

Refrigeration Up-Date

Performing a Clean-Up After a Burnout

When the motor of a hermetic compressor burns out, it is possible for contaminants to form in the compressor, depending on the severity of the motor burn. It is also possible for these contaminants to be pumped out into the system. If this occurs, the contaminants must be removed from the system — otherwise they will surely cause the new compressor to fail.

A common cleanup procedure used on severely contaminated systems is the repetitive filter changeout method.

When a technician encounters a compressor with a burned motor winding, the first step in the repair process is to determine the degree of the burn. 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 shows no signs of acids in the system, then it can be adequately cleaned up simply by installing an oversized liquid-line filter dryer.

The first step is to recover the refrigerant from the system. It may be possible to reuse it if it can be cleaned up adequately. However, this may not be possible or may be very difficult from the field.

However, if either test sample shows acids, the system should be considered severely contaminated and the repetitive filter changeout method should be used.

DO IT RIGHT

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The first step is to recover the refrigerant from the system. It may be possible to reuse it if it can be cleaned up adequately. However, this may not be possible or may be

very difficult to do in the field. Normally it's best to properly dispose of the old refrigerant and recharge the system with new.

Next the old compressor needs to be removed from the system. Any reusable components—such as the crankcase heater, unloaders, and/or pressure controls—should be transferred to the new compressor, which is then installed in the system.

Next, the technician needs to examine the severity of the contamination of other system components and determine whether they need to be cleaned or re-

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Refrigeration Up-Date 2007

Refrigeration Up-Date 2007 is scheduled for Wednesday, April 4th at the Village Inn Golf and Conference Center in Clemmons, NC from 8:00 a.m. to 2:30 p.m.

This year's up-date offers a wide variety of

educational opportunities for licensees, their employees, inspectors and other industry related persons.

Brett Godin, Sporlan Valve Division - Parker Hannifin, will lead a

workshop, *TEV Theory and Operation*, from 8:30 – 9:15 a.m. During this workshop there will be a discussion on the fundamental operation of the expansion valve as it relates to controlling su-

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Suggestions for articles of interest for publication in this newsletter are welcome.

State Board of Refrigeration Examiners
Suite 208, 893 Hwy. 70 W
Garner, NC 27529
Telephone: 919-779-4711
Fax: 919-779-4733
E-Mail: sbre1@bellsouth.net
Website: www.refrigerationboard.org

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REFRIGERATION UP-DATE 2007

perheat, best practices for installation, and trouble shooting TEVs in the field. From 9:15 to 9:30 a.m., Ray Barnes, Sporlan Valve Division - Parker Hannifin, will discuss **TEV's: Balanced Versus Standard**.

Allison Whittington, Senior Technical Service Representative with DuPont Suva® and ISCEON® Refrigerant will head up a 60-minute presentation at 10:00 a.m. with an **up-date on DuPont refrigerants**, as well as the latest on **EPA regulations and industry events**. With over 75 years of proven leadership in refrigerants science and technology, DuPont is committed to leading the search for new cooling solutions.

Beginning at 1:00 p.m. Joe H. Thompson, CLU, Management Consultant, Professional Consulting, will present a workshop on **How Much Profit is Enough for Your Company?** His presentation will include *Understanding where your money is going, examining your business performance objectively, learning techniques to improve your net profit, and increasing your owner's equity*. No contractor

who owns and operates a business can afford to miss this workshop.

The speakers will provide their information in clear, concise and understandable terms. They realize each portion of the program must put a large amount of information into a short period of time and they've concentrated their thoughts and insights to give your every advantage of their knowledge and expertise.

It is hoped that each attendee will leave Up-Date 2007 with a new awareness of topics crucial to the refrigeration industry.

Another highlight of the Up-Date will be the exhibit hall. One of the largest reasons to attend is to learn about products and/or services that you might not otherwise know about. A list of vendors may be found on page three.

Registration is free for both the workshops and exhibits. We expect a large crowd and ask that you pre-register for the up-date. By pre-registering, you will receive your name tag and informational brochure prior to the meeting.

Persons interested in attending the CFC Certification Program should contact the Board office (919) 779-4711.

Up-Date Registration

Please register the following for Up-Date 2007. (Additional forms may be copied as needed.)

PLEASE PRINT

Name _____ Nickname _____

Name _____ Nickname _____

Name _____ Nickname _____

Company Name _____

Mailing Address _____

City, State, Zip _____

Phone _____

Return To: SBRE, 893 Hwy. 70 W., Suite 208, Garner, NC 27529

Permanently Lapsed Refrigeration Contractor Licenses

The following refrigeration contractor licenses permanently lapsed on December 31, 2006 for non-payment of licensing fees:

Allen, Houston M., Weaverville, NC, License Number 1783
Anderson, Clifton, Durham, NC, License Number 2832
Baker, Wallace, Durham, NC, License Number 3114
Bradford, Jr., William E., Clayton, NC, License Number 3383
Branham, Lewis W., Fayetteville, NC, License Number 1522
Brinkley, James E., Pleasant Garden, NC, License Number 3028
Cantrell, E.G., Plymouth, NC, License Number 1852
Carolan, Orman, Raleigh, NC, License Number 1427
Carter, Steven S., Elizabeth City, NC, License Number 3944
Caudle, George, Raleigh, NC, License Number 2954
Cook, Clarence, E., Hickory, NC, License Number 2369
Dooley, J.J., Moncks Corner, SC, License Number 867
Foster, Jr., Sampson W., Greensboro, NC, License Number 3081
Green, Jeffrey S., Paw Creek, NC, License Number 3319
Grimm, John F., Carthage, NC, License Number 2408
Guy, Cecil W., Warsaw, NC, License Number 1977
Hardesty, George F., Mt. Home, NC, License Number 2239
Henderson, Harold, Wallace, NC, License Number 2579
Hill, Jim B., Sevierville, TN, License Number 1826
Hurd, Michael C., Reidsville, NC, License Number 2635
King, Billy R., Burlington, NC, License Number 3090
Lentz, Donald E., Harmony, NC, License Number 1501
Long, Robert E., Concord, NC, License Number 1929
McBane, Floyd W., Snow Camp, NC, License Number 1987
Moore, Michael E., Asheville, NC, License Number 1331
Parchman, Dewey L., Lillington, NC, License Number 1667
Parsons, John R., Walnut Cove, NC, License Number 1942
Payne, John H., Warren, NC, License Number 1480
Pittman, Charles W., Albemarle, NC, License Number 2285
Ray, David O., Boone, NC, License Number 2487
Rolison, Larry A., Burbank, CA, License Number 3830
Sawyer, Allen W., Raleigh, NC, License Number 1716
Shipley, Richard A., Hendersonville, NC, License Number 2601
Skillman, Gregory J., Richmond, VA, License Number 3404
Small, T.L., Concord, NC, License Number 1410
Smith, Jr., Elbert E., Jacksonville, NC, License Number 1209
Stark, Milton R., Asheville, NC, License Number 3243
Stone, Ronnie L., Asheboro, NC, License Number 1995
Tannery, Jerry, Garner, NC, License Number 2788
Taylor, J.D., Lumberton, NC, License Number 2119
Tombaugh, Jr., John R., Erie, PA, License Number 3694
Wrenn, Robert T., Rocky Mount, NC, License Number 3024

Refrigeration Up-Date 2007 List of Vendors as of February 14, 2007

Please contact the Board office if your firm is interested in exhibiting at Refrigeration Up-Date 2007.

ACR Supply Co.
Arneg, USA
Baker Distributing Co., Inc.
Bitzer US, Inc.
C. C. Dickson Co.
Cannon Marketing/Hoshizaki
Chadwick & Associates, Inc.
Cliplight Manufacturing Co.
Du Pont Company
Empire Equipment Co.
Engineering Equipment Sales, Inc.
E. V. Dunbar Company
Frank Door Company
Hill Phoenix
ICOR International, Inc.
Inficon, Inc.
Johnstone Supply
Kysor/Warren
Larry Reynolds & Associates
Linzmaier & Associates, Inc.
Mid Atlantic Sales
Mid South Marketing
Milwaukee Electric Tool Corporation
Mueller Industries
Nu-Calgon
RefPlus
Spectronics Corporation
Sporlan Valve Division – Parker Hannifin
Steve Lee and Associates
Supermarket Systems, Inc.
Testo, Inc.
The Flora Group
Tuttle Company
United Components
United Refrigeration

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Suite 208, 893 Highway 70 W
Garner, NC 27529

Phone: 919-779-4711
Fax: 919-779-4733
Email: refrgexs@bellsouth.net

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placed. This includes examining the metering device, any liquid-line solenoids, or any other flow-control device.

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 its inlet and outlet so the pressure drop across the drier can be measured later.

After all the components have been examined, replaced, or cleaned, and the filter-driers are installed, the system should be properly evacuated using a quality vacuum pump and vacuum gauge. Triple evacuate

the system at this time.

Next, recharge and start up the system according to the manufacturer's recommendations.

Let the system run one to two hours while observing pressure drop across the suction-line filter-drier. If its pressure drop becomes excessive, replace both the liquid-line and suction-line filter-driers. Also, take an oil sample and test its acidity level. If the test still shows signs of contamination, replace the oil charge.

Start the system again and let it run for another one to two hours, observing the pressure drop across the suction-line filter-drier. If the pressure drop again becomes excessive, change the filter-drier again and check the oil. Repeat this process until the pressure drop across the suction-line filter-drier stays below the recommended value.

ENSURING RESULTS

Once this occurs, let the system run for 24 hours, then check the pressure drop across the suction-line filter-drier and take another oil sample. If the pressure drop is good and the oil sample shows no sign of contamination, the system can be considered clean.

At this point, remove the suction line filter drier from the system. Recheck the oil in two weeks to make sure the system remains clear of contaminants.

ABOUT THE AUTHOR

Joe Marchese is owner of Coldtronics of Pittsburgh. He can be reached at 412-734-4433, joe@rhvactools.com, or www.rhvactools.com