

Report By:

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



Report: Prelim Report
Function: Test, Adjust, & Balance
Date: 01/12/2024

PROJECT

Mercedes Benz Dealership (West Chester, OH)

5897 Mulhauser Rd

West Chester, OH 45069

Client

Cinfab, LLC

5240 Lester Road

Cincinnati, OH 45213

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Project: Mercedes Benz Dealership (West Chester, OH)

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Project: Mercedes Benz Dealership (West Chester, OH)

System/Unit: AHU/RTU



Asset: RTU-1

AREA:SHOWROOM

Unit Data		
	Design	Actual
MFG	NA	TRANE
Serial Num	-	452100568D
Model Num	NA	YCD150D4HCBB
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	50"X16"
Num PreFilter 1	-	6
PreFilter Size 1	-	20"X20"X2"

Motor Data		
	Design	Actual
Motor MFG	-	
Horsepower	3.10	5
Phase	3	3
Rated Voltage	460	460
Rated Amperage	-	7.6

Test Data		
	Design	Actual
SF CFM	5000	7066
RA CFM	4300	
OA CFM	700	
RL Voltage	460	
RL Amperage	-	
OA Damper Position	-	
Brake Horse Power	-	

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

Notes:

Unit has not been replaced yet. Airflows are set but final performance data will be obtained once the new rooftop unit is set and fully functional.

Written By: Nick Payne on 11/16/2023

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Project:Mercedes Benz Dealership (West Chester, OH)

AHU/RTU



Diffuser Supply (GRD)

RTU-1/SHOWROOM

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
1-1	NEW VEHICLE DELIVERY	E	28X8	625			-
1-2	NEW VEHICLE DELIVERY	E	28X8	625			-
1-3	NEW VEHICLE DELIVERY	E	28X8	625			-
1-4	NEW VEHICLE DELIVERY	E	28X8	625			-
1-5	SHOWROOM	E	28X8	625			-
1-6	SHOWROOM	E	28X8	625			-
1-7	SHOWROOM	E	28X8	625			-
1-8	SHOWROOM	E	28X8	625			-
Total				5000	0	0	0%

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Project: Mercedes Benz Dealership (West Chester, OH)

System/Unit: AHU/RTU



Asset: RTU-2

AREA:CORRIDOR

Unit Data		
	Design	Actual
MFG	NA	TRANE
Serial Num	-	234310735L
Model Num	NA	YSJ120A4S0H
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	40"x16"
Num PreFilter 1	-	5
PreFilter Size 1	-	16"x24"x2"

Motor Data		
	Design	Actual
Horsepower	3.10	3.0
Phase	3	3
Rated Voltage	460	460
Rated Amperage	-	4.6

Test Data		
	Design	Actual
SF CFM	3800	3892
RA CFM	3300	
OA CFM	500	
RL Voltage	460	
RL Amperage	-	
OA Damper Position	-	
Brake Horse Power	-	

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

Notes:

Only one grille installed where Grilles 2-19 and 2-21 (245 each) serve. They were added together and achieved at the singular grille installed.

11/16/23 OA intake installation is in process. Can obtain final performance data once unit is fully functional.

Written By: Nick Payne on 11/16/2023

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Project:Mercedes Benz Dealership (West Chester, OH)

AHU/RTU



Diffuser Supply (GRD)

RTU-2/CORRIDOR

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
2-1	CONSULT	F	8	240	345	222	92.5
2-2	CONF/TRAIN	C	10	230	161	228	99.1
2-3	CONF/TRAIN	C	10	230	334	235	102.2
2-4	IT	D	12X6	210	190	218	103.8
2-5	CONF/TRAIN	C	10	230	364	240	104.3
2-6	CONSULT	F	8	240	391	226	94.2
2-7	CONSULT	B	8	135	178	142	105.2
2-8	CONSULT	B	8	135	196	138	102.2
2-9	CONSULT	B	8	170	203	179	105.3
2-10	CONSULT	B	8	170	171	185	108.8
2-11	CONSULT	F	8	240	244	256	106.7
2-12	CONSULT	B	8	135	226	138	102.2
2-13	CONSULT	B	8	135	38	142	105.2
2-14	CONSULT	B	8	135	151	140	103.7
2-15	CONSULT	B	8	135	96	145	107.4
2-16	CONSULT	B	8	135	264	148	109.6
2-17	F&I MANAGER	B	8	135	263	145	107.4
2-18	CONSULT	B	8	135	255	141	104.4
2-19	BOUTIQUE	F	8	500	409	476	95.2
2-20	F&I MANAGER	B	8	135	354	148	109.6
2-21	CORRIDOR	F	8	0	0	0	-
Total				3810	4833	3892	102.15%

Diffuser Ret/Exh (GRD)

RTU-2/CORRIDOR

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
R2-1	B	14	690					-
R2-2	A	8	135					-
R2-3	A	8	135					-
R2-4	C	18X14	605					-
R2-5	A	8	170					-
R2-6	A	8	170					-
R2-7	A	8	135					-
R2-8	A	8	135					-
R2-9	A	8	135					-
R2-10	A	8	135					-
R2-11	A	8	135					-
R2-12	C	18X14	605					-
R2-13	A	8	135					-
R2-14	A	8	135					-
R2-15	A	8	135					-
Total			3590		0	0	0	0%

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Project: Mercedes Benz Dealership (West Chester, OH)

System/Unit: AHU/RTU



Asset: RTU-3

AREA:SHOWROOM

Unit Data		
	Design	Actual
MFG	NA	TRANE
Serial Num	-	234010672D
Model Num	NA	YSJ180A4S0L
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	72"x20"
Num PreFilter 1	-	8
PreFilter Size 1	-	20"x24"x2"

Motor Data		
	Design	Actual
Horsepower	3.10	3.0
Phase	3	3
Rated Voltage	460	460
Rated Amperage	-	4.6/ea

Test Data		
	Design	Actual
SF CFM	6000	6538
RA CFM	5100	5623
OA CFM	900	915(965)
RL Voltage	460	497.0/485.5/486.3
RL Amperage	-	1.4/1.4/1.4/1.4/1.3/1.4
OA Damper Position	-	15%/22%

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.50"
Fan Suction SP	-	-0.77"
Fan Discharge SP	-	0.39"
Total ESP	1.0	0.89"
Fan Total SP	-	1.16"

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Project:Mercedes Benz Dealership (West Chester, OH)

AHU/RTU



Diffuser Supply (GRD)

RTU-3/SHOWROOM

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
3-1	SHOWROOM	E	28X8	600			-
3-2	SHOWROOM	E	28X8	600			-
3-3	SHOWROOM	E	28X8	600			-
3-4	SHOWROOM	E	28X8	600			-
3-5	SHOWROOM	E	28X8	600			-
3-6	SHOWROOM	E	28X8	600			-
3-7	SHOWROOM	E	28X8	600			-
3-8	SHOWROOM	E	28X8	600			-
3-9	SHOWROOM	E	28X8	600			-
3-10	SHOWROOM	E	28X8	600			-
Total				6000	0	0	0%

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Project: Mercedes Benz Dealership (West Chester, OH)

System/Unit: AHU/RTU



Asset: RTU-4

AREA:OFFICES

Unit Data		
	Design	Actual
MFG	NA	TRANE
Serial Num	-	234510457L
Model Num	NA	YSJ150A4S0H
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	38"X17"
Num PreFilter 1	-	6
PreFilter Size 1	-	18"X18"X2"

Test Data		
	Design	Actual
SF CFM	5000	5103
RA CFM	4300	4406
OA CFM	700	697
RL Voltage	460	487/486.5/487.2
RL Amperage	-	3.24/2.88/3.08
OA Damper Position	-	25%
Brake Horse Power	-	1.76

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NA
Horsepower	3.10	5
Motor Rpm	-	1629
Phase	3	3
Rated Voltage	460	460
Rated Amperage	-	5.5
Service Factor	-	NA

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.51"
Fan Suction SP	-	-0.87"
Fan Discharge SP	-	0.26"
Total ESP	1.0	1.38"
Fan Total SP	-	1.13"

Completed By: Jordan Best on 12/18/2023

Notes:

Fan speed set pt. 86%

Written By: Jordan Best on 12/18/2023

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Project: Mercedes Benz Dealership (West Chester, OH)

System/Unit: AHU/RTU



Asset: RTU-5

AREA:SERVICE BAYS

Unit Data		
	Design	Actual
MFG	NA	TRANE
Serial Num	-	234310749L
Model Num	NA	YSJ120A4S0H
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	17"x39"
Num PreFilter 1	-	5
PreFilter Size 1	-	16"x24"x2"

Motor Data		
	Design	Actual
Horsepower	3.10	3.0
Phase	3	3
Rated Voltage	460	460
Rated Amperage	-	4.6

Test Data		
	Design	Actual
SF CFM	4000	4050
RA CFM	3500	3547
OA CFM	500	503
RL Voltage	460	486.0/488.6/486.8
RL Amperage	-	2.3/2.3/2.3
OA Damper Position	-	11%
Brake Horse Power	-	1.5

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.53"
Fan Suction SP	-	-0.91"
Fan Discharge SP	-	0.71"
Total ESP	1.0	1.24"
Fan Total SP	-	1.62"

Completed By: Gabe Merk on 12/18/2023

Notes:
80% supply fan

Written By: Gabe Merk on 12/18/2023

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Project: Mercedes Benz Dealership (West Chester, OH)

System/Unit: AHU/RTU



Asset: RTU-6

AREA:PARTS

Unit Data		
	Design	Actual
MFG	NA	TRANE
Serial Num	-	234610475L
Model Num	NA	YSJ150A4S0H
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	37"x18"
Num PreFilter 1	-	3/3
PreFilter Size 1	-	18"x24"x2"/18"x18"x2"

Motor Data		
	Design	Actual
Horsepower	3.10	5.0
Phase	3	3
Rated Voltage	460	460
Rated Amperage	-	5.5

Test Data		
	Design	Actual
SF CFM	5000	
RA CFM	4300	
OA CFM	700	
RL Voltage	460	
RL Amperage	-	
OA Damper Position	-	
Brake Horse Power	-	

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

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Project: Mercedes Benz Dealership (West Chester, OH)

System/Unit: AHU/RTU



Asset: RTU-7

AREA:SERVICE BAYS

Unit Data		
	Design	Actual
MFG	NA	TRANE
Serial Num	-	234310796L
Model Num	NA	YSJ120A4S0H
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	40"X17"
Num PreFilter 1	-	4
PreFilter Size 1	-	16"X24"X2"

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NA
Horsepower	3.10	3
Motor Rpm	-	1474
Phase	3	3
Rated Voltage	460	460
Rated Amperage	-	4.6
Service Factor	-	NA

Test Data		
	Design	Actual
SF CFM	4000	4005
RA CFM	3500	3511
OA CFM	500	494
RL Voltage	460	485.6/484.9/486.5
RL Amperage	-	2.44/2.38/2.33
OA Damper Position	-	5%
Brake Horse Power	-	1.56

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.54"
Fan Suction SP	-	-0.91"
Fan Discharge SP	-	0.49"
Total ESP	1.0	1.45"
Fan Total SP	-	1.4"

Completed By: Jordan Best on 12/18/2023

Notes:

Fan speed set pt. 79%

Written By: Jordan Best on 12/18/2023

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Project: Mercedes Benz Dealership (West Chester, OH)

System/Unit: AHU/RTU



Asset: RTU-8

AREA:DETAIL BAYS

Unit Data		
	Design	Actual
MFG	NA	TRANE
Serial Num	-	234310753L
Model Num	NA	YSJ120A4S0H
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	37"x17"
Num PreFilter 1	-	3/2
PreFilter Size 1	-	16"x24"x2"/18"x24"x2"

Test Data		
	Design	Actual
SF CFM	4000	4104
RA CFM	3500	3563
OA CFM	500	541
RL Voltage	460	484.6/484.4/482.6
RL Amperage	-	2.8/2.7/2.8
OA Damper Position	-	12%
Brake Horse Power	-	1.3

Motor Data		
	Design	Actual
Horsepower	3.10	3.0
Phase	3	3
Rated Voltage	460	460
Rated Amperage	-	4.6

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.47"
Fan Suction SP	-	-0.89"
Fan Discharge SP	-	1.74"
Total ESP	1.0	2.21"
Fan Total SP	-	2.63"

Completed By: Gabe Merk on 12/18/2023

Notes:
SF:83%

Written By: Gabe Merk on 12/18/2023

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Project: Mercedes Benz Dealership (West Chester, OH)

System/Unit: AHU/RTU



Asset: RTU-9

AREA:BODY SHOP OFFICES

Unit Data		
	Design	Actual
MFG	NA	TRANE
Serial Num	-	234310767L
Model Num	NA	YSJ120A4S0H
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	40"X17"
Num PreFilter 1	-	4
PreFilter Size 1	-	16"X24"X2"

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NA
Horsepower	3.10	3
Motor Rpm	-	1474
Phase	3	3
Rated Voltage	460	460
Rated Amperage	-	4.6
Service Factor	-	NA

Test Data		
	Design	Actual
SF CFM	4000	4083
RA CFM	3500	3546
OA CFM	500	537
RL Voltage	460	487.3/486.3/484.2
RL Amperage	-	3.02/2.87/2.93
OA Damper Position	-	5%
Brake Horse Power	-	1.95

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.85"
Fan Suction SP	-	-1.21
Fan Discharge SP	-	0.79"
Total ESP	1.0	1.64"
Fan Total SP	-	2"

Completed By: Jordan Best on 12/18/2023

Notes:

Fan speed set pt. 90%

Written By: Jordan Best on 12/18/2023

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Project: Mercedes Benz Dealership (West Chester, OH)

System/Unit: AHU/RTU



Asset: RTU-10

AREA:BODY SHOP (LEFT)

Unit Data		
	Design	Actual
MFG	NA	TRANE
Serial Num	-	234011504L
Model Num	NA	TSJ102A4S0
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	39"x18"
Num PreFilter 1	-	3/2
PreFilter Size 1	-	16"x24"x2"/18"x24"x2"

Motor Data		
	Design	Actual
Horsepower	3.10	3.0
Phase	3	3
Rated Voltage	460	460
Rated Amperage	-	4.6

Test Data		
	Design	Actual
SF CFM	3400	
RA CFM	3150	
OA CFM	250	
RL Voltage	460	
RL Amperage	-	
OA Damper Position	-	

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

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Project: Mercedes Benz Dealership (West Chester, OH)

System/Unit: AHU/RTU



Asset: RTU-11

AREA:BODY SHOP (LEFT)

Unit Data		
	Design	Actual
MFG	NA	TRANE
Serial Num	-	234310803L
Model Num	NA	TSJ102A4S00
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	40"X17"
Num PreFilter 1	-	4
PreFilter Size 1	-	16"X24"X2"

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NA
Horsepower	3.10	3
Motor Rpm	-	1308
Phase	3	3
Rated Voltage	460	460
Rated Amperage	-	4.6
Service Factor	-	NA

Test Data		
	Design	Actual
SF CFM	3400	
RA CFM	3150	
OA CFM	250	
RL Voltage	460	
RL Amperage	-	
OA Damper Position	-	
Brake Horse Power	-	

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

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Project: Mercedes Benz Dealership (West Chester, OH)

System/Unit: AHU/RTU



Asset: RTU-12

AREA:BODY SHOP (RIGHT)

Unit Data		
	Design	Actual
MFG	NA	TRANE
Serial Num	-	234310737L
Model Num	NA	TSJ120A4S00
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	37"x17"
Num PreFilter 1	-	3/2
PreFilter Size 1	-	16"x24"x2"/18"x24"x2"

Motor Data		
	Design	Actual
Horsepower	3.10	3.0
Phase	3	3
Rated Voltage	460	460
Rated Amperage	-	4.6

Test Data		
	Design	Actual
SF CFM	4000	4216
RA CFM	3750	
OA CFM	250	
RL Voltage	460	
RL Amperage	-	
OA Damper Position	-	
Brake Horse Power	-	

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

Notes:
Sf: 77%

Written By: Gabe Merk on 12/18/2023

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Project: Mercedes Benz Dealership (West Chester, OH)

System/Unit: AHU/RTU



Asset: RTU-13

AREA:BODY SHOP (RIGHT)

Unit Data		
	Design	Actual
MFG	NA	TRANE
Serial Num	-	234310745L
Model Num	NA	TSJ120A4S00
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	40"X17"
Num PreFilter 1	-	34
PreFilter Size 1	-	16"X24"X2"

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NA
Horsepower	3.10	3
Motor Rpm	-	1447
Phase	3	3
Rated Voltage	460	460
Rated Amperage	-	4.6
Service Factor	-	NA

Test Data		
	Design	Actual
SF CFM	4000	4001
RA CFM	3750	3738
OA CFM	250	263
RL Voltage	460	483.9/484.5/485.6
RL Amperage	-	1.91/1.97/1.89
OA Damper Position	-	5%
Brake Horse Power	-	1.23

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.26"
Fan Suction SP	-	-0.75"
Fan Discharge SP	-	0.21"
Total ESP	1.0	1.01"
Fan Total SP	-	0.96"

Completed By: Jordan Best on 12/18/2023

Notes:

- Fan speed set pt. 76%
- Unit missing condensate drain piping.

Written By: Jordan Best on 12/18/2023