

**R-410A - D MODELS**

**COMFORT PACK**

**PACKAGED THRU-THE-WALL  
AIR CONDITIONER WITH ELECTRIC HEAT**

## **INSTALLATION AND MAINTENANCE INSTRUCTIONS**



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**National Comfort Products**

539 Dunksferry Road • Bensalem, PA 19020 • (215) 244-1400 • 1-800-523-7138 • Fax: (215) 244-9579

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### **TO REMOVE THE CHASSIS FROM THE CABINET:**

TURN OFF POWER TO THE UNIT. REMOVE THE LOWER ACCESS PANEL FROM THE CABINET. DISCONNECT THE DRAIN LINE FROM THE EVAPORATOR COIL DRAIN CONNECTION. DEPRESS AND HOLD THE RELEASE LATCH ON THE CHASSIS POWER WIRING CONNECTOR AND UNPLUG IT FROM THE CABINET POWER WIRING CONNECTOR. DEPRESS AND HOLD THE RELEASE LATCH ON THE CONTROL WIRING CONNECTOR AND UNPLUG IT FROM THE CABINET CONTROL WIRING CONNECTOR.

REMOVE THE SCREWS ATTACHING THE CONTROLS ENCLOSURE TO THE INDOOR COIL COVER. REMOVE THE SCREWS FROM THE INDOOR BLOWER COVER PLATE. REMOVE THE PLATE FROM THE UNIT. TEMPORARILY SECURE THE CHASSIS POWER AND CONTROL WIRING AND CONNECTORS TO THE TOP OF THE INDOOR COIL COVER TO PREVENT DAMAGE DURING CHASSIS REMOVAL.

CAREFULLY SLIDE THE CHASSIS OUT OF THE CABINET BY GRASPING BOTH SIDES OF THE EVAPORATOR COIL DRAIN PAN AND PULLING TOWARD YOU WHILE KEEPING THE CHASSIS CENTERED IN THE CABINET. AS THE CHASSIS IS REMOVED, KEEP THE CHASSIS LEVEL UNTIL THE OUTDOOR FAN COVER PASSES THE CABINET SEALS. **DAMAGE TO THE CABINET SEALS WILL RESULT IF THE CHASSIS IS NOT KEPT LEVEL UNTIL THE OUTDOOR FAN COVER HAS PASSED THE CABINET SEALS.** AFTER THE CHASSIS IS REMOVED, IT SHOULD BE HANDLED USING THE CHASSIS BASE AND EVAPORATOR DRAIN PAN, NOT BY USING REFRIGERANT PIPING OR THE OUTDOOR FAN MOUNT. THE BOTTOM OF THE CHASSIS IS NOT SMOOTH AND WILL DAMAGE FLOORS IF SLID.

### **TO INSTALL THE CHASSIS INTO THE CABINET:**

TURN OFF POWER TO THE UNIT. TEMPORARILY SECURE THE CHASSIS POWER AND CONTROL WIRING AND CONNECTORS TO THE TOP OF THE INDOOR COIL COVER TO PREVENT DAMAGE DURING CHASSIS INSTALLATION. PLACE THE OUTDOOR COIL SECTION OF THE CHASSIS ONTO THE CABINET RAILS. LIFT THE REAR OF THE CHASSIS USING THE EVAPORATOR COIL DRAIN PAN SO THAT THE CHASSIS IS LEVEL AND CENTERED AS IT IS PUSHED IN THE CABINET. **DAMAGE TO THE CABINET SEALS WILL RESULT IF THE CHASSIS IS NOT KEPT LEVEL UNTIL THE OUTDOOR FAN COVER HAS PASSED THE CABINET SEALS, AND THE CHASSIS KEPT CENTERED IN THE CABINET.** AFTER THE CHASSIS IS ALL THE WAY IN THE CABINET, CHECK THAT THE CHASSIS IS CENTERED IN THE CABINET BY VERIFYING THAT IT IS IN CONTACT WITH THE CABINET SEALS ON THE BOTH SIDES.

INSTALL THE INDOOR BLOWER COVER PLATE AND SECURE IT WITH SCREWS. INSTALL THE CHASSIS POWER WIRE CONNECTOR AND THE CONTROL WIRING CONNECTOR INTO THEIR RESPECTIVE CABINET WIRING CONNECTORS SO THAT THE CONNECTORS LATCH. POSITION THE CONTROLS ENCLOSURE AND SECURE IT TO THE INDOOR COIL COVER WITH SCREWS. CONNECT THE DRAIN LINE TO THE EVAPORATOR COIL DRAIN CONNECTION. INSTALL THE LOWER ACCESS PANEL ON THE CABINET. TURN ON POWER TO THE UNIT.

# National Comfort Products

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## COMFORT PACK

## PACKAGED THROUGH-THE-WALL AIR CONDITIONER WITH ELECTRIC HEAT

### INSTALLATION AND MAINTENANCE INSTRUCTIONS

**NOTE:** These installation and maintenance instructions should be left with the unit for future reference.

#### INSTALLATION:

This unit must be installed in accordance with all applicable codes. This unit is not to be used for temporary heating of buildings or structures under construction.

**FOR MAXIMUM PERFORMANCE, IT IS IMPERATIVE THAT THE COOLING CHASSIS AIR DIVIDER BE SEALED TO THE CABINET AIR SEAL. ANY LEAKAGE WILL ALLOW OUTSIDE UNCONDITIONED AIR TO INFILTRATE AND MIX WITH THE CONDITIONED AIR. THIS CONDITION WILL DEGRADATE UNIT PERFORMANCE. ALL UNITS SHOULD BE INSPECTED FOR THIS CONDITION, AS DURING TRANSPORTATION AND INSTALLATION THE SEALS CAN BE DISTURBED. IF REQUIRED, A LIGHT BEAD OF CAULKING IS RECOMMENDED TO SEAL THE CHASSIS, TO THE AIR SEAL TO ELIMINATE LEAKAGE.**

#### General

This unit shipped with the cooling chassis installed in the cabinet. Prior to installing the unit in the wall opening, the shipping bolts located at the bottom on both sides of the cabinet must be removed to allow for removal of the cooling chassis. 1/4" hole plugs provided with the unit should be installed in the holes to prevent air leakage.

Shipping bolts are located on both sides below this sticker:

**THE SHIPPING BOLTS MUST BE REMOVED PRIOR TO INSTALLATION OF THE CABINET TO PERMIT REMOVAL OF THE CHASSIS. INSTALL THE HOLE PLUGS PROVIDED.**

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**This unit is designed and approved for through-the-wall installation only. This unit is not approved for residential garage; the entire unit must not be installed outside.** The grille side of the unit should extend 3/4" beyond the exterior wall to allow moisture that may enter the outdoor section to drain. The pitch of the internal drain pans toward the outside will assure proper drainage when the cabinet is installed level. **Masonry walls must have a lintel to support the wall.**

The grille side must be kept free of any obstructions that will reduce or alter the air flow pattern. If an optional architectural grille is to be used on standard units, the stamped and louvered grille provided **must** be removed. Consult the factory prior to ordering product(s) that require an optional architectural grille.

The interior of the unit may be installed with zero clearances to adjacent combustible surfaces. **The unit shall not be installed directly on carpeting, tile or other combustible material, except wood flooring.** In order to be able to remove the

chassis, 29" of open area must be left unobstructed in front of the access panels. The 3/4" O.D. drain pan connection should be connected to the building drain using the flexible tubing included and a trap.

#### Installation

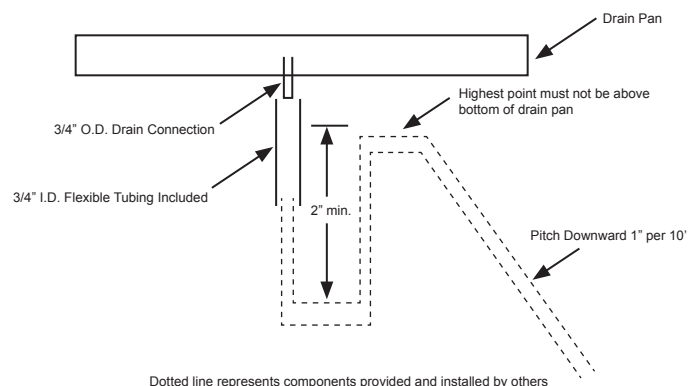
The unit should be provided with support inside the building in the area of the return air opening. The support should be high enough to allow for return air provisions to the unit. To reduce the possible transmission of sound and vibration, a resilient material such as rubber or cork should be installed between the support and the base of the unit. All spaces around the top, sides and bottom of the exterior grille area should be caulked and sealed to the wall, making sure that the openings for drainage in the bottom edge are not blocked.

If the optional wall sleeve is used, caulk the spaces between the sleeve and the wall. Completely fill the clearance on all sides between the unit and the wall sleeve with a polyurethane foam sealant (follow manufacturer's suggested application manual). Provide the unit with support inside the building in the area of the return air opening. Slide the unit into the wall sleeve and fasten the unit to the sleeve with the five screws provided with the sleeve.

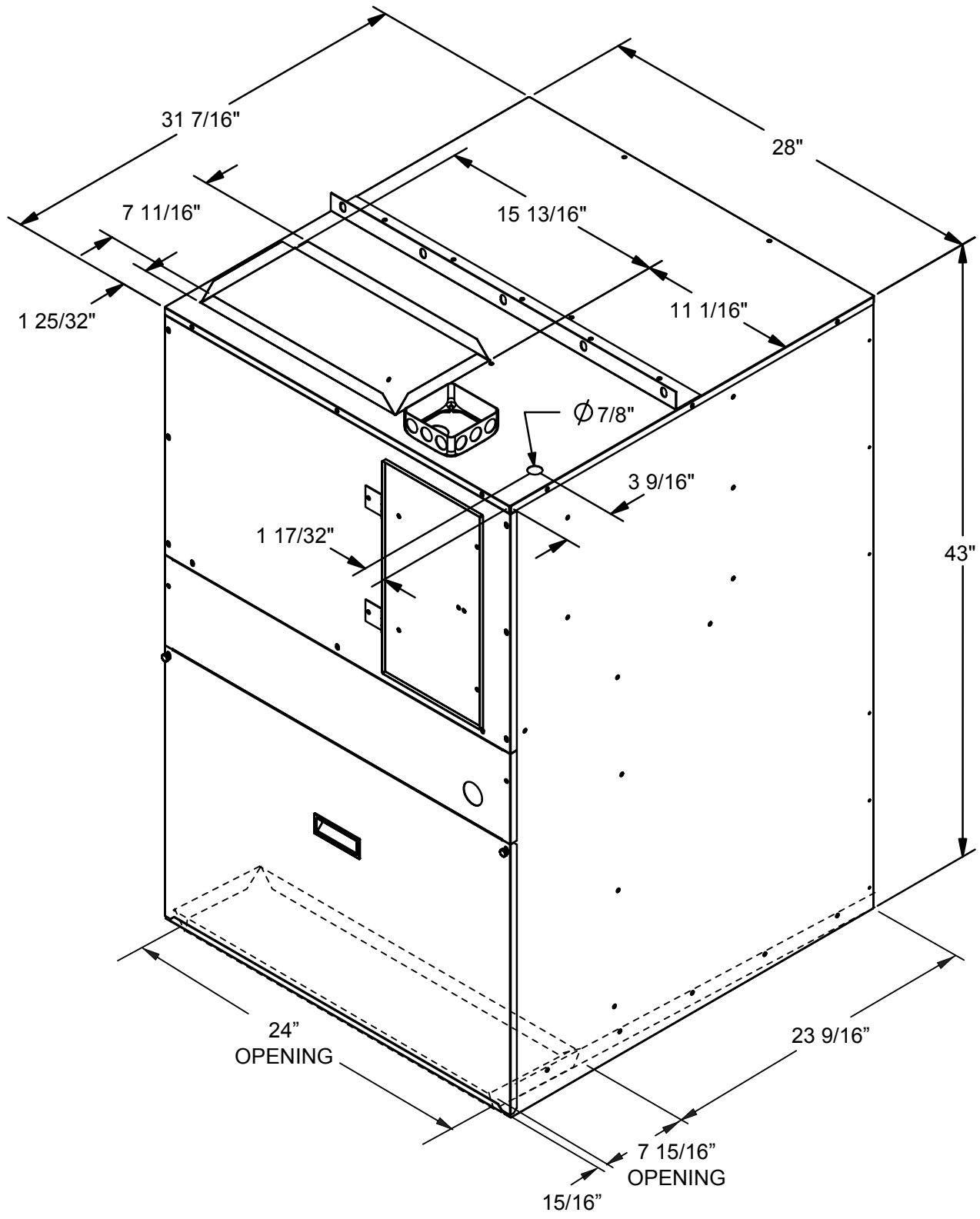
**NOTE:** For ease of installation, install the cabinet into the wall sleeve first without the cooling chassis. Then slide cooling chassis in after cabinet is in place.

#### Drain Connection

The 3/4" I.D. flexible tubing included should be connected to the Comfort Pack drain connection so that it can easily be disconnected if the cooling chassis must be removed. A trap at least 2" deep should be provided close to the drain pan. The tubing should not be higher than the bottom of the unit drain pan at any point to assure proper drainage and allow chassis removal. The drain line should pitch downward at least 1" per 10' to an open building drain trap.



## Comfort Pack Dimension Drawing



## Electrical

**All wiring must be installed in accordance with applicable codes.**

The unit is factory wired for 230/1/60 power. For 208/1/60 power systems, the wiring to the primary side of the control transformer should be changed from the 240-volt connection to the 208-volt connection to provide proper operation of the control system.

The operating voltage of the unit is from 197 to 253 volts. Operating the equipment outside of these limits will void the warranty.

## Controls

Field wiring between the unit and the wall thermostat (by others) may be low voltage for Class 2 systems. The location of the wall thermostat should be 4 to 5 feet above the floor and carefully selected so that the thermostat senses the temperature of the largest conditioned area, without being influenced by drafts, sun exposure or outside temperature.

## Maintenance

### Air Filter

The 16" x 25" x 1" filter on the cooling chassis must be maintained regularly to assure that the unit provides optimal performance and energy efficiency. The intervals between replacing depends entirely on the cleanliness of the return air to the unit and the time that the indoor blower operates. The air filter is accessible by removing the lower access panel. The filter should be inspected and replaced as needed and is not washable. Substituting the air filter with media other than the type provided with the unit is not recommended, since other materials may cause additional static pressure, which could reduce the air delivery of the unit. **The unit should never be operated without the air filter and access panels in place.**

### Cooling Chassis

The cooling chassis contains all items related to the cooling functions of the unit, and also contains the indoor blower and motor for the heating function. For extensive servicing, qualified personnel may choose to remove the cooling chassis from the unit and take it to a work area. Spare chassis are recommended so that extensive servicing can be performed outside the living space. This will prevent introducing dirt or doing damage in the living area, and could help to eliminate significant disruption of the air conditioning and heating functions in the living areas.

The indoor blower motor and the outdoor fan motor have permanently lubricated bearings and do not require routine service. The refrigeration system is sealed and factory charged with R-410A so that routine maintenance is not required. Cleaning of the outdoor coil, indoor coil, drain pan, and inside the bottom of the chassis are recommended at least once a year, and more often if the equipment is operated in a dusty or hostile environment. The electrical controls do not require routine service.

**Power to the unit should always be turned off before performing service or removing the cooling chassis from the unit.** One power connector and one control circuit connector are provided for easy disconnecting and re-connecting of the

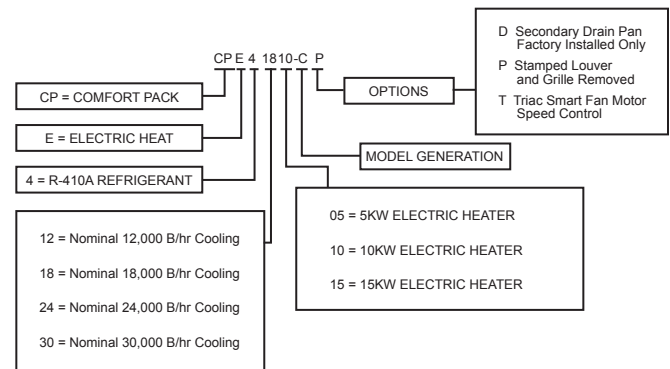
wires between the cooling chassis and cabinet. The controls enclosure cover must be removed to allow access to the screws holding the indoor blower cover plate to the cooling chassis and cabinet. **After reinstalling the cooling chassis, the indoor blower cover plate and controls enclosure cover must be reinstalled.**

## Electric Heat

The cabinet includes open-wire resistance heating elements with automatic reset thermal overloads, as well as branch circuit fuses for short-circuit and electrical overload protection. Routine maintenance is not required.

## Operation

The Comfort Pack is designed to be used with residential single-stage cooling and single-stage heating wall thermostats with automatic or manual mode changeover. Automatic changeover thermostats must include a deadband to prevent cycling between cooling and heating modes. **Single-pole, single-throw thermostats are not suitable for use with Comfort Pack.** The unit incorporates a 90-second time delay to keep the indoor blower operating after cooling is satisfied to reduce operating costs. The unit also contains controls to automatically adjust the indoor blower motor speed for cooling and heating modes.



## REPLACEMENT PARTS GUIDE

To assure accuracy in providing the correct parts, please provide the unit model designation and serial no. with the parts order. The model designation breakdown is shown below:

CABINET				CHASSIS			
ITEM	DESCRIPTION	PART NO.	MODEL	ITEM	DESCRIPTION	PART NO.	MODEL
1	Top Panel	14256607	All	1	Air Divider	14256109	All
2	Top Mount Angle	14256101	All	2	Outdoor Coil Mount	14256113	All
3	Upper Louvered Panel	14256102	All	3	Indoor Coil Cover	14256117	All
4	Lower Intake Grille	14256103	All	4	Indoor Coil Drain Pan	14256118	All
5	Right Side Panel	14256608	All	5	Controls Cover	14256143	All
6	Left Side Panel	14256609	All	6	Air Filter 16" x 25" x 1"	14232002	All
7	Bottom Panel	14256600	All	7	Indoor Blower Assembly	14214026	All
8	Rail (2 req'd)	14256605	All	8	Outdoor Fan	14214027	All
9	Cabinet Air Divider - Horizontal	14256606	All	9	Compressor Harness w/Plug (Rotary)	14230045	1 & 1.5
10	Cabinet Air Divider - Vertical	14256140V	All		Compressor Harness w/Plug (Copeland)	14230044	2
11	Cabinet Air Seal	14256160-01	All		Compressor Harness w/Plug (Bristol)	14230015	2.5
12	Indoor Blower Cover	14256814	All	10	Contactor	14262082	All
13	Blower Cover Mounting Strap	14256811	All	11	Transformer 208/240-24	14262087	All
14	Upper Access Panel	14256159	All	12	5-Pole Terminal Board	14263062	All
15	Fuse Access Door	14256127	All	13	Indoor Motor	14270055	All
16	Lower Access Panel	14256123-01	All	14	Outdoor Fan Motor 1075	14270044	All
17	Air Deflector	14256145	All	15	Outdoor Motor Mount	14270101	All
18	Side Seal (4.33' req'd)	14231012	All	16	3/4" ID Drain Tube x 17"	14275616	All
19	Bottom Seal (2.13' req'd)	14231013	All	17	Control Connection Receptacle	14693028	5,7,10 KW
20	Air Seal Gasket (3.50' req'd)	14231014	All	18	Control Connection Receptacle	14693042	15 KW
21	Access Hinge Door (2 req'd)	14295022	All	19	Ground Lug	14208228	All
22	Power Connection Plug	14630029	All	20	Drier	14275635	All
23	Power Connection Control	14230030	5,7,10 KW	21	Off Delay Timer	14262057	All
24	Power Connection Control	14230043	15 KW				
25	Catch-Fuse Access Door	14256144	All				
26	Electric Heater, 5KW	14208313	5 KW				
27	Electric Heater, 7KW	14208299	7 KW				
28	Electric Heater, 10KW	14208312	10 KW				
29	Electric Heater, 15KW	14208311	15 KW				
30	Sequencer, Single Timing	14262055	15 KW				
31	Sequencer, Seperate Timing	14262056	5,7,10 KW				
32	Relay, DPDT	14262058	All				
33	Fuse, 30 Amps/250V	14693026	5 KW				
34	Fuse, 50 Amps/250V	14693045	7 KW				
35	Fuse, 60 Amps/250V	14693028	10, 15 KW				
36	Fuse Panel, 2 Poles, 30 Amps	14693031	5 KW				
37	Fuse Panel, 2 Poles, 60 Amps	14693030	7,10 KW				
38	Fuse Panel, 4 Poles, 30/60 Amps	14693029A	15 KW				

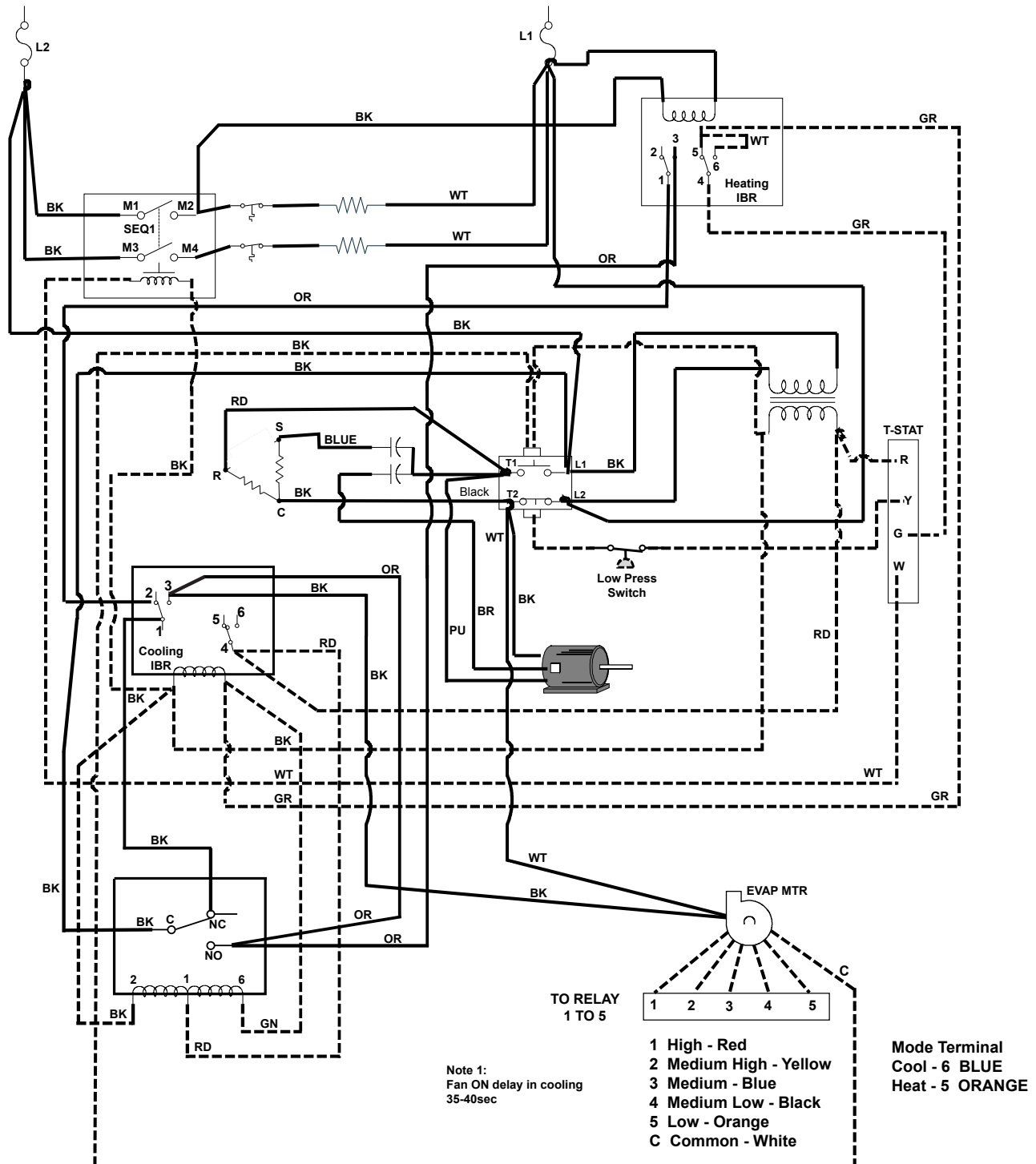
## REPLACEMENT PARTS GUIDE

(Continued...)

CABINET			
ITEM	DESCRIPTION	PART NO.	MODEL
<b>CP41.0-E</b>			
1	Base	14256642	12
2	Indoor Coil	14208305	12
3	Outdoor Coil	14208307	12
4	Compressor (LG Rotary)	14210235	12
5	Dual Run Capacitor 40/5	14225372	12
6	TXV (BBIZE-1-GA)	14275839	12
<b>CP41.5-E-LG</b>			
1	Base	14256642	18
2	Base (Bristol)	14256613	18
3	Indoor Coil	14208305	18
4	Outdoor Coil	14208354	18
5	Compressor (LG Rotary)	14210225	18
6	Compressor (Bristol)	14210102	18
7	Low Pressure Switch	14265026	18
8	Dual Run Capacitor 40/5	14225372	18
9	Dual Run Capacitor 30/5	14225376	18
10	TXV (CBBIZE-1.5-GA)	14275761	18
<b>CP42.0-E</b>			
1	Base	14256613	24
2	Indoor Coil	14208301	24
3	Outdoor Coil	14208354	24
4	Compressor (Copeland ZP21K5E)	14210236	24
5	Low Pressure Switch	14265026	24
6	Dual Run Capacitor 40/5	14225372	24
7	TXV (BBIZE-2-GA)	14275760	24
<b>CP42.5-E</b>			
1	Base	14256641	30
2	Indoor Coil	14208304	30
3	Outdoor Coil	14208362	30
4	Compressor (Bristol H82J26BABCA)	14210219	30
5	Low Pressure Switch	14265026	30
6	Dual Run Capacitor 40/5	14225372	30
7	TXV (CBBIZE-2-GA)	14275817	30

# Wiring Schematic/Electric Heat - 5 - 7 & 10KW

5,7,10 kw



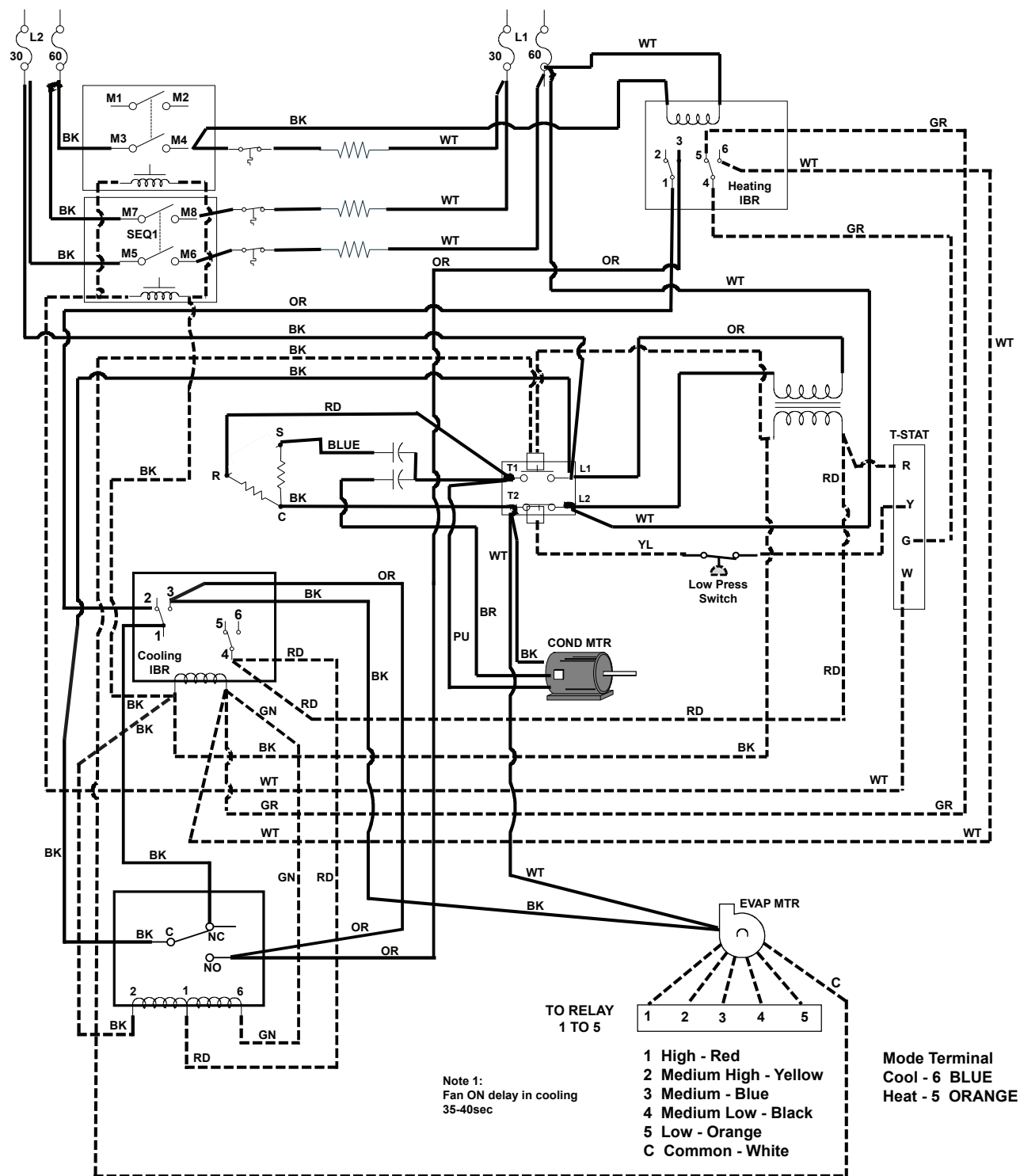
Cooling Nominal Capacity	Cooling Speed	Electric Heat Value	Heating Speed
12	Orange	5	Black
18	Blue	7	Black
24	Yellow	10	Yellow
30	Red	15	Red

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Wiring Schematic/Electric Heat - 15KW

15KW

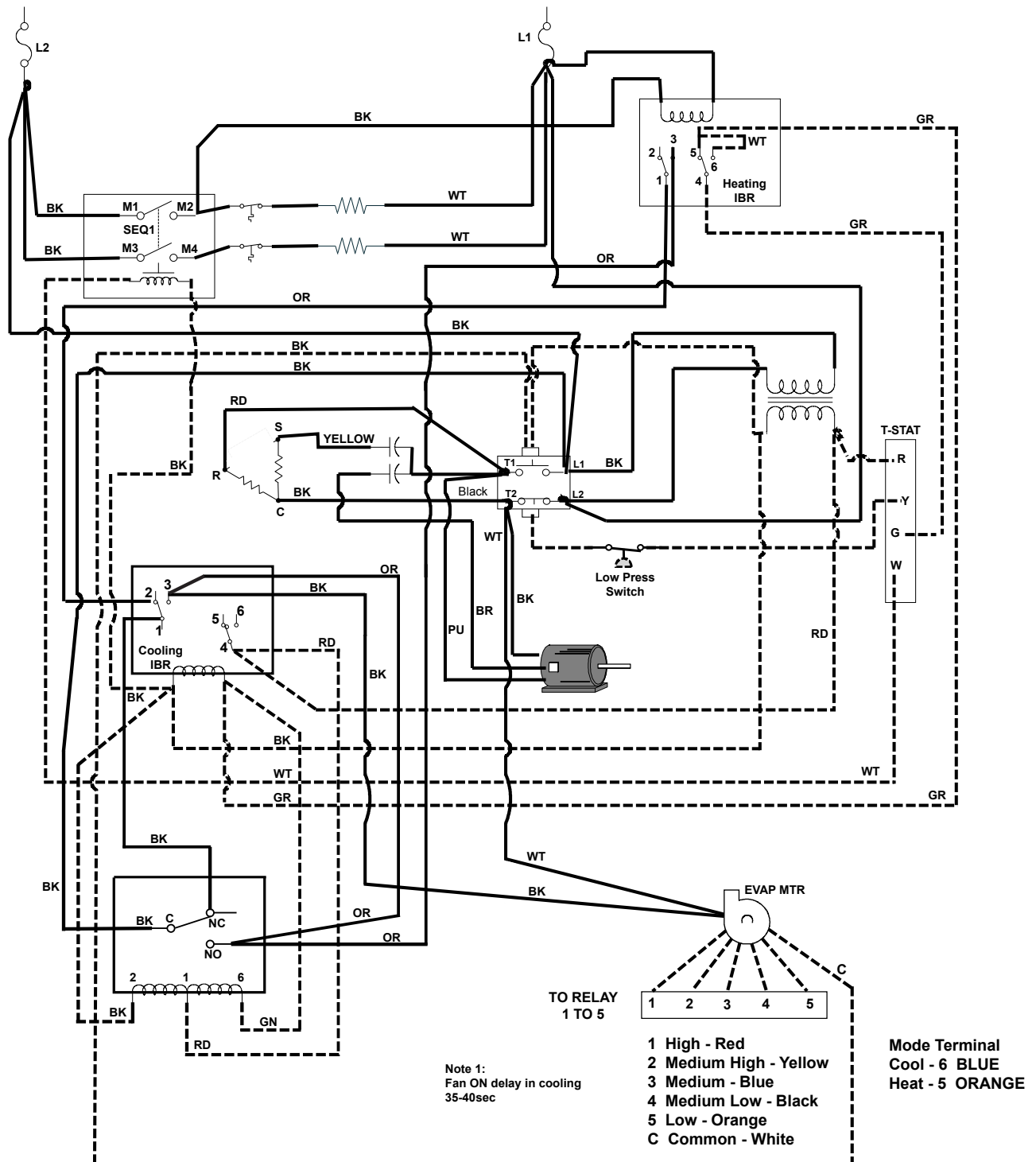


Cooling Nominal Capacity	Cooling Speed	Electric Heat Value	Heating Speed
12	Orange	5	Black
18	Blue	7	Black
24	Yellow	10	Yellow
30	Red	15	Red

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# Wiring Schematic/Electric Heat - 5 - 7 & 10KW

5,7,10 kw

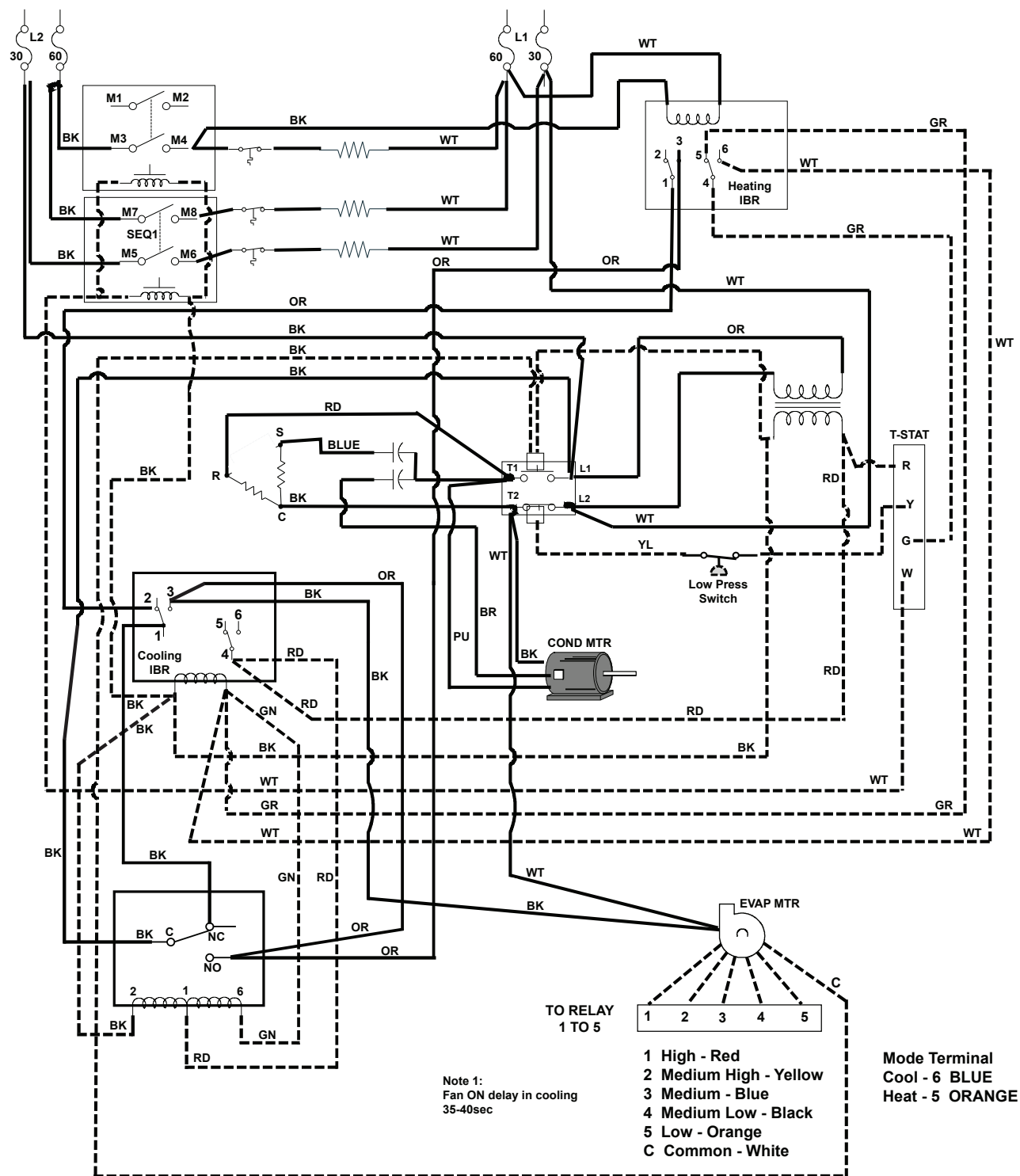


Cooling Nominal Capacity	Cooling Speed	Electric Heat Value	Heating Speed
12	Orange	5	Black
18	Blue	7	Black
24	Yellow	10	Yellow
30	Red	15	Red

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Wiring Schematic/Electric Heat - 15KW

15KW



Cooling Nominal Capacity	Cooling Speed	Electric Heat Value	Heating Speed
12	Orange	5	Black
18	Blue	7	Black
24	Yellow	10	Yellow
30	Red	15	Red

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# National Comfort Products

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## LIMITED EXTENDED PROTECTION WARRANTY FOR NATIONAL COMFORT PRODUCTS (NCP) BENSALEM, PA COMFORT PACK UNITS

This NCP product is warranted to be free from all manufacturing defects, material or workmanship, for a period of five years from the date of installation (receipt required), whether or not actual use begins on this date, or five years from the date of manufacture, if the date of installation cannot be verified. Immediate notice to NCP will (A) provide a new or remanufactured part to replace the defective part, without charge for the part itself, or (B) provide a replacement unit.

National Comfort Products will not be responsible for: local transportation, removing, related service, labor, diagnosis calls, refrigerant, costs incurred for returning defective parts, damage or repairs required due to faulty installation or improper application by others, damage as a result of fire, wind, floods, lightning, accidents, or corrosive atmosphere.

### EXTENDED 2ND THRU 5TH YEAR COMPRESSOR WARRANTY

If the compressor should fail because of a manufacturing defect, is in the original installation, has been operated under normal conditions, and is in the 2nd to 5th year following the above determined date, NCP will provide, at its option, a new or remanufactured replacement compressor.

Replacement parts are warranted for the remainder of the original product warranty, or 90 days, whichever is longer. NCP may require that defective parts be returned to verify and identify the cause of the defect.

LIMITATION OF WARRANTIES — ALL IMPLIED WARRANTIES (INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY) ARE HEREBY LIMITED IN DURATION TO THE PERIOD FOR WHICH EACH LIMITED WARRANTY IS GIVEN. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU. THE EXPRESSED WARRANTIES MADE IN THIS WARRANTY ARE EXCLUSIVE AND MAY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON WHATSOEVER. MATERIAL IS INSPECTED AT THE FACTORY AND RELEASED TO TRANSPORTATION AGENCY IN GOOD CONDITION. WHEN RECEIVED, VISUAL INSPECTION MUST BE MADE IMMEDIATELY. APPARENT SHIPPING DAMAGE SHOULD BE NOTED ON THE DELIVERY RECEIPT AND THE MATERIAL INSPECTED IN THE PRESENCE OF THE CARRIER'S REPRESENTATIVE. IF DAMAGE IS FOUND A CLAIM MUST BE FILED WITH THE CARRIER IMMEDIATELY.

FREIGHT DAMAGE IS NOT COVERED UNDER THIS WARRANTY.

WARNING: NO WARRANTY ON NEW UNITS INSTALLED BEHIND BRICK FACADES. IN YEARS PAST, IT WAS COMMON PRACTICE TO ADD A BRICK PATTERN FACADE (PIGEON HOLES) IN FRONT OF THE THRU-THE-WALL UNIT TO CHANGE THE EXTERIOR APPEARANCE OF THE BUILDING. ALL OBSTACLES ADDED TO IMPEDE AIR FLOW OF THE CONDENSING UNIT WILL DECREASE PERFORMANCE AND CAUSE PREMATURE EQUIPMENT FAILURE AND VOID ALL WARRANTIES. CONSULT FACTORY WITH ANY QUESTIONS.

This warranty gives you specific legal rights. You may also have rights which vary from state to state.

### NATIONAL COMFORT PRODUCTS, BENSALEM, PENNSYLVANIA

**NOTE:** All warranty parts and paper work must be submitted no later than 60 days after failure. Warranty requests submitted after 60 days of failure will not be processed.



