Press Release No. 13/2009

Press Relations Officer: Martin Ittershagen
PR-staff: Anke Döpke, Dieter Leutert,
Fotini Mavromati, Theresa Pfeifer, Martin Stallmann
Address: Postfach 1406, 06813 Dessau-Roßlau
Telephone: +49 340/21 03-2122, -2827, -2250, -2318, -3927, -2507
E-Mail: pressestelle@uba.de
Internet: www.umweltbundesamt.de

Umwelt Bundes Amt
Für Mensch und Umwelt

More environmentally friendly mobile air conditioning systems needed now

UBA's President Troge appeals to automotive industry to go into production of greener cars

At this year's 79th International Motor Show in Geneva, which runs from 5-15 March, a myriad of Minis, hybrid and electric cars are pointing towards tomorrow's trend: fewer emissions and low fuel consumption. It seems the automotive industry has responded to customer demands. Yet a customer's search for a passenger vehicle fitted with a green air- conditioning system will be in vain. All the same, some three million tonnes of greenhouse gases per year are emitted from passenger vehicle air-conditioning units in Germany.

"The industry must move full steam ahead to mass-produce CO_2 air-conditioning systems as they are an outstanding example of innovation in environmental protection", said Prof. Dr. Andreas Troge, President of the Federal Environment Agency (UBA). "A delay in the start of production amounts to a loss of expertise and market opportunities. This will weaken the international position of the European automotive industry and its components suppliers", declared Troge.
In less than two years' time, starting January 2011, all new vehicle types in Europe must run with refrigerants that have a much lower global warming potential than the refrigerants currently used. Automobile manufacturers are investigating two alternatives: the natural refrigerant CO_2 (carbon dioxide) and the synthetic refrigerant R1234yf. Whereas the latter can develop highly corrosive and toxic hydrofluoric acid in a fire, CO_2 is incombustible and non-toxic. What is more, R1234yf has a global warming potential that is four times higher than CO_2.
In Autumn 2007 the German Association of the Automotive Industry (VDA) announced that the German automotive industry would introduce CO_2 as its new refrigerant. The Association re-asserted this claim in Autumn 2008.
"It is a wise decision, which must now be followed up by action. The technology for CO_2 air-conditioning systems has been developed, owing largely to a supplying industry dominated by mid-sized companies. The Federal Environment Agency already owns a vehicle fitted with a CO_2 air-conditioning system", said Troge.
CO_2 is the refrigerant for the vehicles of the future: not only do CO_2 air-conditioning systems provide cooling, they can also serve—unlike other alternatives- as efficient heat pumps in the

cold season. This applies to hybrid or electric cars in particular as they require auxiliary heating in winter.
More information on automobile air-conditioning systems is on the Internet at http://www.umweltbundesamt.de/klimaschutz-e/index.htm as part of the article "Climate-friendly alternative: Mobile air conditioning units with CO2.

Dessau-Roßlau, 5 March 2009