

Report By:

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



Report: Prelim Report
Function: Test, Adjust, & Balance
Date: 07/10/2025
Completed By: National TAB

PROJECT

Conner HS Fieldhouse (Hebron, KY)

3310 Cougar Path

Hebron, KY 41048

Client

Tri-State Mechanical

4498 Petersburg Rd

Burlington, KY 41005

National TAB

Project: Conner HS Fieldhouse (Hebron, KY)

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Issue List

- ERV 1 Exhaust
- ERV 1 Exhaust Dampers
- ERV 2 BALANCE DAMPERS
- Weight room Damper



Conner HS Fieldhouse (Hebron, KY)

Project Issue Information

Issue Name : ERV 1 Exhaust
Description : Restrictive ductwork on the exhaust duct for restroom C7 preventing exhaust flow.
Created By : National TAB **Assigned To :** National TAB - Nick Payne
Status : Open
Priority : Medium **Asset Tag :**
Originated Date : 07/10/2025 - Gabe Merk - National TAB

Project Issue File Details



07/10/2025

Project Issue Response Details

- **07/11/2025 National TAB - Gabe Merk**
 - Issue has been resolved. Reread/balance flow on next trip.

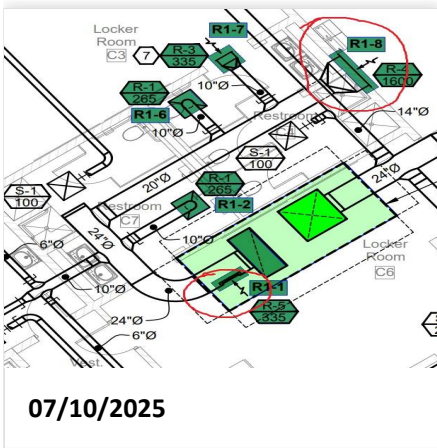


Conner HS Fieldhouse (Hebron, KY)

Project Issue Information

Issue Name : ERV 1 Exhaust Dampers
Description : Two exhaust grilles on ERV 1 are missing dampers. Unable to distribute flow to other individual grilles.
Created By : National TAB **Assigned To :** National TAB - Nick Payne
Status : Open
Priority : Medium **Asset Tag :**
Originated Date : 07/10/2025 - Gabe Merk - National TAB

Project Issue File Details



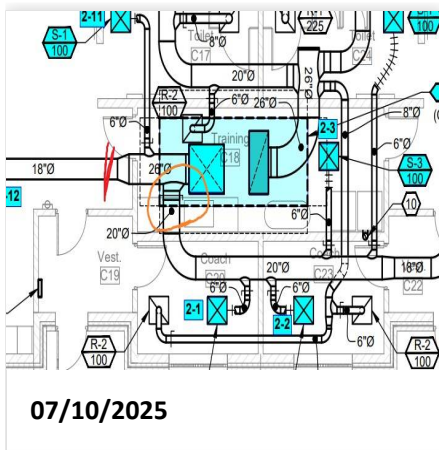


Conner HS Fieldhouse (Hebron, KY)

Project Issue Information

Issue Name : ERV 2 BALANCE DAMPERS
Description : ERV 2 Balance damper jammed. See attached photo highlighted in orange. Additional balance damper install likely needed in location highlighted in red.
Created By : National TAB **Assigned To :** National TAB - Nick Payne
Status : Open
Priority : Medium **Asset Tag :**
Originated Date : 07/10/2025 - Gabe Merk - National TAB

Project Issue File Details



Project Issue Response Details

- **07/11/2025 National TAB - Gabe Merk**
 - Balance damper opened. Additional Balance damper needed to reduce flow to C13.

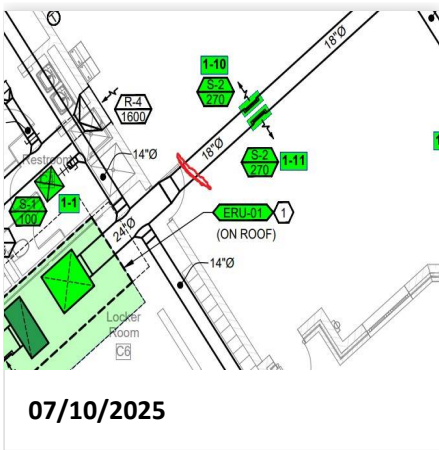


Conner HS Fieldhouse (Hebron, KY)

Project Issue Information

Issue Name : Weight room Damper
Description : A damper will be needed in the weight room in order to distribute flow to the remaining duct branches.
Created By : National TAB **Assigned To :** National TAB - Nick Payne
Status : Open
Priority : Medium **Asset Tag :**
Originated Date : 07/10/2025 - Gabe Merk - National TAB

Project Issue File Details



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Project: Conner HS Fieldhouse (Hebron, KY)

System/Unit: Energy Recovery Unit



Asset: ERU-01

AREA:

Unit Data		
	Design	Actual
MFG	NA	DAIKIN
Model Num	NA	DPS016AHHG4FW-4
Serial Num	-	FBOU240701458
Num Exh-Filters 1	-	2
Exh-Filter Size 1	-	18"x24"x2"
Num OA-Filters 1	-	3
OA-Supply Size 1	-	20"x38"
Num OA-Filters 2	-	2+9
OA-Filter Size 2	-	18"x24"x2"

Exhaust Fan Motor Data		
	Design	Actual
Horsepower	4	4
Phase	3	3
Voltage (rated)	460	460
Amperage (rated)	-	4.7

OA Fan Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	184T
Horsepower	5	5
Motor Rpm	-	1750
Phase	3	3
Voltage (rated)	460	460
Amperage (rated)	-	6.6
Service Factor	-	1.15

Exhaust Fan Test Data		
	Design	Actual
Exh-ERU CFM	3100	3229
Exh-ERU RPM	-	70%
RL Voltage	460	482/487/489
RL Amperage	-	1.0/0.9/1.0
Brake Horse Power	-	0.82

Exhaust Fan Performance Data		
	Design	Actual
Exh-ERU Filter Delta SP	-	0.95"*
Exh-ERU Wheel Delta SP	-	*
Exh-ERU Delta T	-	

OA Fan Test Data		
	Design	Actual
OA-ERU CFM	3120	3227
OA-ERU RPM	-	87%/48.6HZ
RL Voltage	460	323 VFD
RL Amperage	-	3.6 VFD

OA Fan Performance Data		
	Design	Actual
OA-ERU Filter Delta SP	-	1.20"*
OA-ERU Wheel Delta SP	-	*
OA-ERU Delta T	-	

Notes:
 UNIT BALANCED IN MANUAL TEST MODE.
 * INDICATES PRESSURE DROPS ARE COMBINED

EF FAN SUCTION -1.16"
 EF FAN DISCHARGE 0.10"

COOLING COIL PD 0.14"
 SF SUCTION -1.42"
 SF DISCHARGE 0.14"

Written By: Gabe Merk on 07/11/2025

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Project: Conner HS Fieldhouse (Hebron, KY)

Energy Recovery Unit



Diffuser Supply (GRD)

ERU-01/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	C4	S-1	6	100	55	55	55.0
SGRD2	C3	S-2	16X8	250	175	205	82.0
SGRD3	C7	S-1	6	100	32	34	34.0
SGRD4	C3	S-2	16X8	250	166	198	79.2
SGRD5	C1	S-3	6	100	58	59	59.0
SGRD6	C6	S-2	16X8	250	240	270	108.0
SGRD7	C6	S-2	16X8	250	251	275	110.0
SGRD8	C10	S-3	6	100	58	44	44.0
SGRD9	C9	S-3	6	100	41	49	49.0
SGRD10	C5	S-2	16X8	270	1777	2038	754.8
SGRD11	C5	S-2	16X8	270			-
SGRD12	C5	S-2	16X8	270			-
SGRD13	C5	S-2	16X8	270			-
SGRD14	C5	S-2	16X8	270			-
SGRD15	C5	S-2	16X8	270			-
Total				3120	2853	3227	103.43%

Diffuser Ret/Exh (GRD)

ERU-01/

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
EGRD1	R-5		335	0.88	885			-
EGRD2	R-1	22X22	265	1	59			-
EGRD3	R-2	22X22	100	1	49			-
EGRD4	R-2	22X22	100	1	46			-
EGRD5	R-2	22X22	100	1	66			-
EGRD6	R-1	22X22	265	1	213			-
EGRD7	R-3	16X8	335	1	139			-
EGRD8	R-4	40X24	1600	6.65	1835			-
Total			3100		3292	0	0	0%

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Project: Conner HS Fieldhouse (Hebron, KY)

System/Unit: Energy Recovery Unit



Asset: ERU-02

AREA:

Unit Data		
	Design	Actual
MFG	NA	DAIKIN
Model Num	NA	DPS016AHHG4FW-4
Serial Num	-	FBOU240701443
Num Exh-Filters 1	-	2
Exh-Filter Size 1	-	18"X24"X2"
Num OA-Filters 1	-	3
OA-Supply Size 1	-	20"X38"
Num OA-Filters 2	-	2+9
OA-Filter Size 2	-	18"X24"X2"

Exhaust Fan Motor Data		
	Design	Actual
Horsepower	4	4
Phase	3	3
Voltage (rated)	460	460
Amperage (rated)	-	4.7

OA Fan Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	184T
Horsepower	5	5
Motor Rpm	-	1750
Phase	3	3
Voltage (rated)	460	460
Amperage (rated)	-	6.6
Service Factor	-	1.15

Exhaust Fan Test Data		
	Design	Actual
Exh-ERU CFM	3900	
Exh-ERU RPM	-	100%
RL Voltage	460	
RL Amperage	-	
Brake Horse Power	-	

Exhaust Fan Performance Data		
	Design	Actual
Exh-ERU Filter Delta SP	-	
Exh-ERU Wheel Delta SP	-	
Exh-ERU Delta T	-	

OA Fan Test Data		
	Design	Actual
OA-ERU CFM	3940	
OA-ERU RPM	-	90%
RL Voltage	460	
RL Amperage	-	

OA Fan Performance Data		
	Design	Actual
OA-ERU Filter Delta SP	-	
OA-ERU Wheel Delta SP	-	
OA-ERU Delta T	-	

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Project: Conner HS Fieldhouse (Hebron, KY)

Energy Recovery Unit



Diffuser Supply (GRD)

ERU-02/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	C20	S-3	6	100		67	67.0
SGRD2	C23	S-3	6	100		38	38.0
SGRD3	C18	S-3	6	100		38	38.0
SGRD4	C24	S-1	6	100		24	24.0
SGRD5	C21	S-5		270		1023	378.9
SGRD6	C21	S-5		270			-
SGRD7	C21	S-5		270			-
SGRD8	C21	S-5		270			-
SGRD9	C21	S-5		270			-
SGRD10	C21	S-5		270			-
SGRD11	C17	S-1	6	100		103	103.0
SGRD12	C13	S-2	16X8	270	3658	2934	1086.7
SGRD13	C13	S-2	16X8	270			-
SGRD14	C13	S-2	16X8	270			-
SGRD15	C13	S-2	16X8	270			-
SGRD16	C13	S-2	16X8	270			-
SGRD17	C13	S-2	16X8	270			-
SGRD18	C14	S-1	6	100		20	20.0
SGRD19	C27	S-1	6	100		20	20.0
Total				3940	3658	4267	108.3%

Diffuser Ret/Exh (GRD)

ERU-02/

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
EGRD1	R-2	22X22	100		280	195		-
EGRD2	R-2	22X22	100		167	120		-
EGRD3	R-2	22X22	100		23	64		-
EGRD4	R-1	22X22	225		23	97		-
EGRD5	R-1	22X22	300		46	128		-
EGRD6	R-4	40X24	1175	5.60	230	817		-
EGRD7	R-1	22X22	100		0	13		-
EGRD8	R-1	22X22	100		34	84		-
EGRD9	R-1	22X22	225		173	125		-
EGRD10	R-1	22X22	300		66	55		-
EGRD11	R-4	40X24	1175	5.60	1232	918		-
Total			3900		2274	2616	0	0%

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Project: Conner HS Fieldhouse (Hebron, KY)

System/Unit: FAN - Exhaust



Asset: EF1

AREA:

Unit Data		
	Design	Actual
MFG	NA	COOK
Model Num	NA	165RH17D
Serial Num	-	108SL21262-00/0004901
Type	CRE UPBLAST	CRE UPBLAST

Test Data		
	Design	Actual
CFM	750	767
RL Voltage	115	120
RL Amperage	-	0.3
Total ESP	0.1	0.12"

Motor Data		
	Design	Actual
Motor MFG	-	US MOTORS
Frame	-	48Y
Horsepower	-	1/2
Motor Rpm	527	1800
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	6.4

Completed By: Gabe Merk on 07/11/2025

Notes:
SPEED SETPOINT 45%

Written By: Gabe Merk on 07/11/2025

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Project: Conner HS Fieldhouse (Hebron, KY)

System/Unit: FAN - Exhaust



Asset: EF2

AREA:

Unit Data		
	Design	Actual
MFG	NA	COOK
Model Num	NA	101R17D
Serial Num	-	108SL21262-00/0000701
Type	CRE UPBLAST	CRE UPBLAST

Test Data		
	Design	Actual
CFM	250	263
RL Voltage	115	121
RL Amperage	-	0.1
Total ESP	0.1	0.07"

Motor Data		
	Design	Actual
Motor MFG	-	US MOTORS
Frame	-	48Y
Horsepower	-	1/2
Motor Rpm	680	1800
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	6.4

Completed By: Gabe Merk on 07/10/2025

Notes:
MOTOR SPEED SET POINT 27%

Written By: Gabe Merk on 07/10/2025

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Project: Conner HS Fieldhouse (Hebron, KY)

System/Unit: FAN - Exhaust



Asset: EF3

AREA:R2

Unit Data		
	Design	Actual
MFG	NA	COOK
Model Num	NA	101R17D
Serial Num	-	108SL21262-00/0002101
Type	CRE UPBLAST	CRE UPBLAST

Test Data		
	Design	Actual
CFM	250	245
RL Voltage	115	125
RL Amperage	-	0.2
Total ESP	0.1	0.12"

Motor Data		
	Design	Actual
Motor MFG	-	US MOTORS
Frame	-	48Y
Horsepower	-	1/2
Motor Rpm	680	1800
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	6.4

Completed By: Gabe Merk on 07/11/2025

Notes:
SPEED SETPOINT 49%

Written By: Gabe Merk on 07/11/2025

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Project: Conner HS Fieldhouse (Hebron, KY)

FAN - Exhaust



Diffuser Ret/Exh (GRD)

EF3/R2

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
EGRD1	E-1	22X22	250		653	245	245	98.0
Total			250		653	245	245	98%

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Project: Conner HS Fieldhouse (Hebron, KY)

System/Unit: FAN - Exhaust



Asset: EF4

AREA:R1

Unit Data		
	Design	Actual
MFG	NA	COOK
Model Num	NA	101R17D
Serial Num	-	108SL21262-00/0003501
Type	CRE UPBLAST	CRE UPBLAST

Test Data		
	Design	Actual
CFM	350	337
RL Voltage	115	125
RL Amperage	-	0.3
Total ESP	0.1	0.21"

Motor Data		
	Design	Actual
Motor MFG	-	US MOTORS
Frame	-	48Y
Horsepower	-	1/2
Motor Rpm	770	1800
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	6.4

Completed By: Gabe Merk on 07/11/2025

Notes:
SPEED SETPOINT 59%

Written By: Gabe Merk on 07/11/2025

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Project: Conner HS Fieldhouse (Hebron, KY)

FAN - Exhaust



Diffuser Ret/Exh (GRD)

EF4/R1

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
EGRD1	E-1	22X22	350		730	337	337	96.3
Total			350		730	337	337	96.29%