

Report By:

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



Report: prelim
Function: Test, Adjust, & Balance
Date: 07/16/2024

PROJECT
Marshalls (Morehead, KY)

414 KROGER CENTER DRIVE

Morehead, KY 40351

Client

Triton Services, Inc.
8162 Duke Boulevard

Mason, OH 45040

National TAB

Project: Marshalls (Morehead, KY)

Table Of Contents

Section	Page #
AHU/RTU	3
FAN - Exhaust	15

National TAB

Project: Marshalls (Morehead, KY)
System/Unit: AHU/RTU



Asset: RTU-1

AREA:SALES

Unit Data		
	Design	Actual
MFG	NA	YORK
Serial Num	-	N2M3979995
Model Num	NA	ZJ150N24R2B5DCA1R2
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	31"X22"
Num PreFilter 1	-	4
PreFilter Size 1	-	24X20X2

Test Data		
	Design	Actual
SF CFM	5000	
SF RPM	1551	
RA CFM	3550	
OA CFM	1450	
RL Voltage	208	
RL Amperage	14	
OA Damper Position	-	
Brake Horse Power	4.99	

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	184T
Horsepower	5.00	5
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	208	208
Rated Amperage	14	13.5
Service Factor	-	1.15

Performance Data		
	Design	Actual
MA Plenum SP	-	
Fan Suction SP	-	
Fan Discharge SP	-	
Total ESP	1.0	
Fan Total SP	1.82	

Drive Data	
	Actual
Motor Sheave Size	JVP56
Motor Bore Size	1.125"
Motor Sheave SetPt	
Fan Sheave Size	7.5"
Fan Sheave Bore	1"
Belt CL Distance	
Num of Belts	1
Belt Size	BX56

National TAB
 Project: Marshalls (Morehead, KY)
AHU/RTU



Diffuser Supply (GRD)

RTU-1/SALES

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
1-1	SALES	SD-1	10	300			-
1-2	SALES	SD-1	10	300			-
1-3	SALES	SR-1		800			-
1-4	SALES	SR-1		400			-
1-5	SALES	SR-1		800			-
1-6	SALES	SR-1		800			-
1-7	SALES	SR-1		800			-
1-8	SALES	SR-1		800			-
Total				5000	0	0	0%

Diffuser Ret/Exh (GRD)

RTU-1/SALES

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
R1-1	R-2	36X18	2500					-
R1-2	R-2	36X18	2500					-
Total			5000		0	0	0	0%

National TAB

Project: Marshalls (Morehead, KY)
System/Unit: AHU/RTU



Asset: RTU-2

AREA:SALES

Unit Data		
	Design	Actual
MFG	NA	YORK
Serial Num	-	N2A4070739
Model Num	NA	ZJ090N18R2B5DCA1R3
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	31"X22"
Num PreFilter 1	-	4
PreFilter Size 1	-	24X20X2

Test Data		
	Design	Actual
SF CFM	3000	
SF RPM	1024	
RA CFM	2280	
OA CFM	720	
RL Voltage	208	
RL Amperage	9.6	
OA Damper Position	-	
Brake Horse Power	2.06	

Motor Data		
	Design	Actual
Motor MFG	-	
Frame	-	
Horsepower	3.00	
Motor Rpm	-	
Phase	3	
Rated Voltage	208	
Rated Amperage	9.6	
Service Factor	-	

Performance Data		
	Design	Actual
MA Plenum SP	-	
Fan Suction SP	-	
Fan Discharge SP	-	
Total ESP	0.8	
Fan Total SP	1.11	

Drive Data	
	Actual
Motor Sheave Size	5"
Motor Bore Size	0.875"
Motor Sheave SetPt	
Fan Sheave Size	7"
Fan Sheave Bore	1"
Belt CL Distance	
Num of Belts	1
Belt Size	A54

National TAB

Project: Marshalls (Morehead, KY)
System/Unit: AHU/RTU



Asset: RTU-3

AREA:SALES

Unit Data		
	Design	Actual
MFG	NA	YORK
Serial Num	-	N2A4070742
Model Num	NA	ZJ090N18R2B5DCA1R3
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	31"X22"
Num PreFilter 1	-	4
PreFilter Size 1	-	24X20X2

Test Data		
	Design	Actual
SF CFM	3000	2846
RA CFM	2280	2152
OA CFM	720	694
RL Voltage	208	213/213/213
RL Amperage	9.6	2.8/2.6/2.6
OA Damper Position	-	MANUALLY SET
Brake Horse Power	2.06	0.83

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	56HZ
Horsepower	3.00	3
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	208	208
Rated Amperage	9.6	8.3
Service Factor	-	1.15

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.22"
Fan Suction SP	-	-0.34"
Fan Discharge SP	-	0.40"
Total ESP	0.8	0.62"
Fan Total SP	1.11	0.74"

Drive Data	
	Actual
Motor Sheave Size	4.5"
Motor Bore Size	0.875"
Motor Sheave SetPt	
Fan Sheave Size	7"
Fan Sheave Bore	1"
Belt CL Distance	
Num of Belts	1
Belt Size	A54

Notes:

NO GOOD TRAVERSE LOCATION. UNIT TOTAL SET FROM ROOF USING 100% OA.
OA DAMPER WOULD NOT RETURN TO CLOSED. MANUALLY PUSHED TO DESIGN FLOW. DAMPER POSITION MARKED BY SHARPIE.

Written By: Gabe Merk on 07/01/2024

National TAB

Project: Marshalls (Morehead, KY)
System/Unit: AHU/RTU



Asset: RTU-4

AREA:SALES

Unit Data		
	Design	Actual
MFG	NA	YORK
Serial Num	-	N2A4070741
Model Num	NA	ZJ090N18R2B5DCA1R3
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	31"X22"
Num PreFilter 1	-	4
PreFilter Size 1	-	24X20X2

Test Data		
	Design	Actual
SF CFM	3000	
SF RPM	1024	
RA CFM	2280	
OA CFM	720	
RL Voltage	208	
RL Amperage	9.6	
OA Damper Position	-	
Brake Horse Power	2.06	

Motor Data		
	Design	Actual
Motor MFG	-	
Frame	-	
Horsepower	3.00	
Motor Rpm	-	
Phase	3	
Rated Voltage	208	
Rated Amperage	9.6	
Service Factor	-	

Performance Data		
	Design	Actual
MA Plenum SP	-	
Fan Suction SP	-	
Fan Discharge SP	-	
Total ESP	0.8	
Fan Total SP	1.11	

Drive Data	
	Actual
Motor Sheave Size	1VM50
Motor Bore Size	0.875"
Motor Sheave SetPt	
Fan Sheave Size	7"
Fan Sheave Bore	1"
Belt CL Distance	
Num of Belts	1
Belt Size	A54

National TAB

Project: Marshalls (Morehead, KY)
System/Unit: AHU/RTU



Asset: RTU-5

AREA:SALES

Unit Data		
	Design	Actual
MFG	NA	YORK
Serial Num	-	N2A4070740
Model Num	NA	ZJ090N18R2B5DCA1R3
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	31"X22"
Num PreFilter 1	-	4
PreFilter Size 1	-	24X20X2

Test Data		
	Design	Actual
SF CFM	3000	3097
RA CFM	2280	2374
OA CFM	720	723
RL Voltage	208	212/213/213
RL Amperage	9.6	2.9/3.2/3.4
OA Damper Position	-	18%
Brake Horse Power	2.06	0.99

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	56HZ
Horsepower	3.00	3
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	208	208
Rated Amperage	9.6	8.3
Service Factor	-	1.15

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.26"
Fan Suction SP	-	-0.36"
Fan Discharge SP	-	0.32"
Total ESP	0.8	0.58"
Fan Total SP	1.11	0.68"

Drive Data	
	Actual
Motor Sheave Size	1VM50
Motor Bore Size	0.875"
Motor Sheave SetPt	
Fan Sheave Size	7"
Fan Sheave Bore	1"
Belt CL Distance	
Num of Belts	1
Belt Size	A54

Notes:
NO GOOD TRAVERSE LOCATION. UNIT TOTAL READ FROM ROOF USING 100% OA.

Written By: Gabe Merk on 07/01/2024

National TAB

Project: Marshalls (Morehead, KY)
System/Unit: AHU/RTU



Asset: RTU-6

AREA:MENS ADA

Unit Data		
	Design	Actual
MFG	NA	YORK
Serial Num	-	N2M3983227
Model Num	NA	ZT037N08P2B5DCA1R3
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	31"X22"
Num PreFilter 1	-	4
PreFilter Size 1	-	24X16X2

Test Data		
	Design	Actual
SF CFM	1200	
SF RPM	736	
RA CFM	880	
OA CFM	320	
RL Voltage	208	
RL Amperage	4.3	
OA Damper Position	-	
Brake Horse Power	0.50	

Motor Data		
	Design	Actual
Motor MFG	-	
Frame	-	
Horsepower	1.50	
Motor Rpm	-	
Phase	3	
Rated Voltage	208	
Rated Amperage	4.3	
Service Factor	-	

Performance Data		
	Design	Actual
MA Plenum SP	-	
Fan Suction SP	-	
Fan Discharge SP	-	
Total ESP	0.6	
Fan Total SP	-	

Drive Data	
	Actual
Motor Sheave Size	1VL40
Motor Bore Size	0.875"
Motor Sheave SetPt	
Fan Sheave Size	8"
Fan Sheave Bore	1"
Belt CL Distance	
Num of Belts	1
Belt Size	A47

National TAB

Project: Marshalls (Morehead, KY)

AHU/RTU



Diffuser Supply (GRD)

RTU-6/MENS ADA

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
6-1	MENS DR	SD-1	8	150			-
6-2	WOMENS DR	SD-1	8	225			-
6-3	LP	SD-1	8	150			-
6-4	WOMENS DR	SD-1	8	225			-
6-5	DR ENTRANCE	SD-1	10	300			-
6-6	WOMENS ADA	SD-1	6	75			-
6-7	MENS ADA	SD-1	6	75			-
Total				1200	0	0	0%

Diffuser Ret/Exh (GRD)

RTU-6/MENS ADA

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
R6-1	R-1		1200					-
Total			1200		0	0	0	0%

National TAB

Project: Marshalls (Morehead, KY)
System/Unit: AHU/RTU



Asset: RTU-7

AREA:PROCESSING

Unit Data		
	Design	Actual
MFG	NA	YORK
Serial Num	-	N2D4257582
Model Num	NA	ZT061N16P2B5DCA1R2
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	31"X22"
Num PreFilter 1	-	4
PreFilter Size 1	-	24X16X2

Test Data		
	Design	Actual
SF CFM	2000	
SF RPM	945	
RA CFM	1700	
OA CFM	300	
RL Voltage	208	
RL Amperage	4.3	
OA Damper Position	-	
Brake Horse Power	0.93	

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	56HZ
Horsepower	1.50	1.5
Motor Rpm	-	1740
Phase	3	3
Rated Voltage	208	208
Rated Amperage	4.3	4.3
Service Factor	-	1.15

Performance Data		
	Design	Actual
MA Plenum SP	-	
Fan Suction SP	-	
Fan Discharge SP	-	
Total ESP	0.6	
Fan Total SP	0.78	

Drive Data	
	Actual
Motor Sheave Size	1VL40
Motor Bore Size	0.875"
Motor Sheave SetPt	
Fan Sheave Size	6"
Fan Sheave Bore	1"
Belt CL Distance	
Num of Belts	1
Belt Size	A45

National TAB

Project: Marshalls (Morehead, KY)

AHU/RTU



Diffuser Supply (GRD)

RTU-7/PROCESSING

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
7-1	PROCESSING	SR-2		250			-
7-2	PROCESSING	SR-2		250			-
7-3	PROCESSING	SR-2		250			-
7-4	PROCESSING	SR-2		250			-
7-5	PROCESSING	SR-2		250			-
7-6	PROCESSING	SR-2		250			-
7-7	PROCESSING	SR-2		250			-
7-8	PROCESSING	SR-2		250			-
Total				2000	0	0	0%

Diffuser Ret/Exh (GRD)

RTU-7/PROCESSING

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
R7-1	R-2		2000					-
Total			2000		0	0	0	0%

National TAB

Project: Marshalls (Morehead, KY)
System/Unit: AHU/RTU



Asset: RTU-8

AREA:MGR

Unit Data		
	Design	Actual
MFG	NA	YORK
Serial Num	-	N2D4257581
Model Num	NA	ZT061N16P2B5DCA1R2
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	31"X22"
Num PreFilter 1	-	4
PreFilter Size 1	-	24X16X2

Test Data		
	Design	Actual
SF CFM	2000	
SF RPM	945	
RA CFM	1700	
OA CFM	300	
RL Voltage	208	
RL Amperage	4.3	
OA Damper Position	-	
Brake Horse Power	0.93	

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	56HZ
Horsepower	1.50	1.5
Motor Rpm	-	1740
Phase	3	3
Rated Voltage	208	208
Rated Amperage	4.3	4.3
Service Factor	-	1.15

Performance Data		
	Design	Actual
MA Plenum SP	-	
Fan Suction SP	-	
Fan Discharge SP	-	
Total ESP	0.6	
Fan Total SP	0.78	

Drive Data	
	Actual
Motor Sheave Size	1VL40
Motor Bore Size	0.875"
Motor Sheave SetPt	
Fan Sheave Size	6"
Fan Sheave Bore	1"
Belt CL Distance	
Num of Belts	1
Belt Size	A45

National TAB

Project: Marshalls (Morehead, KY)

AHU/RTU



Diffuser Supply (GRD)

RTU-8/MGR

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
8-1	LOUNGE	SD-1	8	200			-
8-2	LOUNGE	SD-1	8	200			-
8-3	LOUNGE	SD-1	8	200			-
8-4	LOUNGE HALL	SD-1	8	125			-
8-5	CASH HALL	SD-1	6	50			-
8-6	MENS RR	SD-2	8	100			-
8-7	WOMENS RR	SD-2	8	150			-
8-8	JAN	SD-1	8	150			-
8-9	CASH	SD-1	8	175			-
8-10	MGR HALL	SD-1	6	50			-
8-11	ASST MGR	SD-1	8	250			-
8-12	LC	SD-1	8	150			-
8-13	MGR	SD-1	8	200			-
Total				2000	0	0	0%

Diffuser Ret/Exh (GRD)

RTU-8/MGR

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
R8-1	R-1		200					-
R8-2	R-1		125					-
R8-3	R-1		50					-
R8-4	R-1		250					-
R8-5	R-1		200					-
R8-6	R-1		50					-
R8-7	R-1		150					-
Total			1025		0	0	0	0%

National TAB
 Project: Marshalls (Morehead, KY)
 System/Unit: FAN - Exhaust



Asset: EF-1

AREA:JAN

Unit Data		
	Design	Actual
MFG	NA	YORK
Model Num	NA	EVD13R
Serial Num	-	C24AV12373
Type	CRE	DOWNBLAST

Test Data		
	Design	Actual
CFM	650	
RL Voltage	-	120
RL Amperage	-	
Total ESP	0.625	

Motor Data		
	Design	Actual
Motor MFG	-	FASCO
Horsepower	-	1/6
Motor Rpm	-	1550
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	2.1

National TAB

Project: Marshalls (Morehead, KY)

FAN - Exhaust



Diffuser Ret/Exh (GRD)

EF-1/JAN

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
E1-1	EG-1		250					-
E1-2	EG-1		250					-
E1-3	EG-1		150					-
Total			650		0	0	0	0%

National TAB

Project: Marshalls (Morehead, KY)

System/Unit: FAN - Exhaust



Asset: EF-2

AREA: LOUNGE

Unit Data		
	Design	Actual
MFG	NA	YORK
Model Num	NA	EVD10R
Serial Num	-	C24AV12374
Type	CRE	DOWNBLAST

Test Data		
	Design	Actual
CFM	220	
RL Voltage	-	120
RL Amperage	-	
Total ESP	0.50	

Motor Data		
	Design	Actual
Motor MFG	-	FASCO
Horsepower	-	1/12
Motor Rpm	-	1550
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	1.1

National TAB

Project: Marshalls (Morehead, KY)

FAN - Exhaust



Diffuser Ret/Exh (GRD)

EF-2/LOUNGE

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
E2-1	R-1		220					-
Total			220		0	0	0	0%

National TAB

Project: Marshalls (Morehead, KY)
System/Unit: FAN - Exhaust



Asset: EF-3

AREA:CLOSET

Unit Data		
	Design	Actual
MFG	NA	YORK
Model Num	NA	EVD10R
Serial Num	-	C24AV12375
Type	CRE	DOWNBLAST

Test Data		
	Design	Actual
CFM	310	
RL Voltage	-	120
RL Amperage	-	
Total ESP	0.50	

Motor Data		
	Design	Actual
Motor MFG	-	FASCO
Horsepower	-	1/12
Motor Rpm	-	1550
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	1.1

National TAB

Project: Marshalls (Morehead, KY)

FAN - Exhaust



Diffuser Ret/Exh (GRD)

EF-3/CLOSET

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
E3-1	R-1		60					-
E3-2	R-1		250					-
Total			310		0	0	0	0%