

Report By:

National TAB
1329 E. KEMPER ROAD
SUITE 4210
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Report: TAB REPORT
Function: Test, Adjust, & Balance
Date: 03/03/2026
Completed By: National TAB

PROJECT
02-16-26 PENN STATION - UNION, KY

US HWY 42

UNION, KY 41091

Client

C&T DESIGN
4025 PORT UNION RD.
FAIRFIELD, OH 45014

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Project: 02-16-26 PENN STATION - UNION, KY

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Project: 02-16-26 PENN STATION - UNION, KY
Function: Test, Adjust, & Balance

Project Summary

Project Summary

The summary below provides a quick understanding of our scope of work and general testing procedures. Enclosed in the report is further detail about your building performance including recommendations, asset data, and pictures. Our focus is to work with the trades to remedy any issues or deficiencies during the actual field balancing and not after the balancing has occurred to achieve a positive environment and outcome. The level of success is determined by the availability of the trades, possible parts needed, or time constraints.

RTU's (Roof Top Units) w/ Diffusers

Each of the RTU's were measured at their terminal devices or via traverse to establish a total flow for that unit. Each RTU was adjusted to within tolerance of the engineer's design flow. Each outlet was then adjusted to within tolerance of the design flow. Outside air was measured by reading the intake air opening with a velocity grid and multiplying by the free area. The outside air damper was adjusted until the airflow was within the design requirements. Any equipment that fell outside of that tolerance is noted throughout the report.

Kitchen Exhaust Hood & Associated Fans

Each kitchen exhaust fan was measured at the hood filter bay utilizing a velocity matrix and a manufacturer's correction factor. Each filter velocity is multiplied by the manufacturer's corrected area. The sum of these readings equals the total flow of the exhaust fans. The total flow of the exhaust was then adjusted to within tolerance of the design flow. . Any EF's that fell outside of this tolerance is noted throughout the report.

MUA (Make Up Air Unit) w/ PSP

Total flow for the MAU (Make-up Air Unit) unit was measured by readings taken at the discharge of the hood's perforated supply plenum. Readings taken with a velocity matrix were averaged and multiplied by a manufacturer's corrected area. Adjustments to the fan speed were made in order to bring the unit to within design tolerance. Any MUA's that fell outside of this tolerance is noted throughout the report.

General Exhaust Fans w/ Grilles

The general exhaust fans were measured by reading each air device with a flow hood. The total airflow for each fan is equivalent to the sum of these readings. Fan speed was then adjusted so that the airflow was within tolerance of design. Each terminal device was balanced to within tolerance of the design volume using the installed volume dampers. Any equipment that fell outside of this tolerance is noted throughout the report.

Final Building Tests

After completing the test and balance the final building pressure was measured. It was confirmed that the building pressure fell within acceptable tolerances of -0.02" wc to +0.02" wc and that the pressure measurement coincides with the actual and design net airflow. Any deviations from these standards are noted throughout the report. The hood capture was tested at the perimeter of the hood and the cook top level with the equipment heat on to ensure satisfactory hood capture and containment.

AIR BALANCE SCHEDULE

UNIT	AREA SERVED	HVAC SUPPLY		HVAC RETURN		HVAC OUTDOOR		OA %		HOOD MAKE-UP		HOOD EXHAUST		GENERAL EXH.	
		DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL
RTU-1	KITCHEN/DININ	7875	7611	6930	6704	945	907	12.0%	11.9%						
MUA-1	HOODS									1320	1383				
KEF-1	GRILL											1150	1082		
KEF-2	FRYER											850	786		
EF-1	RESTROOMS													150	137
TOTALS		7875	7611	6930	6704	945	907			1320	1383	2000	1868	150	137

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	2265	2290
TOTAL EXHAUST	2150	2005
NET AIRFLOW	115	285

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H2O)
FRONT	0.009
SIDE	N/A
REAR	N/A
AVERAGE	0.009

FINAL CHECKS

- ACTUAL NET AIRFLOW COINCIDES WITH DESIGN: ✓

- MEASURED PRESSURES COINCIDES WITH ACTUAL NET AIRFLOW: ✓

- PRESSURE FALLS WITHIN IMC TOLERANCE OF +/-0.02" W.C. ✓

NOTES:

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Project: 02-16-26 PENN STATION - UNION, KY

System/Unit: AHU/RTU



Asset: RTU-1

AREA: KITCHEN/DINING

Unit Data		
	Design	Actual
MFG	CARRIER	CARRIER
Serial Num	-	1325P03771
Model Num	48FEEM16A2A5	48FEEM16A2A5
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	8
OA Filter Size 1	-	2-24"x26"X1", 6-18"X24"X2"

Motor Data		
	Design	Actual
Motor MFG	-	TECO WESTINGHOUSE
Frame	-	184T
Horsepower	-	5
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	13.6

Test Data		
	Design	Actual
SF CFM	7875	7611
SF RPM	-	INACCESSIBLE
RA CFM	6930	6704
OA CFM	945	907
RL Voltage	-	211/213/214
RL Amperage	-	8.9/8.8/8.9
SF Rotation	-	CLOCKWISE
SF System SetPt	-	9.7 VDC
Min OA Damper Position	-	10%

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.85"
Fan Suction SP	-	-1.48"
Fan Discharge SP	-	0.35"
Total ESP	-	1.2"
Fan Total SP	-	1.83"

General	
	Actual
Fan Rotation Correct	Yes
Unit Filters Clean	YES
Condensate Drain Installed	YES

Completed By: MATT WADE on 02/23/2026

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Project:02-16-26 PENN STATION - UNION, KY

AHU/RTU



Diffuser Supply (GRD)

RTU-1/KITCHEN/DINING

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	ELECTRICAL PANEL		8"	200	1	170	184	184	92.0
SGRD2	HALL		8"	200	1	196	207	207	103.5
SGRD3	HALL		8"	250	1	174	226	226	90.4
SGRD4	HOOD 2	ACPSP	36X14	325	0.78	477	342	342	105.2
SGRD5	KITCHEN		8"	150	1	144	148	148	98.7
SGRD6	HOOD 1	ACPSP	72X14	550	0.78	604	585	585	106.4
SGRD7	KITCHEN		10"	200	0.55	115	206	206	103.0
SGRD8	KITCHEN		10"	200	0.55	131	211	211	105.5
SGRD9	KITCHEN		10"	200	0.55	125	201	201	100.5
SGRD10	RR HALL		12"	500	1	450	499	499	99.8
SGRD11	RR HALL		12"	500	1	567	506	506	101.2
SGRD12	MEN'S RR		6"	50	1	128	55	55	110.0
SGRD13	WOMEN'S RR		6"	50	1	134	54	54	108.0
SGRD14	DINING		12"	600	1	457	561	561	93.5
SGRD15	DINING		12"	600	1	530	590	590	98.3
SGRD16	DINING		12"	600	1	368	542	542	90.3
SGRD17	DINING		12"	650	1	422	602	602	92.6
SGRD18	DINING		12"	650	1	457	610	610	93.8
SGRD19	DINING		12"	700	1	526	638	638	91.1
SGRD20	DINING		12"	700	1	471	644	644	92.0
Total				7875		6646	7611	7611	96.65%

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Project: 02-16-26 PENN STATION - UNION, KY

System/Unit: FAN - Exhaust



Asset: EF-1

AREA:RESTROOM

Unit Data	
	Actual
MFG	NA
Model Num	NA

Test Data		
	Design	Actual
CFM	75	68
RL Voltage	-	INACCESSIBLE
RL Amperage	-	INACCESSIBLE

Motor Data		
	Design	Actual
Motor MFG	-	BROAD-OCEAN
Horsepower	-	1/16
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	0.45

Completed By: MATT WADE on 02/23/2026

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Project: 02-16-26 PENN STATION - UNION, KY

System/Unit: FAN - Exhaust



Asset: EF-2

AREA:

Unit Data	
	Actual
MFG	NA
Model Num	NA

Motor Data		
	Design	Actual
Motor MFG	-	BROAD-OCEAN
Horsepower	-	1/16
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	0.45

Test Data		
	Design	Actual
CFM	75	69
RL Voltage	-	INACCESSIBLE
RL Amperage	-	INACCESSIBLE

Completed By: Austin McFall on 03/03/2026

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Project: 02-16-26 PENN STATION - UNION, KY

System/Unit: FAN - Exhaust



Asset: KEF-1

AREA:GRILL

Unit Data		
	Design	Actual
MFG	ECON-AIR	ECON-AIR
Model Num	EADU85H	EADU85H
Serial Num	-	JOB # 8225907
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	TELCO GREEN
Horsepower	0.75	3/4
Motor Rpm	-	1800
Phase	1	N/A
Voltage (rated)	115	115
Amperage (rated)	-	7.6

Test Data		
	Design	Actual
CFM	1150	1082
Fan RPM	-	INACCESSIBLE
Fan Rotation	-	COUNTERCLOCKWISE
Motor RPM	-	INACCESSIBLE
System SetPt	-	50% ECM
RL Voltage	-	INACCESSIBLE
RL Amperage	-	INACCESSIBLE
Total ESP	1.25"	-0.39"
Fan Inlet SP	-	-0.39"
Fan Discharge SP	-	ATMOSPHERE

Completed By: MATT WADE on 02/23/2026

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Project: 02-16-26 PENN STATION - UNION, KY

System/Unit: FAN - Exhaust



Asset: KEF-2

AREA:FRYER

Unit Data		
	Design	Actual
MFG	ECON-AIR	ECON-AIR
Model Num	EADU85H	EADU85H
Serial Num	-	JOB # 8225907
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	TELCO GREEN
Horsepower	0.75	3/4
Motor Rpm	-	1800
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	7.6

Test Data		
	Design	Actual
CFM	850	786
Fan RPM	-	INACCESSIBLE
Fan Rotation	-	COUNTERCLOCKWISE
Motor RPM	-	INACCESSIBLE
System SetPt	-	50% ECM
RL Voltage	-	INACCESSIBLE
RL Amperage	-	INACCESSIBLE
Total ESP	1.25"	-0.51"
Fan Inlet SP	-	-0.51"
Fan Discharge SP	-	ATMOSPHERE

Completed By: MATT WADE on 02/23/2026

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Project: 02-16-26 PENN STATION - UNION, KY

System/Unit: FAN - Supply



Asset: MAU-1

AREA: KITCHEN HD 1 & 2

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	EA1-D.250-15D	EA1-D.250-15D
Serial Num	-	JOB # 8225907
Type	MAU	MAU
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	TECO WESTINGHOUSE
Frame	-	143T
Horsepower	1.00	1.00
Motor Rpm	-	1740
Phase	3	3
Voltage (rated)	230	230
Amperage (rated)	-	2.90
Service Factor	-	1.15

Gas Heat		
	Design	Actual
Heater Operates (y/n)	-	Y
Flame Status (pass/fail)	-	PASS
Inlet Air Temp SetPt	55	55
Discharge Air Temp SetPt	60	60

Test Data		
	Design	Actual
CFM	1320	1383
SF RPM	-	INACCESSIBLE
Motor RPM	-	INACCESSIBLE
SF System SetPt	-	47.8 HZ
RL Voltage	-	213/214/214
RL Amperage	-	2.1/2.2/2.1
Total ESP	-	0.43"
Fan Discharge SP	-	0.43"

General	
	Actual
Fan Rotation Correct	YES

Completed By: MATT WADE on 02/23/2026

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Project: 02-16-26 PENN STATION - UNION, KY

System/Unit: Kitchen Hood Type I



Asset: HD-1

AREA:GRILL

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	3650 ELPX-2	3650 ELPX-2
Job / Serial Num	-	JOB # 8225907
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	72"	72"
Hood Width	36"	36"
Supply Plenum Type	-	ACPSP
Supply Plenum Width	14"	14"
Supply Plenum Length	72"	72"

Test Data Exhaust		
	Design	Actual
Filter Type	CAPTRATE SOLO FILTER	CAPTRATE SOLO FILTER
Filter Size 1	16X16	16"X16"
Filter Qty 1	4	4
Filter AK factor size 1	1.62	1.62
Filter Total AK Area	6.48	6.48
Filter1 FPM	-	154
Filter2 FPM	-	175
Filter3 FPM	-	181
Filter4 FPM	-	160
Filter Ave FPM(corr)	-	167
CFM	1150	1082

Cooking Equipment	
	Actual
Item 1	GRILL

Test Data Supply		
	Design	Actual
Total Area	7	6
Kv factor (Vel)	0.89	0.89
Num of Readings	-	6
Reading1 FPM	-	195
Reading2 FPM	-	146
Reading3 FPM	-	163
Reading4 FPM	-	136
Reading5 FPM	-	146
Reading6 FPM	-	146
Ave FPM(corr)	-	155
CFM	775	828

Completed By: MATT WADE on 02/23/2026

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Project: 02-16-26 PENN STATION - UNION, KY

System/Unit: Kitchen Hood Type I



Asset: HD-2

AREA:FRYER

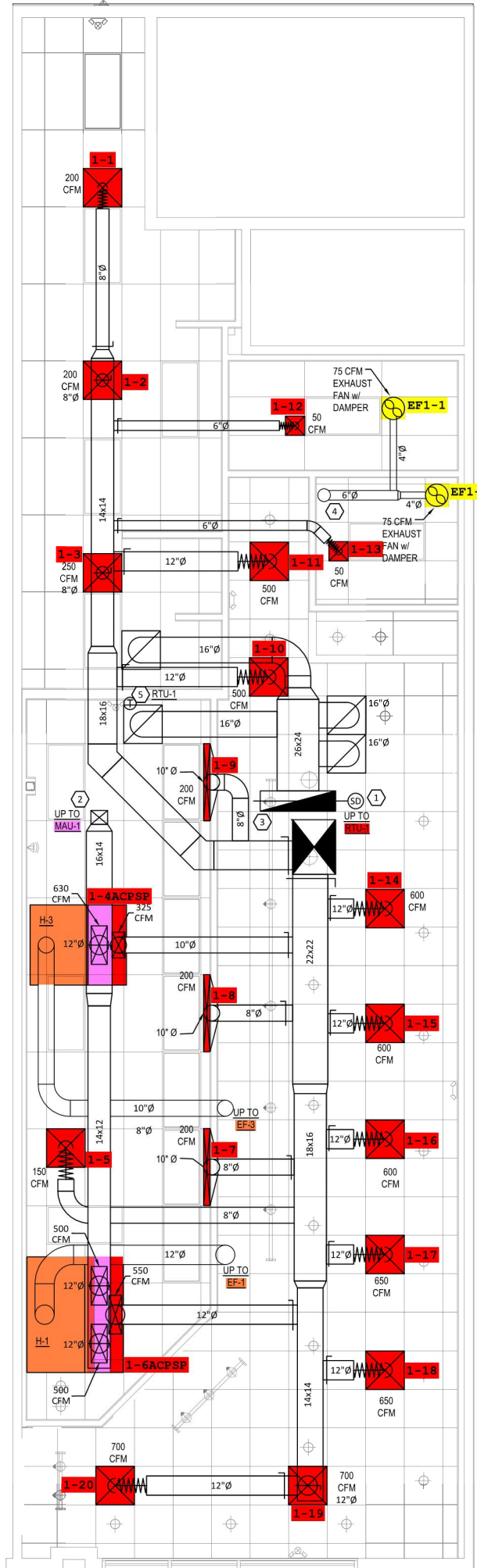
Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	3650 ELPX-2	3650 ELPX-2
Job / Serial Num	-	JOB # 8225907
Type	TYPE 1 CANOPY	TYPE 1 CANOPY
Hood length	50"	50"
Hood Width	36"	36"
Supply Plenum Type	-	ACPSP
Supply Plenum Width	14"	14"
Supply Plenum Length	36"	50"

Test Data Supply		
	Design	Actual
Total Area	3.5	4
Kv factor (Vel)	0.89	0.89
Num of Readings	-	4
Reading1 FPM	-	172
Reading2 FPM	-	163
Reading3 FPM	-	143
Reading4 FPM	-	148
Ave FPM(corr)	-	156
CFM	545	555

Test Data Exhaust		
	Design	Actual
Filter Type	CAPTRATE SOLO FILTER	CAPTRATE SOLO FILTER
Filter Size 1	16X16	16"x16"
Filter Qty 1	3	3
Filter AK factor size 1	1.62	1.62
Filter Total AK Area	4.86	4.68
Filter1 FPM	-	160
Filter2 FPM	-	173
Filter3 FPM	-	171
Filter Ave FPM(corr)	-	168
CFM	850	786

Cooking Equipment	
	Actual
Item 1	FRYER

Completed By: MATT WADE on 02/23/2026



Date: 3/4/2026

MECHANICAL - Floor 15

SCALE: 1/4" = 1'-0"

1
M1.0



SDV Job #: 8409244 - Penn Station V3B-6L (Union, KY)

Service Region: 334 - Louisville, KY Service
Service Person: Tom Stone

Customer Number: 1136898 **Customer Name:** Region 120 - AIR SOLUTIONS

Address: PENN STATION
U.S. Highway 42
UNION, KY 41091

Region Job #: 8225907
Region Job Name: Penn Station V3B-6L (Union, KY)

Sales Region: 120 - Air Solutions
Sales Person: Joe Hertenstein

Created By: Tom Stone **Creation Date:** 2/26/2026 10:56 AM
Last Modified By: Justin Fairchild **Last Modified Date:** 2/27/2026 11:43 AM

Dining Room Pressure: 0 **Kitchen Pressure:** 0
Hours On Job: 0 **Extra Hours:** 0

Completed: Yes **Completed By:** Justin Fairchild
Completion Date: 2/27/2026 11:43 AM

Job Site Meeting

NONE

Hood Group 1

Exhaust CFM: Design = 1150 Initial = 1094 Final = 1244 (108.2% of design)

Hood 1 (HD1-Grill) (HD1-Grill)

Model: 3650ELPX-2 **Length:** 6' 0"
Exhaust CFM: Design = 1150 Initial = 1094 Final = 1244
(108.2% of design)

Installation

Other Notes:
N/A



Hung Using appropriate material to safely secure hood. Design: **Yes** Actual: **Yes**

Other Notes:

Contractors did a good job.

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**

Smoke Test Performed on all Hoods? Upload Video Design: **Yes** Actual: **Yes**

Other Notes:

N/A

See attachment(s): [202602261153444638.mp4]

Measure the Front lower edge of the Hood to the Floor. (AFF) Design: **72** Actual: **72**

Are there combustibles within 18" of the Hood? Design: **No** Actual: **No**

Filters

Type: Captrate Solo

Filter 1 Size: 16x16 Initial Velocity: 150 fpm Final Velocity: 179 fpm
Initial CFM: 271 Final CFM: 324 Fan: #1 - EADU85H (KEF1-GDL)

Filter 2 Size: 16x16 Initial Velocity: 150 fpm Final Velocity: 169 fpm
Initial CFM: 271 Final CFM: 306 Fan: #1 - EADU85H (KEF1-GDL)

Filter 3 Size: 16x16 Initial Velocity: 151 fpm Final Velocity: 169 fpm
Initial CFM: 273 Final CFM: 306 Fan: #1 - EADU85H (KEF1-GDL)

Filter 4 Size: 16x16 Initial Velocity: 154 fpm Final Velocity: 170 fpm
Initial CFM: 279 Final CFM: 308 Fan: #1 - EADU85H (KEF1-GDL)

Hood Group 2

Exhaust CFM:	Design = 0	Initial = 0	Final = 0	(0% of design)
Supply CFM:	Design = 775	Initial = 920	Final = 918	(118.5% of design)

Hood 2 (HD1-PSP) (HD1-PSP)

Model:	246Misc ACPSP-ONLY	Length:	6' 0"	
Exhaust CFM:	Design = 0	Initial = 0	Final = 0	(0% of design)

Installation

Hung Using appropriate material to safely secure hood.	Design: Yes	Actual: Yes
COOKING EQUIPMENT ON AND OPERATING	Design: Yes	Actual: Yes
COOKING EQUIPMENT INSTALLED AS CLOSE TO BACK WALL AS POSSIBLE	Design: Yes	Actual: Yes
Smoke Test Performed on all Hoods? Upload Video	Design: Yes	Actual: Yes
Measure the Front lower edge of the Hood to the Floor. (AFF)	Design: 80	Actual: 80
Are there combustibles within 18" of the Hood?	Design: No	Actual: No

Supply

Supply CFM: (118.5% of design)	Design = 775	Initial = 920	Actual = 918
	Fan: #3 - EA1-D.250-15D (HMUA1)		
AC CFM: (0% of design)	Design = 0	Initial = 0	Actual = 0

PSP 1

Orientation:	Front	Length:	6' 0"	Width:	14"
Banks: 1	Blanks: 1				
CFM: (0% of design)	Design = 775	Initial = 920	Final = 918		
Velocity: (0% of design)	Design = 130	Initial = 0	Final = 0		
AC CFM: (0% of design)	Design = 465	Initial = 0	Final = 0		
AC Velocity: (0% of design)	Design = 0	Initial = 0	Final = 0		

Readings:

1: Initial: 169 fpm, Final: 172 fpm	2: Initial: 156 fpm, Final: 152 fpm
3: Initial: 145 fpm, Final: 152 fpm	4: Initial: 102 fpm, Final: 108 fpm

5: Initial: 149 fpm, Final: 148 fpm

6: Initial: 158 fpm, Final: 145 fpm

AC Readings:

1: Initial: 149 fpm, Final: 149 fpm

2: Initial: 107 fpm, Final: 107 fpm

3: Initial: 52 fpm, Final: 52 fpm

4: Initial: 101 fpm, Final: 101 fpm

5: Initial: 52 fpm, Final: 52 fpm

6: Initial: 129 fpm, Final: 129 fpm

Hood Group 4

Exhaust CFM: Design = 850 Initial = 744 Final = 890 (104.7% of design)

Hood 3 (HD2-Fry) (HD2-Fry)

Model: 3650ELPX-2

Length: 4' 2"

Exhaust CFM: Design = 850
(104.7% of design)

Initial = 744 Final = 890

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: **Yes**

COOKING EQUIPMENT INSTALLED AS CLOSE TO BACK WALL AS POSSIBLE

Design: **Yes**

Actual: **Yes**

END PANELS INSTALLED CORRECTLY

Design: **Yes**

Actual: **Yes**

Smoke Test Performed on all Hoods? Upload Video

Design: **Yes**

Actual: **Yes**

Other Notes:

N/A

See attachment(s): [202602261153811356.mp4]

Measure the Front lower edge of the Hood to the Floor. (AFF)	Design: 72	Actual: 72
Are there combustibles within 18" of the Hood?	Design: No	Actual: No

Filters

Type:	Captrate Solo		
Filter 1	Size: 16x16	Initial Velocity: 138 fpm	Final Velocity: 171 fpm
Initial CFM: 250	Final CFM: 309	Fan: #2 - EADU85H (KEF2-FRY)	
Filter 2	Size: 16x16	Initial Velocity: 148 fpm	Final Velocity: 164 fpm
Initial CFM: 268	Final CFM: 297	Fan: #2 - EADU85H (KEF2-FRY)	
Filter 3	Size: 16x16	Initial Velocity: 125 fpm	Final Velocity: 157 fpm
Initial CFM: 226	Final CFM: 284	Fan: #2 - EADU85H (KEF2-FRY)	

Hood Group 5

Exhaust CFM:	Design = 0	Initial = 0	Final = 0	(0% of design)
Supply CFM:	Design = 545	Initial = 549	Final = 537	(98.5% of design)
Supply AC CFM:	Design = 0	Initial = 192	Final = 192	(0% of design)

Hood 4 (HD2-PSP) (HD2-PSP)

Model:	246Misc ACPSP-ONLY	Length:	4' 2"
Exhaust CFM:	Design = 0	Initial = 0	Final = 0 (0% of design)

Installation

Hung Using appropriate material to safely secure hood.	Design: Yes	Actual: Yes
COOKING EQUIPMENT ON AND OPERATING	Design: Yes	Actual: Yes
COOKING EQUIPMENT INSTALLED AS CLOSE TO BACK WALL AS POSSIBLE	Design: Yes	Actual: Yes
Smoke Test Performed on all Hoods? Upload Video	Design: Yes	Actual: Yes
Measure the Front lower edge of the Hood to the Floor. (AFF)	Design: 80	Actual: 80
Are there combustibles within 18" of the Hood?	Design: No	Actual: No

Supply

Supply CFM: (98.5% of design)	Design = 545 Fan: #3 - EA1-D.250-15D (HMUA1)	Initial = 549	Actual = 537
AC CFM: (0% of design)	Design = 0	Initial = 192	Actual = 192

PSP 1

Orientation:	Front	Length:	4' 2"	Width:	14"
Banks:	1	Blanks:	1		
CFM: (0% of design)	Design = 545	Initial = 549	Final = 537		
Velocity: (0% of design)	Design = 135	Initial = 0	Final = 0		
AC CFM: (0% of design)	Design = 250	Initial = 192	Final = 192		
AC Velocity: (0% of design)	Design = 0	Initial = 0	Final = 0		

Readings:

1: Initial: 138 fpm, Final: 139 fpm	2: Initial: 159 fpm, Final: 148 fpm
3: Initial: 116 fpm, Final: 114 fpm	4: Initial: 110 fpm, Final: 113 fpm
5: Initial: 131 fpm, Final: 123 fpm	6: Initial: 121 fpm, Final: 122 fpm

AC Readings:

1: Initial: 114 fpm, Final: 114 fpm	2: Initial: 142 fpm, Final: 142 fpm
3: Initial: 126 fpm, Final: 126 fpm	4: Initial: 54 fpm, Final: 54 fpm
5: Initial: 137 fpm, Final: 137 fpm	6: Initial: 109 fpm, Final: 109 fpm

Fans

Fan 1 - EADU85H (KEF1-GDL) (KEF1-GDL)

Model: EADU85H

Exhaust

Exhaust CFM: Design = 1150 Actual = 1244 (108% of design)

Record the ECM Speed		Actual:	60
VOLTS	Design:	115	Actual: 120
Do all legs measure the same phase to phase and phase to ground voltage? If not, include notes with all phase to phase and phase to ground voltages.	Design:	Yes	Actual: Yes
HP	Design:	0.75	Actual: 0.75
HUB SET SCREW TIGHT	Design:	Yes	Actual: Yes

FAN LEVEL	Design: Yes	Actual: Yes
ROTATION	Design: Correct	Actual: Correct
UNIT VIBRATION	Design: Good	Actual: Good
FLA	Design: 8.9	Actual: 3.34
OVERLOAD SET POINT	Design: 8.9	Actual: 8.9
PHASE	Design: 1	Actual: 1
Unit within five miles from the coast?		Actual: No
INSPECT ALL EXTERIOR SIDES OF UNIT. ANY VISIBLE DAMAGE	Design: No	Actual: No

Installation Notes:

*Punch Item: Electrician
Electrician did not land wires correctly on disconnect switch. This may cause issues with voltage drops in the future.*



Other Notes:

N/A



RPM - DESIGN	Design: 1254	Actual: 1080
RPM - MAX	Design: 1900	Actual: N/A
RPM - MAX RECOMMENDED	Design: 1600	Actual: N/A

Fan 2 - EADU85H (KEF2-FRY) (KEF2-FRY)

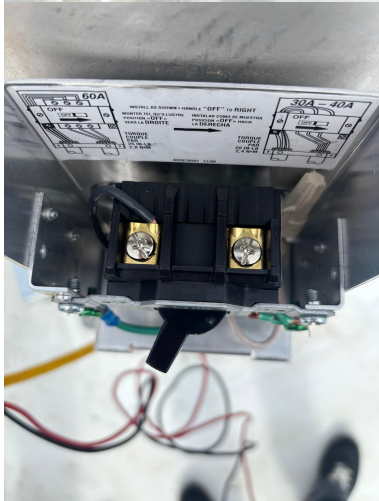
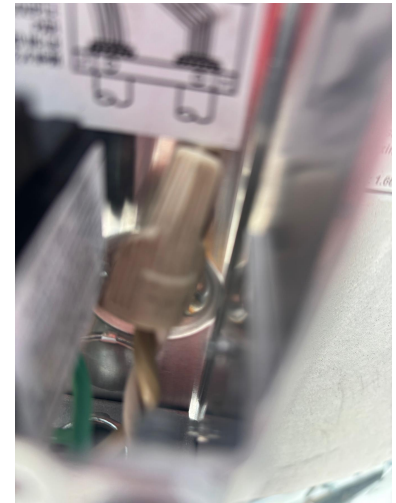
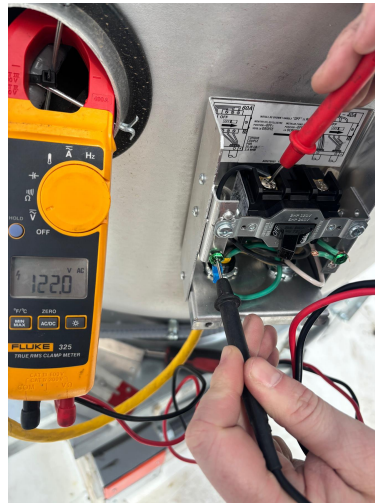
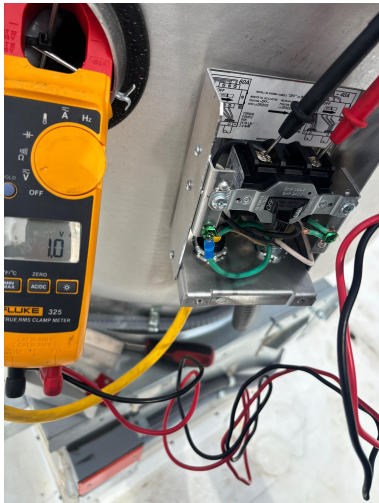
Model: EADU85H

Exhaust

Exhaust CFM: Design = 850 Actual = 890 (105% of design)

Other Notes:

Electrician did not land wires properly on disconnect switch. This may cause issues later on.



Record the ECM Speed

Actual: **57**

VOLTS

Design: **115**

Actual: **123**

Do all legs measure the same phase to phase and phase to ground voltage? If not, include notes with all phase to phase and phase to ground voltages.

Design: **Yes**

Actual: **Yes**

HP	Design: 0.75	Actual: 0.75
HUB SET SCREW TIGHT	Design: Yes	Actual: Yes
FAN LEVEL	Design: Yes	Actual: Yes
ROTATION	Design: Correct	Actual: Correct
UNIT VIBRATION	Design: Good	Actual: Good
FLA	Design: 8.9	Actual: 3.36
OVERLOAD SET POINT	Design: 8.9	Actual: 8.9
PHASE	Design: 1	Actual: 1
Unit within five miles from the coast?		Actual: No

INSPECT ALL EXTERIOR SIDES OF UNIT. ANY VISIBLE DAMAGE Design: **No** Actual: **No**

Other Notes:

N/A



SPEED CONTROL VOLTAGE	Design: 65	Actual: N/A
RPM - DESIGN	Design: 1189	Actual: 1026
RPM - MAX	Design: 1900	Actual: N/A
RPM - MAX RECOMMENDED	Design: 1600	Actual: N/A

Fan 3 - EA1-D.250-15D (HMUA1) (HMUA1)

Model: EA1-D.250-15D

Supply

Supply CFM: Design = 1320 Actual = 1455 (110% of design)

Is the main transformer (TR-01) tapped for the correct voltage?

Actual: **Yes**

HP

Design: **1**

Actual: **1**

HUB SET SCREW TIGHT

Design: **Yes**

Actual: **Yes**

FAN LEVEL

Design: **Yes**

Actual: **Yes**

ROTATION

Design: **Correct**

Actual: **Correct**

UNIT VIBRATION

Design: **Good**

Actual: **Good**

FLA

Design: **2.8**

Actual: **2**

OVERLOAD SET POINT

Design: **2.8**

Actual: **2.8**

PHASE

Design: **3**

Actual: **3**

DAMPER INSTALLED

Design: **Yes**

Actual: **Yes**

Unit within five miles from the coast?

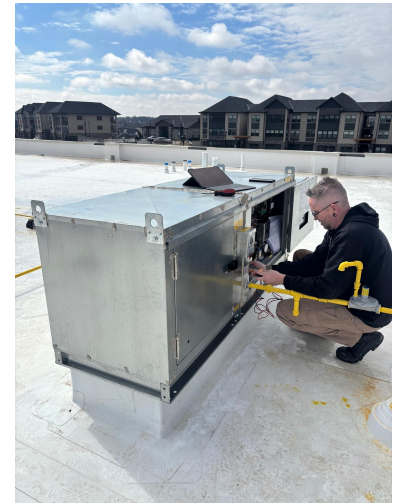
Actual: **No**

INSPECT ALL EXTERIOR SIDES OF UNIT. ANY VISIBLE DAMAGE

Actual: **No**

Other Notes:

N/A



Record the VFD HZ	Design: 53.8 Hz	Actual: 45.8
RPM - DESIGN	Design: 1570	Actual: 1335
RPM - MAX	Design: 2400	Actual: N/A
RPM - MAX RECOMMENDED	Design: 2100	Actual: N/A
Is Supply Fan bolted/secured to curb?	Design: Yes	Actual: Yes

Heater

Gas Heater

GAS TYPE	Design: Natural	Actual: Natural
INLET GAS PRESSURE	Design: 7	Actual: 8
FREEZE STAT TEMPERATURE	Design: 35	Actual: 35
FREEZE STAT TIMER	Design: 10	Actual: 10
SPACE SET POINT	Design: N/A	Actual: N/A
INTAKE SET POINT	Design: 45	Actual: 55
DISCHARGE SET POINT	Design: 55	Actual: 65
HIGH LIMIT SET POINT		Actual: N/A

Direct Fired Heater

Housing Size: 1

Burner Profile Pressure: 0"

PILOT FLAME SIGNAL	Design: 12	Actual: 14
TEMP RISE	Design: 63	Actual: 66
HIGH FIRE MANIFOLD GAS PRESSURE	Design: 0.1	Actual: 0.5
HIGH FIRE INLET PRESSURE		Actual: 8
HIGH FIRE FLAME SIGNAL	Design: 12	Actual: 14
BURNER DIFFERENTIAL PRESSURE	Design: 0.3	Actual: 0.26
LOW MANIFOLD GAS PRESSURE		Actual: -0.25
MODULATION TIME	Design: 4	Actual: 1
LOW FIRE FLAME SIGNAL	Design: 12	Actual: 14

Package #: SC-E012022MA

SCADA 2.0 CAS COM VZ Questions

Are all devices assigned and named appropriately to an area?

Actual: **True**

Confirm all devices are transmitting data. Upload a screenshot of transmitting data; such as temperature, amp draw, etc

Actual: **True**

Box_C-24x18x8.625 Questions

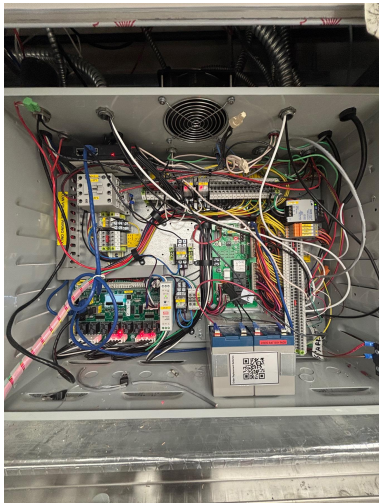
If conduit holes are drilled out, the debris can fall into VFD and cause failure. Take a picture of where the conduit enters the cabinet, and verify VFD is free of debris.

Actual: **Good**

Smart Control

Other Notes:

N/A



ROOM TEMPERATURE OFFSET

Design: **20**

Actual: **21**

Other Notes:

N/A



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

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

Installation Notes:

Electrician has wired lighting circuit wrong. Hoods 2 has a B2 de-energized fault. CAS Service supplied GC with tech support number for electrician due to him not being on site at time of SDV.

ALL FAULTS CLEARED	Design: Yes	Actual: Yes
ECPM03 HARDWARE REVISION		Actual: 04
ECPM03 PROGRAM VERSION		Actual: 2.17
CASHMI HARDWARE REVISION		Actual: 3

CASHMI PROGRAM VERSION

Actual: **2.17**

ECPM03 DATE AND TIME
ACCURATE

Design: **Yes**

Actual: **Yes**

BMS & Monitoring

BMS TYPE

Design: **CASLink**

Actual: **CASLink**

Sensors

T2

SENSOR TYPE

Design: **Duct Stat**

Actual: **Duct Stat**

SENSOR LOCATION

Design: **H1CV1**

Actual: **H1CV1**

FAN NUMBER

Design: **1**

Actual: **1**

T3

SENSOR TYPE

Design: **Duct Stat**

Actual: **Duct Stat**

SENSOR LOCATION

Design: **H3CV1**

Actual: **H2CV1**

FAN NUMBER

Design: **2**

Actual: **2**

VFDs

VFD 1

DESIGN CFM

Design: **1320**

Actual: **1455**

FAN DIRECTION

Design: **Forward**

Actual: **Forward**

DCV VFD

SUPPLY FAN # ASSIGNED

Design: **3**

Actual: **3**

OVERLOAD = P108

Design: **66**

Actual: **66**

MAX HZ

Design: **53.8**

Actual: **45.8**

ALL FAULTS CLEARED = P197

Design: **Yes**

Actual: **Yes**

P508

Actual: **N/A**

LOAD IN SEPARATE CONDUIT.

Design: **Yes**

Actual: **Yes**

TANK

TANK ECP 1 (ECP1)

Location : Hood #1 3650ELPX-2: Fire Cabinet Wall Mounted [4.0/4.0]

SCADA 2.0 CAS COM VZ Questions

Are all devices assigned and named appropriately to an area? Actual: **True**

Confirm all devices are transmitting data. Upload a screenshot of transmitting data; such as temperature, amp draw, etc Actual: **True**

Box_C-24x18x8.625 Questions

If conduit holes are drilled out, the debris can fall into VFD and cause failure. Take a picture of where the conduit enters the cabinet, and verify VFD is free of debris. Actual: **GOOD**

TANK Fire Suppression 1 (fs1)

Location : Hood #1 - Utility Cabinet Wall Mount

87-300030-001-CHG2 Questions

All Schrader cores installed and caps secured tightly Design: **Yes** Actual: **Yes**

12-F28021-005360 Questions

Apply a heat gun approximately 6" from each Fire Stat. Record how many seconds it takes to activate a fire condition. Any Fire Stat activated less than 10 seconds, or greater than 120 seconds should be replaced under warranty (create plant note)

Actual: **75**

Is Building Alarm wired In?

Design: **Yes**

Actual: **No**

Is Trouble Relay wired in?

Design: **Yes**

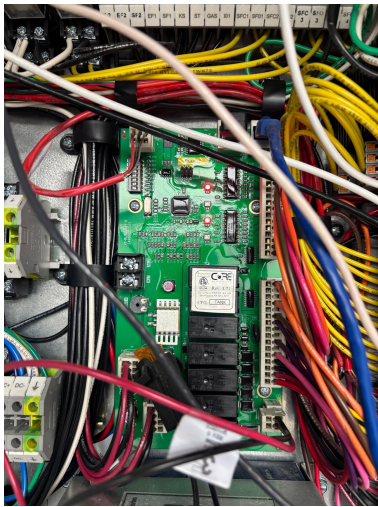
Actual: **No**

TANK Board Software Version

Actual: **1.71**

Other Notes:

N/A



TANK Hardware Version

Actual: **2.3**

Electrician

Verify Voltage at H1 and N1 is 120VAC.

Actual: **120**

Verify the Voltage at H1D and N1D is 27.5 VDC

Actual: **27.5**

Is there a UDS on this job?

Actual: **No**

Fire System Contractor w/CAS Supervision

Take photos of entire appliance lineup.

Actual: **Complete**

Other Notes:

N/A

Other Notes:

N/A



Does the appliance lineup match with the NOLA drawings?

Actual: **Yes**

Is all distribution piping 3/8" black iron, Stainless-Steel, or 1/2" Copper?

Design: **Yes**

Actual: **Yes**

Does the supply line piping from the TANKS to the first overlapping nozzle exceed 42ft?

Design: **No**

Actual: **No**

Are all appliance drops 3/8" polished Stainless-Steel or chrome-plated black iron?

Actual: **Yes**

Are the first and last appliance nozzles within 12" of the ends of the hazard zone?

Design: **Yes**

Actual: **Yes**

Are all overlapping nozzles a maximum of 15" from Front/Back of Hazard Zone?

Design: **Yes**

Actual: **Yes**

Are all overlapping nozzles 35-50" above the cooking surface?

Design: **Yes**

Actual: **Yes**

No appliance drop has more than 2 nozzles.

Design: **True**

Actual: **True**

Does any appliance branch piping exceed max length of 10ft?

Design: **No**

Actual: **No**

Does the correct number of nozzles cover each Duct Riser?

Design: **Yes**

Actual: **Yes**

Do any backshelves overhang a cooking surface 6" - 12"?

Actual: **No**

Do any backshelves/obstructions overhang a cooking surface more than 12"?

Actual: **No**

Are there any Salamanders or Upright Broilers?

Actual: **No**

Are there any Woks?

Actual: **No**

Are there any fryers?

Actual: **Yes**

Are all fryers, less than 14" wide, covered by appliance drops that are no more than 36" apart?

Design: **Yes**

Actual: **Yes**

Are all fryers, greater than 14" wide, covered by appliance drops that are no more than 30" apart?

N/A

Are there any Tilt Skillets or Braising Pans?

Actual: **No**

Are there any other Appliance Specific coverages?

Actual: **No**

What Is the Hood/Appliance Rated Temperature?

Actual: **Light/Medium 450F**

Have shipping covers been removed from all Fire Stats?

Design: **Yes**

Actual: **Yes**

Upload photos verifying correct Fire stats (360 or 600) have been installed.

Design: **Complete**

Actual: **Complete**

Other Notes:

N/A

Other Notes:

N/A



Are any gas appliance discharge flues within 18" of Fire-Stat?

Design: **No**

Actual: **No**

Is supervised loop wiring above hood ran with high temp (842 degree) wire?

Design: **Yes**

Actual: **Yes**

Is MAD wired in a supervised loop, utilizing 4 wires and metal conduit? (upload photo of MAD terminals)

Design: **Yes**

Actual: **Yes**

Other Notes:

N/A

Other Notes:

N/A

Is MAD installed 10-20' from hood, 42-48" above the floor, at a point of egress? (upload photo of location in room)

Design: **Yes**

Actual: **Yes**

Other Notes:

N/A



Has CORE Interlock been wired (If multiple fire systems present)?	N/A
---	------------

Are DIP switches set correctly according to number of Fire Groups?	N/A
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Did CAS Service Supervise, Assist, or Wire supervised loop connections?	Actual: Only verified connections at MAD and terminals
---	---

Calculate the total number of Flow Points.	Design: 38	Actual: 38
--	-------------------	-------------------

Is Gas Valve Orientation Correct?	Actual: Yes
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Is the TANK system located in a climate-controlled area?	Actual: Yes
--	--------------------

Is the Pressure Switch functioning properly?	Actual: Yes
--	--------------------

CAS Service

Other Notes:

Pre tested by Silco. CAS Service was asked to not do the pre test by site.

Who holds the TANK Fire System PO?	Actual: 3rd Party Distributor
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Other Notes:

Silco

Has the TANK pre-testing been completed?	Actual: Yes
--	--------------------

Activate each Manual Activation Device: do all balloons fill and hold pressure properly?	Actual: Yes
--	--------------------

Activate each Fire Stats w/ heat gun: do all balloons fill and hold pressure properly?	Actual: Yes
--	--------------------

Does Fire System activate while on Battery backup only?

Actual: **Yes**

Does Gas Valve close in fire condition?

Actual: **Yes**

Perform leak test for 15 minutes as outlined in manual. Did system pass leak test?

Actual: **Yes**

Has the Fire System been finalled and tagged?

Actual: **No**

Other Notes:

Silco has not performed the fire final yet.

Are all Nozzle caps w/ lanyards intact and in place?

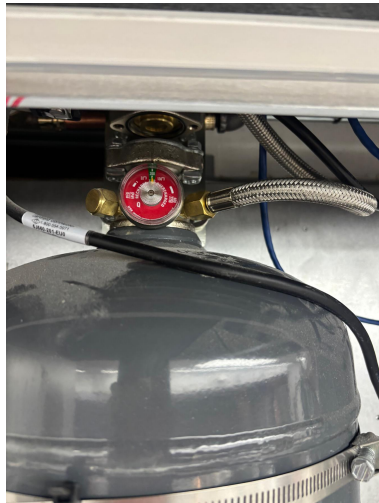
Actual: **Yes**

Does every TANK bottle show 200 PSI on the pressure guage?

Actual: **Yes**

Other Notes:

N/A



Are TANKS installed secured with straps and mounting hardware?

Design: **Yes**

Actual: **Yes**

Date written on batteries w/ paint pen:

Actual: **2/26/2026
5:10:00 PM**

PCU Installations

NONE

PCU Installations

NONE

AQEs

NONE

UDS

NONE