Report By:

National TAB
1329 E. KEMPER ROAD
SUITE 4210
CINCINNATI, OH 45246

Report: TAB REPORT

Function: Test, Adjust, & Balance

Date: 08/08/2023

PROJECT

07-17-2023 CULVERS - LAKE ORION, MI

Brown Avenue

Lake Orion, MI 48607

Client

Accurex

PO Box 410

Schofield, WI 54476

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)
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.

General Exhaust Fans
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.

NATIONAL TAB

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	DINING	6150	6099	4250	4187	1900	1912	30.9%	31.3%						
RTU-2	KITCHEN	6200	6288	4250	4315	1950	1973	31.5%	31.4%						
PRV-1	RESTROOM													375	398
PRV-2	GRIDDLE											1500	1475		
PRV-3	FRYER											1500	1545		
PRV-4	DISH											350	343		
EF-1A	MOP													75	71
TOTALS		12350	12387	8500	8502	3850	3885			0	0	3350	3363	450	469

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	3850	3885
TOTAL EXHAUST	3800	3832
NET AIRFLOW	50	53

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H20)
FRONT	0.0108
SIDE	0.0029
REAR	0.0116
AVERAGE	**0.0084**

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:

CheckList List

- SITE PICTURES
- TECH - STEP 1: INITIAL WALKTHROUGH
- TECH - STEP 2: UNIT DATA AND EVAL
- TECH - STEP 3: TEST, ADJUST AND BALANCE
- TECH - STEP 4: FINAL TESTS

07-17-2023 CULVERS - LAKE ORION, MI

CheckList Information

Name :	SITE PICTURES	**Status :**	Not Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	07/14/2023 - Wale Odofin - National TAB		

CheckList Item Details

STORE FRONT

Comment:

STOREFRONT
07/20/2023

RTU-1

Comment:

RTU-1
07/18/2023

RTU-2

Comment:

RTU-2(1)
07/18/2023

PRV-1

Comment:

PRV-1
07/18/2023

PRV-2

Comment:

PRV-2
07/18/2023

PRV-3

Comment:

PRV-3
07/18/2023

PRV-4

Comment:

PRV-4
07/18/2023

EF-1A

Comment:

EF1-A
07/20/2023

HOOD 1

Comment:

HD-1
07/18/2023

HOOD 2

Comment:

HD-2
07/18/2023

HOOD 3

Comment:

HD-3
07/18/2023

07-17-2023 CULVERS - LAKE ORION, MI

CheckList Information

Name :	TECH - STEP 1: INITIAL WALKTHROUGH	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	07/14/2023 - Wale Odofin - National TAB		
Completed Date :			

CheckList Item Details

INITIAL SITE WALKTHROUGH

All diffusers and grilles are installed and match design?

Comment:

Yes

Perforated diffusers are installed on the cook line? (4-ways will disrupt hood capture)

Comment:

Yes

All hood filters installed and accounted for?

Comment:

Yes

Hoods are wired and have power?

Comment:

Yes

Thermostats have power?

Comment:

Yes

Have trades/general contractor been notified about any issues and are they created on FaciliBuild?

Comment:

Yes

07-17-2023 CULVERS - LAKE ORION, MI

CheckList Information

Name : TECH - STEP 2: UNIT DATA AND EVAL

Status : Completed

Assigned Organization : National TAB

Asset :

Requesting Organization : National TAB

Created Date : 07/14/2023 - Wale Odofin - National TAB

Completed Date :

CheckList Item Details

UNIT DATA AND EVALUATION WHILE GATHERING UNIT DATA CHECK THE FOLLOWING:

RTU's/AHU's

Economizers are assembled and functional?

Comment:

Yes

Thermostat wire run from OCP on the RTU to the Ec terminal at the thermostat? If no, jumper can be installed from R to OCP temporarily. (The economizers will not open without OCP being energized.)

Comment:

Yes

Motors are all operating below the FLA rating?

Comment:

Yes

Are belts tight?

Comment:

Yes

If direct drive unit is the speed controller working.

Comment:

NA

Is gas piping installed and valves turned on?

Comment:

Yes

Unit free of noticeable noise and vibration

Comment:

Yes

EF's

Rotation is correct? Yes

Comment:

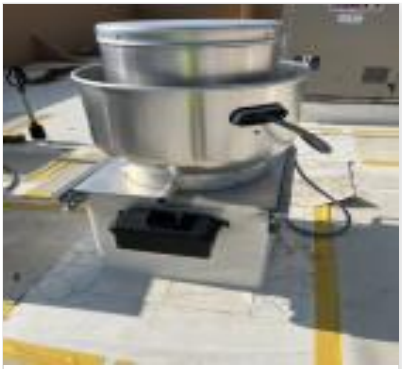
Belts are tight?

Comment:

NA

Grease cup installed on hood fan?

Comment:



PRV-2
07/20/2023

PRV-3
07/20/2023

Hinge kit installed installed on hood fan?

Comment:

Yes

Lean grease rated fans back. Is grease duct installation adequate and is duct ran all the way to the base of the fan?

Comment:

Yes

PRV-2
07/20/2023

PRV-3
07/20/2023

Flex conduit is long enough so that fan can be completely tilted back?

Comment:

Yes

There is no major leakage around base of fan?

Comment:

No

Is the motor operating below the motor FLA rating?

Comment:

Yes

For restroom fan(s) is the back draft damper installed and can it fully open?

Comment:

PRV-1
07/20/2023

Unit free of noticeable noise and vibration?

Comment:

Yes

The hood exhaust fans are installed in correct positions and are not switched?

Comment:

Yes

HOODS

Kitchen equipment installed in proper places?

Comment:

Yes

Can kitchen equipment be turned on for final smoke test?

Comment:

Yes

Second stage Grease Grabber filters are installed on the griddle hood?

Comment:

Yes

DOCUMENTATION

Have trades/general contractor been notified about any issues and are they created on FaciliBuild?

Comment:

Yes

07-17-2023 CULVERS - LAKE ORION, MI

CheckList Information

Name :	TECH - STEP 3: TEST, ADJUST AND BALANCE	**Status :**	Not Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	07/14/2023 - Wale Odofin - National TAB		

CheckList Item Details

TEST, ADJUST, AND BALANCE ALL EQUIPMENT:

DURING TESTING MAKE NOTE OF THE FOLLOWING:

Is space free of drafting?

Comment:

Yes

Is space comfortable in all areas?

Comment:

Yes

Is the space free of ventilation noise?

Comment:

Yes

If deviations from design were necessary to resolve 1-3 what were they? Otherwise put "NA".

Comment:

NA

07-17-2023 CULVERS - LAKE ORION, MI

CheckList Information

Name :	TECH - STEP 4: FINAL TESTS	**Status :**	Not Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	07/14/2023 - Wale Odofin - National TAB		

CheckList Item Details

FINAL TESTS

HOOD CAPTURE TEST

List equipment turned on for testing

Comment:

Fryer/griddle

List smoke candle type used

Comment:

45 Second Smoke Candle

Smoke test capture - Perimeter of hood

Comment:

100%

Smoke test capture - Top of cooking surface

Comment:

90%

WITNESS

Date test was completed	07/20/2023

Comment:

TAB tech name / Firm

Comment:

Dylan Crisman / National TAB Intelligence

Site super name / Firm

Comment:

Not present

Owner representative name / Firm (if Applicable)

Comment:

Joe Zimmer / Culvers

Building pressure at front & back doors (All Systems On)

Comment:

0.0084" wc

ADDITIONAL

Do actual net building airflow, design net building airflow, and pressure coincide? If not why? (All three should either be positive or negative)

Comment:

Yes

Thermostats are programmed?	Yes

Comment:

PRODIGY SETTINGS FOR RTU'S

Parameter 65 set to 0	Yes

Comment:

Parameter 78 set to 0	Yes

Comment:

Parameter 105 set to 6	Yes

Comment:

Parameter 156 set to 70 (Dining unit only)	Yes

Comment:	
Parameter 156 set to 65 (Kitchen Unit Only)	Yes
Comment:	
Parameter 170 set to 75 (Dining Unit Only)	Yes
Comment:	
Parameter 170 set to 70 (Kitchen Unit Only)	Yes
Comment:	
Parameter 131 set to the same % as OA minimum position?	Yes
Comment:	
Parameter 117 set to the same % as OA minimum position?	Yes
Comment:	

National TAB

Project: 07-17-2023 CULVERS - LAKE ORION, MI

System/Unit: AHU/RTU

Asset: RTU1 AREA:DINING

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5622F06868
Model Num	ENERGENCE	LGH180H4BS4Y
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	3
OA Filter Size 1	-	23X14
Num Final Filter 1	-	6
Final Filter Size 1	-	24X24X2

Motor Data		
	Design	**Actual**
Motor MFG	-	INTERLINK
Frame	-	56Hz
Horsepower	-	3
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	8.0

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	3.75"
Motor Bore Size	-	7/8"
Motor Sheave SetPt	-	6 TURNS OPEN
Fan Sheave Size	-	BK72-1-3/16
Fan Sheave Bore	-	1.25"
Belt CL Distance	-	21.5"
Num of Belts	-	1
Belt Size	-	BK55
Belt Alignment	-	VERIFIED

Test Data		
	Design	**Actual**
SF CFM	6150	6099
SF RPM	-	706
RA CFM	4250	4187
OA CFM	1950	1912
RL Voltage	-	210/211/213
RL Amperage	-	6.4/6.4/5.9
SF Rotation	-	CW
RA Damper Position	-	68%
Min OA Damper Position	-	42%
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	10.0 @ PRODIGY

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.38"
Fan Suction SP	-	-0.57"
Fan Discharge SP	-	0.31"
Total ESP	-	0.69"
Fan Total SP	-	0.88"

General		
	Design	**Actual**
Fan Rotation Correct	-	YES
Unit Filters Clean	-	YES
Condensate Drain Installed	-	YES

Completed By: Dylan Crisman on 09/21/2023

Notes:
Diffuser design totals 5925. Unit scheduled at 6150. Adjusted design totals.

Written By: Brianna Biggs on 07/19/2023

National TAB

Project:07-17-2023 CULVERS - LAKE ORION, MI

AHU/RTU

Diffuser Supply (GRD)

RTU1/DINING

Asset											
Asset Name	**Location**	**Type**	**MFG**	**Size**	**Model Num**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	VESTIBULE	CD-13	CARNES	8"	NA	150	1.0	166		149	99.3
SGRD2	RR	CD-15	CARNES	8"	NA	150	1.0	147		144	96.0
SGRD3	RR	CD-15	CARNES	8"	NA	150	1.0	193		144	96.0
SGRD4	109	CD-16	CARNES	12"	NA	469	1.0	375		444	94.7
SGRD5	DINING	CD-10	CARNES	8"	NA	156	1.0	229		158	101.3
SGRD6	DINING	CD-10	CARNES	8"	NA	156	1.0	212		164	105.1
SGRD7	DINING	CD-10	CARNES	8"	NA	156	1.0	244		163	104.5
SGRD8	DINING	CD-10	CARNES	8"	NA	156	1.0	248		149	95.5
SGRD9	DINING	CD-10	CARNES	8"	NA	156	1.0	166		149	95.5
SGRD10	DINING	CD-10	CARNES	8"	NA	156	1.0	239		161	103.2
SGRD11	DINING	CD-10	CARNES	8"	NA	156	1.0	201		164	105.1
SGRD12	DINING	CD-10	CARNES	8"	NA	156	1.0	253		156	100.0
SGRD13	DINING	CD-10	CARNES	8"	NA	156	1.0	295		164	105.1
SGRD14	DINING	CD-10	CARNES	8"	NA	156	1.0	324		159	101.9
SGRD15	DINING	CD-10	CARNES	8"	NA	156	1.0	301		169	108.3
SGRD16	DINING	CD-10	CARNES	8"	NA	156	1.0	305		165	105.8
SGRD17	DINING	CD-10	CARNES	8"	NA	156	1.0	264		165	105.8
SGRD18	102	CD-18	CARNES	10"	NA	313	1.0	581		313	100.0
SGRD19	103	CD-10	CARNES	8"	NA	156	1.0	323		162	103.8
SGRD20	105	CD-16	CARNES	12"	NA	469	1.0	550		452	96.4
SGRD21	110	WD-10	CARNES	10"	NA	366	1.0	173		345	94.3
SGRD22	110	WD-10	CARNES	10"	NA	366	1.0	167		347	94.8
SGRD23	110	WD-10	CARNES	10"	NA	366	1.0	260		374	102.2
SGRD24	110	WD-10	CARNES	10"	NA	366	1.0	284		388	106.0
SGRD25	104	CD-11	CARNES	10"	NA	522	1.0	418		479	91.8
SGRD26	OFFICE	CD-12	CARNES	8"	NA	200	1.0	160		191	95.5
SGRD27	EMP RR	CD-14	CARNES	8"	NA	75	1.0	174		81	108.0
Total						6146		7252	0	6099	99.24%

Completed By: Dylan Crisman on 09/21/2023

National TAB

Project: 07-17-2023 CULVERS - LAKE ORION, MI

System/Unit: AHU/RTU

Asset: RTU2 AREA:KITCHEN

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5622F0744
Model Num	ENERGENCE	LGH210H4BS3Y
Type	RTU	RTU
Configuration	VERTICAL	VERTIAL
Num OA Filters 1	-	3
OA Filter Size 1	-	23X14
Num Final Filter 1	-	6
Final Filter Size 1	-	24X24X2

Motor Data		
	Design	**Actual**
Motor MFG	-	NIDEC
Frame	-	184TZ
Horsepower	-	5.0
Motor Rpm	-	1765
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	13.80

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VP50BB
Motor Bore Size	-	1"
Motor Sheave SetPt	-	3 TURNS OUT
Fan Sheave Size	-	BK100-1-3/16
Fan Sheave Bore	-	1.25"
Belt CL Distance	-	21.5"
Num of Belts	-	1
Belt Size	-	BK61
Belt Alignment	-	VERIFIED

Test Data		
	Design	**Actual**
SF CFM	6200	6288
SF RPM	-	782
RA CFM	4250	4200
OA CFM	1950	1973
RL Voltage	-	212/212/214
RL Amperage	-	7.6/8.4/8.9
SF Rotation	-	CW
RA Damper Position	-	67%
Min OA Damper Position	-	43%
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	10.0 @ PRODIGY

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.43"
Fan Suction SP	-	-0.72"
Fan Discharge SP	-	0.23"
Total ESP	-	0.66"
Fan Total SP	-	0.95"

General		
	Design	**Actual**
Fan Rotation Correct	-	YES
Unit Filters Clean	-	YES
Condensate Drain Installed	-	YES

Completed By: Dylan Crisman on 09/21/2023

Notes:
Diffuser design totals 5950. Unit scheduled at 6150

Written By: on

National TAB

Project:07-17-2023 CULVERS - LAKE ORION, MI

AHU/RTU

Diffuser Supply (GRD)

RTU2/KITCHEN

Asset											
Asset Name	Location	Type	MFG	Size	Model Num	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	111	CD-20	CARNES	12"	NA	600	1.0	643	645	609	101.5
SGRD2	111	CD-22	CARNES	12"	NA	600	1.0	528	558	602	100.3
SGRD3	COOKLINE	CD-23	CARNES	10"	NA	200	1.0	344	194	217	108.5
SGRD4	COOKLINE	CD-24	CARNES	12"	NA	375	1.0	729	730	364	97.1
SGRD5	COOKLINE	CD-25	CARNES	12"	NA	400	1.0	373	406	396	99.0
SGRD6	COOKLINE	CD-25	CARNES	12"	NA	400	1.0	505	403	405	101.3
SGRD7	COOKLINE	CD-26	CARNES	12"	NA	250	1.0	332	245	268	107.2
SGRD8	COOKLINE	CD-27	CARNES	12"	NA	275	1.0	412	404	282	102.5
SGRD9	113	CD-21	CARNES	12"	NA	350	1.0	452	349	352	100.6
SGRD10	113	CD-21	CARNES	12"	NA	350	1.0	409	379	356	101.7
SGRD11	113	CD-21	CARNES	12"	NA	350	1.0	594	373	363	103.7
SGRD12	115	WD-20	CARNES	12"	NA	600	1.0	412	505	591	98.5
SGRD13	115	WD-20	CARNES	12"	NA	600	1.0	498	491	628	104.7
SGRD14	116	CD-29	CARNES	12"	NA	600	1.0	481	526	587	97.8
SGRD15	KITCHEN	CD-28	CARNES	8"	NA	125	1.0	14	154	135	108.0
SGRD16	STORAGE	CD-28	CARNES	8"	NA	125	1.0	202	202	133	106.4
Total						6200		6928	6564	6288	101.42%

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Project: 07-17-2023 CULVERS - LAKE ORION, MI

System/Unit: FAN - Exhaust

Asset: EF1 AREA:

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XCR-B80	S33G182BB-16
Serial Num	-	E257043
Type	CEILING	CEILING
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	GREENHECK
Frame	-	NL
Horsepower	-	NL
Motor Rpm	-	900
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	0.16
Service Factor	-	1.0

Test Data		
	Design	**Actual**
CFM	75	71
Fan RPM	-	900
Fan Rotation	-	CCW
Motor RPM	-	900
System SetPt	-	Max/Marked on speed controller
RL Voltage	-	NA
RL Amperage	-	NA
Total ESP	0.125"	NA
Fan Inlet SP	-	NA
Fan Discharge SP	-	NA

Completed By: Dylan Crisman on 07/20/2023

National TAB

Project: 07-17-2023 CULVERS - LAKE ORION, MI

System/Unit: FAN - Exhaust

Asset: PRV1 AREA:RESTROOMS

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XRED-090-D	XRED-090-VG-1-17-X
Serial Num	-	21087702
Type	DOWNBLAST	DOWNBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	VARI-GREEN
Frame	-	NL
Horsepower	0.667	1/10"
Motor Rpm	-	1750
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	1.38
Service Factor	-	1.15

Test Data		
	Design	**Actual**
CFM	375	398
Fan RPM	-	1225
Fan Rotation	-	CCW
Motor RPM	-	1225
System SetPt	-	7@SPEED DIAL
RL Voltage	-	NA
RL Amperage	-	NA
Total ESP	0.50"	0.18"
Fan Inlet SP	-	-0.18""
Fan Discharge SP	-	ATM

Completed By: Dylan Crisman on 09/21/2023

National TAB

Project:07-17-2023 CULVERS - LAKE ORION, MI

FAN - Exhaust

Diffuser Ret/Exh (GRD)

PRV1/RESTROOMS

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
PRV1-EGRD1	MENS RR	EG-2	8"	150	1.0	200	156	160	106.7
PRV1-EGRD2	WOMENS RR	EG-2	8"	150	1.0	197	152	158	105.3
PRV1-EGRD3	EMPLOYEE RR	EG-1	8"	75	1.0	175	98	80	106.7
Total				375		572	406	398	106.13%

Completed By: Dylan Crisman on 09/20/2023

National TAB

Project: 07-17-2023 CULVERS - LAKE ORION, MI

System/Unit: FAN - Exhaust

Asset: PRV2 AREA:GRIDDLE

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XCUE-140-VG	XCUE-140-10-VG-1-26-6
Serial Num	-	21087824
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	VARI-GREEN
Frame	-	NL
Horsepower	1	1.0"
Motor Rpm	-	1750
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	11.5
Service Factor	-	1.15

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	DD
Motor Bore Size	-	DD
Motor Sheave SetPt	-	6.0 Vdc
Fan Sheave Size	-	DD
Fan Sheave Bore	-	DD
Belt CL Distance	-	DD
Num of Belts	-	DD
Belt Size	-	DD

Test Data		
	Design	**Actual**
CFM	1500	1475
Fan RPM	-	NA
Fan Rotation	-	CCW
Motor RPM	-	NA
RL Voltage	-	123
RL Amperage	-	7.0/6.8
Suction ESP	-	-0.84"
Discharge ESP	-	ATM
Total ESP	1.918"	0.84"

Completed By: Dylan Crisman on 07/19/2023

Notes:
FAN SET TO 6.0 VDC

Written By: Dylan Crisman on 07/19/2023

National TAB

Project: 07-17-2023 CULVERS - LAKE ORION, MI

System/Unit: FAN - Exhaust

Asset: PRV3 AREA:FRYER

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XCUE-140-VG	XCUE-140-10-VG-1-26-6
Serial Num	-	21087864
Type	UPBLAST	UPBLSAT
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	VARI-GREEN
Frame	-	NL
Horsepower	1	1.0"
Motor Rpm	-	1750
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	11.5
Service Factor	-	1.15

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	DD
Motor Bore Size	-	DD
Motor Sheave SetPt	-	6.0 VDC
Fan Sheave Size	-	DD
Fan Sheave Bore	-	DD
Belt CL Distance	-	DD
Num of Belts	-	DD
Belt Size	-	DD

Test Data		
	Design	**Actual**
CFM	1500	1545
Fan RPM	-	NA
Fan Rotation	-	CCW
Motor RPM	-	NA
RL Voltage	-	123
RL Amperage	-	3.1/3.0
Suction ESP	-	-0.34"
Discharge ESP	-	ATM
Total ESP	0.518"	0.34"

Completed By: Dylan Crisman on 07/19/2023

National TAB

Project: 07-17-2023 CULVERS - LAKE ORION, MI

System/Unit: FAN - Exhaust

Asset: PRV4 AREA:DISH

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XRED-090-D	XRED-095-VG-1-17-X
Serial Num	-	21087892
Type	DOWNBLAST	DOWNBLAST
Configuration	HORIZONTAL	HORIZONTAL

Motor Data		
	Design	**Actual**
Motor MFG	-	VARI-GREEN
Frame	-	NL
Horsepower	0.0667	1/6"
Motor Rpm	-	1750
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	2.2
Service Factor	-	1.15

Test Data		
	Design	**Actual**
CFM	350	343
Fan Rotation	-	CCW
System SetPt	-	5 @ SPEED DIAL
RL Voltage	-	NA
RL Amperage	-	NA
Total ESP	0.60"	0.20"
Fan Inlet SP	-	-0.20"
Fan Discharge SP	-	ATM

Completed By: Dylan Crisman on 07/20/2023

National TAB

Project: 07-17-2023 CULVERS - LAKE ORION, MI

System/Unit: Kitchen Hood Type I

Asset: HD1 AREA:

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XGEP-5.33S	XGEP-64.00-SS
Job / Serial Num	-	21103197
Type	TYPE I LOW PROXIMITY	TYPE I LOW PROXIMITY
Hood length	64"	64"
Hood Width	26"	26"

Test Data Exhaust		
	Design	**Actual**
Filter Type	GREASE GRABBER	GREASE GRABBER
Filter Size 1	16X20	16X16
Filter Qty 1	4	4
Filter AK factor size 1	1.53	1.53
Filter Total AK Area	6.12	6.12
Filter1 FPM	-	244
Filter2 FPM	-	225
Filter3 FPM	-	239
Filter4 FPM	-	257
Filter Ave FPM(corr)	-	24
CFM	1500	1475

Cooking Equipment		
	Design	**Actual**
Item 1	-	GRIDDLE
Item 2	-	

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National TAB

Project: 07-17-2023 CULVERS - LAKE ORION, MI

System/Unit: Kitchen Hood Type I

Asset: HD2 AREA:

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XXEP-FB-6.92-S	XXEP-83.00-S
Job / Serial Num	-	21103190
Type	TYPE I LOW PROXIMITY	TYPE I LOW PROXIMITY
Hood length	83"	83"
Hood Width	36"	36"

Test Data Exhaust		
	Design	**Actual**
Filter Type	EXTRACTOR	EXTRACTOR
Filter Size 1	16X16	16X16
Filter Qty 1	5	5
Filter AK factor size 1	1.53	1.53
Filter Total AK Area	7.65	7.65
Filter1 FPM	-	202
Filter2 FPM	-	191
Filter3 FPM	-	203
Filter4 FPM	-	204
Filter5 FPM	-	210
Filter Ave FPM(corr)	-	202
CFM	1500	1545

Cooking Equipment		
	Design	**Actual**
Item 1	-	FRYER

Completed By: Dylan Crisman on 07/18/2023

Notes:
[1] Max VDC setpoint is at (6.0) to achieve 1545 Reading.

Written By: Dylan Crisman on 07/18/2023

National TAB

Project: 07-17-2023 CULVERS - LAKE ORION, MI

System/Unit: Kitchen Hood Type II

Asset: H3 AREA:DISH

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XD3-3.5-S	XD3-42.00-S
Serial Num	-	21103214
Type	TYPE II CANOPY	TYPE II CANOPY
Hood length	42"	42"
Hood Width	42"	42"

Test Data		
	Design	**Actual**
Exhaust CFM	350	343

Completed By: Dylan Crisman on 07/20/2023