METROPOLITAN NY CHAPTER

Refrigeration Service Engineers Society

Continuing Education for the HVAC/R Industry

"Better Service Through Knowledge"

January 2025

RSES® The HVACR Training Authority Metropolitan New York Chapter

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EDUCATIONAL MEETING

WEDNESDAY, March 12th, 2025

Dinner at 6:00pm

At *TAVERNA KOS* 41-19 23rd Ave., Astoria

- **Troubleshooting Gas Boilers**
- **Proper Boiler Wiring**
- **Installation of Carbon Monoxide Detector w/Boiler Shutdown**

Presented by Vincent Grasso, Licensed Electrician NYC, Nassau & Suffolk Counties

BOCES Adult Education Instructor

STAY SAFE—Remember –SAFETY FIRST

THE IMPORTANCE OF READING A SYSTEM'S DISCHARGE PRESSURE

When servicing refrigeration and air conditioning equipment, it is important to read both the system's suction ***and*** discharge pressures. Many times when servicing a piece of equipment, a service technician will omit reading the discharge pressure. This might be due to the system not having an access valve on the high side, or maybe the technician is trying to save steps or cut time on the job. But failure to read the discharge pressure could lead to misdiagnosing a problem, or not finding the ***real*** problem with the system.

By reading only the suction pressure, a technician diagnoses only half of the system.

To effectively troubleshoot any system, he/she must also read the discharge pressure. For example, a tech is working on a system with a capillary tube as its metering device and records a lower than normal suction pressure. His first diagnosis would be a system with a low refrigerant charge. This *may* be correct. However, the capillary tube could be partially plugged, and this would also give a lower than normal suction pressure reading. If the tech also measured the discharge pressure, he/she would see that a system with a low charge would show both low suction ***and*** discharge pressures, while a system with a plugged capillary tube would show a **low** suction pressure and a **higher** than normal discharge pressure.

If a tech is working on a system and finds the suction pressure *higher* than normal, he could have either a compressor which is not pumping efficiently, or a system with an overcharge of refrigerant. By measuring the discharge pressure He/she should be able to tell the difference. A system with an overcharge of refrigerant will have both high suction pressure and high discharge pressure. A system with a defective compressor will have a high suction pressure and a lower than normal discharge pressure. These problems could appear in relation to the current problem, or they may cause new problems with the system in the future. For example, on systems with remote air cooled condensers it is not always easy to get to the condenser to examine its condition. If a technician skips over measuring the discharge pressure, he may come up with a diagnosis unrelated to the actual problem. The condenser may simply be dirty and in need of cleaning, and the tech could have easily determined this by looking at the discharge pressure.

Measuring the discharge pressure should/**must** be a normal part of any service call.

Unfortunately, sometimes it does get overlooked, which leads to needless returns calls and unhappy customers. At times, it may seem like an insignificant part of a service call, but it is truly necessary to completely troubleshoot any system ***PROPERLY.***

Joe Marchese, CMS, Greater Pittsburgh Chapter
Past International President, RSES

Things you didn't need to know . . .

♦ If you toss a penny 10,000 times, it will not be heads 5,000 times, but more like 4,950. The heads picture weighs more, so it ends up on the bottom.

♦ Only one person in two billion will live to be 116 or older.

♦ Humans and dolphins are the only species that have sex for pleasure.

♦ The pop you get when you crack your knuckles is actually a bubble of gas bursting.

♦ 101 Dalmatians and Peter Pan are the only two Disney cartoon features with both parents who are present and don't die throughout the movie.

♦ The winter of 1932 was so cold that Niagara Falls froze completely solid.

♦ There's no Betty Rubble in Flintstones Chewable Vitamins.

♦ It's impossible to get water out of a rimless tire.

♦ Banging your head against a wall uses 150 calories an hour.

♦ Did you know that you are more likely to be killed by a champagne cork than by a poisonous spider?

PRESIDENT'S MESSAGE

Effective April 1,2025 in New York State you cannot purchase, sell or install virgin refrigerants with a GWP2200 and above. They include R422B, R125, R410B, R438A plus others. This is no April Fools joke. Notice: this law prohibits using these virgin refrigerants after April 1st even if you purchased them *before* April 1st. The *approved substitute* refrigerants are ok to use. Our next big date is January 1,2026 at which time it is prohibited to purchase, sell or install equipment using virgin R404A or R507A. Again, substitutes are allowed. You should be aware that the NYS regulation differs from the Federal EPA regulations. It is highly advisable to read the NYS regulation on the NYS website https://dec.ny.gov and see how it applies to you. The regulation is under part 494.

I hope to see you at our March meeting.

Drew Garda, President
Metropolitan NY Chapter, RSES

COMING TOPICS

Upselling The Job

System Evacuation
New Technology, New Procedures

Handling Customers Who are "Educated" on the Internet

High Quality Compressor Remanufacturing

If you have any suggestions or requests for FUTURE EDUCATIONAL PROGRAMS, please let us know!

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