

**AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS,
INC.**

**1791 Tullie Circle, N.E./Atlanta, GA 30329
404-636-8400**

TC/TG/TRG MINUTES COVER SHEET

(Minutes of all TC/TG/TRG Meetings are to be distributed to all persons listed below within 60 days following the meeting.)

TC/TG/TRG NO 3.4 DATE March 29, 2016

TC/TG/TRG TITLE Lubrication <http://tc34.ashraetcs.org/>

DATE OF MEETING January 26, 2016 LOCATION Orlando, FL

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Joe Karnaz	2012	Raymond Thomas	2012	Attendance List Attached
Chris Seeton	2014	Bret Van Horn	2015	
Rob Yost	2014			
Roberto Urrego	2015			
Julie Majurin	2014			
Knut Petry	2013			
Dave Vincent	2014			
Sonny Sundaresan	2014			
Marc Scancarello	2013			
Chris Reeves	2013			
Scott Wujek	2013			

DISTRIBUTION

All Members of TC/TG/TRG plus the following:

TAC Section Head:	<u>Jay Kohler</u>
TAC Chair: TAC Vice-Chair:	<u>Thomas Lawrence</u>
All Committee Liaisons As Shown On TC/TG/TRG Rosters:	Mark Spatz – RAC Roberto Aguilo – Handbook Neils Bidstrup – Standards Francis Mills – Special Pubs Tony Giometti – Program Stephen Piccolo – CTTC
Manager Of Standards Manager Of Research & Technical Services	Stephanie Reiniche Mike Vaughn

Note: "These draft minutes have not been approved and are not the official, approved record until approved by this committee."

Call to Order – Joe Karnaz

Joe Karnaz called TC 3.4 meeting to order at 1:30 pm on January 26th 2016 at the Orlando Hilton in Orange C (LL) in Orlando, FL. Members and guests introduced themselves. Guests were welcomed and invited to participate. A sign-up sheet was circulated. The Chair reviewed the ASHRAE Ethics Statement.

Confirmation of Quorum – Joe Karnaz

Joe Karnaz, Chris Seeton, Julie Majurin, Rob Yost, Knut Petry, Dave Vincent, Chris Reeves, Marc Scancarello, Sonny Sundaresan, Scott Wujek and Roberto Urrego were present. Voting members Ray Thomas and Bret Van Horn were not present. With 11 of 13 voting members present a quorum was established.

Approval of 2015 Summer Meeting Minutes and 2016 Winter Meeting Agenda - Joe Karnaz

A motion was made by Roberto Urrego to approve the Atlanta minutes, the motioned was seconded by Scott Wujek, and the motion carried 11-0-0 (CV).

A motion was made by Rob Yost to approve the agenda for today's meeting in Orlando, the motioned was seconded by Marc Scancarello , and the motion carried 11-0-0 (CV).

Liaisons - Bill Murphy/Dr. Niels Bidstrup Attended

Jay Kohler – TAC Section 3 Head - Reminder - Rosters are due at the end of the day today. Please encourage new TC members to explore the ASHRAE website for available content and training tools.

Dr. Niels Bidstrup- Standards - Standard 86 “Methods of Testing the Floc Points of Refrigeration Grade Oils”- this standard will need to be addressed in St Louis and a vote taken at that time.

TC Chair Breakfast – Joe Karnaz

- Wireless Internet available in all meeting rooms – ASHRAE2016; orlando16 password
- Programs for St Louis are due February 8th, 2016.
- St Louis meeting includes the track “Advances in Refrigeration Systems and Alternative Refrigerants”.
 - Section 3 once again asked the CEC Liaison to communicate our desire to have Refrigeration Tracks in the winter meetings. Later the CEC vice-chair (John Cohen) visited for added discussion, outcome will be discussed more during our Programs section.
 - 84 out of 87 conference papers received were accepted.
 - Future emphasis on speaker accountability.
- Need for reviewers – if interested contact Tiffany Cox (tcox@ashrae.org).
- New TC Websites active – more discuss later during Webmaster section.
- Publications is looking for articles to publish, contact is Mark Tome.
- TC 3.1 is in need of more members to be active in their committee. See Steve Kujak, TC 3.1 vice-chair for more information.

Subcommittee Reports

Program – Ed Hessel

TC 3.4 related programs in Orlando:

Seminar 16 – TC 3.4/3.3/ Low GWP MTG - Sunday 1:30- 3:00 PM – Making the Commercialization of Low GWP Refrigerants a Reality- thanks to all participants – Ed Hessel (Chair), Laurent Abbas, Joe Karnaz & Steve Kujak were the presenters.

Discussion: How do we get more section 3 seminars and papers accepted?? Have a section 3 representative join the CEC. Will work to determine the time commitment for a CEC member to be discussed in St Louis. We are looking for a volunteer.

St Louis Seminar – *A motion was made by Sonny Sundaresan and seconded by Chris Reeves for 3.4 to sponsor this seminar titled “Lubricant Effect Beyond the Compressor” for St Louis, the motion carried 11-0-0 (CV).* Joe Karnaz will chair and speakers include Marc Scancarello, Chris Reeves, Scott Wujek and Danny Halel – the submission will be made by February 8th.

Future Seminars: Joe Karnaz proposed workshop on “New Refrigerants, Glide and Compatibility” and will ask for support from the other section 3 TC’s. The program chairs will work on this idea and hopefully make a submission for Las Vegas – submission deadline is August 8th.

Handbook - Julie Majurin

A meeting was held to discuss the 2018 handbook revision with Ed Hessel, Scott Wujek, Sheli Porter, Roberto Urrego, Brad Boggess, Chris Seeton and Chris Reeves. An interim meeting will be arranged before St Louis to discuss new items for the chapter including: Lubricants for HFO refrigerants, lubrication calculations i.e. film thickness, lubrication outside the system / in system / in the TXV. These items plus other future suggestions will be worked on in 2016 to prepare draft language for the chapter.

Standards – Rob Yost

Standard 86 “Methods of Testing the Flocc Points of Refrigeration Grade Oils” – chaired by Warren Clough. *A motion for a vote to reaffirm Standard 86 was made by Chris Seeton and seconded by Scott Wujek. The motion carried 11-0-0-0 (CV).* With no information from the standards committee for a staff recommendation a letter ballot will be needed before the end of January.

Standard 99 “Refrigeration Oil Description” – chaired by Chris Seeton. It was agreed in Orlando to change this standard to a guideline. The title, purpose and scope have been completed and approved. A meeting was held to agree on information to include on color and organic acid testing. A letter ballot vote will be taken before March 8th for ASHRAE approval.

Standard 172P “Method of Test for Insoluble Materials in Synthetic Lubricants and HFC Refrigerant Systems” chaired by Ed Hessel. The draft standard is out for public review.

SPC 218 “Method of Test for Lubricant and Refrigerant Miscibility Determination” – chaired by Brad Boggess. A meeting was held in Orlando to discuss how miscibility is currently tested. A conference call will be held before the summer meeting to begin work on the draft standard.

An idea for a new standard arose in a subsequent meeting. The standard would address material compatibility issues between refrigerants, lubricants and system materials. The goal would be to create a pathway for users to make good decisions on what to put into a refrigeration system. This idea was tabled and if needed a TPS will need to be drafted.

At the last meeting it was agreed to form an ad hoc committee to study the need for a standard or guideline on Suitability of System Materials. Sonny Sundaresan will lead this group. It was agreed that it would be better for TC 3.2 to handle this project and the move has been suggested to TC 3.2, those members will be informed.

Research – Chris Seeton

RTAR XXXX (previously known as RTAR 1628) “Physical Property Measurements of HFO/Lubricant Mixtures” – this RTAR is waiting for a new number to be assigned. It was decided to move this to a work statement and bypass the RTAR process. A committee of Chris Seeton, Scott Wujek and Joe Karnaz will meet and develop the work statement for committee review by St. Louis.

RTAR 1728 was submitted “Development of a Model for the Prediction of oil/refrigerant mixture Properties of Low GWP Refrigerants and Synthetic Oils” and returned for corrections. A conference call was held and a work statement completed for submission by February 14th.

TC 3.4 voted in Atlanta to cosponsor - Work Statement 1721 – Jacobs Limits & Oil Return by TC 8.1 and (cosponsor) TC 10.3. Work can begin, no re-vote required.

A RTAR has been proposed named “Foaming Properties of Low GWP Refrigerant and Oil Mixtures”. Ivan Rydkin and Julie Majurin have written a work stamen and submitted it too RAC. A letter ballot will be conducted before February 20th and a response sent to the committee. It was agreed to discuss a co-sponsorship opportunity with TC 8.1.

New Research Ideas in need of RTAR authors:

1. Preferential Solubility – AHRI is interested in studying refrigerant flammability with lubricant present. TC 3.4 should get involved if this work moves forward.

A proposed title is: “Preferential solubility of High Glide Blends in lubricating oils System Effect on Fractionation”.

- Effect of lube from a leak of Flammable Refrigerants.
- Fractionation of flammable fuel.
- The affect lube has on a refrigerant leak.
- Effect of lube in combination with a Refrigerant Leak.

Marc Scancarello and Chris Seeton will make an RTAR recommendation in St Louis.

Webmaster – Dave Vincent

The website is up to date. The website will include: notes from the TC Chair meeting, research notes and an updated membership section. The new look of the website was highlighted. The updated site includes the last five sets of meeting minutes. In addition the new site has space to include presentations and other pertinent information.

Membership – Joe Karnaz

The roll over roster was discussed and is ready to be submitted. People wanting to sign up as corresponding members were invited to come forward.

MTG Update –Low GWP Lower Alternative Refrigerants – TC 3.4 Represented by Joe Karnaz

This is an umbrella group with representatives from all section 3 TC's and other TC. The purpose is to support programs and research on topics related to low GWP refrigerants. A meeting update will follow the scheduled January 27th meeting.

Old Business – Joe Karnaz

None

New business – Joe Karnaz

TC 3.4 recognized Raymond Thomas on his retirement and contributions to ASHRAE.

Adjourn – Joe Karnaz

With no further business before the committee, Sonny Sundaresan moved to adjourn. Roberto Urrego seconded and the motion passed. Chair Joe Karnaz adjourned the meeting.