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THE HFO REFRIGERANT PHASE IN

The History **Of 1234yf**

Initial Research and Development: Research on the development of low-global warming potential (GWP) refrigerants gained momentum due to growing concerns about environmental impact, especially the high GWP of R134a

Formation of the HFO-1234yf Consortium: Major chemical and automotive companies collaborated to develop 1234yf, a hydrofluoroolefin (HFO) refrigerant with a significantly lower GWP compared to R134a.

Approval and Acceptance: The Society of Automotive Engineers (SAE) approved HFO-1234yf as a safe and effective refrigerant for automotive air conditioning systems.

Mandatory Adoption in Europe: The European Union (EU) implemented regulations requiring the use of low-GWP refrigerants like 1234yf in newly designed passenger cars, effectively mandating the switch from R134a.

Widespread Adoption in the Automotive Industry: Automotive manufacturers in Europe began incorporating 1234yf in new vehicle models to comply with the EU regulations. Several major car manufacturers made the switch, contributing to the broader acceptance of 1234yf.

Expansion to Other Regions: Adoption of 1234yf started spreading beyond Europe, with automotive manufacturers in other regions, including North America and Asia, beginning to use 1234yf in new car models. The automotive industry, recognizing the pressing need for change, began supporting the adoption of 1234yf. Industry associations and regulatory bodies also played a critical role, advocating for the widespread use of 1234yf to mitigate environmental impact. Legislative measures were introduced to incentivize the transition, cementing 1234yf as the future of refrigerants.



*Individual states may have different compliance dates

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