

Report By:

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



Report: TAB REPORT
Function: Test, Adjust, & Balance
Date: 08/25/2023

PROJECT
08-21-23 CARMAX #7283 COLUMBUS, OH

3800 Morse Rd

Columbus , OH 43219

Client

Comfort Systems USA - Houston
9450 W Wingfoot Rd
Houston, TX 77041

National TAB

Project: 08-21-23 CARMAX #7283 COLUMBUS, OH

Table Of Contents

Section	Page #
Summary	3
AHU/RTU	4
FAN - Exhaust	19
GRD Layout	21

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.

Facility Identification and TAB Requirements

The mechanical equipment to be tested, adjusted, and balanced includes all RTU's and EF's on the Test and Balance Scope on the mechanical drawings.

Standard RTU's

Each of the RTU's were measured at their terminal devices utilizing a flow hood or via total traverse. The sum of these readings is equal to the total flow for that particular unit. The total flow of each RTU was then adjusted to within tolerance of the specified design. Outside airflow was measured by reading the inlet with a velocity grid times the area of the filter. Any equipment that fell outside of this tolerance is noted throughout the report.

Bypass RTU's

The Bypass RTU's were measured by first closing the bypass damper completely. By doing this, the outside airflow is equal to the total flow for the unit. The airflow was measured using a velgrid at the outdoor air intake and multiplying by the free area of the filters. Adjustments made to the motor sheave in order to get airflow within tolerance of design. The bypass damper is then adjusted to so that bypass and OA flows are within tolerance.

Exhaust Fans

The exhaust fans were measured by reading each air device with a flow hood or via a velgrid reading times the free area of the inlets. 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. Any equipment that fell outside of this tolerance is noted throughout the report.

National TAB

Project: 08-21-23 CARMAX #7283 COLUMBUS, OH

System/Unit: AHU/RTU



Asset: RTU1

AREA:SHOW ROOM

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622F01144
Model Num	LGA360H	LGH156H4MS5G
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	3
OA Filter Size 1	-	24.5" X 16"
Num Final Filter 1	-	6
Final Filter Size 1	-	24" X 24" X 2"

Motor Data		
	Design	Actual
Motor MFG	-	US MOTORS
Frame	-	56HZ
Horsepower	3.0	3
Motor Rpm	-	1740
Phase	3	3
Rated Voltage	480	460
Rated Amperage	-	4

Drive Data		
	Design	Actual
Motor Sheave Size	-	3.75"
Motor Bore Size	-	0.875"
Motor Sheave SetPt	-	4 TURNS OUT
Fan Sheave Size	-	7"
Fan Sheave Bore	-	1"
Belt CL Distance	-	20.5"
Num of Belts	-	1
Belt Size	-	BX55
Belt Alignment	-	VERIFIED

Test Data		
	Design	Actual
SF CFM	5500	5355
SF RPM	-	648.5
RA CFM	4700	4422
OA CFM	800	933
RL Voltage	-	495.5
RL Amperage	-	3.37
SF Rotation	-	CCW
RA Damper Position	-	65%
Min OA Damper Position	-	35%
Min OA Damper Type	-	ECON

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.27"
Fan Suction SP	-	-0.42"
Fan Discharge SP	-	0.42"
Total ESP	0.8"	0.69"
Fan Total SP	-	0.84"

General		
	Design	Actual
Fan Rotation Correct	-	YES
Unit Filters Clean	-	YES
Condensate Drain Installed	-	YES

Completed By: Jordan Best on 08/24/2023

Notes:
OA @ LOWEST POSSIBLE SETTING WITH DAMPER OPENED AS MINIMALLY AS POSSIBLE

Written By: Jordan Best on 08/24/2023

National TAB

Project: 08-21-23 CARMAX #7283 COLUMBUS, OH

System/Unit: AHU/RTU



Asset: RTU2

AREA:SHOW ROOM

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622F01147
Model Num	LGA360H	LGH156H4MS5G
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	3
OA Filter Size 1	-	24.5" X 16"
Num Final Filter 1	-	6
Final Filter Size 1	-	24" X 24" X 2"

Motor Data		
	Design	Actual
Motor MFG	-	INTERLINK
Frame	-	56HZ
Horsepower	3.0	3
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	480	460
Rated Amperage	-	4

Drive Data		
	Design	Actual
Motor Sheave Size	-	3.75"
Motor Bore Size	-	0.875"
Motor Sheave SetPt	-	4 TURNS OUT
Fan Sheave Size	-	7"
Fan Sheave Bore	-	1"
Belt CL Distance	-	21"
Num of Belts	-	1
Belt Size	-	BX61
Belt Alignment	-	VERIFIED

Test Data		
	Design	Actual
SF CFM	5500	5112
SF RPM	-	814
RA CFM	4700	4080
OA CFM	800	1032
RL Voltage	-	490
RL Amperage	-	4.5
SF Rotation	-	CCW
RA Damper Position	-	65%
Min OA Damper Position	-	35%
Min OA Damper Type	-	ECON

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.47"
Fan Suction SP	-	-0.74"
Fan Discharge SP	-	0.83"
Total ESP	0.8"	1.21"
Fan Total SP	-	1.57"

General		
	Design	Actual
Fan Rotation Correct	-	YES
Unit Filters Clean	-	YES
Condensate Drain Installed	-	YES

Completed By: Jordan Best on 08/23/2023

Notes:
OA @ LOWEST POSSIBLE SETTING WITH DAMPER OPENED AS MINIMALLY AS POSSIBLE

Written By: Jordan Best on 08/23/2023

National TAB

Project: 08-21-23 CARMAX #7283 COLUMBUS, OH

System/Unit: AHU/RTU



Asset: RTU3

AREA:BUYERS

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622G11271
Model Num	LGA360H	LGH048H4ES5G
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	30" X 15"
Num Final Filter 1	-	4
Final Filter Size 1	-	20" X 16" X 2"

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NA
Horsepower	1.50	NA
Motor Rpm	-	NA
Phase	3	NA
Rated Voltage	480	NA
Rated Amperage	-	NA

Test Data		
	Design	Actual
SF CFM	1280	1180
SF RPM	-	NA
RA CFM	980	873
OA CFM	300	307
RL Voltage	-	491
RL Amperage	-	1.3
SF Rotation	-	CCW
RA Damper Position	-	65%
Min OA Damper Position	-	35%
Min OA Damper Type	-	ECON

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.06"
Fan Suction SP	-	-0.18"
Fan Discharge SP	-	0.19"
Total ESP	0.6"	0.25"
Fan Total SP	-	0.37"

General		
	Design	Actual
Fan Rotation Correct	-	YES
Unit Filters Clean	-	YES
Condensate Drain Installed	-	YES

Completed By: Jordan Best on 08/23/2023

National TAB

Project: 08-21-23 CARMAX #7283 COLUMBUS, OH

System/Unit: AHU/RTU



Asset: RTU4

AREA:SALES WEST

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622G07038
Model Num	LGA360H	LGH102H4MS4G
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	15.5" X 25"
Num Final Filter 1	-	4
Final Filter Size 1	-	20" X 25" X 2"

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NA
Horsepower	2.0	0.33
Motor Rpm	-	NA
Phase	3	1
Rated Voltage	480	NA
Rated Amperage	-	1.3

Drive Data		
	Design	Actual
Motor Sheave Size	-	NA
Motor Bore Size	-	NA
Motor Sheave SetPt	-	NA
Fan Sheave Size	-	NA
Fan Sheave Bore	-	NA
Belt CL Distance	-	NA
Num of Belts	-	1
Belt Size	-	AX54
Belt Alignment	-	VERIFIED

Test Data		
	Design	Actual
SF CFM	2900	3143
SF RPM	-	NA
RA CFM	2300	2596
OA CFM	600	547
RL Voltage	-	489
RL Amperage	-	3.03
SF Rotation	-	CW
RA Damper Position	-	70%
Min OA Damper Position	-	30%
Min OA Damper Type	-	ECON

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.23"
Fan Suction SP	-	-0.55"
Fan Discharge SP	-	0.63"
Total ESP	0.6"	0.78"
Fan Total SP	-	1.18"

General		
	Design	Actual
Fan Rotation Correct	-	YES
Unit Filters Clean	-	YES
Condensate Drain Installed	-	YES

Completed By: Jordan Best on 08/23/2023

Notes:

UNAVLE TO RECORD RPM, AS WELL AS MEASURE DRICE DATA DUE TO GAS LINE INSTALLATION PREVENTING MOTOR DOOR COMPARTMENT FROM OPENING

Written By: Jordan Best on 08/23/2023

National TAB

Project: 08-21-23 CARMAX #7283 COLUMBUS, OH

System/Unit: AHU/RTU



Asset: RTU5

AREA:SALES EAST

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622G11277
Model Num	LGA360H	LGH048H4ES5G
Type	RTU	RTU
Configuration	VERTICAL	VERTICAK
Num OA Filters 1	-	1
OA Filter Size 1	-	30" X 15"
Num Final Filter 1	-	4
Final Filter Size 1	-	20" X 16" X 2"

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NA
Horsepower	1.50	NA
Motor Rpm	-	NA
Phase	3	NA
Rated Voltage	480	NA
Rated Amperage	-	NA

Test Data		
	Design	Actual
SF CFM	1280	1202
SF RPM	-	NA
RA CFM	980	889
OA CFM	300	313
RL Voltage	-	486.5
RL Amperage	-	1.42
SF Rotation	-	CCW
RA Damper Position	-	65%
Min OA Damper Position	-	35%
Min OA Damper Type	-	ECON

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.04"
Fan Suction SP	-	-0.21"
Fan Discharge SP	-	0.4"
Total ESP	0.6"	0.25"
Fan Total SP	-	0.61"

General		
	Design	Actual
Fan Rotation Correct	-	YES
Unit Filters Clean	-	YES
Condensate Drain Installed	-	YES

Completed By: Jordan Best on 08/23/2023

National TAB

Project: 08-21-23 CARMAX #7283 COLUMBUS, OH

System/Unit: AHU/RTU



Asset: RTU6

AREA:OFFICE/CONF

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622G11281
Model Num	LGA360H	LGH048H4ES5G
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	30" X 15"
Num Final Filter 1	-	4
Final Filter Size 1	-	20" X 16" X 2"

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NA
Horsepower	1.50	NA
Motor Rpm	-	NA
Phase	3	NA
Rated Voltage	480	NA
Rated Amperage	-	NA

Test Data		
	Design	Actual
SF CFM	1280	1160
SF RPM	-	NA
RA CFM	1080	950
OA CFM	200	210
RL Voltage	-	489.3
RL Amperage	-	1.45
SF Rotation	-	CCW
RA Damper Position	-	73%
Min OA Damper Position	-	27%
Min OA Damper Type	-	ECON

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.05"
Fan Suction SP	-	-0.22"
Fan Discharge SP	-	0.38"
Total ESP	0.6"	0.27"
Fan Total SP	-	0.43"

General		
	Design	Actual
Fan Rotation Correct	-	YES
Unit Filters Clean	-	YES
Condensate Drain Installed	-	YES

Completed By: Jordan Best on 08/23/2023

National TAB

Project: 08-21-23 CARMAX #7283 COLUMBUS, OH

System/Unit: AHU/RTU



Asset: RTU7

AREA: CUSTOMER LOUNGE

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622G11294
Model Num	LGA360H	LGH048H4ES5G
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	30" X 15"
Num Final Filter 1	-	4
Final Filter Size 1	-	20" X 16" X 2"
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NA
Horsepower	1.5	NA
Motor Rpm	-	NA
Phase	3	NA
Rated Voltage	480	NA
Rated Amperage	-	NA

Test Data		
	Design	Actual
SF CFM	1280	1320
SF RPM	-	NA
RA CFM	980	1014
OA CFM	300	306
RL Voltage	-	488
RL Amperage	-	1.38
SF Rotation	-	CCW
RA Damper Position	-	65%
Min OA Damper Position	-	35%
Min OA Damper Type	-	ECON

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.07"
Fan Suction SP	-	-0.12"
Fan Discharge SP	-	0.24"
Total ESP	0.6"	0.19"
Fan Total SP	-	0.36"

General		
	Design	Actual
Fan Rotation Correct	-	YES
Unit Filters Clean	-	YES
Condensate Drain Installed	-	YES

Completed By: Jordan Best on 08/23/2023

National TAB

Project: 08-21-23 CARMAX #7283 COLUMBUS, OH

System/Unit: AHU/RTU



Asset: RTU8

AREA:BUSINESS

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622H01327
Model Num	LGA360H	LGH074H4TU1G
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	30" X 15"
Num Final Filter 1	-	4
Final Filter Size 1	-	20" X 20" X 2"

Motor Data		
	Design	Actual
Motor MFG	-	US MOTORS
Frame	-	56HZ
Horsepower	1.50	2
Motor Rpm	-	1740
Phase	3	3
Rated Voltage	480	460
Rated Amperage	-	2.9

Drive Data		
	Design	Actual
Motor Sheave Size	-	3.0875
Motor Bore Size	-	0.875"
Motor Sheave SetPt	-	4 TURNS OUT
Fan Sheave Size	-	7.5"
Fan Sheave Bore	-	0.875"
Belt CL Distance	-	19.5"
Num of Belts	-	1
Belt Size	-	A53
Belt Alignment	-	VERIFIED

Test Data		
	Design	Actual
SF CFM	2200	2231
SF RPM	-	764.5
RA CFM	1800	1810
OA CFM	400	421
RL Voltage	-	490
RL Amperage	-	2.08
SF Rotation	-	CW
RA Damper Position	-	70%
Min OA Damper Position	-	30%
Min OA Damper Type	-	ECON

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.3"
Fan Suction SP	-	-0.47"
Fan Discharge SP	-	0.4"
Total ESP	0.6"	0.77"
Fan Total SP	-	0.87"

General		
	Design	Actual
Fan Rotation Correct	-	YES
Unit Filters Clean	-	YES
Condensate Drain Installed	-	YES

Completed By: Jordan Best on 08/23/2023

National TAB

Project: 08-21-23 CARMAX #7283 COLUMBUS, OH

System/Unit: AHU/RTU



Asset: RTU9

AREA:DATA/PBX

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622G08954
Model Num	LCA036H	LCH036H4EN4G
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	0
Num Final Filter 1	-	4
Final Filter Size 1	-	20" X 16" X 2"

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NA
Horsepower	1.5	0.33
Motor Rpm	-	NA
Phase	3	NA
Rated Voltage	480	NA
Rated Amperage	-	NA

Test Data		
	Design	Actual
SF CFM	975	1025
SF RPM	-	630
RA CFM	975	1025
OA CFM	0	0
RL Voltage	-	486.4
RL Amperage	-	0.86
SF Rotation	-	CW
RA Damper Position	-	100%
Min OA Damper Position	-	NA
Min OA Damper Type	-	NA

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.07"
Fan Suction SP	-	-0.17"
Fan Discharge SP	-	0.18"
Total ESP	0.6"	0.25"
Fan Total SP	-	0.35"

General		
	Design	Actual
Fan Rotation Correct	-	YES
Unit Filters Clean	-	YES
Condensate Drain Installed	-	YES

Completed By: Jordan Best on 08/24/2023

Notes:
FAN CURVE USED TO CALCULATE AIRFLOW.

Written By: Will Turnbough on 08/24/2023

National TAB

Project: 08-21-23 CARMAX #7283 COLUMBUS, OH

System/Unit: AHU/RTU



Asset: RTU10

AREA:SERVICE WRITER

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622G11265
Model Num	LGA042H	LGH048H4ES5G
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	30" X 15"
Num Final Filter 1	-	4
Final Filter Size 1	-	16" X 20" X 2"

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NA
Horsepower	1.5	NA
Motor Rpm	-	NA
Phase	3	NA
Rated Voltage	480	NA
Rated Amperage	-	NA

Test Data		
	Design	Actual
SF CFM	1300	1239
SF RPM	-	NA
RA CFM	1100	1020
OA CFM	200	219
RL Voltage	-	486.4
RL Amperage	-	1.58
SF Rotation	-	CW
RA Damper Position	-	75%
Min OA Damper Position	-	25%
Min OA Damper Type	-	ECON

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.16"
Fan Suction SP	-	-0.29"
Fan Discharge SP	-	0.38"
Total ESP	0.6"	0.54"
Fan Total SP	-	0.67"

General		
	Design	Actual
Fan Rotation Correct	-	YES
Unit Filters Clean	-	YES
Condensate Drain Installed	-	YES

Completed By: Jordan Best on 08/23/2023

National TAB

Project: 08-21-23 CARMAX #7283 COLUMBUS, OH

System/Unit: AHU/RTU



Asset: RTU11

AREA:SERVICE AREA

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622H03314
Model Num	LGA360H	LGH360H4BH2G
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	
Num Final Filter 1	-	12
Final Filter Size 1	-	20" X 20" X 2"

Motor Data		
	Design	Actual
Motor MFG	-	US MOTORS
Frame	-	184T
Horsepower	5.0	5
Motor Rpm	-	1765
Phase	3	3
Rated Voltage	480	460
Rated Amperage	-	6.5

Drive Data		
	Design	Actual
Motor Sheave Size	-	5.25"
Motor Bore Size	-	1"
Motor Sheave SetPt	-	1 TURN OUT
Fan Sheave Size	-	11.5"
Fan Sheave Bore	-	1"
Belt CL Distance	-	23"
Num of Belts	-	1
Belt Size	-	
Belt Alignment	-	VERIFIED

Test Data		
	Design	Actual
SF CFM	8400	8556
SF RPM	-	813
RA CFM	2900	2954
OA CFM	5500	5602
RL Voltage	-	488.3
RL Amperage	-	6.8
SF Rotation	-	CCW
RA Damper Position	-	SET MANUALLY
Min OA Damper Position	-	SET MANUALLY
Min OA Damper Type	-	ECON

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.63"
Fan Suction SP	-	-0.86"
Fan Discharge SP	-	0.17"
Total ESP	0.8"	1.49"
Fan Total SP	-	1.03"

General		
	Design	Actual
Fan Rotation Correct	-	YES
Unit Filters Clean	-	NO
Condensate Drain Installed	-	YES

Completed By: Jordan Best on 12/20/2023

Notes:
Unit missing 8 final filters

Written By: Jordan Best on 08/23/2023

National TAB

Project:08-21-23 CARMAX #7283 COLUMBUS, OH

AHU/RTU



Diffuser Supply (GRD)

RTU11/SERVICE AREA

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	SERVICE AREA	NK5	30/12	1100	2.15	1137	1157	1157	105.2
SGRD2	SERVICE AREA	NK5	30/12	1100	2.15	1093	1032	1032	93.8
SGRD3	SERVICE AREA	NK5	30/12	1100	2.15	941	1056	1056	96.0
SGRD4	SERVICE AREA	NK5	30/12	1100	2.15	1287	1188	1188	108.0
SGRD5	SERVICE AREA	NK5	30/12	1100	2.15	1302	1192	1192	108.4
Total				5500		5760	5625	5625	102.27%

Completed By: Jordan Best on 12/21/2023

National TAB

Project: 08-21-23 CARMAX #7283 COLUMBUS, OH

System/Unit: AHU/RTU



Asset: RTU12

AREA:SERVICE AREA

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622H03312
Model Num	LGA360H	LGH360H4BH2G
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	39" X 14"
Num Final Filter 1	-	12
Final Filter Size 1	-	20" X 20" X 2

Motor Data		
	Design	Actual
Motor MFG	-	US MOTORS
Frame	-	184TZ
Horsepower	5.0	5
Motor Rpm	-	1765
Phase	3	3
Rated Voltage	480	460
Rated Amperage	-	6.5

Drive Data		
	Design	Actual
Motor Sheave Size	-	5.25"
Motor Bore Size	-	1"
Motor Sheave SetPt	-	1 TURN OUT
Fan Sheave Size	-	11.5"
Fan Sheave Bore	-	1"
Belt CL Distance	-	23"
Num of Belts	-	1
Belt Size	-	
Belt Alignment	-	VERIFIED

Test Data		
	Design	Actual
SF CFM	8400	8216
SF RPM	-	846
RA CFM	2900	2783
OA CFM	5500	5433
RL Voltage	-	487.4
RL Amperage	-	6.7
SF Rotation	-	CCW
RA Damper Position	-	SET MANUALLY
Min OA Damper Position	-	SET MANUALLY
Min OA Damper Type	-	ECON

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.57"
Fan Suction SP	-	-0.92"
Fan Discharge SP	-	0.45
Total ESP	0.8"	1.49"
Fan Total SP	-	1.37"

General		
	Design	Actual
Fan Rotation Correct	-	YES
Unit Filters Clean	-	NO
Condensate Drain Installed	-	YES

Completed By: Jordan Best on 12/20/2023

National TAB

Project:08-21-23 CARMAX #7283 COLUMBUS, OH

AHU/RTU



Diffuser Supply (GRD)

RTU12/SERVICE AREA

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	SERVICE AREA	NK4	30/12	1275	2.15	982	1239	1229	96.4
SGRD2	SERVICE AREA	NK4	30/12	1275	2.15	1166	1208	1346	105.6
SGRD3	SERVICE AREA	NK4	30/12	1275	2.15	1010	1308	1249	98.0
SGRD4	SERVICE AREA	NK4	30/12	1275	2.15	918	1248	1185	92.9
SGRD5	SERVICE AREA	NK4	10/10	200	0.69	284	192	209	104.5
SGRD6	SERVICE AREA	NK4	10/10	200	0.69	212	212	215	107.5
Total				5500		4572	5407	5433	98.78%

Completed By: Jordan Best on 12/21/2023

National TAB

Project: 08-21-23 CARMAX #7283 COLUMBUS, OH

System/Unit: AHU/RTU



Asset: RTU13

AREA: BREAK/TRAIN

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622G11289
Model Num	LGA048H	LGH048H4ES5G
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	30" X 15"
Num Final Filter 1	-	4
Final Filter Size 1	-	16" X 20" X 2"

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NA
Horsepower	1.5	NA
Motor Rpm	-	NA
Phase	3	NA
Rated Voltage	480	NA
Rated Amperage	-	NA

Test Data		
	Design	Actual
SF CFM	1300	1309
SF RPM	-	NA
RA CFM	420	438
OA CFM	880	871
RL Voltage	-	483.7
RL Amperage	-	1.25
SF Rotation	-	CW
RA Damper Position	-	33%
Min OA Damper Position	-	67%
Min OA Damper Type	-	ECON

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.17"
Fan Suction SP	-	-0.31"
Fan Discharge SP	-	0.23"
Total ESP	6"	0.48"
Fan Total SP	-	0.54"

General		
	Design	Actual
Fan Rotation Correct	-	YES
Unit Filters Clean	-	YES
Condensate Drain Installed	-	YES

Completed By: Jordan Best on 08/23/2023

National TAB

Project: 08-21-23 CARMAX #7283 COLUMBUS, OH

System/Unit: FAN - Exhaust



Asset: EF10

AREA:SERVICE

Unit Data		
	Design	Actual
MFG	GREENHECK	GREENHECK
Model Num	CUE-120-A-7-1-19-X	CUBE-161-7
Serial Num	-	05L00727
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Test Data		
	Design	Actual
CFM	2500	2694
Fan RPM	-	1049
Fan Rotation	-	CCW
Motor RPM	-	1683
System SetPt	-	1 TURN OUT
RL Voltage	-	NA
RL Amperage	-	NA
Total ESP	0.375"	0.31"
Fan Inlet SP	-	-0.31"
Fan Discharge SP	-	ATM

Motor Data		
	Design	Actual
Motor MFG	-	MARATHON
Frame	-	56
Horsepower	1/2	0.75
Motor Rpm	-	1725
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	13.3
Service Factor	-	1.25

Completed By: Jordan Best on 12/21/2023

Notes:

- Motor sheave: 3"
- Motor bore: 0.5"
- Fan sheave:AK46
- Fan bore:0.75"
- CL Distance: 5 1/8"
- Belt size: A-20

Written By: Jordan Best on 12/20/2023

National TAB

Project: 08-21-23 CARMAX #7283 COLUMBUS, OH

System/Unit: FAN - Exhaust



Asset: EF11

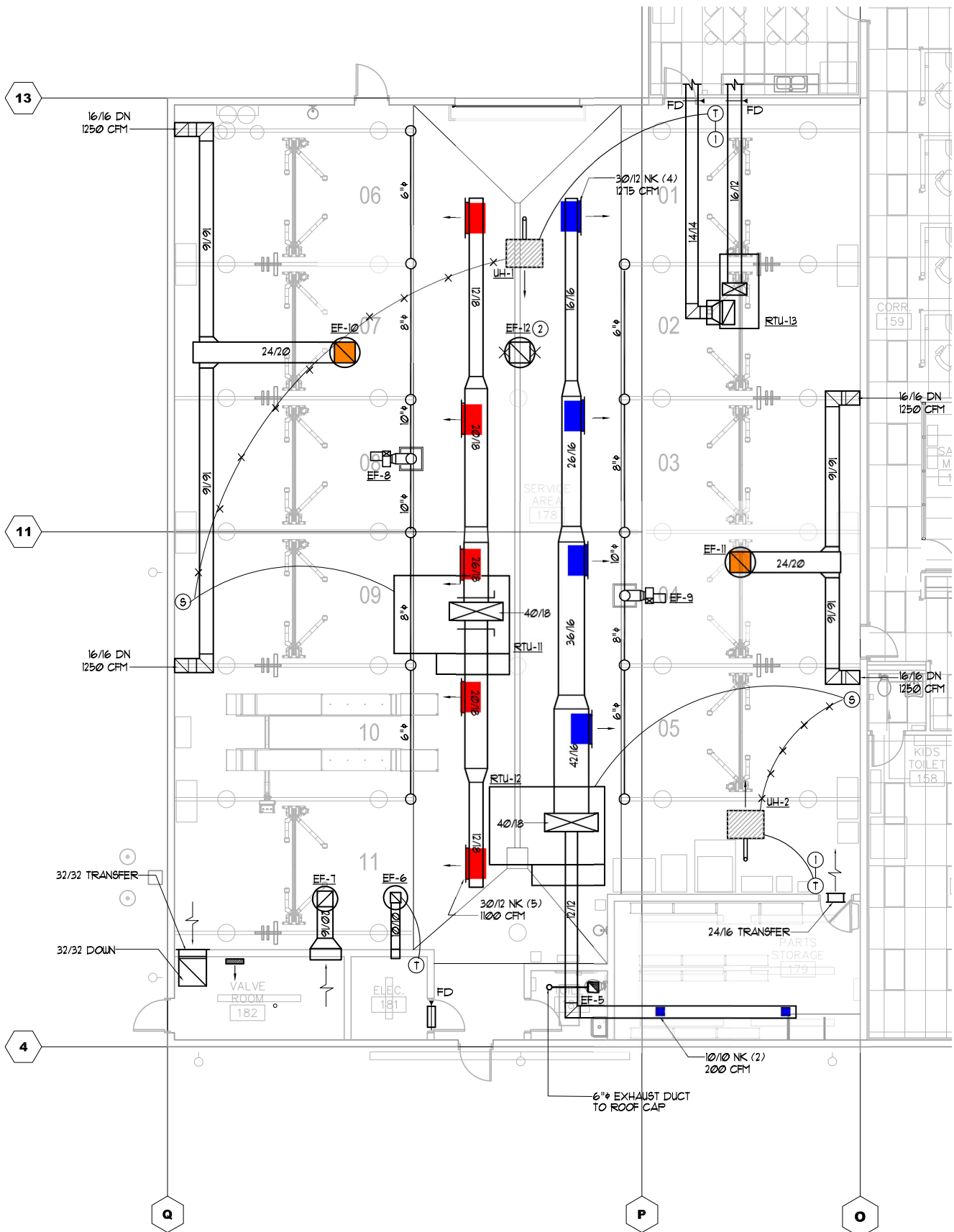
AREA:

Unit Data		
	Design	Actual
MFG	GREENCHECK	GREENCHECK
Model Num	CUE-120-A-7-1-19-X	CUBE-161-7
Serial Num	-	05L00762
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	MARATHON
Frame	-	56
Horsepower	-	0.75"
Motor Rpm	-	1725
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	10
Service Factor	-	1.25

Test Data		
	Design	Actual
CFM	2500	2685
Fan RPM	-	1122
Fan Rotation	-	CW
Motor RPM	-	1743
System SetPt	-	1 TURN OUT
RL Voltage	-	NA
RL Amperage	-	NA
Total ESP	-	0.26"
Fan Inlet SP	-	-0.26"
Fan Discharge SP	-	ATM

Completed By: Jordan Best on 12/21/2023



NOTE: SHOWN FOR TEST AND BALANCE PURPOSES ONLY.
SEE TEST AND BALANCE SCOPE ON M3.0



PART PLAN – HVAC

SCALE: 1/8" = 1'-0"