

## **PRELIMINARY (NON-FACTORY SUPERVISED) UNIT START-UP FOR HEATING ONLY**

The following items are required to be done by contractors or service personnel when early heating only unit operation is required. Authorization by the factory is required on each and every job to be started. This will not supersede a later factory and contractor prearranged date to do specified "Factory Supervised Start-Up." It is only to allow contractors to do a preliminary start-up which will bring on the supply air fan system and heat stages. The air conditioning stages will not run if these items are done.

1. Electrical contractor must have all of the three-phase wiring completed.
2. Control wiring electrical contractor (this might be other than the mechanical contractor) shall have field installed sensors mounted in the store's sales area and wired back to the unit's environmental control panel. These panels are mounted on the vestibule wall between the return air section and the compressors. Most of the units have two separate space mounted sensors, one temperature and one dew point or humidity sensor.

VERY IMPORTANT: Be sure to follow Season's-4 recommendations and wiring diagrams for the TYPE of wire and SIZE of wire when installing these sensors. Refer to the wiring diagrams in the unit and the operations/service manual.

Season's-4 uses different control manufacturers depending on the customer. Consequently, each control manufacturer might have different sensor wire requirements.

3. Install the standby gas burner flue vent cap. On atmospheric burners, there are two duct furnaces making up the heating system, so there are two vent caps. These vent caps are shipped inside the unit in a box.
4. Install the outside air makeup rain hood, which is also shipped inside the unit.
- 5A. (For Gas Heat Units) Install natural gas piping to the unit. If specified gas lines on this project are high pressure, the piping train will most likely need a field supplied reducing pressure regulator installed.
- 5B. (For Electric Heat Units) Check and tighten all electrical connection in the heater control panel, and in the main control panel as well. Step six (6) is not required for electric heat.
6. (For Gas Heat Units) Before the service technician is on the jobsite for start-up, this gas pipe line must be purged. This is important to you, as the HVAC mechanical contractor, if others are installing gas piping because to purge a pipe system on the entire project can take up to four (4) hours.
7. If the unit has a backward inclined supply fan system, remove hold down shipping bolts in the blower system frame. There are four (4) bolts in the four corners of the steel base frame. These bolt down through the frame, through a piece of 2" steel tubing into the floor of the cabinet. Discard these four bolts and tubing after removal.

8. Remove the compressor's fuses and store them for future use. There are three fuses per compressor. These are located in a mounted fuse holder of the electrical feed wiring in the main panel. If the unit is equipped with circuit breakers these must be turned off and tagged.
9. Turn to "OFF", the compressor's pumpdown toggle switches. These switches are located at the bottom left hand corner of the main electrical panel and marked "PUMPDOWN SWITCH".
10. If not already done so that the factory place a permanent jumper in the control wiring between terminals "T" and "G". This is for continuous fan operation. These terminals are located in the upper left hand corner of the electrical panel.
11. Turn on the main three phase electrical power to the unit.
12. Turn on the unit's main disconnect switch. More than one disconnect switch may have been installed on electric heat units.
13. Turn on the fan/blower control toggle switch. Turn on the 24v control toggle switch. These switches are located at the bottom left hand corner of the main electrical panel.
14. At this point, the fan/blower should come on. Important: When the fan is on, check the amp draw at the fan contactor on all three electrical legs, this amp draw cannot exceed the nameplate amps listed on the motor.

If the fan motor does not come on, then the unit's three phase is out of phase from how the unit was tested at the factory. Check the unit mounted phase monitor for a tripped too off indication. If the phase monitor has the green light on the phasing is normal. If the green light is not on the unit phasing is out of correct rotation. To correct a wrong phase rotation indication, no green light, rotate two of the incoming phase lines. This should correct the phase rotation. Correct phase rotation is indicated by the green light being on.

15. WHEN CHANGING THE PHASING ON ELECTRICAL ON THE SEASON'S-4, YOU MUST MAKE THIS CHANGE AT THE UNIT'S MAIN DISCONNECT OR THE BUILDING'S SUBPANEL DISCONNECT. Do not change any wiring inside the Seasons's-4 electrical panel because of all of the other three-phase motor loads in the unit.
16. When the unit's fan system is up and running, set the control systems for the desired space temperature setting.
17. If you do not want to run the unit through the unit's control system, install a return air heating thermostat, close on drop in temperature, on the return side of the unit. This control should be wired as the first stage of heating. Check the wiring diagrams for the correct terminals for your unit. This control will be removed from the unit when the total system start-up is done. This heating only control is not furnished with the unit. **It is available at your local supply house or call Season's-4 for additional information.**
18. Some units are provided with a "back-up" control system. This will be indicated on the unit wiring diagram. If the unit is equipped with a "back-up" control system the unit will turn on automatically and control to the set temperature. Do not readjust the set temperature. If the setting is changed it will affect the cooling as well as the heating when the unit controls are connected.

Units with electric heat may require more than one stage of heat to make up space temperature. Jump stages together at control terminal block for required KW.

19. You may choose to remove the expensive pleated factory air filters. If the store is still under construction, there may be construction debris that will plug the unit's coils, fans and filters.

The following is a suggestion: Remove the factory filters and store them in a plastic bag underneath the condenser fans inside the condenser section. Use 2" deep standard hardware filters in place of the high volume filters.

**IMPORTANT:** If you do the above step, then be aware that these standard hardware filters will plug up in high construction areas every two (2) days or so, and should be checked, cleaned, or replaced.

This is offered only as a suggestion by Season's-4, as we are fully aware that designers/engineers could punch list you on a unit that is dirty because there was a lack of proper filter change. Also, we are aware that most designers will require new filters be in place before the store is open. You may want to check with the general contractor on this item.

**IMPORTANT NOTE: IN NO WAY IS SEASON'S-4 RESPONSIBLE FOR KEEPING THE UNIT CLEAN AND FACTORY NEW AFTER IT HAS BEEN STARTED ON THE JOBSITE. FAILURE TO CHANGE FILTERS COULD RESULT IN INTERNAL UNIT DAMAGE, WHICH WOULD VOID YOUR UNIT WARRANTY.**

This preliminary start-up is being offered as an aid to you and Season's-4 does not assume additional liability and/or warranty for its contents or unit operation. If further assistance is needed, please contact our office at the following:

Season's-4, Inc.  
4500 Industrial Access Road  
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Attn: Field Service Manager,  
Gary Hulsey  
770/489-0716 X-219 or fax 770/489-2938  
or

Assistant Service Manager,  
Dave Grieshober  
770/489-0716 X-142 or fax 770/489-2938

non-fact. super. unit start-up  
rev 10-18-05 for new phase monitor & back-up controls