Report By:

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

Report: TAB Report

Function: Test, Adjust, & Balance

Date: 02/02/2026

Completed By: National TAB

PROJECT

02-02-26 WAWA #8241 ALLENTOWN, PA

3015 LEHIGH ST

ALLENTOWN, PA 18103

Client

Wawa

260 West Baltimore Pike

Wawa, PA 19063

National TAB

Project: 02-02-26 WAWA #8241 ALLENTOWN, PA

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Project Summary

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) w/ Diffusers
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.

General Exhaust Fans w/ Grilles
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 and that the pressure measurement coincides with the actual and design net airflow. Any deviations from these standards are noted throughout the report

Issue List

- GAS To Building/RTUs
- Return Grille R1-3
- Return Grille R3-1

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Project Issue Information

Issue Name :	GAS To Building/RTUs		
Description :	Gas is not yet connected to the building, heating is not functional on the RTUs, once gas is connected ensure proper RTU heater startups and testing is completed.		
Created By :	National TAB	**Assigned To :**	National TAB - Will Turnbough
Status :	Open		
Priority :	InfoOnly	**Asset Tag :**	
Originated Date :	02/03/2026 - Tyler Youells - National TAB		

02-02-26 WAWA #8241 ALLENTOWN, PA

Project Issue Information

Issue Name : Return Grille R1-3

Description : Return Grille 1-3 is not installed per the revision E. NTab balanced per pre revision plans. Review and rectify if the return is to be installed or excepted as-is. Return is intended to be located above the express case.

Created By : National TAB

Assigned To : National TAB - Will Turnbough

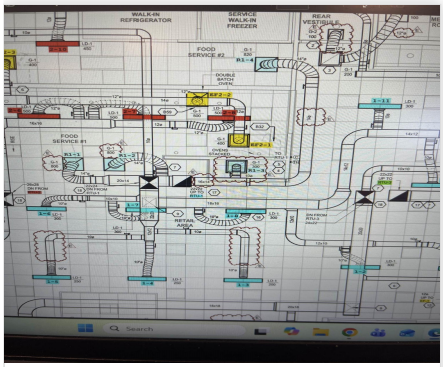
Status : Open

Priority : Medium

Asset Tag :

Originated Date : 02/02/2026 - Tyler Youells - National TAB

Project Issue File Details



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Project Issue Information

Issue Name : Return Grille R3-1

Description : Return Grille 3-1 is not installed per the revision E. NTab balanced per pre revision plans. Review and rectify if the return is to be installed or excepted as-is. Return is intended to be located above the ice machine.

Created By : National TAB

Assigned To : National TAB - Will Turnbough

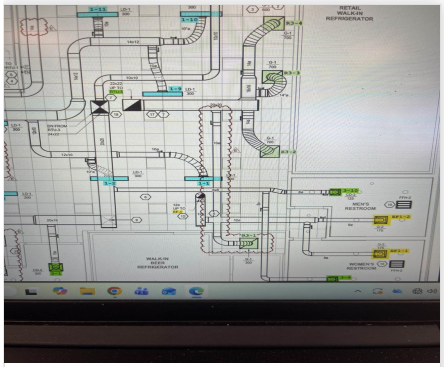
Status : Open

Priority : Medium

Asset Tag :

Originated Date : 02/02/2026 - Tyler Youells - National TAB

Project Issue File Details



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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	RETAIL	3400	3384	2720	2711	680	673	20.0%	19.9%						
RTU-2	FOOD SERVICI	5000	5105	4180	4282	820	823	16.4%	16.1%						
RTU-3	RETAIL	3000	2993	2400	2411	600	582	20.0%	19.4%						
EF-1	RESTROOMS													350	353
EF-2	BOH													1400	1399
TOTALS		11400	11482	9300	9404	2100	2078			0	0	0	0	1750	1752

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	2100	2078
TOTAL EXHAUST	1750	1752
NET AIRFLOW	350	326

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H20)
FRONT	0.0078
SIDE	0.0058
REAR	0.0068
AVERAGE	**0.0068**

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

- 01: RTU's/AHU's
- 02: LENNOX SETUP PARAMETERS
- 03: SENSOR WIRING (LENNOX)
- 04: EF'S
- 05: CLOSEOUT CHECKS

02-02-26 WAWA #8241 ALLENTOWN, PA

CheckList Information

Name :	01: RTU's/AHU's	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	12/17/2025 - Trinity Dodds - National TAB		
Completed Date :	02/03/2026 - Tyler Youells - National TAB		

CheckList Item Details

RTU's/AHU's

All diffusers and grilles are installed and match design?	Fail
Comment:	
Clean filters installed?	Pass
Comment:	
Economizers are assembled and functional?	Pass
Comment:	
Motors are all operating below the FLA rating?	Pass
Comment:	
Are belts tight?	Pass
Comment:	
If direct drive unit is the speed controller working?	Pass
Comment:	
Is gas piping installed and valves turned on?	Fail

Comment:

Building does not have gas meter yet

Condensate drains are installed?	Pass

Comment:

Unit free of noticeable noise and vibration	Pass

Comment:

Final outside air damper position is marked with permanent marker?	Pass

Comment:

No alarms present?	Fail

Comment:

Heating alarms caused by no gas, other than that alarm free

Any noticeable duct leakage?	Pass

Comment:

Total supply and OA flows are balanced within +/-5% and supply & return diffusers within +/-10%?	Pass

Comment:

Adjust side wall diffusers on spiral duct that blow towards the coffee island drop-in to prevent issues with it staying at temperature. Fan out of the deflector blades or reduce airflow as necessary to prevent drafting.	N/A

Comment:

IN TEST MODE, TEST THE FOLLOWING:

Cooling mode is operational? Record EAT/LAT for each unit:	N/A

Comment:

Due to low ambient temperatures(28F) cooling was not tested to prevent any potential unit damage

Heating mode is operational? Record EAT/LAT for each unit:	Fail

Comment:

Dehumidification mode is operational? (Feel dehumidification coil with your hand. Is it hot?) Record EAT/LAT for each unit:	N/A

Comment:

Due to low ambient temperatures(28F) Dehumidification was not tested to prevent any potential unit damage

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CheckList Information

Name :	02: LENNOX SETUP PARAMETERS	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	12/17/2025 - Trinity Dodds - National TAB		
Completed Date :	02/03/2026 - Tyler Youells - National TAB		

CheckList Item Details

UNIT ID CONFIGURATIONS

BACNET CONFIGURATION: GO TO SETTINGS>GENERAL>CONFIGURATION ID1 POSITION 5 SET TO "N".	Pass
Comment:	

NETWORK CONFIGURATION: GO TO SETUP>NETWORK INTEGRATION, SET TO BACNET IP	Pass
Comment:	

CONTROL MODE: SET CONTROL MODE TO ROOM SENSOR: CO2, TEMP & HUMIDITY (PER UNIT, AS NEEDED).	Pass
Comment:	

INDIVIDUAL PARAMETER CONFIGURATIONS (MECHANICAL CONTRACTOR TO DEFINE / AS APPLICABLE):

PARAMETER 105 DEHUMID MODE: 7 NO CONDITIONS	Pass
Comment:	

PARAMETER 106 DEHUMID SETPOINT: 50, THIS IS A CENTERED SET POINT (+/-)	Yes
Comment:	

PARAMETER 107 DEHUMID DEADBAND: 3 (DEFAULT) THIS IS THE ACTUAL +/- VALUE	Pass

Comment:

PARAMETER 117 CO2 DAMPER MAX OPEN: 50%	Pass

Comment:

PARAMETER 118 CO2 START OPEN PPM: 1500	Pass

Comment:

PARAMETER 119 CO2 MAX OPEN PPM: 1500	Pass

Comment:

PARAMETER 137 OCCHET SET POINT: 68 (BACK UP)	Pass

Comment:

PARAMETER 131 SET TO THE SAME % AS THE MINMIUM OA DAMPER SETPOINT	Pass

Comment:

PARAMETER 139 OCC COOLING SET POINT: 72 (BACK UP)	Pass

Comment:

PARAMETER 154 OCC BLOWER MODE: ON-CONTINUOUS 1	Pass

Comment:

CFM VALUES / MSAV FAN SPEEDS (AIR BALANCER TO DEFINE / IF APPLICABLE):

OA DAMPER SET TO SAME POSITION IN ALL FAN SPEEDS?	Pass

Comment:

AC-1: 25% AC-2: 26% AC-3: 27%

ALL FAN SPEEDS SET TO THE SAME CFM VALUE (ENTER SETPOINTS BELOW)	Pass

Comment:

AC-1: 64% AC-2: 92% AC-3: 62%

HEAT CFM VALUE: PER THE HVAC SCHEDULE	Pass

Comment:

HIGH COOL CFM VALUE: THE HIGH COOL CFM VALUE	Pass
Comment:	
LOW COOL CFM VALUE: MATCH THE HIGH COOL CFM VALUE	Pass
Comment:	
VENTILATION CFM VALUE: MATCH THE HIGH COOL CFM VALUE	Pass
Comment:	

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CheckList Information

Name :	03: SENSOR WIRING (LENNOX)	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	12/17/2025 - Trinity Dodds - National TAB		
Completed Date :	02/03/2026 - Tyler Youells - National TAB		

CheckList Item Details

COMBINATION TEMPERATURE/HUMIDITY SENSOR

Sensors are installed where shown on the drawing?	Pass
Comment:	
2 conductor shielded cable has one wire landed to Vin, one to GND, and the shield wire is not connected.	Pass
Comment:	
For second shielded cable, one wire is landed to Vout and the shield wire is not connected.	Pass
Comment:	
Verify that the CORE or Prodigy controller is sensing a relative humidity (record the reading)	
Comment:	
AC-1: 17% AC-2: 15% AC-3: 17%	

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CheckList Information

Name :	04: EF'S	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	12/17/2025 - Trinity Dodds - National TAB		
Completed Date :	02/03/2026 - Tyler Youells - National TAB		

CheckList Item Details

EF's

Rotation is correct?	Pass
Comment:	
Belts are tight (if applicable)?	N/A
Comment:	
Speed controller installed and functional (if applicable)?	Fail
Comment:	
Ef-1 did not have a speed controller, but it was not needed, the fan needs to be full speed	
There is no major leakage around base of fan?	Pass
Comment:	
Is the motor operating below the motor FLA rating?	Pass
Comment:	
Back draft damper installed and can it fully open?	Pass
Comment:	

Unit free of noticeable noise and vibration?	Pass
Comment:	
Total exhaust flow balanced within +/-5% and grilles are within +/-10%?	Pass
Comment:	

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CheckList Information

Name :	05: CLOSEOUT CHECKS	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	12/17/2025 - Trinity Dodds - National TAB		
Completed Date :	02/03/2026 - Tyler Youells - National TAB		

CheckList Item Details

SPACE COMFORT

Is space free of drafting?	Pass
Comment:	
Is space comfortable in all areas?	Fail
Comment: Cold in spots due to no unit heat/no gas	
Is the space free of ventilation noise?	Pass
Comment:	

BUILDING PRESSURE

Do actual net building airflow, design net building airflow, and pressure coincide? If not why? (All three should either be positive or negative)	Pass
Comment: BP: +0.006" AVG	

National TAB

Project: 02-02-26 WAWA #8241 ALLENTOWN, PA

System/Unit: AHU/RTU

Asset: RTU-1 AREA:RETAIL

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5625G04689
Model Num	LGT102H4E	LGT102H5ES2Y
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	25X16
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2

Motor Data		
	Design	**Actual**
Motor MFG	-	EBMPABST
Frame	-	NL
Horsepower	3.75	2970W
Motor Rpm	-	1780
Phase	3	3
Rated Voltage	208	200
Rated Amperage	-	8.0
Service Factor	-	1

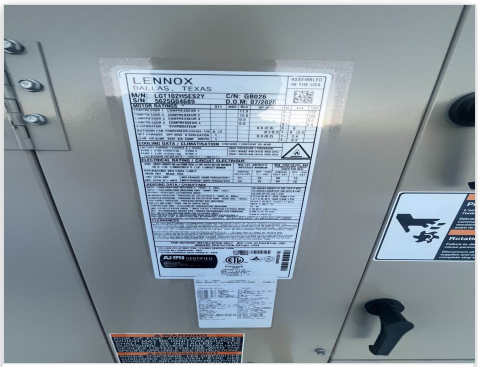
Test Data		
	Design	**Actual**
SF CFM	3400	3384
SF RPM	-	1139
MOTOR RPM	-	1139
RA CFM	2720	2711
OA CFM	680	673
RL Voltage	-	210.3/211.4/210.9
RL Amperage	-	2.7/2.7/2.6
SF System SetPt	-	64%
RA Damper Position	-	MECHANICAL LINKAGE
OA Damper Position	-	25%
OA Damper Type	-	ECONOMIZER989

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.31”
Fan Suction SP	-	-0.59”
Fan Discharge SP	-	0.53”
Total ESP	0.50"	0.84"
Fan Total SP	-	1.12"

Completed By: Tyler Youells on 02/03/2026

Unit Data - PHOTO LOG

02/02/2026



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Project: 02-02-26 WAWA #8241 ALLENTOWN, PA

System/Unit: AHU/RTU

Asset: RTU-2 AREA:FOOD SERVICE

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5625H07144
Model Num	LCT150H4E	LGT150H5ES2Y
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	25X16
Num Final Filter 1	-	4
Final Filter Size 1	-	25X20

Motor Data		
	Design	**Actual**
Motor MFG	-	EBMPABST
Frame	-	NL
Horsepower	3.75	2970W
Motor Rpm	-	1780
Phase	3	3
Rated Voltage	208	200
Rated Amperage	-	8.0
Service Factor	-	1

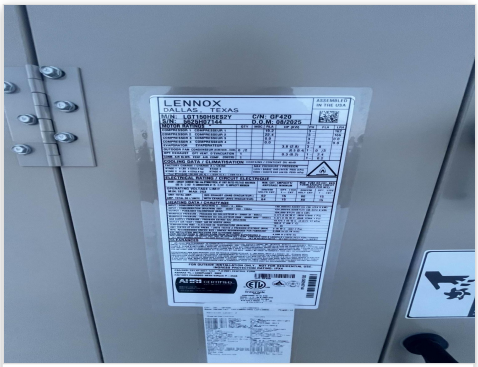
Test Data		
	Design	**Actual**
SF CFM	5000	5105
SF RPM	-	1638
MOTOR RPM	-	1638
RA CFM	4180	4282
OA CFM	820	823
RL Voltage	-	209.9/210.5/210.8
RL Amperage	-	7.1/6.9/7.1
SF System SetPt	-	92%
RA Damper Position	-	MECHANICAL LINKAGE
OA Damper Position	-	26%
OA Damper Type	-	ECONOMIZER

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.51”
Fan Suction SP	-	-1.21”
Fan Discharge SP	-	0.86”
Total ESP	0.50"	1.37"
Fan Total SP	-	2.07"

Completed By: Tyler Youells on 02/03/2026

Unit Data - PHOTO LOG

02/02/2026



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National TAB

Project: 02-02-26 WAWA #8241 ALLENTOWN, PA

System/Unit: AHU/RTU

Asset: RTU-3 AREA:RETAIL

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5625H02231
Model Num	LGT092H4E	LGT092H45ES2Y
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	25X16
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2

Motor Data		
	Design	**Actual**
Motor MFG	-	EBMPABST
Frame	-	NL
Horsepower	3.75	2970W
Motor Rpm	-	1780
Phase	3	3
Rated Voltage	208	200
Rated Amperage	-	8.0
Service Factor	-	1

Test Data		
	Design	**Actual**
SF CFM	3000	2993
SF RPM	-	1103
MOTOR RPM	-	1103
RA CFM	2400	2411
OA CFM	600	582
RL Voltage	-	209.5/210.3/210.0
RL Amperage	-	2.5/2.5/2.5
SF System SetPt	-	62%
RA Damper Position	-	MECHANICAL LINKAGE
OA Damper Position	-	27%
OA Damper Type	-	ECONOMIZER

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.20”
Fan Suction SP	-	-0.49”
Fan Discharge SP	-	0.61”
Total ESP	0.50"	0.81"
Fan Total SP	-	1.10"

Completed By: Tyler Youells on 02/03/2026

Unit Data - PHOTO LOG

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Project: 02-02-26 WAWA #8241 ALLENTOWN, PA

System/Unit: FAN - Exhaust

Asset: EF-1 AREA:RESTROOMS

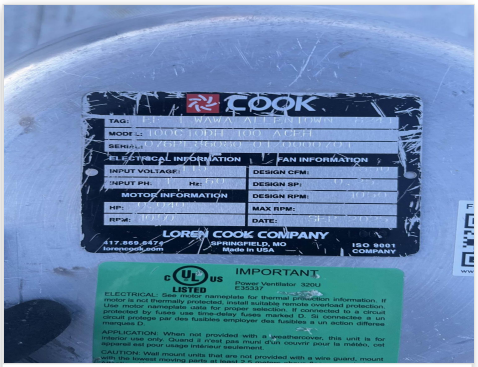
Unit Data		
	Design	**Actual**
MFG	PENNBARRY	COOK
Model Num	DX10R	100C10DH
Serial Num	-	076PL86080-01/0000701
Type	DOWNBLAST	DOWNBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	US MOTOR
Frame	-	42Y
Horsepower	1/12	1/25
Motor Rpm	-	1050
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	1.1
Service Factor	-	1

Test Data		
	Design	**Actual**
CFM	350	353
Fan RPM	-	1050
Fan Rotation	-	CCW
Motor RPM	-	1050
System SetPt	-	FULL SPEED
RL Voltage	-	121.1
RL Amperage	-	1.1
Total ESP	0.25"	0.18”
Fan Inlet SP	-	-0.18”
Fan Discharge SP	-	ATM

Completed By: Tyler Youells on 02/03/2026

Unit Data - PHOTO LOG



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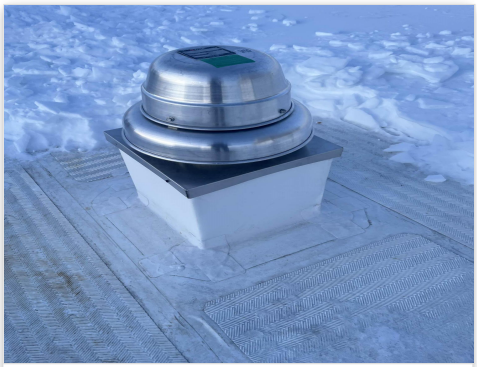

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National TAB

Project: 02-02-26 WAWA #8241 ALLENTOWN, PA

System/Unit: FAN - Exhaust

Asset: EF-2 AREA:BOH/FOOD SERVICE

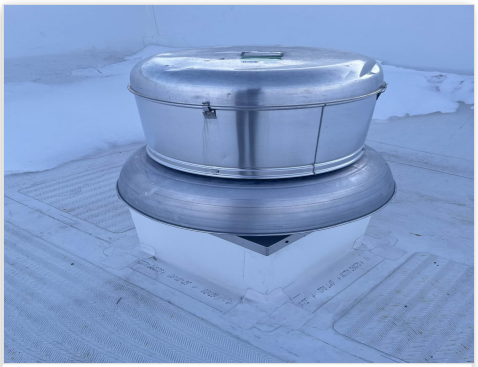
Unit Data		
	Design	**Actual**
MFG	PENNBARRY	COOK
Model Num	DX16S	50C10D
Serial Num	-	076SL86080-00/0000701
Type	DOWNBLAST	DOWNBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	US MOTOR
Frame	-	48Y
Horsepower	1/3	1/3
Motor Rpm	-	1075
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	4.9
Service Factor	-	1

Test Data		
	Design	**Actual**
CFM	1400	1399
Fan RPM	-	1075
Fan Rotation	-	CCW
Motor RPM	-	1075
System SetPt	-	FULL SPEED
RL Voltage	-	116.3
RL Amperage	-	4.3
Total ESP	0.375"	0.61”
Fan Inlet SP	-	-0.61”
Fan Discharge SP	-	ATM

Completed By: Roman Ilovski on 02/03/2026

Unit Data - PHOTO LOG



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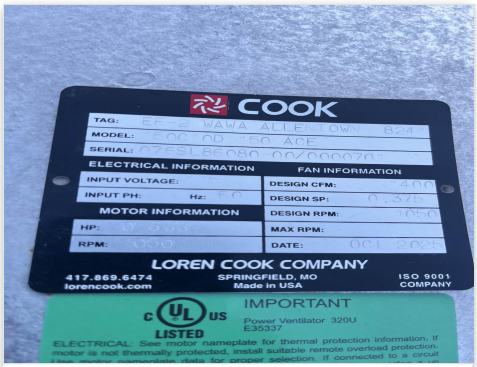

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