



Where: American Classic Ice Cream, Bay Shore, NY
When: August 2014
Contractor: Apollo HVAC Corp.

Background:

American Classic is a wholesale ice cream manufacturer. They manufacture and prepare ice cream specialties for caterers, schools, hospitals, restaurants and other industries requiring ice cream products in wholesale quantities; and have done so since 1971. American Classic, servicing Long Island and the five boroughs, has numerous walk-in freezers where product is stored and readied for delivery. They are also major distributors for top brands such as Haagen Dazs, Edy's, Nestles and more. Deliveries are made in their frozen food trucks.

Their operation is dependent upon reliable freezer performance. This performance comes with a very high energy cost running refrigeration 24/7 every day of the year. This is especially apparent in summer months due to the hot humid weather and the high cost of electric here on Long Island. Priority Cool approached the owners with a solution — Priority Cool hydrocarbon refrigerant. We explained that Priority Cool refrigerants have been independently tested and proven to save energy. Priority Cool refrigerants lower the compressor amperage thereby saving energy, and operate at lower pressures which help extend equipment life. The owners gave us permission to do a trial in one 10hp freezer.

In August of 2014 we installed Priority Cool refrigerant in one freezer. There was an immediate 28% decrease in compressor amperage. This freezer was monitored and while continuing to save energy is keeping the freezer approximately 10 degrees colder than with the previous refrigerant. The previous refrigerant was R-408a and was replaced with HC12a/134+. In the several weeks that followed, the freezer has worked flawlessly. The owners have directed that Priority Cool be installed in all the refrigeration systems and perform a study on their delivery trucks. These trucks have evaporator plates with eutectic salt that runs all evening. The study will include pull-down time, electric energy consumed, truck freezer temperature and outdoor temperature. The current refrigerant will be used as a baseline. The results of this new study will be reported in a few weeks.



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Job Name: American Classic Ice Cream
Address: Bay Shore, New York
Date: 8/4/2014
Equipment: Middle Freezer
Make: National Compressor
Model #: 3DS-1000TFC
Serial #: 55051NF4
Refrigerant: R-408a
Priority Cool: HC-12a/134+

	R-408a		HC-12a/134+	
	Running	Defrost	Running	Defrost
Freezer Temp	2.0	7.0	4.0	7.0
Room Temp	85.0	85.0	85.0	85.0
Evap In	3.0	20.0	5.0	17.0
Evap Out	-1.0	20.0	2.0	21.0
Cond In	96.0	87.1	92.0	87.0
Comp Amp L1	21.2	25.0	14.7	15.2
Comp Amp L2	20.8	24.0	15.0	15.1
Comp Amp L3	21.0	23.0	15.2	15.4
Comp Amp Avg	21.0	24.0	15.0	15.2
Suction psi	8.4	26.0	0.4	24.8
Liquid psi	210.6	156.7	112.0	43.2
Discharge Temp	205.0	84.3	172.0	54.8
Liquid Temp	97.5	92.2	92.8	85.6
Suction Temp	46.4	42.3	39.3	42.0
Hot Gas Temp	-	167.0	-	124.0
Charge	29 lbs, 6 oz		13 lbs, 8 oz	

COMMENTS:

Temperatere = Degrees F. | Pressure = psig | Energy Reduction = 28.73% Running | Energy Reduction = 36.53% Defrost



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