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Report: TAB REPORT
Function: Test, Adjust, & Balance
Date: 07/07/2023

PROJECT
07-03-23 MENDOCINO FARMS - GLENDALE,
CA

769 AMERICANA WAY

GLENDALE, CA 91210

Client

Chill - Factor Mechanical

PO BOX 5756

SAN DIEGO, CA 92165

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Project: 07-03-23 MENDOCINO FARMS - GLENDALE, CA

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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.

FCU's w/ Diffusers

Each of the FCU's were measured at their terminal devices utilizing a flow hood. The sum of these readings is equal to the total flow for that particular unit. The total flow of each FCU was then adjusted to within tolerance of the specified design. Each terminal diffuser was balanced to within tolerance of the engineer's design volume utilizing the provided hand damper located at the takeoff of the main & branch trunk line(s). Any equipment that fell outside of this 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.

Ceiling Exhaust Fans

The ceiling exhaust fans were measured using a flow hood. If speed adjustment was provided, the fan speed was adjusted to within design tolerance. 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.

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Project: 07-03-23 MENDOCINO FARMS - GLENDALE, CA

System/Unit: AHU/RTU



Asset: FCU1

AREA:DINING

Unit Data		
	Design	Actual
MFG	TRANE	TRANE
Serial Num	-	31R0058930P915
Model Num	TPEFY054	TPEFY054MA144A
Type	FCU	FCU
Configuration	VERTICAL	HORIZONTAL
Num OA Filters 1	-	10"
Num Final Filter 1	-	2
Final Filter Size 1	-	14X20X2

Motor Data		
	Design	Actual
Motor MFG	-	NL
Frame	-	NL
Horsepower	-	0.402
Motor Rpm	-	NL
Phase	3	1
Rated Voltage	208	208
Rated Amperage	-	3.09

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

Test Data		
	Design	Actual
SF CFM	1400	1473
SF RPM	-	NA
RA CFM	1100	1152
OA CFM	300	321
RL Voltage	-	210
RL Amperage	-	1.33
SF Rotation	-	CCW
RA Damper Position	-	N/A
Min OA Damper Position	-	20%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	N/A

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.13"
Fan Suction SP	-	-0.21"
Fan Discharge SP	-	0.15"
Total ESP	0.06"	0.28"
Fan Total SP	-	0.36"

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

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AHU/RTU



Diffuser Supply (GRD)

FCU1/DINING

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	ORDERING	SR2	22/6	575	1	592	610	610	106.1
SGRD2	ORDERING	SR2	22/6	575	1	757	602	602	104.7
SGRD3	SERVING	CD1	8"	250	1	126	261	261	104.4
Total				1400		1475	1473	1473	105.21%

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System/Unit: AHU/RTU



Asset: FCU2

AREA:DINING

Unit Data		
	Design	Actual
MFG	TRANE	TRANE
Serial Num	-	31R0058830P915
Model Num	TPEFY054	TPEFY054MA144A
Type	FCU	FCU
Configuration	VERTICAL	HORIZONTAL
Num OA Filters 1	-	10"
Num Final Filter 1	-	2
Final Filter Size 1	-	14X20X2

Motor Data		
	Design	Actual
Motor MFG	-	NL
Frame	-	NL
Horsepower	-	0.402
Motor Rpm	-	NL
Phase	3	1
Rated Voltage	208	208
Rated Amperage	-	3.09

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

Test Data		
	Design	Actual
SF CFM	1400	1436
SF RPM	-	NA
RA CFM	1100	1125
OA CFM	300	311
RL Voltage	-	210
RL Amperage	-	1.25
SF Rotation	-	CCW
RA Damper Position	-	N/A
Min OA Damper Position	-	25%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	N/A

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.11"
Fan Suction SP	-	-0.19"
Fan Discharge SP	-	0.15"
Total ESP	0.06"	0.26"
Fan Total SP	-	0.34"

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

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AHU/RTU



Diffuser Supply (GRD)

FCU2/DINING

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	DINING	SR1	33/6	467	1.4	389	481	481	103.0
SGRD2	DINING	SR1	33/6	467	1.4	501	493	493	105.6
SGRD3	DINING	SR1	33/6	467	1.4	552	462	462	98.9
Total				1401		1442	1436	1436	102.5%

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Project: 07-03-23 MENDOCINO FARMS - GLENDALE, CA

System/Unit: AHU/RTU



Asset: FCU3

AREA:KITCHEN

Unit Data		
	Design	Actual
MFG	TRANE	TRANE
Serial Num	-	31R0056130P915
Model Num	TPEFY054	TPEFY054MA144A
Type	FCU	FCU
Configuration	VERTICAL	HORIZONTAL
Num OA Filters 1	-	10"
Num Final Filter 1	-	2
Final Filter Size 1	-	14X20X2

Motor Data		
	Design	Actual
Motor MFG	-	NL
Frame	-	NL
Horsepower	-	0.402
Motor Rpm	-	NL
Phase	3	1
Rated Voltage	208	208
Rated Amperage	-	3.09

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

Test Data		
	Design	Actual
SF CFM	1400	1361
SF RPM	-	NA
RA CFM	1150	1119
OA CFM	250	242
RL Voltage	-	210
RL Amperage	-	1.13
SF Rotation	-	CCW
RA Damper Position	-	N/A
Min OA Damper Position	-	20%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	N/A

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.13"
Fan Suction SP	-	-0.19"
Fan Discharge SP	-	0.17"
Total ESP	0.06"	0.3"
Fan Total SP	-	0.34"

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

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AHU/RTU



Diffuser Supply (GRD)

FCU3/KITCHEN

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	KITCHEN	CD1	14"	500	1	478	478	478	95.6
SGRD2	KITCHEN	CD1	14"	500	1	491	491	491	98.2
SGRD3	KITCHEN	CD1	14"	400	1	392	392	392	98.0
Total				1400		1361	1361	1361	97.21%

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System/Unit: AHU/RTU



Asset: FCU4

AREA:KITCHEN

Unit Data		
	Design	Actual
MFG	TRANE	TRANE
Serial Num	-	31R0058730P915
Model Num	TPEFY054	TPEFY054MA144A
Type	FCU	FCU
Configuration	VERTICAL	HORIZONTAL
Num OA Filters 1	-	10"
Num Final Filter 1	-	2
Final Filter Size 1	-	14X20X2

Motor Data		
	Design	Actual
Motor MFG	-	NL
Frame	-	NL
Horsepower	-	0.402
Motor Rpm	-	NL
Phase	3	3
Rated Voltage	208	230
Rated Amperage	-	3.09

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

Test Data		
	Design	Actual
SF CFM	1400	1406
SF RPM	-	NA
RA CFM	1150	1161
OA CFM	250	245
RL Voltage	-	209
RL Amperage	-	1.21"
SF Rotation	-	CCW
RA Damper Position	-	N/A
Min OA Damper Position	-	20%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	N/A

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.14"
Fan Suction SP	-	0.21"
Fan Discharge SP	-	0.17"
Total ESP	0.06"	0.31"
Fan Total SP	-	0.38"

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

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AHU/RTU



Diffuser Supply (GRD)

FCU4/KITCHEN

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	KITCHEN	CD1	14"	450	1	476	476	476	105.8
SGRD2	KITCHEN	CD1	14"	450	1	469	469	469	104.2
SGRD3	HOOD 1	ACPSP	8"	500	5.8	461	461	461	92.2
Total				1400		1406	1406	1406	100.43%

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Project: 07-03-23 MENDOCINO FARMS - GLENDALE, CA

System/Unit: FAN - Exhaust



Asset: EF-A1

AREA:

Unit Data		
	Design	Actual
MFG	PANASONIC	GREENHECK
Model Num	FV-0511VQ1	SP-A200-QD
Serial Num	-	22042329
Type	CEILING	CEILING
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	GREENHECK
Frame	-	NL
Horsepower	7.2W	NL
Motor Rpm	-	NL
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	0.46
Service Factor	-	NL

Test Data		
	Design	Actual
CFM	75	71
Fan RPM	-	SINGLE SPEED
Fan Rotation	-	SINGLE SPEED
Motor RPM	-	SINGLE SPEED
System SetPt	-	SINGLE SPEED
RL Voltage	-	120
RL Amperage	-	0.42
Total ESP	0.25"	NA
Fan Inlet SP	-	NA
Fan Discharge SP	-	ATM

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Project: 07-03-23 MENDOCINO FARMS - GLENDALE, CA

System/Unit: FAN - Exhaust



Asset: EF-B1

AREA:RESTROOM

Unit Data		
	Design	Actual
MFG	PANASONIC	GREENHECK
Model Num	FV-0511VQ1	SP-A200-QD
Serial Num	-	22099216
Type	CEILING	CEILING
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	GREENHECK
Frame	-	NL
Horsepower	7.2W	NL
Motor Rpm	-	NL
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	0.46
Service Factor	-	NL

Test Data		
	Design	Actual
CFM	75	73
Fan RPM	-	SINGLE SPEED
Fan Rotation	-	SINGLE SPEED
Motor RPM	-	SINGLE SPEED
System SetPt	-	SINGLE SPEED
RL Voltage	-	120
RL Amperage	-	0.45
Total ESP	0.25"	NA
Fan Inlet SP	-	NA
Fan Discharge SP	-	NA

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Project: 07-03-23 MENDOCINO FARMS - GLENDALE, CA

System/Unit: FAN - Exhaust



Asset: PCU1

AREA:COOKLINE

Unit Data		
	Design	Actual
MFG	NA	SPRING AIR
Model Num	NA	KES-ISH
Serial Num	-	23A0
Type	-	PCU
Configuration	-	HORIZONTAL

Test Data		
	Design	Actual
CFM	2250	3831
Fan Rotation	-	CW
RL Voltage	-	208/207/208
RL Amperage	-	40.5/41.1/40.1

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR RELIANCE
Frame	-	215T
Horsepower	-	10
Motor Rpm	-	1770
Phase	-	3
Voltage (rated)	-	230/460
Amperage (rated)	-	25/12.5
Service Factor	-	1.15

Drive Data		
	Design	Actual
Motor Sheave Size	-	2BK110H
Motor Bore Size	-	1-5/16"
Motor Sheave SetPt	-	FIXED
Fan Sheave Size	-	6"
Fan Sheave Bore	-	1-5/16"
Belt CL Distance	-	19.5"
Num of Belts	-	2
Belt Size	-	BX63

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Project: 07-03-23 MENDOCINO FARMS - GLENDALE, CA

System/Unit: FAN - Supply



Asset: MUA1

AREA:COOKLINE

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	A1-15D	A2-20D
Serial Num	-	5727845
Type	MUA	MUA
Configuration	VERTICAL	HORIZONTAL

Motor Data		
	Design	Actual
Motor MFG	-	TECO
Frame	-	145T
Horsepower	1.5	1
Motor Rpm	-	1150
Phase	3	3
Voltage (rated)	208	230/460
Amperage (rated)	-	3.44/1.72
Service Factor	-	1.15

Drive Data		
	Design	Actual
Motor Sheave Size	-	DD
Motor Bore Size	-	DD
Fan Sheave Size	-	DD
Fan Sheave Bore	-	DD
Belt CL Distance	-	DD
Num of Belts	-	DD
Belt Size	-	DD
Belt Alignment Verified	-	DD

Gas Heat		
	Design	Actual

Test Data		
	Design	Actual
CFM	2475	2420
SF RPM	-	1109
Motor RPM	-	1109
RL Voltage	-	207/206/207
RL Amperage	-	2.98/3.2/3.3
Total ESP	-	0.52"
Fan Discharge SP	-	0.52"

General		
	Design	Actual
Fan Rotation Correct	-	YES

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Project: 07-03-23 MENDOCINO FARMS - GLENDALE, CA

System/Unit: Kitchen Hood Type I



Asset: HD1

AREA:

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	5424 ND-2-ACPSP-F	5424 ND-2-ACPSP-F
Job / Serial Num	-	5727845
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	108	108"
Hood Width	54	54"
Supply Plenum Type	-	PERFORATED
Supply Plenum Width	12"	12"
Supply Plenum Length	120"	120"

Test Data Exhaust		
	Design	Actual
Filter Type	SS FILTERS	SS FILTERS
Filter Size 1	20X16	20X16
Filter Qty 1	7	6
Filter AK factor size 1	2.08"	2.08
Filter Total AK Area	14.56	12.48
Filter1 FPM	-	285
Filter2 FPM	-	297
Filter3 FPM	-	329
Filter4 FPM	-	329
Filter5 FPM	-	297
Filter6 FPM	-	307
Filter Ave FPM(corr)	-	307
CFM	2250	3831

Cooking Equipment		
	Design	Actual
Item 1	-	PANINI PRESS
Item 2	-	FLAT TOP GRILL
Item 3	-	BROILER
Item 4	-	
Item 5	-	

Test Data Supply		
	Design	Actual
Total AK Area	10	10
Kv factor (Vel)	0.87"	0.87
Num of Readings	-	8
Reading1 FPM	-	193
Reading2 FPM	-	170
Reading3 FPM	-	166
Reading4 FPM	-	174
Reading5 FPM	-	168
Reading6 FPM	-	108
Reading7 FPM	-	138
Reading8 FPM	-	165
Ave FPM(corr)	-	160
CFM	1375	1392

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