Report By:

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

NATIONAL TAB

Comfort. Under control.

Report: FINAL TAB REPORT
Function: Test, Adjust, & Balance
Date1: 09/21/2022

PROJECT

08-29 CARMAX #7159 MODESTO, CA

4300 MCHENRY AVE

MODESTO, CA

Client

Comfort Systems USA

National TAB

Project: 08-29 CARMAX #7159 MODESTO, CA

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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.

RTU's (Roof Top Units) w/ Diffusers

Each of the RTU's were measured at their terminal devices or via traverse to establish a total flow for that unit. Each RTU was adjusted to within tolerance of the engineer's design flow. Each outlet was then adjusted to within tolerance of the design flow. Outside air was measured by reading the intake air opening with a velocity grid and multiplying by the free area. The outside air damper was adjusted until the airflow was within the design requirements. Any equipment that fell outside of that tolerance is noted throughout the report.

General Exhaust Fans w/ Grilles

The general exhaust fans were measured by reading each air device with a flow hood. 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. Each terminal device was balanced to within tolerance of the design volume using the installed volume dampers. Any equipment that fell outside of this tolerance is noted throughout the report.

Final Building Tests

After completing the test and balance the final building pressure was measured. It was confirmed that the building pressure fell within acceptable tolerances of -0.02" wc to +0.02" wc and that the pressure measurement coincides with the actual and design net airflow. Any deviations from these standards are noted throughout the report.

The hood capture was tested at the perimeter of the hood and the cook top level with the equipment heat on to ensure satisfactory hood capture and containment.

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AIR BALANCE SCHEDULE

UNIT	AREA SERVED	HVAC SUPPLY		HVAC RETURN		HVAC OUTDOOR		OA %		HOOD MAKE-UP		HOOD EXHAUST		GENERAL EXH.	
		DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL
RTU-1	SHOWROOM	6750	7205	6100	6582	650	623	9.6%	8.6%						
RTU-2	SHOWROOM	6750	7151	6100	6498	650	653	9.6%	9.1%						
RTU-3	CUSTOMER	1300	1388	1100	1176	200	212	15.4%	15.3%						
RTU-4	BUSINESS	2050	2246	1850	2049	200	197	9.8%	8.8%						
RTU-5	BUYERS	1150	1211	950	1000	200	211	17.4%	17.4%						
RTU-6	DATA/PBX	960	1037	960	1037	0	0	0.0%	0.0%						
RTU-7	BREAK/CONF	1330	1382	1130	1093	200	289	15.0%	20.9%						
RTU-8	SERVICE WRIT	1700	1493	1520	1310	180	183	10.6%	12.3%						
RTU-9	PARTS	1200	1257	930	975	270	282	22.5%	22.4%						
RTU-10	SERVICE AREA	6000	6538	0	-4	6000	6542	100.0%	100.1%						
RTU-11	SERVICE AREA	7000	6528	1000	958	6000	5623	85.7%	86.1%						
RTU-12	SERVICE AREA	7000	6838	1000	1053	6000	5785	85.7%	84.6%						
RTU-13	SERVICE AREA	7000	7265	1000	1078	6000	6187	85.7%	85.2%						
RTU-14	SERVICE AREA	6000	6568	0	2	6000	6566	100.0%	100.0%						
RTU-15	FQC	3200	3315	2300	2366	900	949	28.1%	28.6%						
RTU-16	PAINT AREA	7300	6682	1000	971	6300	5711	86.3%	85.5%						
RTU-17	PAINT AREA	7300	6767	1000	944	6300	5823	86.3%	86.0%						
RTU-18	BREAK	1800	1793	1320	1282	480	511	26.7%	28.5%						
EF-1														3400	3117
ERV1														5600	5082
ERV2															5037
TOTALS		75790	76664	29260	30370	46530	46347			0	0	0	0	9000	13236

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	46530	46347
TOTAL EXHAUST	9000	13236
NET AIRFLOW	37530	33111

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H20)
FRONT	
SIDE	
REAR	
AVERAGE	**#DIV/0!**

FINAL CHECKS

ACTUAL NET AIRFLOW COINCIDES WITH DESIGN: ✓

MEASURED PRESSURES COINCIDES WITH ACTUAL NET AIRFLOW:

PRESSURE FALLS WITHIN IMC TOLERANCE OF +/-0.02" W.C.

NOTES:

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08-29 CARMAX #7159 MODESTO, CA

CheckList Information

Name :	TECH RTU/EF CHECKLIST	**Status :**	NotSubmitted
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		

CheckList Item Details

RTU's/AHU's	
Economizers are assembled and functional?	YES
Motors are all operating below the FLA rating?	YES
Are belts tight?	YES
If direct drive unit is the speed controller working.	YES
Is gas piping installed and valves turned on?	YES
Unit free of noticeable noise and vibration	YES
Units are labeled and installed on proper curb	YES
Unit ductwork properly installed / sealed on curb	YES
Pulleys are properly aligned	YES
Condensate lines and P-Traps installed correctly	Yes
Disconnect Switch Installed	YES
Outside air dampers/Economizers installed and functioning	YES
Additional Comments or recommendations:	
EF's	
Is back draft damper installed?	N/A
Are belts tight? (If direct drive put NA)	YES

Free of abnormal noise or vibration?	YES
Disconnect switch installed and functional?	YES
Documentation	
If issues, have NTAB team and Comfort Systems USA been notified ?	YES
If any issues, have Facilibuild issues been created explaining in detail?	YES
Pictures	
All Issues	YES
Each Piece of equipment	YES
Each Piece of equipment	YES
Roof Top Layout	YES

Notes/Comments :

National TAB

Project: 08-29 CARMAX #7159 MODESTO, CA

System/Unit: AHU/RTU

Comfort. Under control.

Asset: RTU1 AREA:SHOWROOM

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5621C09457
Model Num	LGH180H4M	LGH180H4M
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	3
OA Filter Size 1	-	23X13
Num Final Filter 1	-	6
Final Filter Size 1	-	24X24X2
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	**Actual**
Motor MFG	-	NEMA
Frame	-	184ZT
Horsepower	5	5
Motor Rpm	-	1765
Phase	3	3
Rated Voltage	480	460
Rated Amperage	-	6.5

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VP65B
Motor Bore Size	-	1-3/16"
Motor Sheave SetPt	-	4 TURNS OPEN
Fan Sheave Size	-	11"
Fan Sheave Bore	-	1-3/16"
Belt CL Distance	-	21"
Num of Belts	-	1
Belt Size	-	BX65
Belt Alignment	-	VERIFIED

Test Data		
	Design	**Actual**
SF CFM	6750	7205
SF RPM	-	887
RA CFM	6100	6582
OA CFM	650	623
RL Voltage	-	470/471/470
RL Amperage	-	5.8/5.9/5.9
SF Rotation	-	CCW
RA Damper Position	-	90%
Min OA Damper Position	-	10% OPEN
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	NA
Brake Horse Power	-	4.5

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.25"
Fan Suction SP	-	-1.05"
Fan Discharge SP	-	0.25"
Total ESP	0.80"	0.5"
Fan Total SP	-	1.3"

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

Completed By: Dan Hertenstein

Notes:

National TAB

Project: 08-29 CARMAX #7159 MODESTO, CA

System/Unit: AHU/RTU

Comfort. Under control.

Asset: RTU2 AREA:SHOWROOM

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5621C09455
Model Num	LGH180H4M	LGH180H4M
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	3
OA Filter Size 1	-	23X13
Num Final Filter 1	-	6
Final Filter Size 1	-	24X24X2
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	**Actual**
Motor MFG	-	NEMA
Frame	-	185TZ
Horsepower	5	5
Motor Rpm	-	1765
Phase	3	3
Rated Voltage	480	460
Rated Amperage	-	6.5

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VP65B
Motor Bore Size	-	1-3/16"
Motor Sheave SetPt	-	5 TURNS OPEN
Fan Sheave Size	-	11"
Fan Sheave Bore	-	1-3/16"
Belt CL Distance	-	21"
Num of Belts	-	1
Belt Size	-	BX65
Belt Alignment	-	VERIFIED

Test Data		
	Design	**Actual**
SF CFM	6750	7151
SF RPM	-	816
RA CFM	6100	6498
OA CFM	650	653
RL Voltage	-	471/472/471
RL Amperage	-	5.5/5.9/5.6
SF Rotation	-	CCW
RA Damper Position	-	90%
Min OA Damper Position	-	10%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	NA
Brake Horse Power	-	4.5

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.61"
Fan Suction SP	-	-0.95"
Fan Discharge SP	-	0.20"
Total ESP	0.80"	0.92"
Fan Total SP	-	1.33"

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

Completed By: Zack Eismin

Notes:

National TAB

Project: 08-29 CARMAX #7159 MODESTO, CA

System/Unit: AHU/RTU

Comfort. Under control.

Asset: RTU3 AREA:CUSTOMER

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5621C09730
Model Num	LGH048H4E	LGH048H4E
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	29X14
Num Final Filter 1	-	4
Final Filter Size 1	-	16X20X2
Num Final Filter 2	-	
Final Filter Size 2	-	

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	1388
SF RPM	-	60%
RA CFM	1100	1176
OA CFM	200	212
RL Voltage	-	469/471/472
RL Amperage	-	2.6/2.7
SF Rotation	-	CCW
RA Damper Position	-	85%
Min OA Damper Position	-	15% OPEN
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	NA
Brake Horse Power	-	N/A

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.14"
Fan Suction SP	-	-0.40"
Fan Discharge SP	-	0.51"
Total ESP	0.60"	0.65"
Fan Total SP	-	0.91"

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

Completed By: Dan Hertenstein

Notes:

National TAB

Project: 08-29 CARMAX #7159 MODESTO, CA

System/Unit: AHU/RTU

Comfort. Under control.

Asset: RTU4 AREA:BUSINESS

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5621C09714
Model Num	LGH060H4E	LGH060H4E
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	29X14
Num Final Filter 1	-	4
Final Filter Size 1	-	20X20X2
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	**Actual**
Motor MFG	-	NL
Frame	-	NL
Horsepower	1	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	2050	2246
SF RPM	-	70%
RA CFM	1850	2049
OA CFM	200	197
RL Voltage	-	472/473/471
RL Amperage	-	3.1/3.2
SF Rotation	-	CCW
RA Damper Position	-	90%
Min OA Damper Position	-	10%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	NA
Brake Horse Power	-	N/A

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.21"
Fan Suction SP	-	-0.42"
Fan Discharge SP	-	0.29"
Total ESP	0.60"	0.5"
Fan Total SP	-	0.71"

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

Completed By: Dan Hertenstein

Notes:

National TAB

Project: 08-29 CARMAX #7159 MODESTO, CA

System/Unit: AHU/RTU

Comfort. Under control.

Asset: RTU5 AREA:BUYERS

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5621C09732
Model Num	LGH048H4E	LGH048H4E
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	29X14
Num Final Filter 1	-	4
Final Filter Size 1	-	16X20X2
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	**Actual**
Motor MFG	-	NL
Frame	-	NL
Horsepower	3/4	3/4
Motor Rpm	-	NL
Phase	3	3
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	1150	1211
SF RPM	-	48%
RA CFM	950	1000
OA CFM	200	211
RL Voltage	-	471/472/470
RL Amperage	-	2.7/2.8
SF Rotation	-	CCW
RA Damper Position	-	90%
Min OA Damper Position	-	10% OPEN
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	NA
Brake Horse Power	-	N/A

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.21"
Fan Suction SP	-	-0.42"
Fan Discharge SP	-	0.40"
Total ESP	0.60"	0.61"
Fan Total SP	-	0.82"

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

Completed By: Dan Hertenstein

Notes:

National TAB

Project: 08-29 CARMAX #7159 MODESTO, CA

System/Unit: AHU/RTU

Comfort. Under control.

Asset: RTU6 AREA:DATA/PBX

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5621C09870
Model Num	LCH036H4E	LCH036H4E
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	29X14
Num Final Filter 1	-	4
Final Filter Size 1	-	16X20X2
Num Final Filter 2	-	
Final Filter Size 2	-	

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	960	1037
SF RPM	-	44%
RA CFM	960	1037
OA CFM	0	0
RL Voltage	-	471/472/472
RL Amperage	-	1.48/1.46
SF Rotation	-	CCW
RA Damper Position	-	100%
Min OA Damper Position	-	0% OPEN
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	NA
Brake Horse Power	-	N/A

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.15"
Fan Suction SP	-	-0.3"
Fan Discharge SP	-	0.23"
Total ESP	0.60"	0.38"
Fan Total SP	-	0.53"

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

Completed By: Dan Hertenstein

Notes:

National TAB

Project: 08-29 CARMAX #7159 MODESTO, CA

System/Unit: AHU/RTU

Comfort. Under control.

Asset: RTU7 AREA:BREAK/CONF

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5621C09746
Model Num	LGH048H4E	LGH048H4E
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	1
Num Final Filter 1	-	29X14
Final Filter Size 1	-	4
Num Final Filter 2	-	16X20X2
Final Filter Size 2	-	

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	1382
SF RPM	-	58%
RA CFM	1100	1093
OA CFM	300	289
RL Voltage	-	472/470/471
RL Amperage	-	2.9/2.9
SF Rotation	-	CCW
RA Damper Position	-	75%
Min OA Damper Position	-	25% OPEN
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	NA
Brake Horse Power	-	N/A

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.33"
Fan Suction SP	-	-0.58"
Fan Discharge SP	-	0.31"
Total ESP	0.60"	0.64"
Fan Total SP	-	0.89"

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

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Notes:

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Project: 08-29 CARMAX #7159 MODESTO, CA

System/Unit: AHU/RTU

Comfort. Under control.

Asset: RTU8 AREA:SERVICE WRITER

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5621C09724
Model Num	LGH048H4E	LGH048H4E
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	29X14
Num Final Filter 1	-	4
Final Filter Size 1	-	16X20X2
Num Final Filter 2	-	
Final Filter Size 2	-	

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	1700	1676
SF RPM	-	60%
RA CFM	1520	1493
OA CFM	180	183
RL Voltage	-	470/469/470
RL Amperage	-	3.2/3.1/3.2
SF Rotation	-	CCW
RA Damper Position	-	85%
Min OA Damper Position	-	15%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	NA
Brake Horse Power	-	N/A

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.29"
Fan Suction SP	-	-0.49"
Fan Discharge SP	-	0.27"
Total ESP	0.60"	0.56"
Fan Total SP	-	0.76"

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

Completed By: Dan Hertenstein

Notes:

National TAB

Project: 08-29 CARMAX #7159 MODESTO, CA

System/Unit: AHU/RTU

Comfort. Under control.

Asset: RTU9 AREA:PARTS

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5621C09739
Model Num	LGH048H4E	LGH048H4E
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	29X14
Num Final Filter 1	-	4
Final Filter Size 1	-	16X20X2
Num Final Filter 2	-	
Final Filter Size 2	-	

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	1200	1257
SF RPM	-	50%
RA CFM	930	975
OA CFM	270	282
RL Voltage	-	470/471/471
RL Amperage	-	2.5/2.6
SF Rotation	-	CCW
RA Damper Position	-	80% OPEN
Min OA Damper Position	-	20% OPEN
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	NA
Brake Horse Power	-	N/A

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.22"
Fan Suction SP	-	-0.44"
Fan Discharge SP	-	0.26"
Total ESP	0.60"	0.48"
Fan Total SP	-	0.7"

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

Completed By: Dan Hertenstein

Notes:

National TAB

Project: 08-29 CARMAX #7159 MODESTO, CA

System/Unit: AHU/RTU

Comfort. Under control.

Asset: RTU10 AREA:SERVICE AREA (ERV)

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5621C08689
Model Num	LGH240H4B	LGH240H4B
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	38.4X24
Num Final Filter 1	-	6
Final Filter Size 1	-	24X24X2
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	**Actual**
Motor MFG	-	NEMA
Frame	-	185TZ
Horsepower	-	5
Motor Rpm	-	1765
Phase	-	3
Rated Voltage	-	460
Rated Amperage	-	6.5

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VP65B
Motor Bore Size	-	1-3/16"
Motor Sheave SetPt	-	3 TURNS OPEN
Fan Sheave Size	-	11"
Fan Sheave Bore	-	1-3/16"
Belt CL Distance	-	21"
Num of Belts	-	1
Belt Size	-	BX65
Belt Alignment	-	VERIFIED

Test Data		
	Design	**Actual**
SF CFM	6000	6538
SF RPM	-	944
RA CFM	0	0
OA CFM	6000	6542
RL Voltage	-	465/466/466
RL Amperage	-	6.46.1/6.2/6.1
SF Rotation	-	CCW
RA Damper Position	-	0
Min OA Damper Position	-	100%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	NA
Brake Horse Power	-	4.85

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.68"
Fan Suction SP	-	-1.24"
Fan Discharge SP	-	0.23"
Total ESP	1.0"	0.91"
Fan Total SP	-	1.47"

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

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Notes:

National TAB

Project:08-29 CARMAX #7159 MODESTO, CA

AHU/RTU

Comfort. Under control.

Diffuser Supply (GRD)

RTU10/SERVICE AREA (ERV)

Asset							
Asset Name	**Location**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	SERVICE AREA	1500	1.73	1824	1619	1619	107.9
SGRD2	SERVICE AREA	1500	1.73	1745	1645	1645	109.7
SGRD3	SERVICE AREA	1500	1.73	1469	1625	1625	108.3
SGRD4	SERVICE AREA	1500	1.73	1504	1653	1649	109.9

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Project: 08-29 CARMAX #7159 MODESTO, CA

System/Unit: AHU/RTU

Comfort. Under control.

Asset: RTU11 AREA:SERVICE AREA (BP)

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5621D00629
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	-	NEMA
Frame	-	184TZ
Horsepower	5	5
Motor Rpm	-	1765
Phase	3	3
Rated Voltage	480	460
Rated Amperage	-	6.5

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VP56BB
Motor Bore Size	-	1-3/16"
Motor Sheave SetPt	-	3 TURNS OPEN
Fan Sheave Size	-	1-3/16"
Fan Sheave Bore	-	11"
Belt CL Distance	-	23.5"
Num of Belts	-	1
Belt Size	-	BX71
Belt Alignment	-	VERIFIED

Test Data		
	Design	**Actual**
SF CFM	7000	6528
SF RPM	-	762
RA CFM	1000	958
OA CFM	6000	5623
RL Voltage	-	469/470/468
RL Amperage	-	5.7/5.8/6.1
SF Rotation	-	CCW
RA Damper Position	-	15%
Min OA Damper Position	-	100% OPEN
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	NA
Brake Horse Power	-	4.5

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.48"
Fan Suction SP	-	-1.22"
Fan Discharge SP	-	0.65"
Total ESP	1.0"	1.13"
Fan Total SP	-	1.87"

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

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National TAB

Project:08-29 CARMAX #7159 MODESTO, CA

AHU/RTU

Comfort. Under control.

Diffuser Supply (GRD)

RTU11/SERVICE AREA (BP)

Asset							
Asset Name	**Location**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	SERVICE AREA	1500	2.34	1702	1672	1642	109.5
SGRD2	SERVICE AREA	1500	2.34	1738	1623	1623	108.2
SGRD3	SERVICE AREA	1500	2.34	1656	1686	1636	109.1
SGRD4	SERVICE AREA	1500	2.34	1485	1600	1627	108.5

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Project: 08-29 CARMAX #7159 MODESTO, CA

System/Unit: AHU/RTU

Comfort. Under control.

Asset: RTU12 AREA:SERVICE AREA (BP)

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5621D00631
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	-	NEMA
Frame	-	184TZ
Horsepower	5	5
Motor Rpm	-	1765
Phase	3	3
Rated Voltage	480	460
Rated Amperage	-	6.5

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VP56BB
Motor Bore Size	-	1-3/16"
Motor Sheave SetPt	-	2 TURNS OPEN
Fan Sheave Size	-	1-3/16"
Fan Sheave Bore	-	11"
Belt CL Distance	-	24"
Num of Belts	-	1
Belt Size	-	BX71
Belt Alignment	-	VERIFIED

Test Data		
	Design	**Actual**
SF CFM	7000	6838
SF RPM	-	749
RA CFM	1000	1053
OA CFM	6000	5785
RL Voltage	-	469/469/471
RL Amperage	-	5.7/5.8/5.6
SF Rotation	-	CCW
RA Damper Position	-	30%
Min OA Damper Position	-	100% OPEN
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	NA
Brake Horse Power	-	4.4

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.46"
Fan Suction SP	-	-0.86"
Fan Discharge SP	-	0.16"
Total ESP	1.0"	0.62"
Fan Total SP	-	1.02"

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

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Project:08-29 CARMAX #7159 MODESTO, CA

AHU/RTU

Comfort. Under control.

Diffuser Supply (GRD)

RTU12/SERVICE AREA (BP)

Asset							
Asset Name	**Location**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	SERVICE AREA	1320	3.21	1674	1534	1534	116.2
SGRD2	SERVICE AREA	1320	3.21	1502	1532	1532	116.1
SGRD3	SERVICE AREA	1320	3.21	1669	1569	1569	118.9
SGRD4	SERVICE AREA	1320	3.21	1645	1545	1545	117.0
SGRD5	MENS RR	125	1	102	137	137	109.6
SGRD6	WOMENS RR	50	1	43	54	54	108.0
SGRD7	COMPUTER	450	0.785	203	467	467	103.8

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Project: 08-29 CARMAX #7159 MODESTO, CA

System/Unit: AHU/RTU

Comfort. Under control.

Asset: RTU13 AREA:SERVICE AREA (BP)

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5621D00635
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	-	NEMA
Frame	-	184TZ
Horsepower	5	5
Motor Rpm	-	1765
Phase	3	3
Rated Voltage	480	460
Rated Amperage	-	6.5

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VP56BB
Motor Bore Size	-	1-3/16"
Motor Sheave SetPt	-	2 TURNS OPEN
Fan Sheave Size	-	11"
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	7265
SF RPM	-	759
RA CFM	1000	1078
OA CFM	6000	6187
RL Voltage	-	471/471/472
RL Amperage	-	5.98/5.82/5.9
SF Rotation	-	CCW
RA Damper Position	-	30% OPEN
Min OA Damper Position	-	100% OPEN
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	NA
Brake Horse Power	-	4.5

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.37"
Fan Suction SP	-	0.88"
Fan Discharge SP	-	-0.12"
Total ESP	1.0"	0.49"
Fan Total SP	-	1"

General		
	Design	**Actual**
Fan Rotation Correct	-	VERIFIED
Unit Filters Clean	-	NO
Condensate Drain Installed	-	YES, NOT FUNCTIONAL

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Project:08-29 CARMAX #7159 MODESTO, CA

AHU/RTU

Comfort. Under control.

Diffuser Supply (GRD)

RTU13/SERVICE AREA (BP)

Asset							
Asset Name	**Location**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	SERVICE AREA	1465	2.68	1780	1780	1780	121.5
SGRD2	SERVICE AREA	1465	2.68	1767	1767	1767	120.6
SGRD3	SERVICE AREA	1465	2.68	1787	1787	1787	122.0
SGRD4	SERVICE AREA	1465	2.68	1792	1792	1792	122.3
SGRD5	CORRIDOR	150	0.35	139	139	139	92.7

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Project: 08-29 CARMAX #7159 MODESTO, CA

System/Unit: AHU/RTU

Comfort. Under control.

Asset: RTU14 AREA:SERVICE AREA (BP)

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5621C08694
Model Num	LGH240H4B	LGH240H4B
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	-	24X24X2
Num Final Filter 2	-	
Final Filter Size 2	-	

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

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VP65B
Motor Bore Size	-	1-3/16"
Motor Sheave SetPt	-	3 TURNS OPEN
Fan Sheave Size	-	11"
Fan Sheave Bore	-	1-3/16"
Belt CL Distance	-	21"
Num of Belts	-	1
Belt Size	-	BX65
Belt Alignment	-	VERIFIED

Test Data		
	Design	**Actual**
SF CFM	6000	6568
SF RPM	-	943
RA CFM	0	0
OA CFM	6000	6566
RL Voltage	-	472/474/471
RL Amperage	-	6.5/6.1/6.1
SF Rotation	-	CCW
RA Damper Position	-	0%
Min OA Damper Position	-	100%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	NA
Brake Horse Power	-	4.8

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.61"
Fan Suction SP	-	-1.18"
Fan Discharge SP	-	0.55"
Total ESP	1.0"	1.16"
Fan Total SP	-	1.73"

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

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Project:08-29 CARMAX #7159 MODESTO, CA

AHU/RTU

Comfort. Under control.

Diffuser Supply (GRD)

RTU14/SERVICE AREA (BP)

Asset							
Asset Name	**Location**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	SERVICE AREA	1500	2.22	1642	1642	1642	109.5
SGRD2	SERVICE AREA	1500	2.22	1637	1637	1637	109.1
SGRD3	SERVICE AREA	1500	2.22	1647	1647	1647	109.8
SGRD4	SERVICE AREA	1500	2.22	1642	1642	1642	109.5

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Project: 08-29 CARMAX #7159 MODESTO, CA

System/Unit: AHU/RTU

Comfort. Under control.

Asset: RTU15 AREA:FQC

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5621D02973
Model Num	LGH120H4B	LGH120H4B
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	-	US MOTORS
Frame	-	56HZ
Horsepower	2	2
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	480	460
Rated Amperage	-	2.9

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VP34
Motor Bore Size	-	7/8"
Motor Sheave SetPt	-	4 TURNS OPEN
Fan Sheave Size	-	6"
Fan Sheave Bore	-	7/8"
Belt CL Distance	-	21"
Num of Belts	-	1
Belt Size	-	AX54
Belt Alignment	-	VERIFIED

Test Data		
	Design	**Actual**
SF CFM	3200	3315
SF RPM	-	846
RA CFM	2300	2366
OA CFM	900	949
RL Voltage	-	469/468/470
RL Amperage	-	2.4/2.5/2.5
SF Rotation	-	CCW
RA Damper Position	-	75%
Min OA Damper Position	-	25%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	NA
Brake Horse Power	-	1.72

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.41"
Fan Suction SP	-	-0.59"
Fan Discharge SP	-	0.033"
Total ESP	0.60"	0.44"
Fan Total SP	-	0.62"

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

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National TAB

Project: 08-29 CARMAX #7159 MODESTO, CA

System/Unit: AHU/RTU

Comfort. Under control.

Asset: RTU16 AREA:FQC

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5621D00633
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	-	NEMA
Frame	-	184TZ
Horsepower	5	5
Motor Rpm	-	1765
Phase	3	3
Rated Voltage	480	460
Rated Amperage	-	6.5

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VP56BB
Motor Bore Size	-	1-3/16"
Motor Sheave SetPt	-	2 TURNS OPEN
Fan Sheave Size	-	11"
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	7300	6682
SF RPM	-	766
RA CFM	1000	971
OA CFM	6300	5711
RL Voltage	-	470/468/469
RL Amperage	-	5.7/5.2/5.3
SF Rotation	-	CCW
RA Damper Position	-	20% OPEN
Min OA Damper Position	-	100% OPEN
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	NA
Brake Horse Power	-	4.2

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.55"
Fan Suction SP	-	-0.95"
Fan Discharge SP	-	0.12"
Total ESP	1.0"	0.67"
Fan Total SP	-	1.07"

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

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Notes:

National TAB

Project:08-29 CARMAX #7159 MODESTO, CA

AHU/RTU

Comfort. Under control.

Diffuser Supply (GRD)

RTU16/FQC

Asset							
Asset Name	**Location**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1		1250	2.3	1311	1311	1311	104.9
SGRD2		1250	2.38	1309	1309	1309	104.7
SGRD3		1250	2.38	1331	1331	1331	106.5
SGRD4		1250	2.38	1387	1387	1387	111.0
SGRD5		550	1	503	503	503	91.5
SGRD6		550	1	521	521	521	94.7
SGRD7		200	1	220	220	220	110.0

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Project: 08-29 CARMAX #7159 MODESTO, CA

System/Unit: AHU/RTU

Comfort. Under control.

Asset: RTU17 AREA:PAINT AREA (BP)

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5621C09421
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	-	NEMA
Frame	-	184TZ
Horsepower	5	5
Motor Rpm	-	1765
Phase	3	3
Rated Voltage	480	460
Rated Amperage	-	6.5

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VP56BB
Motor Bore Size	-	1-3/16"
Motor Sheave SetPt	-	3 TURNS OPEN
Fan Sheave Size	-	11"
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	7300	6767
SF RPM	-	759
RA CFM	1000	944
OA CFM	6300	5823
RL Voltage	-	470/469/471
RL Amperage	-	5.4/5.6/5.7
SF Rotation	-	CCW
RA Damper Position	-	15% OPEN
Min OA Damper Position	-	100% OPEN
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	NA
Brake Horse Power	-	4.23

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.58"
Fan Suction SP	-	-0.91"
Fan Discharge SP	-	0.31"
Total ESP	1.0"	0.89"
Fan Total SP	-	1.22"

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

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Notes:

National TAB

Project:08-29 CARMAX #7159 MODESTO, CA

AHU/RTU

Comfort. Under control.

Diffuser Supply (GRD)

RTU17/PAINT AREA (BP)

Asset							
Asset Name	**Location**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1		1260	2.33	1289	1211	1211	96.1
SGRD2		1260	2.33	933	1321	1321	104.8
SGRD3		1260	2.33	1469	1421	1421	112.8
SGRD4		1260	2.33	1723	1463	1463	116.1
SGRD5		1260	2.33	1353	1353	1353	107.4

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National TAB

Project: 08-29 CARMAX #7159 MODESTO, CA

System/Unit: AHU/RTU

Comfort. Under control.

Asset: RTU18 AREA:BREAK.TRAIN

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5621C09717
Model Num	LGH060H4E	LGH060H4E
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	29X14
Num Final Filter 1	-	4
Final Filter Size 1	-	20X20X2
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	**Actual**
Motor MFG	-	NL
Frame	-	NL
Horsepower	1	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	1800	1793
SF RPM	-	60%
RA CFM	1320	1282
OA CFM	480	511
RL Voltage	-	470/469/470
RL Amperage	-	3.1/3.3/3.2
SF Rotation	-	CCW
RA Damper Position	-	70%
Min OA Damper Position	-	30%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	NA
Brake Horse Power	-	N/A

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.49"
Fan Suction SP	-	-0.56"
Fan Discharge SP	-	0.26"
Total ESP	0.60"	0.75"
Fan Total SP	-	0.82"

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

Completed By: Dan Hertenstein

Notes:

National TAB

Project: 08-29 CARMAX #7159 MODESTO, CA

System/Unit: Energy Recovery Unit

Comfort. Under control.

Asset: ERV1 AREA:RTU10

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Model Num	50RG252	50R6252
Serial Num	-	20212400106
Num Exh-Filters 1	-	1
Exh-Filter Size 1	-	15X15
Num Exh-Filters 2	-	
Exh-Filter Size 2	-	
Num OA-Filters 1	-	1
OA-Supply Size 1	-	38X24
Num OA-Filters 2	-	
OA-Filter Size 2	-	

Exhaust Fan Motor Data		
	Design	**Actual**
Motor MFG	-	MARATHON
Frame	-	184T
Horsepower	5.0	5
Motor Rpm	-	1765
Phase	3	3
Voltage (rated)	480	230/460
Amperage (rated)	-	13.2/6.6
Service Factor	-	1.15

Exhaust Fan Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VP75B
Motor Bore Size	-	1-3/16"
Fan Sheave Size	-	MA100
Fan Sheave Bore	-	1"
Belt CL Distance	-	17"
Num of Belts	-	1
Belt Size	-	4L-610

OA Fan Motor Data		
	Design	**Actual**
Motor MFG	-	CENTURY
Frame	-	Y56Y
Horsepower	5.0	5
Motor Rpm	-	1725
Phase	3	3
Voltage (rated)	480	230/460
Amperage (rated)	-	14.4/7.2
Service Factor	-	1.15
Efficiency	-	NL
Power Factor	-	NL
Brake Horse Power	-	4.7

Exhaust Fan Test Data		
	Design	**Actual**
Exh-ERU CFM	5600	5082
Exh-ERU RPM	-	1234
Exh-ERU System SetPt	-	1 TURN OPEN
RL Voltage	-	462/465/467
RL Amperage	-	6.4/6.3/6.2
Brake Horse Power	-	4.85

Exhaust Fan Performance Data		
	Design	**Actual**
Exh-ERU Filter Delta SP	-	-0.79"
Exh-ERU Wheel Delta SP	-	-1.35"
Exh-ERU Delta T	-	1.1°

OA Fan Test Data		
	Design	**Actual**
OA-ERU CFM	6000	6542
OA-ERU RPM	400	1136
Motor Frequency	-	NL
RL Voltage	-	468/466/465
RL Amperage	-	6.9/6.7/6.8

OA Fan Performance Data		
	Design	**Actual**
OA-ERU Filter Delta SP	-	-0.34"
OA-ERU Wheel Delta SP	-	-1.34"
OA-ERU Delta T	-	0.6°

OA Fan Drive Data		
	Design	**Actual**
Motor Sheave Size	-	7"
Motor Bore Size	-	7/8"
Fan Sheave Size	-	MA100
Fan Sheave Bore	-	1"
Belt CL Distance	-	16"
Num of Belts	-	1
Belt Size	-	4L-590

Completed By: Dan Hertenstein

Notes:

National TAB

Project: 08-29 CARMAX #7159 MODESTO, CA

System/Unit: Energy Recovery Unit

Comfort. Under control.

Asset: ERV2 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	LENNOX
Model Num	NA	50R6252XH
Serial Num	-	20212400105
Num Exh-Filters 1	-	1
Exh-Filter Size 1	-	15X15
Num Exh-Filters 2	-	
Exh-Filter Size 2	-	
Num OA-Filters 1	-	1
OA-Supply Size 1	-	38X24
Num OA-Filters 2	-	
OA-Filter Size 2	-	

Exhaust Fan Motor Data		
	Design	**Actual**
Motor MFG	-	MARATHON
Frame	-	184T
Horsepower	-	5
Motor Rpm	-	1765
Phase	-	3
Voltage (rated)	-	230/460
Amperage (rated)	-	13.2/6.6
Service Factor	-	1.15

Exhaust Fan Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VP75B
Motor Bore Size	-	1-3/16"
Fan Sheave Size	-	MA100
Fan Sheave Bore	-	1"
Belt CL Distance	-	17"
Num of Belts	-	1
Belt Size	-	4L-610

OA Fan Motor Data		
	Design	**Actual**
Motor MFG	-	CENTURY
Frame	-	Y56Y
Horsepower	-	5
Motor Rpm	-	1725
Phase	-	3
Voltage (rated)	-	230/460
Amperage (rated)	-	14.4/7.2
Service Factor	-	1.15
Efficiency	-	NL
Power Factor	-	NL
Brake Horse Power	-	4.8

Exhaust Fan Test Data		
	Design	**Actual**
Exh-ERU CFM	-	5037
Exh-ERU RPM	-	1233
Exh-ERU System SetPt	-	1 TURN OPEN
RL Voltage	-	463/465/463
RL Amperage	-	6.5/6.4/6.3
Brake Horse Power	-	4.9

Exhaust Fan Performance Data		
	Design	**Actual**
Exh-ERU Filter Delta SP	-	-0.81"
Exh-ERU Wheel Delta SP	-	-1.38"
Exh-ERU Delta T	-	1.2

OA Fan Test Data		
	Design	**Actual**
OA-ERU CFM	-	6498
OA-ERU RPM	-	1137
Motor Frequency	-	NL
RL Voltage	-	467/466/466
RL Amperage	-	6.9/6.7/6.8

OA Fan Performance Data		
	Design	**Actual**
OA-ERU Filter Delta SP	-	-0.33"
OA-ERU Wheel Delta SP	-	-1.34"
OA-ERU Delta T	-	0.6"

OA Fan Drive Data		
	Design	**Actual**
Motor Sheave Size	-	7"
Motor Bore Size	-	7/8"
Fan Sheave Size	-	MA100
Fan Sheave Bore	-	1"
Belt CL Distance	-	16"
Num of Belts	-	1
Belt Size	-	4L-590

Completed By: Dan Hertenstein

Notes:

National TAB

Project: 08-29 CARMAX #7159 MODESTO, CA

System/Unit: FAN - Exhaust

Comfort. Under control.

Asset: EF1 AREA:

Unit Data		
	Design	**Actual**
MFG	GREENHECK	GREENHECK
Model Num	CUBE-180	CUBE-180HP-10-1-30-X
Serial Num	-	19905824
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	US MOTOR
Frame	-	56H
Horsepower	3/4	1
Motor Rpm	-	1725
Phase	1	1
Voltage (rated)	120	115/230
Amperage (rated)	-	15/7.5
Service Factor	-	1.25

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VP3458
Motor Bore Size	-	5/8"
Motor Sheave SetPt	-	FIXED
Fan Sheave Size	-	AK39
Fan Sheave Bore	-	1"
Belt CL Distance	-	6.5"
Num of Belts	-	1
Belt Size	-	AK21

Test Data		
	Design	**Actual**
CFM	3400	3117
Fan RPM	1055	1157
Fan Rotation	-	CCW
Motor RPM	-	1738
RL Voltage	-	NA
RL Amperage	-	NA
Suction ESP	-	-0.34"
Discharge ESP	-	ATM
Total ESP	0.5"	0.34"

Completed By: Dan Hertenstein

Notes:

National TAB

Project:08-29 CARMAX #7159 MODESTO, CA

FAN - Exhaust

Comfort. Under control.

Diffuser Ret/Exh (GRD)

EF1/

Asset							
Asset Name	**Location**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EGRD1		1900	2.55	1625	1625	1625	85.5
EGRD2		1900	2.41	1492	1492	1492	78.5

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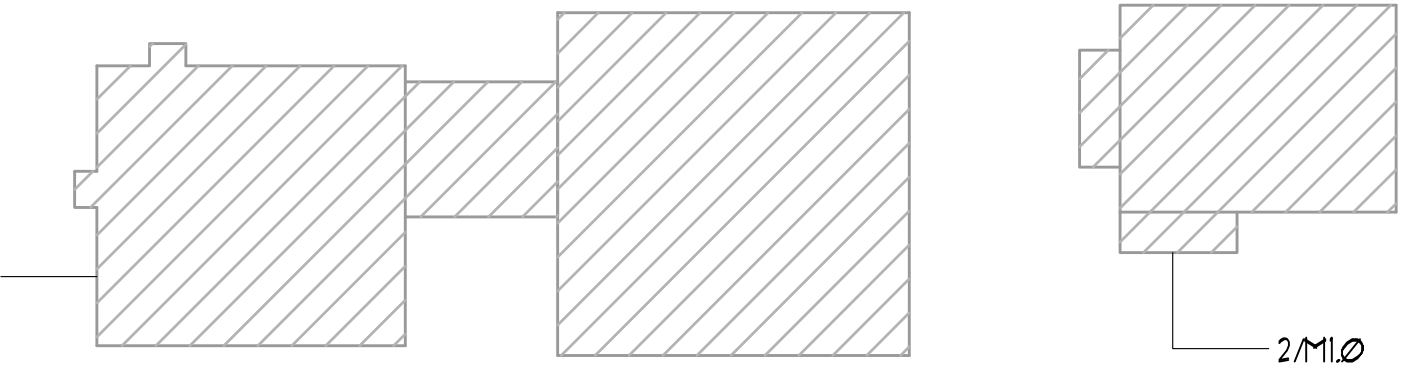
E REMOVED & REPLACED & EXISTING CURB TO REMAIN
DENSATE TO EXISTING
TO EXISTING
EQUIRED
NT TO REMAIN
RB REPLACED WITH NEW UNIT ON NEW CURB
FAN. CAP CURB. CURB CAP TO BE INSULATED WITH 2" POLYSTYRENE
ROOF. SEE 1/M2.1 FOR CONTINUATION



KEY PLAN

CARMAX
THE AUTO SUPERSTORE

CARMAX THE AUTO SUPERSTORE WEST COAST, INC.
12800 TUCKAHOE CREEK PARKWAY, RICHMOND, VA 23238
(804) 747-0422

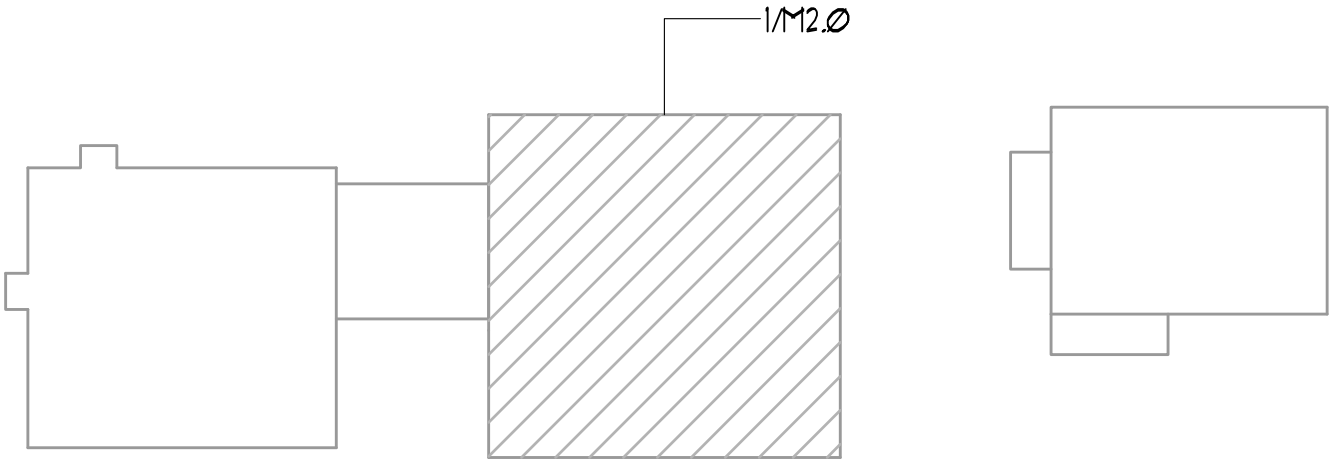
STORE NO. 7159
4300 MCHENRY AVE.
MODESTO, CALIFORNIA

PROJECT NO	20241
DATE	20 JAN 2021
SHEET TITLE	ROOF PLANS - HVAC
SHEET NO	M1.0

48/12 DN

48/16 TRANSFER

PLAN – HVAC



KEY PLAN

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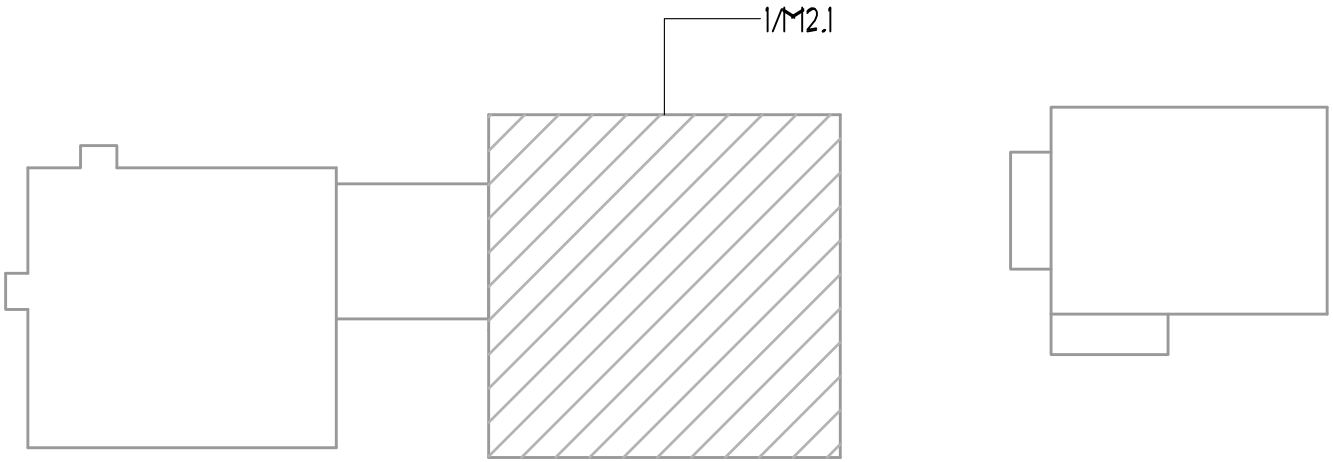
STORE NO. 7159
4300 MCHENRY AVE.
MODESTO, CALIFORNIA

PROJECT NO	20241
DATE	20 JAN 2021
SHEET TITLE	DEMO PART PLAN - HVAC
SHEET NO	M2.0

1



KEY PLAN

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(804) 747-0422

STORE NO. 7159
4300 MCHENRY AVE.
MODESTO, CALIFORNIA

PROJECT NO	20241
DATE	20 JAN 2021
SHEET TITLE	FLOOR PLAN - HVAC
SHEET NO	M2.1