



AGENDA

ASHRAE TC 3.4—Lubrication¹
American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.
Hilton Orlando, Lake Nona
Orlando, FL
Tuesday, February 4, 2020, 1:30 – 3:30 p.m.

1. CALL TO ORDER

Introduction of members and guests

ACTION:

2. ASHRAE Code of Conduct

“Commitment to the ASHRAE Code of Ethics – In this and all other ASHRAE meetings, we will act with honesty, fairness, courtesy, competence, integrity and respect for others, and we shall avoid all real or perceived conflicts of interests. (See full Code of Ethics: <https://www.ashrae.org/about-ashrae/ashrae-code-of-ethics>.)”

3. AGENDA REVIEW

ACTION: XXX, YYY 2nd R-S-T-CNV

4. MINUTES OF THE LAST MEETING (Joe Karnaz)

Draft minutes of the summer 2019 meeting in Kansas City are posted to the TC 3.4 website

<https://tc0304.ashraetcs.org/>

ACTION: XXX, YYY 2nd R-S-T-CNV

5. ROSTER REVIEW AND ANNOUNCEMENTS

Voting Members for this meeting (committee terms expire June 30 of year listed):²

Edward Hesell – 2023
Sarah Kim – 2021
Stephen Kujak – 2022
Julie Majurin - 2023
Rosine Rohatgi – 2021
Ivan Rydkin – 2022
John Senediak – 2020
Stephen Spletzer – 2020

¹ TC 3.4 is concerned with all functions and interactions of lubrication in a refrigerant system, including physical and thermodynamic properties of refrigerant lubricant systems, all issues relating to the circulation of lubricants in a refrigerant system, and other lubrication concerns.

² Members may retrieve the complete committee roster from the AHSRAE website:
log on to ASHRAE.org and sign in with your member info (from the “Join or Login” tab at top of page)
the line “Welcome, [your name]” will appear at the very top of the page; click on “My Account”
this brings up your “ASHRAE Member Profile”
click on “Committees” tab (left side of page); this brings up “My Active Committees”
a line with “T-TAC-TC03.04” should appear; click the “roster” link to download a pdf

Scott Wujek - 2020
Robert Yost – 2023

Management team:

Scott Wujek – Chair
Greg Smith – Vice Chair
Joe Karnaz – Secretary
Greg Smith – Research
Joe Nigro – Program
Casey Scruggs - Handbook
Sheli Porter – Standards
Dave Vincent – Webmaster
Joe Karnaz and Danny Halal – Low GWP TC Liaisons
Scott Wujek - ALI Coordinator

Become a provisional corresponding member:

https://eweb.ashrae.org/eweb/TS_ProvisionalSignup.html

6. REPORT OF TC CHAIR’S BREAKFAST

This meeting provides the Section 3 Chairs’ a forum for distribution of current direction and guidelines for any requirements related to ASHRAE activities including technical and research direction, standards, publications, etc.

7. LIAISON COMMENTS

Barbara Minor – TAC Section head
Stephen Kujak – Research
Frederick Betz – Handbook (Refrigeration)
Steven Hammerling – Staff

8. RESEARCH SUBCOMMITTEE (Greg Smith)

Sunday (2/2) 4:00 pm – 6:00PM, Hilton Orlando, Lake Florence

Update:

- RTAR 1830 “Foaming Properties of Low GWP Refrigerant and Oil Mixtures” – Ivan Rydkin and Julie Majurin
- RP 1721 – “Oil Return and Retention in Unitary Split Systems Gas Lines with HFC and HFO Refrigerants – Chris Seeton
- Tribological interaction data with lubricants and refrigerants - Elyse Sorenson

Update from Sunday research subcommittee meeting.

Previous meeting ideas

- Long term research plan:
 - Preferential solubility of High Glide Blends in Lubricants – system effect of fractionation
 - High stability lubricants
 - Electrical Properties of Lubricant-Refrigerant mixtures, extension of refrigerant electrical properties work of TC 3.1
 - Retrofit considerations when changing refrigerants
- Open discussion on ideas for new research.

ACTION:

9. PROGRAM SUBCOMMITTEE (Joe Nigro)

Monday (2/3) 10:30 AM-noon, Hilton Orlando, Lake Eola

Current Program:

TC 3.4 has a 2 sponsored programs at Orlando:

Seminar 22: Yay! For YEA! Refrigerants and Refrigeration Concepts for YEA Members, by YEA Members

Sunday (2/2) 1:30 to 3PM, Hilton Orlando, Orange G

Refrigerant System Chemistry for Current and Future Refrigerants – Elyse Sorenson

A World of Choices: How to Use the Handbook to Analyze New Refrigerants for Retrofits and New Construction – Ivan Rydkin

Refrigerants for Current and Futures Systems: New Builds – TBA

Lubrication for Current and Future Refrigerants – Jessica Jude

Seminar 54: Lubricants and Lubrication: What is Important for Lower GWP Refrigerants?

Tuesday (2/4) 11AM to 12:20 PM , Hilton Orlando, Orange F

The Chemistry of Refrigeration Lubricants for Low GWP Refrigerants – Ed Hessell

Lubricant Strategies for Lower GWP Refrigerants – Joe Karnaz

Revisiting the Chemical Stability of Refrigerants and Lubricants – Julie Majurin

Effects of the Low GWP Refrigerants on Screw Compressor Lubrication Systems – Kevin Hughes

Other section 3 programs:

Seminar 29: Assessing the Materials Chemistry of Next Generation Refrigeration Technologies

Monday (2/3) 9:45 to 10:45 AM Hilton Orlando, Orlando V

AHR Expo Session 1: State-of-the-Art Refrigeration Technologies with Lower Environmental Impact, Part 1

Monday (2/3) 11:00 to 12:30 PM, OCCC-WEST , W311D

AHR Expo Session 3: Service Practices and Design Consideration for Contaminant and Leak Control

Monday (2/3) 1:00 to 2:30 PM, OCCC-WEST , W311D

AHR Expo Session 6: State-of-the-Art Refrigeration Technologies with Lower Environmental Impact, Part 2

Monday (2/3) 3:00 to 4:30 PM OCCC-WEST , W311D

Future Programs: (Austin June/July 2020, Chicago January 2021)

Previous ideas:

- Estimating Accelerated Chemical Stability Using Equipment Operation
- Thermal, Chemical and Materials Compatibility of Refrigerants and Lubricants Through the Years
- A future program around Lubricants for Natural Refrigerants was suggested.
- Current State of Lubricant and Refrigerant Properties

Open discussion on ideas for new research.

ACTION:

10. HANDBOOK SUBCOMMITTEE (Casey Scruggs)

Subcommittee members: Brad Boggess, Elyse Sorenson, Chris Seeton, Amber Saylor
Chapter review by Andrew Somner

Update:

Ideas:

11. STANDARDS SUBCOMMITTEE (Shelli Porter)

Update:

- Standard 86 “Method of Testing the Floc Point of Refrigeration Grade Oils” - Brad Boggess
- GPC 40 (aka Standard 99) “Refrigeration Oil Description” – Chris Seeton
Action: Vote to revise, withdraw, or reaffirm
- Standard 172P “Method for Test for Insoluble Materials in Synthetic Lubricants and HFC Refrigerant Systems” – Ed Hessel
- SPC 218 “Method of Test for Lubricant and Refrigerant Miscibility Determination” –Brad Boggess

Previously Discussed Ideas

- Guideline on material compatibility of refrigerants, lubricants and system materials; revise Guideline 6 when it is up for its 5-year cycle to include other information.
- Open discussion on ideas for new standards.

12. MTG Liasons (Joe Karnaz and Danny Halel)

13. WEB SITE (Dave Vincent)

<https://tc0304.ashraetcs.org>

14. OLD BUSINESS

ASHRAE updates regarding TC reorganization. (Scott Wujek)

15. NEW BUSINESS

16. NEXT MEETING

2020 ASHRAE Annual Conference; Austin; July 2020.

16. ADJOURN

ACTION: XXX

ATTACHMENTS:

1. Draft minutes: Kansas City, June 2019
2. Guideline 40
3. ASHRAE staff review of Guideline 40