



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

TC/TG/MTG/TRG MINUTES COVER SHEET

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

TC/TG/MTG/TRG No. TC 9.03 DATE June 28, 2016

TC/TG/MTG/TRG TITLE Transportation Air-conditioning

DATE OF MEETING June 27, 2016 LOCATION St. Louis, MO

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
		Richard Fox (chair)		
Byron Jones (Vice Chair)				
		Jerome Johnston (Sec)		
Andreas Bezold				
		Kevin Glover		
Ken Hesser				
G.D. Mathur				
James Bushnell				
		Paul Lebbin		

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

TAC Section Head: Krishnan Gowri	SHx@ashrae.net Where x is the section number
All Committee Liaisons As Shown On TC/TG/MTG/TRG Rosters (Research, Standards, ALI, etc.)	See ASHRAE email alias list for needed addresses.
Mike Vaughn, Manager Of Research & Technical Services	MORTS@ashrae.net

Meeting Attendance

Includes everyone that attended TC 9.3 and any of the subcommittee meetings. The GPC 23 committee meeting is incorporated into the TC 9.3 Rail Subcommittee meeting. Membership designation shown below relates only to TC 9.3 and does not reflect GPC 23 membership.

Byron Jones	Kansas State Univ.	jones@ksu.edu	voting member
Jim Bushnell	HVAC Consulting Svcs	jbushnell@roadrunner.com	voting member
Ken Hesser	LTK Engr. Services	khesser@ltk.com	voting member/rail
Hugh Ferdons	Sutrack	hferdons@sutrackusa.com	guest
Donald LaBlanc	NRC Canada	don.leblanc@nrc.ca	incoming member
Pavel Doubek	Thermo King	pavel_doubek@eu.irco.com	guest
Lorenzo Cremaschi	Auburn Univ.	lorenzo.cremaschi@auburn.edu	guest
Andreas Bezold	Airbus	andreas.bezold@airbus.com	voting member/rsch
G.D. Mathur	Nissan/Calsonic	gd_mathur@ck-mail.com	voting member/auto
Len Duello	Georgia-Pacific	len.duello@gapac.com	guest
Jef Gatlin	Thompson Engineering	rlg@ashrae.net	RAC Liaison
Suzanne LeViseur	Haddad Engineering	sleviser@haddadeng.com	Handbook Liaison
Terry Crawford	Siemens	terry.crawford@siemens.com	guest
Garrett Mann	Kansas State Univ	gmann@ksu.edu	guest
Drew Turner	Danfoss Turbocor	drew.turner@danfos.com	guest

Call to Order

Meeting was called to order by Vice Chair Byron Jones at 2:15 p.m., June 27, 2016. It was determined that 5 of the 9 voting members were present so quorum requirements are met and the committee can conduct official business.

It was also noted that Donald LaBlanc, NRC Canada is coming onto the committee as a voting member after the present meeting. Paul Lebbin, NRC Canada, will be going off of the committee.

Approval Minutes

The minutes of the January 25, 2016 meeting were corrected as follows:

The report near the end of the minutes listed as Aviation Subcommittee is corrected to read Rail Subcommittee.

The corrected minutes were approved by voice vote.

Standards Report

Guideline 23 has been published. GPC 23 has requested for the guideline to go on continuous maintenance.

STD 161 continues with small changes through addenda

Automobile Committee Report (Chaired by G.D. Mathur)

There were only two people present including subcommittee chair Mathur. There was discussion about the developments to replace R-134a with HFO refrigerant. There was discussion of the need for an air quality standard for automobiles (and possibly other ground transportation). G.D. Mathur will gather information that may drive a standard and will distribute it to the committee prior to the January meeting. The committee can then make an assessment of the need at that meeting.

Old Business

There was no old business.

The TC 9.3 meeting recessed for subcommittee meetings and then reconvened.

Research Subcommittee Report (Chaired by Andreas Bezold)

A progress report was received from Battelle for 1272-RP. The latest schedule is that the final report will be submitted in August of 2016 and there will also be a paper for the January 2016 meeting.

There was discussion of a research project to monitor environmental conditions (CO, CO₂, Temp, Humidity, and perhaps others) in rail transportation vehicles. Donald LaBlanc will initiate the development of an RTAR.

There was discussion of the need for a research project to look at particle sensors for use in detecting bleed air contamination in support of Standard 161. Byron Jones may initiate a RTAR for that topic.

Andreas Bezold gave an update on several EU projects related to aircraft. General titles are as follows:

- Adaptive ECS
- In Flight Air Quality Monitoring
- Toxicology Related to Engine Oil (2 projects)
- Technologies to Safeguard and Improve Air Quality

These projects are typically funded at a level of several million Euros each.

Handbook Subcommittee Report (Chaired by Andreas Bezold)

Liaison Suzanne LeViseur briefed the committee on the use of the new author's portal that can be used to allow multiple members to work on handbook chapters simultaneously.

We need to keep Suzanne informed as to how much change we anticipate for each chapter. If we do not plan on changing a chapter, we need to also so inform her.

Each chapter was discussed briefly.

There had been some confusion on the aircraft chapter during the last edit. It was agreed that Jerome Johnston would be informed of what happened and he can work with his Boeing colleagues to see what updating might be needed.

The chapter most in need of updating is the ships chapter. However, there is no active member in that area right now. There is a need to identify one or more people to take on this task.

It was agreed that each subcommittee would take a look at its chapter prior to the next meeting and identify what changes are needed.

It was also noted that the online version of the Handbook is available to all ASHRAE members.

Rail Subcommittee

As noted above, GPC 23 serves as the Rail Subcommittee. No action items for TC 9.3 were identified other than those that have been included in the research report above.

Ship Subcommittee

There was only one person, a guest, that showed up for the Ship subcommittee. Thus, there is no report for this subcommittee.

Aviation Subcommittee

There was only one person, a guest, that showed up for the Aviation subcommittee. Thus, there is no report for this subcommittee.

New Business

Given the minimal activity of the automobile, aviation, and ship subcommittees, there was a consensus (no vote) that there was no need to schedule separate sessions for them at future meetings unless there is a reason to expect much higher levels of activity. Since the Handbook and the Research subcommittees included everybody, there was a consensus they should just be part of the whole TC meeting. Thus, the only need for a separate subcommittee meeting is for the rail subcommittee which will also be the GPC 23 meeting.

Adjournment

The meeting was adjourned at 6:00 p.m.

Minutes recorded by Byron Jones