

Registration form

MOBILE AIR CONDITIONING AND AUXILIARIES 29-30 NOVEMBER 2007-TORINO, ITALY

Please complete this form and return it to ATA
Fax: + 39 011 9080400 – e-mail: marisa.giunipero@crf.it

Surname
First name
Company
Department
Address
Post code City Country.....
Phone
Fax
e-mail.....

Registration Fees

(coffee, lunches, congress dinner and 20% VAT are included)

- Speaker **240,00 Euro**
 ATA Member **420,00 Euro**
 ATA non Member **540,00 Euro**

I will attend the congress dinner YES NO

PAYMENT

- Bank Transfer to Associazione Tecnica dell'Automobile c/o Banca Popolare di Novara, Sportello 126, Orbassano (TO) - Account No. 1000 - ABI 5608 CAB 30689 IBAN: IT 15 F 05608 30689 000000001000 SWIFT CODE: NVRBIT21126 (Please write the participant's surname on the bank document).

- Payment by credit card at the reception desk

Notice of cancellation must be in writing, before **15 Nov. 07**.
No refunds after this deadline.

THE INVOICE WILL BE ISSUED TO

Company
Department
Address
Post code City Country
VAT No. / Partita IVA
Codice Fiscale (only for Italian Companies).....
Account Dept e-mail

In compliance with art. 7 of Italian law 196/03, the data contained in this sheet are used exclusively for sending information regarding this event

Date..... Signature.....

Sponsors



DENSO

DENSO THERMAL SYSTEMS S.p.A.



Fiat Group Automobiles

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ASSOCIAZIONE TECNICA DELL'AUTOMOBILE

2nd European Workshop

MOBILE AIR CONDITIONING AND AUXILIARIES

Energy Management for fuel economy increase

29-30 November 2007

**Mirafiori Motor Village
Piazza Cattaneo 9
Torino - Italy**

ATA and Centro Ricerche Fiat are pleased to announce the forthcoming 2nd International Workshop on Mobile Air Conditioning and Auxiliary Systems.

The event is organised by Centro Ricerche Fiat and held in Orbassano, on 29 and 30 November 2007. It will be focused on the technologies able to reduce the direct and indirect CO₂ emissions related to the vehicle on board auxiliary systems and to the assessing methods. The automotive engineers and designers are facing an important challenge: to reduce the energy systems demand in compliance with the incoming regulations, improving the perceived comfort while keeping under control the production costs. The scenario is moving towards the use of new refrigerants, improved components provides and more sophisticated management strategies able to guarantee more flexible system architectures able to cover a wide range of market segments and powertrains.

On the other hand, there is a need for agreed methods to assess the fuel economy performances considering the real use profile and the effect of auxiliary systems.

It represents, at the same time, a challenge and an opportunity for OEMs and Suppliers.

This second Workshop will be oriented on the most appropriate technical solutions without raising the cost of production, while respecting the future standards in terms of reduced overall environmental impact and increased fuel economy, satisfying the demands of the market for improved comfort and well-being level.

- Low environmental impact Mobile Air Conditioning
- New refrigerants applications
- High Efficiency Auxiliary systems and components
- Rational use of the On Board Energy
- Improved thermal and heat rejection systems and components
- Fuel Economy assessment in real use considering auxiliary systems
- System environmental impact estimation
- Innovative component and system architectures

The aim is to provide a forum for an open exchange of information and opinions among all people involved in related issues, from academic research to vehicle development and test, and the design and manufacture of constituent subsystems and components.

Programme

29 November

- 8.30 Participants Registration**
- 9.00 Welcome addresses**
- 9.10 START OF WORKSHOP**
Secondary Loop Design Criteria to Mitigate Flammability Risk in MAC Systems: consensus Results of the U.S. EPA Workshop on HFC-152a
Dr. A. Ayala - CARB; S. O. Andersen - EPA, W. Atkinson - SAE, J. Baker - Delphi, L. Bendixen - ICF International, N. Blackwell - US Army, D. D. Doniger - Climate Center Policy Director - Natural Resources Defense Council, D. Godwin - EPA, G. Hansen - Red Dot, E. Hoffpauir - MACS, P. Hughes - CARB, C. Malvicino - Centro Ricerche Fiat, S. Rand - EPA, A. N. Reginaldo - Toyota, J. Rugh - NREL, F. Scianca - GM, L. Shields - SAE, S. Stone - Institute for Government and Sustainable Development, K. Taddonio - EPA, N. Nguyen - US National Highway Traffic Safety Administration, M. Zima - Delphi
- 9.30 New refrigerant evaluation results using LCCP method from JAMA**
T. Ikegami - Toyota Motor
- 9.50 Emission reduction through MAC innovation**
F. Wolf - OBRIST Engineering
- 10.10 Utilizing the GREEN-MAC-LCCP tool to analyze new alternative refrigerants**
W. Hill, S. Papasava - General Motors
- 10.30 Coffee break**
- 10.50 Comparison of global warming effects of HFC-134a, R-744, and new refrigerant by TWPG and CWP analyses**
A. Sekiya - National Institute of Advanced Industrial Science and Technology
- 11.10 Next Generation Mobile Air Conditioning Refrigerant Technology**
B.H. Minor - DuPont Fluoroproducts, Mark Spatz - Honeywell
- 11.30 INEOS Fluor's Auto AC-1 - A Technical Update**
R. E. Low - INEOS Fluor
- 11.50 Small car R744 system with fixed displacement compressor**
R. Haller, I. Guitari, M. Yahia, J. Benuali - Valeo Climate Control
- 12.10 R-744 MAC System for a low-intermediate segment vehicle: second step**
R. Monforte - Fiat Group Automobiles

- 12.30 Lunch & Discussion**
- 14.00 Simulation and Test of a CO2 ejector cycle**
E. Bou Lawz Ksayer, D. Clodic - CEP Ecole des Mines de Paris
- 14.20 Improving efficiency of vehicle air conditioning systems**
M. Markowitz - Ford Werke
- 14.40 Drying Alternative Refrigerants with Molecular Sieve Desiccants**
A. P. Cohen - UOP LLC / A Honeywell Company
- 15.00 Air Conditioning Cabin Simulation with Local Comfort Rating of Passengers**
S. Wagner, S. Paulke, M. Ellinger - P+Z Engineering
- 15.20 Supporting the development of refrigerant cycles by means of numerical simulation**
K. Martin - Virtual Vehicle Competence Center, R. Rieberer - TU Graz, S. Alber - Modine, J.J. Robin - Egelhof, T. Schaeffer - Ixetic
- 15.45 Coffee break**
- 16.20 Family of R744 control valves and suggestions for efficient testing**
A. Müller, H. Kappler, T. Greeb - Thomas Magnete, N. Stulgies, J. Köhler - TU Braunschweig, S. Försterling, W. Tegethoff - TLK Thermo
- 16.40 Low GWP refrigerants evaluation - Results on a Fiat Panda Prototype**
R. Bracco, C. Malvicino - Centro Ricerche Fiat
R. Monforte - Fiat Group Automobiles
- 17.00 Enhanced low cost A/C system for small cars and LCVs**
S. Mola, W. Ferraris - Centro Ricerche Fiat
- 17.20 Secondary Loop system for small cars to comply with the 2006/40/EC Directive**
C. Malvicino, M. Rostagno - Centro Ricerche Fiat
T. Craig - Delphi, R. Monforte - Fiat Group Automobiles

FIAT PANDA DEMONSTRATORS EXHIBITION

This is a presentation of four vehicles demonstrators based on the Fiat Panda: one equipped with a R744 system, one using a low GWP refrigerant, one with an enhanced R134a system and one with a R152a secondary loop. The first three are ready and fully tested, the last one is under completion

CONGRESS DINNER

30 November

- 9.00 Thermally operated mobile air-conditioning systems: System concept, overall model and simulation results**
J.M. Corberan, L. Cortés, J. Payá - Universidad Politécnica de Valencia, S. Mola - Centro Ricerche Fiat
- 9.20 Thermally operated mobile air-conditioning systems: Development and tests of three lab-scale prototypes**
R. de Boer - Energy Research Centre of the Netherlands
R.E. Critoph - University of Warwick, G. Restuccia - CNR-ITAE, S. Mola - Centro Ricerche Fiat
- 9.40 Efficient Air Conditioning Operation Using Interior Dewpoint Temperature**
A. Jeckel - DaimlerChrysler Hybrid Development Center
- 10.00 Waste Heat Recovery System**
S. Hase - Sango, M. Ranalli - Emcom, D. Magnetto - Centro Ricerche Fiat
- 10.20 Coffee break**

B-COOL PROJECT SESSION

- 10.40 Fiat Panda with R744 CO2 System - tests results**
C. Malvicino, R. Seccardini, J.C. Petesh, C. Arnaud, L. Dello Preite, A. Bergami
- 11.00 Ford Ka with R744 CO₂ System - tests results**
M. Markowitz - Ford Werke, R. Haller, C. Petitjean - Valeo
- 11.20 Global environmental and economic benefits of introducing R744 mobile air conditioning**
A. Hafner & P. Nekså - SINTEF Energy Research
- 11.40 R744 accumulator design and system modeling**
N.C. Strupp, N.C. Lemke, M. Bockholt, J. Köhler - TU Braunschweig
- 12.00 Method of test and measurement of CO₂ leak from the AC system in the car cabin**
Elias Bou Lawz Ksayer, D. Clodic - CEP Ecole des Mines de Paris
- 12.20 R744 system enhanced lines and components**
A. Bergami - Maffow
F. Angelini - Università Politecnica delle Marche
- 13.00 Lunch**

Workshop venue

The Workshop will be held at Mirafiori Motor Village - Piazza Cattaneo 9 - Torino (Italy).

Official language & Papers

Papers will be written and presented in English. No simultaneous translation will be provided. All papers will be included in a CD and delivered to all participants after the Workshop.

Exhibition

A selected number of Companies will exhibit their latest achievements close to the conference rooms. The exhibits will be related to the main topics discussed during the conference. Please contact ATA organisation for further information.

Registration & cancellation policy

To register, please return the completed registration form to ATA (via fax or e-mail).

For a refund of fees, cancellations must be made at least two weeks prior to the event (please send us your bank details).

Replacement delegates are welcome at any time.

Congress dinner

A dinner is scheduled on 29 November.

Each registered participant is entitled to attend the dinner, but please indicate on the registration form your plans to attend it or not.

Accompanying persons may also attend the dinner, upon purchasing additional ticket(s).

Accommodation

It is not included in the registration fee.

For reservation and information visit:

<https://www.hotelres.it/english/meeting/modulo1.php?id=1034> or alternatively www.ata.it (Conferences/Symposia - future events - 2007, 2nd European Workshop - Mobile Air Conditioning).

Conference Information:

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