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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 CO₂ 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 CO₂ (carbon dioxide) and the synthetic refrigerant R1234yf. Whereas the latter can develop highly corrosive and toxic hydrofluoric acid in a fire, CO₂ is incombustible and non-toxic. What is more, R1234yf has a global warming potential that is four times higher than CO₂. In Autumn 2007 the German Association of the Automotive Industry (VDA) announced that the German automotive industry would introduce CO₂ 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 CO₂ 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 CO₂ air-conditioning system", said Troge.

CO₂ is the refrigerant for the vehicles of the future: not only do CO₂ 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".

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