AIR CONDITIONER COMMISSIONING REPORT

Redevelopment Authority of the City of Philadelphia - Philadelphia Housing Development Corp.

development

HVAC contractor

address / unit

phone

data verified by (technician signature)

date

System Information

	Manufacturer	Model Number	Serial Number	Installation Date
Outdoor Unit/Condenser				
Air Handler/Evaporator				
Furnace				

System Airflow Requirments

	Capacity	Calculated Load from Manual J or Matrix*	Targeted System Airflow (tons x 450, or from mfr)	Estimated Total System Airflow	Difference (Estimated minus Target Airflow)
AC	tons	tons	cfm	cfm	cfm
Furnace	kBtuh	kBtuh			

* Consult OHCD/PHDC/RDA Specifications for Heating Load and Cooling Load / CFM Estimating Matrices

SYSTEM AIRFLOW VERIFICATION - Use one of the following methods. Note that the Static Pressure method should not be used where duct configuration includes hard bends near measuring points.

Airflow testing - Static Pressure Method

Fan Position	Upstream of Coil Static Pressure	Downstream of Coil Static Pressure	Convert Delta IWC to Air Flow*	Mfr's Blower Performance Air Delivery @ 0.2 ESP
Cooling ( ) Fan On ( )	IWC	IWC	cfm	cfm

* Use air handler manufacturer's table **(attach copy)**

Airflow Testing - Temperature Split Method

	A	B	C	D	E	F
	T(return, dry-bulb)	T(supply, dry-bulb)	T(return, wet-bulb)	Actual Split (A - B)	Target Split (from table, over)	Actual vs. Target (D - E)*
Pre-Adjustment						
Post-Adjustment						

...) Allow system to stabilize for 15 minutes before repeating measurement procedure. If difference is between -3° and -100° F, repeat the measurement taking care to measure temperatures at the center of the airflow. If re-measured difference is still greater than -3° F the system passes, but AC capacity is probably low.

Continue to p. 2 (Refrigerant Charge Testing)

Target Temperature Split (Return Dry-Bulb – Supply Dry-Bulb)

Return Air Dry–Bulb (ºF) ($T_{return, db}$)	Return Air Wet-Bulb (ºF) ($T_{return, wb}$)																											
	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76
70	20.9	20.7	20.6	20.4	20.1	19.9	19.5	19.1	18.7	18.2	17.7	17.2	16.5	15.9	15.2	14.4	13.7	12.8	11.9	11.0	10.0	9.0	7.9	6.8	5.7	4.5	3.2
71	21.4	21.3	21.1	20.9	20.7	20.4	20.1	19.7	19.3	18.8	18.3	17.7	17.1	16.4	15.7	15.0	14.2	13.4	12.5	11.5	10.6	9.5	8.5	7.4	6.2	5.0	3.8
72	21.9	21.8	21.7	21.5	21.2	20.9	20.6	20.2	19.8	19.3	18.8	18.2	17.6	17.0	16.3	15.5	14.7	13.9	13.0	12.1	11.1	10.1	9.0	7.9	6.8	5.6	4.3
73	22.5	22.4	22.2	22.0	21.8	21.5	21.2	20.8	20.3	19.9	19.4	18.8	18.2	17.5	16.8	16.1	15.3	14.4	13.6	12.6	11.7	10.6	9.6	8.5	7.3	6.1	4.8
74	23.0	22.9	22.8	22.6	22.3	22.0	21.7	21.3	20.9	20.4	19.9	19.3	18.7	18.1	17.4	16.6	15.8	15.0	14.1	13.2	12.2	11.2	10.1	9.0	7.8	6.6	5.4
75	23.6	23.5	23.3	23.1	22.9	22.6	22.2	21.9	21.4	21.0	20.4	19.9	19.3	18.6	17.9	17.2	16.4	15.5	14.7	13.7	12.7	11.7	10.7	9.5	8.4	7.2	5.9
76	24.1	24.0	23.9	23.7	23.4	23.1	22.8	22.4	22.0	21.5	21.0	20.4	19.8	19.2	18.5	17.7	16.9	16.1	15.2	14.3	13.3	12.3	11.2	10.1	8.9	7.7	6.5
77	-	24.6	24.4	24.2	24.0	23.7	23.3	22.9	22.5	22.0	21.5	21.0	20.4	19.7	19.0	18.3	17.5	16.6	15.7	14.8	13.8	12.8	11.7	10.6	9.5	8.3	7.0
78	-	-	-	24.7	24.5	24.2	23.9	23.5	23.1	22.6	22.1	21.5	20.9	20.2	19.5	18.8	18.0	17.2	16.3	15.4	14.4	13.4	12.3	11.2	10.0	8.8	7.6
79	-	-	-	-	-	24.8	24.4	24.0	23.6	23.1	22.6	22.1	21.4	20.8	20.1	19.3	18.5	17.7	16.8	15.9	14.9	13.9	12.8	11.7	10.6	9.4	8.1
80	-	-	-	-	-	-	25.0	24.6	24.2	23.7	23.2	22.6	22.0	21.3	20.6	19.9	19.1	18.3	17.4	16.4	15.5	14.4	13.4	12.3	11.1	9.9	8.7
81	-	-	-	-	-	-	-	25.1	24.7	24.2	23.7	23.1	22.5	21.9	21.2	20.4	19.6	18.8	17.9	17.0	16.0	15.0	13.9	12.8	11.7	10.4	9.2
82	-	-	-	-	-	-	-	-	25.2	24.8	24.2	23.7	23.1	22.4	21.7	21.0	20.2	19.3	18.5	17.5	16.6	15.5	14.5	13.4	12.2	11.0	9.7
83	-	-	-	-	-	-	-	-	-	25.3	24.8	24.2	23.6	23.0	22.3	21.5	20.7	19.9	19.0	18.1	17.1	16.1	15.0	13.9	12.7	11.5	10.3
84	-	-	-	-	-	-	-	-	-	25.9	25.3	24.8	24.2	23.5	22.8	22.1	21.3	20.4	19.5	18.6	17.6	16.6	15.6	14.4	13.3	12.1	10.8

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REFRIGERANT CHARGE VERIFICATION - Use Subcooling Method if ambient temperature reaches mfr-specified minimum (or 80° F), otherwise use Weigh-In Method.

Refrigerant Charge Testing - Subcooling Method

	A	B	C	D	E	F	G
	Required Subcooling (Mfr Data or default 15° @ 12 SEER)	**Compressor Discharge Pressure (High Side)**	**Condenser Saturation Temperature**	**Liquid Line Temperature**	**Actual Subcooling Temperature (C - D)**	**Subcooling Variance (E - A)**	**Refrigerant Added (+) or Removed (-)**
Manufacturer's Spec							
Pre-Adjustment							
Post-Adjustment							oz.

Refrigerant Charge Testing - Weigh-In Method

A	B	C	D	E	F	G
Actual Liquid Line Length	**Mfr's Standard Liquid Line Length**	**Difference (A - B)**	**Suction Line OD**	**Liquid Line OD**	**Mfr's Correction** (or from table below)	**Refrigerant Added (+) or Removed (-)**
ft.	ft.	ft.	/ "	/ "	oz/ft	oz.

Combination Line Set Charges

Suction OD	Liquid OD	Total ounces/ft.
5/8"	1/4"	0.30
5/8"	5/16"	0.45
5/8"	3/8"	0.64
3/4"	5/16"	0.48
3/4"	3/8"	0.67
7/8"	5/16"	0.50
7/8"	3/8"	0.68
1-1/8"	3/8"	0.75