

METROPOLITAN NY CHAPTER Refrigeration Service Engineers Society

Continued Education for the HVAC/R Industry
"Better Service Through Knowledge"

December 2010

WWW.METRONYRSES.ORG



Cleaning After a Compressor Motor Burn

When the motor of a hermetic compressor burns out, depending of the severity of the motor burn, it is possible for contaminants to form in the compressor and then enter the system. If this occurs these contaminants must be removed from the system, otherwise they will surely cause the new compressor to fail. A common clean-up procedure used on a severely contaminated system is the repetitive filter change-out method.

When a technician encounters a compressor with a burnt motor winding, the first step in the repair process is to determine the degree of the burn. Is it mild or severe? This can be done by taking an oil sample from the compressor or a refrigerant sample from the system and testing its acidity level. If the test show no signs of acids in the system then it can be adequately cleaned up by simply installing an oversized liquid line filter/drier. However if either test sample shows acids in the system, then the system should be considered severely contaminated and a repetitive filter change-out method can be used to clean up the system.

To use this method first recover the refrigerant from the system. It may be possible to re-use the refrigerant from the system if it can be cleaned up adequately, however this may be not be possible or may be very difficult to do in the field. Normally is it best to properly dispose of the refrigerant and use new refrigerant.

Next, the old compressor needs to be removed from the system and any re-useable components, such as its crankcase heater, unloaders or pressure controls, transferred to the new compressor. Then install the new compressor into the system.

Once the new compressor has been installed, the technician needs to examine the severity of the contamination of the other system components and determine whether they need to be cleaned or replaced. This includes examining the metering device, any liquid line solenoids, or any other flow control device used on the system.

The next step is to install a suction line filter/drier and an oversized liquid line/drier into the system. Use filter/driers that are recommended for cleaning up a system after a

severe motor burn. Also, the suction line filter/drier should have access ports at the inlet and outlet of the filter/drier so that the pressure drop across the drier can be measured later in the process.

After all of the components have been examined and either replaced or cleaned as needed and the filter/driers installed, the system should be properly evacuated using a quality vacuum pump and vacuum gauge. Triple evacuating the system is preferable at this time.



Next, recharge and start up the system according to the manufacturer's recommendations. Let it run for one to two hours while observing the pressure drop across the suction line filter/drier. If the pressure drop across the suction line filter/drier becomes excessive, then replace both the liquid line and suction line filter/driers. Also take an oil sample and test its acidity level. If the test shows signs of contamination, the oil charge should also be replaced.

Start up the system again and let it run for another one to two hours and observe the pressure drop across the suction line filter/drier. If the pressure drop again becomes excessive, repeat the process of changing the filter/drier and checking the oil.

Repeat this process until the pressure drop across the suction line filter/drier stays below the recommended value. Once this occurs, let the system run for 24 hours and then check the pressure drop across the suction line filter/drier and take another oil sample. If the pressure drop across the suction line filter is good and the oil sample shows no sign of contamination, then the system is considered clean. It is best then to remove the suction line filter/drier from the system and then re-check the oil in two weeks to be assured the system remains clear of any contaminants.

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COMING EVENTS

The instructor for our School (which will begin in January) - Nick Nuziale - will be at our December meeting to answer any and all questions about our courses.

The Latest Technology in Vacuum Specifics and Evacuation Procedures

Electronic Controls

Mitsubishi Ductless Split Systems

Copeland Digital Discus Compressors

We are looking for a topic for our All Day Seminar for some time in March or April
Please contact Stan Hollander @ 718 232-6679 with any suggestions

<p>SEE US 1st</p>  <p>WHOLESALE DISTRIBUTORS Refrigeration/AC/Heating</p> <p>BROOKLYN (718) 257-4039 99-03 Foster Ave.</p> <p>JAMAICA (718) 526-0330 139-29 Queens Blvd.</p> <p>MT. VERNON (914) 668-3631 551 S. Columbus Ave.</p> 	<p>Fire Ice Mechanical Inc.</p> <p>HVAC/R Service Contractors</p> <p>KURT J. EGGERT</p> <p>Vogt Tube-Ice Authorized Dealer/ Sales & Factory Certified Technicians Goldenrod Distributor; The Newest in Water Treatment Technology Air Conditioning & Refrigeration</p> <p>Tel (718) 631-1503 Fax (718) 279-4686</p>	<p>ThermatiX Supply</p> <p>Plumbing, Heating, and Air Conditioning Supplies</p> <p><i>"We keep you supplied"</i></p>  <p>73 Broadway, Hicksville, NY 11801 toll free: (877) 390-9421 tel: (516) 513-0985 / 0986 fax: (516) 620-5942 email: sales@thermatixsupply.com</p>	 <p>49-70 31st STREET L.I.C., NY 11101 Phone: 718-937-9000 Fax: 718-392-1296 1-800-937-9000</p> 	 <p>WEDDINGS OUR SPECIALTY</p> <p><i>Special Attention Given To</i> Dinner Dances • Company Parties Cocktail Parties • Business Meetings Fund Raisers • Fashion Shows Engagement Parties • Christenings <i>Special Discounts Given to Senior Citizens</i></p> <p><i>Riccardo's by the bridge</i></p> <p>21-01 24th Avenue, Astoria, NY 11102 718 721-7777 ANTHONY M. CORBISIERO RICHARD F. CORBISIERO</p>
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Metro NY Chapter RSES HVAC Training Courses

The Metropolitan New York Chapter RSES will offer the RSES Technical Institute Courses – 1 & 2 on Tuesday & Thursday evenings, starting January 11th in Long Island City, New York

Dates: For 11 weeks on Tuesdays & Thursdays

1/11 & 1/13 1/18 & 1/20 1/25 & 1/27

2/1 & 2/3 2/8 & 2/10 2/15 & 2/17

3/1 & 3/3 3/8 & 3/10 3/15 & 3/17

3/22 & 3/24 3/29 & 3/31

Time: 6:00 PM – 10:00 PM

Location: Long Island City High School
14-30 Broadway
Long Island City, NY 11106

Cost for Course 1 or 2:

\$849.00 for RSES members

\$949.00 non-RSES members (also includes 1 year membership in RSES)

Includes: Technical Institute 1 or 2 course manual, course tuition, Certificate of Completion after passing final exam, 72 hours toward NATE Recertification, for those eligible.

Register by December 15th by mailing or Emailing the form below

FOR ADDITIONAL INFORMATION VISIT:

<http://www.metronyrses.org>

or Email: school@metronyrses.org

or Phone Stan Hollander: 718 232-6679

by Mail: Metro NY Chapter RSES

c/o Stan Hollander, 1837 61st Street, Brooklyn, NY 11204

—Checks and Charges Welcome—

Please make checks payable to "Metro NY RSES"



TRAINING COURSE OVERVIEWS

TECHNICAL INSTITUTE COURSE 1:

This course begins with a comprehensive introduction to refrigeration and air conditioning. Topics covered include: basic physics, major system components including hermetic, semi-hermetic and open compressors, condensers, evaporators and refrigerant metering devices. It also covers the fundamental concepts of electricity and magnetism as they pertain to resistors, resistance, conductors, power supplies, circuit protection devices and transformers. Detailed information on lessons and content for Course 1 can be found at:

<http://metronyrses.org/ti1.html>

TECHNICAL INSTITUTE COURSE 2:

Beginning with tools-of-the-trade this course covers refrigeration system accessories, desiccants and driers, defrosting methods, refrigeration system controls and piping. It also includes instruction on compressor replacement and system evacuation, electric motors in refrigeration systems, motor capacitors and protectors, thermostats, relays, contactors and starters, test equipment and troubleshooting, pressure and enthalpy diagrams, psychrometrics, heat transfer and estimating heat loads, residential air conditioning, humidification and a review of safety codes. Detailed information on lessons and content for Course 2 can be found at:

<http://metronyrses.org/ti2.html>

————— RETURN THIS SECTION WITH PAYMENT ——— BE SURE TO KEEP COPY FOR YOUR RECORDS ———

REGISTRATION FORM

Name: _____ Company: _____
Address: _____ City: _____ State: _____ Zip: _____
Email: _____ Phone: _____
Check / Credit Card Number: _____ Exp: _____
Name on Credit Card: _____

Which course are you registering for? Technical Institute Course 1 or 2: Choose only ONE _____

Are you an RSES Member. If Yes, RSES Membership Number: _____

Please register by December 15th - space is limited.

Check or Credit Card Accepted for Payment

Make check to "Metro NY RSES" and mail w/ registration to: Metro NY RSES, c/o Stan Hollander, 1837 61st Street, Brooklyn, NY 11204

To register by Email submit this form with Credit Card information to school@metronyrses.org

METROPOLITAN NEW YORK CHAPTER, RSES

For Information Call: Stan Hollander, CMS (718) 232-6679

Annual Holiday Dinner (December Meeting)

Starting at 6:30pm

Join us for our Holiday Buffet. Bring nothing but yourselves and your appetites. Riccardo's puts out a great table for us to enjoy. Did I say "bring nothing but"? You can certainly bring a friend or colleague. They can enjoy a fine meal with us, and then partake of the educational opportunities which we have to offer, as well as our friendship and camaraderie. Who knows? They may even want to become a part of this great organization of ours.

The Officers of The Metropolitan NY Chapter, RSES wish all our members, friends & their families
a very

Happy and Healthy Holiday Season

HOLIDAY BUFFET— 6:30 pm

Wednesday December 8th, 2010 at 6:30pm

at

RICCARDO'S

21-01 24th Avenue, Astoria NY 11102

NYC Torch Use Regulations: Do You Have Your Certificate??
If Not, You Could Get a Violation! They're Out There!!!

By Nito Mehra—ThermatiX, Inc.

— PLACE LABEL HERE —

SEE DETAILS
at 6:30pm
Wednesday December 8th, 2010
EDUCATIONAL PROGRAM

