CERTIFICATION OF WORK
PREVENTIVE MAINTENANCE

(To be completed by the Contractor and saved in the Contractor's CMMS)

FACID/Building: VA049 Date of Visit: 5/11/20

Contractor Personnel on Site:

1. RICHARD WALKER
2. _____
3. _____
4. _____

Work Performed:

Preventive Maintenance - Services Completed (Annual, Quarterly, Monthly, equipment identification, etc.)

1. WO'S 12117 Asset 2316 Model # 4a7c3060a3000bb
2. _____
3. _____
4. _____
5. _____

CERTIFICATION OF WORK

To be signed by the Contractor:

Print Name: _____ Date: _____

Signed: See Pm Sheets signed

To be signed by Facility Manager:

By signing the Certification of Work, the said government representative signature does not constitute acceptance of any work performed by the contractor, it only acknowledges that the contractor was on-site during the identified timeline:

Print Name/Rank: _____ Date:_____

Signed: GRENIER.SCOTT.ANTHONY.1007219551 Digitally signed by GRENIER.SCOTT.ANTHONY.1007219551 Date: 2020.05.29 13:19:07 -04'00'

E-Mail: _____

PREVENTATIVE MAINTENANCE PROGRAM CHECKLIST

AIR COOLED CHILLER, PACKAGE UNIT

SITE AND BLDG #: VA049 **MECHANIC SIGNATURE:** [signature] **DATE:** 5.11.2020

LOCATION/RM #: Roof **WO#** 12117 **ASSET #** 2316 **START TIME:** 9 am **FINISH TIME:** 5 pm

CHECK POINT	CHECKPOINT DESCRIPTION	TASK COMPLETE YES	TASK COMPLETE NO	NOTES/ ACTIONS (IF TASK COMPLETE IS CHECKED NO, PROVIDE EXPLANATION)
SPECIAL INSTRUCTIONS				
1	Follow lock out/tag out procedures at all times. De-energize or discharge all hydraulic, electrical, mechanical, or thermal energy prior to beginning work.	✓		
2	No intentional venting of refrigerants is permitted. During the servicing, maintenance, and repair of refrigeration equipment, the refrigerant must be recovered.	✓		
3	Whenever refrigerant is added or removed from equipment, record the quantities on the appropriate forms. Forms tobe maintainted by technician in universal waste binder.	✓		
4	Recover, recycle, or reclaim the refrigerant as appropriate.		✓	Didn't remove any
5	If disposal of the equipment item is required, follow regulations concerning removal of refrigerants and disposal of the item.	✓		
6	If materials containing refrigerants are discarded, comply with EPA regulations as applicable.	✓		
7	Refrigerant oils to be treated as hazardous waste.	✓		
8	Closely follow all safety procedures described in the Safety Data Sheet (SDS) for the refrigerant and all labels on refrigerant containers.	✓		
9	Remove access covers prior to accomplishing check points.	✓		
TO BE PERFORMED AT EACH INSPECTION SERVICE				
CONDENSER				
1	Remove debris from air screen and clean underneath unit.	✓		
2	Pressure wash coil with proper cleaning solution.	✓		
3	Straighten fin tubes with fin comb.	✓		
4	Check electrical wiring and tighten loose connections. Check fused disconnect switches for condition and operation, contactors	✓		
5	Check mounting for tightness.	✓		
6	Check for corrosion. Clean and treat with inhibitor as needed.	✓		
7	Check fan or blower for bent or damaged blades and imbalance.	✓		

CHECK POINT	CHECKPOINT DESCRIPTION	TASK COMPLETE YES	TASK COMPLETE NO	NOTES/ ACTIONS (IF TASK COMPLETE IS CHECKED NO, PROVIDE EXPLANATION)
8	Lubricate shaft and motor bearings on fans and remove old or excess lubricant, if applicable.	✓		Utilized lithium grease/mobil 1 Grease
9	Inspect pulleys, belts, couplings, etc.; adjust tension and tighten mountings as necessary. Change badly worn belts. Multi-belt drives should be replaced with matched sets.	✓		Tightened fan blade
	EVAPORATOR			
1	Inspect evaporator for any obvious deficiencies.	✓		
2	Inspect plumbing, valves and flanges for leaks and correct as needed.	✓		
	COMPRESSOR(S)			
1	Lubricate drive coupling, if applicable.		✓	(N/A)
2	Lubricate motor bearings (non-hermetic), if applicable.		✓	(Hermetic)
3	Check bearrings for vibrations or unuasual noises.	✓		(circuit #2 - Right side) O.L on start up.
4	Leak test unit with soap test or electronic device.	✓		Soap Bubbles
5	Check compressor oil level., if applicable.	✓		visible in sight Glass
6	Run machine; check action of controls, relays, switches, etc. to see that: a. Compressor(s) run at proper settings. b. Suction and discharge pressures are proper.	✓		
7	Check vibration eliminators. Replace as necessary.	✓		None cracked
8	Document AMP draw on compressors	✓		L1 O.L (73) L2 55(flux) L3 62.3
9	Check safety controls for high pressure cut off.	✓		
	CONTROLS			
1	Record chilled water supply and return temps and Humidity .	✓		(S) 39° (R) 41° (H) 52 in bldg.

Note: The technician shall perform any repairs identified during PM up to $250 (direct labor and direct material cost) per PM occurrence. For any deficiencies found exceeding $250 open a corrective maintenance (CM) ticket and include the Asset #, WO #, photos, and a detailed discription of the deficiency.
To be perfomed by: HVAC Technician

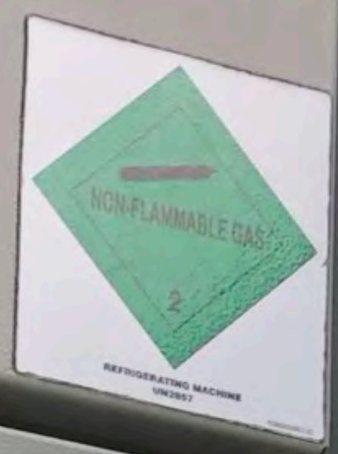
Additional Notes:

Found: Right Side - #2 Compressor Over limit on start up. Drops in Amps while running then Amps raise. while shutting off.

Usually only happens when Compressor is nearing Replacement.

Before


SHIP WITH ITEMS
LOCATED IN THIS
COMPARTMENT


NON-FLAMMABLE GAS
2
REFRIGERATING MACHINE
UN2857

Before


Before

1S1

Sentron Series Circuit Breaker
Interruptor Termomagnético Serie Sentron
SIEMENS

150 I

PUSH TO TRIP
Presione Para Desconectar
150A

BENSHAW
ADVANCED CONTROLS & DRIVES

PO
SO E5L020AAA

Order NO T201000293

RSC-100

Job# T20100
Chassis #
Assembled
Inspected

CGAM Motor Lead Torque Values

Connector Size	Torque (in-lbs)	Hardware Size
RSC-9-22	10	M5 bolt to lug pa
RSC-32-40	18	M5 bolt to lug pa
RSC-50	60	M6 bolt to lug pa
RSC-65-75-85	100	M8 bolt to lug pa
RSC-100-150	225	M8-1.25 bolt / nu
RSC-180-220	350	M10-1.5 bolt / nut


AB
Class 10
10A
Test
ON-OFF
RSC-9
NEMA
Size
00
BENSHAW
QUICK
MENU
ALARM
STOP
RESET
TR1

TRANE

FOR OUTDOOR USE

SERIAL NUMBER: U10C14744[illegible]

MODEL NUMBER: CGAM 070A 2C02 AXD2 A1A1 A1AX XA1A 1AXX XXXX XA1A 3X1D XXX[illegible]

RATED VOLTAGE/HZ/PH	208/60/3		
VOLT UTILIZATION RANGE	187-229		
	MIN CKT AMPACITY (A)	MAX FUSE/ BREAKER (A)	
CKT 1	355	400	
CKT 2			

	RLA	LRA
COMPR MTR 1A	58	485
COMPR MTR 1B	87	485
COMPR MTR 1C		
COMPR MTR 2A	87	485
COMPR MTR 2B	58	485
COMPR MTR 2C		

	QTY	HP EA	FLA EA	VFD INPUT AMPS	MTR VOLT
FIXED SPEED FAN MOTORS	4	1.27	6.2		
2 SPEED FAN MOTORS					
VFD CONTROLLED FAN MOTORS	2	1.27	6.2	7.3	
* PUMP MOTORS					

* EXCLUSIVELY INTERLOCKED

RATED VOLTAGE/HZ/PH	115/60/1
VOLT UTILIZATION RANGE	108-126
CKT 3 FREEZE PROTECTION HEATERS	[illegible]
CKT 4 BUFFER TANK HEATER	[illegible]

REFRIGERANT: FACTORY CHARGED

RFGT CHARGE		OIL CHARGE	
TYPE/ NUMBER	410A		OIL00079
CKT 1 (LBS)	48	CKT 1 (GAL)	3.6
CKT 2 (LBS)	46	CKT 2 (GAL)	3.6

DESIGN PRESSURES (PSI)

HIGH SIDE	650
LOW SIDE	238

WIRING DIAGRAM BOOK: 5726608558100

INSTALLATION, OPERATION & MAINTENANCE MANUAL: CG-SVX17A-EN

TRANE

MANUFACTURED UNDER ONE OR MORE OF THE FOLLOWING U.S. PATENTS/ CORRESPONDING FOREIGN PATENTS OWNED BY TRANE.

5,056,594 5,067,560 5,123,256 5,138,844 5,231,846 5,276,630 5,419,146 5,632,154 5,809,794 5,950,443 6,049,299 6,085,532 6,266,964 6,276,152 6,666,042 6,917,857 7,020,156 7,088,346 7,158,121 7,202,858 7,385,593

MADE IN USA

X39003199010C

c UL US

LISTED

LIQUID CHILLER
SELF-CONTAINED UNIT
85RO

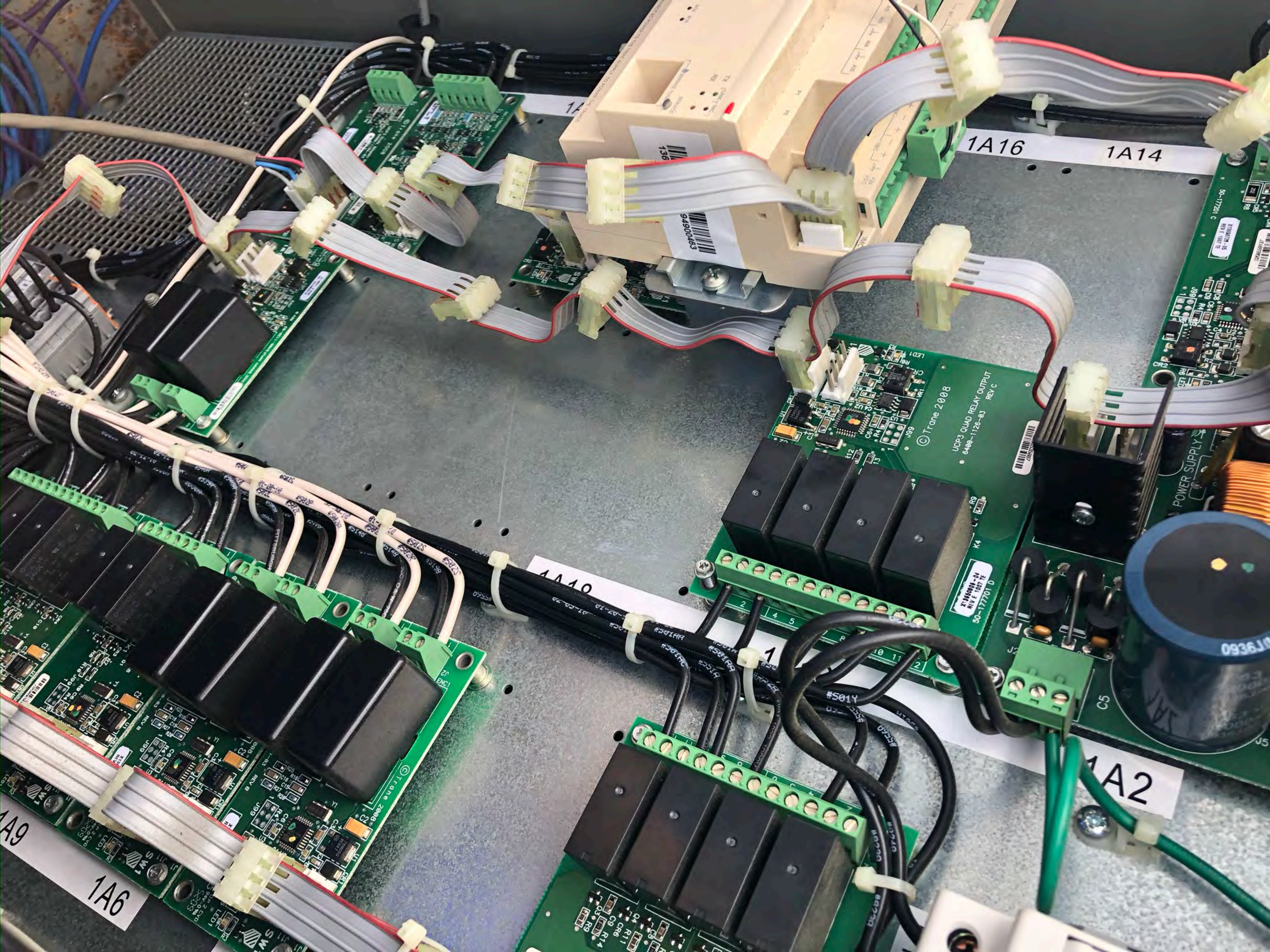
SA8373

X39551090-01

Unit Model Number Complies With Efficiency Requirements of ASHRAE Standard 90.1 - 2001

X39002008010A

PERFORMANCE CERTIFIED


1A16
1A14
1A9
1A6
1A2
© Trane 2008
UCP3 QUAD RELAY OUTPUT
6400-1126-03 REV C
POWER SUPPLY

Circuit 2 (right side)
Over amp on startup


WARNING
HAZARDOUS VOLTAGE -
PRESSURIZED BURNING FLUID!
DISCONNECT ALL ELECTRIC POWER INCLUDING REMOTE DISCONNECTS AND FOLLOW LOCK OUT AND TAG PROCEDURES BEFORE REMOVING COMPRESSOR TERMINAL BOX COVER FOR SERVICING. DO NOT OPERATE COMPRESSOR WITHOUT TERMINAL BOX COVER IN PLACE.
Failure to follow the above could result in death or serious injury.
AVERTISSEMENT
TENSION DANGEREUSE - LIQUIDE BRULANT SOUS PRESSION!
CIRCUIT 2
INSTALLED Ø31
RESTRICTOR
X17311028010
NOTICE
APPLYING VOLTAGE UNDER VACUUM
AVIS
MISE SOUS TENSION PENDANT LA PRESSION À VIDE!
AVISO

After

Recommend insulation repair


After


After


Before

After


la pression à vide.
¡APLICACIÓN
compresor falle.
After

After


SHIP WITH ITEMS
LOCATED IN THIS
COMPARTMENT
NON-FLAMMABLE GAS
2
REFRIGERATING MACHINE
UN2857
NOTICE
AVIS
AVISO