

TECHNICAL SUPPORT MANUAL

3-Phase Air Conditioner Component

R2A3**GHR

Safety Labeling and Signal Words

DANGER, WARNING, CAUTION, and NOTE

The signal words **DANGER**, **WARNING**, **CAUTION**, and **NOTE** are used to identify levels of hazard seriousness. The signal word **DANGER** is only used on product labels to signify an immediate hazard. The signal words **WARNING**, **CAUTION**, and **NOTE** will be used on product labels and throughout this manual and other manuals that may apply to the product.

DANGER – Immediate hazards which **will** result in severe personal injury or death.

WARNING – Hazards or unsafe practices which **could** result in severe personal injury or death.

CAUTION – Hazards or unsafe practices which **may** result in minor personal injury or product or property damage.

NOTE – Used to highlight suggestions which **will** result in enhanced installation, reliability, or operation.

Signal Words in Manuals

The signal word **WARNING** is used throughout this manual in the following manner:



The signal word **CAUTION** is used throughout this manual in the following manner:



Signal Words on Product Labeling

Signal words are used in combination with colors and/or pictures on product labels.

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MODELS

R2A336GHR100
 R2A348GHR100
 R2A360GHR100



DEATH, PERSONAL INJURY, AND/OR PROPERTY DAMAGE HAZARD

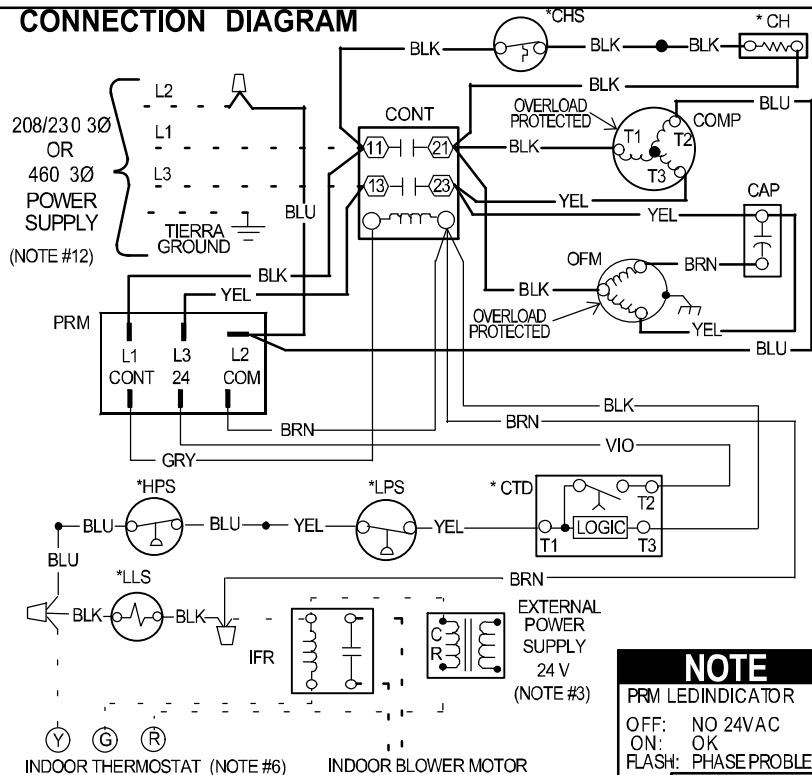
Failure to carefully read and follow this warning could result in equipment malfunction, property damage, personal injury and/or death.

Installation or repairs made by unqualified persons could result in equipment malfunction, property damage, personal injury and/or death.

The information contained in this manual is intended for use by a qualified service technician familiar with safety procedures and equipped with the proper tools and test instruments.

Installation must conform with local building codes and with the National Electrical Code NFPA70 current edition or Canadian Electrical Code Part 1 CSA C.22.1.

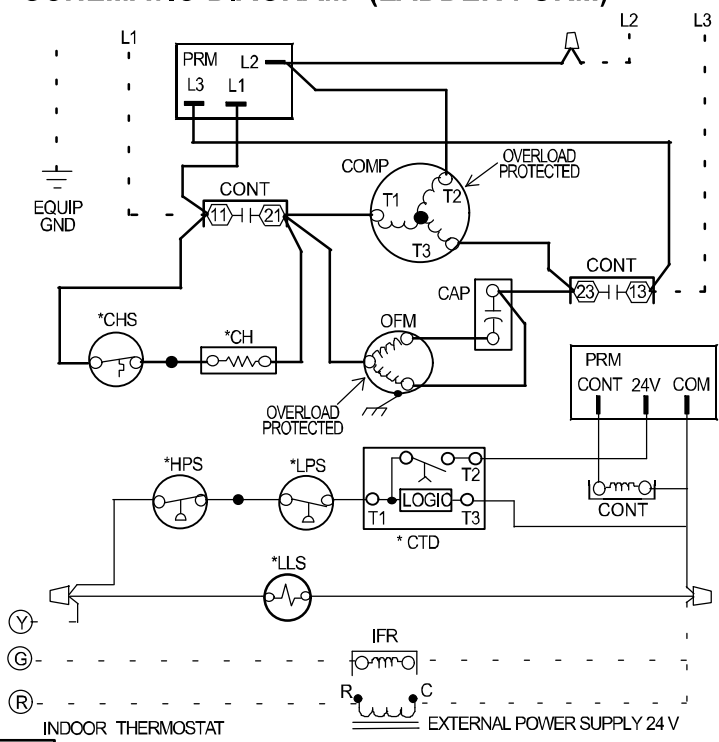
CONNECTION DIAGRAM



NOTE
 PRM LED INDICATOR
 OFF: NO 24VAC
 ON: OK
 FLASH: PHASE PROBLEM

Model Sizes: 36, 48, 60

SCHEMATIC DIAGRAM (LADDER FORM)



335781-101 REV. B

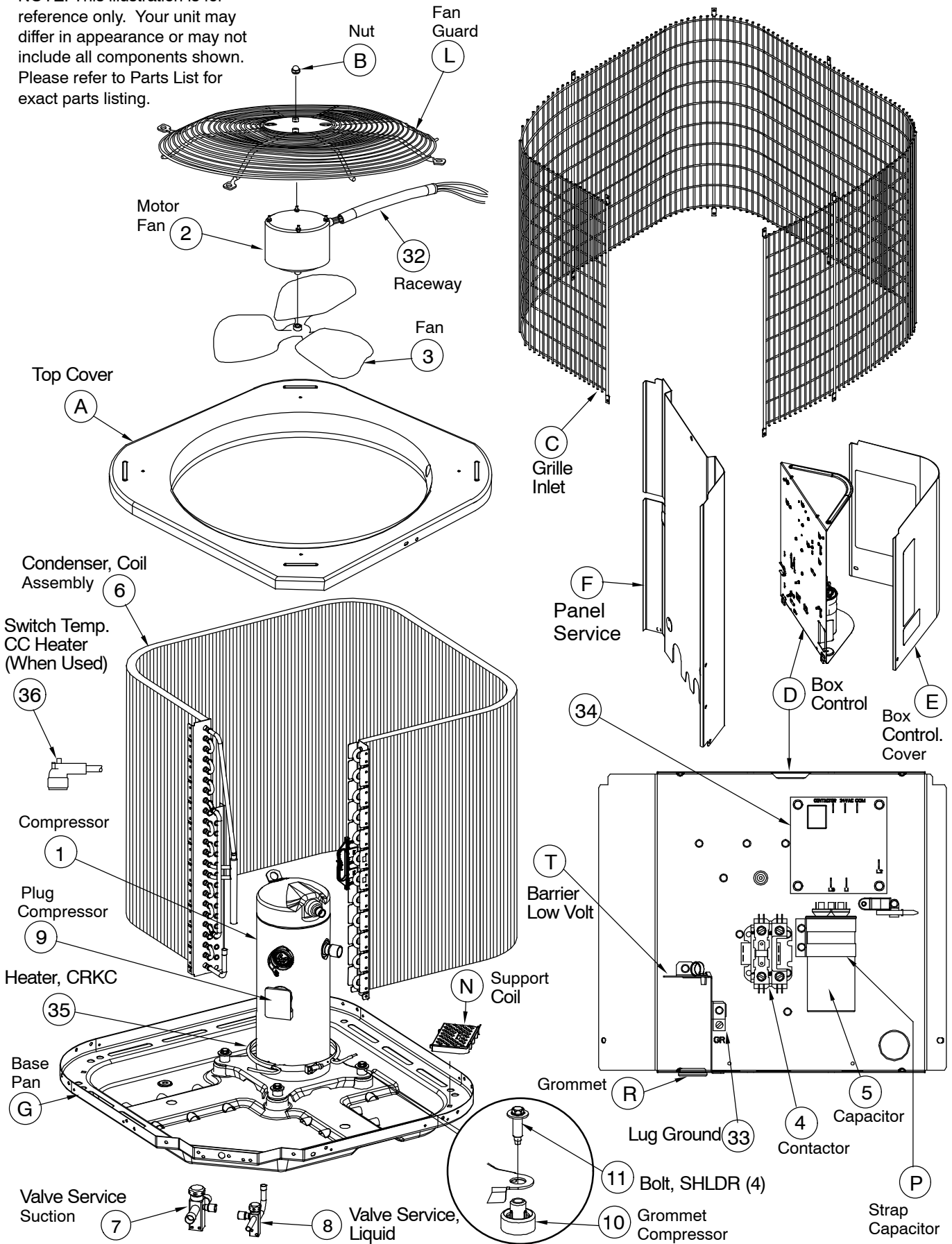
1. Symbols are electrical representation only.
2. Compressor and fan motor furnished with inherent thermal protection.
3. To be wired in accordance with National Electric N.E.C. and local codes.
4. N.E.C. class 2, 24 V circuit, min. 40 VA required, 60 VA on units installed with LLS.
5. Use copper conductors only. Use conductors suitable for at least 75°C (167°F).
6. Connection for typical cooling only thermostat. For other arrangements see installation instructions.
7. If indoor section has a transformer with a grounded secondary, connect the grounded side to the BRN lead.
8. If any of the original wire, as supplied, must be replaced, use the same or equivalent wire.
9. Check all electrical connections inside control box for tightness.
10. Do not attempt to operate unit until service valves have been opened.
11. Do not rapid cycle compressor. Compressor must be off 3 minutes to allow pressures to equalize between high and low side before starting.
12. It is imperative to connect 3-phase field power to unit with correct phasing. The Phase Rotation Monitor will not allow the contactor to energize. If phasing is reversed, interchange any two of the three power connections on field side.

- LEGEND**
- FACTORY POWER WIRING
 - - - FACTORY CONTROL WIRING
 - - - FIELD CONTROL WIRING
 - - - FIELD POWER WIRING
 - COMPONENT CONNECTION
 - ⊕ FIELD SPLICE
 - JUNCTION
 - ⊏ PLUG RECEPTACLE
 - CONT CONTACTOR
 - CAP CAPACITOR (DUAL RUN)
 - *CH CRANKCASE HEATER
 - *CHS CRANKCASE HEATER SWITCH
 - COMP COMPRESSOR
 - *CTD COMPRESSOR TIME DELAY
 - *DTS DISCHARGE TEMP SWITCH
 - *HPS HIGH PRESSURE SWITCH
 - IFR INDOOR FAN RELAY
 - *LLS LIQ LINE SOLENOID VALVE
 - *LPS LOW PRESSURE SWITCH
 - OFM OUTDOOR FAN MOTOR
 - *SC START CAPACITOR
 - *SR START RELAY
 - *ST START THERMISTOR

* MAY BE FACTORY INSTALLED

R-22 CHARGING CHART								
Measured Liquid Pressure (psig)	Rating Plate (required) Subcooling Temperature °F (°C)							
	°F 5	(°C) 3	°F 10	(°C) 6	°F 15	(°C) 8	°F 20	(°C) 11
	R-22 Required Liquid Line Temperature °F (°C)							
163	83	28	78	26	73	23	68	20
171	86	30	81	27	76	24	71	22
179	89	32	84	29	79	26	74	23
187	92	33	87	31	82	28	77	25
196	95	35	90	32	85	29	80	27
205	98	37	93	34	88	31	83	28
214	101	38	96	36	91	33	86	30
223	104	40	99	37	94	34	89	32
233	107	42	102	39	97	36	92	33
243	110	43	105	41	100	38	95	35
253	113	45	108	42	103	39	98	37
264	116	47	111	44	106	41	101	38
274	119	48	114	46	109	43	104	40
285	122	50	117	47	112	44	107	42
297	125	52	120	49	115	46	110	43
309	128	53	123	51	118	48	113	45

NOTE: This illustration is for reference only. Your unit may differ in appearance or may not include all components shown. Please refer to Parts List for exact parts listing.



R2A3**GHR PARTS LIST					
KEY NO.	DESCRIPTION	PART NO.	R2A336GHR100	R2A348GHR100	R2A360GHR100
01	COMP ZR32K5—TF5—130	ZR32K5TF5130	1	—	—
01	COMP ZR44K5—TF5—130	ZR44K5TF5130	—	1	—
01	COMP ZR54K5—TF5—130	ZR54K5TF5130	—	—	1
02	MOTOR CONDENSER FAN	1172775	1	—	—
02	MOTOR CONDENSER FAN	1172709	—	1	1
03	FAN BLADE	1172713	1	—	—
03	FAN BLADE	1173854	—	1	1
04	CONTACTOR 30 AMP	1173785	1	1	1
05	5 MFD 370V	1171727	1	1	1
06	COIL ASY COND	1179193	1	—	—
06	COIL ASY COND	1179195	—	1	—
06	COIL ASY COND	1179196	—	—	1
07	SERVICE VALVE SUCTION	1172727	1	1	1
08	SERVICE VALVE LIQUID	1172728	1	1	1
09	PLUG COMPRESSOR HARNESS	1174072	1	—	—
09	PLUG COMPRESSOR HARNESS	1174082	—	1	1
10	GROMMET COMPRESSOR	1171270	4	4	4
11	BOLT COMPRESSOR MOUNTING	1179201	4	4	4
32	RACEWAY	1171428	1	1	1
33	LUG GROUND	1172300	1	1	1
34	RELAY	1173408	1	1	1
35	C'CASE HEATER 40W 240V	1172358	—	—	1
36	SWITCH TEMP	1172359	—	—	1
)	CAP SERVICE KIT 11/16—20	1175650	1	1	1
)	CAP SERVICE KIT 15/16—20	1175651	1	—	—
)	CAP SERVICE KIT 1—1/16—20	1175652	—	1	1
)	DISTRUBITOR	1172022	—	1	—
)	DISTRUBITOR	1173667	—	—	1
A	PANEL TOP	1176738	1	1	1
B	NUT HEX	1172740	4	4	4
C	GRILLE INLET	1176987	1	—	—
C	GRILLE INLET	1176991	—	1	—
C	GRILLE INLET	1176993	—	—	1
D	BOX CONTROL	1179207	1	1	1
E	KIT COVER CONTROL BOX	1176753	1	1	1
F	PANEL SERVICE	1176740	1	—	—
F	PANEL SERVICE	1176744	—	1	—
F	PANEL SERVICE	1176743	—	—	1
G	PAN BASE	1176764	1	1	1
L	GUARD FAN	1179200	1	1	1
N	SUPPORT COIL	1174068	5	5	5
P	STRAP CAPACITOR	1174073	1	1	1
R	GROMMET	1179531	1	1	1
T	BARRIER LOW VOLTAGE	1176762	1	1	1
)	PAINT TOUCH UP 1PT	1174762	1	1	1
)	SCREW 10 X 1/2 25 PACK	1174880	1	1	1
)	SCREW HEX HD 10AB 3/8	1176782	10	10	10
)	SCREW HEX HD 12AB 5/8	1176781	4	4	4