

# Parts List, Charging Chart, Tech Labels, Wiring Diagrams

**PAF3 3Phase**

**36 (A2) SERIES  
42-54 (A1) SERIES**

**PACKAGE AIR CONDITIONER UNITS**



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**PAF3 36 3PHASE PARTS LIST**

KEY NO.	DESCRIPTION	FAST PART NO.	PAF336000H00A2	PAF336000L00A2
1	COMPRESSOR	ZR32KATFD130	*	1
1	COMPRESSOR	ZR32KAPFV130	1	*
2	MOTOR,OUTDOOR	1175525	1	1
3	PROPELLER,FAN	1173706	1	1
4	COIL ASY	1175761	1	1
5	ORIFICE	1174094	1	1
6	KIT, TAIL PIECE	1174325	1	1
7	DISTRIBUTOR ASY	1174242	1	1
9	KIT, BLW MTR MTG	1175295	1	1
10	WHEEL,BLOWER	1171742	1	1
11	MOTOR,BLOWER	1173817	1	1
12	CAPACITOR	1172149	1	1
13	CONTACTOR	1173689	1	1
15	TRANSFORMER	1175310	*	1
15	TRANSFORMER	1173691	1	*
16	BOARD	1173692	1	1
17	COIL ASY,FORMED	1175733	1	1
18	PLUG ASY	1173826	*	1
18	PLUG ASY	1174904	1	*
20	VALVE,SERVICE	1083939	1	1
23	HEATER,CRANK	1175768	*	1
23	HEATER,CRANK	1173824	1	*
57	RAIL,BASE	1098870	2	2
58	RAIL,BASE	1098868	2	2
60	TRANSFORMER	1175526	*	1
A	PANEL ASY	1174264	1	1
B	GRILLE,OUTLET	1173832	1	1
C	GRILLE ASY	1097528	1	1
G	PANEL ASY	1111015	1	1
H	PLATE	1085473	1	1
J	HOUSING BLOWER	1174167	1	1
K	BOX ASY	1174265	1	1
N	PANEL ASY	1111014	*	1
P	COVER ASY	1114525	2	2
R	PANEL	1097977	1	1
U	PANEL ASY	1111018	*	1
W	POST,CORNER	1098762	1	1
ZZ	PAN,EVAPORATER	1172243	1	1
PARTS NOT SHOWN				
)	HARNESS ASY	1174321	1	1
)	HARNESS ASY	1174903	1	1
)	HARNESS ASY	1175524	*	1

**PAF3 36 3PHASE PARTS LIST (continued)**

KEY NO.	DESCRIPTION	FAST PART NO.	PAF336000H00A2	PAF336000L00A2
) (	PANEL ASY	1111019	1	1
) (	BRACKET, FILTER	1097531	*	1
) (	BRACKET, COIL	1113337	1	1
) (	CONDUIT	1171428	1	1
) (	BRACKET, COIL	1175767	1	1
) (	STRAP, CAPACITOR	1171552	1	1
) (	GROMMET	1171270	4	4

**PAF3 42-54 A1 3PHASE PARTS LIST**

KEY NO.	DESCRIPTION	FAST PART NO.	PAF342000H00A1	PAF348000H00A1	PAF354000H00A1
1	COMPRESSOR	1084534	1	*	*
1	COMPRESSOR	ZRS43K4TF5130	*	1	*
1	COMPRESSOR	ZRS52K4TF5130	*	*	1
2	MOTOR, CONDENSER FAN	1173700	1	1	*
2	MOTOR, CONDENSER FAN	1173701	*	*	1
3	FAN, CONDENSER	1173706	1	1	*
3	FAN, CONDENSER	1173707	*	*	1
4	COIL, EVAPORATOR -MANIFOLDS INCLUDED-	1174224	1	*	*
4	COIL, EVAPORATOR -MANIFOLDS INCLUDED-	1174225	*	1	*
4	COIL, EVAPORATOR -MANIFOLDS INCLUDED-	1174226	*	*	1
7	DISTRIBUTOR (R-22)	1174243	1	1	*
7	DISTRIBUTOR (R-22)	1174244	*	*	1
9	KIT, BLOWER MOTOR MOUNTING	1174295	1	1	1
10	WHEEL, BLOWER (11-9DD)	1171742	1	*	*
10	WHEEL, BLOWER (11-10DD)	1173815	*	1	1
11	MOTOR, BLOWER (208-230 VAC, 6A, 3 PHASE, 3/4 HP)	1173817	1	*	*
11	MOTOR, BLOWER (208-230 VAC, 7.6A, 3 PHASE, 1 HP)	1173819	*	1	*
11	MOTOR, BLOWER (208-230 VAC, 7.6A, 3 PHASE, 1 HP)	1173820	*	*	1
12	CAPACITOR (5 MFD, 370V)	1172149	1	1	*
12	CAPACITOR (10 MFD, 370V)	1171807	*	*	1
13	CONTACTOR (SPST, NO, 25A, 24VAC )	1174905	1	1	1
14	CIRCUIT BREAKER (250VAC, 3.2 A)	1171114	*	1	1
15	TRANSFORMER (208/230V-24V 40VA)	1173691	1	*	*
15	TRANSFORMER (200/230/460V-24V 75VA)	1171496	*	1	1
16	CONTROL BOARD (MOTOR)	1173692	1	*	*
16	CONTROL BOARD (MOTOR)	1173693	*	1	1
17	COIL, CONDENSER -MANIFOLDS INCLUDED-	1174249	1	*	*
17	COIL, CONDENSER -MANIFOLDS INCLUDED-	1174250	*	1	*
17	COIL, CONDENSER -MANIFOLDS INCLUDED-	1174251	*	*	1
18	PLUG, COMPRESSOR	1174904	1	1	1
19	PLUG, SOLENOID	1173827	*	1	1
20	VALVE, SERVICE (HI/LO PORT)	1083939	1	1	1
23	HEATER, CRANKCASE (40W, 240V, FIT 17" DIA.)	1173825	1	1	1
26	VALVE EXPANSION (3 TON)	1173833	1	*	*
26	VALVE EXPANSION (4 TON)	1173834	*	1	*
26	VALVE EXPANSION (5 TON)	1173835	*	*	1
57	RAIL, BASE W/FORK HOLES	1098870	2	2	2
58	RAIL, BASE WO/FORK HOLES	1098868	2	2	2
A	PANEL, TOP	1174264	1	1	1
B	GRILLE, OUTLET	1173832	1	1	1
C	GRILLE, INLET	1097528	1	1	1

**PAF3 42-54 A1 3PHASE PARTS LIST (continued)**

KEY NO.	DESCRIPTION	FAST PART NO.	PAF342000H00A1	PAF348000H00A1	PAF354000H00A1
F	NUT, CAP	1172740	4	4	4
G	PANEL, COMPRESSOR ACCESS	1111015	1	1	1
H	PLATE, HI/LO PORT	1085473	1	1	1
J	HOUSING, BLOWER	1174167	1	*	*
J	HOUSING, BLOWER	1174168	*	1	1
K	BOX ASY, BLOWER	1174265	1	1	1
N	PANEL, REAR	1111014	1	1	1
P	COVER, DUCTS	1114525	2	2	2
R	PANEL, ACCESS CONTROL BOX	1111019	1	1	1
U	PANEL, ACCESS BLOWER	1111018	1	1	1
W	POST, CORNER	1098762	1	1	1
ZZ	PAN, DRAIN (EVAPORATOR)	1172243	1	1	1
PARTS NOT SHOWN					
)	( HARNESS, WIRE (SINGLE CAPACITY PAC)	1174321	1	*	*
)	( HARNESS, WIRE (DUAL CAPACITY PAC)	1174322	*	1	1
)	( HARNESS, WIRE (ECONOMIZER)	1174903	1	1	1

**PAF3 42-54 A1 3PHASE PARTS LIST**

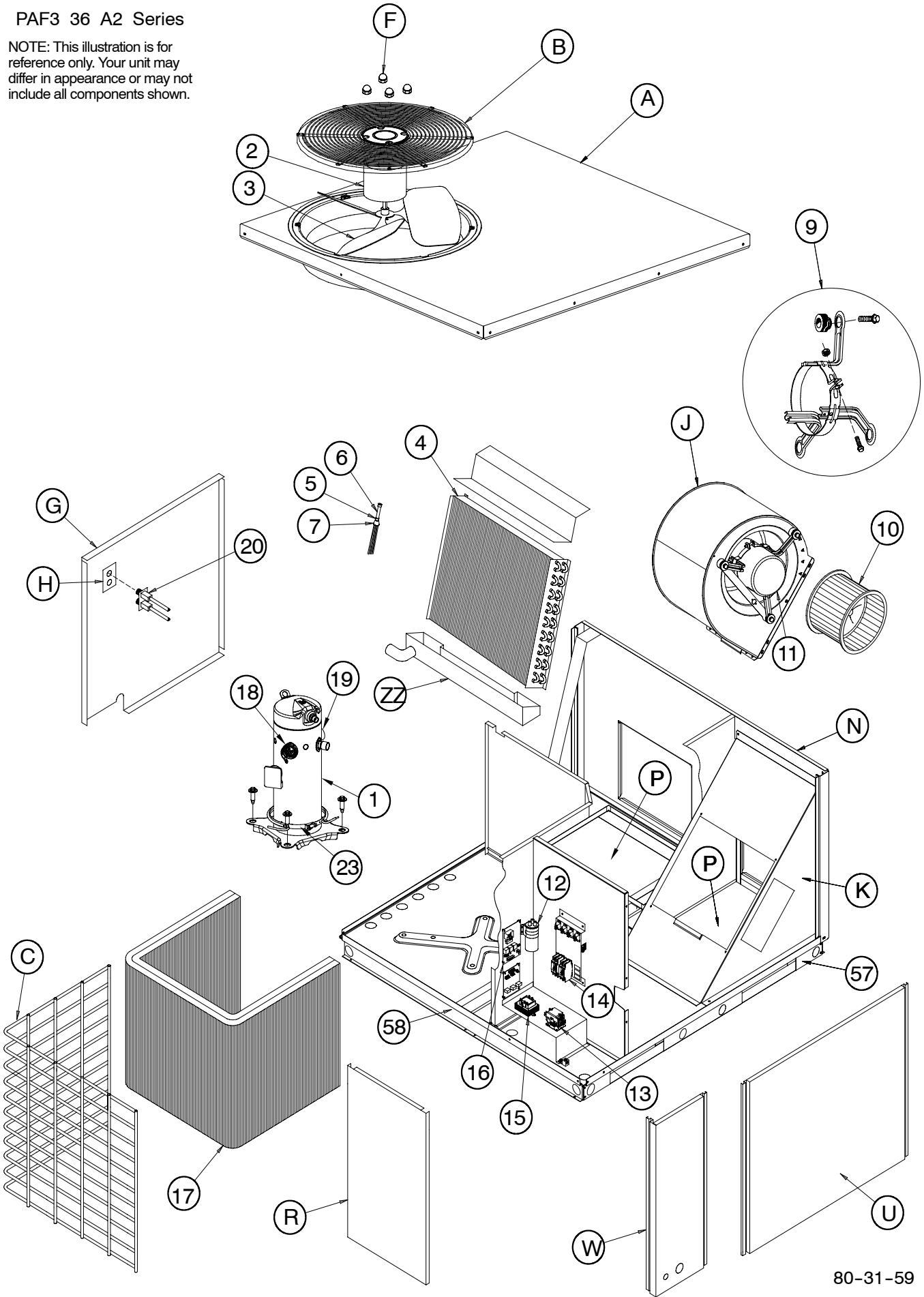
KEY NO.	DESCRIPTION	FAST PART NO.	PAF342000L00A1	PAF348000L00A1	PAF354000L00A1
1	COMP	1085621	1	*	*
1	COMP	ZRS43K4TFD830	*	1	*
1	COMP	ZRS52K4TFD830	*	*	1
2	MTR, COND FAN	1175525	1	1	*
2	MTR, COND FAN	1175528	*	*	1
3	FAN, COND	1173706	1	1	*
3	FAN, COND	1173707	*	*	1
4	COIL, EVAP	1174224	1	*	*
4	COIL, EVAP	1174225	*	1	*
4	COIL, EVAP	1174226	*	*	1
7	DISTRIBUTOR	1174243	1	1	*
7	DISTRIBUTOR	1174244	*	*	1
9	KIT, MTR MOUNTING	1174295	1	1	1
10	WHEEL, BLOWER	1171742	1	*	*
10	WHEEL, BLOWER	1173815	*	1	1
11	MTR BLOWER	1173817	1	*	*
11	MTR BLOWER	1173819	*	1	*
11	MTR BLOWER	1173820	*	*	1
12	CAPACITOR	1172149	1	1	*
12	CAPACITOR	1171807	*	*	1
13	CONTACTOR	1171160	1	1	1
14	CIRCUIT BREAKER	1171114	*	1	1
15	TRANSFORMER	1175310	1	*	*
15	TRANSFORMER	1171496	*	1	1
16	CONTROL BOARD	1173692	1	*	*
16	CONTROL BOARD	1173693	*	1	1
17	COIL, COND	1174248	*	*	*
17	COIL, COND	1174249	1	*	*
17	COIL, COND	1174250	*	1	*
17	COIL, COND	1174251	*	*	1
18	PLUG ASY	1173826	1	1	1
19	PLUG ASY	1173827	*	1	1
20	VALVE, SERVICE	1083939	1	1	1
23	HEATER, CRANKCASE	1175527	1	1	1
25	SWITCH, PRESSURE	1173712	*	1	1
26	VALVE EXPANSION	1173833	1	*	*
26	VALVE EXPANSION	1173834	*	1	*
26	VALVE EXPANSION	1173835	*	*	1
57	RAIL, BASE	1098870	2	2	2
58	RAIL, BASE	1098868	2	2	2
60	TRANSFORMER	1175526	1	1	1

**PAF3 42-54 A1 3PHASE PARTS LIST (continued)**

KEY NO.	DESCRIPTION	FAST PART NO.	PAF342000L00A1	PAF348000L00A1	PAF354000L00A1
A	PANEL ASY	1174264	1	1	1
B	GRILLE	1173832	1	1	1
C	GRILLE ASY	1097528	1	1	1
F	NUT, CAP	1172740	4	4	4
G	PANEL ASY	1111015	1	1	1
H	PLATE	1085473	1	1	1
J	HOUSING, BLOWER	1174167	1	*	*
J	HOUSING, BLOWER	1174168	*	1	1
K	BOX ASY	1174265	1	1	1
N	PANEL ASY	1111014	1	1	1
P	COVER ASY	1114525	2	2	2
R	PANEL ASY	1097977	1	1	1
U	PANEL ASY	1111018	1	1	1
W	POST, CORNER	1098762	1	1	1
ZZ	PAN, DRAIN	1172243	1	1	1
PARTS NOT SHOWN					
)	HARNESS, ASY	1174321	1	*	*
)	HARNESS, ASY	1174322	*	1	1
)	HARNESS, ASY	1175524	1	1	1
)	HARNESS, ASY	1174903	1	1	1

PAF3 36 A2 Series

NOTE: This illustration is for reference only. Your unit may differ in appearance or may not include all components shown.

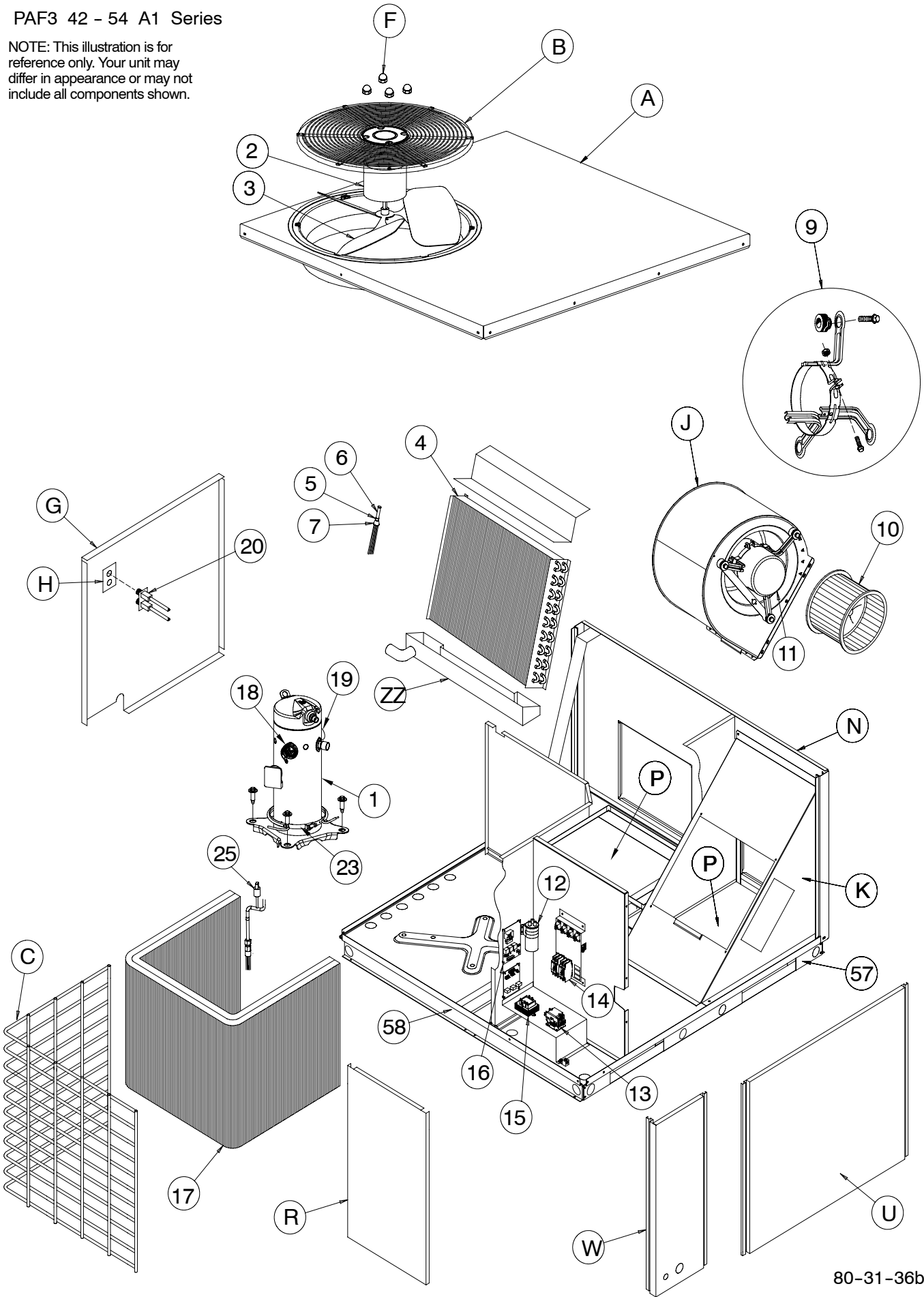


80-31-59



PAF3 42 - 54 A1 Series

NOTE: This illustration is for reference only. Your unit may differ in appearance or may not include all components shown.



80-31-36b

PAF3 36															
Suction Line Temperature (°F)															
OD Temp. (°F)	Suction Line Pressure (PSIG)														
	52	54	56	59	61	64	67	70	73	76	79	82	85	89	92
45	51	55	60	64	69	-	-	-	-	-	-	-	-	-	-
55	-	-	53	57	62	66	70	-	-	-	-	-	-	-	-
65	-	-	-	-	53	57	62	66	71	75	-	-	-	-	-
75	-	-	-	-	-	-	-	56	61	66	71	76	-	-	-
85	-	-	-	-	-	-	-	-	53	58	63	67	72	-	-
95	-	-	-	-	-	-	-	-	-	50	54	58	62	66	-
105	-	-	-	-	-	-	-	-	-	-	50	53	57	60	64
115	-	-	-	-	-	-	-	-	-	-	49	52	55	58	61
125	-	-	-	-	-	-	-	-	-	-	-	50	53	56	59

Suction Line Temperature (°C)															
OD Temp. (°C)	Suction Line Pressure (kPa)														
	361	370	387	405	423	442	462	482	502	523	544	566	589	612	636
7	11	13	15	18	21	-	-	-	-	-	-	-	-	-	-
13	-	-	12	14	16	19	21	-	-	-	-	-	-	-	-
18	-	-	-	-	12	14	17	19	21	24	-	-	-	-	-
24	-	-	-	-	-	-	-	13	16	19	22	24	-	-	-
29	-	-	-	-	-	-	-	-	12	14	17	20	22	-	-
35	-	-	-	-	-	-	-	-	-	10	12	14	17	19	-
41	-	-	-	-	-	-	-	-	-	-	10	12	14	16	18
46	-	-	-	-	-	-	-	-	-	-	9	11	13	14	16
52	-	-	-	-	-	-	-	-	-	-	-	10	11	13	15

Model Size	Required Subcooling of (°C)			
	Outdoor Ambient Temperature			
42	75 (24)	82 (28)	85 (29)	95 (35)
	22.5 (12.5)	22.1 (12.3)	22.1 (12.2)	21.6 (12)
48	26.1 (14.5)	26.8 (14.9)	27 (15)	28 (15.5)
	28.9 (16)	28.9 (16)	28.9 (16)	28.9 (16)
54	17.8 (9.9)	18.9 (10.5)	19.3 (10.7)	20.8 (11.6)
	22.3 (12.4)	22.3 (12.4)	22.3 (12.4)	22.3 (12.4)

**Charging Procedure**

1. Measure Discharge line pressure by attaching a gauge to the service port.
2. Measure the Liquid line temperature by attaching a temperature sensing device to it.
3. Insulate the temperature sensing device so that the Outdoor Ambient doesn't affect the reading.
4. Refer to the required Subcooling in the table to find the required Subcooling based on the model size and the Outdoor Ambient temperature.
5. Interpolate if the Outdoor temperature lies in between the table values. Extrapolate if the temperature lies beyond the table range.
6. Find the Pressure Value corresponding to the measured Pressure on the Compressor Discharge line.
7. Read across from the Pressure reading to obtain the Liquid line temperature for a required Subcooling.
8. Add Charge if the measured temperature is higher than the liquid line temperature value in the table.
9. Add Charge using the service connection on the Suction line of the Compressor.
10. Remove Charge if the measured temperature is lower than the temperature in the table.

**Required Liquid Line Temperature for a Specific Subcooling (R:22)**

Pressure (psig)	Required Subcooling (°F)						
	5	10	15	20	25	30	
134	71	66	61	56	51	46	
141	74	69	64	59	54	49	
156	80	75	70	65	60	55	
163	83	78	73	68	63	58	
170	86	81	76	71	66	61	
177	89	84	79	74	69	64	
184	91	86	81	76	71	66	
191	94	89	84	79	74	69	
198	96	91	86	81	76	71	
205	98	93	88	83	78	73	
213	101	96	91	86	81	76	
221	104	99	94	89	84	79	
229	106	101	96	91	86	81	
237	108	103	98	93	88	83	
245	111	106	101	96	91	86	
253	113	108	103	98	93	88	
262	116	111	106	101	96	91	
271	118	113	108	103	98	93	
280	121	116	111	106	101	96	
289	123	118	113	108	103	98	
298	125	120	115	110	105	100	
307	128	123	118	113	108	103	
317	130	125	120	115	110	105	
327	132	127	122	117	112	107	
337	130	125	120	115	110	105	
347	137	132	127	122	117	112	
357	139	134	129	124	119	114	
367	142	137	132	127	122	117	

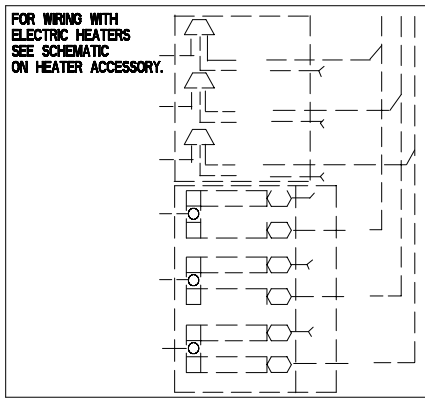
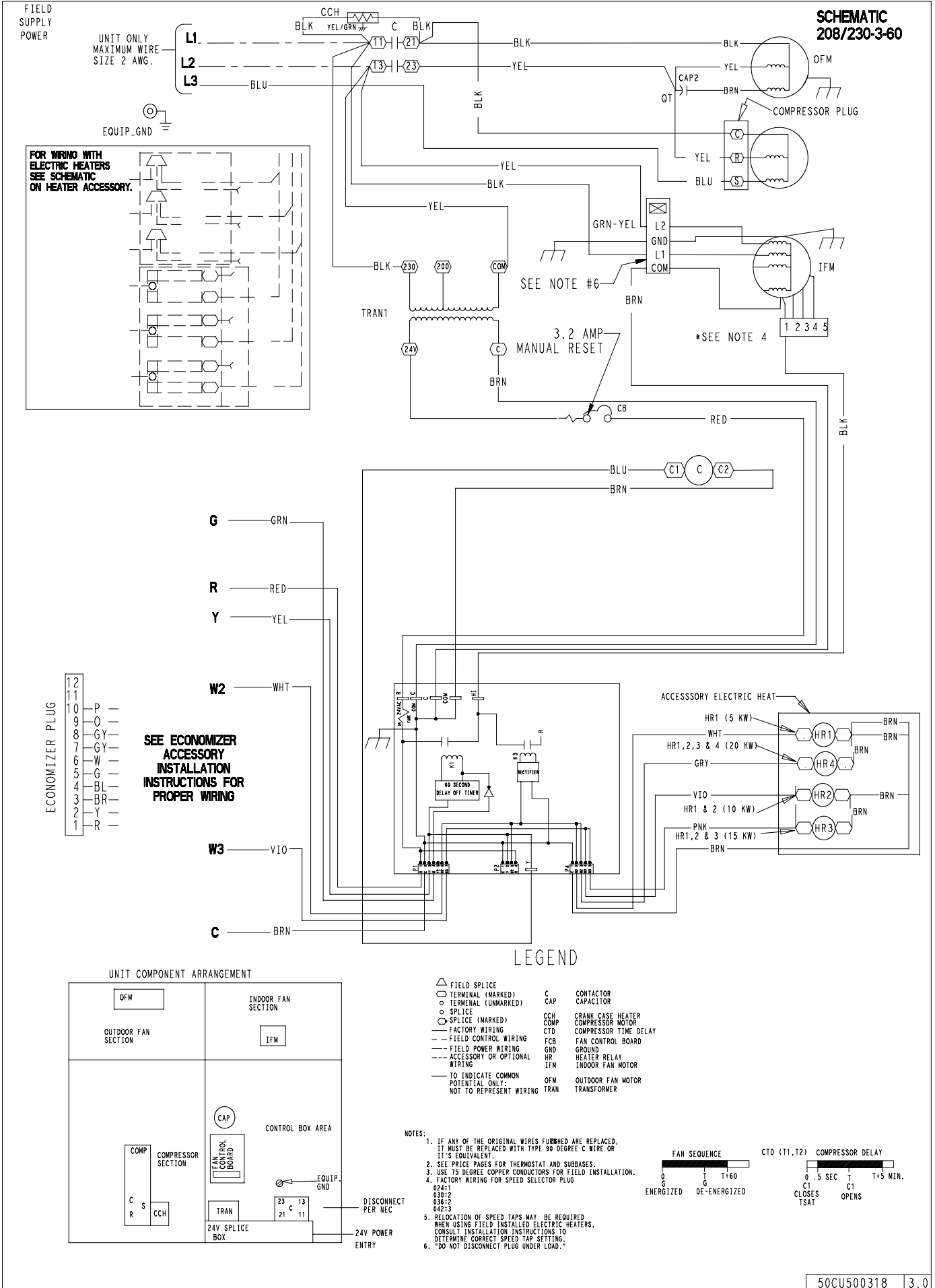
Pressure (kPa)	Required Subcooling (°C)						
	3	6	8	11	14	17	
924	22	19	16	13	11	8	
972	23	21	18	15	12	10	
1075	27	24	21	19	16	13	
1124	28	26	23	20	17	15	
1172	30	27	24	22	19	16	
1220	31	29	26	23	20	18	
1268	33	30	27	24	22	19	
1317	34	31	29	26	23	20	
1365	36	33	30	27	24	22	
1413	37	34	31	29	26	23	
1468	38	36	33	30	27	24	
1524	40	37	34	31	29	26	
1579	41	38	36	33	30	27	
1634	42	40	37	34	31	29	
1689	44	41	38	35	33	30	
1744	45	42	40	37	34	31	
1806	46	44	41	38	35	33	
1868	48	45	42	40	37	34	
1930	49	46	44	41	38	35	
1992	51	48	45	42	39	37	
2054	52	49	46	44	41	38	
2116	53	50	48	45	42	39	
2185	54	52	49	46	43	41	
2254	56	53	50	47	45	42	
2323	54	52	49	46	43	41	
2392	58	56	53	50	47	45	
2461	60	57	54	51	49	46	
2530	61	58	55	53	50	47	



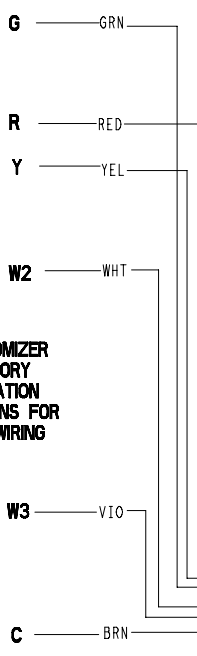


PAF3 208/230V 3Phase

**SCHEMATIC  
208/230-3-60**



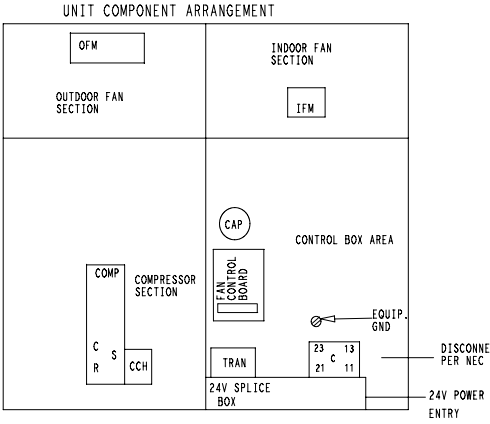
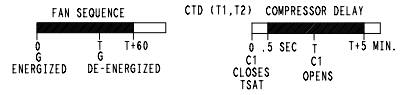
SEE ECONOMIZER ACCESSORY INSTALLATION INSTRUCTIONS FOR PROPER WIRING



**LEGEND**

- △ FIELD SPLICE
  - TERMINAL (MARKED)
  - TERMINAL (UNMARKED)
  - SPLICE
  - SPLICE (MARKED)
  - FACTORY WIRING
  - - - FIELD CONTROL WIRING
  - - - FIELD POWER WIRING
  - - - ACCESSORY OR OPTIONAL WIRING
  - TO INDICATE COMMON
  - POTENTIAL ONLY:
  - NOT TO REPRESENT WIRING
- |      |                       |
|------|-----------------------|
| C    | CONTACTOR             |
| CAP  | CAPACITOR             |
| CCH  | CRANK CASE HEATER     |
| COMP | COMPRESSOR MOTOR      |
| CTD  | COMPRESSOR TIME DELAY |
| FCB  | FAN CONTROL BOARD     |
| GND  | GROUND                |
| HR   | HEATER RELAY          |
| IFM  | INDOOR FAN MOTOR      |
| OFM  | OUTDOOR FAN MOTOR     |
| TRAN | TRANSFORMER           |

- NOTES:
- IF ANY OF THE ORIGINAL WIRES FURNISHED ARE REPLACED, IT MUST BE REPLACED WITH TYPE 90 DEGREE C WIRE OR IT'S EQUIVALENT.
  - SEE PRICE PAGES FOR THERMOSTAT AND SUBBASIS.
  - USE 75 DEGREE COPPER CONDUCTORS FOR FIELD INSTALLATION.
  - FACTORY WIRING FOR SPEED SELECTOR PLUG: 024-1, 030-2, 036-2, 042-3.
  - RELOCATION OF SPEED TAPS MAY BE REQUIRED WHEN USING FIELD INSTALLED ELECTRIC HEATERS. CONSULT INSTALLATION INSTRUCTIONS TO DETERMINE CORRECT SPEED TAP SETTING.
  - "DO NOT DISCONNECT PLUG UNDER LOAD."



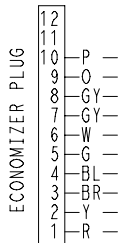
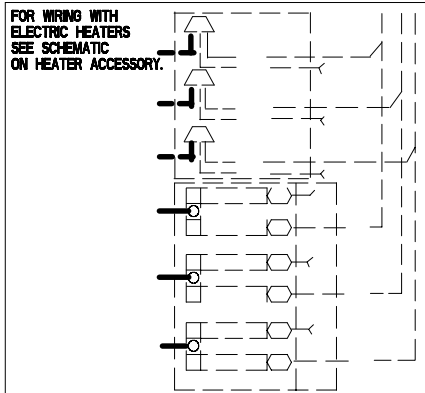
PAF3 460V 3Phase

**SCHEMATIC  
460-3-60**

FIELD  
SUPPLY  
POWER

UNIT ONLY  
MAXIMUM WIRE  
SIZE 2 AWG.

EQUIP\_GND

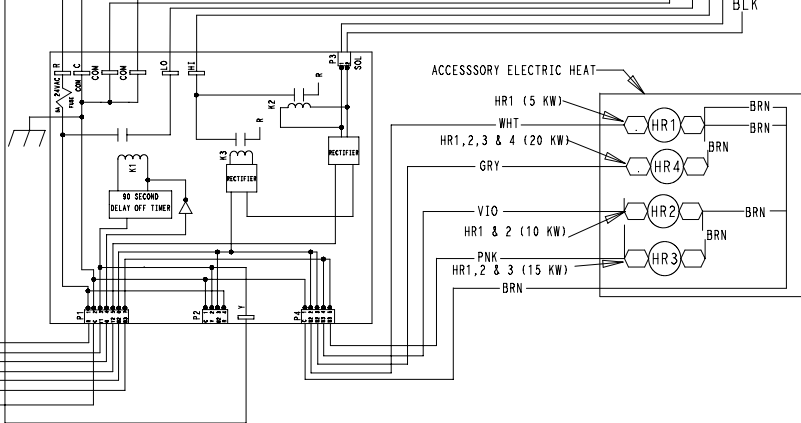


**SEE ECONOMIZER  
ACCESSORY  
INSTALLATION  
INSTRUCTIONS FOR  
PROPER WIRING**

**G** — GRN  
**R** — RED  
**Y1** — YEL  
**W2** — WHT  
**Y2** — PNK  
**W3** — VIO  
**C** — BRN

SEE NOTES  
4 & 5

3.2 AMP  
MANUAL RESET

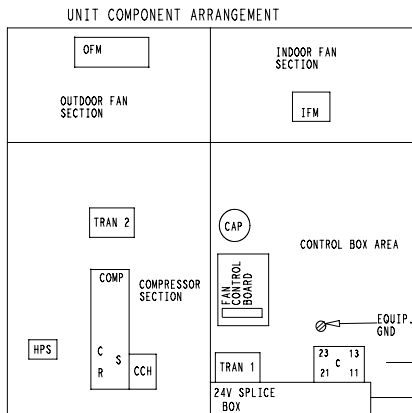
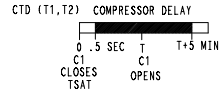
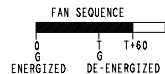


**LEGEND**

- △ FIELD SPLICE
- TERMINAL (MARKED)
- TERMINAL (UNMARKED)
- SPLICE
- SPLICE (MARKED)
- FACTORY WIRING
- - - FIELD CONTROL WIRING
- - - FIELD POWER WIRING
- - - ACCESSORY OR OPTIONAL WIRING
- TO INDICATE COMMON POTENTIAL ONLY; NOT TO REPRESENT WIRING
- C CONTACTOR
- CAP CAPACITOR
- CB CIRCUIT BREAKER
- CCH CRANK CASE HEATER
- COMP COMPRESSOR MOTOR
- CTD COMPRESSOR TIME DELAY
- FCB FAN CONTROL BOARD
- GND GROUND
- HR HEATER RELAY
- IFM INDOOR FAN MOTOR
- HPS HIGH PRESSURE SWITCH
- OFM OUTDOOR FAN MOTOR
- TRAN 1 TRANSFORMER 460-24
- TRAN 2 TRANSFORMER 460-230

**NOTES:**

1. IF ANY OF THE ORIGINAL WIRES FURNISHED ARE REPLACED, IT MUST BE REPLACED WITH TYPE 90 DEGREE C WIRE OR IT'S EQUIVALENT.
2. SEE PRICE PAGES FOR THERMOSTAT AND SUBBASES.
3. USE 75 DEGREE COPPER CONDUCTORS FOR FIELD INSTALLATION.
4. RELOCATION OF SPEED TAPS MAY BE REQUIRED WHEN USING FIELD INSTALLED ELECTRIC HEATERS. CONSULT INSTALLATION INSTRUCTIONS TO DETERMINE CORRECT SPEED TAP SETTING.
5. \*DO NOT DISCONNECT PLUG UNDER LOAD.\*



DISCONNECT  
PER NEC  
24V POWER  
ENTRY