



Heating Check Chart


HEAT PUMP CHARGING INSTRUCTIONS									
For use with units using R-410A refrigerant									
FIELD OPERATING PRESSURE CHARGING TABLE FIXED RESTRICTOR (HIGH PRESSURE @ VAPOR VALVE, SUCTION PRESSURE @ SUCTION SERVICE PORT)									
UNIT	INDOOR DRY BULB	OUTDOOR TEMP. °F DRY BULB/WET BULB							
		60/56	50/47	40/38	30/28	20/18	10/9	0/-1	
024	60°	HIGH	408	363	319	292	265	247	229
		SUCT	139	120	101	86	70	57	44
	70°	HIGH	447	400	353	326	300	281	261
		SUCT	141	121	101	86	71	58	46
	80°	HIGH	485	437	389	363	337	317	297
		SUCT	142	122	102	87	71	59	46
036	60°	HIGH	352	331	310	286	262	246	230
		SUCT	113	102	91	78	66	55	43
	70°	HIGH	400	377	354	325	296	280	264
		SUCT	118	107	95	81	67	56	45
	80°	HIGH	454	424	395	365	335	318	301
		SUCT	124	110	97	83	68	57	46
048	60°	HIGH	397	363	330	299	268	252	237
		SUCT	121	106	91	77	63	52	42
	70°	HIGH	445	403	361	333	305	288	271
		SUCT	124	107	90	77	65	54	43
	80°	HIGH	488	443	397	370	343	324	306
		SUCT	128	108	89	77	65	54	43
060	60°	HIGH	368	343	318	289	259	247	234
		SUCT	114	102	91	75	58	48	37
	70°	HIGH	412	386	359	330	301	284	268
		SUCT	118	106	94	78	62	50	38
	80°	HIGH	463	431	399	368	337	321	306
		SUCT	123	109	95	78	61	50	39

REQUIRED LIQUID LINE TEMPERATURE							
Liquid (PSIG) Pressure at Service Valve	Required Subcooling Temperature (°F)						
	6	8	10	12	14	16	
251	78	76	74	72	70	68	
259	80	78	76	74	72	70	
266	82	80	78	76	74	72	
274	84	82	80	78	76	74	
283	86	84	82	80	78	76	
291	88	86	84	82	80	78	
299	90	88	86	84	82	80	
308	92	90	88	86	84	82	
317	94	92	90	88	86	84	
326	96	94	92	90	88	86	
335	98	96	94	92	90	88	
345	100	98	96	94	92	90	
354	102	100	98	96	94	92	
364	104	102	100	98	96	94	
374	106	104	102	100	98	96	
384	108	106	104	102	100	98	
395	110	108	106	104	102	100	
406	112	110	108	106	104	102	
416	114	112	110	108	106	104	
427	116	114	112	110	108	106	
439	118	116	114	112	110	108	
450	120	118	116	114	112	110	
462	122	120	118	116	114	112	
474	124	122	120	118	116	114	

COOLING ONLY CHARGING PROCEDURE
1. Only use subcooling charging method when OD ambient is greater than 70°F and less than 100°F, indoor temp is greater than 70°F and less than 80°F, and line set is less than 80 ft.
2. Operate unit a minimum of 15 minutes before checking the charge.
3. Measure liquid service valve pressure by attaching an accurate gauge to the service port.
4. Measure the liquid line temperature by attaching an accurate thermistor type or electronic thermometer to the liquid line near the outdoor coil.
5. Refer to unit rating plate for required subcooling temperature.
6. Find the point where the required subcooling temperature intersects the measured liquid service valve pressure.
7. To obtain the required subcooling temperature at specific liquid line pressure, add refrigerant if liquid line temperature is higher than indicated. When adding refrigerant, charge in liquid form using a flow restricting device into suction service port. Recover refrigerant if temperature is lower. Allow a tolerance of +/- 3°F.

CAUTION
1. Compressor damage may occur if system is over-charged.
2. Carefully recover refrigerant from this unit before final disposal or when servicing.
3. Never vent refrigerant to atmosphere. Use approved recovery equipment.
4. Wear safety glasses and gloves when handling refrigerant.

OPERATION
To check system operation during Heating or Cooling cycle use the appropriate table. Table indicates whether a correct relationship exists between system operating pressure and air temperature entering indoor and outdoor units. If pressure and temperature do not match on chart, system refrigerant charge may not be correct or other system abnormalities may exist. Do not use table to adjust refrigerant charge. When charging is necessary during heating season, weigh in total charge as indicated on unit rating plate. Rating plate charge is for systems with 15 ft. of line-set. Adjust charge 0.6 oz of refrigerant per foot of 3/8" liquid connecting tubing. Remove any refrigerant remaining in system before recharging if the system has lost complete charge, evacuate and recharge by weight.



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Fig. 1 – 286BN* 024-060

