

Report By:

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



Report: TAB REPORT
Function: Test, Adjust, & Balance
Date: 12/18/2023

PROJECT

**09-25-23 CARMAX #7281 - BAKERSFIELD,
CA**

6801 COLONY ST

BAKERSFIELD, CA 93307

Client

Comfort Systems USA
9450 W Wingfoot Rd
Houston, TX 77041

National TAB

Project: 09-25-23 CARMAX #7281 - BAKERSFIELD, CA

Table Of Contents

Section	Page #
Summary	3
Pictures	4
RTUs 1-13	17
RTU14	36
ERV-1 Sup	38
ERV-1 Exh	39
RTU-15	40
ERV2 Sup	42
ERV-2 Exh	43
RTUs 16-21	44
GRD Layout	55

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 so that bypass and OA flows are within tolerance.

ERV RTU's

The supply air portion of the ERV is 100% OA that is supplied to the space via two fans in series. The airflow was measured by reading the intake air filter with a velgrid and multiplying by the free area of the filter. Adjustments were made to the airflow by adjusting the motor sheaves to balance airflow within design tolerances. The exhaust system has one fan and was measured via either traverse or by reading the inlets with a velgrid and multiplying by the free area of the filter.

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.

CheckList List

- TECH - SITE PICTURES



20231013_164434
10/13/2023

RTU-2

Comment:



20231013_164449
10/13/2023

RTU-3

Comment:



20231013_164651
10/13/2023

RTU-4

Comment:



20231013_164718
10/14/2023

RTU-5

Comment:



20231013_164623
10/14/2023

RTU-6

Comment:



20231013_164651
10/14/2023

RTU-7

Comment:



20231013_164718
10/14/2023

RTU-8

Comment:



20231013_164821
10/14/2023

RTU-9

Comment:



20231013_164859
10/14/2023

RTU-10

Comment:



20231013_165009
10/14/2023

RTU-11

Comment:



20231013_165036
10/14/2023

RTU-12

Comment:



20231013_165111
10/14/2023

RTU-13

Comment:



20231013_165204
10/14/2023

RTU-14

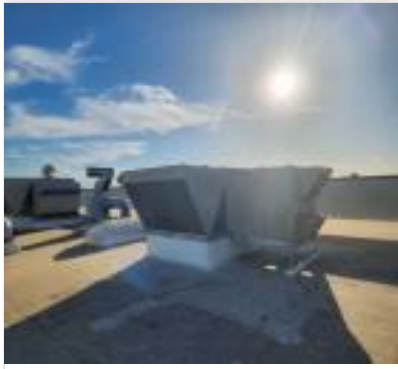
Comment:



20231013_165227
10/14/2023

RTU-15

Comment:



20231013_165235
10/14/2023

RTU-16

Comment:



20231013_165301
10/14/2023

RTU-17

Comment:



20231013_165327
10/14/2023

RTU-18

Comment:



20231013_165441
10/14/2023

RTU-19

Comment:



20231013_165520
10/14/2023

RTU-20

Comment:



20231013_165615
10/14/2023

RTU-21

Comment:



20231013_165637
10/14/2023



National TAB

Project: 09-25-23 CARMAX #7281 - BAKERSFIELD, CA

System/Unit: AHU/RTU

Asset: RTU1

AREA: Showroom

Unit Data		
	Design	Actual
MFG	Lennox	LENNOX
Serial Num	-	5622F07000
Model Num	LGH120H4M	LGH120H4MM4G
Type	RTU	RTU
Configuration	Vertical	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	14X23
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2

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

Drive Data		
	Design	Actual
Motor Sheave Size	-	5"
Motor Bore Size	-	1-3/16"
Motor Sheave SetPt	-	1 TURN OPEN
Fan Sheave Size	-	7"
Fan Sheave Bore	-	7/8"
Belt CL Distance	-	21.5"
Num of Belts	-	1
Belt Size	-	BX57
Belt Alignment	-	VERIFIED

Test Data		
	Design	Actual
SF CFM	4500	4921
SF RPM	-	1080
RA CFM	3950	4342
OA CFM	550	579
RL Voltage	-	475/472/477
RL Amperage	-	6.2/6.0/5.9
SF Rotation	-	CCW
RA Damper Position	-	65%
Min OA Damper Position	-	35%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	N/A

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.78"
Fan Suction SP	-	-1.41"
Fan Discharge SP	-	0.44"
Total ESP	1.43	1.22"
Fan Total SP	-	1.85"

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

Completed By: Zack Eismin on 10/12/2023



National TAB

Project: 09-25-23 CARMAX #7281 - BAKERSFIELD, CA

System/Unit: AHU/RTU

Asset: RTU2

AREA: Showroom

Unit Data		
	Design	Actual
MFG	Lennox	LENNOX
Serial Num	-	5622F07001
Model Num	LGH120H4M	LGH120H4MM4G
Type	RTU	RTU
Configuration	Vertical	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	14X23
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2

Motor Data		
	Design	Actual
Motor MFG	-	US MOTOR
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"
Motor Bore Size	-	1-3/16"
Motor Sheave SetPt	-	5 TURNS OPEN
Fan Sheave Size	-	7"
Fan Sheave Bore	-	7/8"
Belt CL Distance	-	21.5"
Num of Belts	-	1
Belt Size	-	BX57
Belt Alignment	-	VERIFIED

Test Data		
	Design	Actual
SF CFM	4500	4911
SF RPM	-	1140
RA CFM	3950	4320
OA CFM	550	591
RL Voltage	-	472/474/475
RL Amperage	-	6.2/5.9/5.8
SF Rotation	-	CCW
RA Damper Position	-	70%
Min OA Damper Position	-	30%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	N/A

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.98"
Fan Suction SP	-	-1.61"
Fan Discharge SP	-	0.79"
Total ESP	1.43"	1.77"
Fan Total SP	-	2.4"

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

Completed By: Zack Eismin on 10/12/2023



National TAB

Project: 09-25-23 CARMAX #7281 - BAKERSFIELD, CA

System/Unit: AHU/RTU

Asset: RTU3

AREA:Buyers

Unit Data		
	Design	Actual
MFG	Lennox	LENNOX
Serial Num	-	5622G06954
Model Num	LGH060H4EU5G	LGH048H4ES5G
Type	RTU	RTU
Configuration	Vertical	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	14X29
Num Final Filter 1	-	4
Final Filter Size 1	-	16X20X2

Motor Data		
	Design	Actual
Motor MFG	-	NL
Frame	-	NL
Horsepower	3/4	0.75
Motor Rpm	-	NL
Phase	3	1
Rated Voltage	480	460
Rated Amperage	-	3.1

Drive Data		
	Design	Actual
Motor Sheave Size	-	DD
Motor Bore Size	-	DD
Motor Sheave SetPt	-	DD
Fan Sheave Size	-	DD
Fan Sheave Bore	-	DD
Belt CL Distance	-	DD
Num of Belts	-	DD
Belt Size	-	DD
Belt Alignment	-	DD

Test Data		
	Design	Actual
SF CFM	1400	1529
SF RPM	-	100%
RA CFM	1120	1228
OA CFM	280	301
RL Voltage	-	472
RL Amperage	-	2.45
SF Rotation	-	CCW
RA Damper Position	-	87%
Min OA Damper Position	-	13%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	N/A

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.13"
Fan Suction SP	-	-0.31"
Fan Discharge SP	-	0.69"
Total ESP	0.80"	0.82"
Fan Total SP	-	1.00"

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

Completed By: Zack Eismin on 10/12/2023



National TAB

Project: 09-25-23 CARMAX #7281 - BAKERSFIELD, CA

System/Unit: AHU/RTU

Asset: RTU4

AREA:Customer

Unit Data		
	Design	Actual
MFG	Lennox	LENNOX
Serial Num	-	5622G07044
Model Num	LGH060H4EU5G	LGH060H4HEU5G
Type	RTU	RTU
Configuration	Vertical	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	14X29
Num Final Filter 1	-	4
Final Filter Size 1	-	20X20X2
Final Filter Size 2	-	

Motor Data		
	Design	Actual
Motor MFG	-	NL
Frame	-	NL
Horsepower	1.0	1
Motor Rpm	-	NL
Phase	3	1
Rated Voltage	480	460
Rated Amperage	-	3.7

Drive Data		
	Design	Actual
Motor Sheave Size	-	DD
Motor Bore Size	-	DD
Motor Sheave SetPt	-	DD
Fan Sheave Size	-	DD
Fan Sheave Bore	-	DD
Belt CL Distance	-	DD
Num of Belts	-	DD
Belt Size	-	DD
Belt Alignment	-	DD

Test Data		
	Design	Actual
SF CFM	2000	1871
SF RPM	-	NA
RA CFM	1725	1582
OA CFM	275	289
RL Voltage	-	472
RL Amperage	-	2.9
SF Rotation	-	CCW
RA Damper Position	-	70%
Min OA Damper Position	-	30%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	NA

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.19"
Fan Suction SP	-	-0.36"
Fan Discharge SP	-	0.17"
Total ESP	0.80"	0.36"
Fan Total SP	-	0.53"

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

Completed By: Zack Eismin on 10/12/2023



National TAB

Project: 09-25-23 CARMAX #7281 - BAKERSFIELD, CA

System/Unit: AHU/RTU

Asset: RTU5

AREA:Business

Unit Data		
	Design	Actual
MFG	Lennox	LENNOX
Serial Num	-	5622G07047
Model Num	LGH074H4T	LGH074H4TU1G
Type	RTU	RTU
Configuration	Vertical	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	14X29
Num Final Filter 1	-	4
Final Filter Size 1	-	20X20X2
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	Actual
Motor MFG	-	US MOTOR
Frame	-	56HZ
Horsepower	2.0	2.0
Motor Rpm	-	1740
Phase	3	3
Rated Voltage	480	460
Rated Amperage	-	2.9

Drive Data		
	Design	Actual
Motor Sheave Size	-	4"
Motor Bore Size	-	7/8"
Motor Sheave SetPt	-	3 TURNS OPEN
Fan Sheave Size	-	7"
Fan Sheave Bore	-	1"
Belt CL Distance	-	19.5"
Num of Belts	-	1
Belt Size	-	A50
Belt Alignment	-	VERIFIED

Test Data		
	Design	Actual
SF CFM	2400	2557
SF RPM	-	936
RA CFM	2100	2246
OA CFM	300	311
RL Voltage	-	471/471/472
RL Amperage	-	2.7/2.5/2.5
SF Rotation	-	CCW
RA Damper Position	-	75%
Min OA Damper Position	-	25%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	N/A

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.41"
Fan Suction SP	-	-0.66"
Fan Discharge SP	-	0.70"
Total ESP	0.80"	1.11"
Fan Total SP	-	1.36"

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

Completed By: Zack Eismin on 10/12/2023



National TAB

Project: 09-25-23 CARMAX #7281 - BAKERSFIELD, CA

System/Unit: AHU/RTU

Asset: RTU6

AREA:Breakroom

Unit Data		
	Design	Actual
MFG	Lennox	LENNOX
Serial Num	-	5622G06826
Model Num	LCH048H4E	LGH048H4ES5G
Type	RTU	RTU
Configuration	Vertical	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	14X29
Num Final Filter 1	-	4
Final Filter Size 1	-	16X20X2

Motor Data		
	Design	Actual
Motor MFG	-	NL
Frame	-	NL
Horsepower	3/4	0.75
Motor Rpm	-	NL
Phase	3	1
Rated Voltage	480	460
Rated Amperage	-	3.1

Drive Data		
	Design	Actual
Motor Sheave Size	-	DD
Motor Bore Size	-	DD
Motor Sheave SetPt	-	DD
Fan Sheave Size	-	DD
Fan Sheave Bore	-	DD
Belt CL Distance	-	DD
Num of Belts	-	DD
Belt Size	-	DD
Belt Alignment	-	DD

Test Data		
	Design	Actual
SF CFM	1600	1677
SF RPM	-	NA
RA CFM	1370	1436
OA CFM	230	241
RL Voltage	-	467
RL Amperage	-	2.6
SF Rotation	-	CCW
RA Damper Position	-	75%
Min OA Damper Position	-	25%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	N/A

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.16"
Fan Suction SP	-	-0.38"
Fan Discharge SP	-	0.21"
Total ESP	0.80	0.37"
Fan Total SP	-	0.59"

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

Completed By: Zack Eismin on 10/12/2023



National TAB

Project: 09-25-23 CARMAX #7281 - BAKERSFIELD, CA

System/Unit: AHU/RTU

Asset: RTU7

AREA:Data/PBX

Unit Data		
	Design	Actual
MFG	Lennox	LENNOX
Serial Num	-	5622H03175
Model Num	LCH036H4E	LCH036H4EN4G
Type	RTU	RTU
Configuration	Vertical	VERTICAL
Num OA Filters 1	-	N/A
OA Filter Size 1	-	N/A
Num Final Filter 1	-	4
Final Filter Size 1	-	16X20X2

Motor Data		
	Design	Actual
Motor MFG	-	NL
Frame	-	NL
Horsepower	1/2	0.5
Motor Rpm	-	NL
Phase	3	1
Rated Voltage	480	460
Rated Amperage	-	2.2

Drive Data		
	Design	Actual
Motor Sheave Size	-	DD
Motor Bore Size	-	DD
Motor Sheave SetPt	-	DD
Fan Sheave Size	-	DD
Fan Sheave Bore	-	DD
Belt CL Distance	-	DD
Num of Belts	-	DD
Belt Size	-	DD
Belt Alignment	-	DD

Test Data		
	Design	Actual
SF CFM	975	899
SF RPM	-	NA
RA CFM	975	899
OA CFM	-	0
RL Voltage	-	469
RL Amperage	-	0.5
SF Rotation	-	CCW
RA Damper Position	-	100%
Min OA Damper Position	-	N/A
Min OA Damper Type	-	N/A
OA Enthalpy Setpt	-	N/A

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.08"
Fan Suction SP	-	-0.15"
Fan Discharge SP	-	0.04"
Total ESP	0.75	0.12"
Fan Total SP	-	0.19"

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

Completed By: Zack Eismin on 10/12/2023



National TAB

Project: 09-25-23 CARMAX #7281 - BAKERSFIELD, CA

System/Unit: AHU/RTU

Asset: RTU8

AREA:Parts

Unit Data		
	Design	Actual
MFG	Lennox	LENNOX
Serial Num	-	5622G06950
Model Num	LGH048H4E	LGH048H4ES5G
Type	RTU	RTU
Configuration	Vertical	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	14X29
Num Final Filter 1	-	4
Final Filter Size 1	-	16X20X2

Motor Data		
	Design	Actual
Motor MFG	-	NL
Frame	-	NL
Horsepower	3/4	0.75
Motor Rpm	-	NL
Phase	3	1
Rated Voltage	480	460
Rated Amperage	-	3.1

Drive Data		
	Design	Actual
Motor Sheave Size	-	DD
Motor Bore Size	-	DD
Motor Sheave SetPt	-	DD
Fan Sheave Size	-	DD
Fan Sheave Bore	-	DD
Belt CL Distance	-	DD
Num of Belts	-	DD
Belt Size	-	DD
Belt Alignment	-	DD

Test Data		
	Design	Actual
SF CFM	1300	1193
SF RPM	-	NA
RA CFM	1000	901
OA CFM	300	292
RL Voltage	-	470
RL Amperage	-	2.1
SF Rotation	-	CCW
RA Damper Position	-	65%
Min OA Damper Position	-	35%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	NA

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.13"
Fan Suction SP	-	-0.30"
Fan Discharge SP	-	0.14"
Total ESP	0.80"	0.27"
Fan Total SP	-	0.44"

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

Completed By: Zack Eismin on 10/12/2023



National TAB

Project:09-25-23 CARMAX #7281 - BAKERSFIELD, CA

AHU/RTU

Diffuser Supply (GRD)

RTU8/Parts

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
RTU8-SGRD1	PARTS	NK	8/8	135	1	209	147	147	108.9
RTU8-SGRD2	PARTS	NK	8/8	135	1	189	142	142	105.2
RTU8-SGRD3	PARTS	NK	10/6	140	1	147	152	152	108.6
RTU8-SGRD4	PARTS	NK	10/6	140	1	129	149	149	106.4
RTU8-SGRD5	PARTS	NK	8/8	140	1	147	153	153	109.3
RTU8-SGRD6	PARTS	NK	8/8	140	1	162	151	151	107.9
RTU8-SGRD7	PARTS	NK	8/8	140	1	159	145	145	103.6
RTU8-SGRD8	PARTS	NK	8/8	140	1	102	154	154	110.0
Total				1110		1244	1193	1193	107.48%



National TAB

Project: 09-25-23 CARMAX #7281 - BAKERSFIELD, CA

System/Unit: AHU/RTU

Asset: RTU9

AREA:Break/Train

Unit Data		
	Design	Actual
MFG	Lennox	LENNOX
Serial Num	-	5622G07046
Model Num	LGH300H4B	LGH074H4TS1G
Type	RTU	RTU
Configuration	Vertical	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	14X29
Num Final Filter 1	-	4
Final Filter Size 1	-	20X20X2

Motor Data		
	Design	Actual
Motor MFG	-	US MOTOR
Frame	-	56HZ
Horsepower	2.0	5.0
Motor Rpm	-	1740
Phase	3	3
Rated Voltage	480	460
Rated Amperage	-	2.9

Drive Data		
	Design	Actual
Motor Sheave Size	-	4"
Motor Bore Size	-	7/8"
Motor Sheave SetPt	-	3 TURNS OPEN
Fan Sheave Size	-	6"
Fan Sheave Bore	-	1"
Belt CL Distance	-	19"
Num of Belts	-	1
Belt Size	-	A50
Belt Alignment	-	VERIFIED

Test Data		
	Design	Actual
SF CFM	2500	2387
SF RPM	-	948
RA CFM	2050	2153
OA CFM	450	472
RL Voltage	-	478/477/477
RL Amperage	-	2.4/2.4/2.2
SF Rotation	-	CCW
RA Damper Position	-	70%
Min OA Damper Position	-	30%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	NA

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.73"
Fan Suction SP	-	-1.02"
Fan Discharge SP	-	0.37"
Total ESP	1.0	1.10"
Fan Total SP	-	1.39"

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

Completed By: Zack Eismin on 10/13/2023



National TAB

Project:09-25-23 CARMAX #7281 - BAKERSFIELD, CA

AHU/RTU

Diffuser Supply (GRD)

RTU9/Break/Train

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
RTU9-SGRD1	TRAINING	CD	8"	270	1	370	282	282	104.4
RTU9-SGRD2	TRAINING	CD	8"	270	1	289	292	292	108.1
RTU9-SGRD3	TRAINING	CD	8"	270	1	310	296	296	109.6
RTU9-SGRD4	TRAINING	CD	8"	270	1	332	293	293	108.5
RTU9-SGRD5	BREAK ROOM	CD	8"	270	1	172	279	279	103.3
RTU9-SGRD6	BREAK ROOM	CD	8"	270	1	241	297	297	110.0
RTU9-SGRD7	BREAK ROOM	CD	8"	270	1	276	295	295	109.3
RTU9-SGRD8	CORRIDOR	CD	6"	100	1	172	107	107	107.0
RTU9-SGRD9	WOMENS RR	CD	6"	100	1	-	157	107	107.0
RTU9-SGRD10	MENS RR	CD	6"	140	1	-	327	139	99.3
Total				2230		2162	2625	2387	107.04%



National TAB

Project: 09-25-23 CARMAX #7281 - BAKERSFIELD, CA

System/Unit: AHU/RTU

Asset: RTU10

AREA:Service Area (BP)

Unit Data		
	Design	Actual
MFG	Lennox	LENNOX
Serial Num	-	5622F08663
Model Num	LGH300H4B	LGH300H4BH2G
Type	RTU	RTU
Configuration	Vertical	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	38X11
Num Final Filter 1	-	12
Final Filter Size 1	-	20X20X2
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	Actual
Motor MFG	-	US MOTOR
Frame	-	184TZ
Horsepower	5.0	5
Motor Rpm	-	1765
Phase	3	3
Rated Voltage	480	460
Rated Amperage	-	7.6

Drive Data		
	Design	Actual
Motor Sheave Size	-	5.5"
Motor Bore Size	-	1-1/8"
Motor Sheave SetPt	-	1 TURN OPEN
Fan Sheave Size	-	12"
Fan Sheave Bore	-	1-3/16"
Belt CL Distance	-	24"
Num of Belts	-	1
Belt Size	-	BX71
Belt Alignment	-	VERIFIED

Test Data		
	Design	Actual
SF CFM	7000	7076
SF RPM	-	758
RA CFM	2000	2094
OA CFM	5000	4982
RL Voltage	-	475/477/477
RL Amperage	-	7.5/7.4/7.2
SF Rotation	-	CCW
Min OA Damper Position	-	100% OPEN
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	N/A

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.33"
Fan Suction SP	-	-1.13"
Fan Discharge SP	-	0.66"
Total ESP	1.0"	0.99"
Fan Total SP	-	1.79"

General		
	Design	Actual
Fan Rotation Correct	-	YES
Unit Filters Clean	-	100% LOADED
Condensate Drain Installed	-	YES

Completed By: Zack Eismin on 10/13/2023



National TAB

Project:09-25-23 CARMAX #7281 - BAKERSFIELD, CA

AHU/RTU

Diffuser Supply (GRD)

RTU10/Service Area (BP)

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
RTU10-SGRD1	SERVICE	SG	-	1250	2.72	1102	1268	1268	101.4
RTU10-SGRD2	SERVICE	SG	-	1250	2.72	1081	1247	1247	99.8
RTU10-SGRD3	SERVICE	SG	-	1250	2.72	1289	1248	1248	99.8
RTU10-SGRD4	SERVICE	SG	-	1250	2.72	1453	1219	1219	97.5
Total				5000		4925	4982	4982	99.64%



National TAB

Project: 09-25-23 CARMAX #7281 - BAKERSFIELD, CA

System/Unit: AHU/RTU

Asset: RTU11

AREA:SERVICE (BP)

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622F08660
Model Num	LGH300H4B	LGH300H4BH2G
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	38X11
Num Final Filter 1	-	12
Final Filter Size 1	-	20X20X2
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	Actual
Motor MFG	-	US MOTOR
Frame	-	184TZ
Horsepower	5.0	5.0
Motor Rpm	-	17
Phase	3	3
Rated Voltage	480	460
Rated Amperage	-	7.6

Drive Data		
	Design	Actual
Motor Sheave Size	-	5.5"
Motor Bore Size	-	1-1/8"
Motor Sheave SetPt	-	1 TURN OPEN
Fan Sheave Size	-	12"
Fan Sheave Bore	-	1-3/16"
Belt CL Distance	-	23.5"
Num of Belts	-	1
Belt Size	-	BX71
Belt Alignment	-	VERIFIED

Test Data		
	Design	Actual
SF CFM	7000	7411
SF RPM	-	756
RA CFM	2000	1985
OA CFM	5000	5426
RL Voltage	-	475/476/477
RL Amperage	-	7.2/6.8/6.9
SF Rotation	-	CCW
Min OA Damper Position	-	100%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	N/A

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.39"
Fan Suction SP	-	-1.11"
Fan Discharge SP	-	0.62"
Total ESP	1.0"	1.01"
Fan Total SP	-	1.73"

General		
	Design	Actual
Fan Rotation Correct	-	YES
Unit Filters Clean	-	100% LOADED
Condensate Drain Installed	-	YES

Completed By: Zack Eismin on 10/13/2023



National TAB

Project:09-25-23 CARMAX #7281 - BAKERSFIELD, CA

AHU/RTU

Diffuser Supply (GRD)

RTU11/SERVICE (BP)

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
RTU11-SGRD1	SERVICE	SG	-	1250	2.72	1244	1370	1370	109.6
RTU11-SGRD2	SERVICE	SG	-	1250	2.72	1455	1341	1341	107.3
RTU11-SGRD3	SERVICE	SG	-	1250	2.72	1275	1359	1359	108.7
RTU11-SGRD4	SERVICE	SG	-	1250	2.72	1589	1356	1356	108.5
Total				5000		5563	5426	5426	108.52%



National TAB

Project: 09-25-23 CARMAX #7281 - BAKERSFIELD, CA

System/Unit: AHU/RTU

Asset: RTU12

AREA:SERVICE (BP)

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622H03177
Model Num	LGH300H4B	LGH300H4B
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	38X11
Num Final Filter 1	-	12
Final Filter Size 1	-	20X20X2
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	Actual
Motor MFG	-	US MOTOR
Frame	-	184TZ
Horsepower	5.0	5.0
Motor Rpm	-	1765
Phase	3	3
Rated Voltage	480	460
Rated Amperage	-	7.6

Drive Data		
	Design	Actual
Motor Sheave Size	-	5.5"
Motor Bore Size	-	1-1/8"
Motor Sheave SetPt	-	1 TURN OPEN
Fan Sheave Size	-	12"
Fan Sheave Bore	-	1-3/16"
Belt CL Distance	-	29"
Num of Belts	-	1
Belt Size	-	BX71
Belt Alignment	-	VERIFIED

Test Data		
	Design	Actual
SF CFM	7000	6870
SF RPM	-	762
RA CFM	2000	2142
OA CFM	5000	4737
RL Voltage	-	473/475/473
RL Amperage	-	6.5/6.5/6.2
SF Rotation	-	CCW
Min OA Damper Position	-	100%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	N/A

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.64"
Fan Suction SP	-	-1.06"
Fan Discharge SP	-	0.27"
Total ESP	1.0"	0.91"
Fan Total SP	-	1.33"

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

Completed By: Zack Eismin on 10/13/2023



National TAB

Project:09-25-23 CARMAX #7281 - BAKERSFIELD, CA

AHU/RTU

Diffuser Supply (GRD)

RTU12/SERVICE (BP)

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
RTU12-SGRD1	SERVICE	SG	-	1750	3.89	1931	1681	1681	96.1
RTU12-SGRD2	SERVICE	SG	-	1750	3.89	1406	1706	1706	97.5
RTU12-SGRD3	SERVICE	SG	-	1750	3.89	1721	1761	1761	100.6
RTU12-SGRD4	SERVICE	SG	-	1750	3.89	1931	1722	1722	98.4
Total				7000		6989	6870	6870	98.14%



National TAB

Project: 09-25-23 CARMAX #7281 - BAKERSFIELD, CA

System/Unit: AHU/RTU

Asset: RTU13

AREA:SERVICE (BP)

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622F08652
Model Num	LGH300H4B	LGH300H4B
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	11X38
Num Final Filter 1	-	12
Final Filter Size 1	-	20X20X2
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	Actual
Motor MFG	-	US MOTOR
Frame	-	184TZ
Horsepower	5.0	5.0
Motor Rpm	-	1765
Phase	3	3
Rated Voltage	480	460
Rated Amperage	-	7.6

Drive Data		
	Design	Actual
Motor Sheave Size	-	5.5"
Motor Bore Size	-	1-1/8"
Motor Sheave SetPt	-	1 TURN OPEN
Fan Sheave Size	-	12"
Fan Sheave Bore	-	1-3/16"
Belt CL Distance	-	29"
Num of Belts	-	1
Belt Size	-	BX71
Belt Alignment	-	VERIFIED

Test Data		
	Design	Actual
SF CFM	7000	7518
SF RPM	-	762
RA CFM	2000	2101
OA CFM	5000	5427
RL Voltage	-	477/475/475
RL Amperage	-	7.4/7.5/7.5
SF Rotation	-	CCW
Min OA Damper Position	-	100% OPEN
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	N/A

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.45"
Fan Suction SP	-	-0.85"
Fan Discharge SP	-	0.51"
Total ESP	1.0"	0.96"
Fan Total SP	-	1.36"

General		
	Design	Actual
Fan Rotation Correct	-	YES
Unit Filters Clean	-	NO 70% LOADED
Condensate Drain Installed	-	YES

Completed By: Zack Eismin on 10/13/2023



National TAB

Project:09-25-23 CARMAX #7281 - BAKERSFIELD, CA

AHU/RTU

Diffuser Supply (GRD)

RTU13/SERVICE (BP)

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
RTU13-SGRD1	SERVICE	SG	-	1750	3.89	1920	1920	1920	109.7
RTU13-SGRD2	SERVICE	SG	-	1750	3.89	1907	1860	1860	106.3
RTU13-SGRD3	SERVICE	SG	-	1750	3.89	1702	1906	1906	108.9
RTU13-SGRD4	SERVICE	SG	-	1750	3.89	2011	1832	1832	104.7
Total				7000		7540	7518	7518	107.4%



National TAB

Project: 09-25-23 CARMAX #7281 - BAKERSFIELD, CA

System/Unit: AHU/RTU

Asset: RTU14

AREA:SERVICE (ERV)

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622E05536
Model Num	LGH210H4B	LGH210H4BM3G
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	39X24
Num Final Filter 1	-	6
Final Filter Size 1	-	20X24X2

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	-	4.8

Drive Data		
	Design	Actual
Motor Sheave Size	-	4"
Motor Bore Size	-	7/8"
Motor Sheave SetPt	-	1 TURN OPEN
Fan Sheave Size	-	BK72
Fan Sheave Bore	-	1-3/16"
Belt CL Distance	-	20.5"
Num of Belts	-	1
Belt Size	-	BX55
Belt Alignment	-	VERIFIED

Test Data		
	Design	Actual
SF CFM	5250	5368
SF RPM	-	727
RA CFM	0	0
OA CFM	5250	5368
RL Voltage	-	477/475/478
RL Amperage	-	4.5/4.3/4.1
SF Rotation	-	CCW
RA Damper Position	-	N/A
Min OA Damper Position	-	N/A
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	N/A

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.51"
Fan Suction SP	-	-0.71"
Fan Discharge SP	-	0.41"
Total ESP	0.75"	0.92"
Fan Total SP	-	1.12"

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

Completed By: Zack Eismin on 10/13/2023



National TAB

Project:09-25-23 CARMAX #7281 - BAKERSFIELD, CA

AHU/RTU

Diffuser Supply (GRD)

RTU14/SERVICE (ERV)

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
RTU14-SGRD1	SERVICE	SG	-	1315	3.89	1197	1291	1291	98.2
RTU14-SGRD2	SERVICE	SG	-	1315	3.89	1221	1321	1321	100.5
RTU14-SGRD3	SERVICE	SG	-	1315	3.89	1377	1371	1371	104.3
RTU14-SGRD4	SERVICE	SG	-	1315	3.89	1597	1385	1385	105.3
Total				5260		5392	5368	5368	102.05%



National TAB

Project: 09-25-23 CARMAX #7281 - BAKERSFIELD, CA

System/Unit: FAN - Supply

Asset: SUPPLY-ERV1

AREA:RTU-14 SUPPLY

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Model Num	50R6252XM	50R6252XM
Serial Num	-	20224600150
Type	-	ERV-SUPPLY

Motor Data		
	Design	Actual
Motor MFG	-	CENTURY
Frame	-	56Y
Horsepower	-	5
Motor Rpm	-	1725
Phase	-	3
Voltage (rated)	-	230/460
Amperage (rated)	-	14.4/7.2
Service Factor	-	1.15

Test Data		
	Design	Actual
CFM	5250	5368
SF RPM	-	1012
Motor RPM	-	1760
SF System SetPt	-	3 TURNS OPEN
RL Voltage	-	486/486/485
RL Amperage	-	5.4/5.3/5.3
Total ESP	-	0.60"
Fan Discharge SP	-	0.49"

General		
	Design	Actual
Fan Rotation Correct	-	YES



National TAB

Project: 09-25-23 CARMAX #7281 - BAKERSFIELD, CA

System/Unit: FAN - Exhaust

Asset: EXHAUST-ERV1

AREA:RTU-14

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Model Num	50R6252XM	50R6252XM
Type	-	ERV EXHAUST

Motor Data		
	Design	Actual
Motor MFG	-	CENTURY
Horsepower	-	5
Motor Rpm	-	1755
Phase	-	3
Voltage (rated)	-	230/460
Amperage (rated)	-	12.6/6.3

Test Data		
	Design	Actual
CFM	5000	5113
Fan RPM	-	1061
RL Voltage	-	486/486/485
RL Amperage	-	5.0/4.9/4.9
Suction ESP	-	-0.47"
Total ESP	-	0.47"



National TAB

Project: 09-25-23 CARMAX #7281 - BAKERSFIELD, CA

System/Unit: AHU/RTU

Asset: RTU15

AREA:SERVICE (ERV)

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622E05530
Model Num	LGH210H4B	LGH210H4BM3G
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	38X24
Num Final Filter 1	-	6
Final Filter Size 1	-	20X24X2
Num Final Filter 2	-	
Final Filter Size 2	-	

Test Data		
	Design	Actual
SF CFM	5250	5391
SF RPM	-	750
RA CFM	0	0
OA CFM	5250	5391
RL Voltage	-	477/477/477
RL Amperage	-	4.8/4.7/4.8
SF Rotation	-	CCW
RA Damper Position	-	N/A
Min OA Damper Position	-	N/A
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	N/A

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	-	4.8

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.47"
Fan Suction SP	-	-0.77"
Fan Discharge SP	-	0.45"
Total ESP	0.75	0.92"
Fan Total SP	-	1.22"

Drive Data		
	Design	Actual
Motor Sheave Size	-	4"
Motor Bore Size	-	7/8"
Motor Sheave SetPt	-	1 TURN OPEN
Fan Sheave Size	-	BK72
Fan Sheave Bore	-	1-3/16"
Belt CL Distance	-	20.5"
Num of Belts	-	1
Belt Size	-	BX55
Belt Alignment	-	VERIFIED

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

Completed By: Zack Eismin on 10/13/2023



National TAB

Project:09-25-23 CARMAX #7281 - BAKERSFIELD, CA

AHU/RTU

Diffuser Supply (GRD)

RTU15/SERVICE (ERV)

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
RTU15-SGRD1	COMP ROOM	CD	12"	450	1	362	437	437	97.1
RTU15-SGRD2	SHOP OFFICE	CD	8"	25	1	79	24	24	96.0
RTU15-SGRD3	MGR OFFICE	CD	6"	25	1	49	27	27	108.0
RTU15-SGRD4	SHOP	SG	-	1185	3.89	1261	1261	1261	106.4
RTU15-SGRD5	SHOP	SG	-	1185	3.89	1211	1211	1211	102.2
RTU15-SGRD6	SHOP	SG	-	1185	3.89	1240	1240	1240	104.6
RTU15-SGRD7	SHOP	SG	-	1185	3.89	1191	1191	1191	100.5
Total				5240		5393	5391	5391	102.88%

Completed By: Zack Eismin on 12/12/2023



National TAB

Project: 09-25-23 CARMAX #7281 - BAKERSFIELD, CA

System/Unit: FAN - Supply

Asset: SUPPLY-ERV2

AREA:RTU-15 SUPPLY

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Model Num	50R6252XM	50R6252XM
Serial Num	-	20224600150
Type	-	ERV SUPPLY

Motor Data		
	Design	Actual
Motor MFG	-	CENTURY
Frame	-	56Y
Horsepower	-	5
Motor Rpm	-	1725
Phase	-	3
Voltage (rated)	-	230/460
Amperage (rated)	-	14.4/7.2
Service Factor	-	1.15

Test Data		
	Design	Actual
CFM	5000	5391
SF RPM	-	1012
Motor RPM	-	1761
SF System SetPt	-	3 TURNS OPEN
RL Voltage	-	486/486/485
RL Amperage	-	5.3/5.3/5.2
Total ESP	-	0.63"
Fan Discharge SP	-	0.52"



National TAB

Project: 09-25-23 CARMAX #7281 - BAKERSFIELD, CA

System/Unit: FAN - Exhaust

Asset: EXHAUST-ERV2

AREA:RTU-15

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Model Num	50R6252XM	50R6252XM
Type	-	ERV EXHAUST

Motor Data		
	Design	Actual
Motor MFG	-	CENTURY
Horsepower	-	5
Motor Rpm	-	1755
Phase	-	3
Voltage (rated)	-	230/460
Amperage (rated)	-	12.6/6.3

Test Data		
	Design	Actual
CFM	5000	5078
Fan RPM	-	1063
RL Voltage	-	485/485/484
RL Amperage	-	4.9/4.8/5.1
Suction ESP	-	-0.47"
Total ESP	-	0.47"



National TAB

Project: 09-25-23 CARMAX #7281 - BAKERSFIELD, CA

System/Unit: AHU/RTU

Asset: RTU16

AREA:SERVICE

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622F08655
Model Num	LGH300H4B	LGH300H4BH2G
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	38X11
Num Final Filter 1	-	12
Final Filter Size 1	-	20X20X2
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	Actual
Motor MFG	-	US MOTOR
Frame	-	184TZ
Horsepower	5.0	5.0
Motor Rpm	-	1765
Phase	3	3
Rated Voltage	480	460
Rated Amperage	-	7.6

Drive Data		
	Design	Actual
Motor Sheave Size	-	1VP56BB
Motor Bore Size	-	1-1/8"
Motor Sheave SetPt	-	1 TURN OPEN
Fan Sheave Size	-	12"
Fan Sheave Bore	-	1-3/16"
Belt CL Distance	-	23.5"
Num of Belts	-	1
Belt Size	-	BX71
Belt Alignment	-	VERIFIED

Test Data		
	Design	Actual
SF CFM	7000	7245
SF RPM	-	761
RA CFM	2000	2154
OA CFM	5000	5091
RL Voltage	-	477/478/477
RL Amperage	-	6.4/6.2/5.8
SF Rotation	-	CCW
Min OA Damper Position	-	100%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	N/A

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.41"
Fan Suction SP	-	-0.89"
Fan Discharge SP	-	0.68"
Total ESP	1.0"	1.09"
Fan Total SP	-	1.57"

General		
	Design	Actual
Fan Rotation Correct	-	YES
Unit Filters Clean	-	NO, 100% LOAD
Condensate Drain Installed	-	YES

Completed By: Zack Eismin on 10/13/2023



National TAB

Project:09-25-23 CARMAX #7281 - BAKERSFIELD, CA

AHU/RTU

Diffuser Supply (GRD)

RTU16/SERVICE

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
RTU16-SGRD1	SERVICE	SG	-	1250	2.72	944	1257	1257	100.6
RTU16-SGRD2	SERVICE	SG	-	1250	2.72	1332	1217	1217	97.4
RTU16-SGRD3	SERVICE	SG	-	1250	2.72	1379	1315	1315	105.2
RTU16-SGRD4	SERVICE	SG	-	1250	2.72	1400	1302	1302	104.2
Total				5000		5055	5091	5091	101.82%



National TAB

Project: 09-25-23 CARMAX #7281 - BAKERSFIELD, CA

System/Unit: AHU/RTU

Asset: RTU17

AREA:SERVICE

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622F08654
Model Num	LGH300H4B	LGH300H4BH2G
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	38X11
Num Final Filter 1	-	12
Final Filter Size 1	-	20X20X2

Motor Data		
	Design	Actual
Motor MFG	-	US MOTOR
Frame	-	184TZ
Horsepower	5.0	5.0
Motor Rpm	-	1765
Phase	3	3
Rated Voltage	480	460
Rated Amperage	-	7.6

Drive Data		
	Design	Actual
Motor Sheave Size	-	5.5"
Motor Bore Size	-	1-1/8"
Motor Sheave SetPt	-	1 TURN OPEN
Fan Sheave Size	-	12"
Fan Sheave Bore	-	1-3/16"
Belt CL Distance	-	23.5"
Num of Belts	-	1
Belt Size	-	BX71
Belt Alignment	-	VERIFIED

Test Data		
	Design	Actual
SF CFM	7000	7117
SF RPM	-	758
RA CFM	2000	2188
OA CFM	5000	4929
RL Voltage	-	473/473/476
RL Amperage	-	6.8/6.5/6.7
SF Rotation	-	CCW
Min OA Damper Position	-	100%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	N/A

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.52"
Fan Suction SP	-	-0.96"
Fan Discharge SP	-	0.66"
Total ESP	1.0"	1.18"
Fan Total SP	-	1.62"

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

Completed By: Zack Eismin on 10/13/2023



National TAB

Project:09-25-23 CARMAX #7281 - BAKERSFIELD, CA

AHU/RTU

Diffuser Supply (GRD)

RTU17/SERVICE

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
RTU17-SGRD1	SERVICE	SG	-	1250	2.72	1295	1213	1213	97.0
RTU17-SGRD2	SERVICE	SG	-	1250	2.72	1480	1261	1261	100.9
RTU17-SGRD3	SERVICE	SG	-	1250	2.72	1145	1270	1270	101.6
RTU17-SGRD4	SERVICE	SG	-	1250	2.72	1136	1185	1185	94.8
Total				5000		5056	4929	4929	98.58%



National TAB

Project: 09-25-23 CARMAX #7281 - BAKERSFIELD, CA

System/Unit: AHU/RTU

Asset: RTU18

AREA:FQC

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622F07002
Model Num	LGH120H4M	LGH120H4MM4G
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	23X14
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2

Motor Data		
	Design	Actual
Motor MFG	-	INTERLINK
Frame	-	56HZ
Horsepower	2.0	3
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	480	460
Rated Amperage	-	4.8

Drive Data		
	Design	Actual
Motor Sheave Size	-	5"
Motor Bore Size	-	7/8"
Motor Sheave SetPt	-	3 TURN OPEN
Fan Sheave Size	-	7"
Fan Sheave Bore	-	1"
Belt CL Distance	-	22.5"
Num of Belts	-	1
Belt Size	-	AX58
Belt Alignment	-	VERIFIED

Test Data		
	Design	Actual
SF CFM	3000	3271
SF RPM	-	871
RA CFM	2700	2949
OA CFM	300	322
RL Voltage	-	472/472/475
RL Amperage	-	4.3/4.4/4.5
SF Rotation	-	CCW
RA Damper Position	-	75%
Min OA Damper Position	-	25%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	N/A

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.73"
Fan Suction SP	-	-1.08"
Fan Discharge SP	-	0.31"
Total ESP	1.0	1.04"
Fan Total SP	-	1.39"

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

Completed By: Zack Eismin on 10/13/2023



National TAB

Project: 09-25-23 CARMAX #7281 - BAKERSFIELD, CA

System/Unit: AHU/RTU

Asset: RTU19

AREA:FQC

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5619M01329
Model Num	LGH092H4M	LGH120H4MH3G
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	14X23
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	Actual
Motor MFG	-	INTERLINK
Frame	-	56HZ
Horsepower	2.0	3
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	480	460
Rated Amperage	-	4.8

Drive Data		
	Design	Actual
Motor Sheave Size	-	4"
Motor Bore Size	-	7/8"
Motor Sheave SetPt	-	4 TURNS OPEN
Fan Sheave Size	-	7"
Fan Sheave Bore	-	1"
Belt CL Distance	-	21.5"
Num of Belts	-	1
Belt Size	-	AX58
Belt Alignment	-	VERIFIED

Test Data		
	Design	Actual
SF CFM	2400	2377
SF RPM	-	751
RA CFM	2100	2097
OA CFM	300	292
RL Voltage	-	477/479/480
RL Amperage	-	1.78/1.89/1.92
SF Rotation	-	CCW
RA Damper Position	-	70%
Min OA Damper Position	-	30%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	NA

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.37"
Fan Suction SP	-	-0.64"
Fan Discharge SP	-	0.21"
Total ESP	0.75"	0.58"
Fan Total SP	-	0.85"

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

Completed By: Zack Eismin on 10/13/2023



National TAB

Project:09-25-23 CARMAX #7281 - BAKERSFIELD, CA

AHU/RTU

Diffuser Supply (GRD)

RTU19/FQC

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
RTU19-SGRD1	FQC	SG	14X14	600	1.36	879	579	579	96.5
RTU19-SGRD2	FQC	SG	14X14	600	1.36	221	621	621	103.5
RTU19-SGRD3	FQC	SG	24X16	1200	2.67	1361	1177	1177	98.1
Total				2400		2461	2377	2377	99.04%



National TAB

Project: 09-25-23 CARMAX #7281 - BAKERSFIELD, CA

System/Unit: AHU/RTU

Asset: RTU20

AREA: COSMETIC

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622E05054
Model Num	LCH210H4M	LCH210H4MN3G
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	3
OA Filter Size 1	-	23X14
Num Final Filter 1	-	6
Final Filter Size 1	-	24X24X2
Num Final Filter 2	-	
Final Filter Size 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	-	4.8

Drive Data		
	Design	Actual
Motor Sheave Size	-	4"
Motor Bore Size	-	7/8"
Motor Sheave SetPt	-	1 TURN OPEN
Fan Sheave Size	-	7"
Fan Sheave Bore	-	1-3/16"
Belt CL Distance	-	20.5"
Num of Belts	-	1
Belt Size	-	BX55
Belt Alignment	-	VERIFIED

Test Data		
	Design	Actual
SF CFM	5250	5689
SF RPM	-	815
RA CFM	5250	5621
OA CFM	0	0
RL Voltage	-	477/478/477
RL Amperage	-	4.8/4.7/4.8
SF Rotation	-	CCW
RA Damper Position	-	100%
Min OA Damper Position	-	0%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	NA

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.49"
Fan Suction SP	-	-0.72
Fan Discharge SP	-	0.52"
Total ESP	1.0	1.01"
Fan Total SP	-	1.24"

General		
	Design	Actual
Fan Rotation Correct	-	YES
Unit Filters Clean	-	NO, 100% LOAD
Condensate Drain Installed	-	YES

Completed By: Zack Eismin on 10/13/2023



National TAB

Project:09-25-23 CARMAX #7281 - BAKERSFIELD, CA

AHU/RTU

Diffuser Supply (GRD)

RTU20/COSMETIC

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
RTU20-SGRD1			16X44	1310	4.9	1200	1412	1412	107.8
RTU20-SGRD2			16X44	1310	4.9	1232	1397	1397	106.6
RTU20-SGRD3			16X44	1310	4.9	1619	1408	1408	107.5
RTU20-SGRD4			16X44	1310	4.9	1704	1472	1472	112.4
Total				5240		5755	5689	5689	108.57%



National TAB

Project: 09-25-23 CARMAX #7281 - BAKERSFIELD, CA

System/Unit: AHU/RTU

Asset: RTU21

AREA:SERVICE

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622E04974
Model Num	LCH210H4M	LCH210H4MN3G
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	23X14
Num Final Filter 1	-	6
Final Filter Size 1	-	24X24X2
Num Final Filter 2	-	
Final Filter Size 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	-	4.8

Drive Data		
	Design	Actual
Motor Sheave Size	-	4"
Motor Bore Size	-	7/8"
Motor Sheave SetPt	-	1 TURN OPEN
Fan Sheave Size	-	7"
Fan Sheave Bore	-	1-3/16"
Belt CL Distance	-	20.5"
Num of Belts	-	1
Belt Size	-	BX55
Belt Alignment	-	VERIFIED

Test Data		
	Design	Actual
SF CFM	5250	5692
SF RPM	-	833
RA CFM	5250	5692
OA CFM	-	0
RL Amperage	-	4.5/4.4/4.5
SF Rotation	-	CCW
RA Damper Position	-	100%
Min OA Damper Position	-	0%
Min OA Damper Type	-	N/A
OA Enthalpy Setpt	-	N/A

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.49"
Fan Suction SP	-	-0.79"
Fan Discharge SP	-	0.43"
Total ESP	0.75"	0.92"
Fan Total SP	-	1.28"

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

Completed By: Zack Eismin on 10/13/2023



National TAB

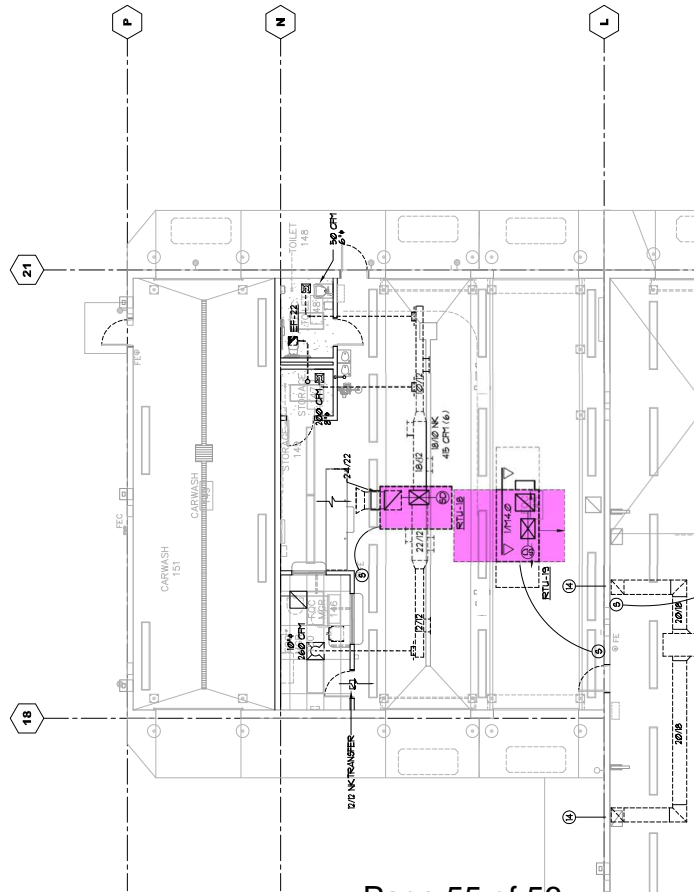
Project:09-25-23 CARMAX #7281 - BAKERSFIELD, CA

AHU/RTU

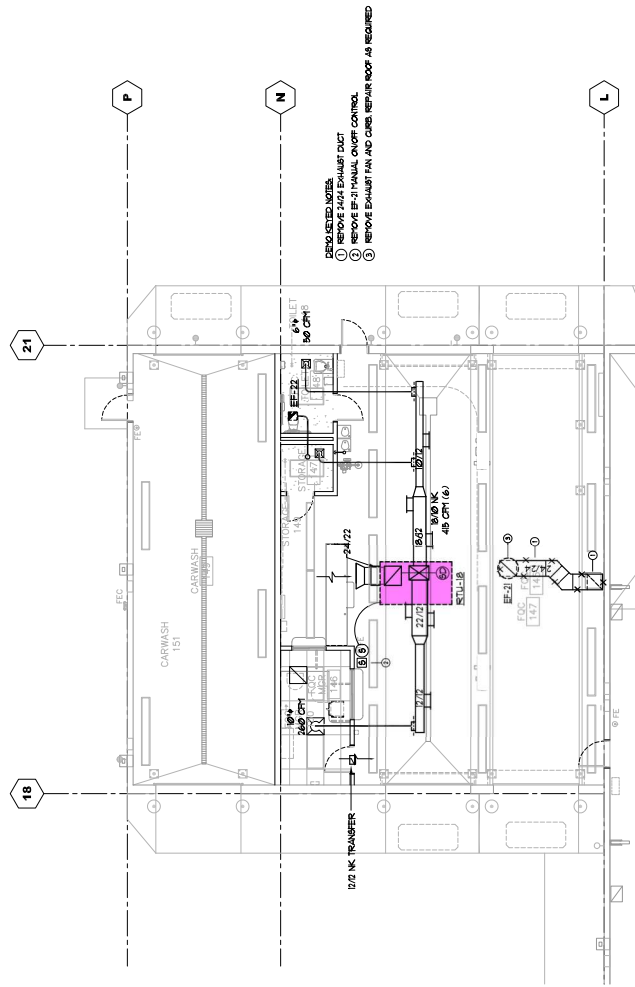
Diffuser Supply (GRD)

RTU21/SERVICE

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
RTU21-SGRD1			14X36	1625	3.5	1732	1742	1742	107.2
RTU21-SGRD2			14X36	1625	3.5	1777	1777	1777	109.4
RTU21-SGRD3			16X16	1000	1.56	1081	1081	1081	108.1
RTU21-SGRD4			16X16	1000	1.56	1092	1092	1092	109.2
Total				5250		5682	5692	5692	108.42%

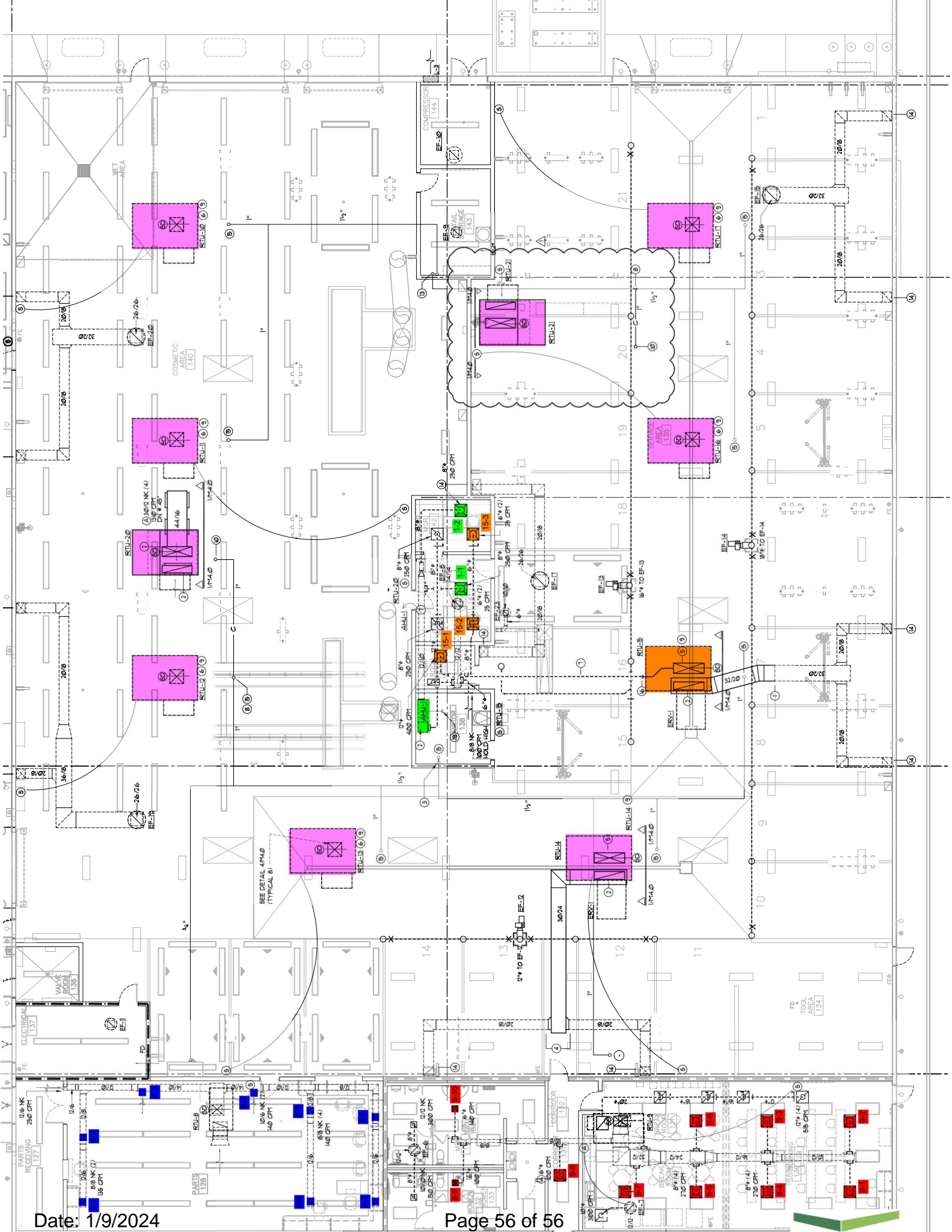


1 FQC FLOOR PLAN – HVAC
M1.2 SCALE: 1/8"=1'-0"



REMARKS:
 ① REMOVE EXISTING EXHAUST DUCT
 ② REMOVE EXISTING EXHAUST CONTROL
 ③ REMOVE EXHAUST FAN AND CABINET REPAIR HOOP AS REQUIRED

2 FQC DEMO PLAN – HVAC
M1.2 SCALE: 1/8"=1'-0"



Date: 1/9/2024

