START-UP CHECKLIST

DATE _____

JOB NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

MODEL NUMBER _____ SERIAL NUMBER _____

QUALIFIED START-UP TECHNICIAN _____

COMPANY _____ PHONE _____

ADDRESS _____

ADDITIONAL WARRANTY STATEMENT

YORK International is confident that this equipment will operate to the owner's satisfaction if the proper procedures and checks are made at initial start-up. This confidence is supported by the DOA portion of our standard warranty policy which states that YORK International will cover parts and labor on all parts if they fail within 30 days of start-up. In addition, YORK will cover labor on compressors if they fail within 30 days of start-up. This DOA parts and labor policy is only valid if start-up is performed per this checklist by a technician qualified by YORK International on Millennium packaged equipment. This warranty statement is in addition to all other warranties provided with the equipment and subject to all of the of the stated limitations.

SAFETY WARNINGS

The inspections and recording of data outlined in this procedure are required for start-up of YORK's Millennium packaged products. This is not a step-by-step instruction on how to perform these tasks. Industry recognized safety standards and practices must be observed at all times. General industry knowledge and experience are required to assure technician safety. It is the responsibility of the technician to assess all potential dangers and take all steps warranted to perform the work in a safe manner. By addressing those potential dangers, prior to beginning any work, the technician can perform the work in a safe manner with minimal risk of injury.

WARNING: *Lethal voltages are present during some start-up checks. Extreme caution must be used at all times.*

WARNING: *Moving parts may be exposed during some startup checks. Extreme caution must be used at all times.*

REFERENCE

INSTRUCTION	PAGE	GENERAL INSPECTION	COMPLETED
035-16682-001	8, 10, 11	Unit inspected for shipping, storage, or rigging damage	☐
035-16682-001	12, 18	Unit installed with proper clearances	☐
035-16682-001	9	Unit installed within slope limitations	☐
		Refrigeration system checked for gross leaks (presence of oil)	☐
		Terminal screws and wiring connections checked for tightness	☐
035-16682-001	14, 131	Filters installed correctly and clean	☐
035-16682-001	13	Economizer hoods installed in operating position	☐
035-16682-001	13, 14	Condensate drain trapped properly	☐
		Economizer damper linkage tight	☐
035-16682-001	17, 18	Gas Heat vent hood installed	☐
035-16682-001	14, 15	All field wiring (power and control) complete	☐

INSTRUCTION	PAGE	AIR MOVING INSPECTION	SUPPLY FAN	EXHAUST
035-16682-001	132	Mis-aligned drive components	☐	☐
035-16682-001	63, 64	Belt tension adjusted properly	☐	☐
035-16682-001	63	Pulleys tight on shaft, blower bearing set screws tight	☐	☐
035-16682-001	20, 101	Pressure switch or transducer tubing installed properly	☐	☐
		IGV and exhaust damper linkage tight	☐	☐

INSTRUCTION	PAGE	OPERATING MEASUREMENTS - COOLING		
035-16682-001	63	Fan operates with proper rotation ID Fans ☐ Exh Fans ☐ Cond Fans ☐		
035-16682-001	63	Pressure drop across dry evaporator coil (IGV at maximum design CFM)	_____	IWC
035-16682-001	63, 64	Supply Air CFM	_____	CFM
035-16682-001	63, 64	Supply Air Drive Adjustment MIN	_____	CFM
		MAX	_____	CFM

ELECTRICAL DATA

Supply Voltage _____Volts

Control Voltage _____Volts

L1-L2 _____Volts

L1-L3 _____Volts

L2-L3 _____Volts

DEVICE	NAMEPLATE	MEASURED
Supply Fan Motor*	Amps	Amps
Exhaust Motor (Dampers 100%)	Amps	Amps
Condenser Fan # 1	Amps	Amps
Condenser Fan # 2	Amps	Amps
Condenser Fan # 3	Amps	Amps
Condenser Fan # 4	Amps	Amps
Compressor # 1	Amps	Amps
Compressor # 2	Amps	Amps
Compressor # 3	Amps	Amps
Compressor # 4	Amps	Amps

* 1) VAV units with heat section - simulate heat call to drive VAV boxes and VFD/IGV to maximum design airflow position
2) VAV units without heat section - VAV boxes must be set to maximum design airflow position.

REFRIGERANT CIRCUITS

STAGE	DIS. PRESS	LIQ. TEMP.**	SUBCOOL	SUCT. PRESS.	SUCT. TEMP.	SUPERHEAT
FIRST	#	°	°	#	°	°
SECOND	#	°	°	#	°	°
THIRD	#	°	°	#	°	°
FOURTH	#	°	°	#	°	°

** Liquid temperature should be taken before filter/drier

SIGHTGLASS

	SYSTEM 1	SYSTEM 2	SYSTEM 3	SYSTEM 4
Sight glass moisture indicator shows dry system (green)	☐	☐	☐	☐
Sight glass shows solid column of liquid with compressors in operation	☐	☐	☐	☐

Outside air temperature _____db°F

OPERATING MEASUREMENTS - GAS HEATING

FUEL TYPE

☐ NATURAL GAS

☐ LP GAS

INSTRUCTION	PAGE	ACTION	COMPLETED
035-16682-001	68	Check for gas leaks	☐
035-16682-001	68	Manifold pressure Stage 1	_____IWC
		Stage 2	_____IWC
035-16682-001	68	Supply gas pressure at full fire	_____IWC
035-16682-001	69	Check temperature rise (measured or calculated at full fire)	_____°F

OPERATIONAL MEASUREMENTS - ACTUATORS

VERIFY PROPER ECONOMIZER ACTUATOR ROTATION ☐

Remove wire from 2-10 VDC "+" terminal on economizer control.

Connect this wire to 24 VAC with Jumper. Economizer dampers will then open.

Remove the jumper. Economizer dampers will then close.

Replace wire to 2-10VDC "+" terminal.

WARNING: *INDOOR FAN AND EXHAUST FANS MAY ENERGIZE IF 5M AND 10M CONTACTORS ARE NOT DISABLED DURING THE FOLLOWING CHECKS. THIS CAN RESULT IN EXPOSURE TO MOVING PARTS AND MAY CAUSE SERIOUS INJURY.*

VERIFY PROPER IGV ACTUATOR ROTATION ☐

Disable 5M contactor.

Jumper the R and TC terminals on TB3

Jumper supply pressure switch terminals C to terminal LO. Vanes will then drive toward open.

Remove the C to LO jumper. The Vanes will then close.

Remove the R to TC jumper and replace the wires on 5M contactor.

VERIFY PROPER POWER EXHAUST ACTUATOR ROTATION ☐

Disable the 5M and 10M contactors.

Attach jumper R to TC terminals on TB3 on VAV units. Attach jumper R to wire 313/R from 5M contactor on CV units.

Jumper return/building pressure switch terminals C to HI. Discharge dampers will drive toward open.

Remove both of the jumpers. The Dampers will then close.

Replace the wires on 5M and 10M contactors.

OPERATIONAL MEASUREMENTS - STAGING CONTROLS

CONSTANT VOLUME - VERIFY PROPER OPERATION OF HEATING/COOLING STAGING CONTROLS Create a cooling demand at the Thermostat Verify that cooling/economizer stages are energized. Create a heating demand at the Control Board Terminal Verify that heating stages are energized.	☐
VARIABLE AIR VOLUME - VERIFY PROPER OPERATION OF HEATING/COOLING STAGING CONTROLS Create a cooling demand at the Control Board Verify that cooling/economizer stages are energized. Jumper terminal R to W1 on Control Board. The Heating Stage 1 will energize. Jumper terminal R to W2 on Control Board. The Heating Stage 2 will energize. Jumper terminal R to W3 on Control Board. The Heating Stage 3 will energize. Remove jumper	☐
VERIFY PROPER FUNCTION OF THE VARIABLE FREQUENCY DRIVE Verify that motorspeed modulates with duct pressure change.	☐

FINAL INSPECTION

VERIFY THAT ALL OPERATIONAL CONTROL SETPOINTS HAVE BEEN SET TO DESIRED VALUE	☐
VERIFY THAT ALL OPTION PARAMETERS ARE CORRECT (035-16682-001, TABLE 49)	☐
VERIFY THAT ALL ACCESS PANELS HAVE BEEN CLOSED AND SECURED	☐

COMMENTS:

DEFICIENCIES FOUND:

NOTES

NOTES

YORK®
Heating and Air Conditioning

Unitary Products Group
5005 York Drive, Norman, Oklahoma 73069
Subject to change without notice. Printed in U.S.A.

Supersedes: 530.70-SU1Y (600)/035-16645-000

035-16645-001-A-0804