Report By:

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

Report: TAB Report

Function: Test, Adjust, & Balance

Date: 09/22/2025

Completed By: National TAB

PROJECT

Forge HQ (Kansas City, MO)

1710 Walnut St

Kansas City, MO 64108

Client

Chief Heating & Cooling Inc.

National TAB

Project: Forge HQ (Kansas City, MO)

Table Of Contents

National TAB

Project: Forge HQ (Kansas City, MO)

System/Unit: AHU/RTU

Asset: RTU-2 AREA:211,212 OFFICES

Unit Data		
	Design	**Actual**
MFG	NA	LENNOX
Serial Num	-	5225A01693
Model Num	NA	LGX024S53
Configuration	-	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	13.75X14”
Num PreFilter 1	-	4
PreFilter Size 1	-	16X20X2

Test Data		
	Design	**Actual**
SF CFM	800	781
SF RPM	-	NA
RA CFM	-	781
OA CFM	-	0
RL Voltage	208	210
RL Amperage	4.6	0.92
SF System SetPt	-	28%
OA Damper Position	-	0%

Motor Data		
	Design	**Actual**
Motor MFG	-	NL
Frame	-	NL
Horsepower	0.50	0.50
Motor Rpm	-	NL
Phase	1	1
Rated Voltage	208	240
Rated Amperage	4.6	3.15
Service Factor	-	NL

Performance Data		
	Design	**Actual**
Fan Suction SP	-	-0.13”
Fan Discharge SP	-	0.35”
Total ESP	0.50	0.48”
Fan Total SP	0.52	0.48”
Cooling Coil P.D.	-	*INCLUDES FILTER DROP

National TAB

Project:Forge HQ (Kansas City, MO)

AHU/RTU

Diffuser Supply (GRD)

RTU-2/211,212 OFFICES

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
2-1	212	SB2	8	200	175	185	92.5
2-2	211	SA1	8X2	200	95	195	97.5
2-3	211	SA1	8X2	200	148	213	106.5
2-4	211	SA1	8X2	200	345	188	94.0
Total				800	763	781	97.62%

National TAB

Project: Forge HQ (Kansas City, MO)

System/Unit: AHU/RTU

Asset: RTU-3 AREA:207 OFFICE

Unit Data		
	Design	**Actual**
MFG	NA	LENNOX
Serial Num	-	5225B03053
Model Num	NA	LGX036S5E
Configuration	-	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	14.125X14.25”
Num PreFilter 1	-	4
PreFilter Size 1	-	16X20X2

Test Data		
	Design	**Actual**
SF CFM	750	1084
SF RPM	-	NA
RA CFM	-	1084
OA CFM	-	0
RL Voltage	208	210
RL Amperage	4.6	1.97
SF System SetPt	-	55%
OA Damper Position	-	0%

Motor Data		
	Design	**Actual**
Motor MFG	-	NL
Frame	-	NL
Horsepower	0.50	0.50
Motor Rpm	-	NL
Phase	1	1
Rated Voltage	208	240
Rated Amperage	4.6	3.15
Service Factor	-	NL

Performance Data		
	Design	**Actual**
Fan Suction SP	-	-0.50”
Fan Discharge SP	-	0.31”
Total ESP	0.50	0.81”
Fan Total SP	0.55	0.81”
Cooling Coil P.D.	-	*INCLUDES FILTER DROP

Notes:
Grilles designed for 250 CFM/ton. Proportionally increased airflow to 350 CFM/ton.

Written By: Kalen Kemp on 09/15/2025

National TAB

Project:Forge HQ (Kansas City, MO)

AHU/RTU

Diffuser Supply (GRD)

RTU-3/207 OFFICE

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
3-1	208	N/A	N/A	0	0	0	-
3-2	208	ROUND	K = 1.19	260	248	267	102.7
3-3	208	ROUND	K = 1.19	265	259	277	104.5
3-4	208	ROUND	K = 1.19	260	200	214	82.3
3-5	208	ROUND		265	305	326	123.0
Total				1050	1012	1084	103.24%

Asset	Notes	Date	Written By
3-1	Diffuser deleted.	09/15/2025	Kalen Kemp
3-2	Diffusers left as is. No drafting observed and diffusers serve open area. With deleted diffuser and increased airflow, did not want to cause comfort issue.	09/16/2025	Will Turnbough

National TAB

Project: Forge HQ (Kansas City, MO)

System/Unit: AHU/RTU

Asset: RTU-4 AREA:221 ADA RR

Unit Data		
	Design	**Actual**
MFG	NA	LENNOX
Serial Num	-	5225A01586
Model Num	NA	LGX048S5E
Configuration	-	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	13.75X14.375”
Num OA Filters 2	-	
OA Filter Size 2	-	
Num PreFilter 1	-	4
PreFilter Size 1	-	16X20X2
Num PreFilter 2	-	
PreFilter Size 2	-	
Num Final Filter 1	-	
Final Filter Size 1	-	
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	**Actual**
Motor MFG	-	NL
Frame	-	NL
Horsepower	1.00	1.0
Motor Rpm	-	NL
Phase	1	1
Rated Voltage	208	240
Rated Amperage	7.4	6.13
Service Factor	-	NL

Test Data		
	Design	**Actual**
SF CFM	1200	1347
SF RPM (Initial)	-	
SF RPM	-	
RA CFM	-	1347
OA CFM	-	0
Relief CFM	-	
RL Voltage	208	212
RL Amperage	7.4	4.36
VFD Max SetPt	-	38%
VFD Min SetPt	-	
SF Motor Freq(HZ)	-	22.8 Hz
SF Flow Station (Kv)	-	
OA Flow Station (Kv)	-	
SF System SetPt	-	40% (CURRENTLY 33%)
RA Flow Station (Kv)	-	
OA Damper Position	-	0%
Brake Horse Power	-	

Performance Data		
	Design	**Actual**
Fan Suction SP	-	-0.29”
Fan Discharge SP	-	0.19”
Total ESP	0.50	0.48”
Fan Total SP	0.58	0.48”
Pre-Filter P.D.	-	
Final Filters P.D.	-	
Cooling Coil P.D.	-	
CHW Coil P.D.	-	
PreHeat Coil P.D	-	
Heating Coil P.D.	-	
HW Coil P.D.	-	
Heat Wheel (Sup) P.D.	-	
OA Temp (db/wb)	-	
RA Temp (db/wb)	-	
MA Temp (db/wb)	-	
SA Temp (db/wb)	-	

National TAB

Project:Forge HQ (Kansas City, MO)

AHU/RTU

Diffuser Supply (GRD)

RTU-4/221 ADA RR

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
4-1	204	SB2	8	150	262	277	184.7
4-2	203	SB2	8	150	133	141	94.0
4-3	202	SB2	8	150	138	143	95.3
4-4	205	SB2	8	150	184	189	126.0
4-5	206	SB2	8	150	149	169	112.7
4-6	207	SB2	8	150	153	162	108.0
4-7	210	SA2	8X4	100	70	78	78.0
4-8	210	SA2	8X4	100	76	93	93.0
4-9	210	SA2	8X4 K =0.12	100	89	95	95.0
Total				1200	1254	1347	112.25%

National TAB

Project: Forge HQ (Kansas City, MO)

System/Unit: AHU/RTU

Asset: RTU-5 AREA:219 HALL

Unit Data		
	Design	**Actual**
MFG	NA	LENNOX
Serial Num	-	5225B04438
Model Num	NA	LGX060S5E
Configuration	-	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	14X14.25”
Num OA Filters 2	-	
OA Filter Size 2	-	
Num PreFilter 1	-	4
PreFilter Size 1	-	16X20X2
Num PreFilter 2	-	
PreFilter Size 2	-	
Num Final Filter 1	-	
Final Filter Size 1	-	
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	**Actual**
Motor MFG	-	NL
Frame	-	NL
Horsepower	1.00	1.0
Motor Rpm	-	NL
Phase	1	1
Rated Voltage	208	240
Rated Amperage	-	6.13
Service Factor	-	NL

Test Data		
	Design	**Actual**
SF CFM	2000	1389
SF RPM (Initial)	-	
SF RPM	-	
RA CFM	-	1389
OA CFM	-	0
Relief CFM	-	
RL Voltage	208	211
RL Amperage	7.4	4.34
VFD Max SetPt	-	68%
VFD Min SetPt	-	68%
SF Motor Freq(HZ)	-	40.8 Hz
SF Flow Station (Kv)	-	
OA Flow Station (Kv)	-	
SF System SetPt	-	68% (CURRENTLY 59%)
RA Flow Station (Kv)	-	
OA Damper Position	-	0%
Brake Horse Power	-	

Performance Data		
	Design	**Actual**
Fan Suction SP	-	-0.44”
Fan Discharge SP	-	0.41”
Total ESP	0.50	0.85”
Fan Total SP	0.63	0.85”
Pre-Filter P.D.	-	
Final Filters P.D.	-	
Cooling Coil P.D.	-	
CHW Coil P.D.	-	
PreHeat Coil P.D	-	
Heating Coil P.D.	-	
HW Coil P.D.	-	
Heat Wheel (Sup) P.D.	-	
OA Temp (db/wb)	-	
RA Temp (db/wb)	-	
MA Temp (db/wb)	-	
SA Temp (db/wb)	-	

National TAB

Project:Forge HQ (Kansas City, MO)

AHU/RTU

Diffuser Supply (GRD)

RTU-5/219 HALL

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
5-1	200 BREAK RM	SA2	8X4 = 0.12 K	180	116	118	65.6
5-2	200 BREAK RM	SA2	8X4	180	127	134	74.4
5-3	200 BREAK RM	SA2	8X4	180	106	117	65.0
5-4	200 BREAK RM	SA2	8X4	175	127	115	65.7
5-5	200 BREAK RM	SA2	8X4	180	132	138	76.7
5-6	218 OFFICE	SB2	8	175	149	193	110.3
5-7	217 OFFICE	SB1	6	120	65	90	75.0
5-8	216 OFFICE	SB1	6	120	46	86	71.7
5-9	215 HUDDLE	SB1	6	120	77	88	73.3
5-10	214 PRINT	SB1	6	80	64	114	142.5
5-11	213 OPEN OFFICE	SA1	8X4	60	73	50	83.3
5-12	213 OPEN OFFICE	SA1	8X4	60	79	47	78.3
5-13	213 OPEN OFFICE	SA1	8X4	60	87	49	81.7
5-14	213 OPEN OFFICE	SA1	8X4	60	98	50	83.3
Total				1750	1346	1389	79.37%

National TAB

Project: Forge HQ (Kansas City, MO)

System/Unit: FAN - Exhaust

Asset: EF-1 AREA:101 ADA RR/SHOWER

Unit Data		
	Design	**Actual**
MFG	NA	NA
Model Num	NA	NA

Test Data		
	Design	**Actual**
CFM	125	

National TAB

Project: Forge HQ (Kansas City, MO)

System/Unit: FAN - Exhaust

Asset: EF-2 AREA:116 ADA RR

Unit Data		
	Design	**Actual**
MFG	NA	NA
Model Num	NA	NA

Test Data		
	Design	**Actual**
CFM	75	

National TAB

Project: Forge HQ (Kansas City, MO)

System/Unit: FAN - Exhaust

Asset: EF-3 AREA:221 ADA RR

Unit Data		
	Design	**Actual**
MFG	NA	NA
Model Num	NA	NA

Test Data		
	Design	**Actual**
CFM	75	56

National TAB

Project: Forge HQ (Kansas City, MO)

System/Unit: FAN - Exhaust

Asset: EF-4 AREA:221 ADA RR

Unit Data		
	Design	**Actual**
MFG	NA	NA
Model Num	NA	NA
Serial Num	-	
Type	CEILING	

Motor Data		
	Design	**Actual**
Motor MFG	-	
Frame	-	
Horsepower	21W	
Motor Rpm	1194	
Phase	1	
Voltage (rated)	208	
Amperage (rated)	-	
Service Factor	-	

Test Data		
	Design	**Actual**
CFM	75	
Motor Frequency	-	
System SetPt	-	
RL Voltage	208	
RL Amperage	-	
Suction ESP	-	
Discharge ESP	-	
Total ESP	0.50	
Brake Horse Power	-	

National TAB

Project: Forge HQ (Kansas City, MO)

System/Unit: Split Sys Furnace

Asset: FCU-1 AREA:FLOOR1 NORTH

Unit Data		
	Design	**Actual**
MFG	NA	LENNOX
Model Num	NA	ML196UH110XE60C
Serial Num	-	1725C22170
Configuration	-	VERTICAL
Filter Size Size 1	-	1 - 24x24x1

Motor Data		
	Design	**Actual**
Motor MFG	-	NA
Frame	-	NA
Horsepower	1.0	1
Motor Rpm	-	NA
Phase	1	1
Voltage	120	120
Amperage	-	10.9

Test Data		
	Design	**Actual**
SF CFM	1581	
Motor Speed SetPt	-	HIGH SPEED
RL Voltage	120	
RL Amperage	-	
RA CFM	-	
OA CFM	-	

Performance Data		
	Design	**Actual**
Suction ESP	-	
Discharge ESP	-	
Total ESP	0.50	

National TAB

Project:Forge HQ (Kansas City, MO)

Split Sys Furnace

Diffuser Supply (GRD)

FCU-1/FLOOR1 NORTH

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
F1-1	102 FITNESS	SA1	8X2	55	58	61	110.9
F1-2	102 FITNESS	SA1	8X2	55	61	58	105.5
F1-3	102 FITNESS	SA1	8X2	55	61	70	127.3
F1-4	102 FITNESS	SA1	8X2	55	51	69	125.5
F1-5	105 BREAK AREA	SC1	8	145	154	136	93.8
F1-6	105 BREAK AREA	SA1	8X2	75	66	87	116.0
F1-7	105 BREAK AREA	SA1	8X2	75	73	77	102.7
F1-8	105 BREAK AREA	SA1	8X2	75	71	78	104.0
F1-9	105 BREAK AREA	SA1	8X2	75	75	89	118.7
F1-10	105 BREAK AREA	SA1	8X2	75	75	95	126.7
F1-11		SA1	8X2	75	48	55	73.3
F1-12		SA1	8X2	75	32	36	48.0
F1-13		SA1	8X2	75	39	47	62.7
F1-14		SA1	8X2	75	63	66	88.0
F1-15		SA1	8X2	75	61	76	101.3
F1-16		SA1	8X2	75	67	74	98.7
F1-17		SA1	8X2	75	62	74	98.7
Total				1265	1117	1248	98.66%

National TAB

Project: Forge HQ (Kansas City, MO)

System/Unit: Split Sys Furnace

Asset: FCU-2 AREA:FLOOR1 SOUTH

Unit Data		
	Design	**Actual**
MFG	NA	LENNOX
Model Num	NA	ML196UH110XE60C
Serial Num	-	1725C22174
Configuration	-	VERTICAL
Filter Size Size 1	-	1-24x24x1

Motor Data		
	Design	**Actual**
Motor MFG	-	NA
Frame	-	NA
Horsepower	1.0	1
Motor Rpm	-	NA
Phase	1	1
Voltage	120	120
Amperage	-	10.9

Test Data		
	Design	**Actual**
SF CFM	1581	1372
Motor Speed SetPt	-	
RL Voltage	120	NA
RL Amperage	-	8.19
RA CFM	-	
OA CFM	-	0

Performance Data		
	Design	**Actual**
Suction ESP	-	-0.22"
Discharge ESP	-	0.12"
Total ESP	0.50	0.34"

National TAB

Project:Forge HQ (Kansas City, MO)

Split Sys Furnace

Diffuser Supply (GRD)

FCU-2/FLOOR1 SOUTH

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
F2-1	117 WELLNESS	SB1	6	50	117	124	248.0
F2-2	118 PRINT	SB1	6	50	101	93	186.0
F2-3	111 OPEN OFICE	SA1	8X2	75	27	18	24.0
F2-4	111 OPEN OFFICE	SA1	8X2	75	29	16	21.3
F2-5	112 MAIN HALL	SA1	8X2	75	39	33	44.0
F2-6	112 MAIN HALL	SA1	8X2	75	32	25	33.3
F2-7	112 MAIN HALL	SA1	8X2	75	50	44	58.7
F2-8	112 MAIN HALL	SA1	8X2	75	48	46	61.3
F2-9	113 OFFICE	SB1	6	100	98	96	96.0
F2-10	114 STORAGE	SB2	8	150	262	147	98.0
F2-11	101 ADA RR/SHOWER	SB1	6	75	98	112	149.3
F2-12	111 OPEN OFFICE	SA1	8X2	50	37	35	70.0
F2-13	111 OPEN OFFICE111 OPEN OFFICE	SA1	8X2	50	54	47	94.0
F2-14	111 OPEN OFFICE	SA1	8X2	50	55	72	144.0
F2-15	111 OPEN OFFICE	SA1	8X2	50	62	60	120.0
F2-16	111 OPEN OFFICE	SA1	8X2	50	63	65	130.0
F2-17	110 OFFICE	SB2	8	200	168	160	80.0
F2-18	109 HUDDLE	SB2	8	150	60	48	32.0
F2-19	108 RECEPTION	SA1	8X2	100	46	40	40.0
F2-20	108 RECEPTION	SA1	8X2	100	49	45	45.0
F2-21	108 RECEPTION	SA1	8X2	100	57	46	46.0
Total				1775	1552	1372	77.3%

Asset	Notes	Date	Written By
F2-1	-NO DAMPER INSTALLED. UNABLE TO BALANCE	09/16/2025	Kalen Kemp
F2-2	-NO DAMPER INSTALLED. UNABLE TO BALANCE.	09/16/2025	Kalen Kemp
F2-11	-NO DAMPER INSTALLED. UNABLE TO BALANCE.	09/16/2025	Kalen Kemp
F2-15	-UNABLE TO SAFELY ACCESS GRILLE. COULD NOT BALANCE.	09/16/2025	Kalen Kemp
F2-16	UNABLE TO SAFELY ACCESS GRILLE. COULD NOT BALANCE.	09/16/2025	Kalen Kemp