

Report By:

**National TAB
1126 SWIFT STREET
KANSAS CITY, MO 64116**



**Report: TAB REPORT
Function: Test, Adjust, & Balance
Date: 02/16/2026
Completed By: National TAB**

PROJECT

M'Lady Nissan Dealership (Crystal Lake, IL)

5656 Northwest Hwy

Crystal Lake, IL 60014

Client

Air Temperature Services

5301 VOGES RD

MADISON, WI 53718

National TAB

Project: M'Lady Nissan Dealership (Crystal Lake, IL)

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CERTIFICATION

PROJECT: M'Lady Nissan Dealership (Crystal Lake, IL)

The data presented in this report is a record of system measurements and final adjustments that have been obtained in accordance with the current edition of the NEBB *Procedural Standards for Testing, Adjusting, and Balancing of Environmental Systems*. Any variances from design quantities, which exceed NEBB tolerances, are noted in the Test-Adjust-Balance Report Project Summary.

The air distribution system has been tested and balanced and final adjustments have been made in accordance with NEBB standards and the project specifications.

NEBB TAB FIRM: National TAB-Southeast

REGISTRATION NO: 3755

CERTIFIED BY: J. Scott Springer 23312

DATE: 2/16/2026

The hydronic distribution system has been tested and balanced and final adjustments have been made in accordance with NEBB standards and the project specifications.

NEBB TAB FIRM: National TAB-Southeast

REGISTRATION NO: 3755

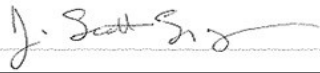
CERTIFIED BY: J. Scott Springer 23312

DATE: _____

Submitted and Certified by:

NEBB TAB FIRM: National TAB-Southeast

TAB PROFESSIONAL: J. Scott Springer

SIGNATURE: 

REGISTRATION NO: 3755 (NTAB) / 23312

CERTIFICATION EXP: 12/31/2026





National TAB

Testing, Adjusting, and Balancing Equipment



Function		Range	Minimum Accuracy	Instrument Information	Calibration Date	Date Due
AIR	AIR PRESSURE	0 in wg to 10 in wg	2% +/- 0.001 in wg	Evergreen S-PVF-1 S/N 25D-00848	12/11/2025	12/11/2026
	AIR VELOCITY INSTRUMENT	50 fpm to 3900 fpm	+/- 5 % +/- 7 fpm	Evergreen S-PVF-1 S/N 25D-00848	12/11/2025	12/11/2026
	DIRECT HOOD READING	100 cfm to 2000 cfm	+/- 3 % +/- 7 cfm	Evergreen 15D Flow Hood	12/11/2025	12/11/2026
TEMPERATURE	AIR METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 081820093	9/30/2025	9/30/2026
	AIR PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 5028	9/30/2025	9/30/2026
	IMMERSION METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 081820093	9/30/2025	9/30/2026
	IMMERSION PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 1075	9/30/2025	9/30/2026
	CONTACT METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 081820093	9/30/2025	9/30/2026
	CONTACT PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 4011	9/30/2025	9/30/2026
HUMIDITY	HUMIDITY PROBE	10 % RH to 90 % RH	3% of reading	Cooper ATKINS - SRH77A S/N 090315046	9/30/2025	9/30/2026
ELECTRICAL	VOLTAGE MEASUREMENT	0 VAC to 600 VAC	2 % reading +/- 5 digits	Dwyer CM-1 - S/N 190800099	9/30/2025	9/30/2026
	AMPERAGE MEASUREMENT	0 Amperers to 100 Amperes	2 % reading +/- 5 digits	Dwyer CM-1 - S/N 190800099	9/30/2025	9/30/2026
ROTATION	ROTATION MEASUREMENT	60 rpm to 5000 rpm	2 % reading 2 rpm	Dwyer TAC-L - S/N S1100123	9/30/2025	9/30/2026
HYDRONIC	PRESSURE MEASUREMENT	-30 in Hg to 200 psi	±2% of reading +/- 1 psi	Shortridge HDM 250 - S/N W25059	6/18/2025	6/18/2026
	DIFFERENTIAL PRESSURE MEASUREMENT	0 psi - 80 psi	±2% of reading +/- 1 psi	Shortridge HDM 250 - S/N W25059	6/18/2025	6/18/2026

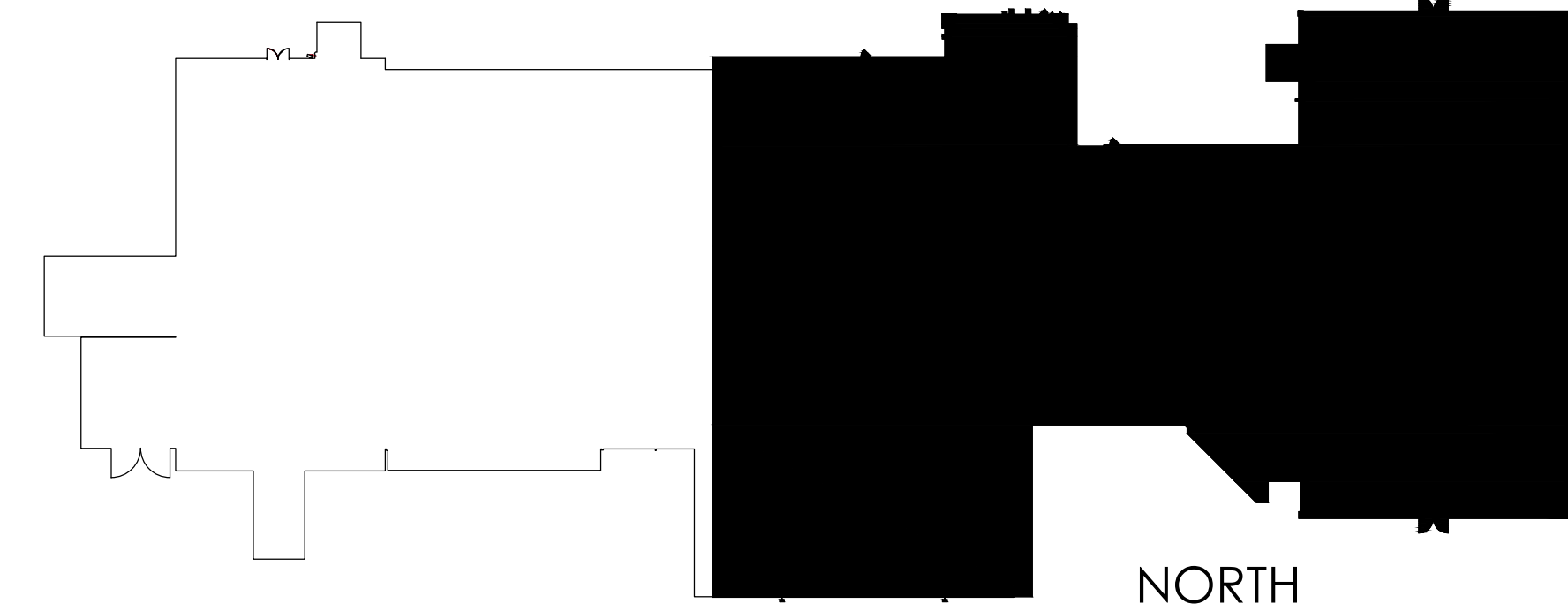
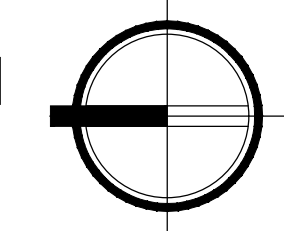
Abbreviation List

A = Area (ft ²)	S.F. = Service Factor
AHU = Air Handling Unit	SF = Supply Fan
A _k = Effective Area	SP = Static Pressure
BHP = Brake Horsepower (IP) HP	SR = Supply Register
Btu = British Thermal Unit	T = Temperature
Btu/h = Btuh = BTUH = BTU/Hour	T _{ma} = Mixed Air Temperature
CL = Center Distance (used in belt formula)	T _{oa} = Outside Air Temperature
CD = Ceiling Diffuser	T _{ra} = Return Air Temperature
CF = Correction Factor	H = Head (in wc, ft wc, psi)
CFM = Volumetric Flow: Cubic Feet Per Minute	h = Enthalpy
CO ₂ = Carbon Dioxide	HP = Horsepower
CO = Carbon Monoxide	hr = Hour
C _v = Flow Constant	K _v = Flow constant (SI)
d = Diameter (in.) IP	kW = Kilowatt = 1000 Watts
Δ = Difference or Change (Final - Initial)	LAT = Leaving Air Temperature
DB = Dry Bulb	lb = Pounds
EA = Exhaust Air	LWT = Leaving Water Temperature
EAT = Entering Air Temperature	ma = Mixed Air
EF = Exhaust Fan	MIN = Minimum
Eff = Efficiency	MAX = Maximum
EG = Exhaust Grille	N/A = Not Applicable
ESP = External Static Pressure	NA = No Access
EWT = Entering Water Temperature	NL = Not Listed
°F = Degrees Fahrenheit, °F	NPSHA = Net Positive Suction Head Available
FPB = Fan Powered Box	NS = Not Specified
FLA = Full Load Amps	OA = Outside Air
fpm = Feet per Minute (fpm)	OAT = Outside Air Temperature
ft = Foot	PD = Sheave Pitch Diameter
gal = Gallons	P.D. = Pressure Drop
GPM = Gallons Per Minute (GPM)	PF = Power Factor
h = Enthalpy (BTU/lb dry air)	SG = Supply Grille
P = Pressure	SR = Supply Register
ppm = parts per million	TP = Total Pressure
psi = Pounds Per Square Inch	T _{ra} = Return Air Temperature
psid = PSI Differential	TS = Tip Speed (fpm) IP, (m/s) SI
r = Radius (in)	TSP = Total Static Pressure
% _{ra} = % of Return Air	V = Velocity
RA = Return Air	VAV = Variable Air Volume
RAT = Return Air Temperature	VD = Volume Damper
RF = Return Fan	VFD = Variable Frequency Drive
RG = Return Grille	W = Watt
RH = Relative Humidity	WB = Wet Bulb
RPM = Revolutions Per Minute	wg = wc = water gauge = water column
RTU = Roof Top Unit	WHP = Water Horsepower (IP)
SA = Supply Air	ω = Humidity Ratio



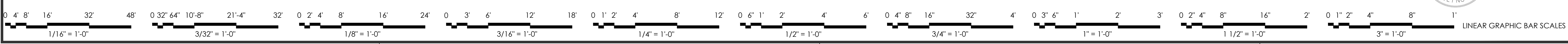
NORTH

PARTIAL MECHANICAL PLAN
SCALE: 1/8"=1'-0"



NORTH

KEY PLAN



JOHN K. NEVILLE
062-082009
LICENSED
PROFESSIONAL
ENGINEER
OF
ILLINOIS
MAY 07, 2025
EXPIRES 11/30/2025

Revisions	<ul style="list-style-type: none"> PERMIT REVISION #1 10-25-2024 ELECTRICAL REVISION #2 01-20-2025 CEILING CLARIFICATION REVISION VE-01-31-2025 FIELD REVISIONS ELECTRICAL/PLUMBING REV. 05-07-2025
Drawing Date	
Project Number	22038
Sheet Name	PARTIAL ENLARGED MECHANICAL PLAN
Sheet Number	M1.0

National TAB

Project: M'Lady Nissan Dealership (Crystal Lake, IL)

System/Unit: AHU/RTU



Asset: RTU1

AREA:SHOWROOM RIGHT

Unit Data	
	Actual
MFG	TRANE
Serial Num	251111077L
Model Num	YSK090A4S0H0A00C
Configuration	HORIZONTAL
Num OA Filters 1	1
OA Filter Size 1	31X18
Num PreFilter 1	3/2
PreFilter Size 1	16X24X2/18X24X2

Test Data		
	Design	Actual
SF CFM	3000	3012
SF RPM	-	1258
RA CFM	2550	2590
OA CFM	450	422
RL Voltage	460	487/487/486
RL Amperage	4.6	1.8/1.8/1.7
OA Damper Position	-	25%
Brake Horse Power	-	1.15

Motor Data	
	Actual
Motor MFG	TRANE
Horsepower	3.0
Phase	3
Rated Voltage	460
Rated Amperage	4.6

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.59"
Fan Suction SP	-	-0.88"
Fan Discharge SP	-	0.32"
Total ESP	1.0	0.91"
Fan Total SP	1.33	1.2"

Completed By: Dylan Crisman on 02/16/2026

Notes:

Return air reduced proportionally to accommodate outside air.

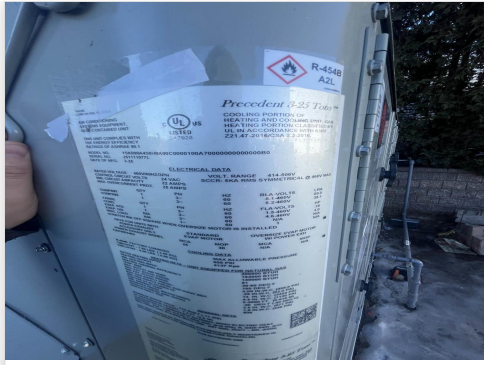
- [1] Unit is labeled RTU-2 but is RTU-1 on plans.
- [2] diffuser 17 is not installed.
- [3] dampers not installed on returns.

Written By: Scott Springer on 02/18/2026

Unit Data - PHOTO LOG



02/11/2026



02/11/2026

National TAB

Project: M'Lady Nissan Dealership (Crystal Lake, IL)

AHU/RTU



Diffuser Supply (GRD)

RTU1/SHOWROOM RIGHT

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	OFFICE	S1	8	200	221	208	104.0
SGRD2	OFFIE	S1	8	200	158	213	106.5
SGRD3	OFFICE	S2	8	200	209	195	97.5
SGRD4	SHOWROOM	S1	8	200	144	201	100.5
SGRD5	SHOWROOM	S1	8	170	136	165	97.1
SGRD6	SHOWROOM	S1	8	170	243	177	104.1
SGRD7	SHOWROOM	S1	8	170	234	182	107.1
SGRD8	SHOWROOM	S1	8	165	205	155	93.9
SGRD9	SHOWROOM	S1	8	165	283	170	103.0
SGRD10	SHOWROOM	S1	8	170	186	224	131.8
SGRD11	SHOWROOM	S1	8	170	161	169	99.4
SGRD12	SHOWROOM	S1	8	170	246	180	105.9
SGRD13	SHOWROOM	S1	8	170	176	181	106.5
SGRD14	SHOWROOM	S1	8	170	179	246	144.7
SGRD15	SHOWROOM	S1	8	170	198	185	108.8
SGRD16	SHOWROOM	S1	8	170	226	161	94.7
SGRD17	SHOWROOM	S1	8	170	0	0	0.0
Total				3000	3205	3012	100.4%

Diffuser Ret/Exh (GRD)

RTU1/SHOWROOM RIGHT

Asset								
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	FINAL CFM	% to design
EGRD1	102	R1	14	680	1.23	656	803	118.1
EGRD2	101	R1	14	625	1.23	489	605	96.8
EGRD3	101	R1	14	625	1.23	480	592	94.7
EGRD4	101	R1	14	620	1.23	471	590	95.2
Total				2550		2096	2590	101.57%

Completed By: Dylan Crisman on 02/18/2026

Asset	Notes	Date	Written By
SGRD17	Diffuser Deleted. Only 15 Linear diffusers and one 2x2 supply diffuser found on duct network air distributed to surrounding diffusers.	02/11/2026	Dylan Crisman

National TAB

Project: M'Lady Nissan Dealership (Crystal Lake, IL)

System/Unit: AHU/RTU



Asset: RTU2

AREA:SHOWROOM LEFT

Unit Data	
	Actual
MFG	TRANE
Serial Num	251111054L
Model Num	YSK090A4S0H0A00C
Configuration	HORIZONTAL
Num OA Filters 1	1
OA Filter Size 1	31X18
Num PreFilter 1	3/2
PreFilter Size 1	16X24X2/18X24X2

Motor Data	
	Actual
Motor MFG	TRANE
Horsepower	3.0
Phase	3
Rated Voltage	460
Rated Amperage	4.6

Test Data		
	Design	Actual
SF CFM	3000	3054
SF RPM	-	1239
RA CFM	2550	2574
OA CFM	450	480
RL Voltage	460	485/484/483
RL Amperage	4.6	1.8/1.7/1.8
OA Damper Position	-	30%
Brake Horse Power	-	1.15

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.44"
Fan Suction SP	-	-1.01"
Fan Discharge SP	-	0.30"
Total ESP	1.0	0.74"
Fan Total SP	1.33	1.31"

Completed By: Dylan Crisman on 02/16/2026

Notes:

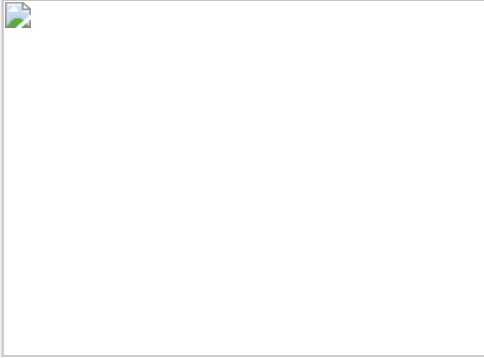
Return air reduced proportionally to accommodate outside air.

[1] labeled RTU-1 but is RTU-2 on plans.

[2] dampers not installed on returns

Written By: Dylan Crisman on 02/18/2026

Unit Data - PHOTO LOG



02/11/2026



02/11/2026

National TAB

Project: M'Lady Nissan Dealership (Crystal Lake, IL)

AHU/RTU



Diffuser Supply (GRD)

RTU2/SHOWROOM LEFT

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	SHOWROOM	S1	8	200	193	185	92.5
SGRD2	SHOWROOM	S1	8	200	282	211	105.5
SGRD3	SHOWROOM	S1	8	160	203	172	107.5
SGRD4	SHOWROOM	S1	8	200	186	214	107.0
SGRD5	SHOWROOM	S1	8	200	317	218	109.0
SGRD6	SHOWROOM	S1	8	160	200	210	131.3
SGRD7	SHOWROOM	S1	8	200	313	220	110.0
SGRD8	SHOWROOM	S1	8	200	179	201	100.5
SGRD9	SHOWROOM	S1	8	210	210	210	100.0
SGRD10	SHOWROOM	S1	8	210	179	197	93.8
SGRD11	SHOWROOM	S1	8	210	238	198	94.3
SGRD12	SHOWROOM	S1	8	200	192	212	106.0
SGRD13	SHOWROOM	S1	8	210	163	196	93.3
SGRD14	SHOWROOM	S1	8	200	191	208	104.0
SGRD15	FRONT VESTIBULE	S1	8	200	147	202	101.0
Total				2960	3193	3054	103.18%

Diffuser Ret/Exh (GRD)

RTU2/SHOWROOM LEFT

Asset								
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	FINAL CFM	% to design
EGRD1	111	R1	8	175	1.19	189	221	126.3
EGRD2	112	R1	8	175	1.19	182	216	123.4
EGRD3	101	R1	14	520	1.19	518	616	118.5
EGRD4	101	R1	14	520	1.19	446	531	102.1
EGRD5	101	R1	14	530	1.19	363	433	81.7
EGRD6	113	R1	14	140	1.19	125	157	112.1
EGRD7	114	R1	8	175	1.19	95	113	64.6
EGRD8	115	R1	8	140	1.19	93	190	135.7
EGRD9	116	R1	8	175	1.19	81	97	55.4
Total				2550		2092	2574	100.94%

Completed By: Dylan Crisman on 02/18/2026

National TAB

Project: M'Lady Nissan Dealership (Crystal Lake, IL)

System/Unit: AHU/RTU



Asset: RTU3

AREA:SALES/SHOWROOM CENTER RIGHT

Unit Data	
	Actual
MFG	LENNOX
Serial Num	5603K 08565
Model Num	GCS16-090-200-2G
Configuration	HORIZONTAL
Num OA Filters 1	0
OA Filter Size 1	NA
Num PreFilter 1	4
PreFilter Size 1	16X20X2

Test Data		
	Design	Actual
SF CFM	3000	2752
SF RPM	-	940
RA CFM	2550	2752
OA CFM	450	0
RL Voltage	460	488/487/488
RL Amperage	3.9	3.7/3.7/3.6
OA Damper Position	-	0%
Brake Horse Power	-	1.87

Motor Data	
	Actual
Motor MFG	EMERSON
Frame	56HZ
Horsepower	2.0
Motor Rpm	1725
Phase	3
Rated Voltage	460
Rated Amperage	3.9

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.38"
Fan Suction SP	-	-1.21"
Fan Discharge SP	-	0.31"
Total ESP	-	0.69"
Fan Total SP	-	1.52"

Drive Data	
	Actual
Motor Sheave Size	F8400TL
Motor Bore Size	7/8"
Motor Sheave SetPt	3 TURNS OPEN
Fan Sheave Size	AK64
Fan Sheave Bore	1"
Belt CL Distance	16"
Num of Belts	1
Belt Size	AX44

Completed By: Dylan Crisman on 02/16/2026

Notes:

Return air reduced proportionally to accommodate outside air.

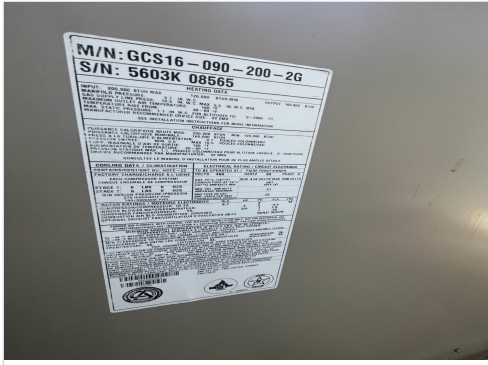
[1] Unable to proportionally balance low due to linear diffusers 1 thru 5 being high on airflow with no dampers installed to decrease airflow. showrrom 2x2 diffusers are all low on flow.

[2] Motor sheave is seized, unable to adjust sheave to increase airflow. Airflow is at 2752/3000 CFM 91.73%

[3] Can not locate controller for OA dampers to be adjusted. could not properly set OA. Reported as is.

Written By: Dylan Crisman on 02/12/2026

Unit Data - PHOTO LOG



02/11/2026



02/11/2026

National TAB

Project: M'Lady Nissan Dealership (Crystal Lake, IL)

AHU/RTU



Diffuser Supply (GRD)

RTU3/SALES/SHOWROOM CENTER RIGHT

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1		S1	6	100	159	159	159.0
SGRD2		S1	8	100	81	81	81.0
SGRD3		S1	8	100	124	124	124.0
SGRD4		S1	8	100	104	104	104.0
SGRD5		S1	10	100	118	118	118.0
SGRD6		S2	10	275	302	302	109.8
SGRD7		S2	10	275	235	235	85.5
SGRD8		S2	10	275	221	221	80.4
SGRD9		S2	10	275	261	261	94.9
SGRD10		S2	10	275	234	234	85.1
SGRD11		S2	10	275	245	245	89.1
SGRD12		S2	10	300	246	246	82.0
SGRD13		S2	10	275	224	224	81.5
SGRD14		S2	10	275	198	198	72.0
Total				3000	2752	2752	91.73%

Diffuser Ret/Exh (GRD)

RTU3/SALES/SHOWROOM CENTER RIGHT

Asset								
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	FINAL CFM	% to design
EGRD1	101	R1	14	637	1.37	658	901	141.4
EGRD2	101	R1	14	638	1.37	560	767	120.2
EGRD3	101	R1	14	637	1.37	431	590	92.6
EGRD4	101	R1	14	638	1.37	360	494	77.4
Total				2550		2009	2752	107.92%

Asset	Notes	Date	Written By
SGRD1	[1] Damper is not installed at takeoff, Linear diffuser only has pattern deflectors on face to direct direction of airflow, does not increase or decrease airflow sufficiently	02/12/2026	Dylan Crisman
SGRD2	[1] Damper is not installed at takeoff, Linear diffuser only has pattern deflectors on face to direct direction of airflow, does not increase or decrease airflow sufficiently	02/12/2026	Dylan Crisman
SGRD3	[1] Damper is not installed at takeoff, Linear diffuser only has pattern deflectors on face to direct direction of airflow, does not increase or decrease airflow sufficiently	02/12/2026	Dylan Crisman
SGRD4	[1] Damper is not installed at takeoff, Linear diffuser only has pattern deflectors on face to direct direction of airflow, does not increase or decrease airflow sufficiently	02/12/2026	Dylan Crisman
SGRD5	[1] Damper is not installed at takeoff, Linear diffuser only has pattern deflectors on face to direct direction of airflow, does not increase or decrease airflow sufficiently	02/12/2026	Dylan Crisman

National TAB

Project: M'Lady Nissan Dealership (Crystal Lake, IL)

System/Unit: AHU/RTU



Asset: RTU4

AREA:SALES/SHOWROOM CENTER LEFT

Unit Data	
	Actual
MFG	LENNOX
Serial Num	5607C18815
Model Num	TGA090S2BM1G
Configuration	HORIZONTAL
Num OA Filters 1	2
OA Filter Size 1	23X14
Num PreFilter 1	4
PreFilter Size 1	18X24X2

Test Data		
	Design	Actual
SF CFM	2975	1768
SF RPM	-	944
RA CFM	2529	1768
OA CFM	446	0
RL Voltage	460	488/489/492
RL Amperage	3.1	2.4/2.1/2.3
OA Damper Position	-	0%
Brake Horse Power	-	1.46

Motor Data	
	Actual
Motor MFG	BALDOR-RELIANCE
Frame	56HZ
Horsepower	2.0
Motor Rpm	1725
Phase	3
Rated Voltage	460
Rated Amperage	3.1
Service Factor	

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.46"
Fan Suction SP	-	-1.06"
Fan Discharge SP	-	0.12"
Total ESP	-	0.58"
Fan Total SP	-	1.18"

Drive Data	
	Actual
Motor Sheave Size	3.75"
Motor Bore Size	7/8"
Motor Sheave SetPt	3 TURNS OPEN
Fan Sheave Size	6.75"
Fan Sheave Bore	1"
Belt CL Distance	17.5"
Num of Belts	1
Belt Size	AX48

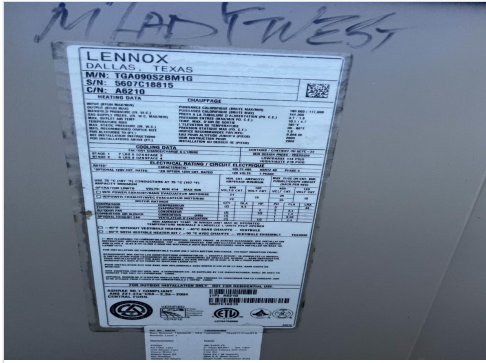
Completed By: Dylan Crisman on 02/16/2026

Notes:

Return air reduced proportionally to accommodate outside air.
 Unit is very low on flow and only runs when jumpered to blower only. See issue regarding mechanical inspection.
 Due to low flow could not balance as this would result in further airflow loss.
 Could not set OA due to damper not functioning. Damper is closed.

Written By: Scott Springer on 02/18/2026

Unit Data - PHOTO LOG



02/11/2026



02/11/2026

National TAB

Project: M'Lady Nissan Dealership (Crystal Lake, IL)

AHU/RTU



Diffuser Supply (GRD)

RTU4/SALES/SHOWROOM CENTER LEFT

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1		S1	6	100	108	108	108.0
SGRD2		ES	8	200	229	229	114.5
SGRD3		ES	8	200	206	206	103.0
SGRD4		S1	6	100	87	87	87.0
SGRD5		S1	6	100	0	0	0.0
SGRD6		S1	6	100	0	75	75.0
SGRD7		S1	6	100	98	98	98.0
SGRD8		S2	10	225	0	0	0.0
SGRD9		S2	10	225	134	134	59.6
SGRD10		S2	10	225	190	190	84.4
SGRD11		S2	10	225	0	0	0.0
SGRD12		S2	10	275	0	0	0.0
SGRD13		S2	10	225	159	159	70.7
SGRD14		S2	10	225	147	147	65.3
SGRD15		S2	10	225	150	150	66.7
SGRD16		S2	10	225	185	185	82.2
Total				2975	1693	1768	59.43%

Diffuser Ret/Exh (GRD)

RTU4/SALES/SHOWROOM CENTER LEFT

Asset								
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	FINAL CFM	% to design
EGRD1	122	ERG	8	150	1.33	87	116	77.3
EGRD2	122	ERG	8	150	1.33	95	126	84.0
EGRD3	101	ERG	14	557	1.33	345	459	82.4
EGRD4	101	ERG	14	557	1.33	333	443	79.5
EGRD5	101	ERG	14	557	1.33	254	338	60.7
EGRD6	101	ERG	14	558	1.33	214	286	51.3
Total				2529		1328	1768	69.91%

Completed By: Dylan Crisman on 02/13/2026

National TAB

Project: M'Lady Nissan Dealership (Crystal Lake, IL)

System/Unit: AHU/RTU



Asset: RTU5

AREA:SERVICE

Unit Data	
	Actual
MFG	CARRIER
Serial Num	1212G50334
Model Num	48TCED08A
Configuration	VERTICAL
Num OA Filters 1	1
OA Filter Size 1	34.75X19.25
Num PreFilter 1	4
PreFilter Size 1	16X20X2

Motor Data	
	Actual
Motor MFG	MARATHON
Frame	56Y
Motor Rpm	1725
Phase	3
Rated Voltage	460
Rated Amperage	3.40
Service Factor	1.20

Drive Data	
	Actual
Motor Sheave Size	4.5"
Motor Bore Size	7/8"
Motor Sheave SetPt	3 TURNS OPEN
Fan Sheave Size	AFD84
Fan Sheave Bore	1"
Belt CL Distance	18"
Num of Belts	1
Belt Size	AX52

Test Data		
	Design	Actual
SF CFM	3000	2730
SF RPM	-	910
RA CFM	2550	2248
OA CFM	450	482
RL Voltage	460	485/486/485
RL Amperage	3.4	3.5/3.3/3.3
OA Damper Position	-	0.75" open

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.72"
Fan Suction SP	-	-0.84"
Fan Discharge SP	-	0.40"
Total ESP	-	1.12"
Fan Total SP	-	1.24"

Completed By: Dylan Crisman on 02/16/2026

Notes:

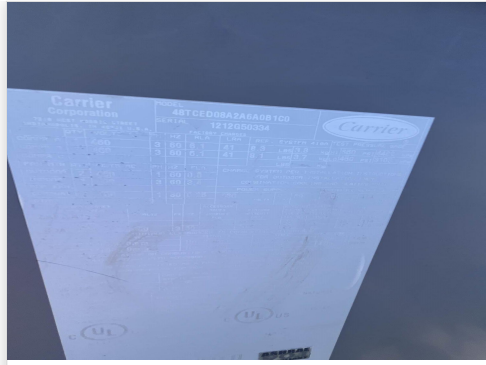
- Return air reduced proportionally to accommodate outside air.
- OA damper manually set at 0.75" open
- [1] could not locate dampers for Returns.

Written By: Dylan Crisman on 02/18/2026

Unit Data - PHOTO LOG



02/11/2026



02/11/2026

National TAB

Project: M'Lady Nissan Dealership (Crystal Lake, IL)

AHU/RTU



Diffuser Supply (GRD)

RTU5/SERVICE

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	SERVICE ENTRANCE	ES	8	250	263	238	95.2
SGRD2	SERVICE COUNTER	ES	8	250	220	231	92.4
SGRD3	SERVICE COUNTER	RS	8	250	190	231	92.4
SGRD4	SERVICE COUNTER	ES	8	250	180	229	91.6
SGRD5	SERVICE OFFICE	S2	8	200	236	175	87.5
SGRD6	SERVICE OFFICE	S2	8	200	163	148	74.0
SGRD7	SERVICE WAITING	S2	8	200	133	245	122.5
SGRD8	SERVICE WAITING	S2	10	300	245	288	96.0
SGRD9	SERVICE WAITING	S2	10	200	248	278	139.0
SGRD10	SERVICE WAITING	S1	6	100	0	0	0.0
SGRD11	SERVICE WAITING	S1	6	100	0	0	0.0
SGRD12	SERVICE WAITING	ES	ES	120	278	126	105.0
SGRD13	SERVICE WAITING	S1	S1	100	102	102	102.0
SGRD14	SERVICE WAITING	S2	S2	200	108	186	93.0
SGRD15	SERVICE WAITING	ES	ES	280	250	253	90.4
Total				3000	2616	2730	91%

Diffuser Ret/Exh (GRD)

RTU5/SERVICE

Asset								
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	FINAL CFM	% to design
EGRD1	134	ERG	10	562	1.65	805	1328	236.3
EGRD2	133	R1	10	300	1.65	218	359	119.7
EGRD3	132	R1	20	1688	1.65	341	561	33.2
Total				2550		1364	2248	88.16%

Completed By: Dylan Crisman on 02/18/2026

Asset	Notes	Date	Written By
SGRD4	[1] low on flow due to air being stuck in diffusers 7 and 9. Unable to increase airflow to this diffuser.	02/12/2026	Dylan Crisman
SGRD5	[1] low on flow due to air being stuck in diffusers 7 and 9. Unable to increase airflow to this diffuser.	02/12/2026	Dylan Crisman
SGRD7	[1] Unable to decrease airflow due to dampers being above hard ceiling and inaccessible.	02/12/2026	Dylan Crisman
SGRD9	[1] Unable to decrease airflow due to dampers being above hard ceiling and inaccessible.	02/12/2026	Dylan Crisman

Issue List

- Diffuser 1-10 missing damper
- Diffuser 1-14 missing damper.
- Diffuser 5-11/5-10 no airflow
- Diffusers on RTU-4 8-11-12 missing
- No airflow Diffuser 4-5
- OA dampers on RTU-3/RTU4 could not be set
- RTU-1/RTU/2 return dampers not functional
- RTU-3 motor sheave seized
- RTU-3/RTU-4/RTU-5 final filters
- RTU-3/RTU-4/RTU-5 OA filters
- RTU-4 not operational

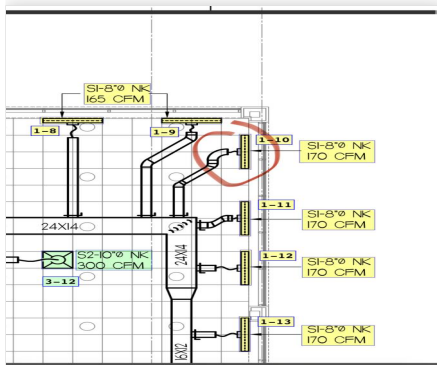


M'Lady Nissan Dealership (Crystal Lake, IL)

Project Issue Information

Issue Name : Diffuser 1-10 missing damper
Description : Diffuser 1-10 is missing a damper, diffuser is high on flow. Unable to balance properly
Created By : National TAB **Assigned To :** National TAB - Stephan Gabbert
Status : Open
Priority : Urgent **Asset Tag :**
Originated Date : 02/12/2026 - Dylan Crisman - National TAB

Project Issue File Details



02/12/2026



02/12/2026

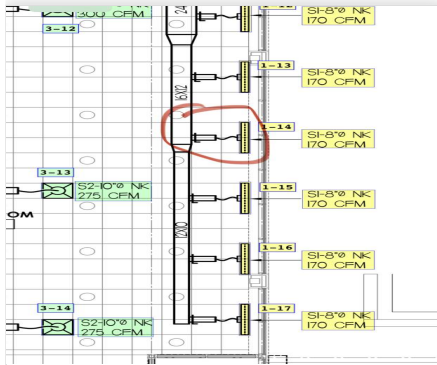


M'Lady Nissan Dealership (Crystal Lake, IL)

Project Issue Information

Issue Name : Diffuser 1-14 missing damper.
Description : Missing damper on Diffuser 1-14 for RTU-1 on showroom linear diffuser. Diffuser is high on flow. Unable to balance properly
Created By : National TAB **Assigned To :** National TAB - Dylan Crisman
Status : Open
Priority : Urgent **Asset Tag :**
Originated Date : 02/12/2026 - Dylan Crisman - National TAB

Project Issue File Details



02/12/2026



02/12/2026



M'Lady Nissan Dealership (Crystal Lake, IL)

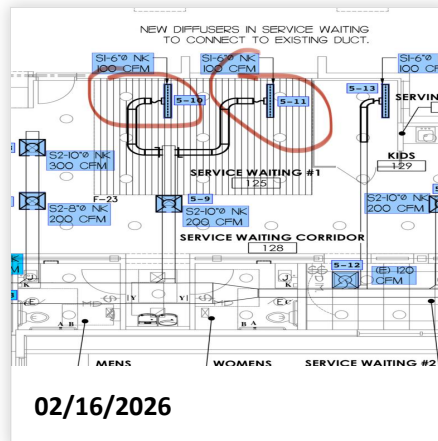
Project Issue Information

Issue Name : Diffuser 5-11/5-10 no airflow
Description : Diffusers 5-11/5-12 linear above the service waiting room were receiving no airflow, due to hard ceiling we were unable to determine direct root cause. Recommend mechanical inspection.
Created By : National TAB **Assigned To :** National TAB - Stephan Gabbert
Status : Open
Priority : Urgent **Asset Tag :**
Originated Date : 02/16/2026 - Dylan Crisman - National TAB

Project Issue File Details



02/16/2026



02/16/2026

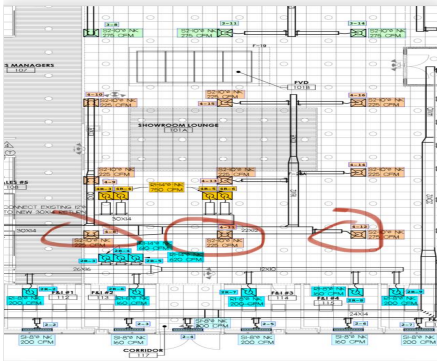


M'Lady Nissan Dealership (Crystal Lake, IL)

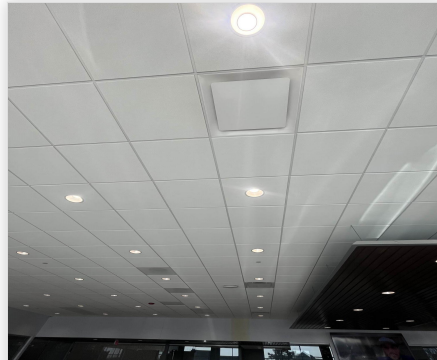
Project Issue Information

Issue Name : Diffusers on RTU-4 8-11-12 missing
Description : Diffusers 4-8,4-11,4-12 are missing on site, noted in plans to show where they should be installed.
Created By : National TAB **Assigned To :** National TAB - Dylan Crisman
Status : Open
Priority : **Urgent** **Asset Tag :**
Originated Date : 02/16/2026 - Dylan Crisman - National TAB

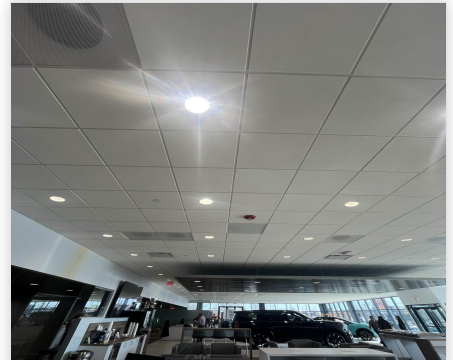
Project Issue File Details



02/16/2026



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02/16/2026



M'Lady Nissan Dealership (Crystal Lake, IL)

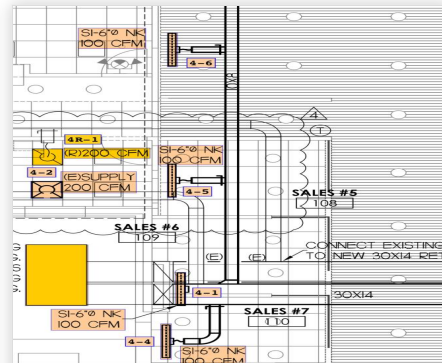
Project Issue Information

Issue Name : No airflow Diffuser 4-5
Description : Diffuser 4-5 is getting no airflow, unable to get a good look above ceiling to see if duct is disconnected or damper is fully closed at takeoff, blades at the face of the diffuser are fully open.
Created By : National TAB **Assigned To :** National TAB - Dylan Crisman
Status : Open
Priority : Urgent **Asset Tag :**
Originated Date : 02/16/2026 - Dylan Crisman - National TAB

Project Issue File Details



02/16/2026



02/16/2026



M'Lady Nissan Dealership (Crystal Lake, IL)

Project Issue Information

Issue Name : OA dampers on RTU-3/RTU4 could not be set
Description : OA dampers for RTU-4/RTU-3 could not be set. Couldn't locate controllers for function and limited access to damper actuators to manually adjust.
Created By : National TAB **Assigned To :** National TAB - Stephan Gabbert
Status : Open
Priority : Urgent **Asset Tag :**
Originated Date : 02/16/2026 - Dylan Crisman - National TAB

Project Issue File Details



02/16/2026



02/16/2026



02/16/2026



M'Lady Nissan Dealership (Crystal Lake, IL)

Project Issue Information

Issue Name : RTU-1/RTU/2 return dampers not functional
Description : New units RTU-1/RTU-2 return dampers installed on exterior duct run do not function when OA dampers move, they should be interlocked with the OA dampers. Returns remain closed at any setpoint the OA is set to.
Created By : National TAB **Assigned To :** National TAB - Dylan Crisman
Status : Open
Priority : Urgent **Asset Tag :**
Originated Date : 02/16/2026 - Dylan Crisman - National TAB

Project Issue File Details



02/16/2026



02/16/2026



02/16/2026



M'Lady Nissan Dealership (Crystal Lake, IL)

Project Issue Information

Issue Name : RTU-3 motor sheave seized
Description : RTU-3 motor sheave is seized. Rusted shut, and hex set keys on pulley are stripped. Unable to free to make speed adjustment on unit. Unit is at 92% of design airflow 2752/3000CFM.

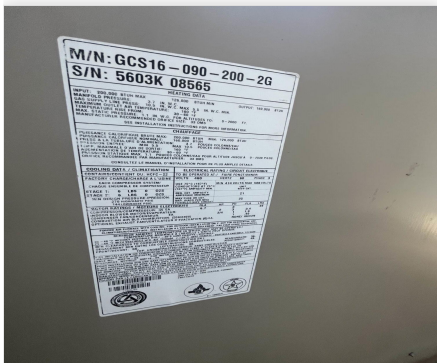
Created By : National TAB **Assigned To :** National TAB - Dylan Crisman

Status : Open

Priority : Urgent **Asset Tag :**

Originated Date : 02/12/2026 - Dylan Crisman - National TAB

Project Issue File Details



02/12/2026



02/12/2026



02/12/2026



M'Lady Nissan Dealership (Crystal Lake, IL)

Project Issue Information

Issue Name : RTU-3/RTU-4/RTU-5 final filters
Description : Existing RTUs 3,4,5 final filters are very dirty. Recommend replacing with correct size merv 8 rated pleated filters.
Created By : National TAB **Assigned To :** National TAB - Dylan Crisman
Status : Open
Priority : Low **Asset Tag :**
Originated Date : 02/12/2026 - Dylan Crisman - National TAB

Project Issue File Details



02/12/2026



02/12/2026



02/12/2026



M'Lady Nissan Dealership (Crystal Lake, IL)

Project Issue Information

Issue Name : RTU-3/RTU-4/RTU-5 OA filters
Description : OA filters for existing units are in rough shape, clogged with debris. Recommend replacing. RTU-3 is missing the OA filters entirely.
Created By : National TAB **Assigned To :** National TAB - Stephan Gabbert
Status : Open
Priority : Low **Asset Tag :**
Originated Date : 02/12/2026 - Dylan Crisman - National TAB

Project Issue File Details



02/12/2026



M'Lady Nissan Dealership (Crystal Lake, IL)

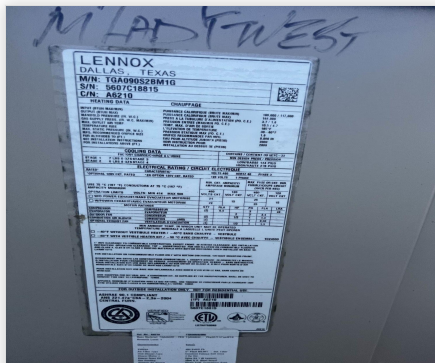
Project Issue Information

Issue Name : RTU-4 not operational
Description : RTU-4 is not operational at time of TAB. When commanded to run via thermostat or jumpering at unit the thermostat displays an alarm “no power from heat / cool System”
Created By : National TAB **Assigned To :** National TAB - Dylan Crisman
Status : Open
Priority : Urgent **Asset Tag :**
Originated Date : 02/12/2026 - Dylan Crisman - National TAB

Project Issue File Details



02/12/2026



02/12/2026



02/12/2026

Project Issue Response Details

- **02/16/2026 National TAB - Dylan Crisman**
 - RTU-4 was able to be Jumpered to run in blower only to get an airflow reading, the unit was very low on flow. Suspected to be because it couldn't be ran in full cool/full heat. gas was turned off and unit would not run heating or cooling, mechanical is unaware of any issues with this unit as they did not work on it and advised to contact the owners of Nissan to further diagnose.