SDV Job #: 5390553 - Shake Shack-1423-Westfield Topanga-R4

Service Region:	367 - LA, Orange County, San Diego		
Service Person:	Anthony Santiago		
Customer Number:	779445	**Customer Name:**	Region 108 - Eastern PA Mechanical
Address:	Shake Shack 6600 Topanga Canyon Blvd Space #FC10 Los Angeles, CA 91303		
Region Job #:	5322262		
Region Job Name:	Shake Shack-1423-Westfield Topanga-R4		
Sales Region:	108 - Eastern PA Mechanical		
Sales Person:	Joe Shiiba		
Created By:	Anthony Santiago	**Creation Date:**	12/21/2022 10:51 AM
Last Modified By:	Steve Sandoval	**Last Modified Date:**	12/21/2022 6:29 PM
Dining Room Pressure:	0.0	**Kitchen Pressure:**	0.0
Hours On Job:	0.0	**Extra Hours:**	0.0
Completed:	Yes	**Completed By:**	Steve Sandoval
Completion Date:	12/21/2022 6:29 PM		

UDS

NONE

Hood Group 1

Exhaust CFM:	Design = 3150	Initial = 3543	Final = 3266	(103.7% of design)
Supply CFM:	Design = 2520	Initial = 1860	Final = 2383	(94.6% of design)
Supply AC CFM:	Design = 800	Initial = 8	Final = 8	(1.0% of design)

Hood 1 (Hood-Left) (Hood-Left)

Model:	5430ND-2-ACPSP-F	**Length:**	9' 0.00"	
Exhaust CFM:	Design = 1575	Initial = 1731	Final = 1595	(101.3% of design)

Other Notes:

N/A

Installation

Hung Using appropriate material to safely secure hood.	Design:	**Yes**	Actual:	**No**

Installation Notes:

Punch Item: Sales Office

At time of SDV CAS service found single hex nut used on hanging angles.

COOKING EQUIPMENT ON AND OPERATING	Design:	**Yes**	Actual:	**Yes**
COOKING EQUIPMENT INSTALLED AS CLOSE TO BACK WALL AS POSSIBLE	Design:	**Yes**	Actual:	**Yes**
END PANELS INSTALLED CORRECTLY	Design:	**Yes**	Actual:	**No**

Other Notes:

N/A

Installation Notes:

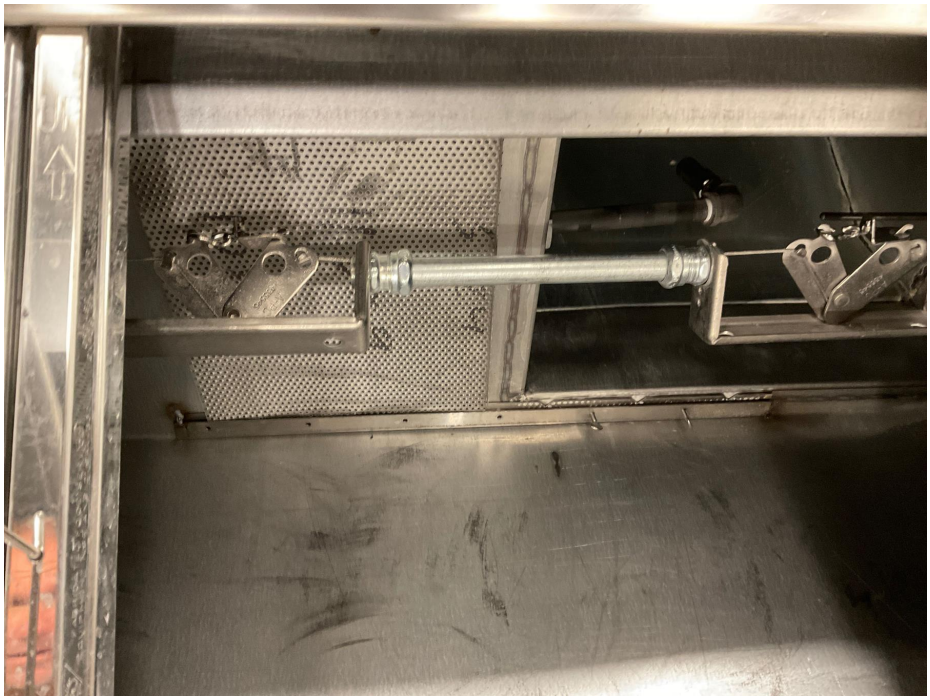
Punch Item: Sales Office

At time of SDV CAS Service recommends raising panels slightly to eliminate gap between hood and panel.

INITIAL POSITION OF BALANCE DAMPER		Actual: **100% open**

Other Notes:

N/A



POSITION OF BALANCE DAMPER AFTER AIRFLOW		Actual: **100% open**
Was a smoke test performed on Hood System?	Design: **Yes**	Actual: **Yes**

Filters

Type: Captrate Solo

Filter 1 Size: 20x16 Initial Velocity: 126 fpm Final Velocity: 113 fpm Initial CFM: 262 Final CFM: 235
Fan: #2 - USBI18DD-RM (KEF-1)

Filter 2 Size: 20x16 Initial Velocity: 129 fpm Final Velocity: 128 fpm Initial CFM: 268 Final CFM: 266
Fan: #2 - USBI18DD-RM (KEF-1)

Filter 3 Size: 20x16 Initial Velocity: 154 fpm Final Velocity: 130 fpm Initial CFM: 320 Final CFM: 270
Fan: #2 - USBI18DD-RM (KEF-1)

Filter 4 Size: 20x16 Initial Velocity: 158 fpm Final Velocity: 144 fpm Initial CFM: 328 Final CFM: 299
Fan: #2 - USBI18DD-RM (KEF-1)

Filter 5 Size: 20x16 Initial Velocity: 125 fpm Final Velocity: 130 fpm Initial CFM: 260 Final CFM: 270
Fan: #2 - USBI18DD-RM (KEF-1)

Filter 6 Size: 20x16 Initial Velocity: 141 fpm Final Velocity: 123 fpm Initial CFM: 293 Final CFM: 255
Fan: #2 - USBI18DD-RM (KEF-1)

Supply

Supply CFM: Design = 1260 Initial = 1036 Actual = 1308 (103.8% of design)
Fan: #1 - A2-D.250-20D-MPU (MAU-1)
AC CFM: Design = 400 Initial = 4 Actual = 4 (1.0% of design)

PSP 1

Orientation: Front **Length:** 10' 8.00" **Width:** 12.00" **Banks:** 1
Blanks: 1

CFM:	Design = 1260	Initial = 1036	Final = 1308	(103.8% of design)
Velocity:	Design = 147	Initial = 120	Final = 152	(103.4% of design)
AC CFM:	Design = 400	Initial = 4	Final = 4	(1.0% of design)
AC Velocity:	Design = 93	Initial = 0	Final = 0	(0.0% of design)

Readings:

1: Initial: 161 fpm, Final: 213 fpm	2: Initial: 115 fpm, Final: 158 fpm	3: Initial: 128 fpm, Final: 166 fpm
4: Initial: 107 fpm, Final: 130 fpm	5: Initial: 115 fpm, Final: 154 fpm	6: Initial: 141 fpm, Final: 180 fpm
7: Initial: 127 fpm, Final: 143 fpm	8: Initial: 111 fpm, Final: 129 fpm	9: Initial: 118 fpm, Final: 117 fpm
10: Initial: 89 fpm, Final: 145 fpm	11: Initial: 117 fpm, Final: 128 fpm	12: Initial: 121 fpm, Final: 167 fpm

AC Readings:

Other Notes:

At time of SDV CAS Service was unable to measure ACP CFM

1: Initial: 1 fpm, Final: 1 fpm	2: Initial: 1 fpm, Final: 1 fpm	3: Initial: 1 fpm, Final: 1 fpm	4: Initial: 1 fpm, Final: 1 fpm
5: Initial: 1 fpm, Final: 1 fpm	6: Initial: 1 fpm, Final: 1 fpm	7: Initial: 1 fpm, Final: 1 fpm	8: Initial: 1 fpm, Final: 1 fpm
9: Initial: 1 fpm, Final: 1 fpm	10: Initial: 1 fpm, Final: 1 fpm	11: Initial: 1 fpm, Final: 1 fpm	
12: Initial: 1 fpm, Final: 1 fpm			

Hood 2 (Hood-Right) (Hood-Right)

Model: 5430ND-2-ACPSP-F **Length:** 9' 0.00"
Exhaust CFM: Design = 1575 Initial = 1812 Final = 1671 (106.1% of design)

Other Notes:

N/A

Installation

Hung Using appropriate material to safely secure hood.	Design:	**Yes**	Actual:	**No**

Other Notes:

At time of SDV CAS Service could not verify Hood 2 hanging angles due to ceiling configuration.

COOKING EQUIPMENT ON AND OPERATING	Design:	**Yes**	Actual:	**Yes**
COOKING EQUIPMENT INSTALLED AS CLOSE TO BACK WALL AS POSSIBLE	Design:	**Yes**	Actual:	**Yes**
END PANELS INSTALLED CORRECTLY	Design:	**Yes**	Actual:	**No**

Other Notes:

N/A

Installation Notes:

Punch Item: Sales Office

At time of SDV CAS Service recommends raising end panel to eliminate slight gap.

INITIAL POSITION OF BALANCE DAMPER — Actual: **100% open**

Other Notes:

N/A

POSITION OF BALANCE DAMPER AFTER AIRFLOW — Actual: **100% open**

Was a smoke test performed on Hood System? — Design: **Yes** — Actual: **Yes**

Filters

Type: Captrate Solo

Filter 1	Size: 20x16	Initial Velocity: 159 fpm	Final Velocity: 138 fpm	Initial CFM: 330	Final CFM: 286	Fan: #2 - USBI18DD-RM (KEF-1)
Filter 2	Size: 20x16	Initial Velocity: 135 fpm	Final Velocity: 130 fpm	Initial CFM: 280	Final CFM: 270	Fan: #2 - USBI18DD-RM (KEF-1)
Filter 3	Size: 20x16	Initial Velocity: 158 fpm	Final Velocity: 144 fpm	Initial CFM: 328	Final CFM: 299	Fan: #2 - USBI18DD-RM (KEF-1)
Filter 4	Size: 20x16	Initial Velocity: 138 fpm	Final Velocity: 128 fpm	Initial CFM: 286	Final CFM: 266	Fan: #2 - USBI18DD-RM (KEF-1)
Filter 5	Size: 20x16	Initial Velocity: 131 fpm	Final Velocity: 137 fpm	Initial CFM: 272	Final CFM: 284	Fan: #2 - USBI18DD-RM (KEF-1)
Filter 6	Size: 20x16	Initial Velocity: 152 fpm	Final Velocity: 128 fpm	Initial CFM: 316	Final CFM: 266	Fan: #2 - USBI18DD-RM (KEF-1)

Supply

Supply CFM:	Design = 1260	Initial = 824	Actual = 1075	(85.3% of design)
Fan: #1 - A2-D.250-20D-MPU (MAU-1)				
AC CFM:	Design = 400	Initial = 4	Actual = 4	(1.0% of design)

PSP 1

Orientation: Front **Length:** 9' 0.00" **Width:** 12.00" **Banks:** 1
Blanks: 1

CFM:	Design = 1260	Initial = 824	Final = 1075	(85.3% of design)
Velocity:	Design = 175	Initial = 114	Final = 149	(85.1% of design)
AC CFM:	Design = 400	Initial = 4	Final = 4	(1.0% of design)
AC Velocity:	Design = 111	Initial = 1	Final = 1	(0.9% of design)

Readings:

1: Initial: 105 fpm, Final: 146 fpm 2: Initial: 82 fpm, Final: 145 fpm 3: Initial: 108 fpm, Final: 114 fpm
4: Initial: 145 fpm, Final: 142 fpm 5: Initial: 144 fpm, Final: 177 fpm 6: Initial: 125 fpm, Final: 185 fpm
7: Initial: 106 fpm, Final: 158 fpm 8: Initial: 113 fpm, Final: 144 fpm 9: Initial: 106 fpm, Final: 126 fpm
10: Initial: 111 fpm, Final: 158 fpm

AC Readings:

Other Notes:

At time of SDV CAS Service was unable to measure ACP CFM.

1: Initial: 1 fpm, Final: 1 fpm 2: Initial: 1 fpm, Final: 1 fpm 3: Initial: 1 fpm, Final: 1 fpm 4: Initial: 1 fpm, Final: 1 fpm
5: Initial: 1 fpm, Final: 1 fpm 6: Initial: 1 fpm, Final: 1 fpm 7: Initial: 1 fpm, Final: 1 fpm 8: Initial: 1 fpm, Final: 1 fpm
9: Initial: 1 fpm, Final: 1 fpm 10: Initial: 1 fpm, Final: 1 fpm

AQEs

NONE

Fans

Fan 1 - A2-D.250-20D-MPU (MAU-1) (MAU-1)

Model: A2-D.250-20D-MPU

Supply

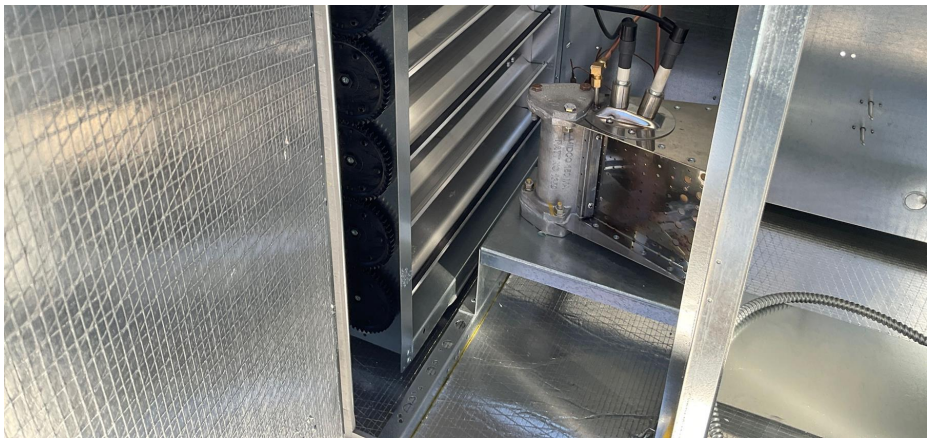
Supply CFM: Design = 2520 Actual = 2383 (94.6% of design)

VOLTS	Design:	**208**	Actual:	**208**
HP	Design:	**7.5**	Actual:	**7.5**
HUB SET SCREW TIGHT	Design:	**Yes**	Actual:	**Yes**
FAN LEVEL	Design:	**Yes**	Actual:	**Yes**
ROTATION	Design:	**Correct**	Actual:	**Correct**
FAN VIBRATION	Design:	**Good**	Actual:	**Good**
RPM - DESIGN	Design:	**2130**	Actual:	**1487**
RPM - MAX	Design:	**2400**	Actual:	**N/A**
RPM - MAX RECOMMENDED	Design:	**2000**	Actual:	**N/A**
FLA	Design:	**21.1**	Actual:	**12.8**
OVERLOAD SET POINT	Design:	**21.1**	Actual:	**21.1**
PHASE	Design:	**3**	Actual:	**3**
DAMPER INSTALLED	Design:	**Yes**	Actual:	**Yes**

Installation Notes:

Punch Item: Sales Office

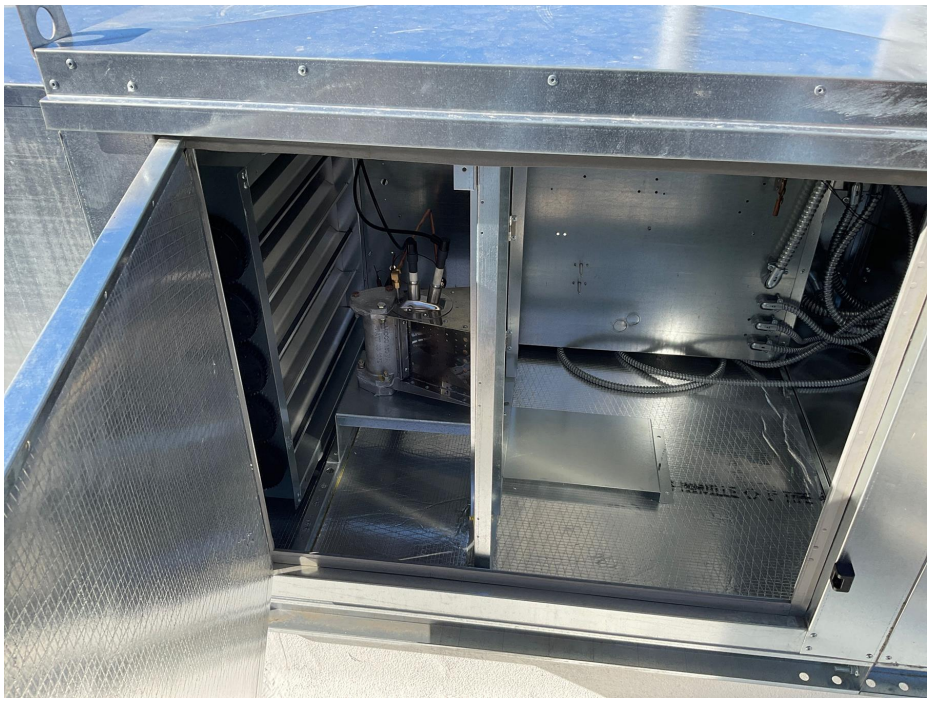
Damper installed.

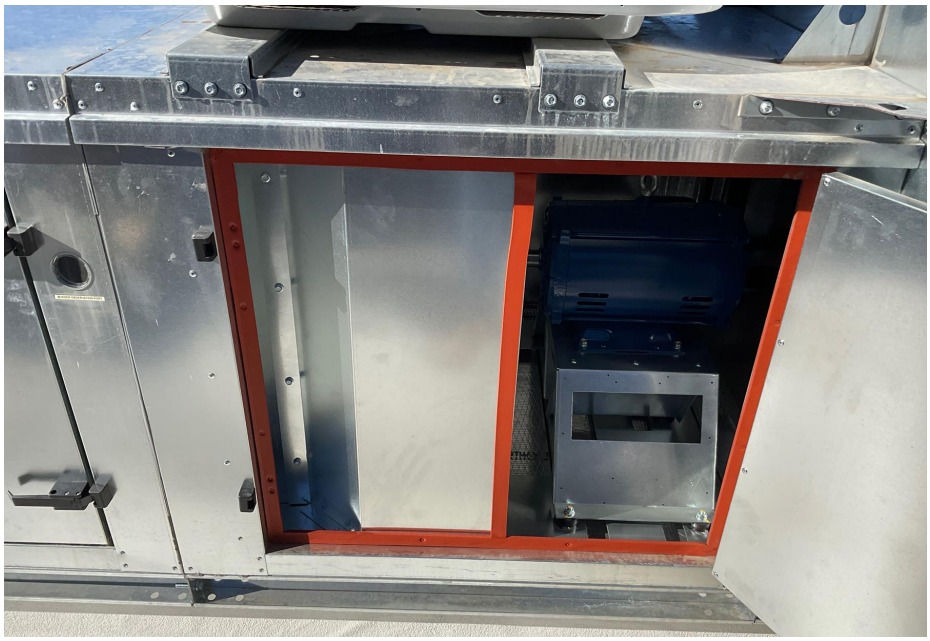


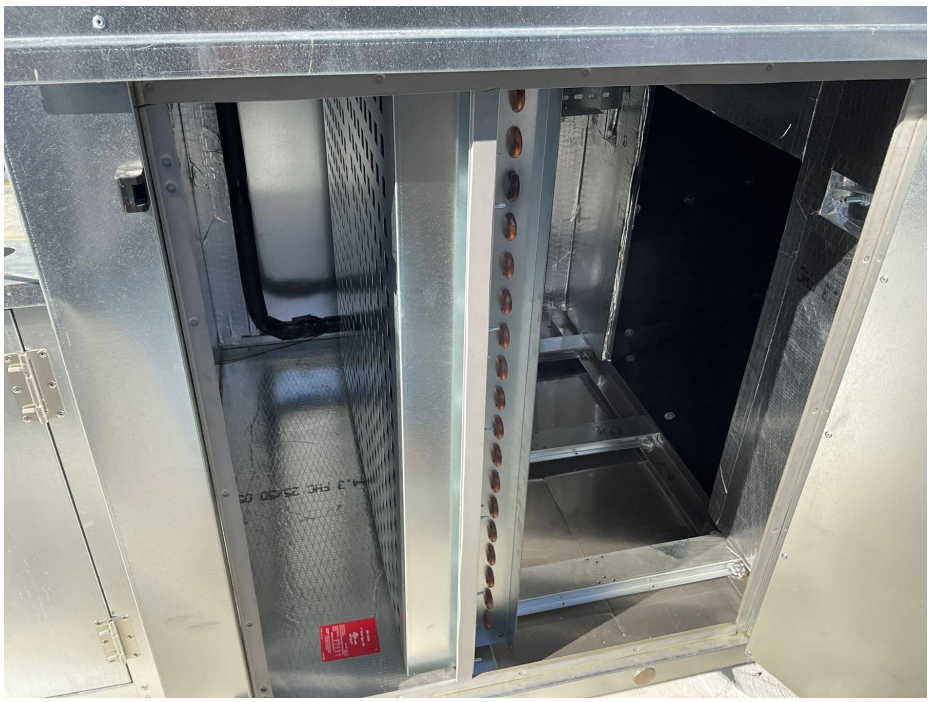
FAN WITHIN 5 MILES OF COAST	Actual:	**No**
INSPECT ALL EXTERIOR SIDES OF UNIT. ANY VISIBLE DAMAGE	Actual:	**No**

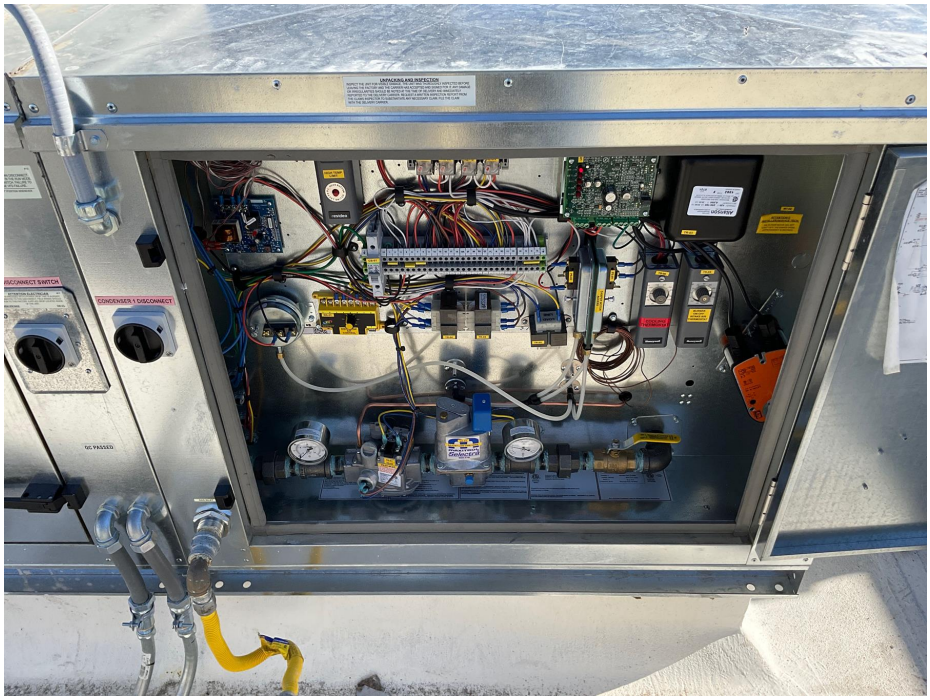
Other Notes:

N/A

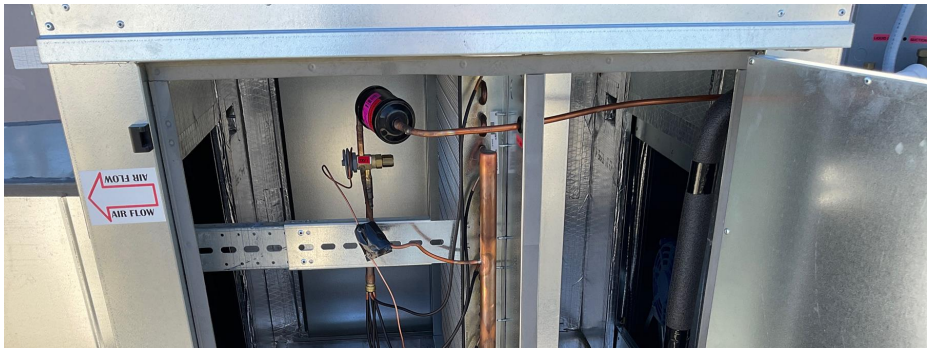







UNPACKING AND INSPECTION
CONDENSER 1 DISCONNECT


WARNING


AIR FLOW
AIR FLOW

Record the VFD HZ			Actual:	**51**
Is Supply Fan bolted/secured to curb? If no, secure fan properly according to manual.	Design:	**Yes**	Actual:	**Yes**

Heater

Gas Heater

GAS TYPE	Design:	**Natural**	Actual:	**Natural**
INLET GAS PRESSURE	Design:	**7**	Actual:	**7**

Other Notes:

Unable to verify gas pressure.

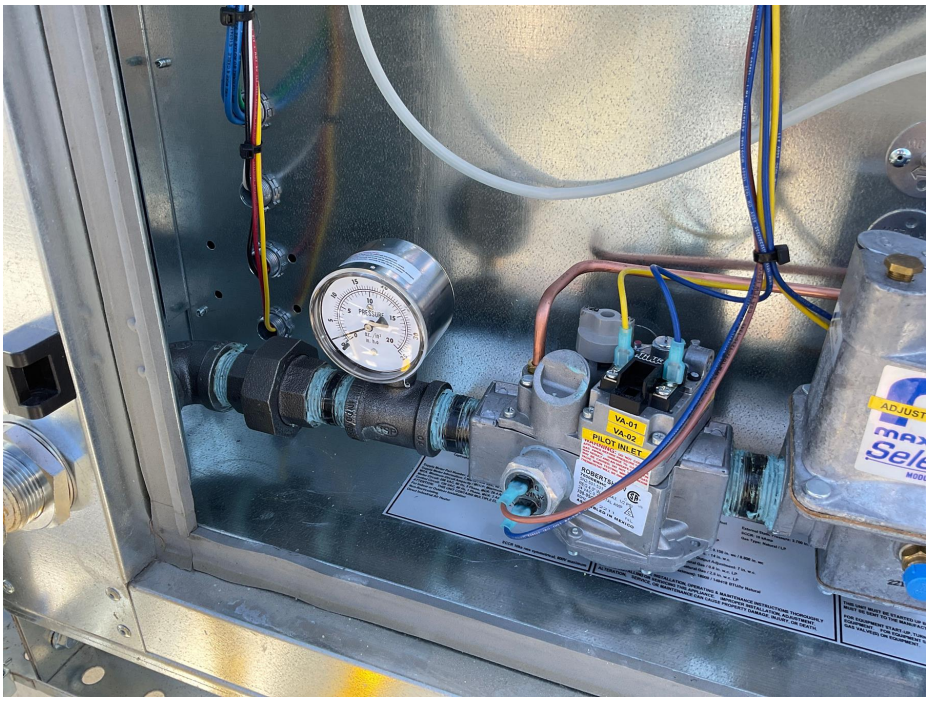
FREEZE STAT TEMPERATURE	Design:	**35**	Actual:	**35**
FREEZE STAT TIMER	Design:	**10**	Actual:	**10**
SPACE SET POINT	Design:	**N/A**	Actual:	**0**
INTAKE SET POINT	Design:	**45**	Actual:	**50**
DISCHARGE SET POINT	Design:	**55**	Actual:	**60**
HIGH LIMIT SET POINT			Actual:	**170**

Direct Fired Heater

Housing Size: 2 **Burner Profile Pressure:** 0.0"

Other Notes:

At time of SDV Gas gauge is broken and not reading properly. Unable to verify pressures.



PILOT FLAME SIGNAL	Design:	**12**	Actual:	**15.7**
TEMP RISE			Actual:	**60**
HIGH FIRE MANIFOLD GAS PRESSURE	Design:	**1.2**	Actual:	**1.2**
HIGH FIRE INLET PRESSURE			Actual:	**N/A**
HIGH FIRE FLAME SIGNAL	Design:	**12**	Actual:	**15.3**
BURNER DIFFERENTIAL PRESSURE	Design:	**0.3**	Actual:	**0.43**
LOW MANIFOLD GAS PRESSURE			Actual:	**N/A**
MODULATION TIME	Design:	**4**	Actual:	**4**
LOW FIRE FLAME SIGNAL	Design:	**12**	Actual:	**15.2**

Cooling

TEMP DROP	Design:	**14**	Actual:	**14**

MPU

CONTROL MODE			Actual:	**Cool**
THERMOSTAT SET POINT	Design:	**85**	Actual:	**80**
EACH CONDENSER HAS IT'S OWN BREAKER	Design:	**Yes**	Actual:	**Yes**

Other Notes:

N/A

Installation Notes:

Punch Item: Sales Office

At time of SDV Condenser is sharing conduit with VFD wiring.

CONDENSER-1 VOLTAGE	Design:	**208-230**	Actual:	**208**

Fan 2 - USBI18DD-RM (KEF-1) (KEF-1)

Model: USBI18DD-RM

Exhaust

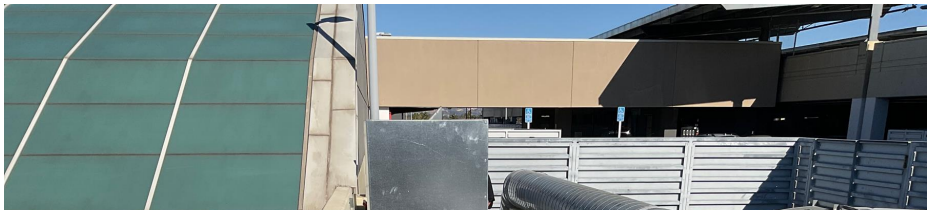
Exhaust CFM: Design = 3150 Actual = 3266 (103.7% of design)

Record the VFD HZ			Actual:	**59.6**
VOLTS	Design:	**208**	Actual:	**208**
HP	Design:	**3**	Actual:	**3**
HUB SET SCREW TIGHT	Design:	**Yes**	Actual:	**Yes**
FAN LEVEL	Design:	**Yes**	Actual:	**Yes**
ROTATION	Design:	**Correct**	Actual:	**Correct**
FAN VIBRATION	Design:	**Good**	Actual:	**Good**
RPM - DESIGN	Design:	**1493**	Actual:	**1743**
RPM - MAX	Design:	**1900**	Actual:	**N/A**

RPM - MAX RECOMMENDED	Design:	**1600**	Actual:	**N/A**
FLA	Design:	**9.5**	Actual:	**7.5**
OVERLOAD SET POINT	Design:	**9.5**	Actual:	**9.5**
PHASE	Design:	**3**	Actual:	**3**
FAN WITHIN 5 MILES OF COAST			Actual:	**No**
INSPECT ALL EXTERIOR SIDES OF UNIT. ANY VISIBLE DAMAGE	Design:	**No**	Actual:	**No**

Other Notes:

N/A



Installation Notes:

Punch Item: Sales Office

Partial Item: Sales Office

At time of SDV exhaust fan has no isolators installed.

ECPs

ECP 1 - SC-311110MA

Package #: SC-311110MA

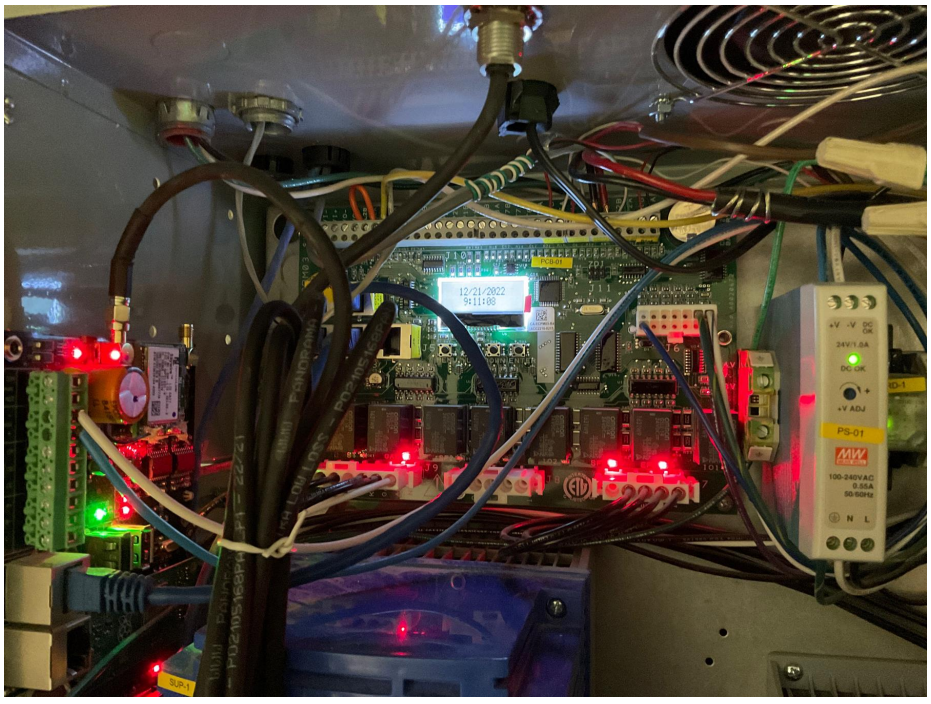
Other Notes:

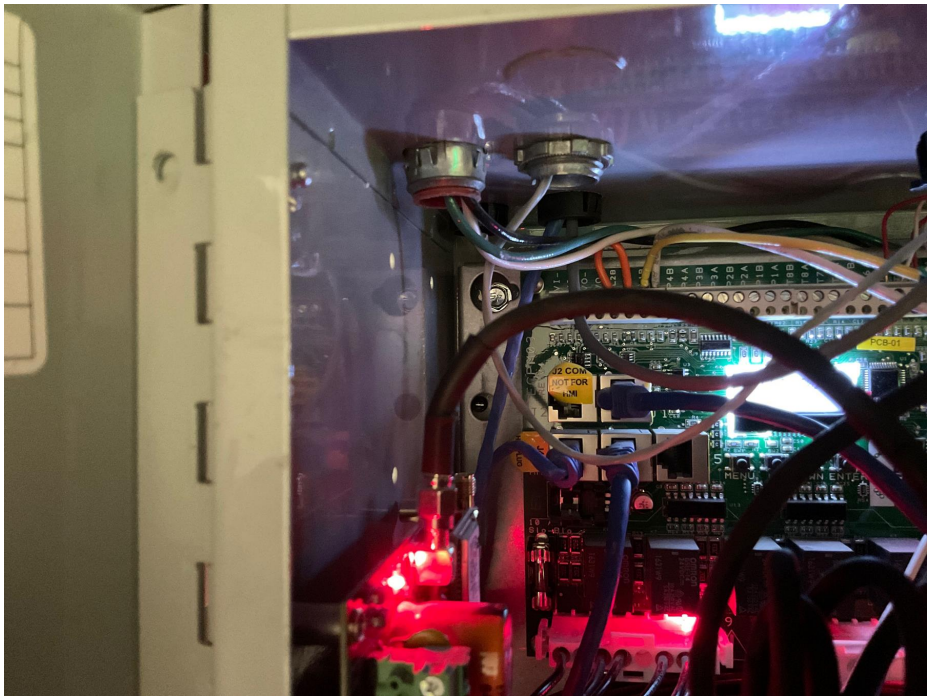
N/A

Smart Control

Other Notes:

N/A

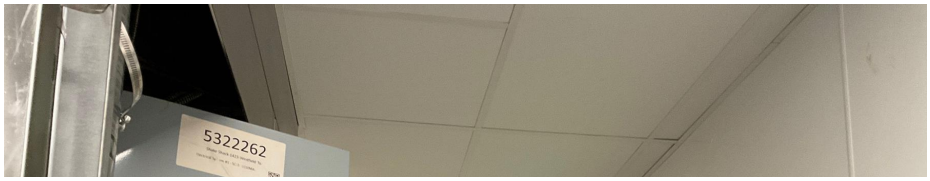


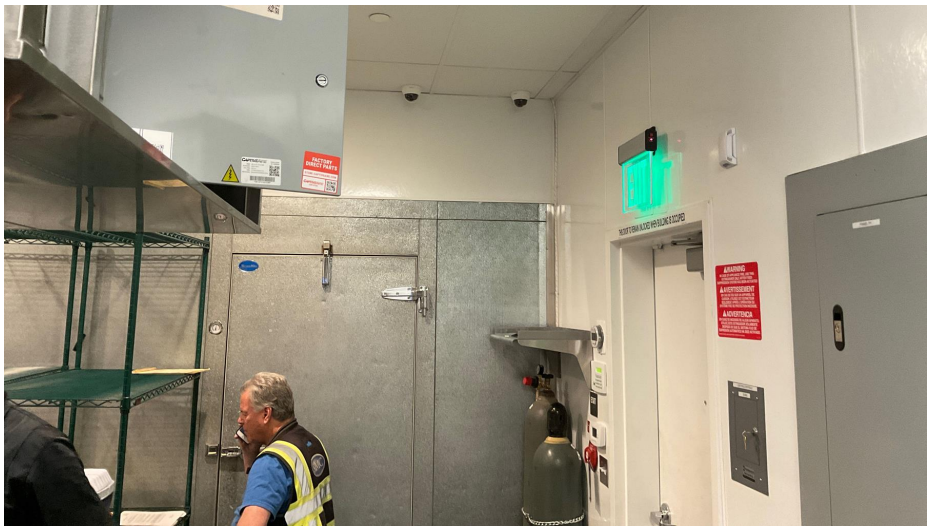


ROOM TEMPERATURE OFFSET	Design:	**15**	Actual:	**15**
HOW MANY FAN ZONES ARE THERE	Design:	**1**	Actual:	**1**
HYSTERESIS TEMPERATURE			Actual:	**2**
Room Sensor Type			Actual:	**Room Sensor**
Is room sensor wireless or wired?			Actual:	**Wired**
Is room sensor operating correctly? Upload Picture of installation			Actual:	**Yes**

Other Notes:

N/A

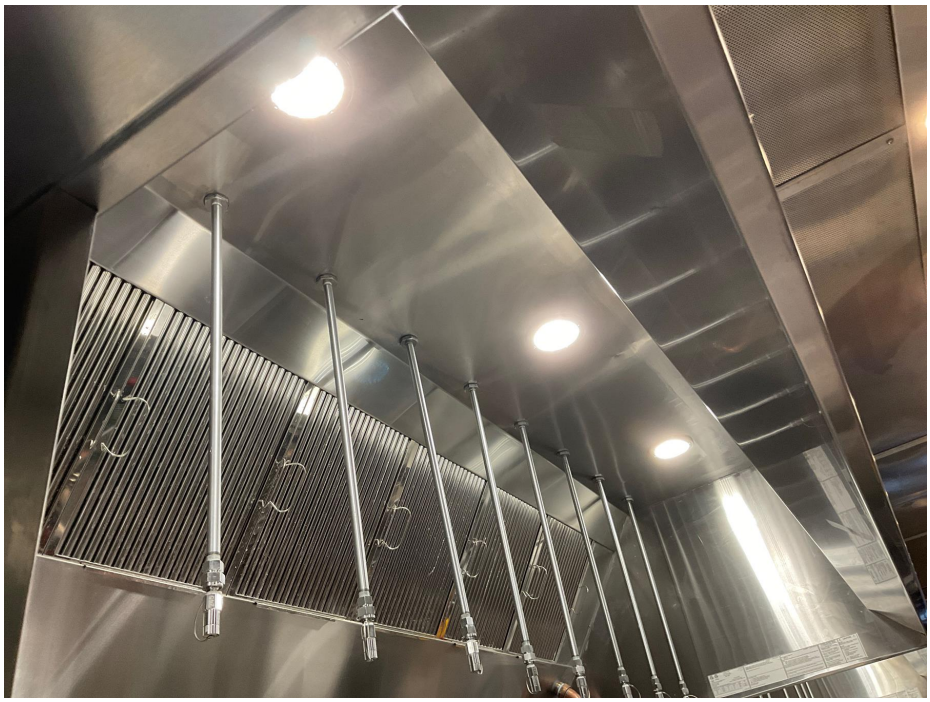


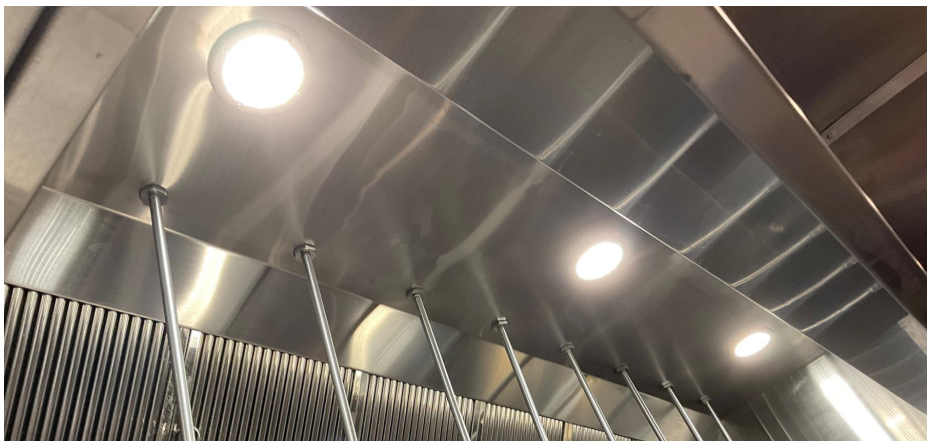


Are there Tempering HMI's?	Design:	**Yes**	Actual:	**No**
ALL TEMP SENSORS ARE WIRED IN	Design:	**Yes**	Actual:	**Yes**
Do any of the light circuits exceed 1400W?	Design:	**No**	Actual:	**No**
ALL LIGHTS WORK	Design:	**Yes**	Actual:	**Yes**

Other Notes:

N/A





ALL FAULTS CLEARED	Design:	**Yes**	Actual:	**Yes**
ECPM03 HARDWARE REVISION	Design:	**4**	Actual:	**4**
ECPM03 PROGRAM VERSION	Design:	**2.15.04**	Actual:	**2.15.04**
CASHMI HARDWARE REVISION	Design:	**3**	Actual:	**3**
CASHMI PROGRAM VERSION	Design:	**2.15.04**	Actual:	**2.15.04**
ECPM03 DATE AND TIME ACCURATE	Design:	**Yes**	Actual:	**Yes**
Smoke Test Performed on all Hoods? Upload Video	Design:	**Yes**	Actual:	**Yes**

Other Notes:

N/A

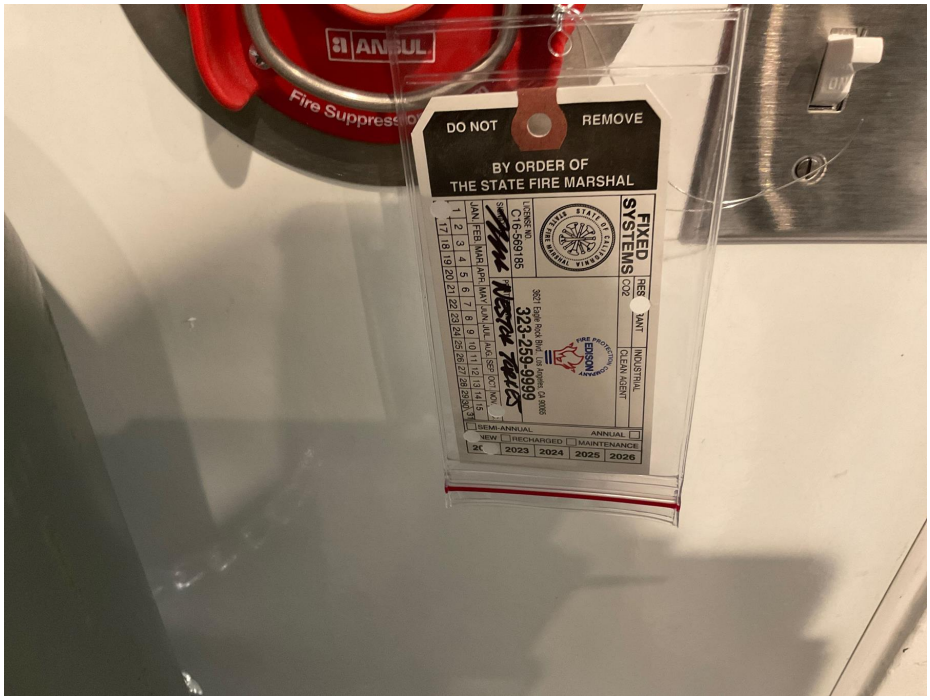
See attachment(s): [20221221100111.mp4] [20221221100327.mp4]

Ansul Cylinder Installed	Design:	**Yes**	Actual:	**Yes**

Ansul

Other Notes:

Site has already passed fire final at time of SDV.

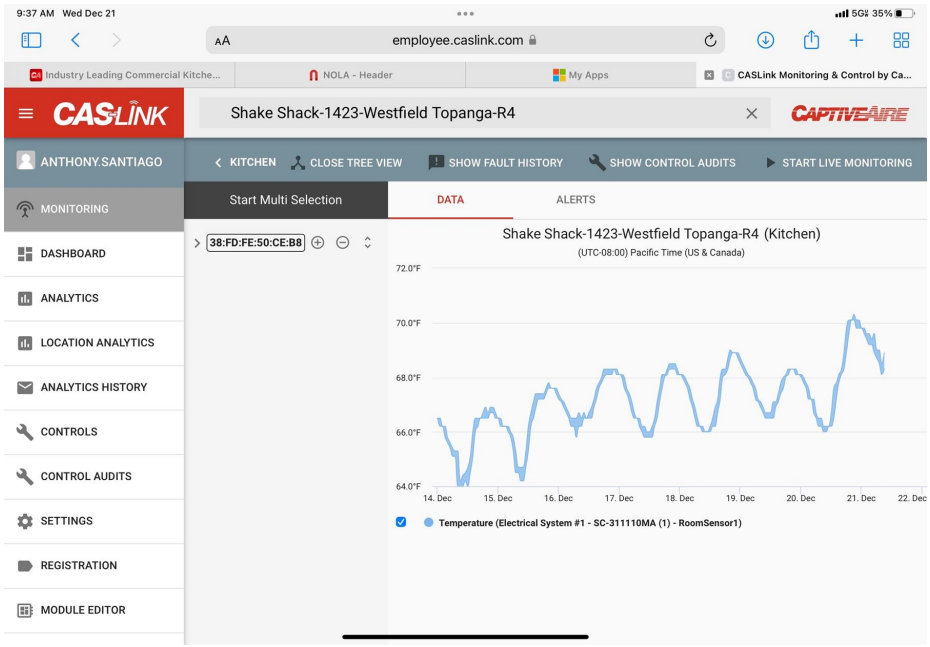


Is the Ansul micro switch connected from common and normally closed to C1 & AR1 in control panel?	Design:	**Yes**	Actual:	**Yes**
Test Micro switch. With power off, remove C1 wire from terminal. Apply power, does system go into fire mode? Check HMI display and ensure "Fire" is displayed	Design:	**Yes**	Actual:	**Yes**
(Test shunt trip) With system in Fire Mode, Take Multimeter and test between ST & N1. Do you have 120V? If No, replace ECPM03 board and retest.	Design:	**Yes**	Actual:	**Yes**
Does Exhaust Fan ramp up to full speed in fire mode?	Design:	**Yes**	Actual:	**Yes**

BMS & Monitoring

Other Notes:

N/A



BMS TYPE	Design:	**CASLink**	Actual:	**CASLink**
CASLINK COMMUNICATION TYPE	Design:	**Cellular**	Actual:	**Cellular**
Cellular status is Active Online?	Design:	**Yes**	Actual:	**Yes**
CASLink Registration Wizard was completed?	Design:	**Yes**	Actual:	**Yes**
CASLink Module has a current heartbeat?	Design:	**Yes**	Actual:	**Yes**
All devices connected to the SCADA are reporting live data?	Design:	**Yes**	Actual:	**Yes**
Devices were assigned to an area and named appropriately?	Design:	**Yes**	Actual:	**Yes**

Sensors

T2

SENSOR TYPE	Design:	**Duct Stat**	Actual:	**Duct Stat**
SENSOR LOCATION	Design:	**H1R1**	Actual:	**H1R1**
FAN NUMBER	Design:	**2**	Actual:	**2**

T3

SENSOR TYPE	Design:	**Duct Stat**	Actual:	**Duct Stat**
SENSOR LOCATION	Design:	**H2R1**	Actual:	**H2R1**
FAN NUMBER	Design:	**2**	Actual:	**2**

T4

SENSOR TYPE	Design:	**PSP**	Actual:	**PSP**
SENSOR LOCATION	Design:	**Hood 1**	Actual:	**Hood 1**
FAN NUMBER	Design:	**0**	Actual:	**0**

T5

SENSOR TYPE	Design:	**AC-PSP**	Actual:	**AC-PSP**
SENSOR LOCATION	Design:	**Hood 1**	Actual:	**Hood 1**
FAN NUMBER	Design:	**0**	Actual:	**0**

VFDs

VFD 1

DESIGN CFM	Design:	**3150**	Actual:	**3266**
FAN DIRECTION	Design:	**Forward**	Actual:	**Forward**
TEMP SENSOR #s ASSIGNED	Design:	**T2, T3**	Actual:	**T2, T3**

DCV VFD

OVERLOAD = P108	Design:	**98**	Actual:	**98**
MIN HZ	Design:	**40.8**	Actual:	**59.6**

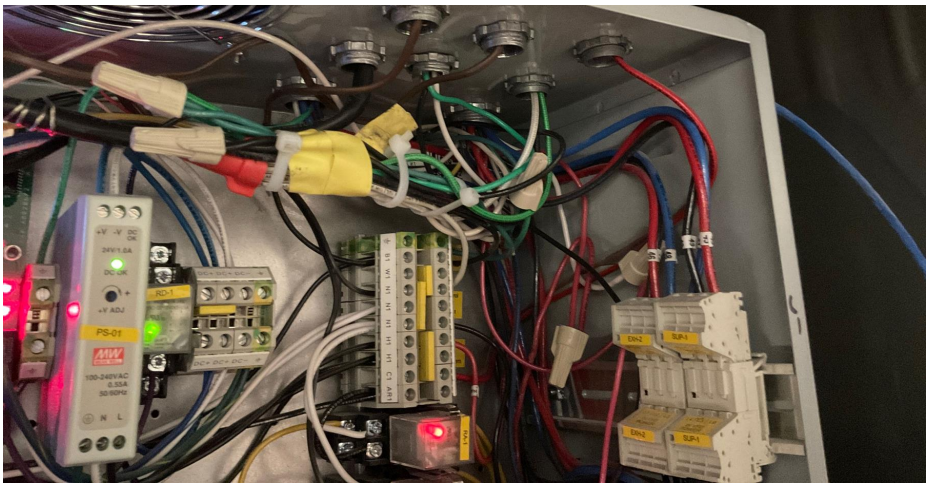
Other Notes:

SC package runs at one speed.

MAX HZ	Design:	**51**	Actual:	**59.6**
ALL FAULTS CLEARED = P197	Design:	**Yes**	Actual:	**Yes**
P508			Actual:	**7.5**
LOAD IN SEPARATE CONDUIT.	Design:	**Yes**	Actual:	**No**

Other Notes:

N/A



Installation Notes:

Punch Item: Sales Office

At time of SDV both VFDs are sharing conduit with each other and other equipment.

VFD 2

DESIGN CFM	Design:	**2520**	Actual:	**2383**
FAN DIRECTION	Design:	**Forward**	Actual:	**Forward**

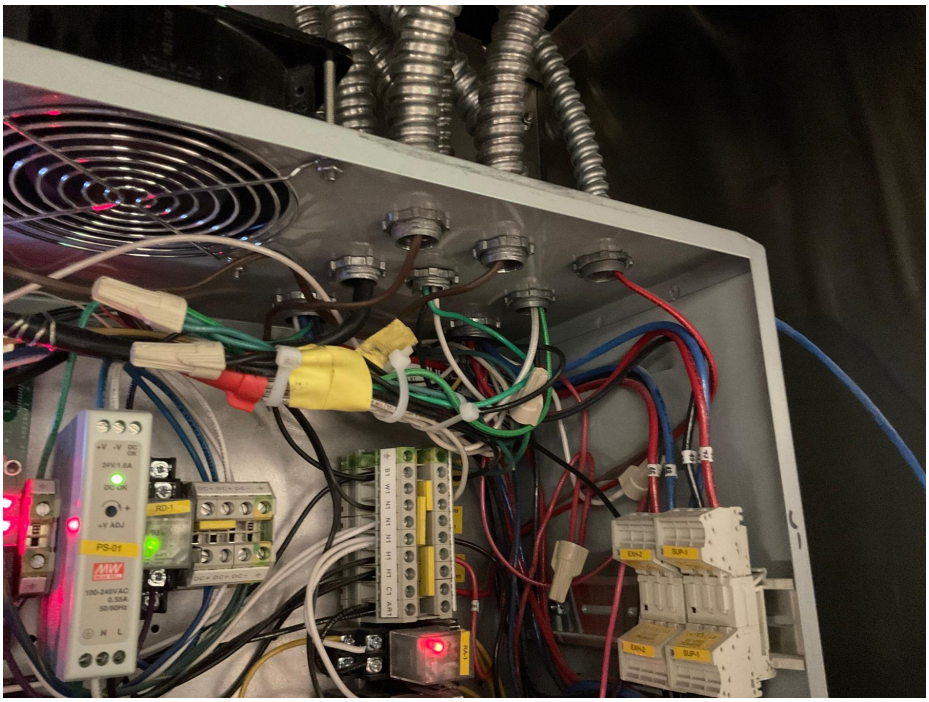
DCV VFD

SUPPLY FAN # ASSIGNED	Design:	**1**	Actual:	**1**
OVERLOAD = P108	Design:	**91**	Actual:	**91**
MAX HZ	Design:	**73**	Actual:	**73**
ALL FAULTS CLEARED = P197	Design:	**Yes**	Actual:	**Yes**
P508			Actual:	**12.8**
LOAD IN SEPARATE CONDUIT.	Design:	**Yes**	Actual:	**No**

Installation Notes:

Punch Item: Sales Office

At time of SDV VFDs are sharing conduit with each other and other equipment.



CORE

NONE