ACCESSORY KIT INSTALLATION INSTRUCTION

2PH0852* SERIES ELECTRIC HEAT ACCESSORIES SPECIFICATIONS

For 13 SEER
SJ, PAC R-22 Packaged Air Conditioners
JP, PHP R-22 Packaged Heat Pumps
NM, NL R-410A Packaged Air Conditioners
UQ, UB R-410A Packaged Heat Pumps

TABLE 1: HEATER KIT ELECTRICAL SPECIFICATIONS

HEATER NUMBER			2PH08520506 (4.8 KW)	2PH08520706 (6.5 KW)	2PH08521006 (9.6 KW)	2PH08521506 (14.3 KW)	
HEATER BRANCH CIRCUIT ELECTRICAL SERVICE			2 Leads + 1 Ground	2 Leads + 1 Ground	2 Leads + 1 Ground	4 Leads + 2 Ground	
OUTPUT CAPACITY	240 VAC	Capacity	16,300	22,184	32,600	48,900	
		KW	4,776	6,500	9,552	14,328	
	230 VAC	Capacity	14,970	20,375	29,940	44,910	
		KW	4,386	5,970	8,773	13,159	
	220 VAC	Capacity	13,700	18,640	27,400	41,100	
		KW	4,013	5,462	8,026	12,040	
CIRCUIT NUMBER			1	1	1	1	2
NOMINAL CIRCUIT LOAD - AMPS			19.9	27.1	39.8	39.8	19.9
HEATER CIRCUIT MAXIMUM FUSE SIZE			30	35	60	60	30
MINIMUM CIRCUIT AMPACITY			24.9	33.9	49.8	49.8	24.8

TABLE 2: SJ, PAC R-22 AIR CONDITIONER SINGLE CIRCUIT SPECIFICATIONS

UNIT MODEL NUMBER	SINGLE CIRCUIT POWER SUPPLY SPECIFICATIONS	AIR CONDITIONER ONLY	WITH HEATER NUMBER			
			2PH08520506 (4.8 KW)	2PH08520706 (6.5 KW)	2PH08521006 (9.6 KW)	2PH08521506 (14.3 KW)
SJ024C00A1AAA1 PAC024H1321A	Minimum Circuit Amps.	18.8	30.0	39.0	54.9	79.8
	Maximum Overcurrent Device Amps.	25	30	40	60	80
SJ030C00A1AAA2 PAC030H132A	Minimum Circuit Amps.	19.8	30.0	39.0	54.9	79.8
	Maximum Overcurrent Device Amps.	25	30	40	60	80
SJ036C00A1AAA1 PAC036H1321A	Minimum Circuit Amps.	23.9	30.0	39.0	54.9	79.8
	Maximum Overcurrent Device Amps.	30	35	40	60	80
SJ042C00A1AAA1 PAC042H1321A	Minimum Circuit Amps.	24.3	30.0	39.0	54.9	79.8
	Maximum Overcurrent Device Amps.	35	35	40	60	80
SJ048C00A1AAA1 PAC048H1321A	Minimum Circuit Amps.	31.7	34.4	43.4	59.3	84.1
	Maximum Overcurrent Device Amps.	40	45	45	60	90
SJ060C00A1AAA1 PAC060H1321A	Minimum Circuit Amps.	41.3	41.3	43.4	59.3	84.1
	Maximum Overcurrent Device Amps.	60	60	60	60	90

TABLE 3: SJ, PAC R-22 AIR CONDITIONER DUAL CIRCUIT SPECIFICATIONS

UNIT MODEL NUMBER	OPTIONAL DUAL CIRCUIT POWER SUPPLY SPECIFICATIONS	WITH HEATER NUMBER							
		2PH08520506 (4.8 KW)		2PH08520706 (6.5 KW)		2PH08521006 (9.6 KW)		2PH08521506 (14.3 KW)	
		Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower
SJ024C00A1AAA1 PAC024H1321A	Minimum Circuit Amps.	30.0	14.7	39.0	14.7	54.9	14.7	54.9	24.9
	Maximum Overcurrent Device Amps.	30	20	40	20	60	20	60	25
SJ030C00A1AAA2 PAC030H1322A	Minimum Circuit Amps.	30.0	15.7	39.0	15.7	54.9	15.7	54.9	24.9
	Maximum Overcurrent Device Amps.	30	20	40	20	60	20	60	25
SJ036C00A1AAA1 PAC036H1321A	Minimum Circuit Amps.	30.0	19.8	39.0	19.8	54.9	19.8	54.9	24.9
	Maximum Overcurrent Device Amps.	30	25	40	25	60	25	60	30
SJ042C00A1AAA1 PAC042H1321A	Minimum Circuit Amps.	30.0	20.2	39.0	20.2	54.9	20.2	54.9	24.9
	Maximum Overcurrent Device Amps.	30	30	40	30	60	30	60	35
SJ048C00A1AAA1 PAC048H1321A	Minimum Circuit Amps.	34.4	24.1	43.4	24.1	59.3	24.1	59.3	24.9
	Maximum Overcurrent Device Amps.	35	35	45	35	60	35	60	35
SJ060C00A1AAA1 PAC060H1321A	Minimum Circuit Amps.	34.4	33.7	43.4	33.7	59.3	33.7	59.3	33.7
	Maximum Overcurrent Device Amps.	35	45	45	45	60	45	60	45

TABLE 4: JP, PHP R-22 HEAT PUMPS SINGLE CIRCUIT SPECIFICATIONS

UNIT MODEL NUMBER	SINGLE CIRCUIT POWER SUPPLY SPECIFICATIONS	HEAT PUMP ONLY	WITH HEATER NUMBER			
			2PH08520506 (4.8 KW)	2PH08520706 (6.5 KW)	2PH08521006 (9.6 KW)	2PH08521506 (14.3 KW)
JP024C00A1AAA1 PHP024H1321A	Minimum Circuit Amps.	18.0	42.8	51.8	67.7	92.6
	Maximum Overcurrent Device Amps.	25	45	60	70	100
JP030C00A1AAA1 PHP030H1321A	Minimum Circuit Amps.	19.0	43.8	52.8	68.7	93.6
	Maximum Overcurrent Device Amps.	25	45	60	70	100
JP036C00A1AAA1 PHP036H1321A	Minimum Circuit Amps.	22.5	47.3	56.3	72.2	97.1
	Maximum Overcurrent Device Amps.	30	50	60	80	100
JP042C00A1AAA1 PHP042H1321A	Minimum Circuit Amps.	30.8	55.7	64.6	80.5	105.4
	Maximum Overcurrent Device Amps.	40	60	70	90	110
JP048C00A1AAA1 PHP048H1321A	Minimum Circuit Amps.	38.3	63.1	72.1	88.0	112.9
	Maximum Overcurrent Device Amps.	50	80	80	100	125
JP060C00A1AAA1 PHP060H1321A	Minimum Circuit Amps.	41.5	66.4	75.4	91.3	116.1
	Maximum Overcurrent Device Amps.	60	80	90	100	125

TABLE 5: JP, PHP R-22 HEAT PUMPS DUAL CIRCUIT SPECIFICATIONS

UNIT MODEL NUMBER	OPTIONAL DUAL CIRCUIT POWER SUPPLY SPECIFICATIONS	WITH HEATER NUMBER							
		2PH08520506 (4.8 KW)		2PH08520706 (6.5 KW)		2PH08521006 (9.6 KW)		2PH08521506 (14.3 KW)	
		Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower
JP024C00A1AAA1 PHP024H1321A	Minimum Circuit Amps.	30.0	13.9	39.0	13.9	54.9	13.9	54.9	38.7
	Maximum Overcurrent Device Amps.	30	20	40	20	60	20	60	40
JP030C00A1AAA1 PHP030H1321A	Minimum Circuit Amps.	30.0	14.9	39.0	14.9	54.9	14.9	54.9	39.7
	Maximum Overcurrent Device Amps.	30	20	40	20	60	20	60	45
JP036C00A1AAA1 PHP036H1321A	Minimum Circuit Amps.	30.0	18.4	39.0	18.4	54.9	18.4	54.9	43.2
	Maximum Overcurrent Device Amps.	30	25	40	25	60	25	60	50
JP042C00A1AAA1 PHP042H1321A	Minimum Circuit Amps.	34.4	23.2	43.4	23.2	59.3	23.2	59.3	48.1
	Maximum Overcurrent Device Amps.	35	30	45	30	60	30	60	60
JP048C00A1AAA1 PHP048H1321A	Minimum Circuit Amps.	34.4	30.7	43.4	30.7	59.3	30.7	59.3	55.5
	Maximum Overcurrent Device Amps.	35	40	45	40	60	40	60	60
JP060C00A1AAA1 PHP060H1321A	Minimum Circuit Amps.	34.4	33.9	43.4	33.9	59.3	33.9	59.3	58.8
	Maximum Overcurrent Device Amps.	35	45	45	45	60	45	60	60

TABLE 6: NM, NL R-410A AIR CONDITIONER SINGLE CIRCUIT SPECIFICATIONS

UNIT MODEL NUMBER	SINGLE CIRCUIT POWER SUPPLY SPECIFICATIONS	AIR CONDITIONER ONLY	WITH HEATER NUMBER			
			2PH08520506 (4.8 KW)	2PH08520706 (6.5 KW)	2PH08521006 (9.6 KW)	2PH08521506 (14.3 KW)
NM024C00A1AAA1	Minimum Circuit Amps.	14.9	29.0	38.0	53.9	78.8
NL024C00A1AAA1	Maximum Overcurrent Device Amps.	20	30	40	60	80
NM030C00A1AAA1	Minimum Circuit Amps.	18.0	29.0	38.0	53.9	78.8
NL030C00A1AAA1	Maximum Overcurrent Device Amps.	25	30	40	60	80
NM036C00A1AAA1	Minimum Circuit Amps.	23.1	29.0	38.0	53.9	78.8
NL036C00A1AAA1	Maximum Overcurrent Device Amps.	30	35	40	60	80
NM042C00A1AAA1	Minimum Circuit Amps.	25.8	30.0	39.0	54.9	79.8
NL042C00A1AAA1	Maximum Overcurrent Device Amps.	35	40	40	60	80
NM048C00A1AAA1	Minimum Circuit Amps.	32.6	34.4	43.4	59.3	84.1
NL048C00A1AAA1	Maximum Overcurrent Device Amps.	45	45	50	60	90
NM060C00A1AAA1	Minimum Circuit Amps.	42.1	42.1	43.4	59.3	84.1
NL060C00A1AAA1	Maximum Overcurrent Device Amps.	60	60	60	60	90

TABLE 7: NM, NL R-410A AIR CONDITIONERS DUAL CIRCUIT SPECIFICATIONS

UNIT MODEL NUMBER	OPTIONAL DUAL CIRCUIT POWER SUPPLY SPECIFICATIONS	WITH HEATER NUMBER							
		2PH08520506 (4.8 KW)		2PH08520706 (6.5 KW)		2PH08521006 (9.6 KW)		2PH08521506 (14.3 KW)	
		Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower
NM024C00A1AAA1	Minimum Circuit Amps.	29.0	11.6	38.0	11.6	53.9	11.6	53.9	24.9
NL024C00A1AAA1	Maximum Overcurrent Device Amps.	30	15	40	15	60	15	60	25
NM030C00A1AAA1	Minimum Circuit Amps.	29.0	14.7	38.0	14.7	53.9	14.7	53.9	24.9
NL030C00A1AAA1	Maximum Overcurrent Device Amps.	30	20	40	20	60	20	60	25
NM036C00A1AAA1	Minimum Circuit Amps.	29.0	19.8	38.0	19.8	53.9	19.8	53.9	24.9
NL036C00A1AAA1	Maximum Overcurrent Device Amps.	30	25	40	25	60	25	60	30
NM042C00A1AAA1	Minimum Circuit Amps.	30.0	21.7	39.0	21.7	54.9	21.7	54.9	24.9
NL042C00A1AAA1	Maximum Overcurrent Device Amps.	30	30	40	30	60	30	60	35
NM048C00A1AAA1	Minimum Circuit Amps.	34.4	25.0	43.4	25.0	59.3	25.0	59.3	25.0
NL048C00A1AAA1	Maximum Overcurrent Device Amps.	35	35	45	35	60	35	60	35
NM060C00A1AAA1	Minimum Circuit Amps.	34.4	34.5	43.4	34.5	59.3	34.5	59.3	34.5
NL060C00A1AAA1	Maximum Overcurrent Device Amps.	35	45	45	45	60	45	60	45

TABLE 8: UQ, UB R-410A AIR CONDITIONER SINGLE CIRCUIT SPECIFICATIONS

UNIT MODEL NUMBER	SINGLE CIRCUIT POWER SUPPLY SPECIFICATIONS	HEAT PUMP ONLY	WITH HEATER NUMBER			
			2PH08520506 (4.8 KW)	2PH08520706 (6.5 KW)	2PH08521006 (9.6 KW)	2PH08521506 (14.3 KW)
UQ024C00A1AAA1 UB024C00A1AAA1	Minimum Circuit Amps.	22.1	46.9	55.9	71.8	96.7
	Maximum Overcurrent Device Amps.	30	50	60	80	100
UQ030C00A1AAA1 UB030C00A1AAA1	Minimum Circuit Amps.	22.9	47.8	56.8	72.7	97.6
	Maximum Overcurrent Device Amps.	30	50	60	80	100
UQ036C00A1AAA1 UB036C00A1AAA1	Minimum Circuit Amps.	26.3	51.1	60.1	76	100.9
	Maximum Overcurrent Device Amps.	35	60	70	80	110
UQ042C00A1AAA1 UB042C00A1AAA1	Minimum Circuit Amps.	37.1	61.9	70.9	86.8	111.7
	Maximum Overcurrent Device Amps.	50	70	80	90	125
UQ048C00A1AAA1 UB048C00A1AAA1	Minimum Circuit Amps.	35.4	60.3	69.3	85.2	110.1
	Maximum Overcurrent Device Amps.	45	70	80	90	125
UQ060C00A1AAA1 UB060C00A1AAA1	Minimum Circuit Amps.	41.1	65.9	74.9	90.8	115.7
	Maximum Overcurrent Device Amps.	60	80	90	100	125

TABLE 9: UQ, UB R-410A HEAT PUMP DUAL CIRCUIT SPECIFICATIONS

UNIT MODEL NUMBER	OPTIONAL DUAL CIRCUIT POWER SUPPLY SPECIFICATIONS	WITH HEATER NUMBER							
		2PH08520506 (4.8 KW)		2PH08520706 (6.5 KW)		2PH08521006 (9.6 KW)		2PH08521506 (14.3 KW)	
		Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower
UQ024C00A1AAA1 UB024C00A1AAA1	Minimum Circuit Amps.	30.0	18	39.0	18	54.9	18	54.9	42.8
	Maximum Overcurrent Device Amps.	30	25	40	25	60	25	60	50
UQ030C00A1AAA1 UB030C00A1AAA1	Minimum Circuit Amps.	30.0	18.8	39.0	18.8	54.9	18.8	54.9	43.7
	Maximum Overcurrent Device Amps.	30	25	40	25	60	25	60	50
UQ036C00A1AAA1 UB036C00A1AAA1	Minimum Circuit Amps.	30.0	22.2	39.0	22.2	54.9	22.2	54.9	47
	Maximum Overcurrent Device Amps.	30	30	40	30	60	30	60	50
UQ042C00A1AAA1 UB042C00A1AAA1	Minimum Circuit Amps.	34.4	29.5	43.4	29.5	59.3	29.5	59.3	54.3
	Maximum Overcurrent Device Amps.	35	40	45	40	60	40	60	70
UQ048C00A1AAA1 UB048C00A1AAA1	Minimum Circuit Amps.	34.4	27.8	43.4	27.8	59.3	27.8	59.3	52.7
	Maximum Overcurrent Device Amps.	35	35	45	35	60	35	60	60
UQ060C00A1AAA1 UB060C00A1AAA1	Minimum Circuit Amps.	34.4	33.5	43.4	33.5	59.3	33.5	59.3	58.3
	Maximum Overcurrent Device Amps.	35	45	45	45	60	45	60	70

IMPORTANT - These instructions are intended for the use of qualified individuals specifically trained and experienced in installation of this type of equipment and related system components.

Installation and service personnel are required by some states to be licensed.

Persons not qualified shall not install this equipment or interpret these instructions.

NOTE: The words “Shall” or “Must” indicate a requirement which is essential to satisfactory and safe product performance.

The words “Should” or “May" indicate a recommendation or advice which is not essential and not required but which may be useful or helpful.

⚠WARNING

Improper installation may damage equipment, can create a hazard, and will void the warranty. Disconnect electrical power supply to the unit before installing or servicing to avoid the possibility of shock, injury, or damage to the equipment.

VISUALLY INSPECT PRODUCT

Check the contents of this package and look for shipping damage. If there is damage, file a claim immediately with the shipping company.

APPLICATION

These heaters are designed for use in JP, PHP, UQ and UB 13 SEER Packaged Heat Pumps, and SJ, PAC, NM and NL 13 SEER Packaged Air Conditioners. These units may be wired as single or dual circuits and may use terminal blocks or circuit breakers.

IMPORTANT - The circuit breakers are required on all Packaged Heat Pump (JP, PHP, UQ and UB) installations and all installations 15 KW or greater. When installing this accessory with an Air Conditioner (SJ, PAC, NM and NL) and 5 KW, 6.5 KW or 10 KW heater kit, circuit breakers are optional. Refer to Table 10 for a list of additional accessories.

CONTENTS OF PACKAGE

1. Heater Assembly
2. Installation Instructions
3. Wiring Diagram Stickers
4. Control Assembly
5. Wire and Components

Table 10: ADDITIONAL ACCESSORIES

Part Name	Part Number
Single-Stage Outdoor Thermostat	3024-6881/D
Dual-Stage Outdoor Thermostat	3024-7881/D
Circuit Breakers (x1)	3500-377P*
Dual-Circuit to Single-Circuit Jumper Bar	3500-378P*
Jumper Bar Cover Plate	032-00006-000*

* May be additional characters or numbers

INSTALLATION PROCEDURE

1. Remove the blower compartment access panel and control compartment panel. See Figure 1.

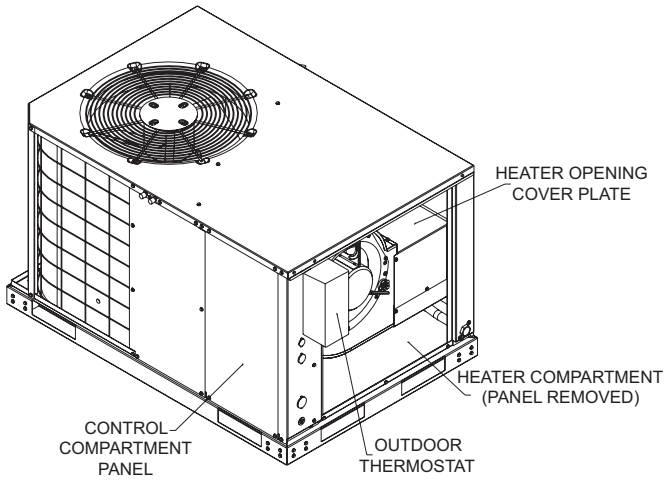

FIGURE 1: BLOWER COMPARTMENT

2. Remove and discard the blower chute top plate. Save all removed screws for later use. See Figure 2.

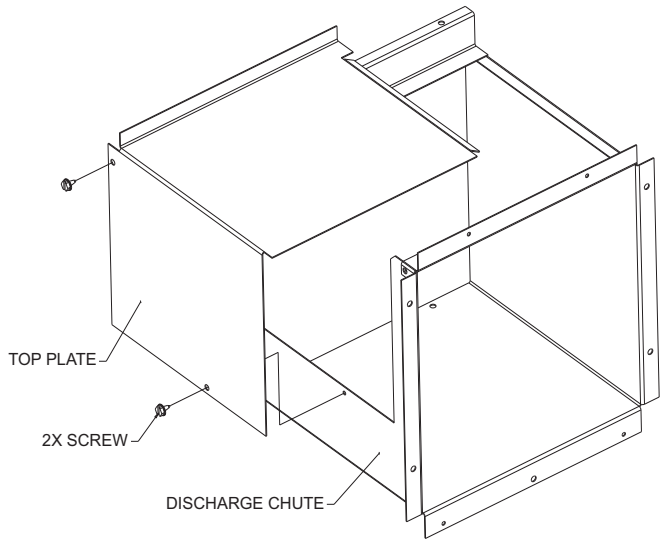

FIGURE 2: DISCHARGE CHUTE ASSEMBLY

3. Remove the heater assembly cover temporarily to allow installation onto the top plate. Take care not to deform the heater element wires or insulators during installation onto the top plate. Secure the heater assembly onto the top plate using the (4) four screws previously removed with the heater opening cover plate. Re-secure heater assembly cover using the same screws previously removed. See Figure 3.

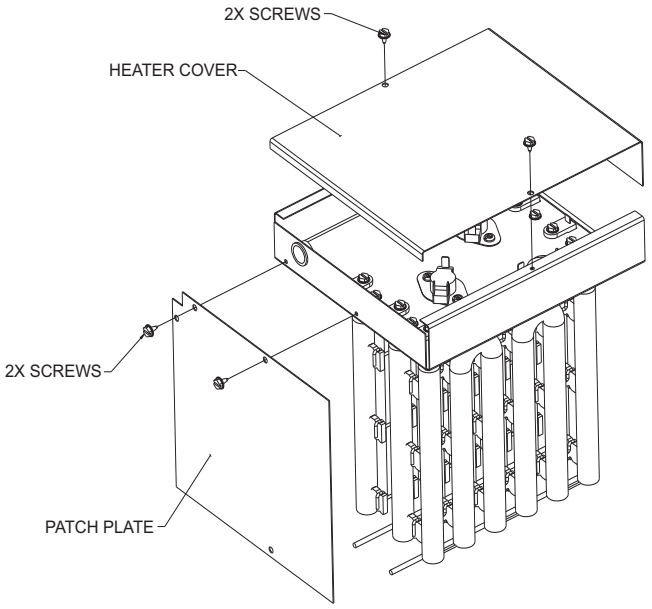

FIGURE 3: HEATER/TOP PLATE ASSEMBLY

4. Re-install the top plate/heater assembly into the blower chute. Again, take care not to deform the heater element wires during installation into the blower chute. See Figure 4.

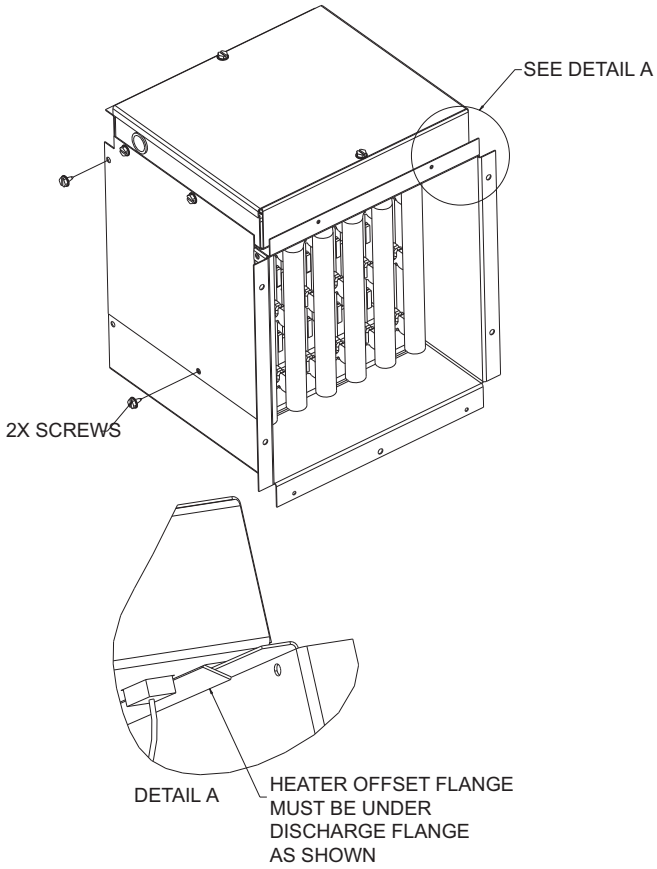

FIGURE 4: INSTALLED HEATER ASSEMBLY

5. Install the heater control plate using the four (4) screws located in the small parts package. See Figure 5.

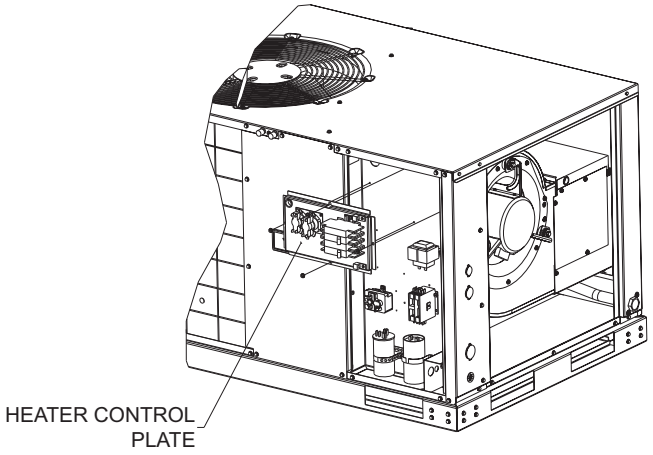

FIGURE 5: CONTROL PLATE INSTALLATION

6. Route the heater assembly wire leads by the blower and up to the control panel entry hole. Trim away insulation with a knife to facilitate installation of the strain relief fitting. Feed all wires through the control panel entry hole. See Figures 5, 6, 7 & 8.

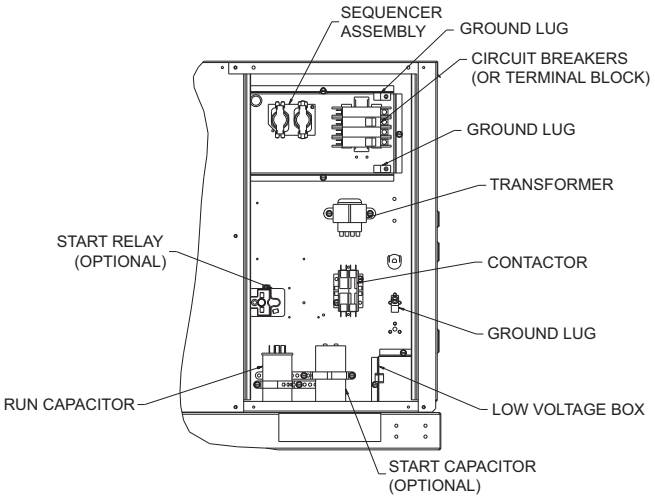

FIGURE 6: SJ, PAC, NM/NL042-060

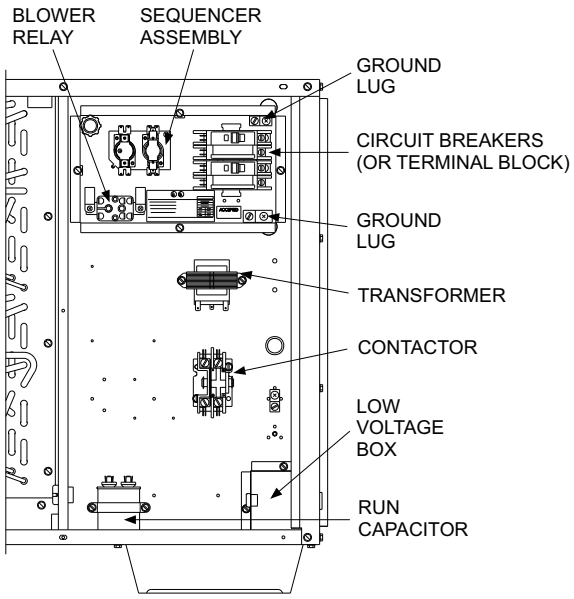

FIGURE 7: NM/NL024-036

NOTE: These models are equipped with a 1/2 HP PSC Blower Motor and will require a relay to operate the motor. Install the Blower Relay on the control plate as shown in Figure 7. The Blower Relay is included in a parts bag along with this kit.

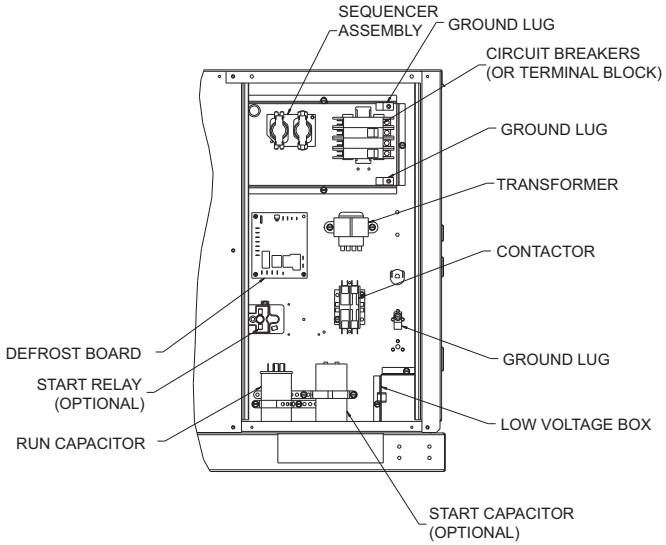

FIGURE 8: JP, PHP, UQ, UB

NOTE: The 2PH0852* Electric Heat Package accessories are designed for use with the 13 SEER Packaged Heat Pump (JP, PHP, UQ, UB) and Packaged Air Conditioners (SJ, PAC, NM, NL). They may not be used with the earlier air conditioners or heat pumps.

TO WIRE THE HEATER LEADS

Without Circuit Breakers

To wire Heater Kit number 2PH08520506 follow Step 1 below. To wire Heater Kit number 2PH08520706 and 2PH08521006 follow Steps 1 & 2 below.

Refer to the wiring diagram provided with the heater as you progress.

1. Attach blue (711) heater lead wire to the bottom terminal on the field wiring terminal block. Attach the orange (702) heater lead wire to the M1 position on the sequencer.
2. Attach blue (709) heater lead wire to the bottom terminal of the field wiring terminal block along with the blue (711) heater lead wire attached in step #1. Attach the remaining red (701) heater lead wire to the M3 position on the sequencer.

With Circuit Breakers

To wire Heater Kit number 2PH08520506 follow Step 1 below. To wire Heater Kit number 2PH08520706 and 2PH08521006 follow Steps 1 & 2 below. To wire Heater Kit number 2PH08521506 follow Steps 1, 2 & 3 below.

1. Attach blue (711) heater lead wire to position 2 on the UPPER circuit breaker. See figure 9. Attach the orange (702) heater lead wire to the M1 position on the sequencer.
2. Attach blue (709) heater lead wire to position 2 on the UPPER circuit breaker along with the blue (711) heater lead wire attached in Step 1. See Figure 9. Attach the remaining red (701) heater lead wire to the M3 position on the sequencer.
3. Attach orange (710) heater lead wire to position 2 on the LOWER circuit breaker. See Figure 9. Attach the brown (700) heater lead wire to the M5 position on the sequencer.

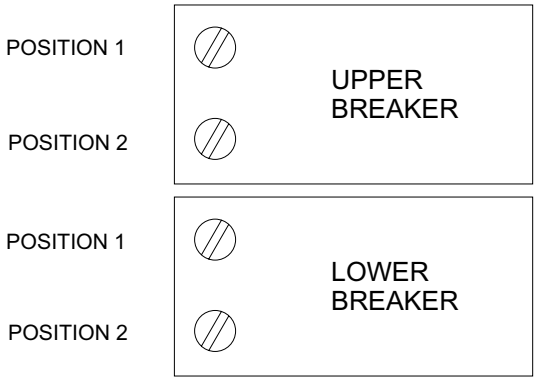

FIGURE 9: CIRCUIT BREAKERS

TO WIRE THE ECM BLOWER MOTOR (PAC & PHP, UQ, UB, NM/NL042-060)

Disconnect the yellow and orange blower motor lead wires from the contactor and route up to the control plate. Connect the yellow wire to the top terminal of the terminal block.

Connect the orange wire to the bottom terminal of the terminal block. If using circuit breakers, connect the yellow wire to position 1 on the upper circuit breaker and connect the orange wire to position 2 on the upper circuit breaker. (See Figure 9).

TO WIRE THE PSC BLOWER MOTOR (NM/NL024-036)

NOTE: Terminal numbers on the Blower Relay may vary per manufacturer.

1. Disconnect the yellow (129) and orange (130) blower motor lead wires from the contactor and route up to the control plate. Connect the orange (130) wire to blower relay terminal “2”.
2. Connect the yellow (129) wire to the bottom terminal of the terminal block. If using circuit breakers, connect the yellow (129) wire to position 2 on the upper circuit breaker. See Figure 9.
3. Connect the green (804) wire to blower relay terminal “A”. This wire may need to be connected with the green (230) wire, equipped with the main unit.
4. Connect the brown (805) wire to blower relay terminal “B” and to the “H1” terminal on the sequencer.
5. Connect the red (806) wire to the “MI” terminal on the sequencer and to blower relay terminal “6”.
6. Connect the red (807) wire to blower relay terminal “5” and to the desired speed tap on the Blower Motor.
7. Connect the orange (808) wire to blower relay terminal “4” and to the top terminal on the field wiring terminal block or circuit breaker.

WALL THERMOSTAT

Connect wall thermostat to low voltage wiring according to wiring diagram in these instructions. See Figure 10 & 11.

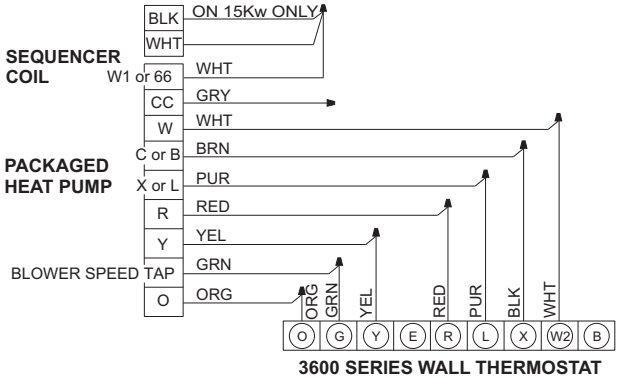

FIGURE 10: HEAT PUMP THERMOSTAT WIRING

POWER WIRING

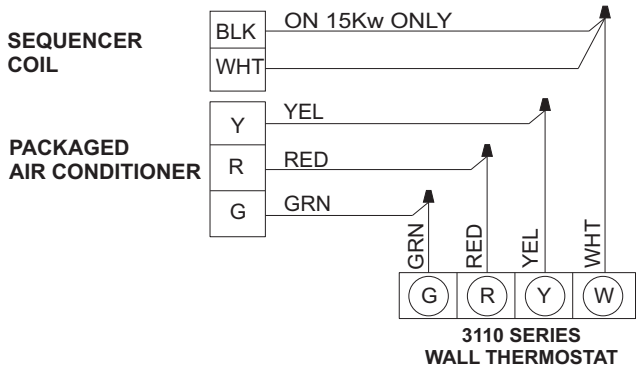

FIGURE 11: AIR CONDITIONING THERMOSTAT WIRING

As shipped from the factory, this packaged unit is equipped to operate on a dual branch circuit. However, an optional method of wiring is available which allows the use of single supply circuit.

Determine whether the power supply will be a single or dual circuit, then select the proper wire and circuit breaker sizes as shown in the specification tables in these instructions.

Single Supply Circuit

A single supply circuit will power the entire unit (packaged unit plus electric heaters) using one supply circuit. When this is done, use the top knockout located on the unit's control box corner post. See Figure 1. Select the proper wire and circuit breaker sizes as shown in the specification tables in these instructions.

NOTE: For Air Conditioner Installations refer to Table 2 or 6 for wire size specifications. In this application, the compressor and electric heaters **do not** function at the same time. For this reason, the wire/breaker size shown is for the compressor **or** electric heater load, whichever is greater.

For Heat Pump Installations refer to Table 4 or 8 for wire size specifications. In this application, the compressor and electric heaters **do** function at the same time. For this reason, the wire/breaker size shown is for the compressor and electric heater combination load.

Route the wire into the unit and up the control box side to the terminal block or circuit breakers. When using a terminal block, attach the power wires to the terminal block lugs. If using circuit breakers, install the 4-pole single circuit jumper bar to the circuit breakers then connect the power wires to the jumper bar lugs. A 15 KW kit includes circuit breakers and a jumper bar. If you are using breakers on a 5 KW, 6.5 KW or 10 KW kit (required on all heat pump applications) they must be ordered separately. Refer to Table 10 for a list of optional accessories.

A pair of jumper wires are included with each kit to connect the terminal block/circuit breaker to the compressor contactor. Refer to the wiring diagram included with this kit for wiring information.

IMPORTANT - Torque all terminal block/circuit breaker lugs to 45-in/lbs.

Dual Supply Circuit

A dual supply circuit will power the packaged unit using one circuit and the electric heater accessory using a second circuit. Use both knockouts located on the units control box corner post. See Figure 1. Select the proper wire and circuit breaker sizes as shown in the specification tables in these instructions.

NOTE: For Air Conditioner applications, refer to Table 3 or 7. For an explanation of "upper" and "lower" circuit breakers, refer to Figure 9.

For Heat pump Applications, refer to table 5 or 9. For an explanation of "upper" and "lower" circuit breakers, refer to Figure 9.

Route the wire used for the electric heater accessory into the unit and up the control box side to the terminal block or circuit breakers. When using a terminal block, attach the electric heater power wires to the terminal block lugs. Route the second circuit wire used for the air conditioner to the units contactor. If using circuit breakers, install the 4-pole single circuit jumper bar to the circuit breakers then connect the electric heater power wires to the jumper bar. Refer to the wiring diagram included with this kit for wiring information.

IMPORTANT - Torque all terminal block/circuit breaker lugs to 45-in/lbs.

OUTDOOR THERMOSTAT

The outdoor thermostat accessory is for use with all packaged heat pump (JP, PHP, UB and UQ) models. This accessory is recommended with residential installations but is required for all HUD certified Manufactured Home Installations.

TO MOUNT OUTDOOR THERMOSTAT BOX (MUST BE ORDERED SEPERATELY)

1. **JP, PHP, UB and UQ models -** Locate the outdoor thermostat box on the unit as shown in Figure 1. Use existing screw to secure box to unit.
2. Route the low voltage cable of the outdoor thermostat through the small grommeted hole.
3. Connect the outdoor thermostat wires to the units low voltage wiring according to the instructions supplied with the outdoor thermostat accessory kit.

HOW THE OUTDOOR THERMOSTAT FUNCTIONS

The function of the outdoor thermostat is to prevent the use of unnecessary electric heat. The 5 KW, 6.5 KW and 10 KW heater assemblies have only one (#1) thermostat. The 15 KW may have one (#1) or two (#2) thermostats. See Table 10 for a list of accessories.

The #1 outdoor thermostat should not be set higher than 40° F. It is preset at 30° F from the factory. As the outdoor temperature drops below the temperature setting on the #1 outdoor thermostat, its contacts close which allows the wall thermostat second stage to control the first electric heat sequencer.

The #2 outdoor thermostat is preset at 20° F from the factory. Do not adjust the #2 outdoor thermostat to a setting above the #1 thermostat.

Setting the #2 outdoor thermostat at the second balance point prevents the wall thermostat from turning on additional electric heat during outdoor temperatures at which the heat pump plus the first stage of electric heat are sufficient to heat the home.

As the outdoor temperature drops below the temperature setting on the #2 outdoor thermostat, its contacts close which allows the wall thermostat second stage to control all the remaining electric heating elements.

As the outdoor temperature warms above the set point, the outdoor thermostat contacts open and shut off the availability of electric heating circuits under its control.

When the wall thermostat is set to Emergency Heat, or the outdoor heat pump unit goes to its emergency heat mode, a relay contained in the outdoor thermostat box bypasses the outdoor thermostats and allows the wall thermostat second stage to control all electric heating elements regardless of outdoor temperatures.

For more information about the outdoor thermostat, refer to the instructions supplied with the outdoor thermostat kit.

WIRING DIAGRAM NUMBERS

The 2PH0852* Electric Heat Package accessories are designed for use with the SJ, PAC, NM, NL 13 SEER Packaged Air conditioner and JP, PHP, UQ, UB 13 SEER Packaged Heat Pumps.

To facilitate this interchangeability, wiring diagrams are packed with the accessories. The following table specifies the correct wiring diagram to be used with a particular model. Attach the appropriate wiring diagram over the existing diagram on the inside of the units control panel cover as instructed above.

(Wiring diagram part number is located in the lower left corner of the diagram.)

TABLE 11: WIRING DIAGRAM MATCH-UP CHART

WIRING DIAGRAM NUMBER	KW	PACKAGED UNIT MODELS
157952	5, 6.5, 10, 15	13 SEER Heat Pumps (JP, PHP, UQ, UB)
162454	5, 6.5, 10	13 SEER Cooling Units (SJ, PAC, NM/NL042-060)
162453	15	13 SEER Cooling Units (SJ, PAC, NM/NL042-060)
554895	5, 6.5, 10, 15	13 SEER Cooling Units (NM, NL024-036)
554894	15	13 SEER Cooling Units (NM, NL024-036)

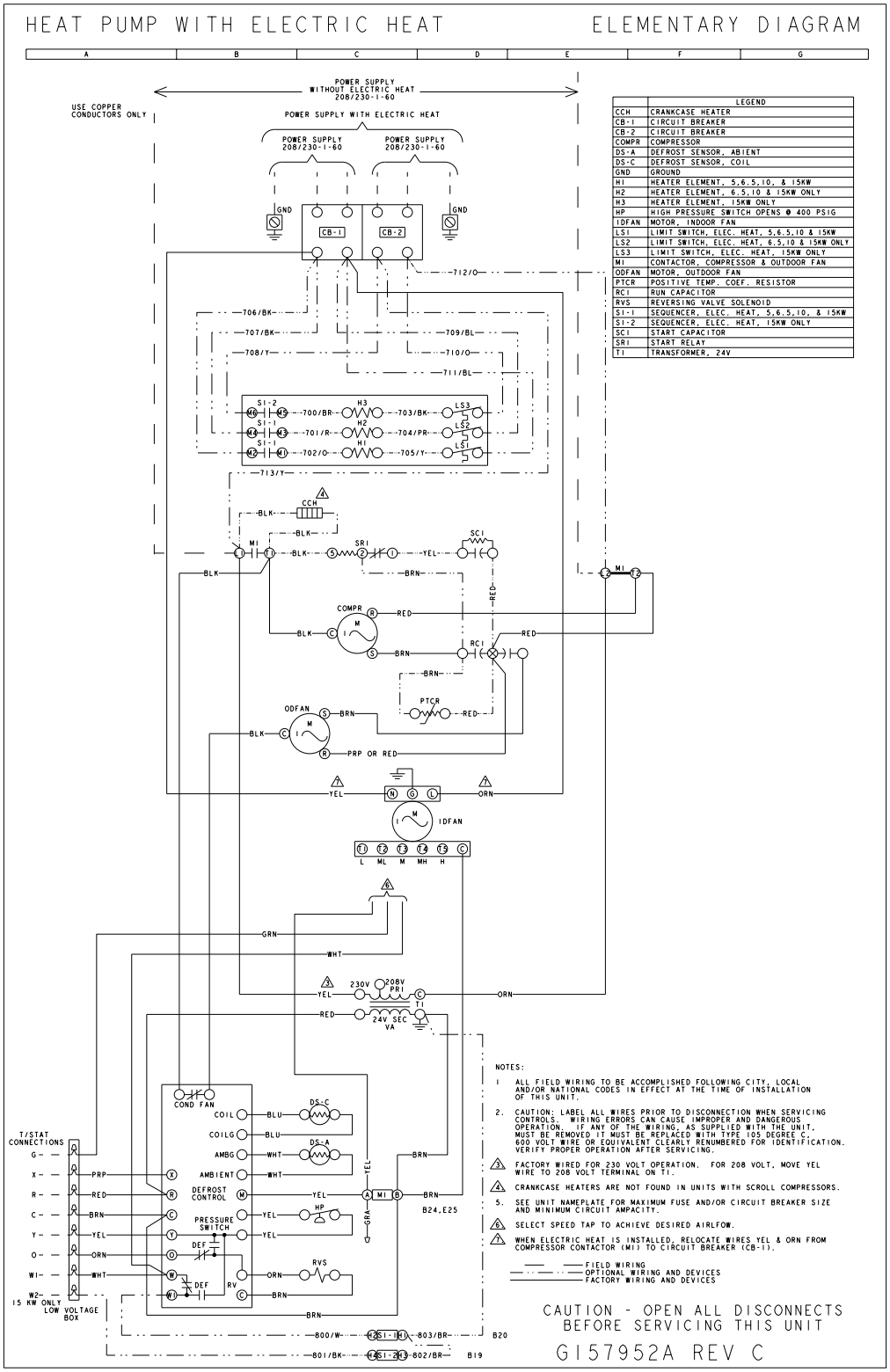

FIGURE 12: TYPICAL 5, 6.5, 10 AND 15KW ELECTRIC HEAT WIRING DIAGRAM FOR JP, PHP, UQ AND UB 13 SEER HEAT PUMPS

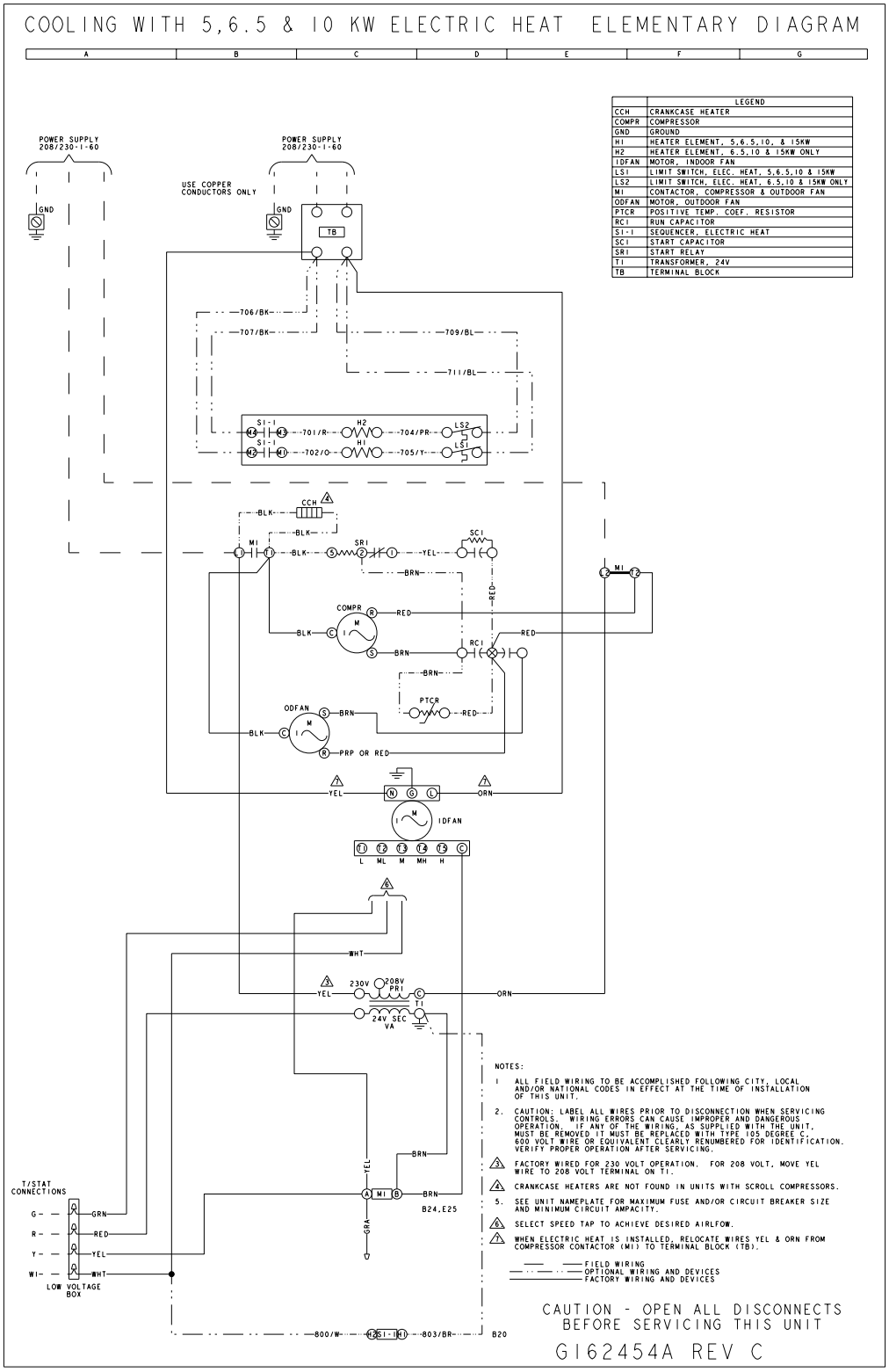

FIGURE 13: TYPICAL 5, 6.5, AND 10KW ELECTRIC HEAT WIRING DIAGRAM FOR SJ, PAC AND NM/NL042-060 13 SEER COOLING UNITS

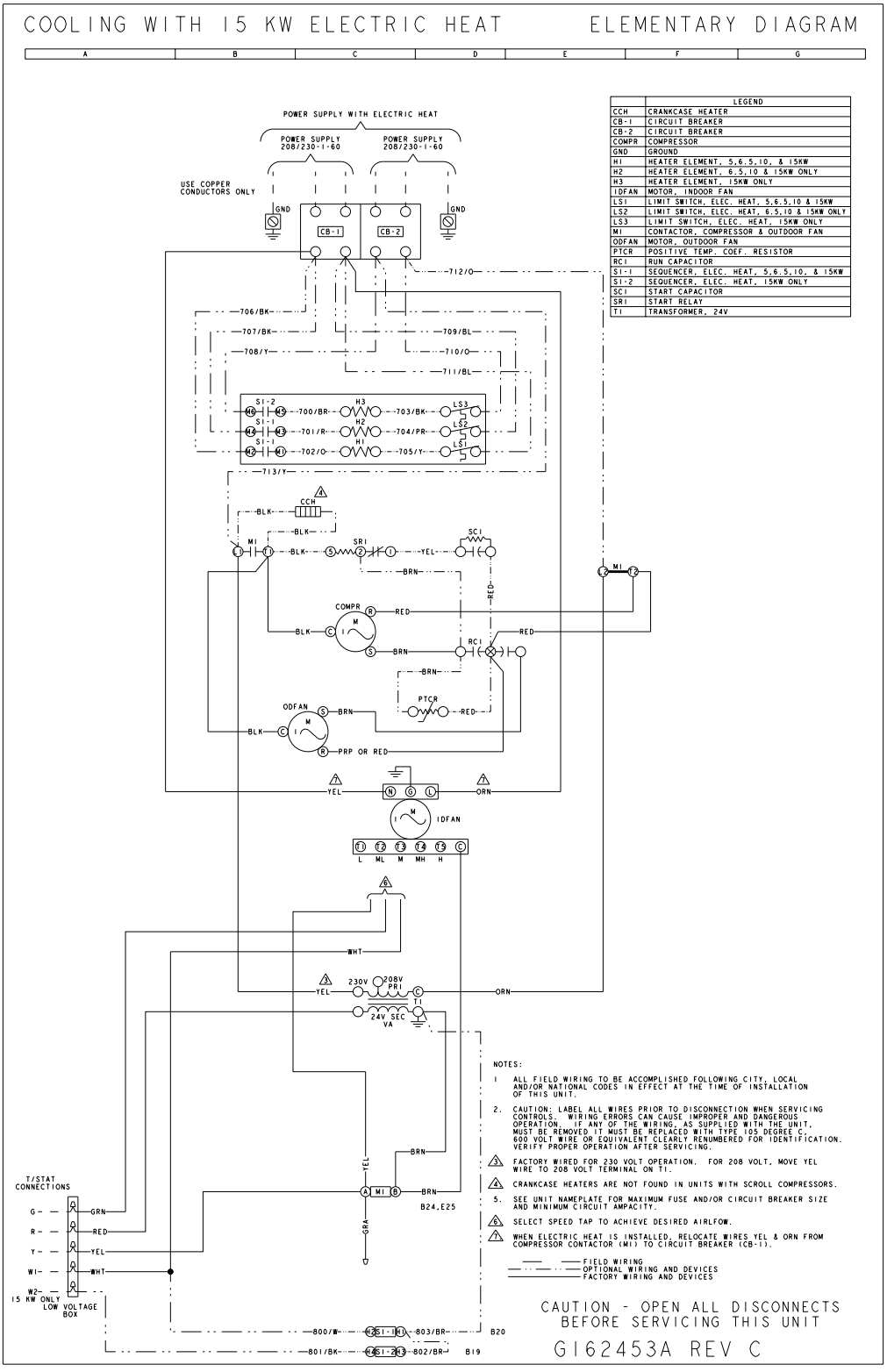

FIGURE 14: TYPICAL 15KW ELECTRIC HEAT WIRING DIAGRAM FOR SJ, PAC AND NM/NL042-060 13 SEER COOLING UNITS

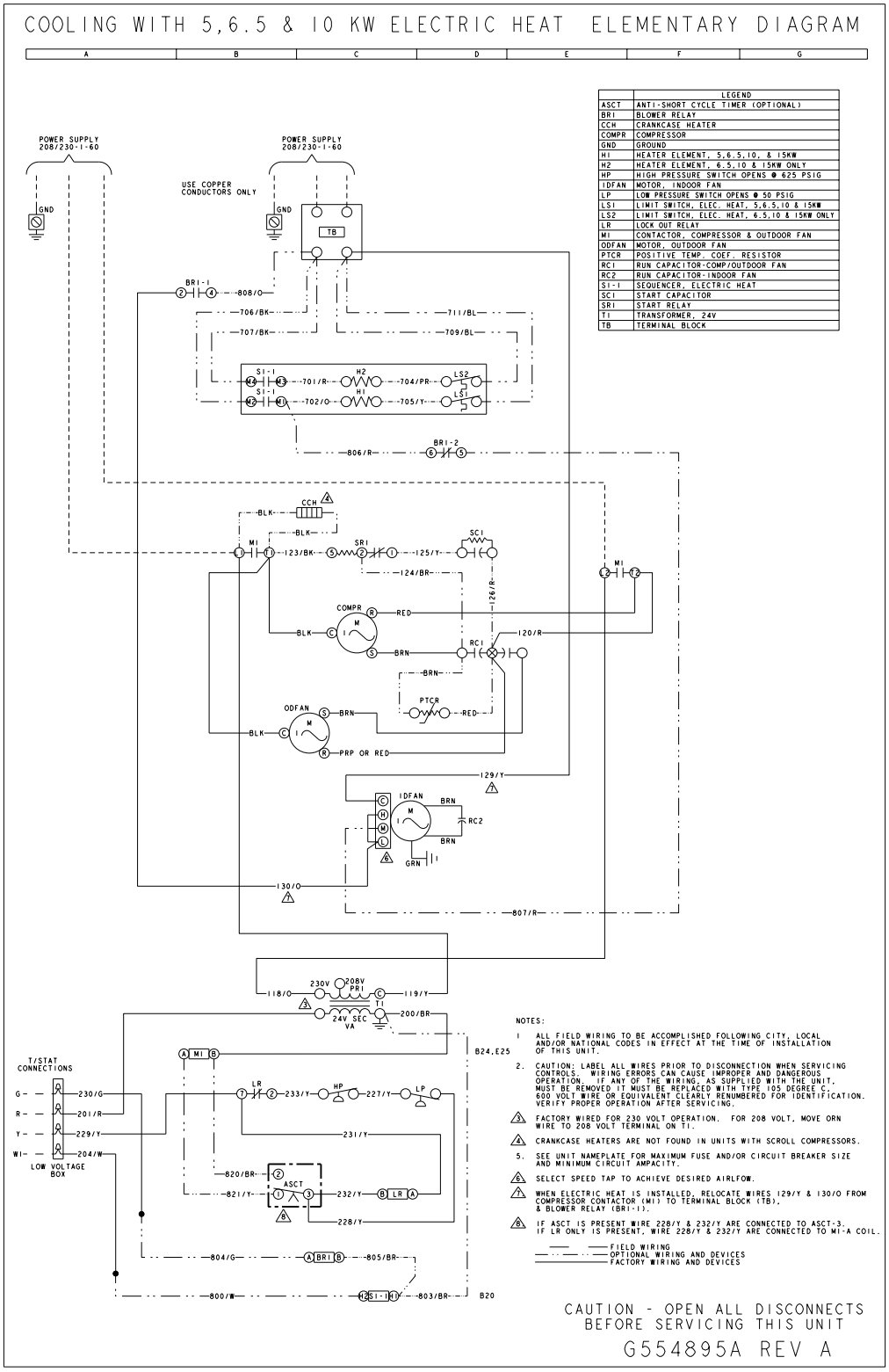

FIGURE 15: TYPICAL 5, 6.5, AND 10KW ELECTRIC HEAT WIRING DIAGRAM FOR NM/NL024-036 13 SEER COOLING UNITS

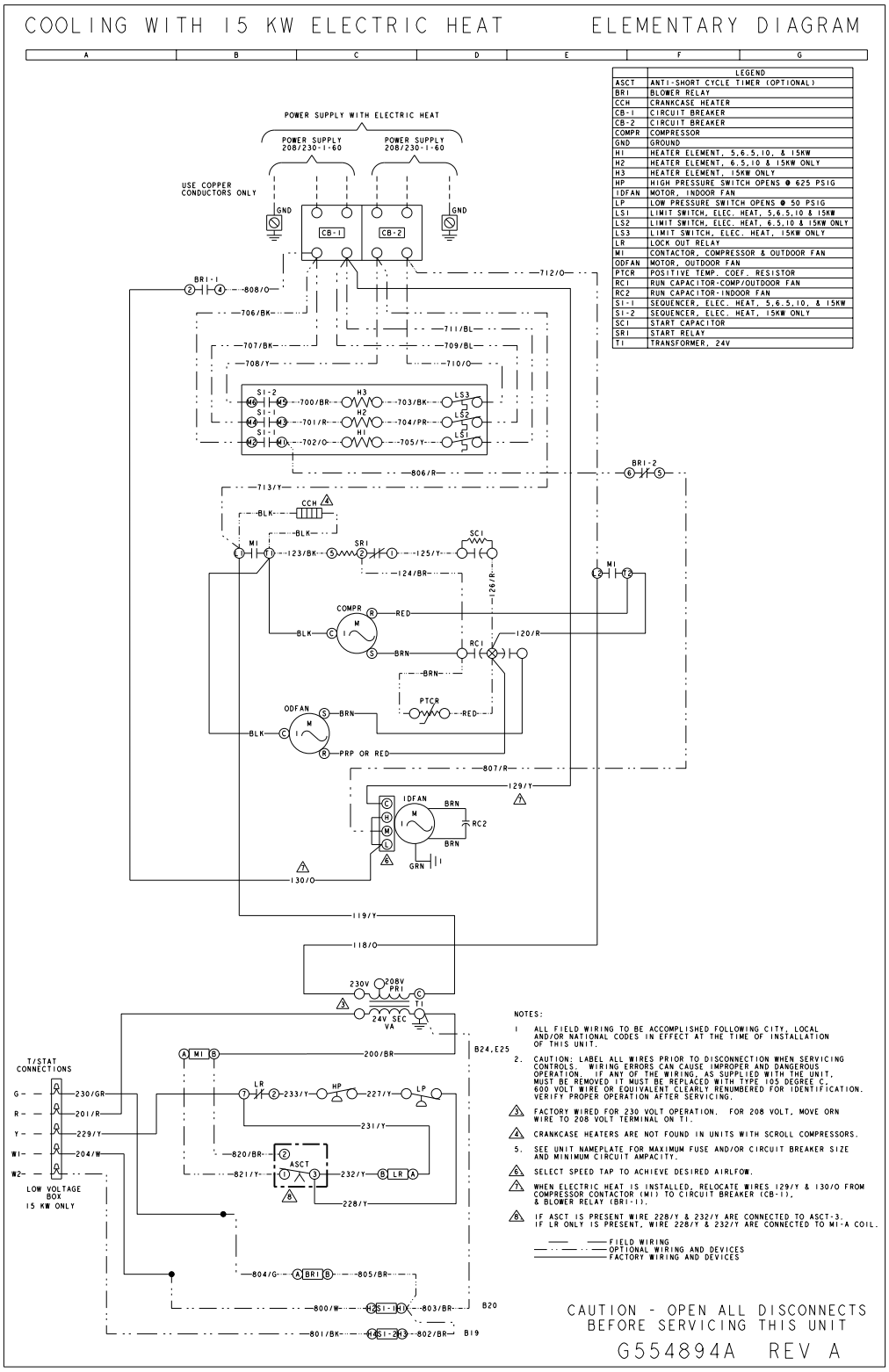

FIGURE 16: TYPICAL 15KW ELECTRIC HEAT WIRING DIAGRAM FOR NM/NL024-036 13 SEER COOLING UNITS

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