

Report By:

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



Report: TAB REPORT
Function: Test, Adjust, & Balance
Date: 10/30/2023

PROJECT

**10-23-23 CARMAX #7279 - FAYETTEVILLE,
NC**

521 NORTH MCHPERSON CHURCH RD

FAYETTEVILLE, NC

Client

Comfort Systems USA
9450 W Wingfoot Rd
Houston, TX 77041

National TAB

Project: 10-23-23 CARMAX #7279 - FAYETTEVILLE, NC

Table Of Contents

Section	Page #
AHU/RTU	3
FAN - Exhaust	14

National TAB

Project: 10-23-23 CARMAX #7279 - FAYETTEVILLE, NC

System/Unit: AHU/RTU



Asset: RTU1

AREA:SHOWROOM

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5623G04880
Model Num	LGH036H4E	LGT210H4M
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	3
OA Filter Size 1	-	23.125X13.875
Num Final Filter 1	-	6
Final Filter Size 1	-	24X24X2

Motor Data		
	Design	Actual
Motor MFG	-	US MOTORS
Frame	-	184TZ
Horsepower	5.0	5
Motor Rpm	1765	1765
Phase	3	3
Rated Voltage	480	460
Rated Amperage	7.3	7.3

Drive Data		
	Design	Actual
Motor Sheave Size	-	1VP66B
Motor Bore Size	-	1.0625"
Motor Sheave SetPt	-	2 TO
Fan Sheave Size	-	BK110H
Fan Sheave Bore	-	1.1875"
Belt CL Distance	-	21"
Num of Belts	-	1
Belt Size	-	BX65
Belt Alignment	-	CORRECT

Test Data		
	Design	Actual
SF CFM	6000	6017
SF RPM	-	675 / 42.6 Hz
RA CFM	5200	5196
OA CFM	800	821
RL Voltage	-	493/493/488
RL Amperage	-	3.5/3.5/3.6
SF Rotation	-	CCW
RA Damper Position	-	77%
Min OA Damper Position	-	23%
Min OA Damper Type	-	ECONOMIZIER
OA Enthalpy Setpt	-	5 mA

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.38"
Fan Suction SP	-	-0.57"
Fan Discharge SP	-	0.55"
Total ESP	0.8"	-0.85"
Fan Total SP	-	1.12"

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

Completed By: Antonio Flores-De La Cruz on 10/24/2023

National TAB

Project: 10-23-23 CARMAX #7279 - FAYETTEVILLE, NC

System/Unit: AHU/RTU



Asset: RTU2

AREA:SHOWROOM

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5623G04881
Model Num	LGH036H4E	LGT210H4M
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	3
OA Filter Size 1	-	23.125X13.785
Num Final Filter 1	-	6
Final Filter Size 1	-	24X24X2

Motor Data		
	Design	Actual
Motor MFG	-	US MOTORS
Frame	-	184TZ
Horsepower	3.0	5
Motor Rpm	1765	1765
Phase	3	3
Rated Voltage	480	460
Rated Amperage	7.3	7.3

Drive Data		
	Design	Actual
Motor Sheave Size	-	1VP66B
Motor Bore Size	-	1.0625"
Motor Sheave SetPt	-	2 TO
Fan Sheave Size	-	BK110H
Fan Sheave Bore	-	1.1875"
Belt CL Distance	-	21"
Num of Belts	-	1
Belt Size	-	BX65
Belt Alignment	-	CORRECT

Test Data		
	Design	Actual
SF CFM	6000	5898
SF RPM	-	757
RA CFM	5200	5068
OA CFM	800	830
RL Voltage	-	494/495/492
RL Amperage	-	4.0/4.0/4.1
SF Rotation	-	CCW
RA Damper Position	-	76%
Min OA Damper Position	-	24%
Min OA Damper Type	-	ECONOMIZERSA
OA Enthalpy Setpt	-	5 mA

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.55"
Fan Suction SP	-	-0.83"
Fan Discharge SP	-	0.58"
Total ESP	0.8"	1.13"
Fan Total SP	-	1.41"

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

Completed By: Antonio Flores-De La Cruz on 10/23/2023

National TAB

Project: 10-23-23 CARMAX #7279 - FAYETTEVILLE, NC

System/Unit: AHU/RTU



Asset: RTU3

AREA:OFFICE

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5623F05321
Model Num	LGH036H4E	LGT060H4E
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	29X14.5
Num Final Filter 1	-	4
Final Filter Size 1	-	20X20X2

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

Drive Data		
	Design	Actual
Motor Sheave Size	-	DD

Test Data		
	Design	Actual
SF CFM	2000	2014
SF RPM	-	77% POWER
RA CFM	1700	1713
OA CFM	300	301
RL Voltage	-	490
RL Amperage	-	4.5
SF Rotation	-	CW
RA Damper Position	-	74%
Min OA Damper Position	-	26%
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	5 mA

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.25"
Fan Suction SP	-	-0.40"
Fan Discharge SP	-	0.48"
Total ESP	0.6"	0.73"
Fan Total SP	-	0.88"

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

Completed By: Antonio Flores-De La Cruz on 10/24/2023

National TAB

Project: 10-23-23 CARMAX #7279 - FAYETTEVILLE, NC

System/Unit: AHU/RTU



Asset: RTU4

AREA: BREAK/TOILETS

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5623G01997
Model Num	LGH036H4E	LGT048H4E
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	29X14.5
Num Final Filter 1	-	4
Final Filter Size 1	-	20X20X2

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NA
Horsepower	1.0	1
Motor Rpm	-	NA
Phase	3	3
Rated Voltage	480	480
Rated Amperage	-	NA

Drive Data		
	Design	Actual
Motor Sheave Size	-	DD

Test Data		
	Design	Actual
SF CFM	1280	1348
SF RPM	-	58%
RA CFM	1130	1188
OA CFM	150	160
RL Voltage	-	494/494/490
RL Amperage	-	3.4/3.4/3.5
SF Rotation	-	CW
RA Damper Position	-	78%
Min OA Damper Position	-	22%
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	5 mA

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.45"
Fan Suction SP	-	-0.56"
Fan Discharge SP	-	0.43"
Total ESP	0.6"	0.92"
Fan Total SP	-	0.99"

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

Completed By: Antonio Flores-De La Cruz on 10/25/2023

National TAB

Project: 10-23-23 CARMAX #7279 - FAYETTEVILLE, NC

System/Unit: AHU/RTU



Asset: RTU5

AREA:WRITE UP

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5623G00638
Model Num	LGH036H4E	LGT048H4E
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	29X14.5
Num Final Filter 1	-	4
Final Filter Size 1	-	20X20X2

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NA
Horsepower	0.5	1
Motor Rpm	-	NA
Phase	3	1
Rated Voltage	480	480
Rated Amperage	-	NA

Drive Data		
	Design	Actual
Motor Sheave Size	-	DD

Test Data		
	Design	Actual
SF CFM	1300	1342
SF RPM	-	45% POWER
RA CFM	1100	1188
OA CFM	150	154
RL Voltage	-	289
RL Amperage	-	2.5
SF Rotation	-	CCW
RA Damper Position	-	75%
Min OA Damper Position	-	25%
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	5 mA

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.27"
Fan Suction SP	-	-0.37"
Fan Discharge SP	-	0.33"
Total ESP	0.6"	0.60"
Fan Total SP	-	0.70"

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

Completed By: Antonio Flores-De La Cruz on 10/24/2023

National TAB

Project: 10-23-23 CARMAX #7279 - FAYETTEVILLE, NC

System/Unit: AHU/RTU



Asset: RTU6

AREA:WAITING

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	56233G01598
Model Num	LGH036H4E	LGT036H4E
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	14.5X29
Num Final Filter 1	-	4
Final Filter Size 1	-	20X20X2

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NA
Horsepower	0.75	1
Motor Rpm	-	NA
Phase	3	1
Rated Voltage	480	480
Rated Amperage	-	NA

Drive Data		
	Design	Actual
Motor Sheave Size	-	DD

Test Data		
	Design	Actual
SF CFM	960	1016
SF RPM	-	53% POWER
RA CFM	760	812
OA CFM	200	204
RL Voltage	-	490
RL Amperage	-	1.4
SF Rotation	-	CW
RA Damper Position	-	68%
Min OA Damper Position	-	32%
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	5 mA

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.08"
Fan Suction SP	-	-0.15"
Fan Discharge SP	-	0.33"
Total ESP	.60"	-0.45"
Fan Total SP	-	0.48"

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

Completed By: Antonio Flores-De La Cruz on 10/24/2023

National TAB

Project: 10-23-23 CARMAX #7279 - FAYETTEVILLE, NC

System/Unit: AHU/RTU



Asset: RTU7

AREA:SERVICE AREA

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5623F05683
Model Num	LGH036H4E	LGH360H4M
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	38.375X11.25
Num Final Filter 1	-	12
Final Filter Size 1	-	20X20X2

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	-	7.3

Drive Data		
	Design	Actual
Motor Sheave Size	-	1VP56BB
Motor Bore Size	-	1.125"
Motor Sheave SetPt	-	1 TO
Fan Sheave Size	-	BK120H
Fan Sheave Bore	-	1.1875"
Belt CL Distance	-	23.5
Num of Belts	-	1
Belt Size	-	BX71
Belt Alignment	-	CORRECT

Test Data		
	Design	Actual
SF CFM	8400	7674
SF RPM	-	769
RA CFM	3600	2919
OA CFM	4800	4755
RL Voltage	-	464/464/463
RL Amperage	-	6.6/6.6/6.5
SF Rotation	-	CCW
RA Damper Position	-	50% OPEN
Min OA Damper Position	-	100% OPEN
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	5 mA

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.42"
Fan Suction SP	-	-0.75"
Fan Discharge SP	-	1.12"
Total ESP	0.8"	1.54"
Fan Total SP	-	1.87"

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

Completed By: Antonio Flores-De La Cruz on 10/25/2023

Notes:

SGRD-1 TYPE IS DIFFERENT THAN MSET. DUCT IS EXTENDED AND HAS 3 MINI-ROUND DIFFUSERS FROM THE BOTTOM OF THE DUCT.

Written By: Antonio Flores-De La Cruz on 10/25/2023

National TAB

Project:10-23-23 CARMAX #7279 - FAYETTEVILLE, NC

AHU/RTU



Diffuser Supply (GRD)

RTU7/SERVICE AREA

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	PARTS	NK	12	460	1	367	421	435	94.6
SGRD2	SERVICE	NK	18/12	1085	1	845	1203	1095	100.9
SGRD3	SERVICE	NK	18/12	1085	1	845	1040	1108	102.1
SGRD4	SERVICE	NK	18/12	1085	1	845	1106	1074	99.0
SGRD5	SERVICE	NK	18/12	1085	1	845	1040	1043	96.1
Total				4800		3747	4810	4755	99.06%

National TAB

Project: 10-23-23 CARMAX #7279 - FAYETTEVILLE, NC

System/Unit: AHU/RTU



Asset: RTU8

AREA:SERVICE AREA

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5620K02449
Model Num	LGH036H4E	LGH360H4M
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	5
OA Filter Size 1	-	14.125X23.125
Num Final Filter 1	-	12
Final Filter Size 1	-	20X20X2

Motor Data		
	Design	Actual
Motor MFG	-	US MOTORS
Frame	-	215TZ
Horsepower	5.0	10
Motor Rpm	1765	1765
Phase	3	3
Rated Voltage	480	480
Rated Amperage	-	13.6

Drive Data		
	Design	Actual
Motor Sheave Size	-	1VP71B
Motor Bore Size	-	1.375"
Motor Sheave SetPt	-	2 TO
Fan Sheave Size	-	11.5"
Fan Sheave Bore	-	1.125"
Belt CL Distance	-	24.5
Num of Belts	-	1
Belt Size	-	BX75
Belt Alignment	-	CORRCET

Test Data		
	Design	Actual
SF CFM	8400	-
SF RPM	-	CCW
RA CFM	3600	-
OA CFM	4800	4581
RL Voltage	-	489/489/490
RL Amperage	-	3.9/3.9/3.8
SF Rotation	-	CCW
RA Damper Position	-	0%
Min OA Damper Position	-	100%
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	5 mA

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.34"
Fan Suction SP	-	-0.43"
Fan Discharge SP	-	0.56"
Total ESP	0.8"	0.90"
Fan Total SP	-	0.99"

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

Completed By: Antonio Flores-De La Cruz on 10/25/2023

Notes:
RETURN IS 100% CLOSED AND OA IS 100% OPEN. MIXING BOX IS NOT INSTALLED.

Written By: Antonio Flores-De La Cruz on 10/25/2023

National TAB

Project:10-23-23 CARMAX #7279 - FAYETTEVILLE, NC

AHU/RTU



Diffuser Supply (GRD)

RTU8/SERVICE AREA

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
RTU10-SGRD1	SERVICE AREA	NK	24/12	960	1	962	972	935	97.4
RTU10-SGRD2	SERVICE AREA	NK	24/12	960	1	968	977	921	95.9
RTU10-SGRD3	SERVICE AREA	NK	24/12	960	1	1190	1202	933	97.2
RTU10-SGRD4	SERVICE AREA	NK	24/12	960	1	687	693	906	94.4
RTU10-SGRD5	SERVICE AREA	NK	24/12	960	1	762	769	894	93.1
Total				4800		4569	4613	4589	95.6%

National TAB

Project: 10-23-23 CARMAX #7279 - FAYETTEVILLE, NC

System/Unit: AHU/RTU



Asset: RTU9

AREA:PBX

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5623G01996
Model Num	LGH036H4E	LCH036H4E
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num Final Filter 1	-	4
Final Filter Size 1	-	20X20X2

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NA
Horsepower	0.5	0.5
Motor Rpm	-	NA
Phase	3	1
Rated Voltage	480	480
Rated Amperage	-	NA

Drive Data		
	Design	Actual
Motor Sheave Size	-	DD

Test Data		
	Design	Actual
SF CFM	960	942
SF RPM	-	68% POWER
RA CFM	960	942
OA CFM	0	0
RL Voltage	-	487
RL Amperage	-	2.0
SF Rotation	-	CW
RA Damper Position	-	100%

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.13"
Fan Suction SP	-	-0.24"
Fan Discharge SP	-	0.43"
Total ESP	0.8"	0.56"
Fan Total SP	-	0.67"

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

Completed By: Antonio Flores-De La Cruz on 10/24/2023

National TAB

Project: 10-23-23 CARMAX #7279 - FAYETTEVILLE, NC

System/Unit: FAN - Exhaust



Asset: EF11

AREA:

Unit Data		
	Design	Actual
MFG	GREENHECK	GREENHECK
Model Num	CUBE-160-7-1-22-X	CUBE-160-7-1-22-X
Serial Num	-	19201738
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Test Data		
	Design	Actual
CFM	2800	2619
Fan RPM	--	1215
Fan Rotation	-	CW
Motor RPM	-	1752
RL Voltage	-	119
RL Amperage	-	NA
Suction ESP	-	-0.34"
Discharge ESP	-	ATM
Total ESP	-	0.34"

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	56
Horsepower	0.75	0.75
Motor Rpm	1725	1725
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	10.8
Service Factor	-	1

Drive Data		
	Design	Actual
Motor Sheave Size	-	VP343
Motor Bore Size	-	0.625"
Motor Sheave SetPt	-	1 TO
Fan Sheave Size	-	AK46
Fan Sheave Bore	-	0.75"
Belt CL Distance	-	6"
Num of Belts	-	1
Belt Size	-	A36

Completed By: Antonio Flores-De La Cruz on 10/24/2023

National TAB

Project: 10-23-23 CARMAX #7279 - FAYETTEVILLE, NC

System/Unit: FAN - Exhaust



Asset: EF12

AREA:

Unit Data		
	Design	Actual
MFG	GREENHECK	GREENHECK
Model Num	CUBE-160-7-1-22-X	CUBE-161-7-X
Serial Num	-	04C18473
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Test Data		
	Design	Actual
CFM	2800	2865
Fan RPM	-	1031
Fan Rotation	-	CW
Motor RPM	-	1766
RL Voltage	-	120
RL Amperage	-	NA
Suction ESP	-	-0.28"
Discharge ESP	-	ATM
Total ESP	-	0.28"

Motor Data		
	Design	Actual
Motor MFG	-	MARATHON
Frame	-	56
Horsepower	0.75	0.75
Motor Rpm	1725	1725
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	10.6
Service Factor	-	1.25

Drive Data		
	Design	Actual
Motor Sheave Size	-	VP44
Motor Bore Size	-	0.625"
Motor Sheave SetPt	-	5 TO
Fan Sheave Size	-	AK5934
Fan Sheave Bore	-	0.75"
Belt CL Distance	-	6"
Num of Belts	-	1
Belt Size	-	A24

Completed By: Antonio Flores-De La Cruz on 10/24/2023