



101 Convention Center Head Pressure Test FrigiTech Refrigerant Additive Las Vegas, Nevada July, 2005



Summary

CMAS treated two (2) York 4 Ton Split Systems with Frigi-Tech. The two units serve commercial office space located at 101 Convention Center Dr. in Las Vegas, Nevada with Frigi-Tech. The units were treated July 18th, with the post treatment readings taken on July 29th, ten (10) days later. The units were experiencing high head pressure and were "tripping off". The Frigi-Tech treatments were to evaluate the effectiveness of Frigi-Tech in lowering the head pressure to stop the units from tripping off.

The temperatures and pressure readings were taken, the units treated with Frigi-Tech. The after treatment temperatures and pressure readings taken ten (10) days post treatment. Following are the results of the field test. **The readings before and after:**

York 4 Ton Split Systems 101 Convention Center - The Plaza	Unit # P-3 #84				Unit P-3 #32			
	Before	After	ΔT	%Δ	Before	After	ΔT	%Δ
Measurements & Readings	July 19th	July 29th			July 19th	July 29th		
Ambient Temperature (°F)	121	123	2.0	1.7%	120	120.1	0.1	0.1%
Suction Pressure (PSIG)	78	74	(4.0)	-5.1%	64	57	(7.0)	-10.9%
Suction Line Temperature (°F)	52.7	52.9	0.2	0.4%	85.9	75.2	(10.7)	-12.5%
Evaporator Coil Temp (°F) (P/T Chart)	46	44	(2.0)	-4.3%	37	32	(5.0)	-13.5%
Discharge Pressure (PSIG)	360	335	(25.0)	-6.9%	355	310	(45.0)	-12.7%
Liquid Line Temperature (°F)	123.3	116.5	(6.8)	-5.5%	121.5	120.1	(1.4)	-1.2%
Condenser Temperature (P/T Chart)	144	139	(5.0)	-3.5%	143	127	(16.0)	-11.2%
Condenser Intake Air (°F)	120.1	119.3	(0.8)	-0.7%	123.3	112	(11.3)	-9.2%
Condenser Discharge Air (°F)	138	138	0.0	0.0%	150.1	130	(20.1)	-13.4%

Results:

Analysis shows the ambient temperature was relatively the same before and after the Frigi-Tech treatments. Suction pressure dropped in both cases indicating colder temperatures in the evaporator coils, unit #84 dropped 2 degrees and unit #32 dropped 5 degrees, both units are discharging colder air to the conditioned space as a result of the Frigi-Tech treatments.

The head pressure on both treated units dropped considerably. Head pressure on Unit #84 dropped 25 PSIG from 360 to 335 PSIG. Head pressure on Unit #32 dropped a whopping 45 PSIG from 355 to 310 PSIG, or almost 13%! Result: Increased efficiency in the condensers

The significant drop in head pressures simply means the units do not have to work as hard to subcool the refrigerant in the condenser. The temperatures in the condenser coils have been lowered, too. This should equate to fewer service calls and extended lives of the compressors. The lower head pressure should also stop the units from tripping off. To date, August 1st, neither unit has tripped off due to high head pressure.

Efficiency has also been increased in the evaporator coils. The drop in the coils temperatures show the units are providing colder air into the conditioned space which should make for happier tenants and the units should cycle off more saving energy consumption dollars. Result: Increased efficiency in the evaporator coils. All of these results are consistent with other Frigi-Tech treatments performed by CAMS.