

Report By:

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



**Report: Prelim TAB 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

National TAB

Project: Mercedes Benz Dealership (West Chester, OH)

Table Of Contents

Section	Page #
AHU/RTU	3

National TAB

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	5225
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

National TAB

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		645	103.2
1-2	NEW VEHICLE DELIVERY	E	28X8	625		652	104.3
1-3	NEW VEHICLE DELIVERY	E	28X8	625		678	108.5
1-4	NEW VEHICLE DELIVERY	E	28X8	625		660	105.6
1-5	SHOWROOM	E	28X8	625		618	98.9
1-6	SHOWROOM	E	28X8	625		669	107.0
1-7	SHOWROOM	E	28X8	625		645	103.2
1-8	SHOWROOM	E	28X8	625		658	105.3
Total				5000	0	5225	104.5%

National TAB

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.

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

Written By: Nick Payne on 01/12/2024

National TAB

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%

National TAB

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	6302
RA CFM	5100	5387
OA CFM	900	915
RL Voltage	460	497.0/485.5/486.3
RL Amperage	-	1.4/1.4/1.3
OA Damper Position	-	15%

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"

National TAB

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	318	642	107.0
3-2	SHOWROOM	E	28X8	600	322	613	102.2
3-3	SHOWROOM	E	28X8	600	152	656	109.3
3-4	SHOWROOM	E	28X8	600	66	632	105.3
3-5	SHOWROOM	E	28X8	600	345	608	101.3
3-6	SHOWROOM	E	28X8	600	492	625	104.2
3-7	SHOWROOM	E	28X8	600	588	617	102.8
3-8	SHOWROOM	E	28X8	600	417	647	107.8
3-9	SHOWROOM	E	28X8	600	247	638	106.3
3-10	SHOWROOM	E	28X8	600	588	624	104.0
Total				6000	3535	6302	105.03%

National TAB

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

National TAB

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

National TAB

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	-	

National TAB

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

National TAB

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

National TAB

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

National TAB

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	-	

National TAB

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	-	

National TAB

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	3.0	3.0
Phase	3	3
Rated Voltage	460	460
Rated Amperage	-	4.6

Test Data		
	Design	Actual
SF CFM	4000	4216
RA CFM	3750	3942
OA CFM	250	274
RL Voltage	460	490/481/485
RL Amperage	-	2.2/2.0/2.2
OA Damper Position	-	15%
Brake Horse Power	-	1.36

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.33"
Fan Suction SP	-	-0.68
Fan Discharge SP	-	0.39
Total ESP	1.0	0.72
Fan Total SP	-	1.07

Notes:
Sf: 77%

Written By: Gabe Merk on 12/18/2023

National TAB

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"

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

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

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