METROPOLITAN NY CHAPTER

Refrigeration Service Engineers Society

Continuing Education for the HVAC/R Industry

"Better Service Through Knowledge"

September 2024

RSES® The HVACR Training Authority Metropolitan New York Chapter

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EMPIRE KEYSTONE ASSOCIATION BETTER SERVICE THROUGH KNOWLEDGE

EDUCATIONAL MEETING

September 11th, 2024 @ 7:30pm

Dinner at 6:00pm

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

Low Temperature Hydronic Systems

- Delivering c***omfort*** not Temp!
- Why Hydronics
- Heating & Cooling Solutions
- DHW Too!?
- System Considerations

Presented by: Wales Darby & Rick Koester

MAINTAINING THE *SMALLER* SYSTEMS

Performing preventive maintenance on any refrigeration system is necessary to keep the system operating at peak efficiency. Owners of large refrigeration systems understand this, and usually perform routine maintenance on their systems. But many times, smaller air-cooled systems are left running without any regularly performed maintenance—they simply are left running until there is a problem. Smaller problems— left unresolved—could result in a major failure: a dirty condenser coil, if left untreated, may lead to an early compressor failure. Routine maintenance inspections can prevent this from occurring.

Maintenance inspections on smaller systems do not need to be very complex, but they should be detailed enough to ensure the system is operating properly. Below is a list of services that should be performed:

1. *Record manufacturers name, model and serial numbers*. Having this information recorded for each piece of equipment will allow the service technician to keep track of any suggested repairs that may need to be performed. It may also save him/her a trip back to the customer to obtain this information if a part needs to be ordered;
2. *Check the condition of the condenser **and** evaporator coils and clean if necessary*. It is very important to inspect the condition of the condenser coil. If the unit is installed in a greasy environment, the condenser coil can easily become matted with grease and cause problems for the system. The evaporator coil should also be checked for dirt and for abnormal amounts of frosting.
3. *Check and record the suction and discharge pressures*. This may not always be practical since many times these smaller systems will not have any service valves installed. Valves can be added; but if the system seems to be operating normally, this may not be necessary and may even cause other problems. A saddle valve, which is normally used to access the system's pressure, can leak. Use only a ***solder-on*** piercing valve.
4. *Check the condition of any electrical connections and cords*. Any electrical connections wiring or cords which look discolored, brittle or frayed should be replaced.
5. *Check door hinge screws, if any, for tightness*. Loose screws will cause damage to the hinge as well as to the threads of the screw and its insert.
6. *Check the condition of the door gasket, if any*. Any gasket that is worn should be replaced. Also check that the door is closing properly and adjust if needed;
7. *Check amperage draw of the compressor and compare to manufacturer's specifications*. If the amperage draw of the compressor is outside of its rating, determine the cause, notify the customer.
8. *Check drain line(s) for clogs, obstructions or kinks.* Also check the drain pan and verify it is aligned and tilted properly. If the unit uses a heated drain pan make sure it is heating properly.
9. *Check evaporator's airflow pattern for any obstructions or blockages*. Make sure the product is not stacked in a manner that will cause a problem with airflow pattern within the case.
10. *Check and record the case temperature*. This final check will verify that the system is functioning within its design parameters. Preventive maintenance inspections on this type of equipment can be performed on a quarterly, semi-annual or annual basis. The frequency of inspection will depend on the location and usage of the equipment. If the unit is operating in a greasy environment (such as a restaurant kitchen) with heavy usage, the inspection should be done more frequently. Those units operating in a cleaner environment with less abuse (such as a school cafeteria) can be done on a less frequent schedule.

PRESIDENT'S MESSAGE

Our world is changing! Effective January 1, 2025, manufacturers will no longer be producing R410A units. Several manufacturers have already taken their final orders for R410A units from distributors. Newly manufactured units will use A2L refrigerants. Now is the time to start to prepare. Make sure your service equipment is A2L compatible. Many distributors will be putting A2L items on sale, and it will be a good opportunity for you to purchase your needs—in advance. Although you can still purchase ***and install*** R410A equipment, note that the new A2L equipment will be out there.

Be ready for it!

Drew Garda, President

Metropolitan NY Chapter, RSES

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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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