

Report By:

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Report: Test and Balance
Date: 3/9/2022

PROJECT
MOD PIZZA - LEES SUMMIT, MO

460 NW CHIPMAN RD
LEE SUMMIT, MO

Client

OLIPHANT HEATING
208 WOLLARD BLVD
RICHMOND, MO

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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	2600	2642	2200	2224	400	418	15.4%	15.8%						
RTU-2	DINING	2600	2757	2200	2334	400	423	15.4%	15.3%						
RTU-3	DINING/RR	2600	2535	2200	2152	400	383	15.4%	15.1%						
RTU-4	KITCHEN	2600	2801	2200	2385	400	416	15.4%	14.9%						
EF-1	HOOD1											600	614		
EF-2	WOMENS RR													75	74
EF-3	MENS RR													75	43
EF-4	MOP SINK													75	54
TOTALS		10400	10735	8800	9095	1600	1640			0	0	600	614	225	171

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	1600	1640
TOTAL EXHAUST	825	785
NET AIRFLOW	775	855

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H2O)
FRONT	0.0107
SIDE	0.0138
REAR	0.0056
AVERAGE	0.01

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:

System/Unit: AHU/RTU

Asset: RTU1

AREA: DINING

Unit Data		
	Design	Actual
MFG	YORK	YORK
Model Num	ZF078	ZF078
Serial Num	-	N2E0784070
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2 METAL MESH
OA Filter Size 1	-	11.5X23.5
Num Final Filter 1	-	4
Final Filter Size 1	-	18X24X2
Num Final Filter 2	-	NA
Final Filter Size 2	-	NA

Test Data		
	Design	Actual
SF CFM	2600	2642
SF RPM	-	ICE NOT SAFE
RA CFM	2200	2224
OA CFM	400	418
RL Voltage	-	214/214/214
RL Amperage	-	4.2/5.2/5.2
SF Rotation	-	CW
RA Damper Position	-	12%
Min OA Damper Position	-	12%
Min OA Damper Type	-	ECONMIZER

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	56HZ
Horsepower	-	2
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	208	208-230/460
Rated Amperage	-	5.8/2.9

Drive Data		
	Design	Actual
Motor Sheave Size	-	1VM50
Motor Bore Size	-	7/8"
Fan Sheave Size	-	6"
Fan Sheave Bore	-	1"
Belt CL Distance	-	17"
Num of Belts	-	1
Belt Size	-	A49
Belt Alignment	-	VERIFIED GOOD

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Notes:

System/Unit: AHU/RTU

Asset: RTU2

AREA: DINING

Unit Data		
	Design	Actual
MFG	YORK	YORK
Model Num	ZF078	ZF078
Serial Num	-	N2A0579517
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1 METAL MESH
OA Filter Size 1	-	25X23.5
Num Final Filter 1	-	4
Final Filter Size 1	-	16X24X2
Num Final Filter 2	-	NA
Final Filter Size 2	-	NA

Test Data		
	Design	Actual
SF CFM	2600	2757
SF RPM	-	ICE NOT SAFE
RA CFM	2200	2334
OA CFM	400	423
RL Voltage	-	213/214/214
RL Amperage	-	5.1/5.5/5.7
SF Rotation	-	CW
RA Damper Position	-	15%
Min OA Damper Position	-	15%
Min OA Damper Type	-	ECONMIZER

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	56HZ
Horsepower	-	2
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	208	208-230/460
Rated Amperage	-	5.8/2.9

Drive Data		
	Design	Actual
Motor Sheave Size	-	1VM50
Motor Bore Size	-	7/8"
Fan Sheave Size	-	6"
Fan Sheave Bore	-	1"
Belt CL Distance	-	17"
Num of Belts	-	1
Belt Size	-	A49
Belt Alignment	-	VERIFIED GOOD

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Notes:

System/Unit: AHU/RTU

Asset: RTU3

AREA: DINING /RR

Unit Data		
	Design	Actual
MFG	YORK	YORK
Model Num	ZF078	ZF078
Serial Num	-	N2D0782508
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	11.5X23.5
Num Final Filter 1	-	4
Final Filter Size 1	-	16X24X2
Num Final Filter 2	-	NA
Final Filter Size 2	-	NA

Test Data		
	Design	Actual
SF CFM	2600	2535
SF RPM	-	ICE NOT SAFE
RA CFM	2200	2152
OA CFM	400	383
RL Voltage	-	214/215/216
RL Amperage	-	5.7/5.3/4.9
SF Rotation	-	CW
RA Damper Position	-	12%
Min OA Damper Position	-	12%
Min OA Damper Type	-	ECONMIZER

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	56HZ
Horsepower	-	2
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	208	208-230/460
Rated Amperage	-	5.8/2.9

Drive Data		
	Design	Actual
Motor Sheave Size	-	1VM50
Motor Bore Size	-	7/8"
Fan Sheave Size	-	6"
Fan Sheave Bore	-	1"
Belt CL Distance	-	17"
Num of Belts	-	1
Belt Size	-	A49
Belt Alignment	-	VERIFIED GOOD

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Notes:

System/Unit: AHU/RTU

Asset: RTU4

AREA: KITCHEN

Unit Data		
	Design	Actual
MFG	YORK	YORK
Model Num	ZF078	ZF078
Serial Num	-	N2A0579516
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	25X23.5
Num Final Filter 1	-	4
Final Filter Size 1	-	16X24X2
Num Final Filter 2	-	NA
Final Filter Size 2	-	NA

Test Data		
	Design	Actual
SF CFM	2600	2801
SF RPM	-	ICE NOT SAFE
RA CFM	2200	2385
OA CFM	400	416
RL Voltage	-	213/214/213
RL Amperage	-	5.1/5.5/5.7
SF Rotation	-	CW
RA Damper Position	-	11%
Min OA Damper Position	-	11%
Min OA Damper Type	-	ECONMIZER

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	56HZ
Horsepower	-	2
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	208	208-230/460
Rated Amperage	-	5.8/2.9

Drive Data		
	Design	Actual
Motor Sheave Size	-	1VM50
Motor Bore Size	-	7/8"
Fan Sheave Size	-	6"
Fan Sheave Bore	-	1"
Belt CL Distance	-	17"
Num of Belts	-	1
Belt Size	-	A49
Belt Alignment	-	VERIFIED GOOD

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Notes:

System/Unit: FAN - Exhaust

Asset: EF1

AREA: HD1 PIZZA

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	CASRE13BD	CASRE13BD
Serial Num	-	5191766
Type	UTILITY	UTILITY
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	HHSA
Frame	-	C56
Horsepower	0.5	0.5
Motor Rpm	-	1730/1435
Phase	1	1
Voltage (rated)	115	115/208-230
Amperage (rated)	-	7.6/4.2-3.8
Service Factor	-	9.0/8-4.5

Drive Data		
	Design	Actual
Motor Sheave Size	-	1VL40
Motor Bore Size	-	5/8"
Fan Sheave Size	-	6.5"
Fan Sheave Bore	-	1"
Belt CL Distance	-	21"
Num of Belts	-	1
Belt Size	-	AX56

Test Data		
	Design	Actual
CFM	600	612
Fan RPM	867	913
Fan Rotation	-	CCW
Motor RPM	-	1783
RL Voltage	-	118
RL Amperage	-	7.5
Suction ESP	-	UTO
Discharge ESP	-	UTO
Total ESP	0.2"	UTO

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Notes:

System/Unit: FAN - Exhaust

Asset: EF2

AREA: RESTROOM

Unit Data		
	Design	Actual
MFG	COOK	BRAOAN
Model Num	GC-146	AE80B-B
Serial Num	-	NL

Test Data		
	Design	Actual
CFM	75	74

Motor Data		
	Design	Actual
Motor MFG	-	NL
Horsepower	33.1W	NL
Motor Rpm	-	NL
Phase	1	1
Voltage (rated)	120	120
Amperage (rated)	-	0.3

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Notes: (1) Single Speed
(2) Motor data taken from unit label

System/Unit: FAN - Exhaust

Asset: EF3

AREA: RESTROOM

Unit Data		
	Design	Actual
MFG	COOK	BRAOAN
Model Num	GC-146	AE80B-B
Serial Num	-	NL

Test Data		
	Design	Actual
CFM	75	43

Motor Data		
	Design	Actual
Motor MFG	-	NL
Horsepower	33.1W	NL
Motor Rpm	-	NL
Phase	1	1
Voltage (rated)	120	120
Amperage (rated)	-	0.3

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Notes: (1) Single Speed
(2) Motor data taken from unit label

System/Unit: FAN - Exhaust

Asset: EF4

AREA: MOP SINK

Unit Data		
	Design	Actual
MFG	COOK	BRAOAN
Model Num	GC-146	AE80B-B
Serial Num	-	NL

Test Data		
	Design	Actual
CFM	75	54

Motor Data		
	Design	Actual
Motor MFG	-	NL
Horsepower	33.1W	NL
Motor Rpm	-	NL
Phase	1	1
Voltage (rated)	120	120
Amperage (rated)	-	0.3

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Notes: (1) Single Speed
(2) Motor data taken from unit label

System/Unit: Kitchen Hood

Asset: HD1

AREA:

Unit Data		
	Design	Actual
MFG	NA	WOOD STONE
Model Num	NA	WS-FD-9660-RFG-LR-IR-NG
Serial Num	-	0149
Type	-	PIZZA OVEN
Hood length	-	12" ROUND
Hood Width	-	12" ROUND

Test Data		
	Design	Actual
Exhaust CFM	600	614

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Notes: