NATIONAL - TAB

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P - 800 / 291 / 7138
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Balance Report

PROJECT	KROGER EXPANSION 034-509
ADDRESS	4901 MAPLE AVE.
	DALLAS, TX 75235
ARCHITECT / ENGINEER	KME (P# 972-812-1270)
	-
	IRVING, TX
HVAC CONTRACTOR	-
	-
	-
NEBB TAB FIRM	TEAMMATE FIRM - AIR SOLUTIONS, INC.
	-
	CINCINNATI, OH

This test completed on 4/19/2012
This report completed on 4/29/2012

NATIONAL · TAB

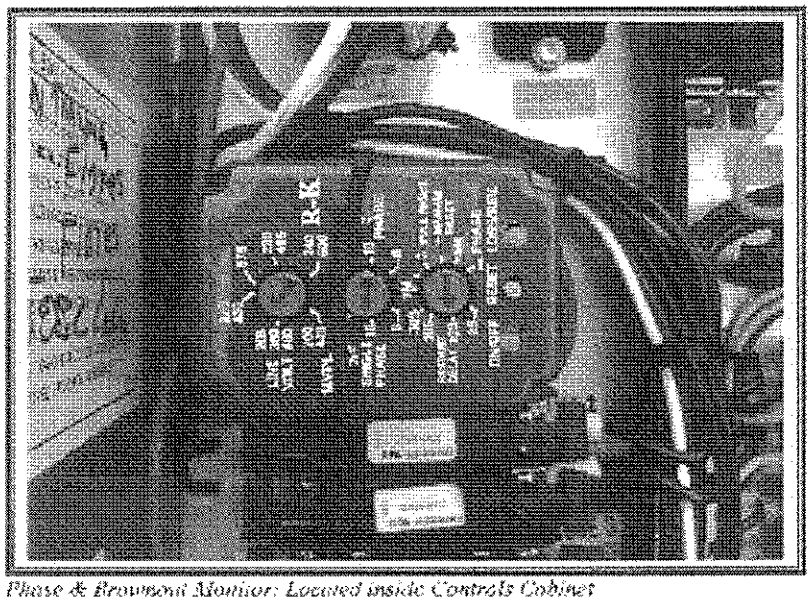
PROJECT: Kroger -509

SYSTEM: Procedure to set Brown-out Monitor on AaON UNITS

SUMMARY

Balancing Technician to Set for AAON UNITS ONLY (SEE BELOW)

Phase and Brownout monitor



Phase & Brownout Monitor: Located inside Controls Cabinet

Voltage

The top dial, (Voltage) should be field set at the nameplate voltage. It is preferred to use a voltmeter to measure the single phase power across L1-L2, L2-L3 and L2-L3, average them and set the voltage at the actual duty voltage.

Voltage Variance

The second dial (Voltage Variance) is to be set at a value of "10". This is +/- 10% the setting of the Voltage dial.

Brownout Ride-Through

The third dial (Brownout Ride-Through) is to be set at 10 seconds ride to prevent nuisance trip outs.

If these are set correctly, and the unit has been phased correctly, the LED on the Phase monitor will glow green; if the incoming phase is incorrect or the voltage setting (top knob) is not correct, the LED will glow Red.

NATIONAL - TAB

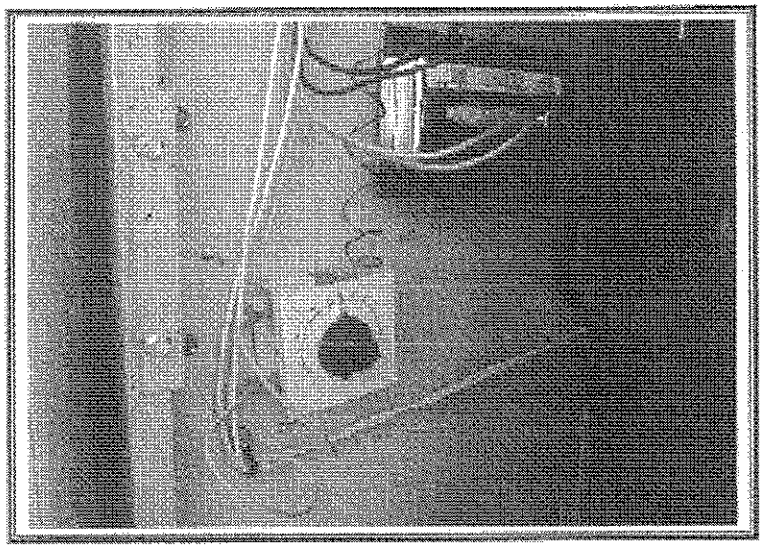
PROJECT: Kroger -509

SYSTEM: Procedure to set Freezestat on AaON UNITS

SUMMARY

Balancing Technician to Set for AAON UNITS ONLY (SEE BELOW) - set to 38 degrees

Freeze Thermostat



Freeze Thermostat

The freeze thermostat is located in the DX coil section. This should be factory set at 38°F, if not, set at 38°F.

NATIONAL TAB

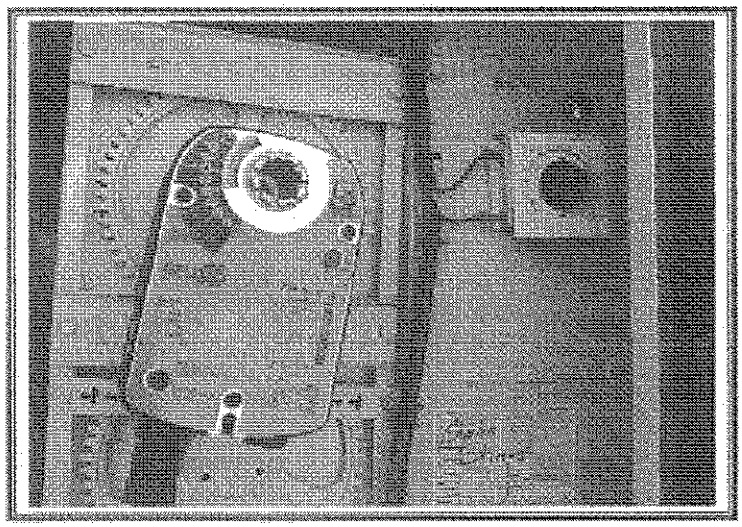
PROJECT: Kroger - 509

SYSTEM: Procedure to set Compressor Lockout on AaON UNITS

SUMMARY

Balancing Technician to Set for AAON UNITS ONLY (SEE BELOW) - set to 45degrees

Compressor Lockout Thermostat



The compressor lockout thermostat is located in the mixed air plenum. This is not factory se and must be field set at a minimum temperature of 45 degrees.

PROJECT:_KROGER 509

LOCATION: DALLAS, TX

NATIONAL - TAB

P # 800-291-7138
joe@nationaltab.com
860-0465
Fax 513-

RTU & ASSOCIATED DUCTWORK CHECKLIST

N = NOT ACCEPTABLE & NEEDS IMMEDIATE ACTION

Y = ACCEPTABLE CONDITIONS NO FURTHER ACTION REQUIRED

R = RECOMMEND IMPROVEMENT BUT DOESN'T AFFECT OPENING OR IMPACT PERFORMANCE

N/A = NOT APPLICABLE

Balancing technician to check all items below on each unit. Any items marked N must be reviewed with general contractor on site (via phone minimum) & contact the Regional Manager for National TAB immediately at 800-291-7138

DESCRIPTION	SYSTEM #				COMMENTS\ RECOMMENDED ACTION STEP
RTU UNIT #					
- Units are labeled and installed at proper locations	Y				
- Units size matches its design (nameplate)	Y				
- Clean filters are installed at DX coil	R				ALL FILTERS DIRTY, RECOMMEND GETTING CLEAN.
- Belts are tight and in good working order	N/A				
- Pulleys are properly aligned	N/A				
- Motors rotating correctly	Y				
- Motors are operating under full load amps	Y				
- Units sealed and properly seated to roof curb	Y				
- Evaporator coils clean and free of debris	Y				
- Gas piping installed	Y				
- Gas valves turned in the on position	Y				
- Condensate lines and P-traps installed correctly	Y				
k					
- No noticeable vibration or noise exist	Y				
- Economizer filters installed	N/A				
- Outside air dampers installed and functioning	Y				
- Outside air damper positions are clearly marked	Y				
- Is unit bringing in sufficient amount of outside air	Y				
- Unit is providing required supply airflow	Y				
- Condensor coil clean and free of damage	Y				
- Verify voltage input correct	Y				
- Compressors operating in correct rotation	Y				
- Heating mode tested satisfactorily	Y				
- Cooling mode tested satisfactorily	Y				
DUCTWORK					
- Ductwork and diffusers are installed per design	Y				
- Balance dampers installed and functional	Y				
- Balance dampers are accessible	R				RTU-9, 10 DAMPERS TOO HIGH
- Ductwork is properly covered with insulation, and insulation is secure IF required	Y				
- Tops of diffusers are properly insulated	R				
- Installed diffusers match design	Y				
THERMOSTAT					
If unit is required to be connected to CPC Panel - Is it wired & functional?	Y				

PROJECT:_KROGER 509

LOCATION: DALLAS, TX

NATIONAL TAB

P # 800-291-7138
joe@nationaltab.com
Fax 513-860-0465

HOOD SYSTEM & ASSOCIATED FANS CHECKLIST

N = NOT ACCEPTABLE & NEEDS IMMEDIATE ACTION **Y** = ACCEPTABLE CONDITIONS NO FURTHER ACTION REQUIRED **R** = RECOMMEND IMPROVEMENT BUT DOESN'T AFFECT OPENING OR IMPACT PERFORMANCE **N/A** = NOT APPLICABLE	**Balancing technician to check all items below on each unit. Any items marked N must be reviewed with general contractor on site (via phone minimum) & contact the Regional Manager for National TAB immediately at 800-291-7138**

DESCRIPTION	SYSTEM			COMMENTS / RECOMMENDATIONS
HOODS / DUCT SYSTEMS	EF-5			
- Welded grease duct or Listed SS grease Duct looks to be installed properly	Y			
- If fire wrap on exhaust duct does it visually appear to be installed properly (sealed)	Y			
- Make-Up-Air duct installed per plan & sufficient for balancing	N/A			
- All hood filters are installed and accounted for	Y			
- All cooking equipment is set under the hoods and operational	Y			
- Smoke capture is satisfactory	Y			
HOOD EXHAUST FANS	EF-5			
- Verify units marked for easy identification	R			
- Unit sealed and properly seated to roof curb	Y			
- No unusual vibration or noise	Y			
- Transition from exhaust duct to fan done properly	Y			
- Fan hinged and opened for easy access	Y			
- Grease traps properly installed on fan	Y			
- Belts properly tensioned and free of damage	Y			
- Pulleys properly aligned	Y			
- Blower wheel moves freely by hand	Y			
- Unit is providing required Exhaust airflow	Y			
- Verify on/off disconnect works	Y			
- Verify voltage input is correct	Y			
- Fan rotation is correct (compare to arrow stamped on fan)	Y			

PROJECT:_KROGER 509

LOCATION: DALLAS, TX

NATIONAL · TAB

P # 800-291-7138
joe@nationaltab.com
Fax 513-860-0465

RESTAURANT ENVIRONMENT CHECKLIST

N = NOT ACCEPTABLE & NEEDS IMMEDIATE ACTION

Y = ACCEPTABLE CONDITIONS NO FURTHER ACTION REQUIRED

R = RECOMMEND IMPROVEMENT BUT DOESN'T AFFECT OPENING OR IMPACT PERFORMANCE

N/A = NOT APPLICABLE

Balancing technician to check all items below on each unit. Any items marked N must be reviewed with general contractor on site (via phone minimum) & contact the Regional Manager for National TAB immediately at 800-291-7138

GENERAL EXHAUST / MUA FANS

DESCRIPTION	SYSTEM			COMMENTS / RECOMMENDATIONS
	EF-2	EF-3	EF-4	
- Verify units marked for easy identification	R	R	R	
- Unit sealed and properly seated to roof curb	Y	Y	Y	
- No unusual vibration or noise	Y	Y	Y	
- Belts properly tensioned and free of damage	N/A	N/A	N/A	
- Pulleys properly aligned	N/A	N/A	N/A	
- Blower wheel moves freely by hand	Y	Y	Y	
- Unit is providing required airflow	Y	Y	N	EF-S/4 NOT POWERED
- Verify on/off disconnect works	Y	Y	N	EF-S/4 NOT POWERED
- Verify voltage input is correct	Y	Y	N	EF-S/4 NOT POWERED
- Fan rotation is correct (compare to arrow stamped on fan)	Y	Y	N	EF-S/4 NOT POWERED

GENERAL EXHAUST / MUA FANS

DESCRIPTION	SYSTEM			COMMENTS / RECOMMENDATIONS
	EF-6	EF-7		
- Verify units marked for easy identification	R	R		
- Unit sealed and properly seated to roof curb	Y	Y		
- No unusual vibration or noise	Y	N/A		
- Belts properly tensioned and free of damage	N/A	N/A		
- Pulleys properly aligned	N/A	N/A		
- Blower wheel moves freely by hand	Y	N/A		
- Unit is providing required airflow	Y	N		EF-7 NOT POWERED
- Verify on/off disconnect works	Y	N		EF-7 NOT POWERED
- Verify voltage input is correct	Y	N		EF-7 NOT POWERED
- Fan rotation is correct (compare to arrow stamped on fan)	Y	N		EF-7 NOT POWERED

AIR APPARATUS TEST REPORT

Air Solutions Eng., Inc. Cincinnati, OH
NEBB
JOE HEINTENSTEIN
CERTIFICATION
3088
Exp. 3/31/13
Air and Hydronic Systems

PROJECT: KROGER - 509
SYSTEM/UNIT: RTU-1

UNIT DATA:		
UNIT MANF.	AAON	
MODEL #	RN-030-3-0-BQ02	
SERIAL #	20111OBNGT18938	
DISCHARGE	VERTICAL	
SHEAVE DIAM / BORE	DD	DD
# BELTS / SIZE	DD	DD
# FILTERS / SIZE	6	16X20X2
UNIT TAG (BarCode on Unit Housing)	-	

MOTOR DATA:		
MOTOR MANF.	BALDOR	
FRAME	-	
HP / RPM	15	1760
VOLTAGE / PHASE	480	3
F.L. AMPS / S.F.	21.0	1.15
SHEAVE DIAM / BORE	DD	DD
C.L. DISTANCE	DD	
MOTOR EFF-P.F.	-	

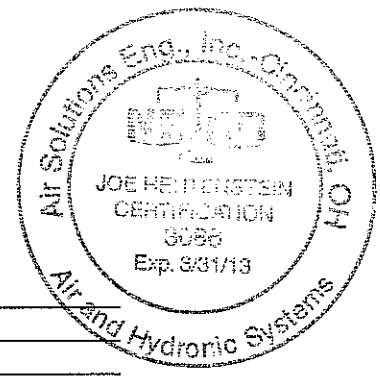
TEST DATA	DESIGN	ACTUAL
CFM	10500	10486
FAN RPM (INITIAL)	-	41.2 Hz
FAN RPM (FINAL)	-	55 Hz
MOTOR RPM	1760	55 Hz
R.L. VOLTAGE	460	489/484/487
R.L. AMPERAGE (INITIAL)	21.0	-
R.L. AMPERAGE (FINAL)	21.0	13.4/14.0/13.1
RETURN AIR CFM	8500	8434
OUTSIDE AIR CFM	2000	2052
ROTATION	-	OK
DX FILTER CONDITION	DIRTY	

TEST DATA	DESIGN	ACTUAL
E.S.P. SUCTION	-	-1.24"
E.S.P. DISCHARGE	-	0.94"
TOTAL E.S.P.	1.50"	2.18"
UNIT TOTAL S.P. (TSP)	-	2.85"
OUTSIDE AIR /RETURN DAMPER POSITIONS	1" / 100%	
TYPE OF DAMPER	MANUAL	
(IF UNIT IS AAON)-SETTINGS:		
FREEZESTAT (SET @ 38 DEGREE F)	38	
COMPRESSOR LOCKOUT (SET @ 45	45	
PHASE-BROWNOUT (BLUE) MONITOR IN CABINET		
Line VOLT AVERAGE (DIAL) SETTING	487	
VOLT-VARIANCE = 10	10	
3RD DIAL = 10S SET PT	10	

REMARKS:

TEST DATE: 4/18/12 READINGS BY: AG

SQUARE DUCT TRAVERSE FORM



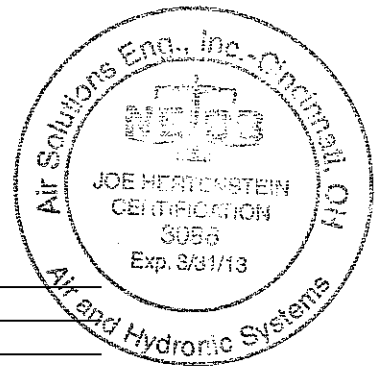
PROJECT	KROGER 509	SYSTEM	RTU-1
LOCATION	DALLAS, TX	SERVICE	TS-1 (SUPPLY)
ALTITUDE	-	DENSITY -	FACTOR

DUCT			REQUIRED		ACTUAL	
S.P.(act)		TEMP -	SCFM	-	SCFM	-
SIZE	20x36		FPM		FPM	800
AREA (ft)	5 ft2		CFM	5310	CFM	4000 @ 41.2 Hz

DISTANCE FROM BOTTOM	POSITION	1	2	3	4	5	6	7	8	9	10	11	12
1ST	1	943	888	984	699	626							
	2	1002	768	825	723	643							
	3	984	768	847	643	648		INITIAL					
	4	963	801	894	673	624							
	5	993	922	864	649	634							
	6												
	7												
2ND	8												
	9							FINAL					
	10												
	11												
	12												
	13												
	14												
DISTANCE FROM DUCT EDGE													
VELOCITY SUB - TOTALS													

REMARKS:

SQUARE DUCT TRAVERSE FORM



PROJECT	KROGER 509	SYSTEM	RTU-1
LOCATION	DALLAS, TX	SERVICE	TS-2 (SUPPLY)
ALTITUDE	-	DENSITY	-
		FACTOR	

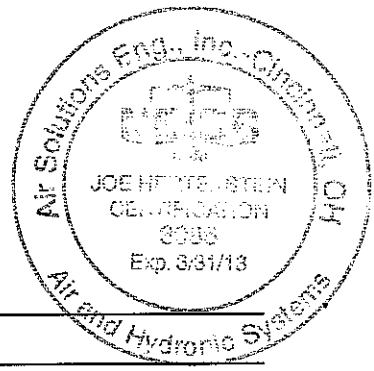
DUCT			REQUIRED		ACTUAL	
S.P.(act)		TEMP. -	SCFM	-	SCFM	-
SIZE	20x36		FPM		FPM	771
AREA (ft)	5 ft2		CFM	5190	CFM	3855 @ 41.2 Hz

DISTANCE FROM BOTTOM	POSITION	1	2	3	4	5	6	7	8	9	10	11	12
1ST	1	1129	1058	891	635	341							
	2	1114	1020	781	509	210							
	3	1099	1052	792	343	254		INITIAL					
	4	1114	1060	800	578	323							
	5	1112	1090	986	716	261							
	6												
	7												
2ND	8												
	9							FINAL					
	10												
	11												
	12												
	13												
	14												
DISTANCE FROM DUCT EDGE													
VELOCITY SUB - TOTALS													

REMARKS:

TEST DATE: 4/18/12 READINGS BY: AG PAGE: 9

AIR APPARATUS TEST REPORT



PROJECT: KROGER - 509

SYSTEM/UNIT: RTU-2

UNIT DATA:		
UNIT MANF.	AAON	
MODEL #	RN-015-3-0-CA02	
SERIAL #	201110ANGL18922	
DISCHARGE	VERTICAL	
SHEAVE DIAM / BORE	DD	DD
# BELTS / SIZE	DD	DD
# FILTERS / SIZE	4	20X25X2
UNIT TAG (BarCode on Unit Housing)	-	

MOTOR DATA:		
MOTOR MANF.	BALDOR	
FRAME	-	
HP / RPM	5	1760
VOLTAGE / PHASE	480	3
F.L. AMPS / S.F.	7.6	1.15
SHEAVE DIAM / BORE	DD	DD
C.L. DISTANCE	DD	
MOTOR EFF-P.F.	-	

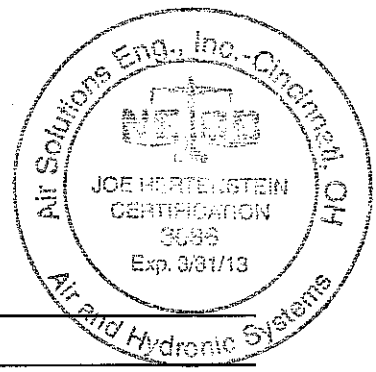
TEST DATA	*DESIGN*	*ACTUAL*
CFM	5000	5187
FAN RPM (INITIAL)	-	43 Hz
FAN RPM (FINAL)	-	39 Hz
MOTOR RPM	1760	39 Hz
R.L. VOLTAGE	460	489/484/487
R.L. AMPERAGE (INITIAL)	7.6	-
R.L. AMPERAGE (FINAL)	7.6	1.5/1.6/1.9
RETURN AIR CFM	4000	4172
OUTSIDE AIR CFM	1000	1015
ROTATION	-	OK
DX FILTER CONDITION	OK	

TEST DATA	*DESIGN*	*ACTUAL*
E.S.P. SUCTION	-	-0.18"
E.S.P. DISCHARGE	-	0.08"
TOTAL E.S.P.	0.35"	0.26"
UNIT TOTAL S.P. (TSP)	-	0.55"
OUTSIDE AIR /RETURN DAMPER POSITIONS	1" / NONE	
TYPE OF DAMPER	ECONOMIZER	
(IF UNIT IS AAON)-SETTINGS:		
FREEZESTAT (SET @ 38 DEGREE F)	38	
COMPRESSOR LOCKOUT (SET @ 45	45	
PHASE-BROWNOUT (BLUE) MONITOR IN CABINET		
Line VOLT AVERAGE (DIAL) SETTING	487	
VOLT-VARIANCE = 10	10	
3RD DIAL = 10S SET PT	10	

REMARKS:

TEST DATE: 4/18/12 READINGS BY: AG PAGE: 1

AIR APPARATUS TEST REPORT



PROJECT: KROGER - 509

SYSTEM/UNIT: RTU-3

UNIT DATA:		
UNIT MANF.	AAON	
MODEL #	RN-015-3-0-CA02	
SERIAL #	201112ANGL18928	
DISCHARGE	VERTICAL	
SHEAVE DIAM / BORE	DD	DD
# BELTS / SIZE	DD	DD
# FILTERS / SIZE	4	20X25X2
UNIT TAG (BarCode on Unit Housing)	-	

MOTOR DATA:		
MOTOR MANF.	BALDOR	
FRAME	-	
HP / RPM	5	1760
VOLTAGE / PHASE	480	3
F.L. AMPS / S.F.	7.6	1.15
SHEAVE DIAM / BORE	DD	DD
C.L. DISTANCE	DD	
MOTOR EFF-P.F.	-	

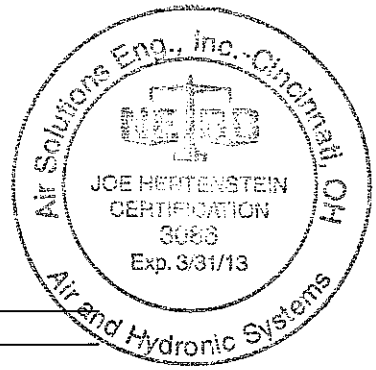
TEST DATA	DESIGN	ACTUAL
CFM	5000	5063
FAN RPM (INITIAL)	-	43 Hz
FAN RPM (FINAL)	-	41 Hz
MOTOR RPM	1760	41 Hz
R.L. VOLTAGE	460	489/483/487
R.L. AMPERAGE (INITIAL)	7.6	-
R.L. AMPERAGE (FINAL)	7.6	2.0/2.3/1.8
RETURN AIR CFM	4000	3996
OUTSIDE AIR CFM	1000	1067
ROTATION	-	OK
DX FILTER CONDITION	DIRTY	

TEST DATA	DESIGN	ACTUAL
E.S.P. SUCTION	-	-0.17"
E.S.P. DISCHARGE	-	0.14"
TOTAL E.S.P.	0.35"	0.31"
UNIT TOTAL S.P. (TSP)	-	0.69"
OUTSIDE AIR /RETURN DAMPER POSITIONS	1 1/2" / NONE	
TYPE OF DAMPER	ECONOMIZER	
(IF UNIT IS AAON)-SETTINGS:		
FREEZESTAT (SET @ 38 DEGREE F)	38	
COMPRESSOR LOCKOUT (SET @ 45	45	
PHASE-BROWNOUT (BLUE) MONITOR IN CABINET		
Line VOLT AVERAGE (DIAL) SETTING	487	
VOLT-VARIANCE = 10	10	
3RD DIAL = 10S SET PT	10	

REMARKS:

TEST DATE: 4/18/12 READINGS BY: AG PAGE: \\

SQUARE DUCT TRAVERSE FORM



PROJECT	KROGER 509	SYSTEM	RTU-3
LOCATION	DALLAS, TX	SERVICE	TS-3 (SUPPLY)
ALTITUDE	-	DENSITY -	FACTOR

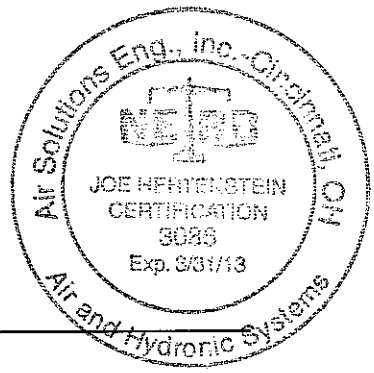
DUCT			REQUIRED		ACTUAL	
S.P.(act)		TEMP -	SCFM	-	SCFM	-
SIZE	24x36		FPM		FPM	885
AREA (ft)	6 ft2		CFM	5000	CFM	5310 @ 43 Hz

DISTANCE FROM BOTTOM	POSITION	1	2	3	4	5	6	7	8	9	10	11	12
1ST	1	1169	1066	949	899	872							
	2	1345	998	764	759	877							
	3	1428	897	684	607	845		INITIAL					
	4	1381	761	561	503	792							
	5	1226	776	459	680	828							
	6												
	7												
2ND	8												
	9							FINAL					
	10												
	11												
	12												
	13												
	14												
DISTANCE FROM DUCT EDGE													
VELOCITY SUB - TOTALS													

REMARKS:

TEST DATE: 4/18/12 READINGS BY: AG PAGE: 12

AIR APPARATUS TEST REPORT



PROJECT: KROGER - 509

SYSTEM/UNIT: RTU-4

UNIT DATA:		
UNIT MANF.	AAON	
MODEL #	RN-015-3-0-CA02	
SERIAL #	201110ANGL18924	
DISCHARGE	VERTICAL	
SHEAVE DIAM / BORE	DD	DD
# BELTS / SIZE	DD	DD
# FILTERS / SIZE	4	20X25X2
UNIT TAG (BarCode on Unit Housing)	-	

MOTOR DATA:		
MOTOR MANF.	BALDOR	
FRAME	-	
HP / RPM	5	1760
VOLTAGE / PHASE	480	3
F.L. AMPS / S.F.	7.6	1.15
SHEAVE DIAM / BORE	DD	DD
C.L. DISTANCE	DD	
MOTOR EFF-P.F.	-	

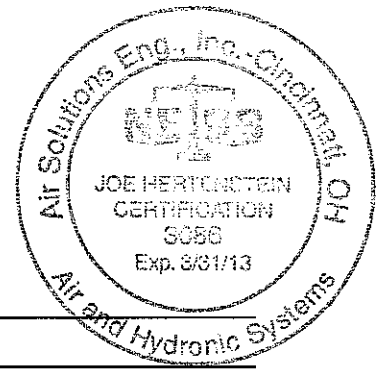
TEST DATA	DESIGN	ACTUAL
CFM	5000	5059
FAN RPM (INITIAL)	-	43 Hz
FAN RPM (FINAL)	-	39 Hz
MOTOR RPM	1760	39 Hz
R.L. VOLTAGE	460	488/482/486
R.L. AMPERAGE (INITIAL)	7.6	-
R.L. AMPERAGE (FINAL)	7.6	1.6/1.2/1.6
RETURN AIR CFM	4000	4032
OUTSIDE AIR CFM	1000	1027
ROTATION	-	OK
DX FILTER CONDITION	DIRTY	

TEST DATA	DESIGN	ACTUAL
E.S.P. SUCTION	-	-0.25"
E.S.P. DISCHARGE	-	0.05"
TOTAL E.S.P.	0.35"	0.30"
UNIT TOTAL S.P. (TSP)	-	0.54"
OUTSIDE AIR /RETURN DAMPER POSITIONS	1" / NONE	
TYPE OF DAMPER	ECONOMIZER	
(IF UNIT IS AAON)-SETTINGS:		
FREEZESTAT (SET @ 38 DEGREE F)	38	
COMPRESSOR LOCKOUT (SET @ 45	45	
PHASE-BROWNOUT (BLUE) MONITOR IN CABINET		
Line VOLT AVERAGE (DIAL) SETTING	486	
VOLT-VARIANCE = 10	10	
3RD DIAL = 10S SET PT	10	

REMARKS:

TEST DATE: 4/18/12 READINGS BY: AG

AIR APPARATUS TEST REPORT



PROJECT: KROGER - 509

SYSTEM/UNIT: RTU-5

UNIT DATA:		
UNIT MANF.	AAON	
MODEL #	RN-015-3-0-CA02	
SERIAL #	201110ANCL04620	
DISCHARGE	VERTICAL	
SHEAVE DIAM / BORE	DD	DD
# BELTS / SIZE	DD	DD
# FILTERS / SIZE	4	20X25X2
UNIT TAG (BarCode on Unit Housing)	-	

MOTOR DATA:		
MOTOR MANF.	BALDOR	
FRAME	-	
HP / RPM	5	1760
VOLTAGE / PHASE	480	3
F.L. AMPS / S.F.	7.6	1.15
SHEAVE DIAM / BORE	DD	DD
C.L. DISTANCE	DD	
MOTOR EFF-P.F.	-	

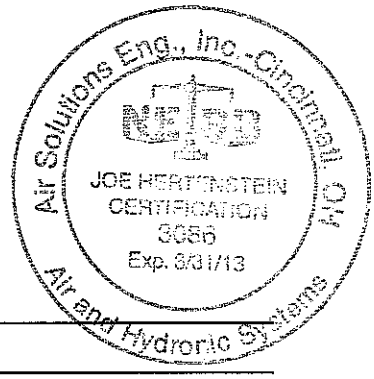
TEST DATA	*DESIGN*	*ACTUAL*
CFM	5000	5213
FAN RPM (INITIAL)	-	44 Hz
FAN RPM (FINAL)	-	40 Hz
MOTOR RPM	1760	40 Hz
R.L. VOLTAGE	460	491/485/489
R.L. AMPERAGE (INITIAL)	7.6	-
R.L. AMPERAGE (FINAL)	7.6	1.8/1.7/1.9
RETURN AIR CFM	5000	5213
OUTSIDE AIR CFM	0	0
ROTATION	-	OK
DX FILTER CONDITION	DIRTY	

TEST DATA	*DESIGN*	*ACTUAL*
E.S.P. SUCTION	-	-0.39"
E.S.P. DISCHARGE	-	0.09"
TOTAL E.S.P.	0.80"	0.48"
UNIT TOTAL S.P. (TSP)	-	0.83"
OUTSIDE AIR /RETURN DAMPER POSITIONS	0 / NONE	
TYPE OF DAMPER	ECONOMIZER	
(IF UNIT IS AAON)-SETTINGS:		
FREEZESTAT (SET @ 38 DEGREE F)	38	
COMPRESSOR LOCKOUT (SET @ 45	45	
PHASE-BROWNOUT (BLUE) MONITOR IN CABINET		
Line VOLT AVERAGE (DIAL) SETTING	488	
VOLT-VARIANCE = 10	10	
3RD DIAL = 10S SET PT	10	

REMARKS:

TEST DATE: 4/19/12 READINGS BY: AG

AIR APPARATUS TEST REPORT



PROJECT: KROGER - 509

SYSTEM/UNIT: RTU-6

UNIT DATA:		
UNIT MANF.	AAON	
MODEL #	RN-015-3-0-CA02	
SERIAL #	201110ANCL04621	
DISCHARGE	VERTICAL	
SHEAVE DIAM / BORE	DD	DD
# BELTS / SIZE	DD	DD
# FILTERS / SIZE	4	20X25X2
UNIT TAG (BarCode on Unit Housing)	-	

MOTOR DATA:		
MOTOR MANF.	BALDOR	
FRAME	-	
HP / RPM	5	1760
VOLTAGE / PHASE	480	3
F.L. AMPS / S.F.	7.6	1.15
SHEAVE DIAM / BORE	DD	DD
C.L. DISTANCE	DD	
MOTOR EFF-P.F.	-	

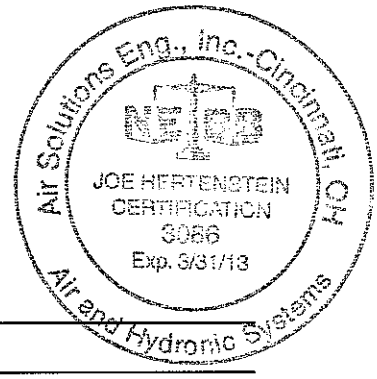
TEST DATA	DESIGN	ACTUAL
CFM	5000	5244
FAN RPM (INITIAL)	-	44 Hz
FAN RPM (FINAL)	-	40 Hz
MOTOR RPM	1760	40 Hz
R.L. VOLTAGE	460	488/483/486
R.L. AMPERAGE (INITIAL)	7.6	-
R.L. AMPERAGE (FINAL)	7.6	1.8/2.0/1.6
RETURN AIR CFM	5000	5244
OUTSIDE AIR CFM	0	0
ROTATION	-	OK
DX FILTER CONDITION	DIRTY	

TEST DATA	DESIGN	ACTUAL
E.S.P. SUCTION	-	-0.39"
E.S.P. DISCHARGE	-	0.10"
TOTAL E.S.P.	0.15"	0.49"
UNIT TOTAL S.P. (TSP)	-	0.82"
OUTSIDE AIR /RETURN DAMPER POSITIONS	0 / NONE	
TYPE OF DAMPER	ECONOMIZER	
(IF UNIT IS AAON)-SETTINGS:		
FREEZESTAT (SET @ 38 DEGREE F)	38	
COMPRESSOR LOCKOUT (SET @ 45	45	
PHASE-BROWNOUT (BLUE) MONITOR IN CABINET		
Line VOLT AVERAGE (DIAL) SETTING	486	
VOLT-VARIANCE = 10	10	
3RD DIAL = 10S SET PT	10	

REMARKS:

TEST DATE: READINGS BY: PAGE: 5

AIR APPARATUS TEST REPORT



PROJECT: KROGER - 509

SYSTEM/UNIT: RTU-7

UNIT DATA:		
UNIT MANF.	AAON	
MODEL #	RN-015-3-0-CA02	
SERIAL #	201110ANGL18925	
DISCHARGE	VERTICAL	
SHEAVE DIAM / BORE	DD	DD
# BELTS / SIZE	DD	DD
# FILTERS / SIZE	4	20X25X2
UNIT TAG (BarCode on Unit Housing)	-	

MOTOR DATA:		
MOTOR MANF.	BALDOR	
FRAME	-	
HP / RPM	5	1760
VOLTAGE / PHASE	480	3
F.L. AMPS / S.F.	7.6	1.15
SHEAVE DIAM / BORE	DD	DD
C.L. DISTANCE	DD	
MOTOR EFF-P.F.	-	

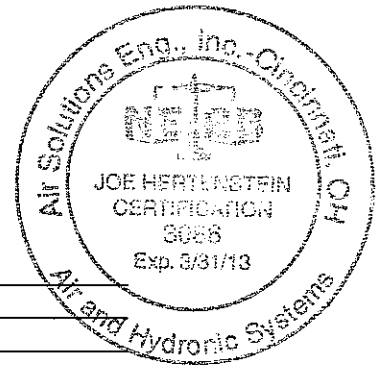
TEST DATA	*DESIGN*	*ACTUAL*
CFM	5000	5244
FAN RPM (INITIAL)	-	43 Hz
FAN RPM (FINAL)	-	43 Hz
MOTOR RPM	1760	43 Hz
R.L. VOLTAGE	460	488/483/488
R.L. AMPERAGE (INITIAL)	7.6	-
R.L. AMPERAGE (FINAL)	7.6	1.9/2.6/2.0
RETURN AIR CFM	4000	4212
OUTSIDE AIR CFM	1000	1032
ROTATION	-	OK
DX FILTER CONDITION	OK	

TEST DATA	*DESIGN*	*ACTUAL*
E.S.P. SUCTION	-	-0.25"
E.S.P. DISCHARGE	-	0.15"
TOTAL E.S.P.	0.35"	0.40"
UNIT TOTAL S.P. (TSP)	-	0.82"
OUTSIDE AIR /RETURN DAMPER POSITIONS	1 1/4" / NONE	
TYPE OF DAMPER	ECONOMIZER	
(IF UNIT IS AAON)-SETTINGS:		
FREEZESTAT (SET @ 38 DEGREE F)	38	
COMPRESSOR LOCKOUT (SET @ 45	45	
PHASE-BROWNOUT (BLUE) MONITOR IN CABINET		
Line VOLT AVERAGE (DIAL) SETTING	486	
VOLT-VARIANCE = 10	10	
3RD DIAL = 10S SET PT	10	

REMARKS:

TEST DATE: 4/18/12 READINGS BY: AG PAGE: 16

SQUARE DUCT TRAVERSE FORM



PROJECT	KROGER 509	SYSTEM	RTU-7
LOCATION	DALLAS, TX	SERVICE	TS-8 (SUPPLY)
ALTITUDE	-	DENSITY -	FACTOR

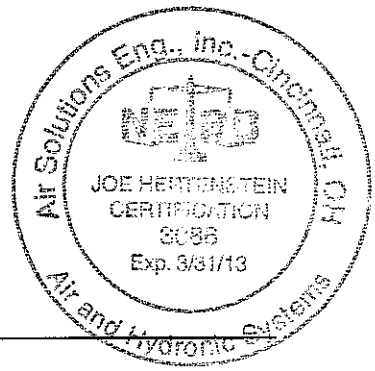
DUCT			REQUIRED		ACTUAL	
S.P.(act)		TEMP -	SCFM	-	SCFM	-
SIZE	24x36		FPM		FPM	874
AREA (ft)	6 ft2		CFM	5000	CFM	5244 @ 43 Hz

DISTANCE FROM BOTTOM	POSITION	1	2	3	4	5	6	7	8	9	10	11	12
1ST	1	876	895	1022	1271	1268							
	2	784	775	1153	1378	1275							
	3	617	557	820	1137	1180		INITIAL					
	4	578	464	617	700	973							
	5	656	521	605	670	1071							
	6												
	7												
2ND	8												
	9							FINAL					
	10												
	11												
	12												
	13												
	14												
DISTANCE FROM DUCT EDGE													
VELOCITY SUB - TOTALS													

REMARKS:

TEST DATE: 4/18/12 READINGS BY: AG PAGE: 17

AIR APPARATUS TEST REPORT



PROJECT: KROGER - 509

SYSTEM/UNIT: RTU-8

UNIT DATA:		
UNIT MANF.	AAON	
MODEL #	RN-015-3-0-CA02	
SERIAL #	201110ANGL18926	
DISCHARGE	VERTICAL	
SHEAVE DIAM / BORE	DD	DD
# BELTS / SIZE	DD	DD
# FILTERS / SIZE	4	20X25X2
UNIT TAG (BarCode on Unit Housing)	-	

MOTOR DATA:		
MOTOR MANF.	BALDOR	
FRAME	-	
HP / RPM	5	1725
VOLTAGE / PHASE	480	3
F.L. AMPS / S.F.	7.6	1.15
SHEAVE DIAM / BORE	DD	DD
C.L. DISTANCE	DD	
MOTOR EFF-P.F.	-	

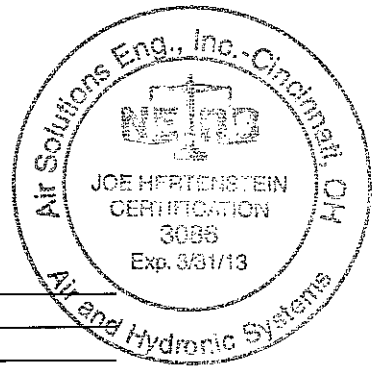
TEST DATA	*DESIGN*	*ACTUAL*
CFM	5000	5280
FAN RPM (INITIAL)	-	43 Hz
FAN RPM (FINAL)	-	43 Hz
MOTOR RPM	1760	43 Hz
R.L. VOLTAGE	460	489/484/488
R.L. AMPERAGE (INITIAL)	7.6	-
R.L. AMPERAGE (FINAL)	7.6	2.4/1.9/2.0
RETURN AIR CFM	4000	4236
OUTSIDE AIR CFM	1000	1044
ROTATION	-	OK
DX FILTER CONDITION	OK	

TEST DATA	*DESIGN*	*ACTUAL*
E.S.P. SUCTION	-	-0.25"
E.S.P. DISCHARGE	-	0.08"
TOTAL E.S.P.	0.35"	0.33"
UNIT TOTAL S.P. (TSP)	-	0.53"
OUTSIDE AIR /RETURN DAMPER POSITIONS	3/4" / NONE	
TYPE OF DAMPER	ECONOMIZER	
(IF UNIT IS AAON)-SETTINGS:		
FREEZESTAT (SET @ 38 DEGREE F)	38	
COMPRESSOR LOCKOUT (SET @ 45	45	
PHASE-BROWNOUT (BLUE) MONITOR IN CABINET		
Line VOLT AVERAGE (DIAL) SETTING	487	
VOLT-VARIANCE = 10	10	
3RD DIAL = 10S SET PT	10	

REMARKS:

TEST DATE: 4/18/12 READINGS BY: AG PAGE: 8

SQUARE DUCT TRAVERSE FORM



PROJECT	KROGER 509	SYSTEM	RTU-8
LOCATION	DALLAS, TX	SERVICE	TS-9 (SUPPLY)
ALTITUDE	-	DENSITY -	FACTOR

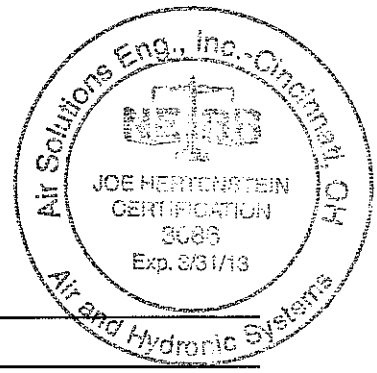
DUCT			REQUIRED		ACTUAL	
S.P. (act)		TEMP -	SCFM	-	SCFM	-
SIZE	24x36		FPM		FPM	880
AREA (ft)	6 ft2		CFM	5000	CFM	5280

DISTANCE FROM BOTTOM	POSITION	1	2	3	4	5	6	7	8	9	10	11	12
1ST	1	592	633	855	1175	1277							
	2	718	772	990	1421	1601							
	3	661	610	839	987	1531		INITIAL					
	4	640	553	639	635	1406							
	5	720	531	425	691	1088							
	6												
	7												
2ND	8												
	9							FINAL					
	10												
	11												
	12												
	13												
	14												
DISTANCE FROM DUCT EDGE													
VELOCITY SUB - TOTALS													

REMARKS:

TEST DATE: 4/18/12 READINGS BY: AG PAGE: 19

AIR APPARATUS TEST REPORT



PROJECT: KROGER - 509

SYSTEM/UNIT: RTU-9

UNIT DATA:		
UNIT MANF.	AAON	
MODEL #	RN-007-3-0-CA01	
SERIAL #	201110ANG618934	
DISCHARGE	VERTICAL	
SHEAVE DIAM / BORE	DD	DD
# BELTS / SIZE	DD	DD
# FILTERS / SIZE	4	16X20X2
UNIT TAG (BarCode on Unit Housing)	-	

MOTOR DATA:		
MOTOR MANF.	BALDOR	
FRAME	-	
HP / RPM	2	1760
VOLTAGE / PHASE	480	3
F.L. AMPS / S.F.	3.4	1.15
SHEAVE DIAM / BORE	DD	DD
C.L. DISTANCE	DD	
MOTOR EFF-P.F.	-	

TEST DATA	*DESIGN*	*ACTUAL*
CFM	2800	2897
FAN RPM (INITIAL)	-	30.5 Hz
FAN RPM (FINAL)	-	60 Hz
MOTOR RPM	1760	60 Hz
R.L. VOLTAGE	460	488/484/487
R.L. AMPERAGE (INITIAL)	3.4	-
R.L. AMPERAGE (FINAL)	3.4	1.3/1.3/1.6
RETURN AIR CFM	2450	1239
OUTSIDE AIR CFM	350	1658 **[1]**
ROTATION	-	OK
DX FILTER CONDITION	DIRTY	

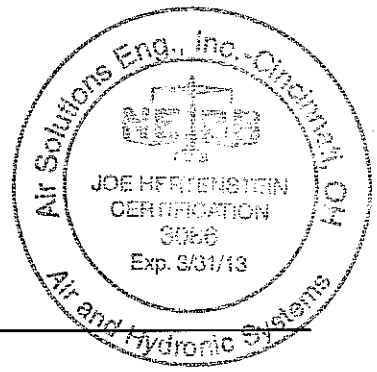
TEST DATA	*DESIGN*	*ACTUAL*
E.S.P. SUCTION	-	-0.09"
E.S.P. DISCHARGE	-	0.56"
TOTAL E.S.P.	0.35"	0.65"
UNIT TOTAL S.P. (TSP)	-	1.12"
OUTSIDE AIR /RETURN DAMPER POSITIONS	100 / NONE	
TYPE OF DAMPER	ECONOMIZER	

(IF UNIT IS AAON)-SETTINGS:	
FREEZESTAT (SET @ 38 DEGREE F)	38
COMPRESSOR LOCKOUT (SET @ 45	45
PHASE-BROWNOUT (BLUE) MONITOR IN CABINET	
Line VOLT AVERAGE (DIAL) SETTING	487
VOLT-VARIANCE = 10	10
3RD DIAL = 10S SET PT	10

REMARKS:

[1] ECONOMIZER WILL NOT GO TO MIN, ONLY 100% OPEN OR CLOSED. UNIT VIBRATES.

AIR OUTLET TEST REPORT



PROJECT: KROGER 509

SYSTEM/UNIT: RTU-9

AREA SERVED	OUTLET NO	OUTLET TYPE	DESIGN CFM	PRELIMINARY (CFM)1	PRELIMINARY (CFM)2	PRELIMINARY (CFM)3	FINAL CFM	% TO DESGN	REMS
LUNCHROOM	1	CD	300	153		398	398	1.33	[1]
LUNCHROOM	2	CD	300	169		424	424	1.41	[1]
HALLWAY	3	CD	1100	746		1082	1082	0.98	
HALLWAY	4	CD	1100	402		994	994	0.90	
RTU-9 TOTAL			**2800**	**1470**		**2898**	**2898**	**1.04**	

REMARKS

[1] BALANCE DAMPERS 10' ABOVE CEILING.

TEST DATE: READINGS BY: PAGE: 21

AIR APPARATUS TEST REPORT

Air Solutions Eng., Inc. - Cincinnati, OH
NEBB
JOE HERTENSTEIN
CERTIFICATION
3086
Exp. 3/31/13
Air and Hydronic Systems

PROJECT: KROGER - 509

SYSTEM/UNIT: RTU-10

UNIT DATA:		
UNIT MANF.	AAON	
MODEL #	RN-008-3-0-CA01	
SERIAL #	201110ANGH18935	
DISCHARGE	VERTICAL	
SHEAVE DIAM / BORE	DD	DD
# BELTS / SIZE	DD	DD
# FILTERS / SIZE	4	16X20X2
UNIT TAG (BarCode on Unit Housing)	-	

MOTOR DATA:		
MOTOR MANF.	BALDOR	
FRAME	-	
HP / RPM	2	1760
VOLTAGE / PHASE	480	3
F.L. AMPS / S.F.	3.4	1.15
SHEAVE DIAM / BORE	DD	DD
C.L. DISTANCE	DD	
MOTOR EFF-P.F.	-	

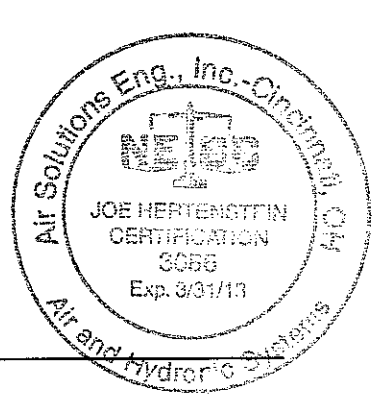
TEST DATA	DESIGN	ACTUAL
CFM	3200	2937
FAN RPM (INITIAL)	-	40.5 Hz
FAN RPM (FINAL)	-	60 Hz
MOTOR RPM	1760	60 Hz
R.L. VOLTAGE	460	491/485/489
R.L. AMPERAGE (INITIAL)	3.4	-
R.L. AMPERAGE (FINAL)	3.4	1.7/1.7/1.8
RETURN AIR CFM	2850	2560
OUTSIDE AIR CFM	350	377
ROTATION	-	OK
DX FILTER CONDITION	DIRTY	

TEST DATA	DESIGN	ACTUAL
E.S.P. SUCTION	-	-0.34"
E.S.P. DISCHARGE	-	0.41"
TOTAL E.S.P.	0.80"	0.75"
UNIT TOTAL S.P. (TSP)	-	1.13"
OUTSIDE AIR /RETURN DAMPER POSITIONS	5/8" / NONE	
TYPE OF DAMPER	ECONOMIZER	
(IF UNIT IS AAON)-SETTINGS:		
FREEZESTAT (SET @ 38 DEGREE F)	38	
COMPRESSOR LOCKOUT (SET @ 45	45	
PHASE-BROWNOUT (BLUE) MONITOR IN CABINET		
Line VOLT AVERAGE (DIAL) SETTING	488	
VOLT-VARIANCE = 10	10	
3RD DIAL = 10S SET PT	10	

REMARKS:

TEST DATE: 4/18/12 READINGS BY: AG

AIR OUTLET TEST REPORT



PROJECT: KROGER 509

SYSTEM/UNIT: RTU-10

AREA SERVED	OUTLET NO	OUTLET TYPE	DESIGN CFM	PRELIMINARY (CFM)1	PRELIMINARY (CFM)2	PRELIMINARY (CFM)3	FINAL CFM	% TO DESGN	REMS
BACK STORAGE	1	CD	1950	870	1397		1397	0.72	[2]
OFFICE	2	CD	200	169	259		259	1.30	[1]
OFFICE	3	CD	300	299	452		452	1.51	[1]
OFFICE	4	CD	300	128	192		192	0.64	[1]
OFFICE	5	CD	150	177	269		269	1.79	[1]
OFFICE	6	CD	300	243	368		368	1.23	[1]
RTU-10 TOTAL			**3200**	**1886**	**2937**		**2937**	**0.92**	

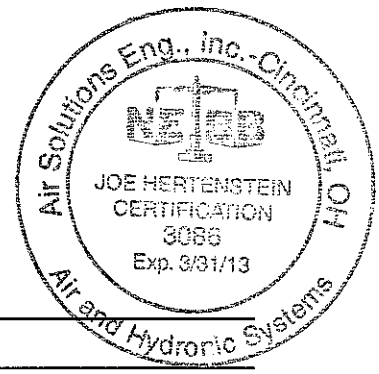
REMARKS

[1] BALANCE DAMPERS ARE 10' ABOVE CEILING.

[2] BALANCE DAMPER IS 100% OPEN.

TEST DATE: 4/18/12 READINGS BY: AG

AIR APPARATUS TEST REPORT



PROJECT: KROGER - 509

SYSTEM/UNIT: RTU-11

UNIT DATA:		
UNIT MANF.	AAON	
MODEL #	RN-010-3-0-CA01	
SERIAL #	201110-ANGJ18936	
DISCHARGE	VERTICAL	
SHEAVE DIAM / BORE	DD	DD
# BELTS / SIZE	DD	DD
# FILTERS / SIZE	4	16X20X2
UNIT TAG (BarCode on Unit Housing)	-	

MOTOR DATA:		
MOTOR MANF.	BALDOR	
FRAME	-	
HP / RPM	3	1760
VOLTAGE / PHASE	480	3
F.L. AMPS / S.F.	4.8	1.15
SHEAVE DIAM / BORE	DD	DD
C.L. DISTANCE	DD	
MOTOR EFF-P.F.	-	

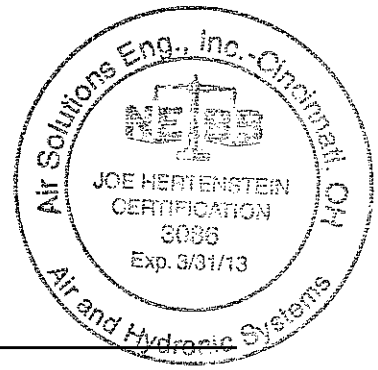
TEST DATA	*DESIGN*	*ACTUAL*
CFM	4000	4008
FAN RPM (INITIAL)	-	30 Hz
FAN RPM (FINAL)	-	60 Hz
MOTOR RPM	1760	60 Hz
R.L. VOLTAGE	460	490/489/485
R.L. AMPERAGE (INITIAL)	4.8	-
R.L. AMPERAGE (FINAL)	4.8	1.9/2.0/2.5
RETURN AIR CFM	3575	3590
OUTSIDE AIR CFM	425	418
ROTATION	-	OK
DX FILTER CONDITION	DIRTY	

TEST DATA	*DESIGN*	*ACTUAL*
E.S.P. SUCTION	-	-0.34"
E.S.P. DISCHARGE	-	0.15"
TOTAL E.S.P.	0.80"	0.49"
UNIT TOTAL S.P. (TSP)	-	1.51"
OUTSIDE AIR /RETURN DAMPER POSITIONS	3/4" / NONE	
TYPE OF DAMPER	ECONOMIZER	
(IF UNIT IS AAON)-SETTINGS:		
FREEZESTAT (SET @ 38 DEGREE F)	38	
COMPRESSOR LOCKOUT (SET @ 45	45	
PHASE-BROWNOUT (BLUE) MONITOR IN CABINET		
Line VOLT AVERAGE (DIAL) SETTING	486	
VOLT-VARIANCE = 10	10	
3RD DIAL = 10S SET PT	10	

REMARKS:

TEST DATE: 4/18/12 READINGS BY: AG

AIR OUTLET TEST REPORT



PROJECT: KROGER 509

SYSTEM/UNIT: RTU-11

AREA SERVED	OUTLET NO	OUTLET TYPE	DESIGN CFM	PRELIMINARY (CFM)1	PRELIMINARY (CFM)2	PRELIMINARY (CFM)3	FINAL CFM	REMS
BACK STORAGE	1	CD	1000	337	674		674	[2]
BACK STORAGE	2	CD	1000	287	574		574	[2]
DOCK	3	AA	2000	1380	2760		2760	[1]
RTU-11 TOTAL			**4000**	**2004**	**4008**		**4008**	

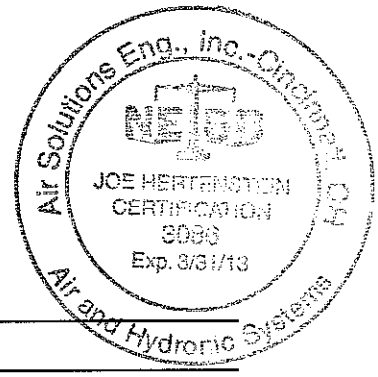
REMARKS

[1] NO BALANCE DAMPER LOCATED.

[2] BALANCE DAMPER OPEN 100%.

TEST DATE: 4/18/12 READINGS BY: AG

AIR APPARATUS TEST REPORT



PROJECT: KROGER - 509

SYSTEM/UNIT: RTU-12

UNIT DATA:		
UNIT MANF.	AAON	
MODEL #	RN-013-3-0-CA02	
SERIAL #	201110ANGK18923	
DISCHARGE	VERTICAL	
SHEAVE DIAM / BORE	DD	DD
# BELTS / SIZE	DD	DD
# FILTERS / SIZE	4	20X25X2
UNIT TAG (BarCode on Unit Housing)	-	

MOTOR DATA:		
MOTOR MANF.	BALDOR	
FRAME	-	
HP / RPM	5	1760
VOLTAGE / PHASE	480	3
F.L. AMPS / S.F.	7.6	1.15
SHEAVE DIAM / BORE	DD	DD
C.L. DISTANCE	DD	
MOTOR EFF-P.F.	-	

TEST DATA	DESIGN	ACTUAL
CFM	5200	5258
FAN RPM (INITIAL)	-	47 Hz
FAN RPM (FINAL)	-	44 Hz
MOTOR RPM	1760	44 Hz
R.L. VOLTAGE	460	481/488/484
R.L. AMPERAGE (INITIAL)	7.6	-
R.L. AMPERAGE (FINAL)	7.6	2.4/2.3/2.1
RETURN AIR CFM	4650	4666
OUTSIDE AIR CFM	550	592
ROTATION	-	OK
DX FILTER CONDITION	DIRTY	

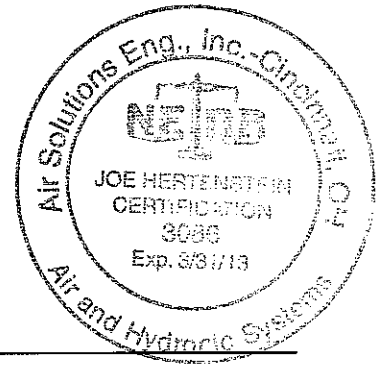
TEST DATA	DESIGN	ACTUAL
E.S.P. SUCTION	-	-0.25"
E.S.P. DISCHARGE	-	0.55"
TOTAL E.S.P.	0.80"	0.80"
UNIT TOTAL S.P. (TSP)	-	1.00"
OUTSIDE AIR /RETURN DAMPER POSITIONS	3/4" / NONE	
TYPE OF DAMPER	ECONOMIZER	
(IF UNIT IS AAON)-SETTINGS:		
FREEZESTAT (SET @ 38 DEGREE F)	NONE	
COMPRESSOR LOCKOUT (SET @ 45	45	
PHASE-BROWNOUT (BLUE) MONITOR IN CABINET		
Line VOLT AVERAGE (DIAL) SETTING	485	
VOLT-VARIANCE = 10	10	
3RD DIAL = 10S SET PT	10	

REMARKS:

***CONDENSATE DRAIN BLOCKS ACCESS DOOR.**

TEST DATE: 4/18/12 READINGS BY: AG PAGE: 26

AIR OUTLET TEST REPORT



PROJECT: KROGER 509

SYSTEM/UNIT: RTU-12

AREA SERVED	OUTLET NO	OUTLET TYPE	DESIGN CFM	PRELIMINARY (CFM)1	PRELIMINARY (CFM)2	PRELIMINARY (CFM)3	FINAL CFM	% TO DESGN	REMS
BAKERY	1	CD	400	479	450		450	1.13	
BAKERY	2	CD	400	445	413		413	1.03	
BAKERY	3	CD	400	455	438		438	1.10	
BAKERY	4	CD	400	403	397		397	0.99	
BAKERY	5	CD	400	450	415		415	1.04	
DELI PREP	6	CD	400	494	462		462	1.16	
DELI PREP	7	CD	400	367	379		379	0.95	
DELI PREP	8	CD	400	573	428		428	1.07	
DELI PREP	9	CD	350	465	431		431	1.23	
RESTROOM	10	CD	225	277	224		224	1.00	
RESTROOM	11	CD	225	197	204		204	0.91	
SEATING	12	CD	600	547	520		520	0.87	
SEATING	13	CD	600	520	497		497	0.83	
RTU-12 TOTAL			**5200**	**5672**	**5258**		**5258**	**1.01**	

REMARKS

TEST DATE: 4/19/12 READINGS BY: AG PAGE: 21

AIR APPARATUS TEST REPORT

Air Solutions Eng., Inc. Cincinnati, OH
NEBB
JOE HERTENSTEIN
CERTIFICATION
3056
Exp. 3/31/13
Air and Hydronic Systems

PROJECT: KROGER - 509
SYSTEM/UNIT: RTU-13

UNIT DATA:		
UNIT MANF.	AAON	
MODEL #	RN-011-3-0-CA01	
SERIAL #	201110ANGZ18927	
DISCHARGE	VERTICAL	
SHEAVE DIAM / BORE	DD	DD
# BELTS / SIZE	DD	DD
# FILTERS / SIZE	4	20X25X2
UNIT TAG (BarCode on Unit Housing)	-	

MOTOR DATA:		
MOTOR MANF.	BALDOR	
FRAME	-	
HP / RPM	5	1170
VOLTAGE / PHASE	480	3
F.L. AMPS / S.F.	8.1	1.15
SHEAVE DIAM / BORE	DD	DD
C.L. DISTANCE	DD	
MOTOR EFF-P.F.	-	

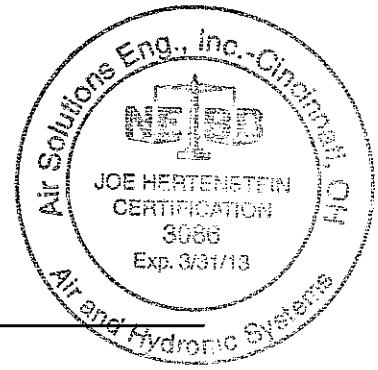
TEST DATA	DESIGN	ACTUAL
CFM	4400	4411
FAN RPM (INITIAL)	-	57 Hz
FAN RPM (FINAL)	-	60 Hz
MOTOR RPM	1170	60 Hz
R.L. VOLTAGE	460	486/481/484
R.L. AMPERAGE (INITIAL)	8.1	-
R.L. AMPERAGE (FINAL)	8.1	1.9/1.6/2.0
RETURN AIR CFM	3400	3425
OUTSIDE AIR CFM	1000	986
ROTATION	-	OK
DX FILTER CONDITION	DIRTY	

TEST DATA	DESIGN	ACTUAL
E.S.P. SUCTION	-	-0.25"
E.S.P. DISCHARGE	-	0.40"
TOTAL E.S.P.	0.80"	0.65"
UNIT TOTAL S.P. (TSP)	-	0.85"
OUTSIDE AIR /RETURN DAMPER POSITIONS	1" / NONE	
TYPE OF DAMPER	ECONOMIZER	
(IF UNIT IS AAON)-SETTINGS:		
FREEZESTAT (SET @ 38 DEGREE F)	38	
COMPRESSOR LOCKOUT (SET @ 45	45	
PHASE-BROWNOUT (BLUE) MONITOR IN CABINET		
Line VOLT AVERAGE (DIAL) SETTING	485	
VOLT-VARIANCE = 10	10	
3RD DIAL = 10S SET PT	10	

REMARKS:

TEST DATE: 4/19/12 READINGS BY: AG PAGE: 28

AIR OUTLET TEST REPORT



PROJECT: KROGER 509

SYSTEM/UNIT: RTU-13

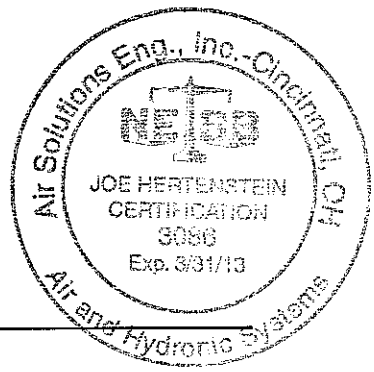
AREA SERVED	OUTLET NO	OUTLET TYPE	DESIGN CFM	PRELIMINARY (CFM)1	PRELIMINARY (CFM)2	PRELIMINARY (CFM)3	FINAL CFM	REMS
CART CORRAL	1	CD	500	489	515		515	
VESTIBULE	2	CD	1950	1222	1294		1294	[1]
VESTIBULE	3	CD	1950	2469	2602		2602	[1]
RTU-13 TOTAL			**4400**	**4180**	**4411**		**4411**	

REMARKS

[1] NO BALANCE DAMPER INSTALLED.

TEST DATE: 4/18/12 READINGS BY: AG

AIR APPARATUS TEST REPORT



PROJECT: KROGER - 509

SYSTEM/UNIT: RTU-14

UNIT DATA:		
UNIT MANF.	AAON	
MODEL #	RQ-004-3-V-CA01	
SERIAL #	201110AYGD02453	
DISCHARGE	VERTICAL	
SHEAVE DIAM / BORE	DD	DD
# BELTS / SIZE	DD	DD
# FILTERS / SIZE	2	20X20X2
UNIT TAG (BarCode on Unit Housing)	-	

MOTOR DATA:		
MOTOR MANF.	BALDOR	
FRAME	-	
HP / RPM	1	1760
VOLTAGE / PHASE	480	3
F.L. AMPS / S.F.	2.1	1.15
SHEAVE DIAM / BORE	DD	DD
C.L. DISTANCE	DD	
MOTOR EFF-P.F.	-	

TEST DATA	DESIGN	ACTUAL
CFM	1600	1618
FAN RPM (INITIAL)	-	60 Hz
FAN RPM (FINAL)	-	54 Hz
MOTOR RPM	1760	54 Hz
R.L. VOLTAGE	460	486/482/488
R.L. AMPERAGE (INITIAL)	2.1	-
R.L. AMPERAGE (FINAL)	2.1	0.6/0.9/0.6
RETURN AIR CFM	1340	1352
OUTSIDE AIR CFM	260	266
ROTATION	-	OK
DX FILTER CONDITION	DIRTY	

TEST DATA	DESIGN	ACTUAL
E.S.P. SUCTION	-	-0.25"
E.S.P. DISCHARGE	-	0.41"
TOTAL E.S.P.	0.50"	0.66"
UNIT TOTAL S.P. (TSP)	-	0.86"
OUTSIDE AIR /RETURN DAMPER POSITIONS	3/4" / NONE	
TYPE OF DAMPER	ECONOMIZER	
(IF UNIT IS AAON)-SETTINGS:		
FREEZESTAT (SET @ 38 DEGREE F)	-	
COMPRESSOR LOCKOUT (SET @ 45	45	
PHASE-BROWNOUT (BLUE) MONITOR IN CABINET		
Line VOLT AVERAGE (DIAL) SETTING	487	
VOLT-VARIANCE = 10	10	
3RD DIAL = 10S SET PT	10	

REMARKS:

TEST DATE: 4/19/12 READINGS BY: AG PAGE: 30

AIR OUTLET TEST REPORT

Air Solutions Eng., Inc.-Cincinnati, OH
NEBB
JOE HERTENSTEIN
CERTIFICATION
3086
Exp. 3/31/13
Air and Hydronic Systems

PROJECT: KROGER 509

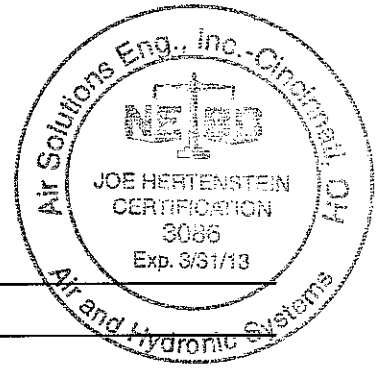
SYSTEM/UNIT: RTU-14

AREA SERVED	OUTLET NO	OUTLET TYPE	DESIGN CFM	PRELIMINARY (CFM)1	PRELIMINARY (CFM)2	PRELIMINARY (CFM)3	FINAL CFM	% TO DESGN	REMS
CONSULTATION	1	CD	200	172	178	180	180	0.90	
PHARMACY	2	CD	450	489	476	478	478	1.06	
PHARMACY	3	CD	450	465	452	457	457	1.02	
PHARMACY	4	CD	450	612	450	455	455	1.01	
RR	5	CD	50	113	81	48	48	0.96	
RTU-14 TOTAL			**1600**	**1851**	**1637**	**1618**	**1618**	**1.01**	

REMARKS

TEST DATE: READINGS BY: PAGE: 3

FAN TEST REPORT



PROJECT: KROGER 509

SYSTEM/UNIT: EF-2, EF-3, EF-4

FAN DATA	FAN UNIT # EF-2		FAN UNIT # EF-3		FAN UNIT # EF-4	
LOCATION	ROOF		ROOF		ROOF	
SERVICE	REAR RESTROOMS		MEAT SEAFOOD		BAKERY DBL.OVEN	
MANUFACTURER	CAPTIVEAIRE		CAPTIVEAIRE		CAPTIVEAIRE	
MODEL #	DR10HFA		DR30HFA		NCA14HPFA	
SERIAL #	1434446		1434446		1434446	
TYPE	DOWNBLAST		DOWNBLAST		UPBLAST	
MOTOR MANF / FRAME	FASCO	48	MARATHON	48	WEG	C58
MOTOR HP / RPM	.08	1550	1/4	1625	1/2	1730
VOLTAGE / PHASE	115	1	115	1	115/208-230	1
F.L.AMPS / S.F.	1.0	-	4.0	1	7.7/4.3-3.9	1.35
MTR SHEAVE DIA / BORE	DD	DD	DD	DD	VL40	5/8"
FAN SHEAVE DIA / BORE	DD	DD	DD	DD	AK46	3/4"
# BELTS / SIZE	DD	DD	DD	DD	1	AX21
SHEAVE C.L. DISTANCE	DD		DD		5"	

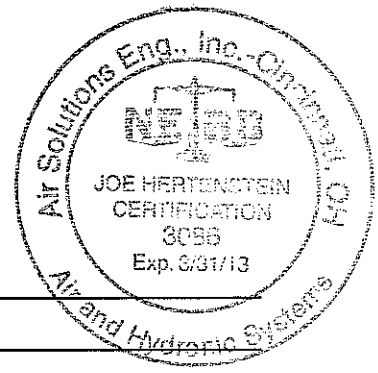
TEST DATA	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL
CFM	200	208	1200	1283	900	[1]
FAN RPM	DD	DD	DD	DD	-	-
MOTOR RPM	DD	DD	DD	DD	1730	-
E.S.P. SUCTION	-	-0.20"	-	-0.32"	-	-
E.S.P. DISCHARGE	-	ATM	-	ATM	-	-
TOTAL E.S.P.	0.13"	0.20"	0.25"	0.32"	1.20"	-
R.L. VOLTAGE	115	119	115	119	115	0
R.L. AMPERAGE	2.0	1.6	4.0	3.6	7.7	0
ROTATION	-	OK	-	OK	-	-

REMARKS:

[1] OVEN NOT STARTED UP YET BY MAINTENANCE. FAN KICKS ON ONLY WHEN OVEN IS IN OPERATION.

TEST DATE: 4/18/12 READINGS BY: AG

FAN TEST REPORT



PROJECT: KROGER 509

SYSTEM/UNIT: EF-5, EF-6, EF-7

FAN DATA	FAN UNIT # EF-5		FAN UNIT # EF-6		FAN UNIT # EF-7	
LOCATION	ROOF		ROOF		ROOF	
SERVICE	DELI HOOD		PUBLIC RESTROOMS		FAMILY RESTROOM	
MANUFACTURER	CAPTIVEAIRE		CAPTIVEAIRE		-	
MODEL #	NCA16FA		DR12HFA		-	
SERIAL #	1434446		1434446		-	
TYPE	UPBLAST		DOWNBLAST		CEILING MOUNT	
MOTOR MANF / FRAME	WEG	D56	FASCO	48	-	-
MOTOR HP / RPM	1 1/2	1710	0.18	1625	-	-
VOLTAGE / PHASE	208-230/460	3	115	1	-	1
F.L.AMPS / S.F.	4.7-4.6/2.3	1.15	2.0	1	-	-
MTR SHEAVE DIA / BORE	VL40	5/8"	DD	DD	-	-
FAN SHEAVE DIA / BORE	AK54	1"	DD	DD	-	-
# BELTS / SIZE	1	AX25	DD	DD	-	-
SHEAVE C.L. DISTANCE	6 1/2"		DD		-	

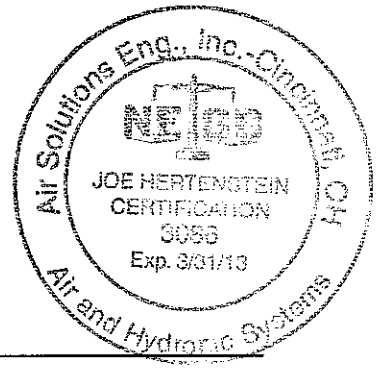
TEST DATA	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL
CFM	3150	3281	600	633	100	[1]
FAN RPM	-	1044	DD	DD	-	-
MOTOR RPM	1710	1740	DD	DD	-	-
E.S.P. SUCTION	-	-0.45"	-	-0.17"	-	-
E.S.P. DISCHARGE	-	ATM	-	ATM	-	-
TOTAL E.S.P.	0.35"	0.45"	0.13"	0.17"	0.13"	-
R.L. VOLTAGE	208	209/211/209	115	119	-	-
R.L. AMPERAGE	4.7	3.2/3.2/3.3	2.0	1.7	-	-
ROTATION	-	OK	-	OK	-	-

REMARKS:

[1] FAN NOT WIRED.

TEST DATE: 4/18/12 READINGS BY: AG

AIR OUTLET TEST REPORT



PROJECT: KROGER 509

SYSTEM/UNIT: EF OUTLETS

AREA SERVED	OUTLET NO	OUTLET TYPE	DESIGN CFM	PRELIMINARY (CFM)1	PRELIMINARY (CFM)2	PRELIMINARY (CFM)3	FINAL CFM	% TO DESGN	REMS
WOMENS	1	F4	300	683	375	419	323	1.08	
MENS	2	F4	300	94	456	404	310	1.03	
EF-6 TOTAL			**600**	**777**	**831**	**823**	**633**	**1.06**	
SEAFOOD	1	F4	300	298	355	329	329	1.10	
SEAFOOD	2	F4	300	377	347	325	325	1.08	
SEAFOOD	3	F4	300	226	326	312	312	1.04	
SEAFOOD	4	F4	300	350	318	318	318	1.06	
EF-3 TOTAL			**1200**	**1251**	**1346**	**1284**	**1284**	**1.07**	
WOMENS	1	F1	100	172	137	108	108	1.08	
MENS	2	F1	100	162	132	100	100	1.00	
EF-2 TOTAL			**200**	**334**	**269**	**208**	**208**	**1.04**	

REMARKS

TEST DATE: 4/18/12 READINGS BY: AG

PROJECT	KROGER 509
HOOD TAG	H-1

GENERAL DATA / HOOD SUMMARY

HOOD DATA							
MODEL	6024 ND	**EXHAUST**		**SUPPLY**		**NET**	
LENGTH	216"	**DESIGN**	**ACTUAL**	**DESIGN**	**ACTUAL**	**DESIGN**	**ACTUAL**
WIDTH	60"	3150	3281				
SIZE RISER #1				← VELOCITY RISER #1		**CONTAINMENT TEST**	
SIZE RISER #2				← VELOCITY RISER #2		**PASS/FAIL**	

comments:

Air Solutions Eng., Inc.-Cincinnati, OH
NEBB
JOE HERTENSTEIN
CERTIFICATION
3056
Exp. 3/31/13
Air and Hydronic Systems

EXHAUST READINGS

U.L. CLASSIFIED GREASE BAFFLE FILTERS

FILTER SIZE	16x16	16x20	20x20	12x12	12x16
SQR. FT. AREA(CORRECTED)	1.615	2.08	2.68	0.83	1.16
# OF FILTERS	***6***	***6***			
AREA	***9.69***	***12.48***			

TOTAL AREA **22.17**

FIELD NOTES

BAFFLE FILTERS INSTALLED

READINGS	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12
VELOCITY R1	139	145	166	168	139	134	138	160	194	194	152	166
VELOCITY R2	132	139	157	156	132	126	134	149	171	176	149	156
VELOCITY R3												
VELOCITY FINAL												

AVERAGE VELOCIY	148
EXHAUST CFM	3281

LEAVE CELLS ABOVE BLANK IF NO READINGS ARE TAKEN (DO NOT INPUT "0")

TEST DATE:

READINGS BY: