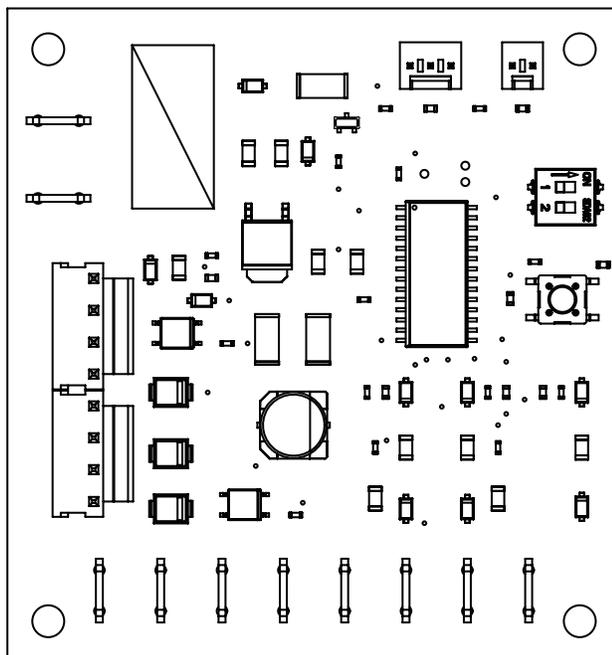


*Thru-the-Wall Comfort for all types of Multi-Family Construction*

# Installation Guide

## Defrost Board Replacement Kit



*Please read the entire installation guide before starting the installation.  
All phases of this installation must comply with National, State and Local codes.*

*This manual must be left with the homeowner for future reference.*

*Go Thru-the-Wall*

**Important: This document is customer property and is to remain with this unit.**

**DO NOT DESTROY OR THROW AWAY THIS MANUAL.  
IT SHOULD BE KEPT IN A SAFE PLACE FOR FUTURE REFERENCE.**

## Table of Contents

Safety Warnings.....	Page 4
Defrost Board Replacement Kit Compatibility.....	Page 4
Defrost Board Replacement Kit Installation.....	Page 5
Defrost Board Wiring Diagram.....	Page 9
Defrost Board Replacement Parts Guide.....	Page 10

## Safety Warnings!

### ATTENTION INSTALLING PERSONNEL

#### WARNING



**HIGH VOLTAGE!** Disconnect ALL power before servicing. Multiple power sources may be present. Failure to do so may result in property damage, personal injury or death.

#### WARNING

These instructions are intended as an aid to qualified, licensed service personnel for proper installation, adjustment and operation of this unit. **Read these instructions thoroughly before attempting installation or operation.** Failure to follow these instructions may result in improper installation, adjustment, service or maintenance possibly resulting in fire, electrical shock, property damage, personal injury or death.

#### WARNING

Installation and repair of this unit should be performed **ONLY** by individuals meeting the requirements of an "entry level technician" as specified by National Codes. Attempting to install or repair this unit without such background may result in product damage, personal injury or death.

#### CAUTION

- **ENSURE THAT ALL POWER IS DISCONNECTED PRIOR TO ATTEMPTING INSTALLATION OF THIS HEATER KIT. THERE MAY BE MORE THAN ONE DISCONNECT SERVICING THE UNIT.**
- **A MEANS OF STRAIN RELIEF AND CONDUCTOR PROTECTION MUST BE PROVIDED AT THE SUPPLY WIRE ENTRANCE INTO CABINET.**
- **USE COPPER CONDUCTORS ONLY.**
- **INSTALLATION MUST FOLLOW NATIONAL ELECTRIC CODE AND OTHER APPLICABLE CODES.**

If this appliance is installed in an enclosed area such as a garage or utility room with any carbon monoxide producing appliance, ensure the area is properly ventilated.

ALL phases of this installation must comply with NATIONAL, STATE AND LOCAL CODES. The manufacturer assumes no responsibility for equipment installed in violation of any code requirements.

Be sure that the electrical data specified on the unit rating plate corresponds to what is available at the installation site and NEC for installation requirements.

Be sure that the electrical service provided to the building can handle the load imposed by the unit.

**"USE COPPER SUPPLY WIRES ONLY"**

## Defrost Board Replacement Kit Compatibility

### Replacement Models:

NCHP-018-1019  
NCHP-018-3019  
NCHP-024-1019  
NCHP-024-3019  
NCHP-030-1019  
NCHP-030-3019  
NHPA-418-3019  
NHPA-418-5019  
NHPA-424-3019  
NHPA-424-5019  
NHPA-430-3019  
NHPA-430-5019

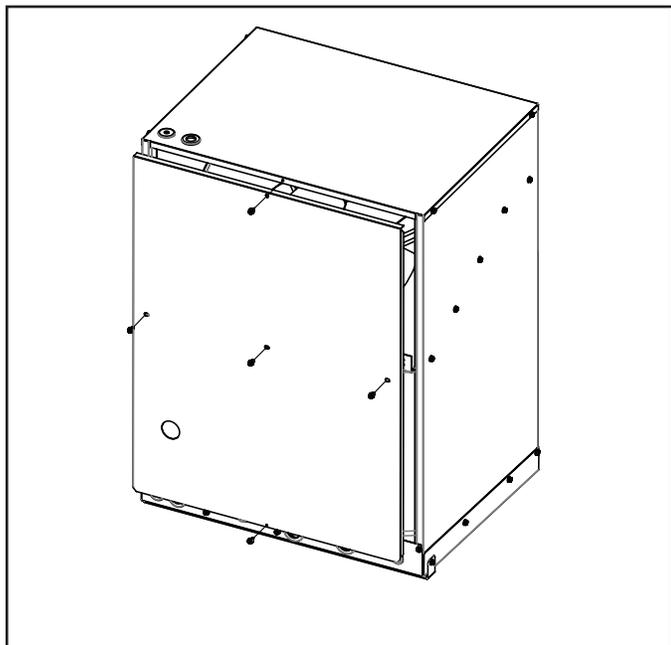
### DSHP models may require further modification

\*Only compatible with models that use the ICM 321 Defrost Board.

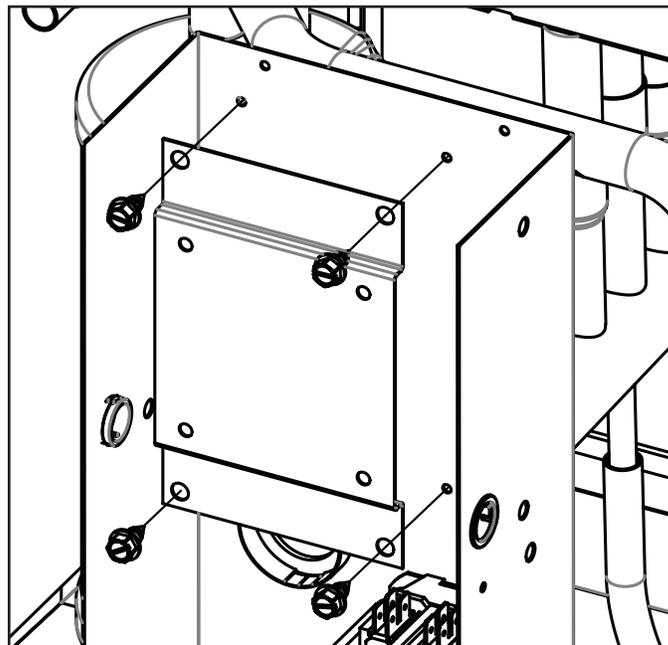
\*List is subject to change without notice.

### Defrost Board Replacement Kit Installation (For Compatibility List See Page 4)

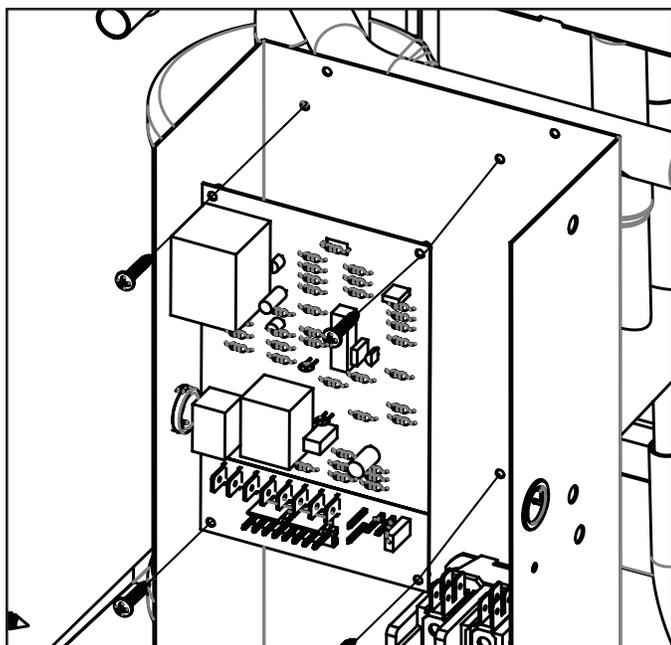
1. Remove the access panel from the cabinet.



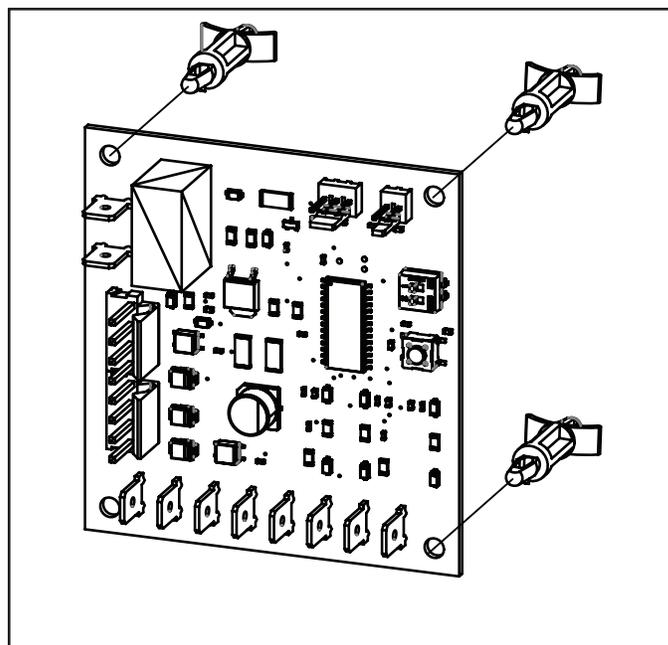
3. Align the defrost board bracket with the four holes in the control box and secure it using the four sheet metal screws.



2. Disconnect all wires from the control board. Remove the four fasteners securing the board to the control box and remove the board.

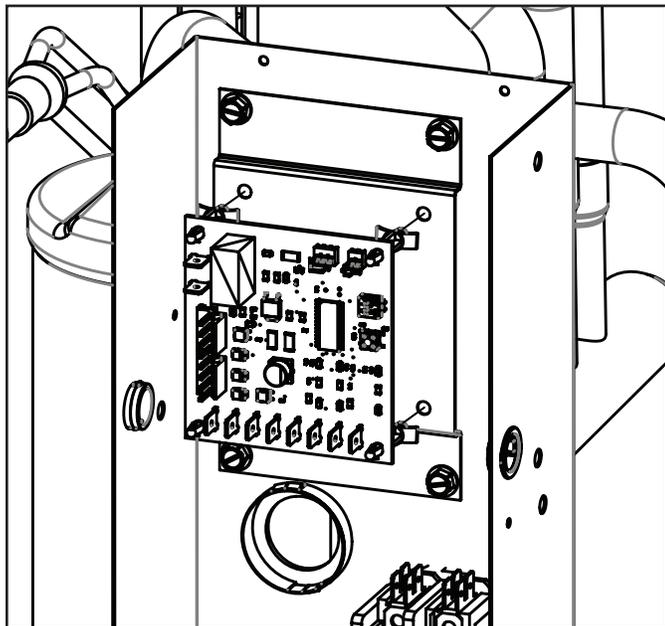


4. Carefully insert the four plastic standoffs to the new control board.

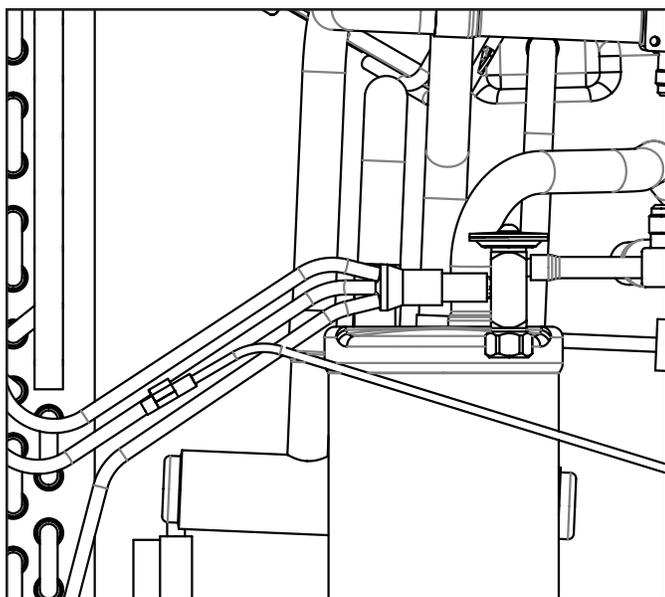


5. Insert the plastic standoff in the center four holes of the metal bracket.

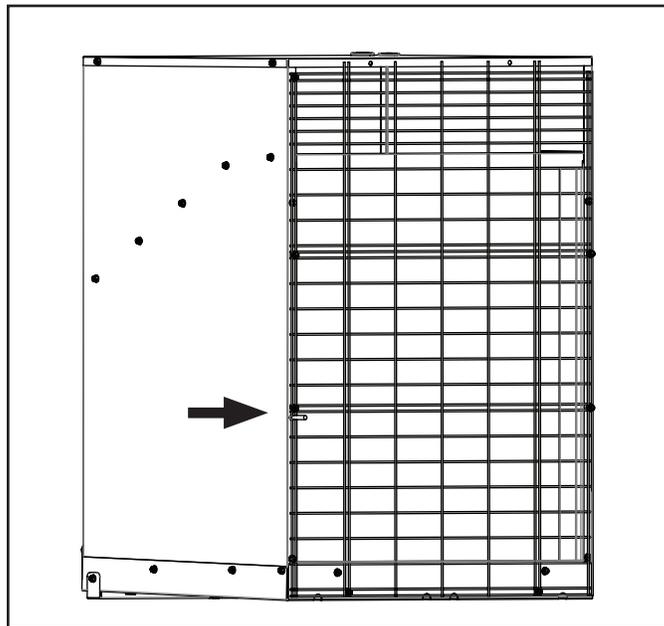
(Ensure orientation of the control board matches figure)



6. Attach the brass temperature sensor to the second capillary tube coming out of the TXV using the provided clip. Secure using a zip tie and completely cover the sensor with cork tape.

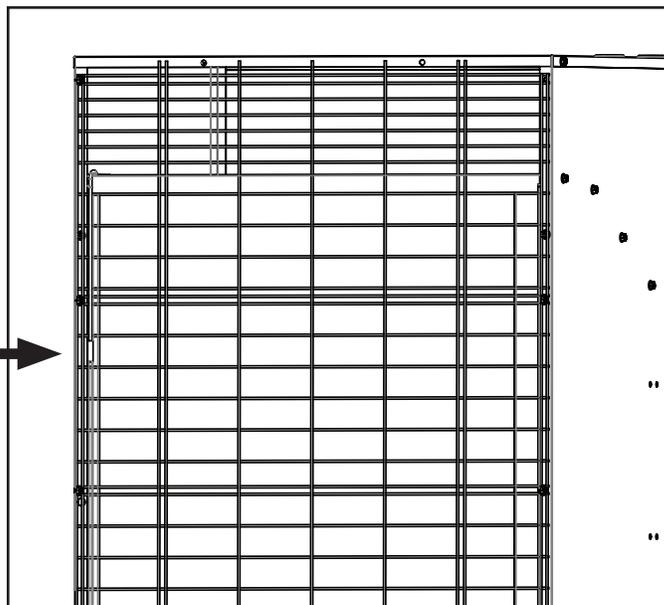


7. Feed the white plastic temperature sensor through the 3/8" hole on the right side of the coil. Push through the grille.



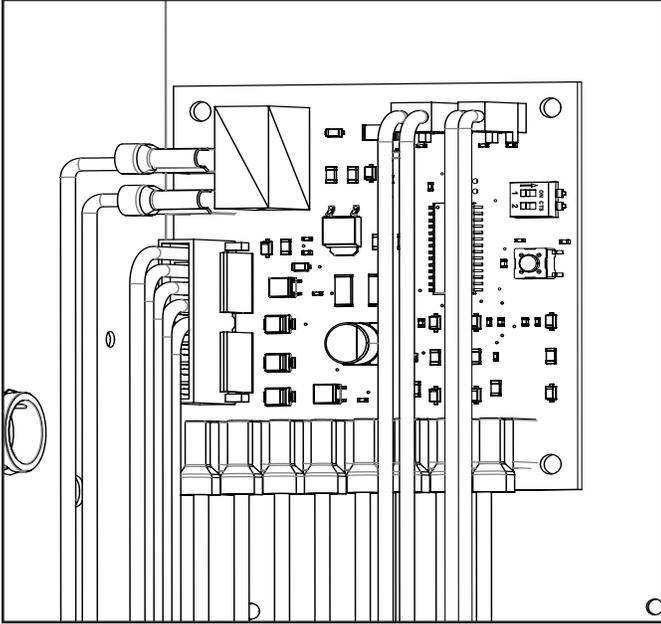
8. Alternatively, if the model does not have a 3/8" hole on the right side of the coil run the white temperature sensor over the fan deck and hang on the outside of the grille. Use the entire length of the wire getting the sensor as far down the back side of the unit as possible. On the fan deck use foil tape to secure the wire.

**Make sure the wire is out of the path of the fan blades.**

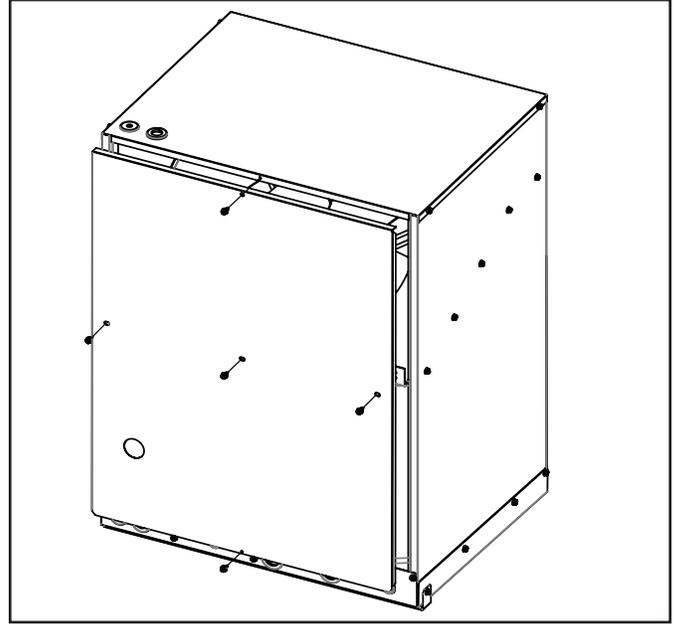


**9.** Connect the wires to the control board.

(Refer to the wiring diagram included with the kit or on page 9 of this manual)

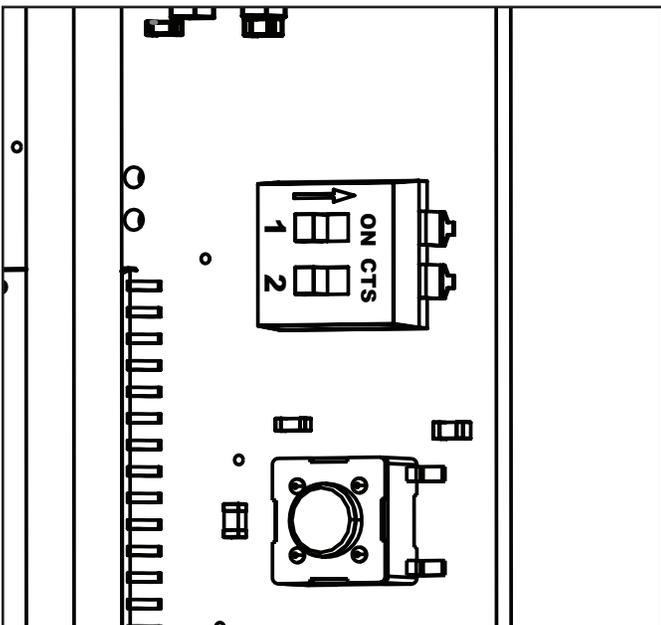


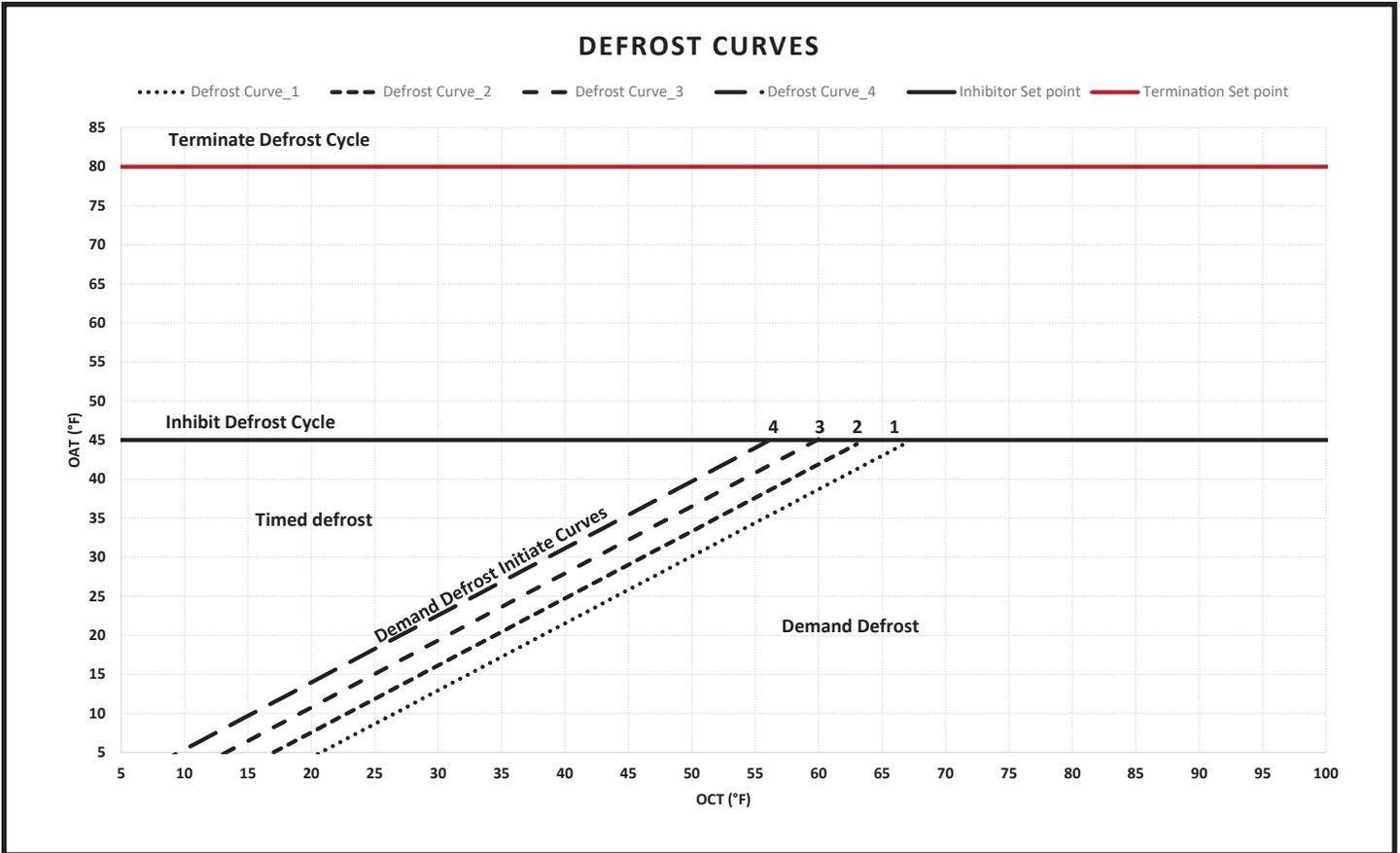
**11.** Reattach access panel



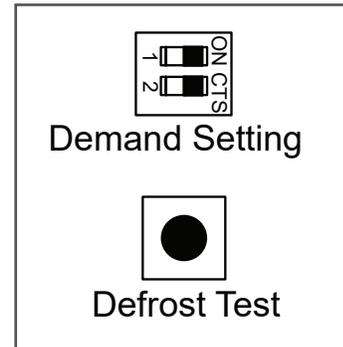
**10.** Change the defrost curve setting on the control board to match your unit.

(Refer to page 8 for defrost curve settings)





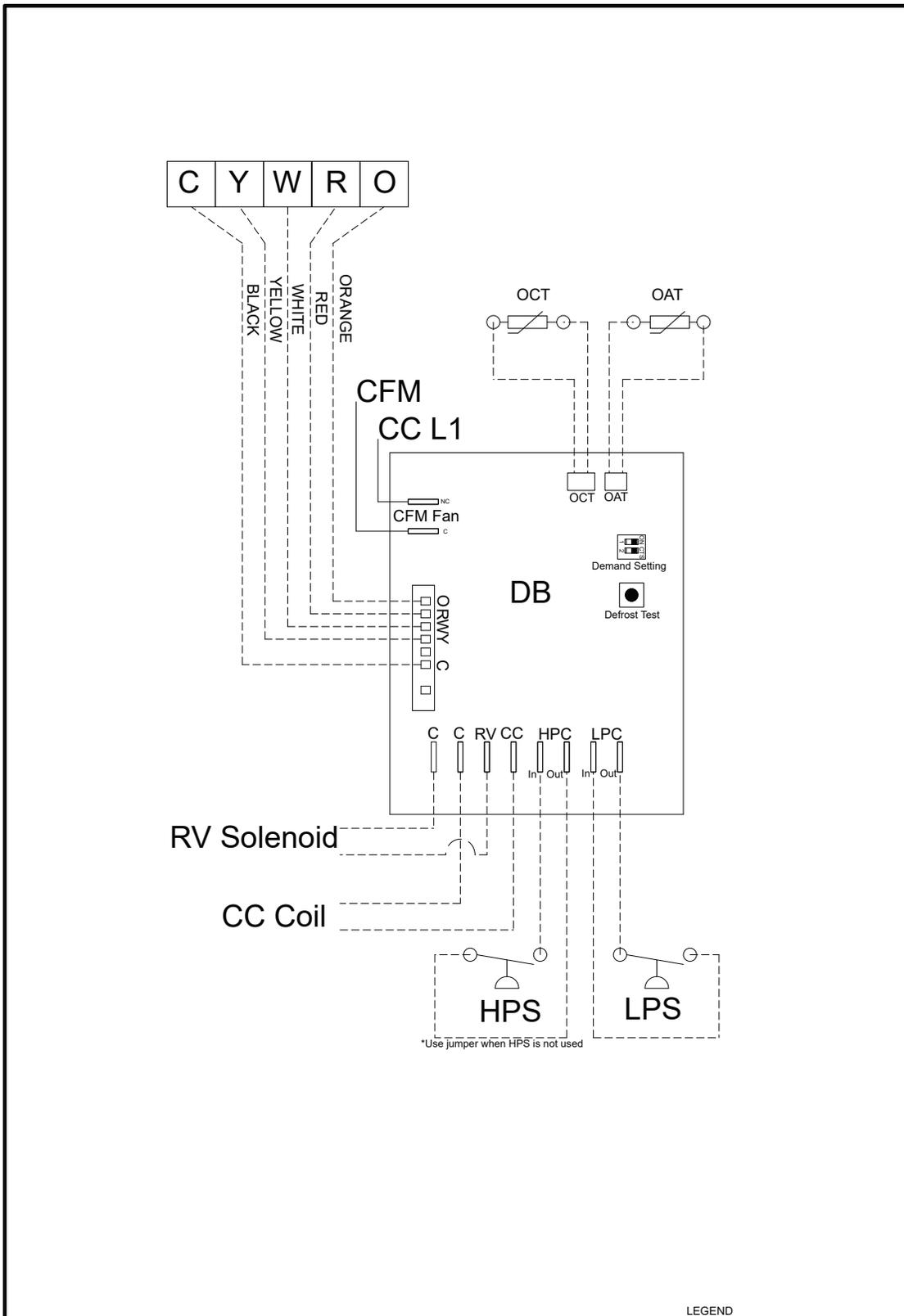
The demand defrost curve setting is important for system performance and equipment protection. During heating operation, the outdoor coil accumulates frost. Each system can accumulate frost on the outdoor coil at different rates. It is **NECESSARY** for the installer to check that the appropriate defrost curve is selected for your system by referencing the defrost curve plot above. For defrost curve adjustments refer to the dip switch setting table dip switch positions to select the desired curve. A defrost test can be initiated by pressing the button provided on the defrost control board. Once the button is pressed the system will go into a 60 second timed defrost.



**Note:** Adjustment of the defrost curve may be necessary to provide complete defrost for your climate zone. Refer to the defrost curve plot above to select the appropriate defrost settings for your climate zone.

If using **ALTERNATIVE POSITION** of the ambient temperature sensor select **DEFROST CURVE 1** for the dip switch settings.

Dip Switch setting On Defrost Board		
Defrost Curve	Dip Switch 1	Dip Switch 2
1	Off	Off
2	On	Off
3	Off	On
4	On	On



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 FAX: 215-639-1674

**WIRING DIAGRAM**  
 14262099-KIT  
 Defrost Board Replacement Kit

DRAWN BY	DATE	JOB NUMBER
BS	1/6/2023	14299236

LEGEND

- CC T1 - CONTACTOR LOAD SIDE 1
- CFM - CONDENSER FAN MOTOR
- DB - DEFROST BOARD
- HPS - HIGH PRESSURE SWITCH
- LPS - LOW PRESSURE SWITCH
- OAT - OUTDOOR AIR TEMP. SENSOR
- OCT - OUTDOOR COIL TEMP. SENSOR
- RV - REVERSING VALVE

**Defrost Board Replacement Parts Guide**

<b>Item</b>	<b>Part Description</b>	<b>Part Number</b>
1	Part Bag (9x12)	5-394
2	NHPA lcm321 5 Wire Harness	142-30-058
3	NHPA Coil Defrost Sensor	142-60-025
4	NHPA Ambient Defrost Sensor	142-60-026
5	NHP Defrost Control Board	142-62-099
6	Defrost Board Replacement IOM	142-99-242
7	Part Bag (7x8)	5-386
8	8" Wire Tie	T59-033
9	Cork Insulation Tape	142-31-001
10	3/4" Nylon Circular Board Mounts	142-62-061
11	Screw #12 Hwh Sertd Flange	142-95-037
12	Defrost Board Bracket	143-56-061
13	Label 142-62-099-Kit	142-99-241

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**National Comfort Products®**

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