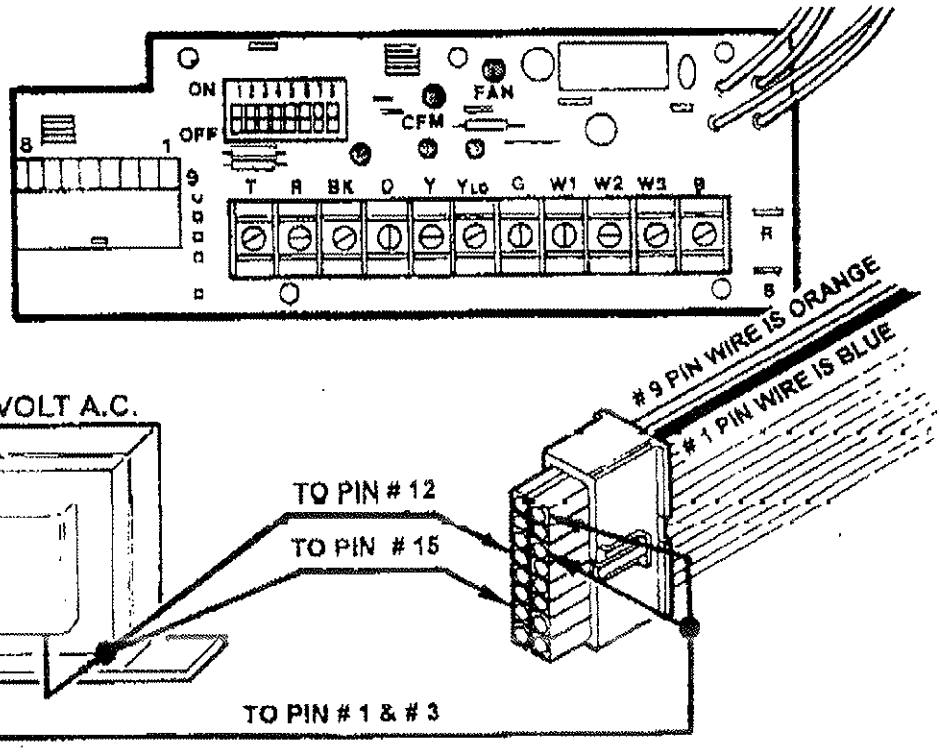
2. Unplug 16 wire low voltage harness from the motor control board. Jumper 24 Volts A. C, to pins #12, #15 and common pins #1 and #3.

Does the motor run?

NO: Go to step #3.

YES: Replace the motor control board on Air handlers, or Package units.
On a furnace go to step #5.



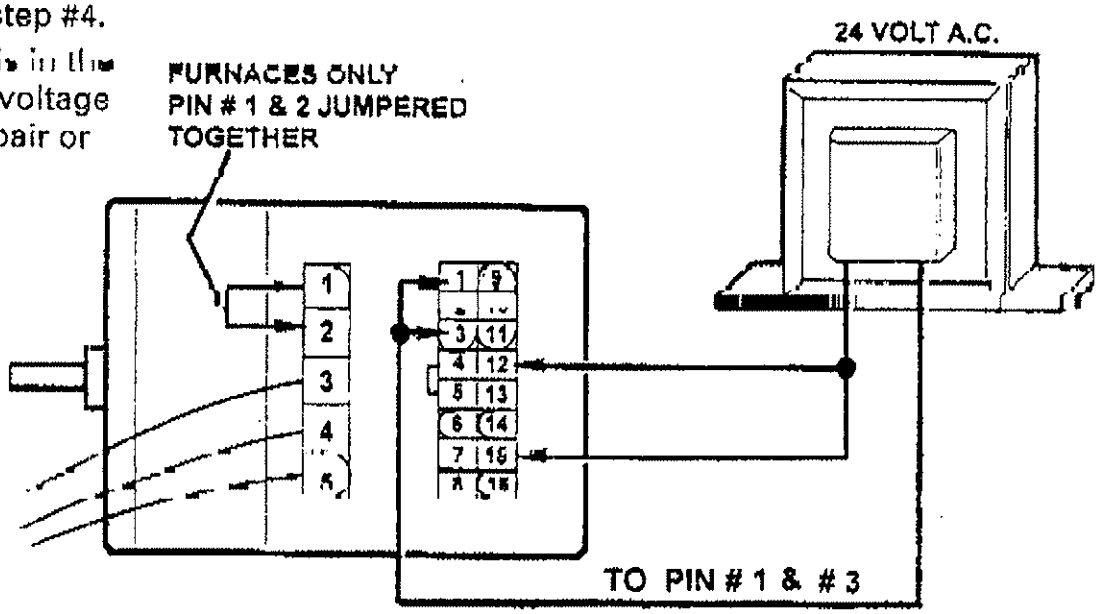
Quick Check Motor Will Not Run

3. Unplug 16 wire low voltage harness from the motor. Jumper 24 Volts A.C. to motor low voltage plug pins #12 and #15 and pins #1 and #2 which are common.

Does motor run?

NO: Go to step #4.

YES Fault is in the 16 wire low voltage harness. Repair or replace it.



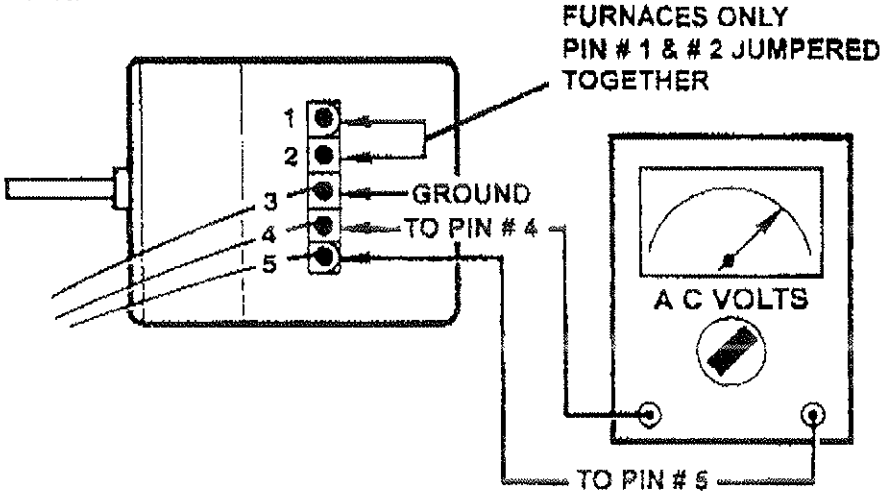
4. Is the line voltage to the motor high voltage power plug pin #4 and pin #5 correct?

Furnace ICM-2 motor correct voltage is 120 Volts A.C. and there must be a jumper wire in this plug between pins #1 and #2.

Air handler ICM-2 motor correct voltage is 220 volts A.C.

NO: Correct line voltage fault.

YES: Live voltage correct and motor will not run. Replace motor.



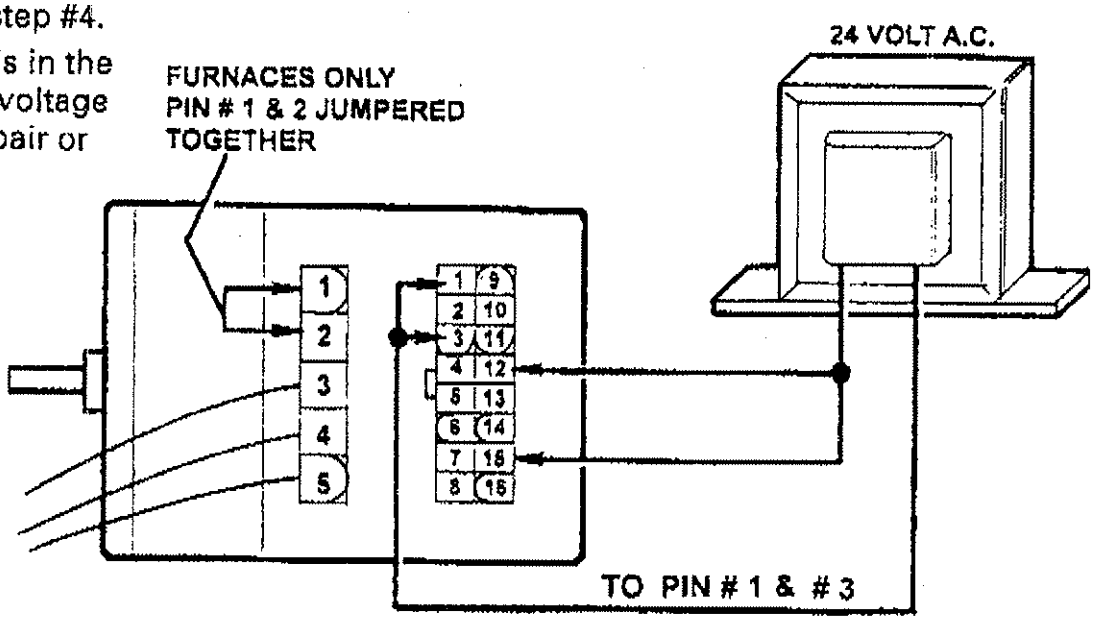
Quick Check Motor Will Not Run

3. Unplug 16 wire low voltage harness from the motor. Jumper 24 Volts A.C. to motor low voltage plug pins #12 and #15 and pins #1 and #3 which are common.

Does motor run?

NO: Go to step #4.

YES: Fault is in the 16 wire low voltage harness. Repair or replace it.



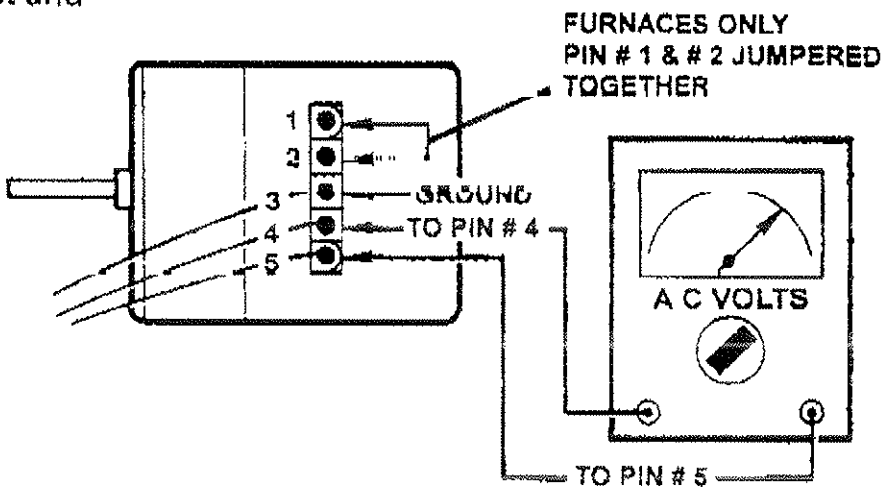
4. Is the line voltage to the motor high voltage power plug pin #4 and pin #5 correct?

Furnace ICM-2 motor correct voltage is 120 Volts A.C. and there must be a jumper wire in this plug between pins #1 and #2.

Air handler ICM-2 motor correct voltage is 220 volts A.C.

NO: Correct line voltage fault.

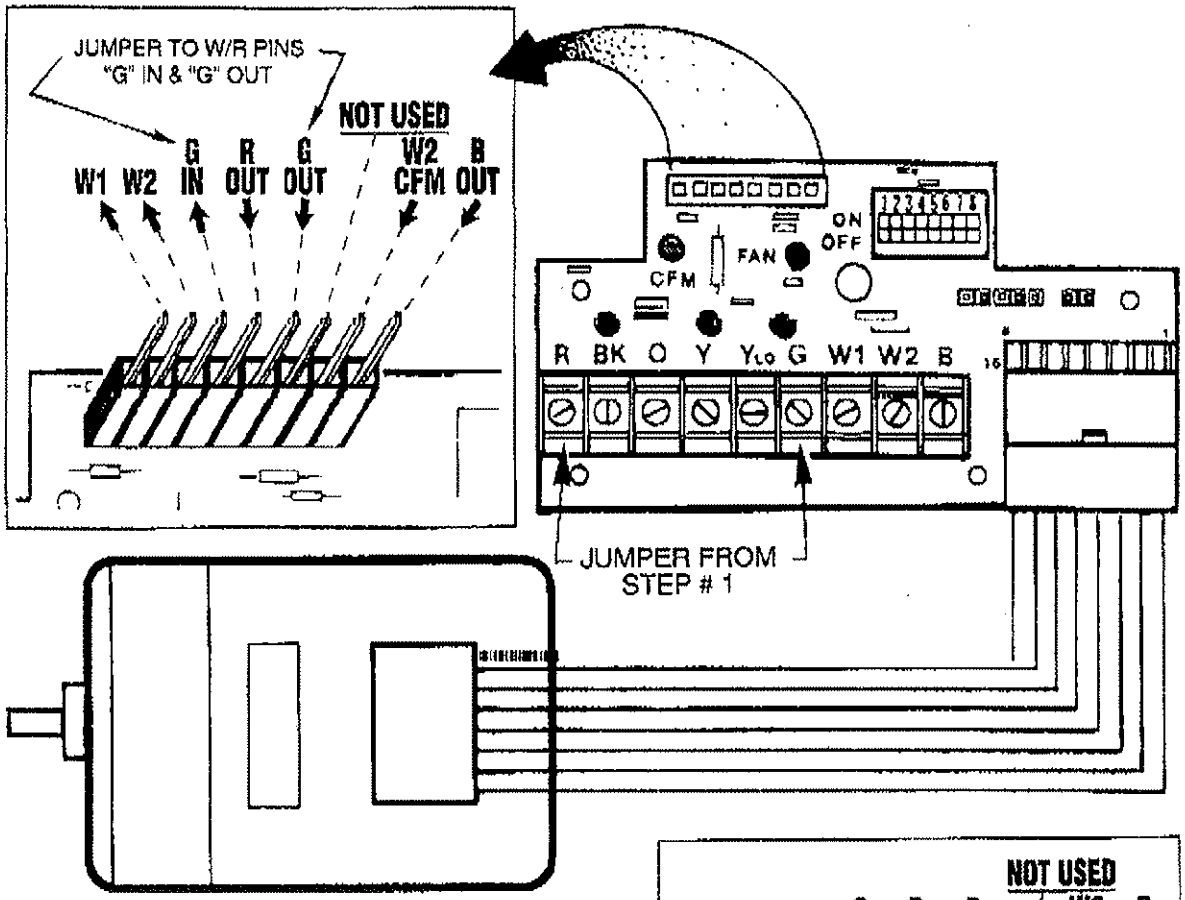
YES: Live voltage correct and motor will not run. Replace motor.



Quick Check Motor Will Not Run

5. Plug the 16 wire low voltage harness from the motor back into the motor control board. Jumper "G" in pin to "G" out pin of the White-Rodgers module which plugs into the low voltage motor control board Does the motor run?

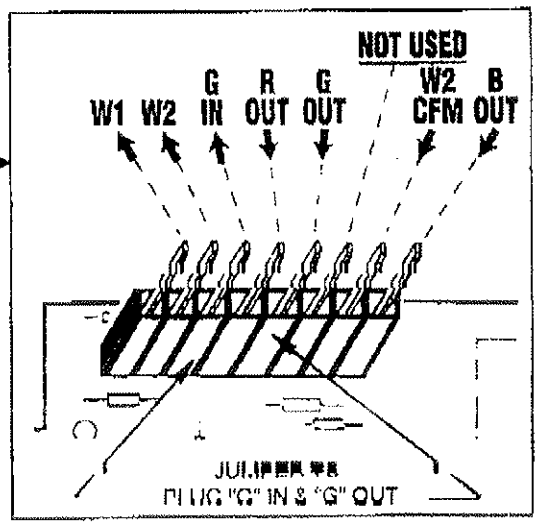
YES: Replace White Rodgers ignition module.



NO: Move the jumper to the metal part of the low voltage motor control board plug. Does the motor run?

YES: White-Rodgers ignition module pins not making contact with motor control board plugs. Clean pins & plugs by unplugging and plugging board onto pins or replace both if necessary.

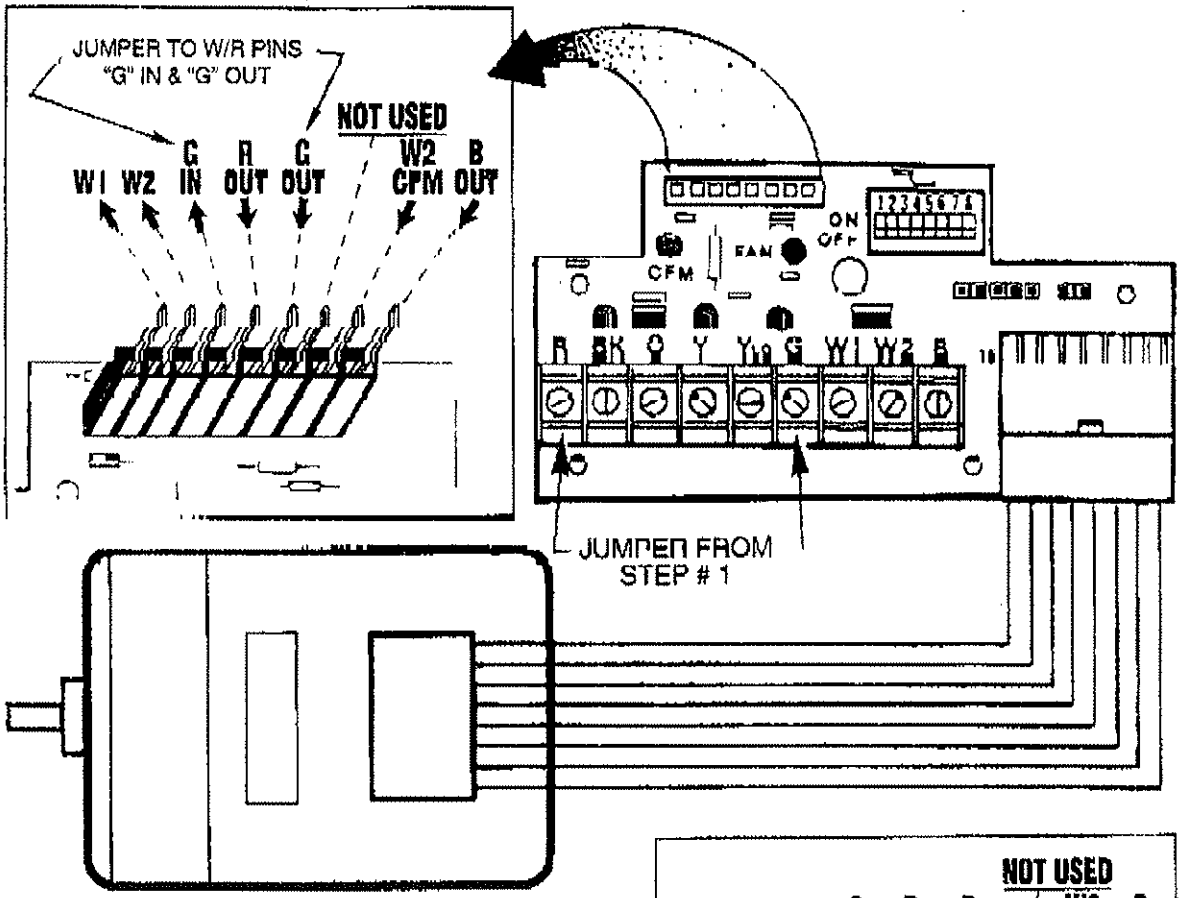
NO: Repair or replace the motor control board.



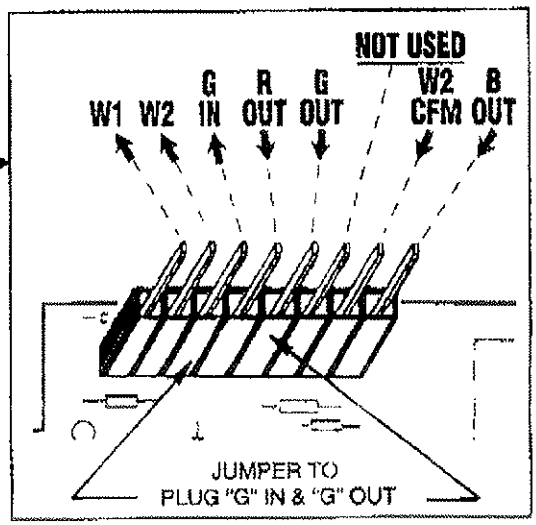
Quick Check Motor Will Not Run

5. Plug the 16 wire low voltage harness from the motor back into the motor control board. Jumper "G" in pin to "G" out pin of the White-Rodgers module which plugs into the low voltage motor control board Does the motor run?

YES: Replace White-Rodgers ignition module.



NO: Move the jumper to the metal part of the low voltage motor control board plug. Does the motor run?



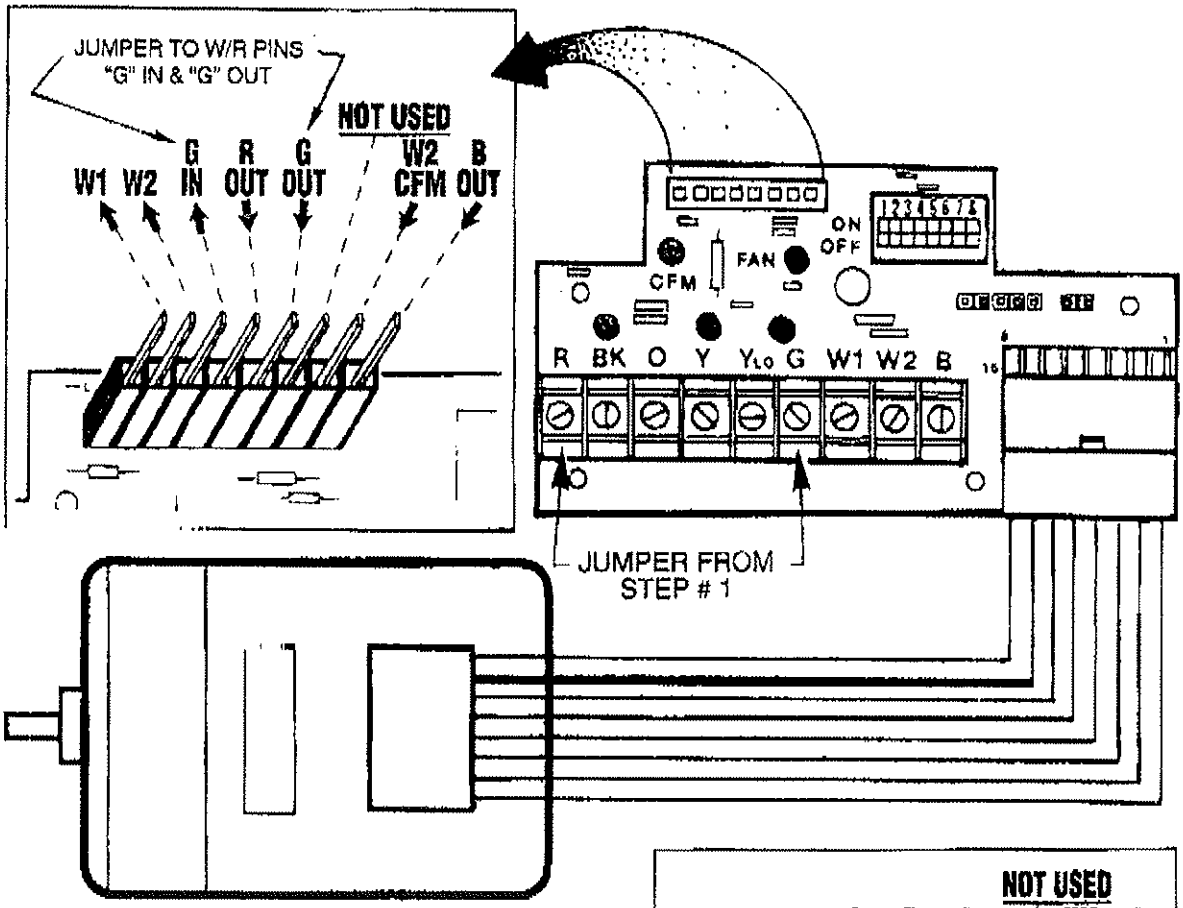
YES: White-Rodgers ignition module pins not making contact with motor control board plugs. Clean pins & plugs by unplugging and plugging board onto pins or replace both if necessary.

NO: Repair or replace the motor control board.

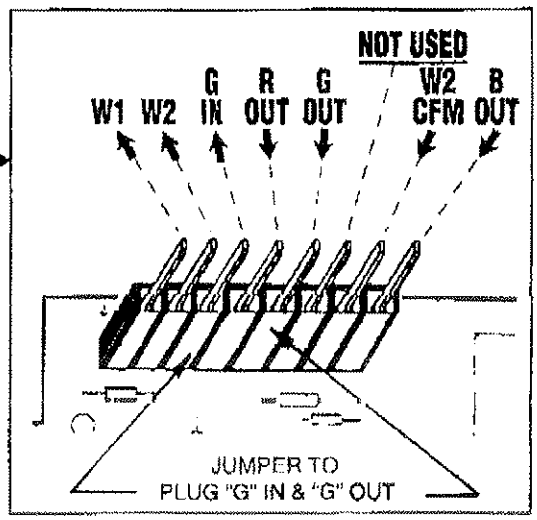
Quick Check Motor Will Not Run

5. Plug the 16 wire low voltage harness from the motor back into the motor control board. Jumper "G" in pin to "G" out pin of the White-Rodgers module which plugs into the low voltage motor control board Does the motor run?

YES: Replace White-Rodgers ignition module.



NO: Move the jumper to the metal part of the low voltage motor control board plug. Does the motor run?



YES: White-Rodgers ignition module pins not making contact with motor control board plugs. Clean pins & plugs by unplugging and plugging board onto pins or replace both if necessary.

NO: Repair or replace the motor control board.