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One air conditioning compressor, two systems

MAHLE offers air conditioning compressors that can be installed in both R134a and R1234yf systems. However, a few things need to be noted.

Among other things, the refrigerants R134a and R1234yf differ significantly from one another in their chemical composition. But the working pressure and technical design of both systems (for example, the working pressure and technical design of their piston compressors) are identical. The same MAHLE air conditioning compressor can thus be used in conjunction with both refrigerants.

The right oil

MAHLE air conditioning compressors, which are suitable for both refrigerants, are filled ex works with PAG YF oil. This oil can be used in conjunction with both R134a and R1234yf. However, it should be noted that some UV dyes are not compatible with PAG YF oil when used in systems filled with R134a. In such cases, the system should thus always be flushed before installing the new air conditioning compressor. Alternatively, the oil in the new compressor can be replaced with a PAG oil that is explicitly suitable for R134a and the UV dyes used in conjunction with it.

Before installation

One of the most important tasks before installing any air conditioning compressor is determining the correct oil quantity and adjusting it accordingly (see TM 03/2020). This also applies to compressors that have been filled with a certain amount of PAG YF oil at the factory. If the air conditioning compressor is to be used in an R134a system containing a UV dye, the system must be flushed, because the dye may not be compatible with the PAG YF oil.

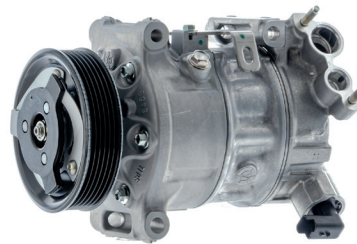


Figure 1: Suitable for two refrigerants:
MAHLE ACP 543 000P



Figure 2: MAHLE PAG YF oil can be used in both R134a and R1234yf systems.

Important!

MAHLE air conditioning compressors for R134a and R1234yf systems are filled with PAG YF oil, which is generally compatible with both refrigerants. If a UV dye has been added to the R134a, it must be compatible with PAG YF oil (see "The right oil"). Before installation, the correct oil quantity for the air conditioning compressor must be determined and adjusted accordingly. The correct quantities for most vehicle types can be found in our **Refrigerant and A/C compressor oil filling quantities manual**.

Link 1: <https://www.mahle-aftermarket.com/eu/de/services/filling-quantities/>

Link 2: <https://www.mahle-aftermarket.com/eu/de/medien-center/engine-cooling-&-air-conditioning/>