

# Technical Support Manual

## Models

### Single Phase

<b>NPHAD24N1K2</b>	<b>PYMC24G2</b>
<b>NPHAD30N1K2</b>	<b>PYMC30G2</b>
<b>NPHAD36N1K2</b>	<b>PYMC36G2</b>
<b>NPHAD42N1K2</b>	<b>PYMC42G2</b>
<b>NPHAD47N1K2</b>	<b>PYMC48G2</b>
<b>NPHAD60N1K3</b>	<b>PYMC60G2</b>

## Single Package Heat Pumps

Save This Manual For Future Reference

## ELECTRIC POWER REQUIREMENTS / REFRIGERANT CHARGE

All units 208/230 nominal volts, single phase, 60Hz.  
Minimum operating volts 187, Maximum voltage 253. Use copper wire ONLY.

MODEL	TOTAL AMPS	MINIMUM CIRCUIT AMPACITY	MAXIMUM FUSE OR HACR BREAKER SIZE (AMPS)	TIME DELAY FUSE SIZE (AMPS)	DISCONNECT SWITCH SIZE (AMPS)	REFRIG. CHARGE R-22/OZ.
<b>1Ø Units</b>						
2 TON	16.9	20.2	30	25	30	120
2 <sup>1</sup> / <sub>2</sub> TON	19.2	23.0	35	30	30	130
3 TON	22.9	27.4	45	35	60	135
3 <sup>1</sup> / <sub>2</sub> TON	26.2	31.4	50	40	60	240
4 TON	30.4	36.3	60	45	60	265
5 TON	36.4	43.7	60	60	60	252

**NOTE: Refer to NEC tables for proper wire sizing.**











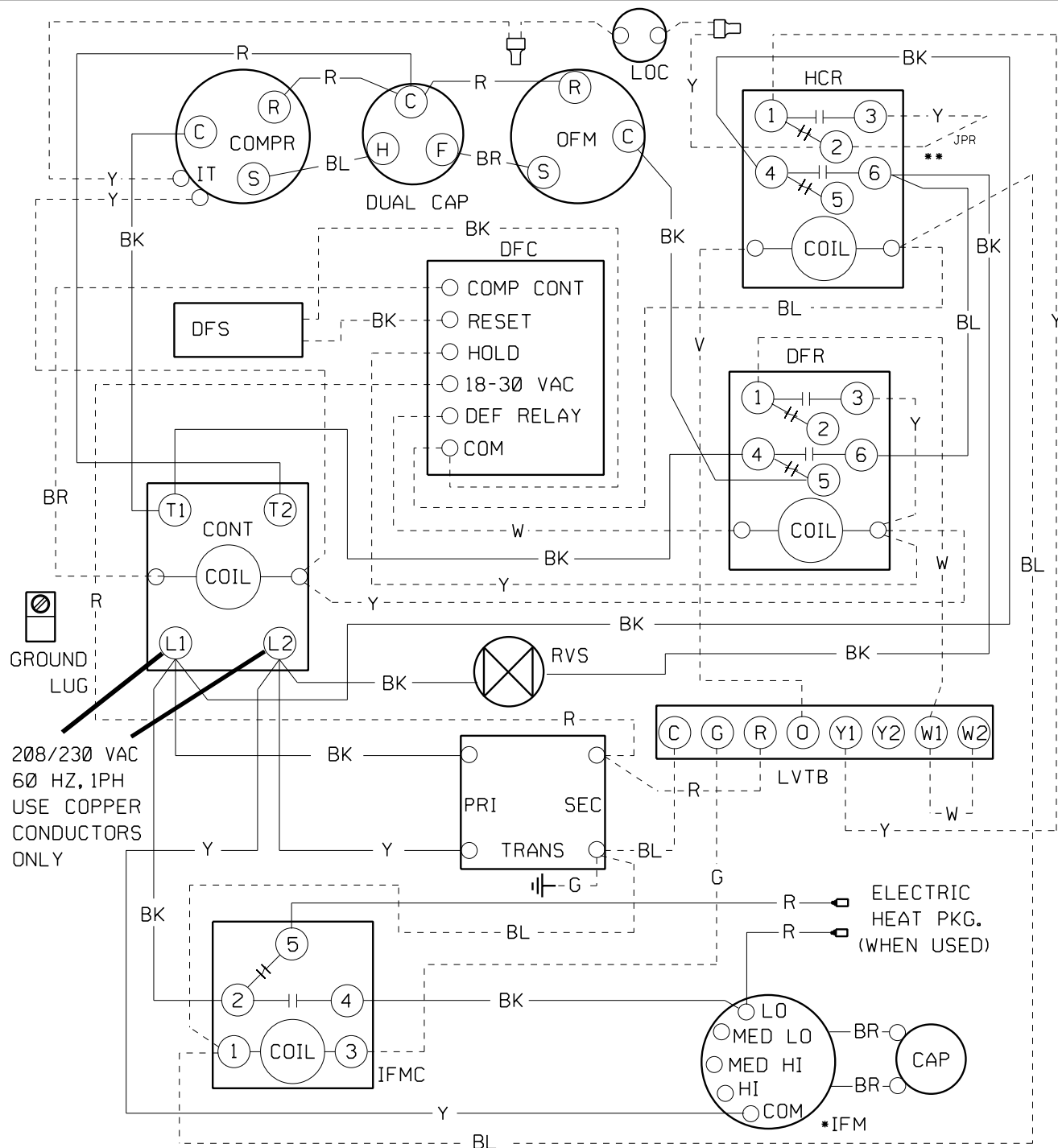




# 2 THRU 3 1/2 TON MODELS

## CONNECTION WIRING DIAGRAM

DANGER: ELECTRICAL SHOCK HAZARD DISCONNECT POWER BEFORE SERVICING



IF ANY OF THE ORIGINAL WIRE AS SUPPLIED WITH THE APPLIANCE MUST BE REPLACED, IT MUST BE REPLACED WITH TYPE AWM-105°C OR ITS EQUIVALENT.

\* SEE INSTALLATION INSTRUCTIONS FOR PROPER HEATING AND COOLING CONNECTIONS FOR YOUR UNIT

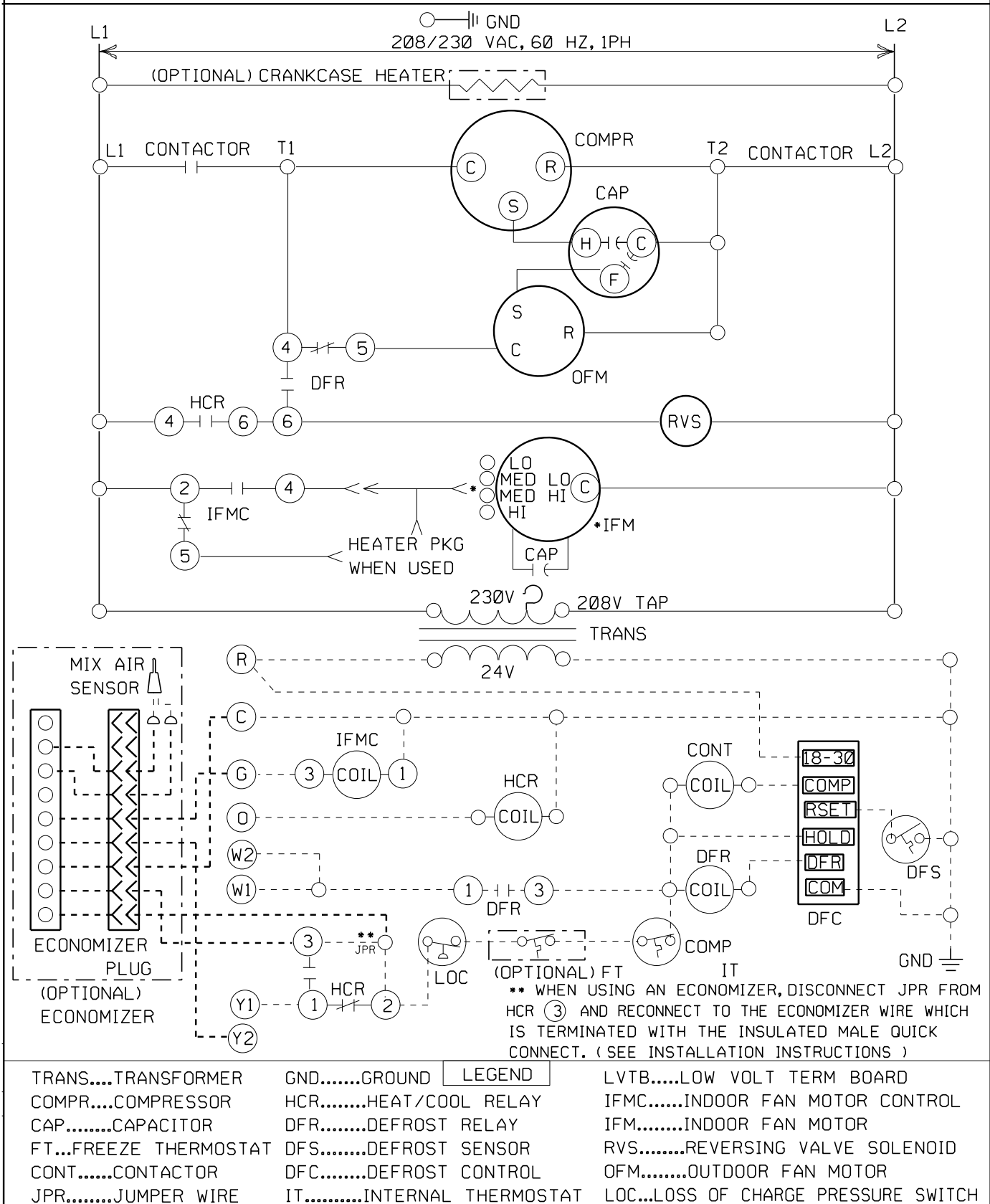
LINE VOLTAGE FACTORY	LINE VOLTAGE FIELD	LOW VOLTAGE FACTORY	LOW VOLTAGE FIELD	COLOR CODE	BLACK	BLUE	BROWN	GRAY	BK	BL	BR	GY	GREEN	ORANGE	RED	VIOLET	G	WHITE	W
—	—	---	---																

See page 10 for part two of this wiring diagram (1066017-B)

# 2 THRU 3<sup>1</sup>/<sub>2</sub> TON MODELS

## LADDER WIRING DIAGRAM

DANGER: ELECTRICAL SHOCK HAZARD DISCONNECT POWER BEFORE SERVICING



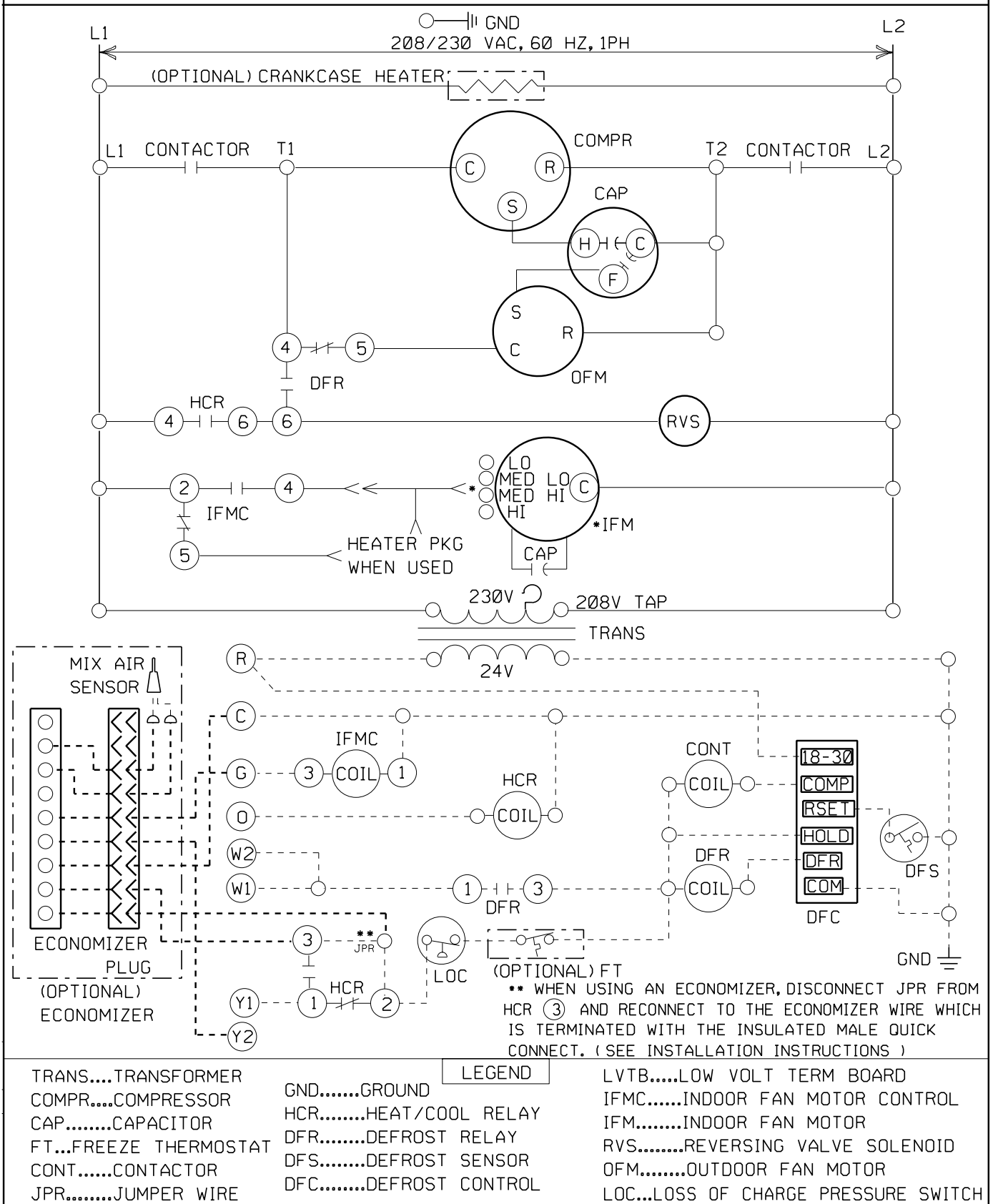
1066017-B (cont.)



# 4 TON MODEL

## LADDER WIRING DIAGRAM

DANGER: ELECTRICAL SHOCK HAZARD DISCONNECT POWER BEFORE SERVICING

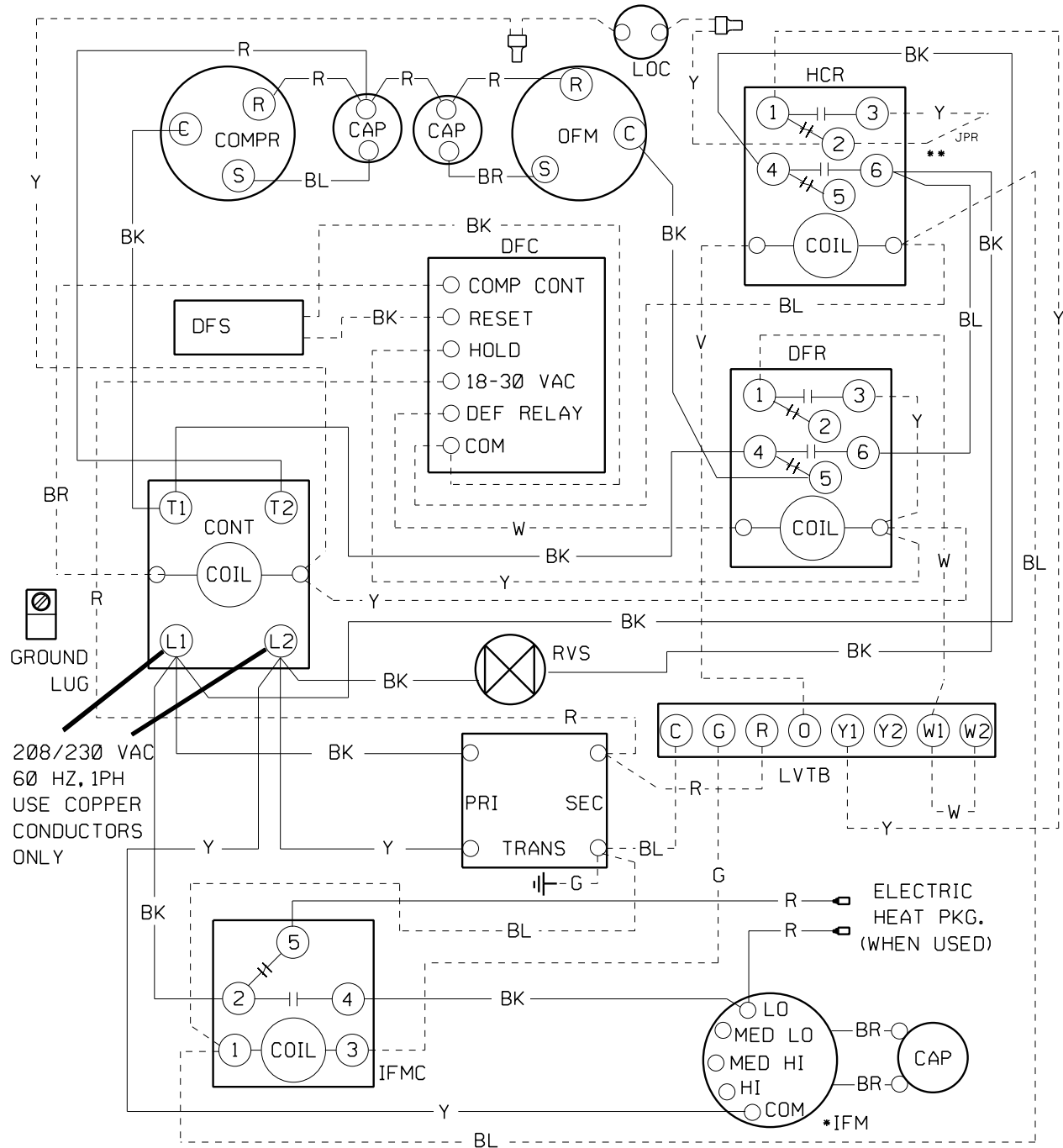


1066593 (cont.)

# 5 TON MODEL

## CONNECTION WIRING DIAGRAM

DANGER: ELECTRICAL SHOCK HAZARD DISCONNECT POWER BEFORE SERVICING



IF ANY OF THE ORIGINAL WIRE AS SUPPLIED WITH THE APPLIANCE MUST BE REPLACED, IT MUST BE REPLACED WITH TYPE AWM-105°C OR ITS EQUIVALENT.

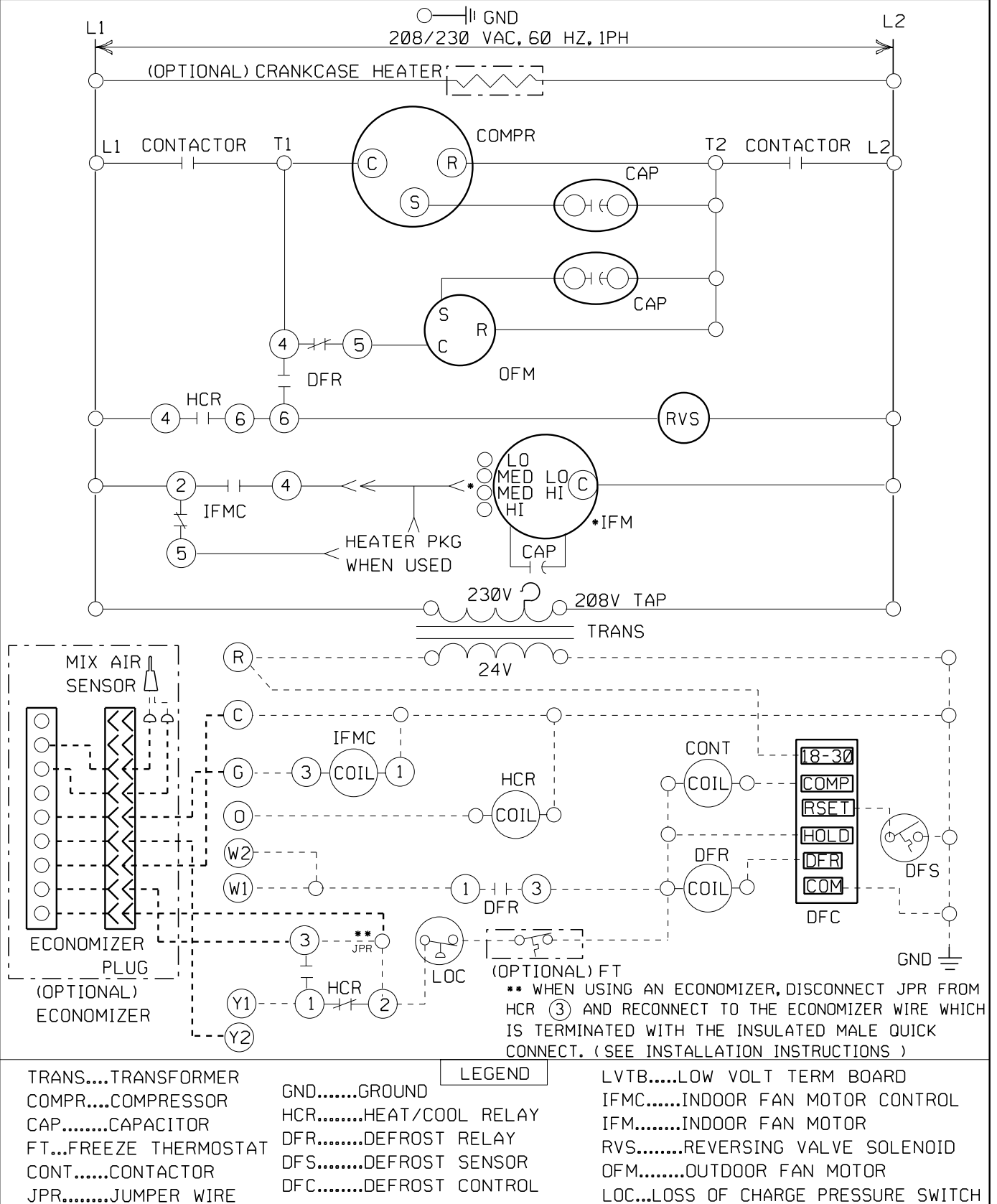
\* SEE INSTALLATION INSTRUCTIONS FOR PROPER HEATING AND COOLING CONNECTIONS FOR YOUR UNIT

---	LINE VOLTAGE FACTORY	COLOR CODE	BLACK	BK	GREEN	G	WHITE	W
---	LINE VOLTAGE FIELD		BLUE	BL	ORANGE	O	YELLOW	Y
- - -	LOW VOLTAGE FACTORY		BROWN	BR	RED	R		
- - -	LOW VOLTAGE FIELD		GRAY	GY	VIOLET	V		

# 5 TON MODEL

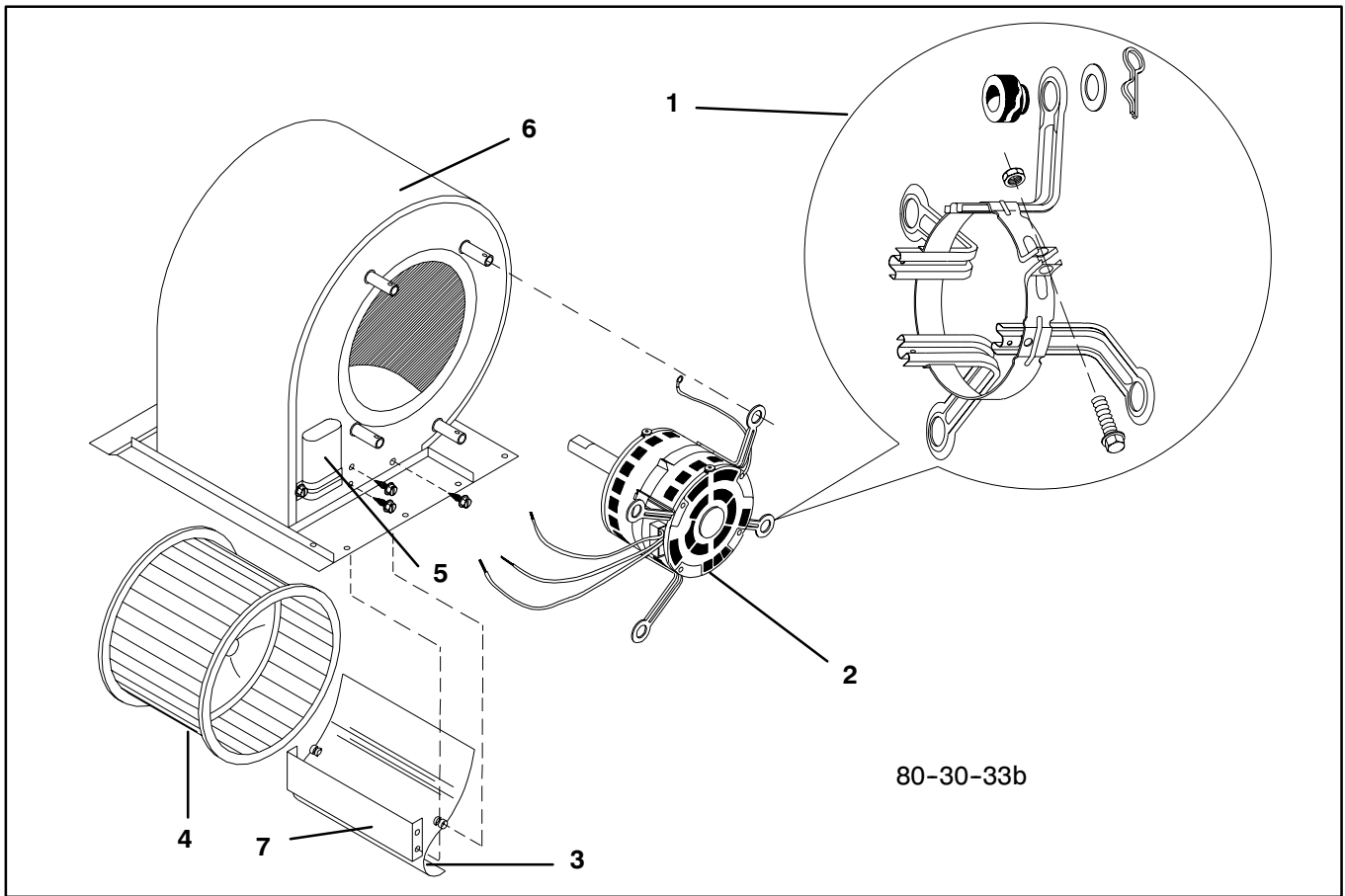
## LADDER WIRING DIAGRAM

DANGER: ELECTRICAL SHOCK HAZARD DISCONNECT POWER BEFORE SERVICING



1066706 (cont...)

# BLOWER PARTS - ALL MODELS



80-30-33b

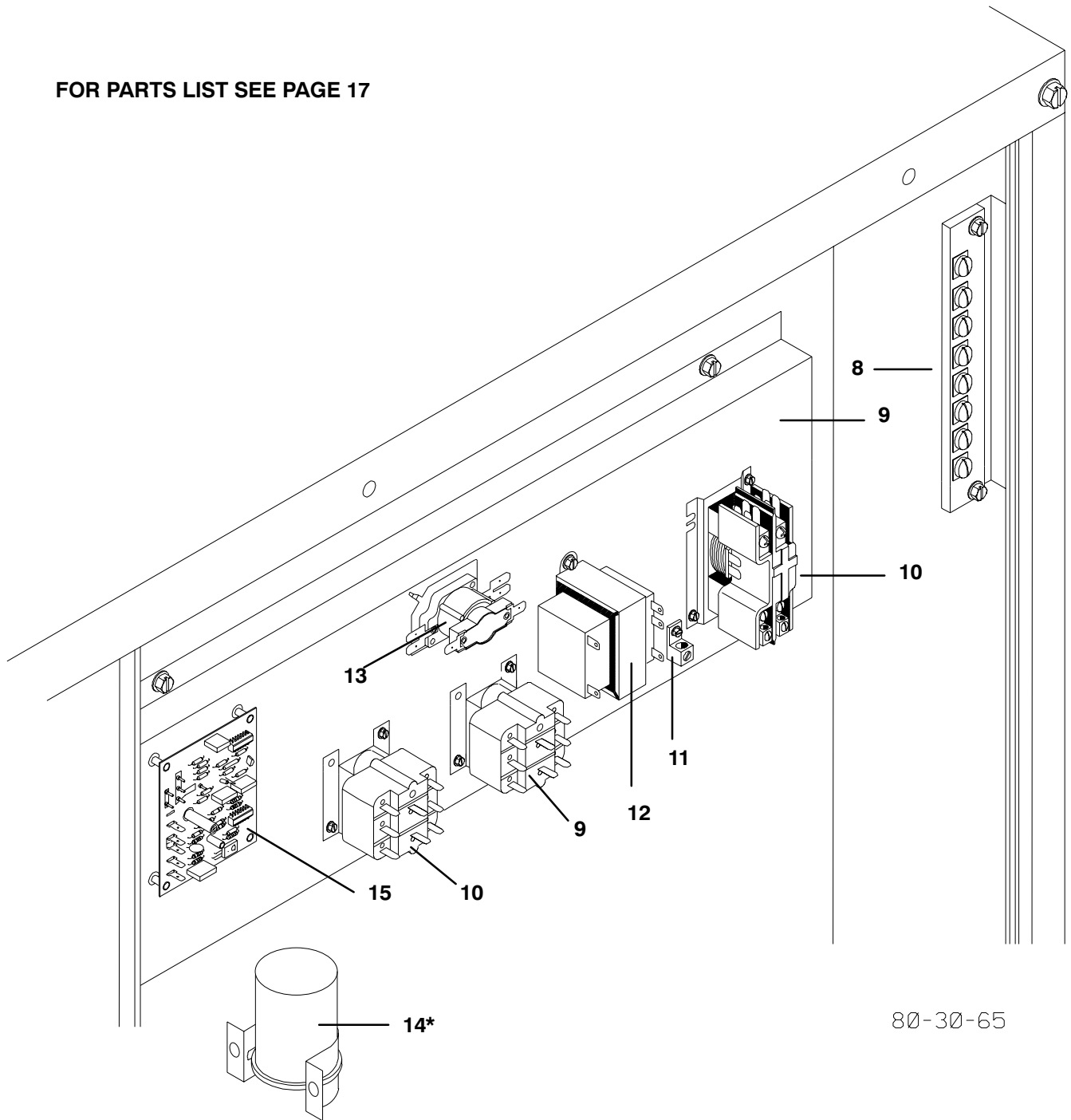
## Replacement Parts

Replacement part supplied will be current active part.  
For parts not listed, consult place of purchase.

			Model Number/ Quantity Required					
			NPHAD					
			24N1K2	30N1K2	36N1K2	42N1K2	47N1K2	60N1K3
			PYMC					
			24G2	30G2	36G2	42G2	48G2	60G2
Key No.	Description	Replacement Part Number						
1	Kit, Motor Mount	1093453	1	1	-	1	-	-
		1002804	-	-	1	-	1	1
2	Motor, Evaporator Blower	1066420	1	1	-	-	-	-
		1066421	-	-	1	-	-	-
		1054583	-	-	-	1	-	-
		1065129	-	-	-	-	1	1
3	Panel, Cut-Off	95143	1	1	-	1	-	-
		1066448	-	-	1	-	-	-
		1065073	-	-	-	-	1	1
4	Wheel, Blower	600587	1	1	-	1	-	-
		1065361	-	-	1	-	-	-
		1054593	-	-	-	-	1	1
		706338	1	1	-	1	-	-
5	Capacitor, 7.5MFD., 370V. 15.0 MFD., 370V. 20.0 MFD., 440V.	1006176	-	-	1	-	-	-
		1070017	-	-	-	-	1	1
		1065300	1	1	-	1	-	-
6	Housing, Blower	1066454	-	-	1	-	-	-
		1066363	-	-	-	-	1	1
		1066621	-	-	1	-	-	-
7	Baffle, Air (3, 4 and 5 Ton models only. Positioning of baffle is different on 4 and 5 ton models.)	1066364	-	-	-	-	1	1
			-	-	-	-	1	1

# CONTROL PLATE - ALL MODELS

FOR PARTS LIST SEE PAGE 17



80-30-65

\* The 5 Ton models will have two capacitors in the control plate area, one for the compressor and one for the condensor fan motor.



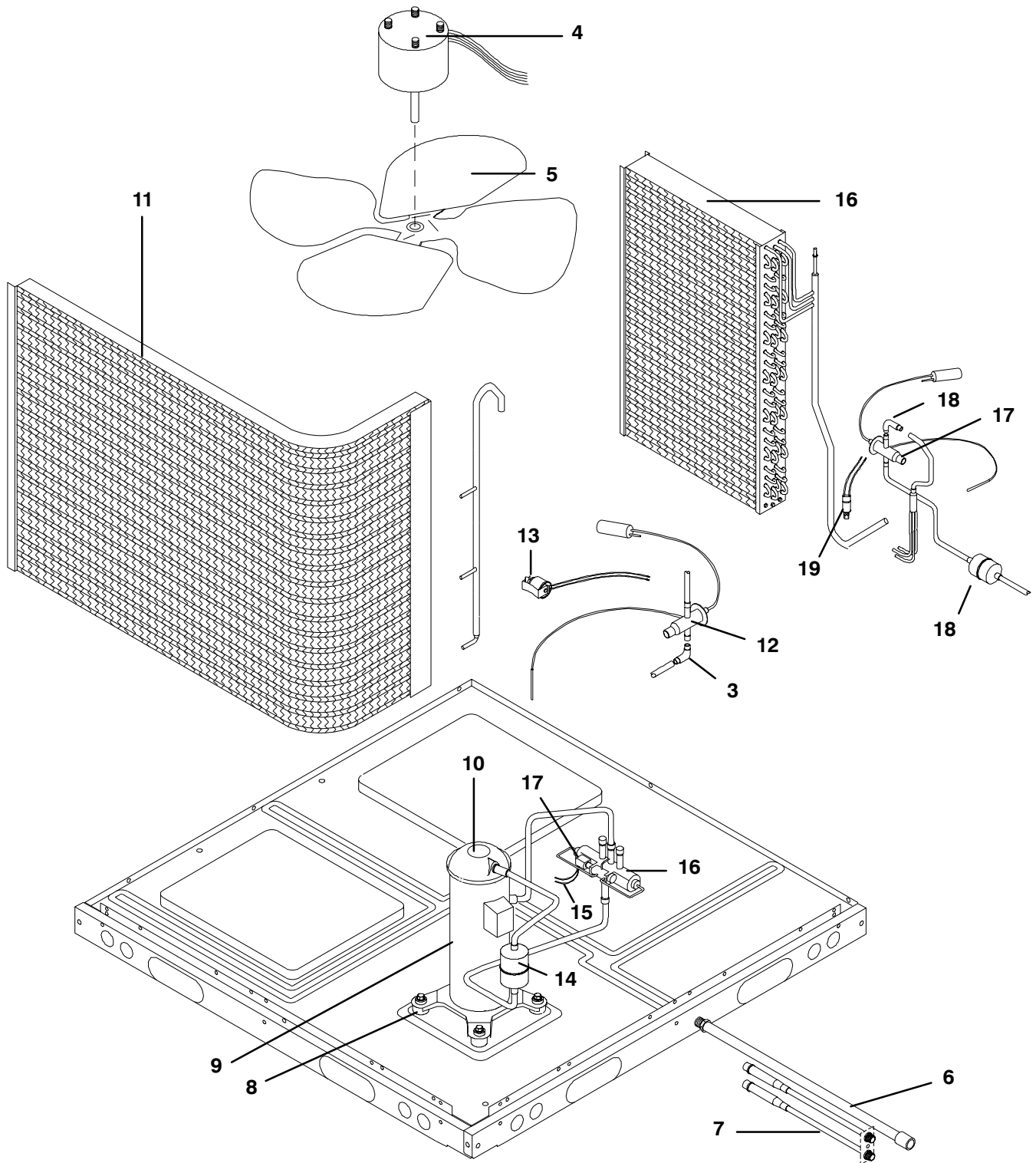
# Replacement Parts

Replacement part supplied will be current active part.  
For parts not listed, consult place of purchase.

			Model Number/ Quantity Required					
			NPHAD					
			24N1K2	30N1K2	36N1K2	42N1K2	47N1K2	60N1K3
Key No.	Description	Replacement Part Number	PYMC					
			24G2	30G2	36G2	42G2	48G2	60G2
1	Board, Terminal	1066159	1	1	1	1	1	1
2	Plate, Control	1066168	1	1	1	1	1	1
3	Contactor, 25 AMP., 1Ph.	1050699	1	1	1	-	-	-
	35 AMP., 1Ph.	1050839	-	-	-	1	-	-
	40 AMP., 1Ph.	1053980	-	-	-	-	1	1
4	Lug, Ground	91590	1	1	1	1	1	1
5	Transformer	1056899	1	1	1	1	1	1
6	Sequencer, SPDT	1054372	1	1	1	1	1	1
7	Capacitor, 5 / 30MFD., 370V.	1094977	1	-	-	-	-	-
	5 / 35MFD., 370V.	1094978	-	1	-	-	-	-
	5 / 35MFD., 440V.	1053068	-	-	1	-	-	-
	7.5 / 35MFD., 440V.	1053659	-	-	-	1	-	-
	7.5 / 60MFD., 370V.	1066512	-	-	-	-	1	-
	80MFD., 370V. (compressor only)	1066776	-	-	-	-	-	1
	10MFD., 440V. (condenser fan only)	1053918	-	-	-	-	-	1
8	Control, Defrost	1093410	1	1	1	1	1	1
9	Relay, DPDT (Heat/Cool)	96467	1	1	1	1	1	1
10	Relay, Defrost	96467	1	1	1	1	1	1

FOR PARTS ILLUSTRATION SEE PAGE 16

# FUNCTIONAL PARTS - PHAD24-36



FOR PARTS LIST SEE PAGE 19

80-30-67

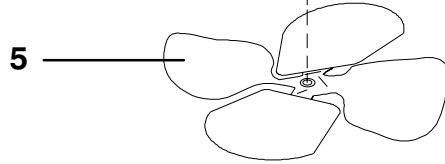
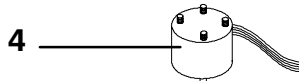
# Replacement Parts

Replacement part supplied will be current active part.  
For parts not listed, consult place of purchase.

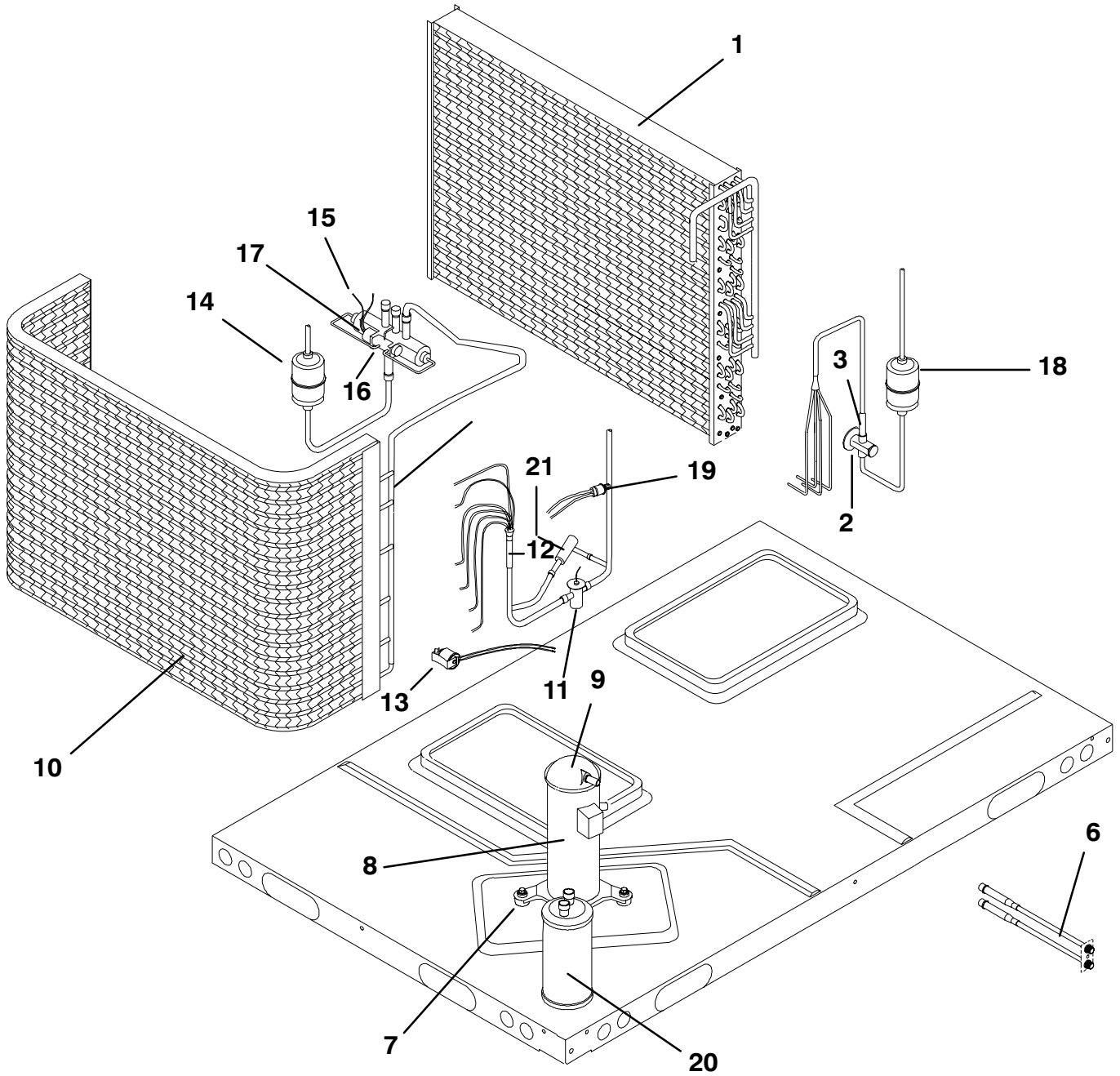
			Model Number/ Quantity Required					
			NPHAD					
			24N1K2	30N1K2	36N1K2			
Key No.	Description	Replacement Part Number	PYMC					
			24G2	30G2	36G2			
8	Coil, Evaporator	1066069	1	-	-			
		1066070	-	1	1			
9	Valve, TXV (Evaporator)	1066042	1	-	-			
		1066043	-	1	-			
		1066044	-	-	1			
3	Tube, Strainer	1066347	2	2	2			
4	Motor, Condenser Fan	1054573	1	1	1			
5	Blade, Fan	1066557	1	1	-			
		1065389	-	-	1			
6	Tube, Drain	1066051	1	1	1			
7	Assembly, Valve Port	1052725	1	1	1			
8	Grommet, Compressor Mounting	1052060	4	4	4			
9	Compressor	1059581	1	-	-			
		1053333	-	1	-			
		1053334	-	-	1			
10	Protector, Compressor	1148116	1	1	1			
11	Coil, Condenser	1066050	1	-	-			
		1066560	-	1	1			
12	Valve, TXV (Condenser)	1065871	1	-	-			
		1066006	-	1	-			
		1066007	-	-	1			
13	Sensor, Defrost	1066430	1	1	1			
14	Muffler	1059730	1	1	1			
15	Cord, Coil	1066711	1	1	1			
16	Valve, Reversing (includes solenoid coil and coil cord)	1067012	1	-	-			
		1067010	-	1	1			
17	Coil, Solenoid	1058643	1	1	1			
18	Dryer, Bi-Flow Filter	1065870	1	1	1			
19	Switch, Loss of Charge Pressure	1071317	1	1	1			
)	Manual, User's Information	1066092	1	1	1			
)	Manual, Installation	1066660	1	1	1			
)	Manual, Technical Support	1068270	1	1	1			
)	PART NOT ILLUSTRATED							

FOR PARTS ILLUSTRATION SEE PAGE 18

# FUNCTIONAL PARTS - 3<sup>1</sup>/<sub>2</sub> THRU 5 TON



FOR PARTS LIST  
SEE PAGE 21



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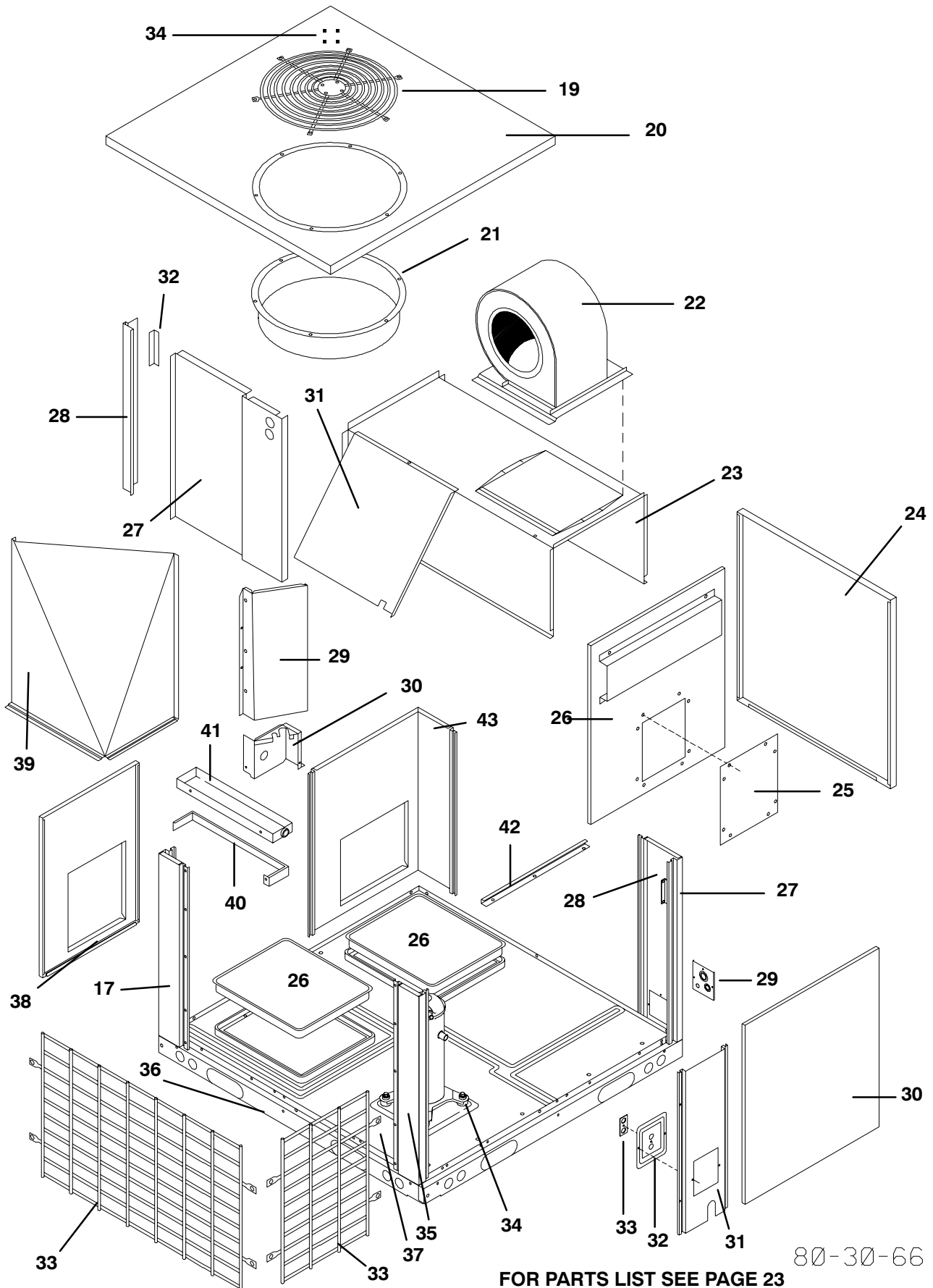
# Replacement Parts

Replacement part supplied will be current active part.  
For parts not listed, consult place of purchase.

			Model Number/ Quantity Required					
			NPHAD					
			42N1K2	47N1K2	60N1K3			
Key No.	Description	Replacement Part Number	PYMC					
			42G2	48G2	60G2			
10	Coil, Evaporator	1067472	1	-	-			
		1067471	-	1	-			
		1067473	-	-	1			
11	Valve, TXV (Evaporator)	1066008	1	-	-			
		1066490	-	1	-			
		1066819	-	-	1			
12	Tube, Strainer	1066489	1	1	-			
		1066804	-	-	1			
4	Motor, Condenser Fan	1066470	1	1	-			
		1065751	-	-	1			
5	Blade, Fan	1066603	1	1	-			
		1065391	-	-	1			
6	Assembly, Valve Port	1052725	1	1	1			
7	Grommet, Compressor Mounting	1052060	4	4	4			
8	Compressor	1052767	1	-	-			
		1066697	-	1	-			
		1066696	-	-	1			
9	Protector, Compressor	1148116	1	-	-			
10	Coil, Condenser	1066598	1	-	-			
		1066847	-	1	-			
		1067435	-	-	1			
11	Valve, TXV (Condenser)	1066045	1	-	-			
		1066484	-	1	-			
		1067420	-	-	1			
12	Tube, Strainer	1066804	1	1	1			
13	Sensor, Defrost	1066934	1	1	1			
14	Muffler	1059730	1	1	1			
15	Cord, Coil	1066711	1	1	1			
16	Valve, Reversing (includes solenoid coil and coil cord)	1067009	1	-	-			
		1067011	-	1	1			
17	Coil, Solenoid	1058643	1	1	1			
18	Dryer, Bi-Flow Filter	1065870	1	1	1			
19	Switch, Loss of Charge Pressure	1071317	1	1	1			
20	Accumulator, Suction Line	1053431	1	-	-			
		1053432	-	1	1			
21	Valve, Check	1066803	1	1	1			
)	Manual, User's Information	1066092	1	1	1			
)	Manual, Installation	1066660	1	1	1			
)	Manual, Technical Support	1068270	1	1	1			
)	PART NOT ILLUSTRATED							

FOR PARTS ILLUSTRATION SEE PAGE 20

# NON-FUNCTIONAL PARTS - 2 THRU 3 TON MODELS



80-30-66

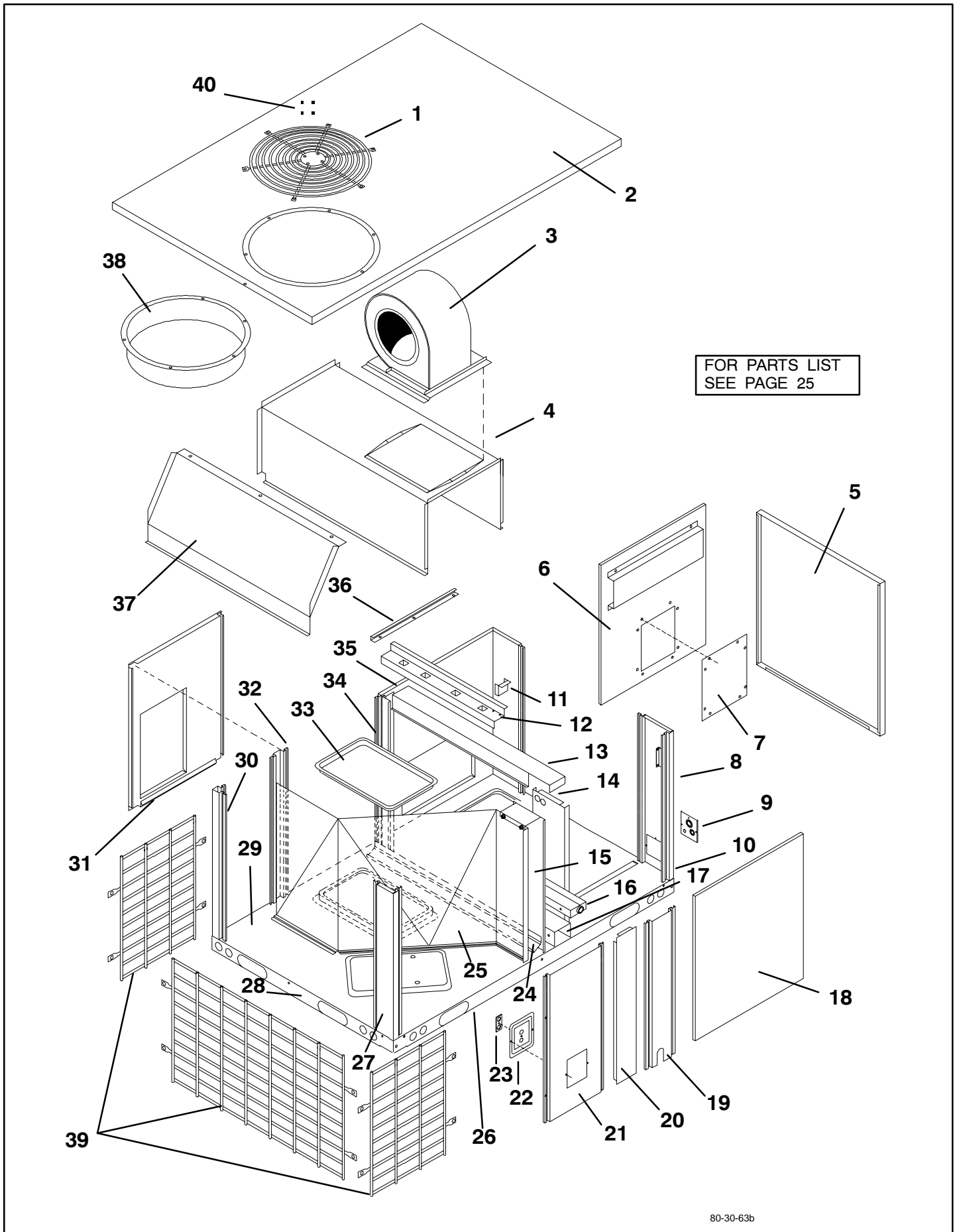
FOR PARTS LIST SEE PAGE 23

# Replacement Parts

Replacement part supplied will be current active part.  
For parts not listed, consult place of purchase.

			Model Number/ Quantity Required					
			NPHAD					
			24N1K2	30N1K2	36N1K2			
Key No.	Description	Replacement Part Number	PYMC					
			24G2	30G2	36G2			
13	Grille, Top Discharge	1064541	1	1	1			
14	Panel, Top	1068191	1	1	1			
15	Orifice, Condenser Fan	1065724	1	1	1			
16	Housing, Blower	SEE BLOWER ASSEMBLY PAGE 15						
17	Deck, Blower	1065949	1	1	1			
18	Panel, Access	1068180	1	1	1			
19	Plate, Block Off	1066107	1	1	1			
20	Panel, Division	1065942	1	1	1			
21	Post, Electrical Corner	1068192	1	1	1			
22	Bracket, Low Volt. Terminal Mounting	1066106	1	1	1			
23	Plate, Conduit	1068179	1	1	1			
24	Panel, Electric Access	1068185	1	1	1			
25	Panel, Pressure Port	1068182	1	1	1			
26	Plate, Pressure Port	1068189	1	1	1			
27	Bracket, Port	1053009	1	1	1			
28	Bolt, Compressor Mounting	1057967	4	4	4			
29	Post, Corner	1068167	2	2	2			
30	Rail, Base	1065001	4	4	4			
31	Panel, Base	1065031	1	1	1			
32	Panel, Return Air	1068166	1	1	1			
33	Partition, Return Air	1065033	1	1	1			
34	Support, Drain Pan	1065251	1	1	1			
35	Pan, Drain	1066040	1	1	1			
36	Bracket, Evaporator	1065035	1	1	1			
37	Panel, Supply Air	1068165	1	1	1			
38	Cover, Duct	1068159	2	2	2			
39	Partition, Heat / Cool	1066331	1	1	1			
40	Bracket, Supply Air	1054524	1	1	1			
29	Evaporator Cover, Top	1066332	1	1	1			
30	Evaporator Cover, Bottom	1066333	1	1	1			
31	Baffle, Evaporator Blower	1066409	1	1	1			
32	Clip, Insulation	1065076	1	1	1			
33	Grille, Inlet	1149485	1	1	1			
34	Nut, Cap (attaches condenser motor to outlet grille)	1052962	4	4	4			
<b>FOR PARTS ILLUSTRATION SEE PAGE 22</b>								

# NON-FUNCTIONAL PARTS - 3 1/2 THRU 5 TON MODELS



80-30-63b



# Replacement Parts

Replacement part supplied will be current active part.  
For parts not listed, consult place of purchase.

			Model Number/ Quantity Required					
			NPHAD					
			42N1K2	47N1K2	60N1K3			
Key No.	Description	Replacement Part Number	PYMC					
			42G2	48G2	60G2			
1	Grille, Top Discharge	1064542	1	1	1			
2	Panel, Top	1068157	1	1	1			
3	Housing, Blower	SEE BLOWER ASSEMBLY PAGE 15						
4	Deck, Blower	1065948	1	1	1			
5	Panel, Access	1068181	1	1	1			
6	Panel, Division	1065943	1	1	1			
7	Plate, Block Off	1066107	1	1	1			
8	Bracket, Low Voltage Mounting	1066106	1	1	1			
9	Plate, Conduit	1068179	1	1	1			
10	Post, Electrical Corner	1068193	1	1	1			
11	Bracket, Filter Top	1065618	1	1	1			
12	Support, Filter Top	1054502	1	1	1			
13	Panel, Coil Support	1054507	1	1	1			
14	Panel, Heating Area	1054508	1	1	1			
15	Baffle, Air	1054518	1	1	1			
16	Pan, Drain	1065242	1	1	1			
17	Support, Drain Pan	1065259	1	1	1			
18	Panel, Electrical Access	1068186	1	1	1			
19	Panel, Drain Outlet	1068162	1	1	1			
20	Panel, Filter Access	1068175	1	1	1			
21	Panel, Pressure Port	1068154	1	1	1			
22	Plate, Pressure Port	1068189	1	1	1			
23	Bracket, Pressure Port	1053009	1	1	1			
24	Support, Filter Bottom	1054501	1	1	1			
25	Partition, Return Air	1054471	1	1	1			
26	Rail, Base	1054464	2	2	2			
27	Post, Corner	1068172	1	1	1			
28	Rail, Base	1065001	2	2	2			
29	Panel, Base	1066937	1	1	1			
30	Post, Return Air	1068168	1	1	1			
31	Panel, Return Air	1068160	1	1	1			
32	Post, Center	1068163	1	1	1			
33	Cover, Duct	1068158	2	2	2			
34	Bracket, Supply Air	1054525	1	1	1			
35	Panel, Supply Air	1054546	1	1	1			
36	Bracket, Evaporator	1054519	1	1	1			
37	Baffle, Air	1054522	1	1	1			
38	Orifice, Condenser Fan	1065725	1	1	1			
39	Grille, Inlet (3 pc.)	1149486	1	1	1			
40	Nut, Cap (attaches condenser motor to outlet grille)	1052962	4	4	4			
)(	Bracket, Blower Support	1065030	-	1	1			

FOR PARTS ILLUSTRATION SEE PAGE 24