YORK®	YLAA	
INSTALLATION CHECKLIST	Supersedes 150.72-CL1 (1217)	Form 150.72-CL1 (318)

STARTUP CHECKLIST

CUSTOMER: _____ JOB NAME: _____

ADDRESS: _____ LOCATION: _____

PHONE: _____ CUSTOMER ORDER NO: _____

JCI TEL NO: _____ JCI ORDER NO: _____ JCI CONTRACT NO: _____

CHILLER MODEL NO: _____ **UNIT SERIAL NO**: _____

The work (as checked below) is in process and will be completed by: _____ / _____ / _____
Month Day Year

The following work must be completed in accordance with installation instructions:

A. PRE-STARTUP

Unit Checks (No Power)

The following basic checks should be made with the customer power to the unit switched OFF.

1. Inspect the unit for shipping or installation damage ☐
2. Assure that all piping has been completed. ☐
3. Visually check for refrigerant piping leaks ☐
4. If available, open suction line ball valve, discharge line ball valve, and liquid line valve for each system ☐
5. At shutdown, the oil level should be between the bottom and middle of the oil equalizing sight glass. ☐
6. Are water pumps ON?
   a. Check and adjust water pump flow rate and pressure drop across the cooler Refer to *Operating Limitations, SECTION 8 - TECHNICAL DATA (Form 150.72-ICOM6)*. ☐
   b. Is the flow switch in place, wired properly, and operational? ☐
   c. Are the chilled water pumps operational? ☐
   d. Is the water system filled with water? ☐
   e. Is ALL air purged from the water system? ☐

   NOTE: Any air found in the water system MUST be purged before the chiller can start up. Excessive flow may cause catastrophic damage to the heat exchanger (evaporator)
7. Is the control panel free of foreign material (wires, metal chips and so on)? ☐
8. Is ALL power wired to the chiller and meets the following N.E.C. and local codes?
   a. High voltage ☐
   b. Low voltage ☐
   c. Check tightness of power wiring inside the power panel on both sides of the motor contactors and overloads. ☐
   d. Check to ensure BAS control is wired correctly and operational. ☐
9. Check for proper size fuses in main and control circuits, and verify overload setting corresponds with RLA and FLA values in electrical tables (see Table 8 and Table) ☐
10. Assure 120VAC (110VAC for 50Hz units) Control Power to TB1 has 15 amp minimum capacity. ☐
11. Are all water temp sensors inserted completely into their respective wells and are coated with heat conductive compound? ☐
12. Are the evaporator TXV bulbs strapped onto the suction lines at 4 or 8 o'clock positions or suction temp. sensors if EEVs are installed? ☐
13. Do all sides of the unit have the recommended amount of space for air ventilation? Refer to *SECTION 4 - INSTALLATION (Form 150.72-ICOM6)*. ☐
14. Does the cabinet edge clear the insulation of cable at the power entry to avoid slicing the cable? ☐

B. COMPRESSOR HEATER
(Power On - 24 Hours Prior To Start)

Apply 120VAC and verify its value between terminals 5 and 2 of XTBC2. The voltage should be 120VAC (110VAC for 50Hz units) plus or minus 10% ☐

NOTE: Power must be applied 24 hours prior to start-up. Each heater should draw approximately 0.5 to 1A.

C. STARTUP

Panel checks (Power On - Both unit switch Off)

1. Apply 3-phase power and verify its value. Voltage imbalance should be no more than 2% of the average voltage. ☐
2. Apply 120VAC (110VAC for 50Hz units) and verify its value on the terminal block in the Power Panel. Make the measurement between Terminals 5 and 2 of XTBC2. The voltage should be 120VAC plus or minus 10% ☐
3. Program/verify the Cooling Setpoints, Program Setpoints, and Unit Options. Record the values in the Setpoints Entry List table. ☐
4. Place the unit into Service Mode and cycle each condenser fan to ensure proper rotation. ☐
5. Turn system 2 OFF and leave System 1 running. Refer to SECTION 6 – OPERATIONS *(Form 150.72-ICOM6)*, UNIT KEYS, Option 2 for more information on System Switches. ☐
6. Connect a manifold gauge to system 1 suction and discharge service valves. ☐
7. Place the Unit Switch in the control panel to the ON position. ☐

   NOTE: The chilled liquid setpoint may need to be temporarily lowered to ensure all compressors cycle ON.

   As each compressor cycles ON, ensure that the discharge pressure rises and the suction pressure decreases. If this does not occur, the compressor being tested is operating in the reverse direction and must be corrected.
8. Verify proper compressor rotation and then turn the Unit Switch to “OFF.” ☐

   NOTE: This unit uses scroll compressors which can only operate in one direction. Failure to observe this will lead to compressor failure.
9. Turn system 1 OFF and system 2 ON (two system units only). Refer to SECTION 6 – OPERATIONS *(Form 150.72-ICOM6)*, UNIT KEYS for more information. . ☐
10. Place the Unit Switch in the control panel to the ON position. ☐

    NOTE: The chilled liquid setpoint may need to be temporarily lowered to ensure all compressors cycle ON.

    As each compressor cycles ON, ensure that the discharge pressure rises and the suction pressure decreases. If this does not occur, the compressor being tested is operating in the reverse direction and must be corrected.
11. Verify proper compressor rotation and then turn the Unit Switch to OFF. ☐

SETPOINTS ENTRY LIST

UNIT OPTIONS	
Display Language	✓
Sys 1 Switch	✓
Sys 2 Switch	✓
Chilled Liquid	✓
Ambient Control*	✓
Local/Remote Mode	✓
Control Mode	✓
Display Units	✓
Lead/Lag Control*	✓
Fan Control*	✓
Manual Override	✓
Current Feedback	✓
Power Fail Restart	✓
Soft Start**	✓
Unit Type**	✓
Refrigerant Type**	✓
Flash Card Update	✓
Remote Temperature Reset	✓
External Evaporator Pump	✓
YORK Hydro Kit Pump	✓
Pump Selection	✓
Data Log to Flashcard Enabled	✓
Expansion Valve Type**	✓
COOLING SETPOINTS	
Cooling Setpoint	✓
Range	✓
EMS-PWM Max. Setpoint	✓
PROGRAM SETPOINTS	
Discharge Pressure Cutout	
Suction Pressure Cutout	
Low Ambient Temp. Cutout	
Leaving Liquid Temp. Cutout	
Anti-Recycle Time	
Fan Control ON Pressure	
Fan Differential OFF Pressure	
Total # of Compressors	
Number of Fans/System*	
Unit/Sys Voltage*	
Remote Unit ID	

*Not on All Models **Viewable Only

D. CHECKING SUPERHEAT AND SUBCOOLING

The subcooling temperature of each system can be calculated by recording the temperature of the liquid line at the outlet of the condenser and subtracting it from the liquid line saturation temperature at the liquid stop valve (liquid line saturation temperature is converted from a temperature/pressure chart).

Example:

Liquid line pressure = 325 PSIG converted to temp.	101 °F
minus liquid line temp.	- 83 °F
Subcooling =	18 °F

The subcooling should be adjusted to 18 °F (-8 °C) at design conditions.

1. Record the liquid line pressure and its saturated temperature, liquid line temperature and subcooling below:..... ☐

	SYS 1	SYS 2	
Liq Line Press =	_____	_____	PSIG
Saturated Temp =	_____	_____	°F
Liq Line Temp =	_____	_____	°F
Subcooling =	_____	_____	°F

After the subcooling is verified, the suction superheat-should be checked. The superheat should be checked only after steady state operation of the chiller has been established, the leaving water temperature has been pulled down to the required leaving water temperature, and the unit is running in a fully loaded condition. Correct superheat setting for a system is 10 °F to 15 °F (5.56 °C to 8.33 °C) 18” (46 cm) from the heat exchanger.

Superheat should typically be set for no less than 10 °F with only a single compressor running on a circuit. The superheat is calculated as the difference between the actual temperature of the returned refrigerant gas in the suction line entering the compressor and the temperature corresponding to the suction pressure as shown in a standard pressure/temperature chart.

Example:

Suction Temp =	46 °F
minus Suction Press 105 PSIG converted to Temp	- 34 °F
Superheat =	12 °F

When adjusting the expansion valve (TXV only), the adjusting screw should be turned not more than one turn at a time, allowing sufficient time (approximately 15 minutes) between adjustments for the system and the thermal expansion valve to respond and stabilize.

Assure that superheat is set at a minimum of 10 °F (5.56 °C) with a single compressor running on each circuit.

2. Record the suction temperature, suction pressure, saturation temperature, and superheat of each system below:..... ☐

	SYS 1	SYS 2	
Suction Temp =	_____	_____	°F
Suction Pressure =	_____	_____	PSIG
Saturation Temp =	_____	_____	°F
Superheat =	_____	_____	°F

E. LEAK CHECKING

Leak check compressors, fittings, and piping to ensure no leaks. ..... ☐

If the unit is functioning satisfactorily during the initial operating period with no safeties trip and the compressors cycle to control water temperature to the setpoint, the chiller is considered ready to be placed into operation.

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