SDV Job #: 5441139 - Shake Shack-1252-Menlo Park-R1

Service Region: 326 - Morristown, NJ Service
Service Person: Chad Cleere

Customer Number: 545562
Customer Name: Region 108 - Rupp Philadelphia

Address: Shake Shack
1521b US-1
Edison, NJ 08837

Region Job #: 5185582
Region Job Name: Shake Shack-1252-Menlo Park-R1

Sales Region: 108 - Eastern PA Mechanical
Sales Person: Joe Shiiba

Created By: Chad Cleere
Creation Date: 10/24/2022 8:10 AM
Last Modified By: Nick Maestoso
Last Modified Date: 11/30/2022 10:38 PM

Dining Room Pressure: 0.0
Kitchen Pressure: 0.0
Hours On Job: 0.0
Extra Hours: 0.0

Completed: Yes
Completed By: Nick Maestoso
Completion Date: 11/30/2022 10:38 PM

Installation Notes:

11/23/22 During SDV there were originally some issue with wiring that got resolved prior to turnover except for one issue.

-120V to MAU is not wired to SF1/N1
-the gas pressure regulator seems to be off when we returned but prior to leaving it seemed to have adjusted back to normal.

11/30/22 the Electrician called to confirm what wiring needed to be fixed and we explained it to him.

UDS

NONE

Hood Group 1

Exhaust CFM:	Design = 4144	Initial = 4137	Final = 4070	(98.2% of design)
Supply CFM:	Design = 3316	Initial = 4227	Final = 3428	(103.4% of design)
Supply AC CFM:	Design = 1000	Initial = 1246	Final = 1120	(112.0% of design)

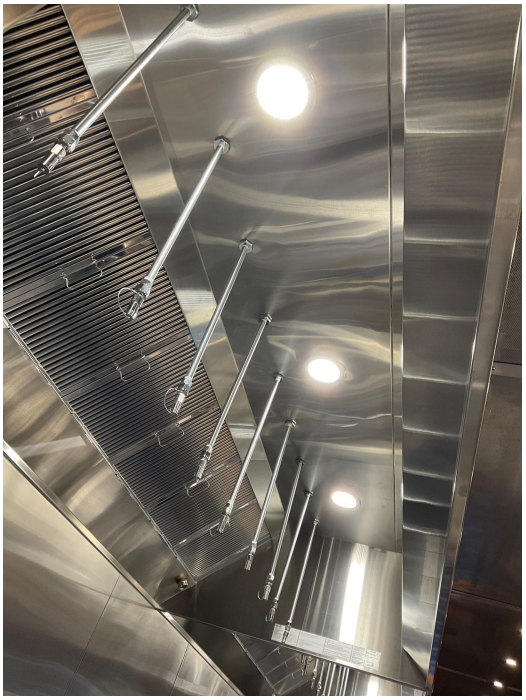
Hood 1 (Hood 1 Left) (Hood 1 Left)

Model: 5424ND-2-ACPSP-F **Length:** 9' 5.00"
Exhaust CFM: Design = 2072 Initial = 2207 Final = 2103 (101.5% of design)
Other Notes:

N/A


SELECTRONIC


SELECTRONIC



Installation

Hung Using appropriate material to safely secure hood.	Design:	**Yes**	Actual:	**Yes**
COOKING EQUIPMENT ON AND OPERATING	Design:	**Yes**	Actual:	**No**
COOKING EQUIPMENT INSTALLED AS CLOSE TO BACK WALL AS POSSIBLE	Design:	**Yes**	Actual:	**Yes**
END PANELS INSTALLED CORRECTLY	Design:	**Yes**	Actual:	**Yes**
INITIAL POSITION OF BALANCE DAMPER			Actual:	**0**
POSITION OF BALANCE DAMPER AFTER AIRFLOW			Actual:	**25**
Was a smoke test performed on Hood System?	Design:	**Yes**	Actual:	**Yes**

Filters

Type: Captrate Solo

Filter 1 Fan: #1 - USBI24DD-RM (KEF-1)	Size: 20x16	Initial Velocity: 147 fpm	Final Velocity: 138 fpm	Initial CFM: 305	Final CFM: 286
Filter 2 Fan: #1 - USBI24DD-RM (KEF-1)	Size: 20x16	Initial Velocity: 147 fpm	Final Velocity: 146 fpm	Initial CFM: 305	Final CFM: 303
Filter 3 Fan: #1 - USBI24DD-RM (KEF-1)	Size: 20x16	Initial Velocity: 162 fpm	Final Velocity: 154 fpm	Initial CFM: 336	Final CFM: 320
Filter 4 Fan: #1 - USBI24DD-RM (KEF-1)	Size: 20x16	Initial Velocity: 165 fpm	Final Velocity: 164 fpm	Initial CFM: 343	Final CFM: 340
Filter 5 Fan: #1 - USBI24DD-RM (KEF-1)	Size: 20x16	Initial Velocity: 173 fpm	Final Velocity: 153 fpm	Initial CFM: 359	Final CFM: 318
Filter 6 Fan: #1 - USBI24DD-RM (KEF-1)	Size: 20x16	Initial Velocity: 142 fpm	Final Velocity: 133 fpm	Initial CFM: 295	Final CFM: 276
Filter 7 Fan: #1 - USBI24DD-RM (KEF-1)	Size: 20x16	Initial Velocity: 127 fpm	Final Velocity: 125 fpm	Initial CFM: 264	Final CFM: 260

Supply

Supply CFM: Fan: #2 - A2-D.250-20D (MAU-1)	Design = 1528	Initial = 2051	Actual = 1647	(107.8% of design)
AC CFM:	Design = 500	Initial = 638	Actual = 594	(118.8% of design)

PSP 1

Orientation:	Front	**Length:**	11' 1.00"	**Width:**	14.00"	**Banks:**	1
Blanks:	1						

CFM:	Design = 1528	Initial = 2051	Final = 1647	(107.8% of design)
Velocity:	Design = 135	Initial = 181	Final = 145	(107.4% of design)
AC CFM:	Design = 500	Initial = 638	Final = 594	(118.8% of design)
AC Velocity:	Design = 112	Initial = 143	Final = 133	(118.8% of design)

Readings:

1: Initial: 216 fpm, Final: 170 fpm	2: Initial: 141 fpm, Final: 112 fpm	3: Initial: 167 fpm, Final: 135 fpm
4: Initial: 114 fpm, Final: 105 fpm	5: Initial: 168 fpm, Final: 112 fpm	6: Initial: 205 fpm, Final: 170 fpm
7: Initial: 158 fpm, Final: 157 fpm	8: Initial: 165 fpm, Final: 124 fpm	9: Initial: 162 fpm, Final: 177 fpm
10: Initial: 224 fpm, Final: 167 fpm	11: Initial: 230 fpm, Final: 133 fpm	12: Initial: 230 fpm, Final: 189 fpm

AC Readings:

1: Initial: 132 fpm, Final: 123 fpm	2: Initial: 102 fpm, Final: 124 fpm	3: Initial: 134 fpm, Final: 142 fpm
4: Initial: 107 fpm, Final: 135 fpm	5: Initial: 104 fpm, Final: 95 fpm	6: Initial: 146 fpm, Final: 117 fpm
7: Initial: 187 fpm, Final: 155 fpm	8: Initial: 104 fpm, Final: 84 fpm	9: Initial: 136 fpm, Final: 138 fpm
10: Initial: 192 fpm, Final: 156 fpm	11: Initial: 182 fpm, Final: 164 fpm	12: Initial: 189 fpm, Final: 164 fpm

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

Model:	5424ND-2-ACPSP-F	**Length:**	9' 5.00"

Exhaust CFM:	Design = 2072	Initial = 1930	Final = 1967	(94.9% of design)

Other Notes:

N/A

Installation

Hung Using appropriate material to safely secure hood.	Design:	**Yes**	Actual:	**Yes**
COOKING EQUIPMENT ON AND OPERATING	Design:	**Yes**	Actual:	**No**
COOKING EQUIPMENT INSTALLED AS CLOSE TO BACK WALL AS POSSIBLE	Design:	**Yes**	Actual:	**Yes**
END PANELS INSTALLED CORRECTLY	Design:	**Yes**	Actual:	**Yes**
INITIAL POSITION OF BALANCE DAMPER			Actual:	**0**
POSITION OF BALANCE DAMPER AFTER AIRFLOW			Actual:	**0**
Was a smoke test performed on Hood System?	Design:	**Yes**	Actual:	**Yes**

Filters

Type: Captrate Solo

Filter 1 Size: 20x16 Initial Velocity: 132 fpm Final Velocity: 136 fpm Initial CFM: 274 Final CFM: 282
Fan: #1 - USBI24DD-RM (KEF-1)

Filter 2 Size: 20x16 Initial Velocity: 134 fpm Final Velocity: 138 fpm Initial CFM: 278 Final CFM: 286
Fan: #1 - USBI24DD-RM (KEF-1)

Filter 3 Size: 20x16 Initial Velocity: 145 fpm Final Velocity: 146 fpm Initial CFM: 301 Final CFM: 303
Fan: #1 - USBI24DD-RM (KEF-1)

Filter 4 Size: 20x16 Initial Velocity: 138 fpm Final Velocity: 146 fpm Initial CFM: 286 Final CFM: 303
Fan: #1 - USBI24DD-RM (KEF-1)

Filter 5 Size: 20x16 Initial Velocity: 141 fpm Final Velocity: 143 fpm Initial CFM: 293 Final CFM: 297
Fan: #1 - USBI24DD-RM (KEF-1)

Filter 6 Size: 20x16 Initial Velocity: 124 fpm Final Velocity: 132 fpm Initial CFM: 257 Final CFM: 274
Fan: #1 - USBI24DD-RM (KEF-1)

Filter 7 Size: 20x16 Initial Velocity: 116 fpm Final Velocity: 107 fpm Initial CFM: 241 Final CFM: 222
Fan: #1 - USBI24DD-RM (KEF-1)

Supply

Supply CFM: Design = 1788 Initial = 2176 Actual = 1781 (99.6% of design)
Fan: #2 - A2-D.250-20D (MAU-1)
AC CFM: Design = 500 Initial = 608 Actual = 526 (105.2% of design)

PSP 1

Orientation: Front **Length:** 9' 5.00" **Width:** 14.00" **Banks:** 1
Blanks: 1

CFM:	Design = 1788	Initial = 2176	Final = 1781	(99.6% of design)
Velocity:	Design = 187	Initial = 228	Final = 186	(99.5% of design)
AC CFM:	Design = 500	Initial = 608	Final = 526	(105.2% of design)
AC Velocity:	Design = 133	Initial = 161	Final = 139	(104.5% of design)

Readings:

1: Initial: 270 fpm, Final: 226 fpm	2: Initial: 220 fpm, Final: 191 fpm	3: Initial: 220 fpm, Final: 185 fpm
4: Initial: 233 fpm, Final: 182 fpm	5: Initial: 208 fpm, Final: 167 fpm	6: Initial: 230 fpm, Final: 186 fpm
7: Initial: 252 fpm, Final: 199 fpm	8: Initial: 223 fpm, Final: 195 fpm	9: Initial: 193 fpm, Final: 165 fpm
10: Initial: 232 fpm, Final: 171 fpm		

AC Readings:

1: Initial: 160 fpm, Final: 142 fpm	2: Initial: 148 fpm, Final: 144 fpm	3: Initial: 184 fpm, Final: 151 fpm
4: Initial: 158 fpm, Final: 133 fpm	5: Initial: 165 fpm, Final: 137 fpm	6: Initial: 171 fpm, Final: 153 fpm
7: Initial: 158 fpm, Final: 131 fpm	8: Initial: 147 fpm, Final: 126 fpm	9: Initial: 159 fpm, Final: 131 fpm
10: Initial: 164 fpm, Final: 147 fpm		

AQEs

NONE

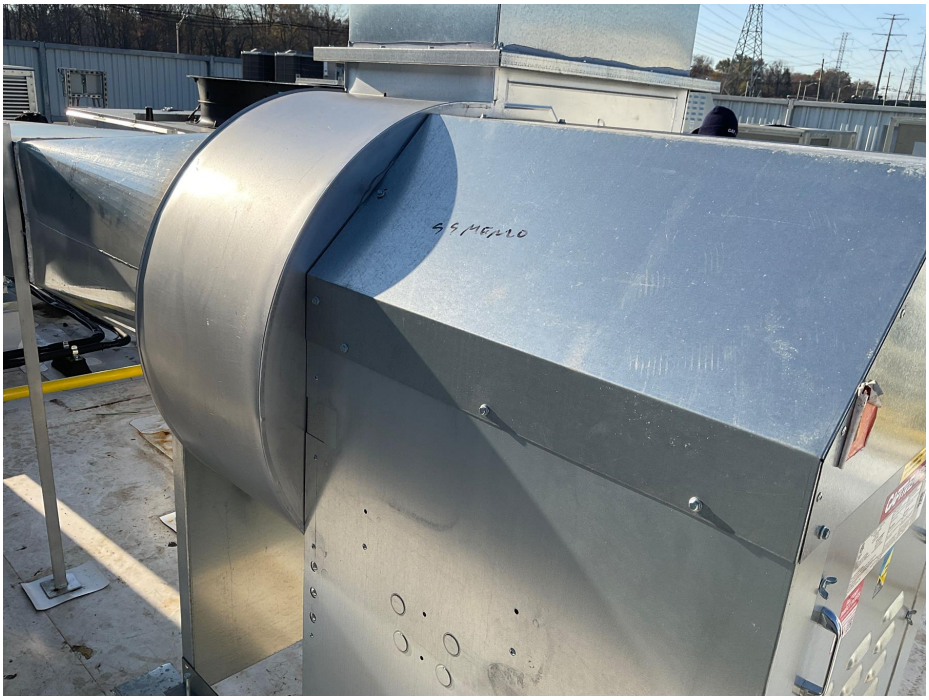
Fans

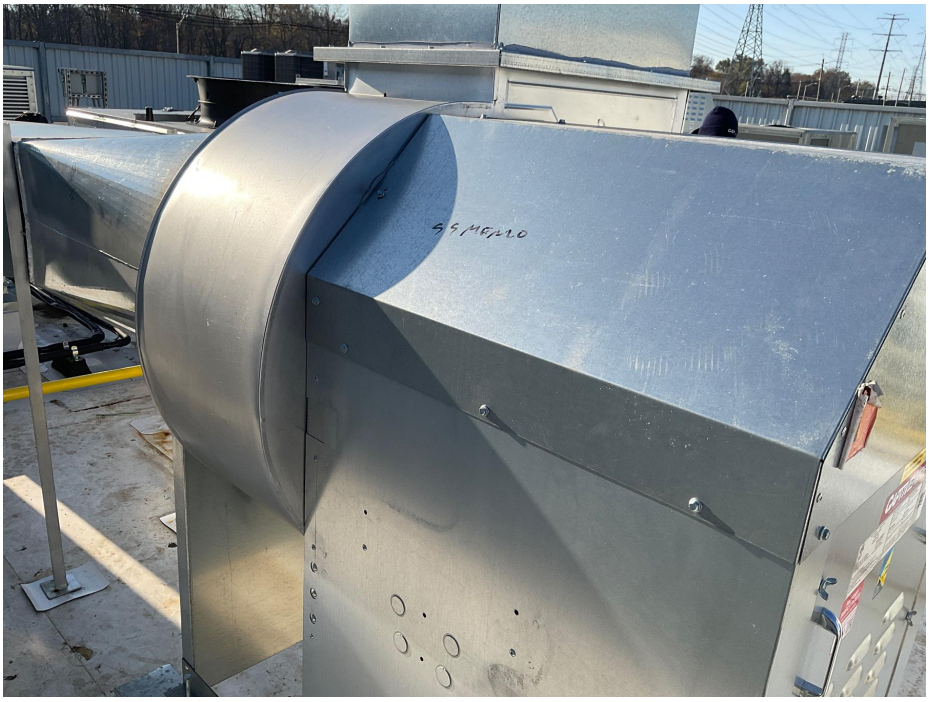
Fan 1 - USBI24DD-RM (KEF-1) (KEF-1)

Model: USBI24DD-RM
Other Notes:

N/A


MOTOR COVER
FOR LIFTING
POINTS
are packaged
under the
motor cover
CAPTIVEAIRE





Exhaust

Exhaust CFM: Design = 4144 Actual = 4070 (98.2% of design)

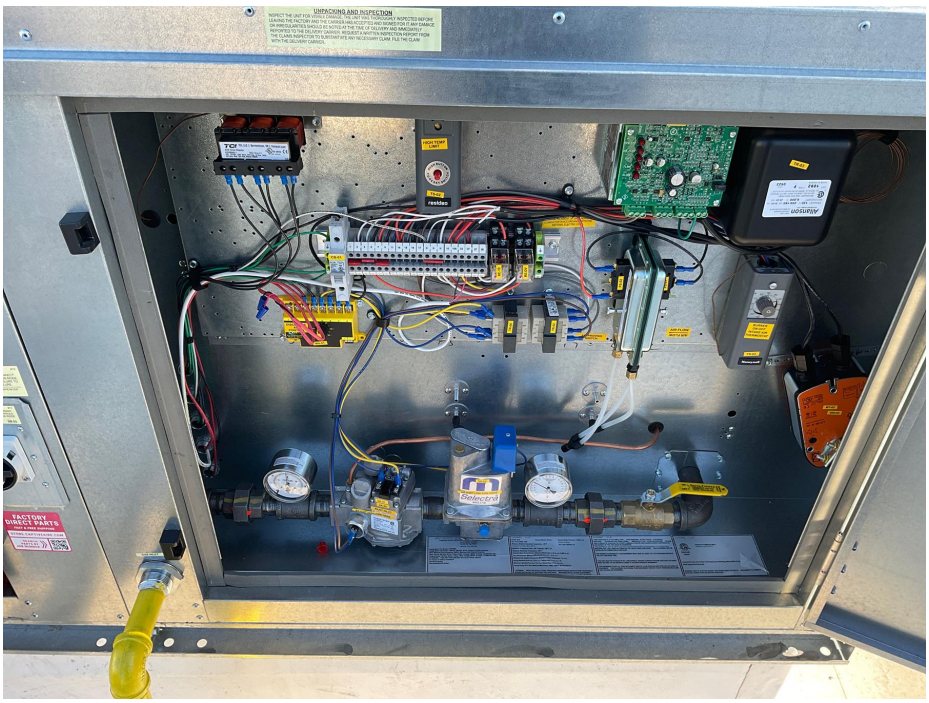
Record the VFD HZ			Actual:	**40.9**
VOLTS	Design:	**460**	Actual:	**463**
HP	Design:	**3**	Actual:	**3**
HUB SET SCREW TIGHT	Design:	**Yes**	Actual:	**Yes**
FAN LEVEL	Design:	**Yes**	Actual:	**Yes**
ROTATION	Design:	**Correct**	Actual:	**Correct**
FAN VIBRATION	Design:	**Good**	Actual:	**Good**
RPM - DESIGN	Design:	**952**	Actual:	**783**
RPM - MAX	Design:	**1500**	Actual:	**N/A**
RPM - MAX RECOMMENDED	Design:	**1250**	Actual:	**N/A**
FLA	Design:	**4.6**	Actual:	**3.5**
OVERLOAD SET POINT	Design:	**4.6**	Actual:	**4.6**
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:	**Yes**

Fan 2 - A2-D.250-20D (MAU-1) (MAU-1)

Model: A2-D.250-20D

Other Notes:

N/A



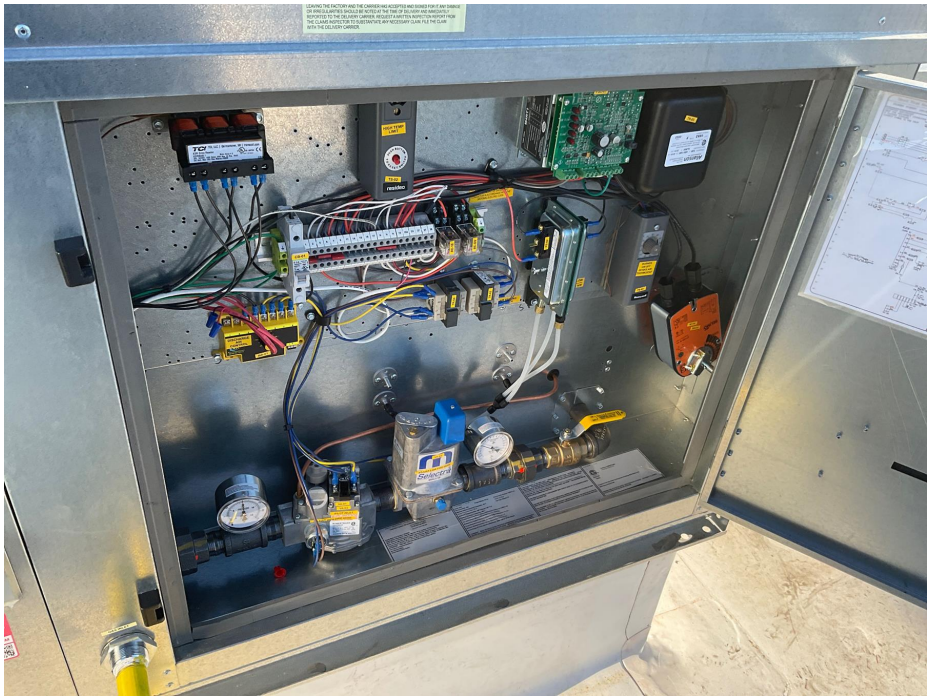
Supply

Supply CFM: Design = 3316 Actual = 3428 (103.4% of design)

VOLTS	Design:	**460**	Actual:	**460**
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:	**1468**	Actual:	**1175**
RPM - MAX	Design:	**2400**	Actual:	**N/A**
RPM - MAX RECOMMENDED	Design:	**2000**	Actual:	**N/A**
FLA	Design:	**4.3**	Actual:	**4.3**
OVERLOAD SET POINT	Design:	**4.3**	Actual:	**4.3**
PHASE	Design:	**3**	Actual:	**3**
DAMPER INSTALLED	Design:	**Yes**	Actual:	**Yes**

Other Notes:

N/A



FAN WITHIN 5 MILES OF COAST			Actual:	**No**
INSPECT ALL EXTERIOR SIDES OF UNIT. ANY VISIBLE DAMAGE			Actual:	**No**
Record the VFD HZ			Actual:	**40.2**
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:	**17**
FREEZE STAT TEMPERATURE	Design:	**35**	Actual:	**35**
FREEZE STAT TIMER	Design:	**10**	Actual:	**10**
SPACE SET POINT	Design:	**N/A**	Actual:	**0**

Other Notes:

No space set point needed

INTAKE SET POINT	Design:	**45**	Actual:	**55**
DISCHARGE SET POINT	Design:	**55**	Actual:	**65**
HIGH LIMIT SET POINT			Actual:	**170**

Direct Fired Heater

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

PILOT FLAME SIGNAL	Design:	**12**	Actual:	**14**
TEMP RISE			Actual:	**70**
HIGH FIRE MANIFOLD GAS PRESSURE	Design:	**2.8**	Actual:	**3**
HIGH FIRE INLET PRESSURE			Actual:	**10**
HIGH FIRE FLAME SIGNAL	Design:	**12**	Actual:	**15.6**
BURNER DIFFERENTIAL PRESSURE	Design:	**0.3**	Actual:	**0.39**
LOW MANIFOLD GAS PRESSURE			Actual:	**0**
MODULATION TIME	Design:	**4**	Actual:	**1**
LOW FIRE FLAME SIGNAL	Design:	**12**	Actual:	**15.6**

ECPs

ECP 1 - SC-311110MA

Package #: SC-311110MA

Smart Control

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**
ALL FAULTS CLEARED	Design:	**Yes**	Actual:	**Yes**
ECPM03 HARDWARE REVISION	Design:	**04**	Actual:	**04**
ECPM03 PROGRAM VERSION	Design:	**2.15.04**	Actual:	**2.15.04**
CASHMI HARDWARE REVISION	Design:	**03**	Actual:	**03**
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): [20221116092637.mp4] [20221116092645.mp4] [20221116092650.mp4]

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

Ansul

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

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:	**1**	Actual:	**1**

T3

SENSOR TYPE	Design:	**Duct Stat**	Actual:	**Duct Stat**
SENSOR LOCATION	Design:	**H2R1**	Actual:	**H2R1**
FAN NUMBER	Design:	**1**	Actual:	**1**

T4

SENSOR TYPE	Design:	**AC-PSP**	Actual:	**AC-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 2**	Actual:	**Hood 2**
FAN NUMBER	Design:	**0**	Actual:	**0**

VFDs

VFD 1

DESIGN CFM	Design:	**4144**	Actual:	**4070**
FAN DIRECTION	Design:	**Forward**	Actual:	**Forward**
TEMP SENSOR #s ASSIGNED	Design:	**T2, T3**	Actual:	**T2,T3**

DCV VFD

OVERLOAD = P108	Design:	**95**	Actual:	**95**
MIN HZ	Design:	**39.8**	Actual:	**46.96**
MAX HZ	Design:	**49.7**	Actual:	**58.7**
ALL FAULTS CLEARED = P197	Design:	**Yes**	Actual:	**Yes**
P508			Actual:	**3.5**
LOAD IN SEPARATE CONDUIT.	Design:	**Yes**	Actual:	**Yes**

VFD 2

DESIGN CFM	Design:	**3316**	Actual:	**3288**
FAN DIRECTION	Design:	**Forward**	Actual:	**Reverse**

DCV VFD

SUPPLY FAN # ASSIGNED	Design:	**2**	Actual:	**2**
OVERLOAD = P108	Design:	**89**	Actual:	**89**
MAX HZ	Design:	**50.2**	Actual:	**40.2**
ALL FAULTS CLEARED = P197	Design:	**Yes**	Actual:	**Yes**
P508			Actual:	**N/A**
LOAD IN SEPARATE CONDUIT.	Design:	**Yes**	Actual:	**Yes**

CORE

NONE