Low Cost and High Efficiency CO2 Mobile Air Conditioning system for lower segment cars

Fact Sheet

Project information

B-COOL

Grant agreement ID: 12394

Project website

Start date: 1 March 2005
End date: 30 November 2008

Funded under:
FP6-SUSTDEV

Overall budget:
€ 4 649 220

EU contribution:
€ 2 548 510

Coordinated by:
CENTRO RICERCHE FIAT SOCIETA
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Objective

The Project objective is the development of a low cost and high efficiency air-conditioning system based on CO2 (R744) as refrigerant fluid. Methods to assess performance, fuel annual consumption and environmental impact will be identified and they will constitute a first step for EU new standards. The EU, as Greenhouse Gas emission reduction measure, proposed the ban for Mobile Air Conditioning systems of fluids having a Global Warming Potential lower than 50 (i.e. R-134a and R-152a) with complementary measures - e.g. measurement of the MAC fuel consumption - This represents a challenge and an opportunity for OEMs and Mobile A/C Suppliers. The CO2 - R-744 when used as a refrigerant - is the favourite candidate to replace the R-134a. Besides safety, reliability and efficiency, the present estimated additional cost, ranging from 70 up to 150 Euro with reference to the low priced car systems, represents a obstacle. The lower priced vehicles constitute up the 70% of the present EU car market, this number will rise up to the 80% with the EU enlargement. A low cost and high efficiency R 744 MAC will support the EU efforts reducing the resistance to the approval of the HFC ban, allowing a rapid diffusion of the new system with the related environmental benefits and making the EU industries more competitive. The consortium composition - 2 major OEMs, 4 suppliers and three acknowledged excellence centres - makes the risk acceptable assuring an effective exploitation. Finally the Project gathers the most skilled European scientists and engineers in this specific field, so high level scientific and technical know how are expected to be produced as well as scientific advances in the dynamic system modelling. This will contribute to
strengthen EU industries position in other domains (e.g. domestic air conditioning). The BCOOL project forms a cluster with the project named TOPMACS, focused on innovative adsorption mobile air conditioning systems...

Programme(s)

FP6-SUSTDEV - Sustainable Development, Global Change and Ecosystems: thematic priority 6 under the Focusing and Integrating Community Research programme 2002-2006.

Topic(s)

SUSTDEV-2 - Sustainable surface transport

Call for proposal

FP6-2003-TRANSPORT-3

See other projects for this call

Funding Scheme

STREP - Specific Targeted Research Project

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Last update: 26 March 2013
Record number: 74779