## METROPOLITAN NY CHAPTER Refrigeration Service Engineers Society

Continuing Education for the HVAC/R Industry



# "Better Service Through Knowledge" May 2019 WWW.METRONYRSES.ORG







#### Taking Shortcuts??????

Taking shortcuts while servicing refrigeration equipment can lead a technician to make costly mistakes. They may cause harm to the equipment as well as the technician.

It is important for a service technician to try and avoid taking shortcuts—even though this may be difficult. Many times a technician is backed up with more service calls then he can handle in a day, and taking a few shortcuts may seem to be the answer to reduce their time on the job. Although some shortcuts may initially save time, they may end up taking more time later on, and potentially costing the customer or service contractor more money.

A technician should strive to avoid taking any shortcut that could lead to misdiagnosing a system's problem. Some common shortcuts to avoid are:

- Not reading the high side pressure and relying only on the suction pressure to troubleshoot a system. This simple shortcut may not seem to save much time on the job, but technicians often do this when trying to save time. The problem with reading only the suction pressure is that there are several reasons that may cause the suction pressure to be out of the correct operating range. Looking at both the suction and the discharge pressures may help, and is a better way to analyze the system.
- On a thermostatic expansion valve system which seems not to be cooling properly, technicians may opt not to measure the superheat at the outlet of the evaporator. It takes time to get an accurate measurement, and it is often difficult to get to the sensing bulb location to take the measurement. Also you may need to wait for the thermostatic expansion to stabilize before relying on its reading.
- When adding refrigerant to a system a technician should <u>never</u> assume which refrigerant is currently in the system. He/she should always verify the type used. Many times this is very easy; however, occasionally this takes extra time and work. Adding the wrong refrigerant, or mixing refrigerants, can lead to more serious system problems.
- Not verifying that the voltage supply is <u>truly</u> off when replacing a component is a serious shortcut to avoid. This can be extremely dangerous for the technician as well as the equipment. Just because the disconnect switch is in the "off" position, or the system switch is set to "off", does not always mean that the power is <u>truly</u> off. A technician must always verify that voltage is off by using a volt meter or volt stick.

There may be occasions when a disconnect switch has been bypassed or is defective (yes, that has been known to happen) and does not disconnect the voltage from the system.

- Not checking the condition of the start relay and start capacitor before condemning the single-phase CSIR or CSCR compressor. When compressors fail to start it is easy for a technician to condemn the compressor. Although it may be a time-consuming task, a technician should always check the condition of the start relay and start capacitor.
- When a system that had been operating normally in the past is short of refrigerant, the system most likely has a leak. A common mistake is to add refrigerant to the system and not even attempt to find the leak. The system runs for some time and then the technician is called out again for the same problem. Many times a leak is very small and difficult to find, but often the leak is large enough to locate with a little extra effort. It is important to always try to look for a leak and not miss finding the larger ones.
- Not checking the voltage directly at the motor terminals before condemning the motor. Sometimes it is difficult to get to the motor terminal to check the voltage. A shortcut to avoid is relying on measuring the voltage at a point leading to the motor and not at motor terminal itself. There may be voltage leading to the motor, but at the terminal there may be a disconnected or burnt wire causing the problem.

These are only a few shortcuts a technician should avoid. There are many more, depending on the type of system being worked on and the nature of the problem. Taking shortcuts can save time on the job, however taking the wrong shortcuts can and will lead to problems for both the service contractors and their customers.

The Shortest Solution is the RIGHT Solution!







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The cost for full program, including morning & afternoon refreshment breaks and full service, hot sit-down lunch is: \$130 - (\$105 for RSES & OESP members)

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For Further Information Call: Stan Hollander @ 718 232-6679

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## PRESIDENT'S MESSAGE

We will be having elections for chapter officers in October. The nominating committee will present a slate of officers at the September meeting. Any member may also nominate someone for an office. The nominee must be a member of RSES and be present to accept. Voting will be done at the October meeting.

Our May 8, 2019 meeting will be our last before breaking for the summer. The past year has been full of helpful and informative meetings. This year concludes with a seminar on Heat Pump Systems on May 25, 2019. This topic has been requested several times in the past and we were finally able to get a program put together. A flyer and registration form are included in this email. Do not miss out on what will be a great seminar. Register now.

Your Board of Directors are busy planning next year's speakers and seminars. You can help by making any suggestions of topics you feel are of interest. Just send you suggestion to Rich Bruno. You can find him under contacts on our web site <a href="www.metronyrses.org">www.metronyrses.org</a>. We believe the best topics are those suggested by you—the members.

Your Board of Directors joins me in wishing all of you a Prosperous and Safe Summer. **See you in September**.