Report By:

National TAB - Kansas City
1126 Swift St
N Kansas City, MO 64116

NATIONAL TAB INTELLIGENCE

Certified TAB Report
Function: Test, Adjust, & Balance
Date: 07/31/2024

PROJECT

Maysville School Reno (Maysville, MO)

601 West Main Street

Maysville, MO 64469

Client

HK Quality

1105 North 3rd St.

St. Joseph, MO 64501

National TAB

Project: Maysville School Reno (Maysville, MO)

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Maysville School Reno (Maysville, MO)

PROJECT TEAM MEMBERS

Architect/Engineer/Consultant:	Lankford-Fendler & Associates 1730 Walnut Street Kansas City, MO, 64108
Mechanical Contractor:	HK Quality 1105 North 3rd St. St. Joseph, MO, 64501
Test, Adjust, & Balance:	National TAB Intelligence - Kansas City 1126 Swift St North Kansas City, MO, 64116

CERTIFICATION

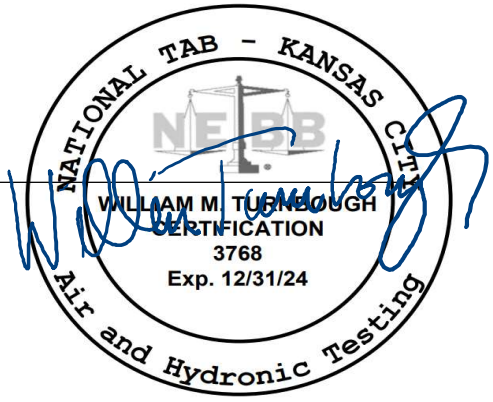
PROJECT: Maysville School Reno

The data presented in this report is a record of system measurements and final adjustments that have been obtained in accordance with the current edition of the NEBB Procedural Standard for Testing, Adjusting and Balancing of Environmental Systems. The measurements shown, and the information given, in this report are certified to be accurate and complete, at the time and date information was gathered. Any variances from design quantities, which exceed NEBB tolerances, are noted in the TAB report project summary.

NEBB TAB FIRM:	National TAB - Kansas City
REGISTRATION NO:	3768
CERTIFIED BY:	Will Turnbough
DATE:	7/31/2024

Submitted and Certified by:

NEBB TAB FIRM:	National TAB - Kansas City
TAB PROFESSIONAL:	Will Turnbough
REGISTRATION NO:	CP-24289
CERTIFICATION EXP:	12/31/2024



1126 Swift St
North Kansas City, MO 64116
[855] 682 6822

Summary and Remarks
The scope of the project was to balance new diffusers on 7 existing split systems and 3 existing RTU's, along with 4 new exhaust fans.

RTU-1 airflow was designed for 1200 CFM (300 CFM/ton). Balanced to 1482 CFM to ensure that the coil would not freeze. Diffuser in the corridor was not installed on this unit, so airflow was distributed to the remaining diffusers on the system.

RTU-2 diffuser in the corridor was not installed on this unit, so airflow was distributed to the remaining diffusers on the system.

RTU-3 airflow was designed for 950 CFM (238 CFM/ton). Balanced to 1295 CFM to ensure that the coil would not freeze. Diffuser in the corridor was not installed on this unit, so airflow was distributed to the remaining diffusers on the system.

FCU-1 successfully balanced to design.

FCU-2 airflow was designed for 900 CFM (225 CFM/ton). Balanced to 1128 CFM to ensure that the coil would not freeze. Airflow still lower than preferred but is set to high speed.

FCU-3 is operating at 899 CFM out of design of 1400 CFM. Ensured all dampers were fully open. The blower compartment is dirty with dry wall dust. Unable to see the evaporator coil but likely it is dirty and recommend that it is cleaned.

FCU-4 is operating at 1324 CFM out of design of 1650 CFM. Ensured all dampers were fully open. Unable to see the evaporator coil but possible it is dirty and recommend that it is cleaned. The motor is loose on this unit as well and needs to be secured. When the unit shuts down, the squirrel cage rubs on the housing.

FCU-5 was successfully balanced to total flow. The diffuser in the hallway was not installed so the airflow was distributed proportionally to the remaining diffusers on the system.

FCU-6 successfully balanced to design.

FCU-7 is a 3 ton unit designed for 600 CFM. Left airflow above design to help ensure that the coil will not freeze. It is still lower than preferred (907 CFM) but the motor was wired for high speed.

EF-1 successfully balanced to design.

EF-2 successfully balanced to total design. The two individual grilles are slightly unbalanced and no dampers are installed. It's not anticipated to be an issue since they serve the same area.

EF-3 airflow is 65 CFM out of design of 50 CFM. Single speed fan with no adjustment.

EF-6 airflow is 69 CFM out of design of 50 CFM. Single speed fan with no adjustment.

National TAB

Project: Maysville School Reno (Maysville, MO)

System/Unit: AHU/RTU

Asset: RTU-1 AREA:107

Unit Data		
	Design	**Actual**
MFG	NA	TRANE
Serial Num	-	172112015L
Model Num	NA	YHC047E3RMA0BT0
Configuration	-	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	36x15
Num PreFilter 1	-	4
PreFilter Size 1	-	16x25x2

Test Data		
	Design	**Actual**
SF CFM	1200	1482
RA CFM	1050	1322
OA CFM	150	160
RL Voltage	-	209
RL Amperage	-	4.1
OA Damper Position	-	1/2"

Motor Data		
	Design	**Actual**
Motor MFG	-	GENTEQ
Frame	-	NA
Horsepower	-	1
Rated Voltage	-	208/230
Rated Amperage	-	9

Completed By: Will Turnbough on 07/30/2024

Notes:
4 TON UNIT WITH DIFFUSER DESIGN OF 1200 CFM (300 CFM/TON). DESIGNED AIRFLOW IS TOO LOW AND WILL CAUSE COIL TO FREEZE. INCREASED AIRFLOW BASED ON NOMINAL EQUIPMENT SIZE FOR BETTER PERFORMANCE AND PROPORTIONALLY BALANCED DIFFUSER AIRFLOWS.

Written By: Will Turnbough on 07/31/2024

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Project:Maysville School Reno (Maysville, MO)

Diffuser Supply (GRD)

RTU-1/107

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
1-1	110	SA1	8	214	282	196	91.6
1-2	110	SA1	8	214	322	193	90.2
1-3	136	SA1	8	0			-
1-4	110	SA1	8	214	191	199	93.0
1-5	110	SA1	8	214	206	206	96.3
1-6	113	SA1	8	214	188	228	106.5
1-7	107	SA1	8	214	204	234	109.3
1-8	107	SA1	8	214	178	226	105.6
Total				1498	1571	1482	98.93%

Asset	Notes	Date	Written By
1-3	DIFFUSER NOT INSTALLED ON THIS UNIT. DISTRIBUTED AIRFLOW TO THE REMAINING DIFFUSERS TO MAINTAIN TOTAL AIRFLOW.	07/31/2024	Will Turnbough

National TAB

Project: Maysville School Reno (Maysville, MO)

System/Unit: AHU/RTU

Asset: RTU-2 AREA:105

Unit Data		
	Design	**Actual**
MFG	NA	TRANE
Serial Num	-	172112027I
Model Num	NA	YHC047E3RMA0BT0
Configuration	-	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	36X15
Num PreFilter 1	-	4
PreFilter Size 1	-	16X25X2

Test Data		
	Design	**Actual**
SF CFM	1350	1327
RA CFM	1150	1142
OA CFM	200	185
RL Voltage	-	7.2
RL Amperage	-	206
OA Damper Position	-	1/4" OPEN

Motor Data		
	Design	**Actual**
Motor MFG	-	GENTEQ
Horsepower	-	1
Rated Voltage	-	9
Rated Amperage	-	208/230

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National TAB

Project:Maysville School Reno (Maysville, MO)

Diffuser Supply (GRD)

RTU-2/105

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
2-1	105	SA1	8	168	419	162	96.4
2-2	107	SA1	8	168	409	159	94.6
2-3	107	SA1	8	168	432	158	94.0
2-4	136	SA1	8	0			-
2-5	105	SA1	8	168	68	176	104.8
2-6	105	SA1	8	168	67	163	97.0
2-7	113	SA1	8	168	72	171	101.8
2-8	105	SA1	8	168	63	156	92.9
2-9	105	SA1	8	168	74	182	108.3
Total				1344	1604	1327	98.74%

Asset	Notes	Date	Written By
2-4	DIFFUSER NOT INSTALLED ON THIS UNIT. DISTRIBUTED AIRFLOW TO THE REMAINING DIFFUSERS TO MAINTAIN TOTAL AIRFLOW.	07/31/2024	Will Turnbough

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Project: Maysville School Reno (Maysville, MO)

System/Unit: AHU/RTU

Asset: RTU-3 AREA:112

Unit Data		
	Design	**Actual**
MFG	NA	TRANE
Serial Num	-	172112003L
Model Num	NA	YHC047E3RMA0BT0
Configuration	-	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	36X15
Num PreFilter 1	-	4
PreFilter Size 1	-	16X25X2

Test Data		
	Design	**Actual**
SF CFM	950	1295
RA CFM	650	1016
OA CFM	300	279
RL Voltage	-	209
RL Amperage	-	3.2
OA Damper Position	-	1/2"

Motor Data		
	Design	**Actual**
Motor MFG	-	GENTEQ
Horsepower	-	1
Rated Voltage	-	208/230
Rated Amperage	-	9

Completed By: Will Turnbough on 07/31/2024

Notes:
4 TON UNIT WITH DIFFUSER DESIGN OF 950 CFM (238 CFM/TON). DESIGNED AIRFLOW IS TOO LOW AND WILL CAUSE COIL TO FREEZE. INCREASED AIRFLOW BASED ON NOMINAL EQUIPMENT SIZE FOR BETTER PERFORMANCE AND PROPORTIONALLY BALANCED DIFFUSER AIRFLOWS.

Written By: Will Turnbough on 07/31/2024

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Project:Maysville School Reno (Maysville, MO)

Diffuser Supply (GRD)

RTU-3/112

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
3-1	115	SA1	8	250	241	240	96.0
3-2	115	SA1	8	250	224	240	96.0
3-3	115	SA1	8	250	138	255	102.0
3-4	115	SA1	8	250	207	274	109.6
3-5	HALL	SA1	8		38		-
3-6	112	SA1	8	150	313	139	92.7
3-7	112	SA1	8	150	332	147	98.0
Total				1300	1493	1295	99.62%

Completed By: Will Turnbough on 07/30/2024

Asset	Notes	Date	Written By
3-5	DIFFUSER NOT INSTALLED ON THIS UNIT. DISTRIBUTED AIRFLOW TO THE REMAINING DIFFUSERS TO MAINTAIN TOTAL AIRFLOW.	07/31/2024	Will Turnbough

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Project: Maysville School Reno (Maysville, MO)

System/Unit: Fan Coil

Asset: FCU-1 AREA:106

Unit Data		
	Design	**Actual**
MFG	NA	TRANE
Model Num	NA	TUH1C100A9H41BA
Serial Num	-	17191KGX2G
Type	-	SPLIT SYSTEM
Configuration	-	VERTICAL
Num Filters Size 1	-	1
Filter Size 1	-	16X25X1

Test Data		
	Design	**Actual**
SFAN CFM	1200	1236
Motor Speed SetPt	-	HIGH
RL Voltage	-	121
RL Amperage	-	4.7

Motor Data		
	Design	**Actual**
Motor MFG	-	NA
Frame	-	NA
Horsepower	-	NA
Motor Rpm	-	NA
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	NA
Service Factor	-	NA
Brake Horse Power	-	NA

Completed By: Will Turnbough on 07/31/2024

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Project:Maysville School Reno (Maysville, MO)

Diffuser Supply (GRD)

FCU-1/106

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
F1-1	104	SA1	8	150	214	156	104.0
F1-2	104	SA1	8	150	231	157	104.7
F1-3	104	SA1	8	150	147	141	94.0
F1-4	104	SA1	8	150	167	159	106.0
F1-6	106	SA1	8	200	131	194	97.0
F1-7	106	SA1	8	200	207	214	107.0
F1-8	106	SA1	8	200	138	215	107.5
Total				1200	1235	1236	103%

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Project: Maysville School Reno (Maysville, MO)

System/Unit: Fan Coil

Asset: FCU-2 AREA:108

Unit Data		
	Design	**Actual**
MFG	NA	TRANE
Model Num	NA	TUH1C100A9H41BA
Serial Num	-	17183UHX2G
Type	-	SPLIT SYSTEM
Configuration	-	VERTICAL
Num Filters Size 1	-	1
Filter Size 1	-	16X25X1

Test Data		
	Design	**Actual**
SFAN CFM	900	1128
Motor Speed SetPt	-	HIGH
RL Voltage	-	122
RL Amperage	-	5.7

Motor Data		
	Design	**Actual**
Motor MFG	-	NA
Frame	-	
Horsepower	-	
Motor Rpm	-	
Phase	-	
Voltage (rated)	-	115
Amperage (rated)	-	
Service Factor	-	
Brake Horse Power	-	

Completed By: Will Turnbough on 07/31/2024

Notes:
4 TON CONDENSER

Written By: Will Turnbough on 07/30/2024

Diffuser Supply (GRD)

FCU-2/108

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
F2-1	108	SA1	8	150	261	190	126.7
F2-2	108	SA1	8	150	176	180	120.0
F2-3	109	SA1	8	150	160	178	118.7
F2-4	109	SA1	8	150	68	175	116.7
F2-5	108	SA1	8	150	309	203	135.3
F2-6	109	SA1	8	150	88	202	134.7
Total				900	1062	1128	125.33%

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Project: Maysville School Reno (Maysville, MO)

System/Unit: Fan Coil

Asset: FCU-3 AREA:103

Unit Data		
	Design	**Actual**
MFG	NA	TRANE
Model Num	NA	AM88960805CNAA
Serial Num	-	1602066165
Type	-	SPLIT SYSTEM
Configuration	-	VERTICAL
Num Filters Size 1	-	1
Filter Size 1	-	20X25X1

Test Data		
	Design	**Actual**
SFAN CFM	1400	899
Motor Speed SetPt	-	HIGH
RL Voltage	-	122
RL Amperage	-	7.2

Motor Data		
	Design	**Actual**
Horsepower	-	NA
Motor Rpm	-	NA
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	NA

Unit Data - PHOTO LOG

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Completed By: Will Turnbough on 07/30/2024

Notes:
BLOWER COMPARTMENT DIRTY. NO VISIBLE ACCESS TO THE EVAPORATOR COIL, BUT LIKELY IT IS DIRTY. RECOMMEND CLEANING. LEFT DAMPERS OPEN TO MAXIMIZE AIRFLOW.

Written By: Will Turnbough on 07/31/2024

Diffuser Supply (GRD)

FCU-3/103

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
F3-1	102	SA1	8	150	119	119	79.3
F3-2	102	SA1	8	150	122	122	81.3
F3-3	102	SA1	8	150	118	118	78.7
F3-4	102	SA1	8	150	94	94	62.7
F3-5	103	SA1	8	200	113	113	56.5
F3-6	103	SA1	8	200	116	116	58.0
F3-7	103	SA1	8	200	109	109	54.5
F3-8	103	SA1	8	200	98	98	49.0
Total				1400	889	889	63.5%

National TAB

Project: Maysville School Reno (Maysville, MO)

System/Unit: Fan Coil

Asset: FCU-4 AREA:100

Unit Data		
	Design	**Actual**
MFG	NA	TRANE
Model Num	NA	AM88960804CNAA
Serial Num	-	1503362996
Type	-	SPLIT SYSTEM
Configuration	-	VERTICAL
Num Filters Size 1	-	1
Filter Size 1	-	20X25X1

Test Data		
	Design	**Actual**
SFAN CFM	1650	1324
Motor Speed SetPt	-	HIGH
RL Voltage	-	121
RL Amperage	-	6.3

Motor Data		
	Design	**Actual**
Horsepower	-	0.5
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	7.1

Completed By: Will Turnbough on 07/30/2024

Notes:
MOTOR IS LOOSE. SQUIRREL CAGE RUBBING WHEN UNIT SHUTS DOWN.
UNIT DOES NOT APPEAR DIRTY, BUT RECOMMEND CLEANING COIL SIMLIAR TO FCU-3.
DAMPERS LEFT FULLY OPEN TO MAXIMIZE AIRFLOW ON THE SYSTEM.

Written By: Will Turnbough on 07/31/2024

Diffuser Supply (GRD)

FCU-4/100

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
F4-1	133	SA1	8	150	133	133	88.7
F4-2	133	SA1	8	150	128	128	85.3
F4-3	131	SA1	8	150	125	125	83.3
F4-4	131	SA1	8	150	82	82	54.7
F4-5	133	SA1	8	150	140	140	93.3
F4-6	133	SA1	8	150	123	123	82.0
F4-7	130	SA1	8	150	146	146	97.3
F4-8	132	SA1	8	150	128	128	85.3
F4-9	132	SA1	8	150	115	115	76.7
F4-10	113	SA1	8	150	110	110	73.3
F4-11	100	SA1	8	150	94	94	62.7
Total				1650	1324	1324	80.24%

National TAB

Project: Maysville School Reno (Maysville, MO)

System/Unit: Fan Coil

Asset: FCU-5 AREA:HALL

Unit Data		
	Design	**Actual**
MFG	NA	TRANE
Model Num	NA	TUH1B060A9H31BA
Serial Num	-	172127TB2G
Type	-	SPLIT SYSTEM
Configuration	-	VERTICAL

Test Data		
	Design	**Actual**
SFAN CFM	1200	1151
Motor Speed SetPt	-	HIGH
RL Voltage	-	121
RL Amperage	-	5.46

Motor Data		
	Design	**Actual**
Horsepower	-	NA
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	NA

Completed By: Will Turnbough on 07/30/2024

National TAB

Project:Maysville School Reno (Maysville, MO)

Diffuser Supply (GRD)

FCU-5/HALL

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
F5-1	116	SA1	8	150	147	165	110.0
F5-2	113	SA1	8	150	44	136	90.7
F5-3	116	SA1	8	150	196	140	93.3
F5-4	120	SA1	8	150	172	137	91.3
F5-5	117	SA1	8	150	148	145	96.7
F5-6	116	SA1	8	150	98	156	104.0
F5-7	116	SA1	8	150	166	137	91.3
F5-8	119	SA1	8	150	123	135	90.0
F5-9	HALL	SA1	8	0	0	0	-
Total				1200	1094	1151	95.92%

Completed By: Will Turnbough on 07/30/2024

Asset	Notes	Date	Written By
F5-9	NOT INSTALLED ON THIS UNIT.	07/31/2024	Will Turnbough

National TAB

Project: Maysville School Reno (Maysville, MO)

System/Unit: Fan Coil

Asset: FCU-6 AREA:111

Unit Data		
	Design	**Actual**
MFG	NA	TRANE
Model Num	NA	TUH1C100A9H41BA
Serial Num	-	17183UY32G
Type	-	SPLIT SYSTEM
Configuration	-	VERTICAL
Num Filters Size 1	-	1
Filter Size 1	-	16X25X1

Test Data		
	Design	**Actual**
SFAN CFM	950	905
Motor Speed SetPt	-	HIGH
RL Voltage	-	122
RL Amperage	-	5.4

Motor Data		
	Design	**Actual**
Motor MFG	-	NA
Frame	-	NA
Horsepower	NA	0.75
Motor Rpm	-	NA
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	NA
Service Factor	-	NA
Brake Horse Power	-	NA

Completed By: Will Turnbough on 07/31/2024

Diffuser Supply (GRD)

FCU-6/111

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
F6-1	114	SA1	8	150	131	143	95.3
F6-2	114	SA1	8	150	122	141	94.0
F6-3	114	SA1	8	150	57	138	92.0
F6-4	114	SA1	8	150	147	143	95.3
F6-5	113	SA1	8	150	146	141	94.0
F6-6	111	SA1	8	100	63	108	108.0
F6-7	111	SA1	8	100	5	91	91.0
Total				950	671	905	95.26%

National TAB

Project: Maysville School Reno (Maysville, MO)

System/Unit: Fan Coil

Asset: FCU-7 AREA:126

Unit Data		
	Design	**Actual**
MFG	NA	TRANE
Model Num	NA	TUH1B060A9361CB
Serial Num	-	17123RWS2G
Configuration	-	VERTICAL

Test Data		
	Design	**Actual**
SFAN CFM	600	907
Motor Speed SetPt	-	HIGH
RL Voltage	-	121
RL Amperage	-	6.1

Motor Data		
	Design	**Actual**
Horsepower	-	NA
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	NA

Completed By: Will Turnbough on 07/31/2024

Notes:
3 TON UNIT DESIGNED FOR 600 CFM. LEFT FAN COIL ABOVE DESIGN TO ENSURE COIL DIDN'T FREEZE.

Written By: Will Turnbough on 07/31/2024

National TAB

Project:Maysville School Reno (Maysville, MO)

Fan Coil

Diffuser Supply (GRD)

FCU-7/126

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	126	SA1	8	150	1	272	272	225	150.0
SGRD2	126	SA1	8	150	1	178	178	245	163.3
SGRD3	125	SA1	8	150	1	225	225	216	144.0
SGRD4	124	SA1	8	150	1	221	221	221	147.3
Total				600		896	896	907	151.17%

National TAB

Project: Maysville School Reno (Maysville, MO)

System/Unit: FAN - Exhaust

Asset: EF-1 AREA:111

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	G-090-VG-1-17-X
Serial Num	-	24836804
Type	-	DOWNBLAST

Motor Data		
	Design	**Actual**
Motor MFG	-	VARIGREEN
Horsepower	-	0.10
Motor Rpm	-	300-1750
Phase	-	1
Voltage (rated)	-	115/208-230
Amperage (rated)	-	1.38/0.84

Test Data		
	Design	**Actual**
CFM	400	414
Fan RPM	-	6 ON DIAL
RL Voltage	-	NA
RL Amperage	-	NA
Suction ESP	-	-0.23"
Discharge ESP	-	ATM
Total ESP	-	0.23"

Completed By: Will Turnbough on 07/30/2024

National TAB

Project:Maysville School Reno (Maysville, MO)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF-1/111

Asset								
Asset Name	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
E1-1	EA1	8	200		293	259	195	97.5
E1-2	EA1	8	200		316	338	219	109.5
Total			400		609	597	414	103.5%

National TAB

Project: Maysville School Reno (Maysville, MO)

System/Unit: FAN - Exhaust

Asset: EF-2 AREA:111

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	G-090-VG-1-17-X
Serial Num	-	24836805
Type	-	DOWNBLAST

Motor Data		
	Design	**Actual**
Motor MFG	-	VARIGREEN
Horsepower	-	0.10
Motor Rpm	-	300-1750
Phase	-	1
Voltage (rated)	-	115/208-230
Amperage (rated)	-	1.38/0.84

Test Data		
	Design	**Actual**
CFM	400	401
Fan RPM	-	6 ON DIAL
RL Voltage	-	NA
RL Amperage	-	NA
Suction ESP	-	-0.19"
Discharge ESP	-	ATM
Total ESP	-	0.19"

Completed By: Will Turnbough on 07/31/2024

National TAB

Project:Maysville School Reno (Maysville, MO)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF-2/111

Asset								
Asset Name	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
E2-1	EA1	8	200		259	173	173	86.5
E2-2	EA1	8	200		338	228	228	114.0
Total			400		597	401	401	100.25%

Asset	Notes	Date	Written By
E2-2	NO DAMPER INSTALLED. AIRFLOW SLIGHTLY HIGH. TOTAL FLOW FOR RESTROOM IS WITHIN DESIGN.	07/31/2024	Will Turnbough

National TAB

Project: Maysville School Reno (Maysville, MO)

System/Unit: FAN - Exhaust

Asset: EF-3 AREA:101

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	SP-A90-QD
Type	CEILING	CEILING

Test Data		
	Design	**Actual**
CFM	50	65

Completed By: Will Turnbough on 07/31/2024

Notes:
SINGLE SPEED DIRECT DRIVE FAN.

Written By: Will Turnbough on 07/31/2024

National TAB

Project: Maysville School Reno (Maysville, MO)

System/Unit: FAN - Exhaust

Asset: EF-6 AREA:118

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	SP-A90-QD
Type	CEILING	CEILING

Test Data		
	Design	**Actual**
CFM	50	69

Completed By: Will Turnbough on 07/30/2024

Notes:
SINGLE SPEED DIRECT DRIVE FAN.

Written By: Will Turnbough on 07/31/2024

Abbreviation List

A = Area (ft^2)	S.F. = Service Factor
AHU = Air Handling Unit	SF = Supply Fan
A_k = Effective Area	SP = Static Pressure
BHP = Brake Horsepower (IP) HP	SR = Supply Register
Btu = British Thermal Unit	T = Temperature
Btu/h = Btuh = BTUH = BTU/Hour	T_{ma} = Mixed Air Temperature
CL = Center Distance (used in belt formula)	T_{oa} = Outside Air Temperature
CD = Ceiling Diffuser	T_{ra} = Return Air Temperature
CF = Correction Factor	H = Head (in wc, ft wc, psi)
CFM = Volumetric Flow: Cubic Feet Per Minute	h = Enthalpy
CO2 = Carbon Dioxide	HP = Horsepower
CO = Carbon Monoxide	hr = Hour
C_v = Flow Constant	K_v = Flow constant (SI)
d = Diameter (in.) IP	kW = Kilowatt = 1000 Watts
Δ = Difference or Change (Final - Initial)	LAT = Leaving Air Temperature
DB = Dry Bulb	lb = Pounds
EA = Exhaust Air	LWT = Leaving Water Temperature
EAT = Entering Air Temperature	ma = Mixed Air
EF = Exhaust Fan	MIN = Minimum
Eff = Efficiency	MAX = Maximum
EG = Exhaust Grille	N/A = Not Applicable
ESP = External Static Pressure	NA = No Access
EWT = Entering Water Temperature	NL = Not Listed
°F = Degrees Fahrenheit, °F	NPSHA = Net Positive Suction Head Available
FPB = Fan Powered Box	NS = Not Specified
FLA = Full Load Amps	OA = Outside Air
fpm = Feet per Minute (fpm)	OAT = Outside Air Temperature
ft = Foot	PD = Sheave Pitch Diameter
gal = Gallons	P.D. = Pressure Drop
GPM = Gallons Per Minute (GPM)	PF = Power Factor
h = Enthalpy (BTU/lb dry air)	SG = Supply Grille
P = Pressure	SR = Supply Register
ppm = parts per million	TP = Total Pressure
psi = Pounds Per Square Inch	T_{ra} = Return Air Temperature
psid = PSI Differential	TS = Tip Speed (fpm) IP, (m/s) SI
r = Radius (in)	TSP = Total Static Pressure
$\%_{ra}$ = % of Return Air	V = Velocity
RA = Return Air	VAV = Variable Air Volume
RAT = Return Air Temperature	VD = Volume Damper
RF = Return Fan	VFD = Variable Frequency Drive
RG = Return Grille	W = Watt
RH = Relative Humidity	WB = Wet Bulb
RPM = Revolutions Per Minute	wg = wc = water gauge = water column
RTU = Roof Top Unit	WHP = Water Horsepower (IP)
SA = Supply Air	ω = Humidity Ratio

National TAB

Testing, Adjusting, and Balancing Equipment

Function		Range	Minimum Accuracy	Instrument Information	Calibration Date	Date Due
AIR	AIR PRESSURE	0 in wg to 10 in wg	2% +/- 0.001 in wg	TSI EBT731 EBT732117009	9/7/2023	9/7/2024
	AIR VELOCITY INSTRUMENT	50 fpm to 3900 fpm	+/- 5 % +/- 7 fpm	TSI EBT731 EBT732117009	9/7/2023	9/7/2024
	DIRECT HOOD READING	100 cfm to 2000 cfm	+/- 5 % +/- 7 cfm	TSI EBT731 EBT732117009	9/7/2023	9/7/2024
TEMPERATURE	AIR METER	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/29/2023	9/29/2024
	AIR PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/29/2023	9/29/2024
	IMMERSION METER	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/29/2023	9/29/2024
	IMMERSION PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/29/2023	9/29/2024
	CONTACT METER	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/29/2023	9/29/2024
	CONTACT PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/29/2023	9/29/2024
HUMIDITY	HUMIDITY PROBE	10 % RH to 90 % RH	3% of reading	Cooper SRH77A S/N 100516003	9/29/2023	9/29/2024
ELECTRICAL	VOLTAGE MEASUREMENT	0 VAC to 600 VAC	2 % reading +/- 5 digits	Klein Tools CL800 S/N 1220C-C1	9/29/2023	9/29/2024
	AMPERAGE MEASUREMENT	0 Amperers to 100 Amperes	2 % reading +/- 5 digits	Klein Tools CL800 S/N 1220C-C1	9/29/2023	9/29/2024
ROTATION	ROTATION MEASUREMENT	60 rpm to 5000 rpm	2 % reading 2 rpm	Shimpo DT 207Lp S/N D1690029R	9/29/2023	9/29/2024

Report of Calibration

Kansas City Calibration Lab., Inc.
8847 Long Street
Lenexa, Kansas 66215
Telephone: (913) 541-0629 Internet: www.kccl.com Email: service@kccl.com

UNIT UNDER TEST:	TSI EBT731 Diferental Digital Meter	TEST RESULT:	PASS
SERIAL NUMBER:	EBT732117009	PERFORMED ON:	9/7/2023
ASSET NUMBER:	EBT732117009	DATA TYPE:	FOUND-LEFT
PROCEDURE NAME:	ADM-XXX / EBT-XXX-XX 2.0% Reading : 1 Yr Cert CPC(	TEMPERATURE:	23.8°C
PROCEDURE REV.:	20210930C	HUMIDITY:	44 %
CALIBRATED BY:	Bart Schwartz	BAROMETRIC:	28.93 inHg
P.O. NUMBER:		**Recalibration Date**	
CUSTOMER:	National TAB 1126 Swift Street NKC, MO 64116	**September 07, 2024**	
		Calibration Number:	00077333
Cal Seals Intact:	Yes	Previous Calibration Date:	**August 12, 2022**

K.C. Calibration Lab., Inc. certifies that the above listed instrument meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). This calibration is traceable to the International System of Units (SI), throught National Metrology Institutes (NIST, PTB NRC NPL, etc), ratiometric techniques, or natural physical constants. This calibration complies with MIL-STD-45662A and ANSI/NCSL Z540-1-1994.

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Note: Any Test Uncertainty Ratio (TUR) that is less than four to one will appear under the "TUR" heading on the data record. If the TUR meets or exceeds four to one, the field is left blank.

REMARKS:

Standards Used

Asset #	Description	Cal Date	Due Date
41001AR6	Mensor CPC6050 Low & Meduim Pressure Calibrator	3/15/2023	3/15/2024

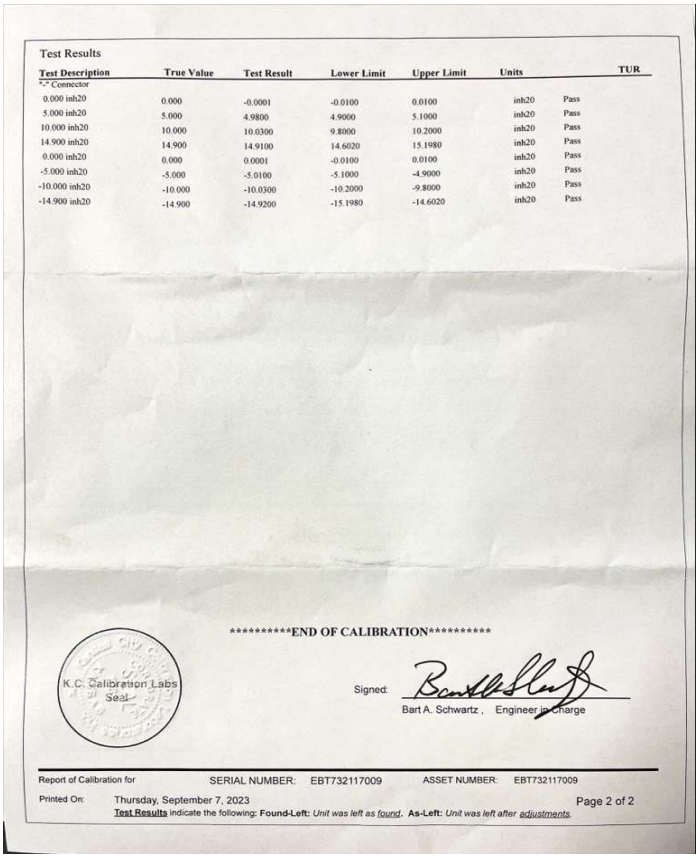
Test Results

Test Description	True Value	Test Result	Lower Limit	Upper Limit	Units	TUR
Vertical Accuracy: ±2.0% ±0.001 Reading INH2O @ 60F						
Reference Documents: Mfr. Manuals						
Internal Barometric Reading: 28.80 inHg						
Version Number is 1.11.1						
"+" Connector						
0.000 inh20	0.000	-0.0005	-0.0100	0.0100	inh20	Pass
5.000 inh20	5.000	5.1000	4.9000	5.1000	inh20	Pass
10.000 inh20	10.000	10.0300	9.8000	10.2000	inh20	Pass
14.900 inh20	14.900	14.9100	14.6020	15.1980	inh20	Pass
0.000 inh20	0.000	-0.0003	-0.0100	0.0100	inh20	Pass
-5.000 inh20	-5.000	-5.0100	-5.1000	-4.9000	inh20	Pass
-10.000 inh20	-10.000	-10.0200	-10.2000	-9.8000	inh20	Pass
-14.900 inh20	-14.900	-14.9600	-15.1980	-14.6020	inh20	Pass

Report of Calibration for SERIAL NUMBER: EBT732117009 ASSET NUMBER: EBT732117009

Printed On: Thursday, September 7, 2023 Page 1 of 2

Test Results indicate the following: **Found-Left:** *Unit was left as found*. **As-Left:** *Unit was left after adjustments*.



Test Results

Test Description	True Value	Test Result	Lower Limit	Upper Limit	Units	TUR
"+" Connector						
0.000 inh20	0.000	-0.0001	-0.0100	0.0100	inh20	Pass
5.000 inh20	5.000	4.9800	4.9000	5.1000	inh20	Pass
10.000 inh20	10.000	10.0300	9.8000	10.2000	inh20	Pass
14.900 inh20	14.900	14.9100	14.6020	15.1980	inh20	Pass
0.000 inh20	0.000	0.0001	-0.0100	0.0100	inh20	Pass
-5.000 inh20	-5.000	-5.0100	-5.1000	-4.9000	inh20	Pass
-10.000 inh20	-10.000	-10.0300	-10.2000	-9.8000	inh20	Pass
-14.900 inh20	-14.900	-14.9200	-15.1980	-14.6020	inh20	Pass

**********END OF CALIBRATION**********

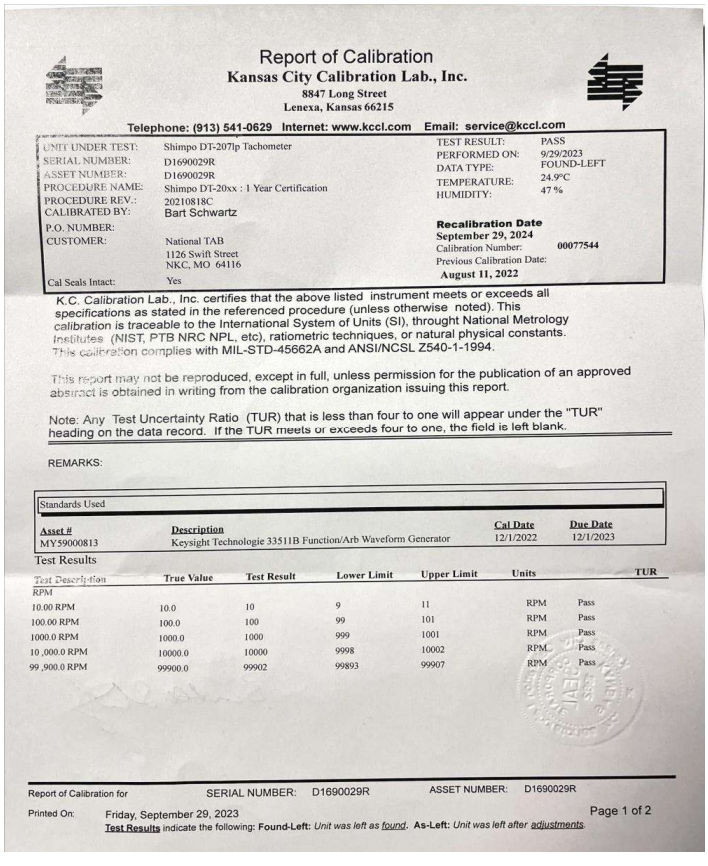
K.C. Calibration Labs Seal

Signed:
Bart A. Schwartz , Engineer in Charge

Report of Calibration for SERIAL NUMBER: EBT732117009 ASSET NUMBER: EBT732117009

Printed On: Thursday, September 7, 2023 Page 2 of 2

Test Results indicate the following: **Found-Left:** *Unit was left as found*. **As-Left:** *Unit was left after adjustments*.



Report of Calibration

Kansas City Calibration Lab., Inc.
8847 Long Street
Lenexa, Kansas 66215
Telephone: (913) 541-0629 Internet: www.kccl.com Email: service@kccl.com

UNIT UNDER TEST:	Shimpo DT-207lp Tachometer	TEST RESULT:	PASS
SERIAL NUMBER:	D1690029R	PERFORMED ON:	9/29/2023
ASSET NUMBER:	D1690029R	DATA TYPE:	FOUND-LEFT
PROCEDURE NAME:	Shimpo DT-20xx : 1 Year Certification	TEMPERATURE:	24.9°C
PROCEDURE REV.:	20210818C	HUMIDITY:	47 %
CALIBRATED BY:	Bart Schwartz		
P.O. NUMBER:		**Recalibration Date**	
CUSTOMER:	National TAB 1126 Swift Street NKC, MO 64116	**September 29, 2024**	
		Calibration Number:	00077544
Cal Seals Intact:	Yes	Previous Calibration Date:	**August 11, 2022**

K.C. Calibration Lab., Inc. certifies that the above listed instrument meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). This calibration is traceable to the International System of Units (SI), throught National Metrology Institutes (NIST, PTB NRC NPL, etc), ratiometric techniques, or natural physical constants. This calibration complies with MIL-STD-45662A and ANSI/NCSL Z540-1-1994.

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Note: Any Test Uncertainty Ratio (TUR) that is less than four to one will appear under the "TUR" heading on the data record. If the TUR meets or exceeds four to one, the field is left blank.

REMARKS:

Standards Used

Asset #	Description	Cal Date	Due Date
MY59000813	Keysight Technologie 33511B Function/Arb Waveform Generator	12/1/2022	12/1/2023

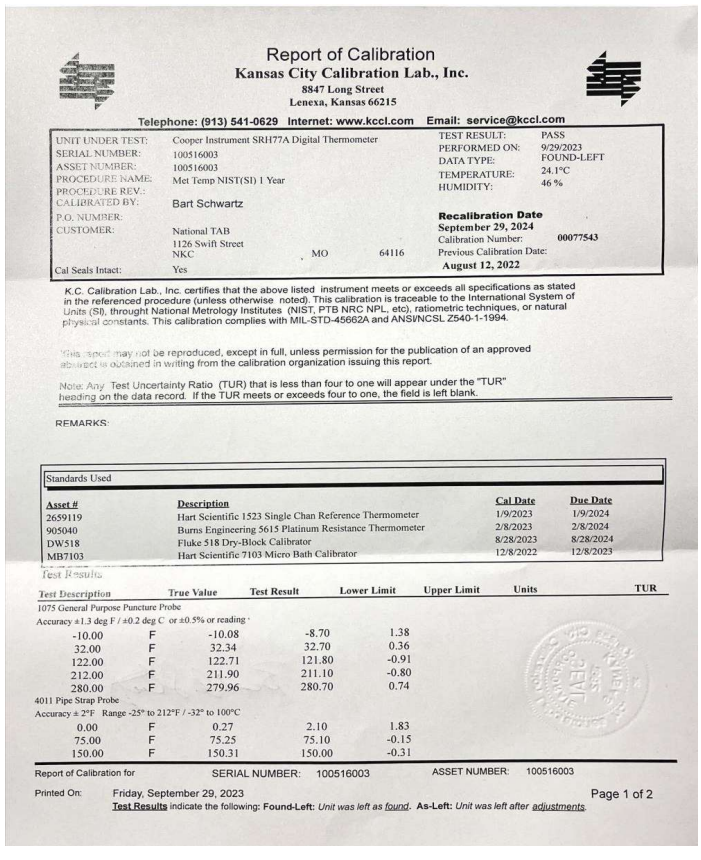
Test Results

Test Description	True Value	Test Result	Lower Limit	Upper Limit	Units	TUR
RPM						
10.00 RPM	10.0	10	9	11	RPM	Pass
100.00 RPM	100.0	100	99	101	RPM	Pass
1000.0 RPM	1000.0	1000	999	1001	RPM	Pass
10 ,000.0 RPM	10000.0	10000	9998	10002	RPM	Pass
99 ,900.0 RPM	99900.0	99902	99893	99907	RPM	Pass

Report of Calibration for SERIAL NUMBER: D1690029R ASSET NUMBER: D1690029R

Printed On: Friday, September 29, 2023 Page 1 of 2

Test Results indicate the following: **Found-Left:** *Unit was left as found*. **As-Left:** *Unit was left after adjustments*.



Report of Calibration

Kansas City Calibration Lab., Inc.
8847 Long Street
Lenexa, Kansas 66215
Telephone: (913) 541-0629 Internet: www.kccl.com Email: service@kccl.com

UNIT UNDER TEST:	Cooper Instrument SRH77A Digital Thermometer	TEST RESULT:	PASS
SERIAL NUMBER:	100516003	PERFORMED ON:	9/29/2023
ASSET NUMBER:	100516003	DATA TYPE:	FOUND-LEFT
PROCEDURE NAME:	Met Temp NIST(SI) 1 Year	TEMPERATURE:	24.1°C
PROCEDURE REV.:		HUMIDITY:	46 %
CALIBRATED BY:	Bart Schwartz		
P.O. NUMBER:		**Recalibration Date**	
CUSTOMER:	National TAB 1126 Swift Street NKC MO 64116	**September 29, 2024**	
		Calibration Number:	00077543
Cal Seals Intact:	Yes	Previous Calibration Date:	**August 12, 2022**

K.C. Calibration Lab., Inc. certifies that the above listed instrument meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). This calibration is traceable to the International System of Units (SI), throught National Metrology Institutes (NIST, PTB NRC NPL, etc), ratiometric techniques, or natural physical constants. This calibration complies with MIL-STD-45662A and ANSI/NCSL Z540-1-1994.

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Note: Any Test Uncertainty Ratio (TUR) that is less than four to one will appear under the "TUR" heading on the data record. If the TUR meets or exceeds four to one, the field is left blank.

REMARKS:

Standards Used

Asset #	Description	Cal Date	Due Date
2659119	Hart Scientific 1523 Single Chan Reference Thermometer	1/9/2023	1/9/2024
905040	Burns Engineering 5615 Platinum Resistance Thermometer	2/8/2023	2/8/2024
DW518	Fluke 518 Dry-Block Calibrator	8/28/2023	8/28/2024
MB7103	Hart Scientific 7103 Micro Bath Calibrator	12/8/2022	12/8/2023

Test Results

Test Description	True Value	Test Result	Lower Limit	Upper Limit	Units	TUR
1075 General Purpose Puncture Probe						
Accuracy ±1.3 deg F / ±0.2 deg C or ±0.5% or reading '						
-10.00	F	-10.08	-8.70	1.38		
32.00	F	32.34	32.70	0.36		
122.00	F	122.71	121.80	-0.91		
212.00	F	211.90	211.10	-0.80		
280.00	F	279.96	280.70	0.74		
4011 Pipe Strap Probe						
Accuracy ± 2°F Range -25° to 212°F / -32° to 100°C						
0.00	F	0.27	2.10	1.83		
75.00	F	75.25	75.10	-0.15		
150.00	F	150.31	150.00	-0.31		

Report of Calibration for SERIAL NUMBER: 100516003 ASSET NUMBER: 100516003

Printed On: Friday, September 29, 2023 Page 1 of 2

Test Results indicate the following: **Found-Left:** *Unit was left as found*. **As-Left:** *Unit was left after adjustments*.

Test Results

Test Description	True Value	Test Result	Lower Limit	Upper Limit	Units	TUR
5028 Slim Humidity Probe						
Accuracy ±2% from 20 to 80%RH, ±3% below 20 and a						
10.0 %RH @ 23.0°C	%RH	10.0	16	6.0		
25.0 %RH @23.0°C	%RH	25.0	30	5.0		
50.0 %RH @ 23.0°C	%RH	50.0	53	3.0		
75.0 %RH @ 23.0°C	%RH	75.0	77	2.0		
23.0°C @ 10.0 %RH	C	23.0	23.2	0.2		
23.0°C @ 25.0 %RH	C	23.0	23.2	0.2		
23.0°C @ 50.0 %RH	C	23.0	23.2	0.2		
23.0°C @ 75.0 %RH	C	23.0	23.1	0.1		

**********END OF CALIBRATION**********

K.C. Calibration Labs Seal

Signed: Bart A. Schwartz , Engineer in Charge

Report of Calibration for SERIAL NUMBER: 100516003 ASSET NUMBER: 100516003

Printed On: Friday, September 29, 2023 Page 2 of 2

Test Results indicate the following: **Found-Left:** *Unit was left as found.* **As-Left:** *Unit was left after adjustments.*

Report of Calibration

Kansas City Calibration Lab., Inc.
8847 Long Street
Lenexa, Kansas 66215

Telephone: (913) 541-0629 Internet: www.kccl.com Email: service@kccl.com

UNIT UNDER TEST:	Klein Tools CL800 True RMS Digital Clampmeter	TEST RESULT:	PASS
SERIAL NUMBER:	1220C-C1	PERFORMED ON:	9/29/2023
ASSET NUMBER:	1220C-C1	DATA TYPE:	FOUND-LEFT
PROCEDURE NAME:	Klein Tools CL800 : (1 year) CAL VER / 5520	TEMPERATURE:	24.9°C
PROCEDURE REV.:	20230928	HUMIDITY:	46 %
CALIBRATED BY:	Bart Schwartz		
P.O. NUMBER:		**Recalibration Date**	
CUSTOMER:	National TAB 1126 Swift Street NKC, MO 64116	**September 29, 2024**	
		Calibration Number:	00077542
		Previous Calibration Date:	
Cal Seals Intact:	Unknown		

K.C. Calibration Lab., Inc. certifies that the above listed instrument meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). This calibration is traceable to the International System of Units (SI), throught National Metrology Institutes (NIST, PTB NRC NPL, etc), ratiometric techniques, or natural physical constants. This calibration complies with MIL-STD-45662A and ANSI/NCSL Z540-1-1994.

Note: Any Test Uncertainty Ratio (TUR) that is less than four to one will appear under the "TUR" heading on the data record. If the TUR meets or exceeds four to one, the field is left blank.

REMARKS:

Standards Used

Asset #	Description	Cal Date	Due Date
3277903	Fluke 5522A Multi-Product Calibrator	11/30/2022	11/30/2023

Test Results

Test Description	True Value	Test Result	Lower Limit	Upper Limit	Units	TUR	
Root Difference Square guardbanding method used							
AC VOLTS TESTS							
6 V Range							
5.900 V @ 60 Hz	5.9000	5.897	5.807	5.994	V		Pass
60 V Range							
59.00 V @ 60 Hz	59.000	58.97	58.24	59.76	V		Pass
600 V Range							
590.0 V @ 60 Hz	590.00	589.7	582.4	597.6	V		Pass
1000 V Range							
990.0 V @ 60 Hz	990.00	991.0	970.1	1009.9	V		Pass
DC VOLTS TESTS							
600 mV Range							
600.0 mV	600.00	599.8	593.2	606.8	m	V	Pass

Report of Calibration for SERIAL NUMBER: 1220C-C1 ASSET NUMBER: 1220C-C1

Printed On: Friday, September 29, 2023 Page 1 of 3

Test Results indicate the following: **Found-Left:** *Unit was left as found.* **As-Left:** *Unit was left after adjustments.*

Test Results

Test Description	True Value	Test Result	Lower Limit	Upper Limit	Units	TUR	
-600.0 mV	-600.00	-599.9	-606.8	-593.2	m	V	Pass
6 V Range							
6.000 V	6.0000	5.997	5.937	6.063	V		Pass
-6.000 V	-6.0000	-5.995	-6.063	-5.937	V		Pass
60 V Range							
60.00 V	60.000	59.96	59.37	60.63	V		Pass
600 V Range							
600.0 V	600.00	599.6	593.7	606.3	V		Pass
1000 V Range							
1000 V	1000.0	1001	985	1015	V		Pass
-1000 V	-1000.0	-1001	-1015	-985	V		Pass
CONTINUITY TESTS							
Audible Indicator ON @ 10 ohms							Pass
Audible Indicator OFF @ 51 ohms							Pass
RESISTANCE TESTS							
600 Ohm Range							
600.0 Ohm	600.00	601.2	590.5	609.5	Ω		Pass
6 kOhm Range							
6.000 kOhm	6.0000	6.000	5.905	6.095	k	Ω	Pass
60 kOhm Range							
60.00 kOhm	60.000	59.99	59.05	60.95	k	Ω	Pass
600 kOhm Range							
600.0 kOhm	600.00	599.9	590.5	609.5	k	Ω	Pass
6 MOhm Range							
6.000 MOhm	6.0000	5.993	5.905	6.095	M	Ω	Pass
60 MOhm Range							
60.00 MOhm	60.000	59.47	58.70	61.30	M	Ω	Pass
DIODE CHECK TESTS							
Diode Voltage							Pass
FREQUENCY TESTS							
9.000 Hz @ 8 V	9.0000	8.999	8.905	9.095	Hz		Pass
90.00 Hz @ 8 V	90.000	90.00	89.05	90.95	Hz		Pass
900.0 Hz @ 8 V	900.00	900.0	890.5	909.5	Hz		Pass
9.000 kHz @ 8 V	9.0000	9.000	8.905	9.095	k	Hz	Pass
90.00 kHz @ 8 V	90.000	90.00	89.05	90.95	k	Hz	Pass
100.0 kHz @ 8 V	100.00	100.0	98.5	101.5	k	Hz	Pass
DUTY CYCLE							
50.0 % @ 1 kHz	50.00	50.3	49.3	50.8	%		Pass
CAPACITANCE TESTS							
60 nF Range							
59.00 nF	59.000	59.96	55.70	62.30	n	F	Pass
600 nF Range							
590.0 nF	590.00	597.1	571.8	608.2	n	F	Pass
6 uF Range							
5.900 µF	5.9000	5.854	5.718	6.082	µ	F	Pass
60 uF Range							
59.00 µF	59.000	58.87	57.18	60.82	µ	F	Pass

Report of Calibration for SERIAL NUMBER: 1220C-C1 ASSET NUMBER: 1220C-C1

Printed On: Friday, September 29, 2023 Page 2 of 3

Test Results indicate the following: **Found-Left:** *Unit was left as found.* **As-Left:** *Unit was left after adjustments.*

Test Results

Test Description	True Value	Test Result	Lower Limit	Upper Limit	Units	TUR	
600 uF Range							
590.0 µF	590.00	590.6	560.0	620.0	µ	F	Pass
6000 uF Range							
5900 µF	5900.0	5957	5600	6200	µ	F	Pass
TEMPATURE F TESTS							
-14 °F	-14.0	-10	-23	-5	°F		Pass
100 °F	100.0	102	94	106	°F		Pass
500 °F	500.0	502	490	510	°F		Pass
900 °F	900.0	902	873	927	°F		Pass
TEMPATURE C TESTS							
-25 °C	-25.0	-23	-31	-20	°C		Pass
100 °C	100.0	102	96	104	°C		Pass
350 °C	350.0	351	344	357	°C		Pass
500 °C	500.0	501	485	515	°C		Pass
AC CURRENT TESTS							
60 A Range							
50.00 A @ 60 Hz	50.000	49.60	48.92	51.08	A		Pass
50.00 A @ 400 Hz	50.000	50.00	48.92	51.08	A		Pass
400 A Range							
500.0 A @ 60 Hz	500.00	494.2	489.5	510.5	A		Pass
500.0 A @ 100 Hz	500.00	494.4	489.5	510.5	A		Pass
60 A Range							
50.00 A	50.000	49.20	48.92	51.08	A		Pass
600 A Range							
300.0 A	300.00	296.5	293.5	306.5	A		Pass
590.0 A	590.00	582.7	577.7	602.3	A		Pass

**********END OF CALIBRATION**********

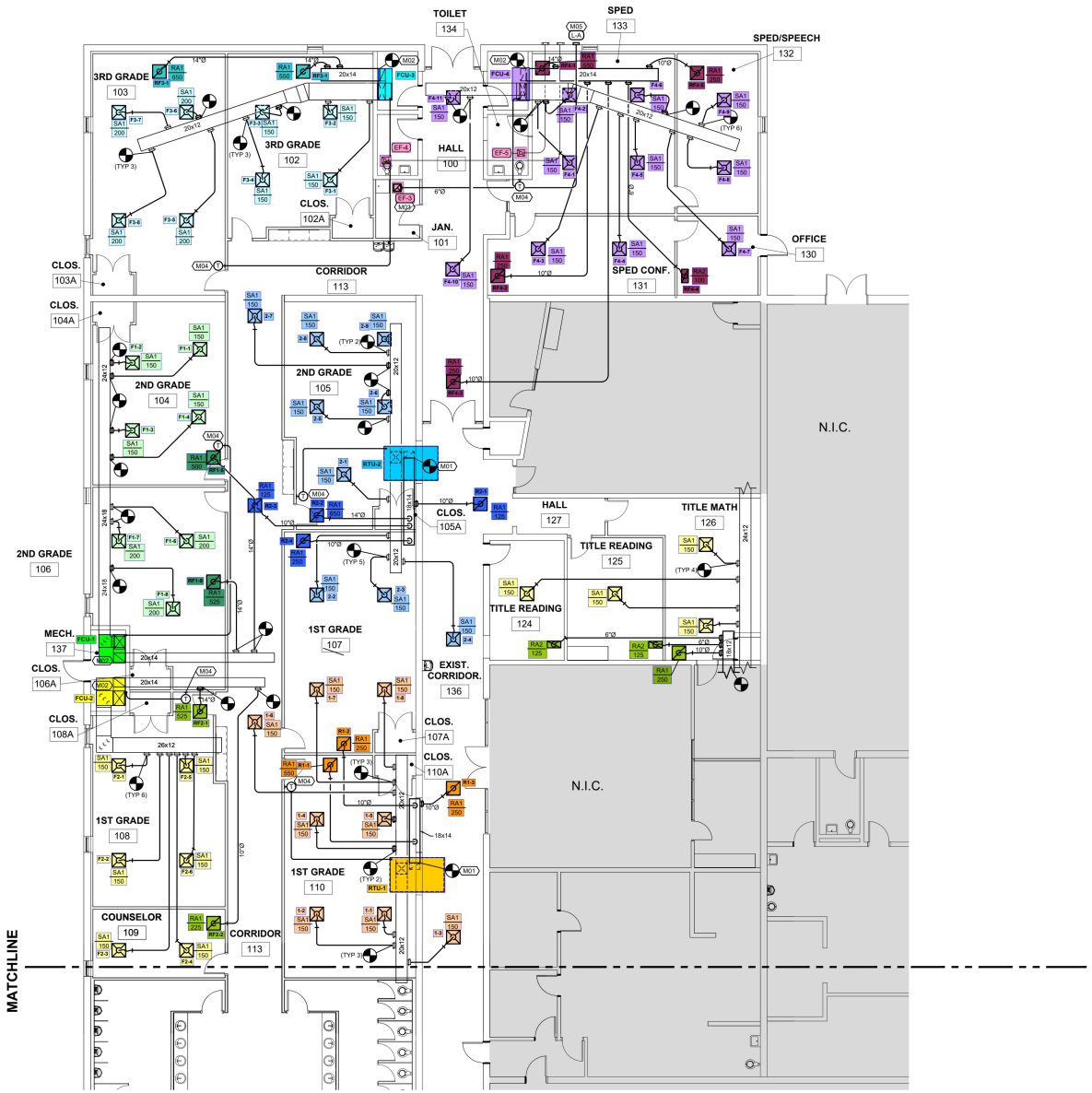
K.C. Calibration Labs Seal

Signed: Bart A. Schwartz , Engineer in Charge

Report of Calibration for SERIAL NUMBER: 1220C-C1 ASSET NUMBER: 1220C-C1

Printed On: Friday, September 29, 2023 Page 3 of 3

Test Results indicate the following: **Found-Left:** *Unit was left as found.* **As-Left:** *Unit was left after adjustments.*



LEVEL 1 FLOOR PLAN - AREA A - MECHANICAL NEW WORK

SCALE: 1/8" = 1'-0"

FLOOR PLAN NOTES

1. EXISTING ROOFTOP UNIT TO REMAIN. FIELD VERIFY EXACT LOCATION OF UNIT AND ADJUST DUCTWORK ACCORDINGLY. SERVICE UNIT AND PROVIDE FLEXIBLE CONNECTORS ON THE SUPPLY AND RETURN AIR DUCT CONNECTIONS WHERE NEEDED. TRANSITION TO DUCT SIZES SHOWN. BALANCE UNIT TO CFM SHOWN ON PLANS.
2. EXISTING FAN COIL UNIT TO REMAIN. SERVICE UNIT PER MANUFACTURERS RECOMMENDATIONS AND BALANCE UNIT TO CFM SHOWN ON PLANS.
3. PROVIDE CEILING MOUNTED EXHAUST FAN. TRANSITION FROM FAN DISCHARGE TO DUCT SIZE SHOWN. SEE FAN SCHEDULE FOR CONTROLS.
4. RELOCATED THERMOSTAT TO BE MOUNTED 48" ABOVE FINISHED FLOOR.
5. ALL EXTERIOR EXHAUST TERMINATIONS SHALL MAINTAIN 3'-0" MINIMUM CLEARANCE FROM OPERABLE BUILDING OPENINGS AND 10'-0" FROM ALL OUTSIDE AIR INTAKES.

ALAN W. LANKFORD NUMBER E-34224 STATE OF MISSOURI REGISTERED PROFESSIONAL ENGINEER
03/18/2024

ELLISON - AUXIER ARCHITECTS

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NO.	ISSUE DESCRIPTION	DATE

NO.	REVISION DESCRIPTION	DATE

PROJECT:
BUILDING RENOVATIONS
MAYSVILLE R1 SCHOOL DISTRICT
601 W. MAIN STREET
MAYSVILLE, MO 64469

LEVEL 1 FLOOR PLAN - AREA A - MECHANICAL NEW WORK

SHEET:
M101

OF: DATE: Issue Date

Lankford + Fendler + associates
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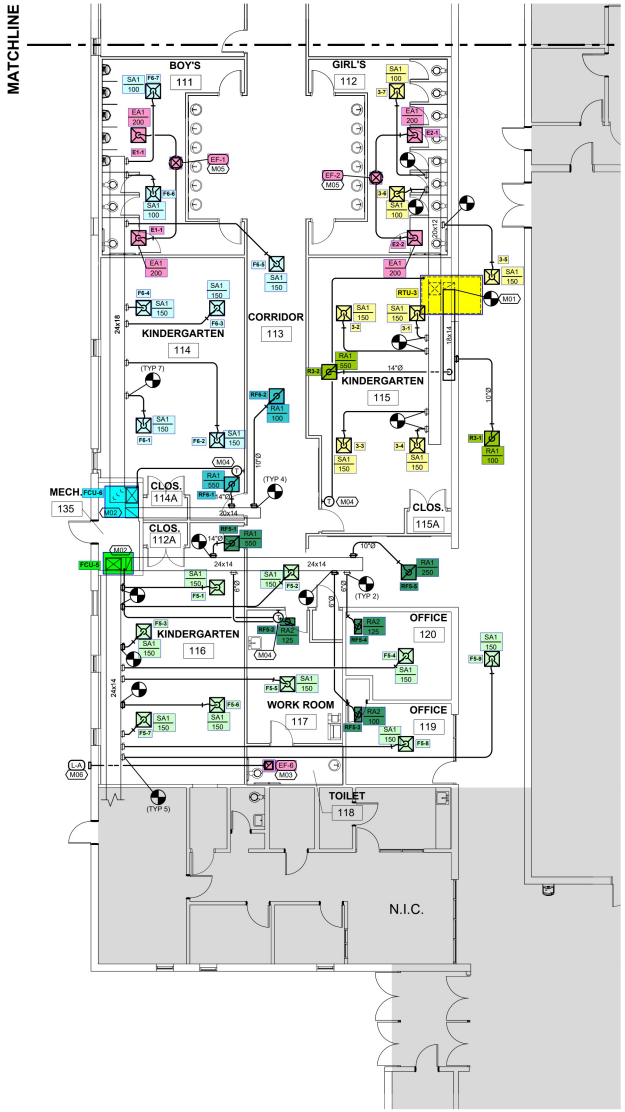
1915 Frederick Avenue, St. Joseph, Missouri 64501
Phone: 816.221.1411 | Fax: 816.221.1429



LEVEL 1 FLOOR PLAN - AREA B - MECHANICAL NEW WORK

SCALE: 1/8" = 1'-0"

FLOOR PLAN NOTES

1. EXISTING ROOFTOP UNIT TO REMAIN. FIELD VERIFY EXACT LOCATION OF UNIT AND ADJUST DUCTWORK ACCORDINGLY. SERVICE UNIT AND PROVIDE FLEXIBLE CONNECTORS ON THE SUPPLY AND RETURN AIR DUCT CONNECTIONS WHERE NEEDED. TRANSITION TO DUCT SIZES SHOWN. BALANCE UNIT TO CFM SHOWN ON PLANS.
2. EXISTING FAN COIL UNIT TO REMAIN. SERVICE UNIT PER MANUFACTURERS RECOMMENDATIONS AND BALANCE UNIT TO CFM SHOWN ON PLANS.
3. PROVIDE CEILING MOUNTED EXHAUST FAN. TRANSITION FROM FAN DISCHARGE TO DUCT SIZE SHOWN. SEE FAN SCHEDULE FOR CONTROLS.
4. RELOCATED THERMOSTAT TO BE MOUNTED 48" ABOVE FINISHED FLOOR.
5. PROVIDE ROOF MOUNTED EXHAUST FAN AND CURB.
6. ALL EXTERIOR EXHAUST TERMINATIONS SHALL MAINTAIN 3'-0" MINIMUM CLEARANCE FROM OPERABLE BUILDING OPENINGS AND 10'-0" FROM ALL OUTSIDE AIR INTAKES.

ALAN W. LANKFORD
NUMBER E-34324
STATE OF MISSOURI
REGISTERED PROFESSIONAL ENGINEER
03/08/2024

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NO.	ISSUE DESCRIPTION	DATE

NO.	REVISION DESCRIPTION	DATE

PROJECT:
BUILDING RENOVATIONS
MAYSVILLE R1 SCHOOL DISTRICT
601 W. MAIN STREET
MAYSVILLE, MO 64469

LEVEL 1 FLOOR PLAN - AREA B - MECHANICAL NEW WORK

SHEET:
M102

OF: DATE: Issue Date