MAC Directive drives the need for R-1234yf refrigerant

From January 1, all new vehicles sold in Europe must use a refrigerant gas with a GWP (global warming potential) value below 150, according to the European MAC Directive

Since 2011, car manufacturers have been required to meet the European MAC (mobile air conditioning) Directive prohibiting the use of refrigerants with a global warming potential (or GWP) of 150 or more, in new vehicle model types.

From January 1 this year, it rolls out across all new vehicles.

GWP explained

Refrigerant gases are each allocated a GWP value – the higher the number, the more negative the potential impact if it is released to atmosphere. The aim of the MAC Directive is to limit emissions of certain greenhouse gases from car air conditioning and reduce their impact on climatic change.

R-134a refrigerant

R-134a has been the standard refrigerant used in car air conditioning for many years and has a GWP of 1430*. Car air conditioning systems already using this gas can continue to do so, and R-134a will continue to have a place in the market for some years to come. However, from 2017 all new vehicles must use a refrigerant with a GWP below 150.

"The aim of the MAC Directive is to limit emissions of certain greenhouse gases"

R-1234yf – the new refrigerant for car air conditioning

R-1234yf is the new refrigerant for car air conditioning. More than one million vehicles in the UK aftermarket already use it, and its use will grow over coming years.

R-1234yf has a GWP of less than 1**, meaning it has virtually no impact on the environment, breaking down and disappearing from the atmosphere in just 11 days, compared with R-134a's 13-year lifespan.

Vehicles using R-1234yf are expected to use less fuel and produce 20-30% less CO_2, resulting in a significant decrease in carbon footprint. R-1234yf has undergone rigorous testing by third parties and car manufacturers and has been verified as being safe to use. R-1234yf is at least as efficient as R-134a and has the same cooling capacity. All components of an AC system using R-1234yf are identical or similar to those using R-134a.

Climalife – your first-choice supplier for R-1234yf

As we see the shift from R-134a to R-1234yf, it's important to ensure you have both products in stock.

A key player in the distribution of refrigerants and other climate control products for more than 140 years, Climalife is a long-term supplier of R-134a to the motor industry and has been supplying R-1234yf for those cars already using it.

Climalife has R-134a and R-1234yf in stock with a nationwide distribution network, together with the knowledge and experience to support you.

*IPCC 4th Assessment. **IPCC 5th Assessment

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