

REFRIGERATION TEST

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10 floz of **RESTORE1030™** was injected into Unit H8-LL30X-EWL on June 22, 2010. This unit is approximately 8 years old. The energy consumption of this unit is monitored by a smart meter and data is recorded. The purpose is to measure the reduction in energy consumption after the injection of **RESTORE1030™**. We have some pressure readings to work with that will shed some light on the results.

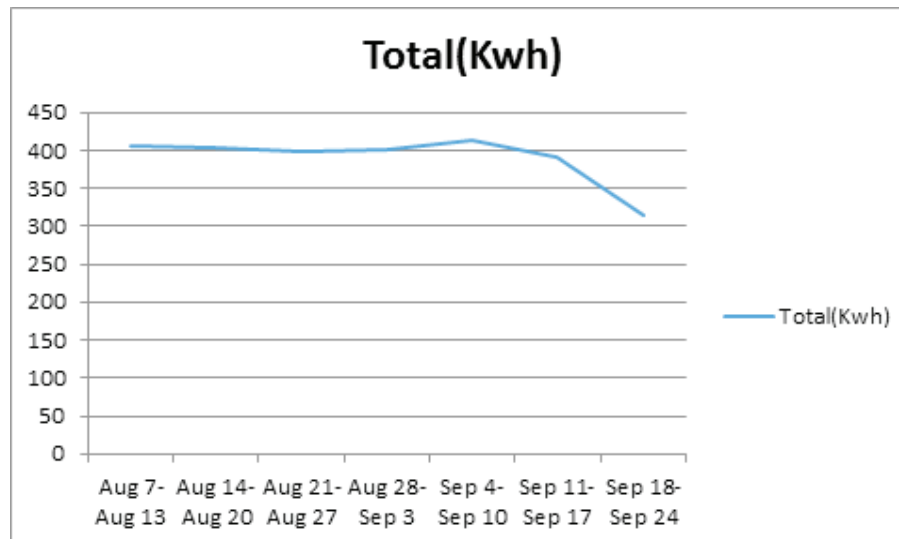
		Low(bar)	High(bar)	Low(psi)	High(psi)
Week 1	before installation	1.5	21	22.04	308.61
Week 1	30 min after installation	1.1	22	16.17	323.31
Week 4		1	17	14.7	249.83
17-Sep	adjustment	1	15.5	14.7	227.78

The week 1 numbers are fairly typical of a unit right after injection with **RESTORE1030™**. We generally see a drop in suction pressure and a slight increase in high side pressures. By week 4 the suction pressure has dropped slightly and we see a significant reduction in high side pressure. With the adjustments made 17-Sep we see another drop in the high side pressures of 1.5 bars (22.1 psi). Since this included condenser coil cleaning most of the pressure drop would be attributed to a cleaner coil. We would expect to see a drop in energy consumption of about 6% to correspond with that pressure drop.

The chart below shows the consumption information recorded in 7 day periods working back from the Sep 17th adjustment date. As you can see there is a significant reduction in consumption the week following the adjustment. This is due to the action of the **RESTORE1030™** and the unit adjusted to specifications. This allows the unit to take advantage of the benefits provided by the **RESTORE1030™**.

Period	Day Units(Kwh)	Night Units(Kwh)	Total(Kwh)	Night%	Peak Demand(KW)	Est Cost (Euro)
Aug 7 - Aug 13	275.7	131.2	406.9	32.23	3.6	40.69
Aug 14 - Aug 20	275	128.6	403.6	31.86	3.6	40.36
Aug 21 - Aug 27	272.5	125	397.5	31.44	3.6	39.75
Aug 28 - Sep 3	273.8	126.2	400	31.54	3.6	40
Sep 4 - Sep 10	280.3	132.5	412.8	32.08	3.6	41.28
Sep 11 - Sep 17	266.4	123.9	390.3	31.73	3.6	39.03
Sep 18 - Sep 24	202	112.6	314.6	35.84	3.4	31.46

If we look at this graphically you can see the total consumption drop after the adjustments were made.



The data below shows the relationship of consumption reduction and cost. The consumption figures and cost are averaged from Aug 7 thru Sep 17th and that number is shown in the column to the right of Sep 11-Sep 17. The average is then compared to the week after the adjustments and it shows a 22% reduction in consumption and cost. Approximately 6% of this reduction was a gain from cleaning the condenser coil which leaves a 16% reduction from the action of the RESTORE1030™.

Date	Total(Kwh)	Estimated Cost(Euro)
Aug 7-Aug 13	406.9	
Aug 14-Aug 20	403.6	
Aug 21-Aug 27	397.5	
Aug 28-Sep 3	400	
Sep 4-Sep 10	412.8	
Sep 11-Sep 17	390.3	401.85
Sep 18-Sep 24	314.6	
Difference		87.25 22%