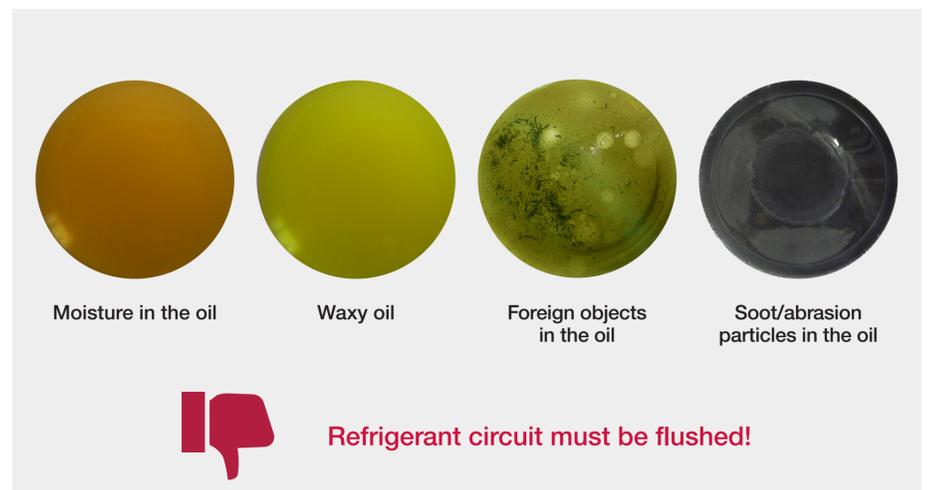
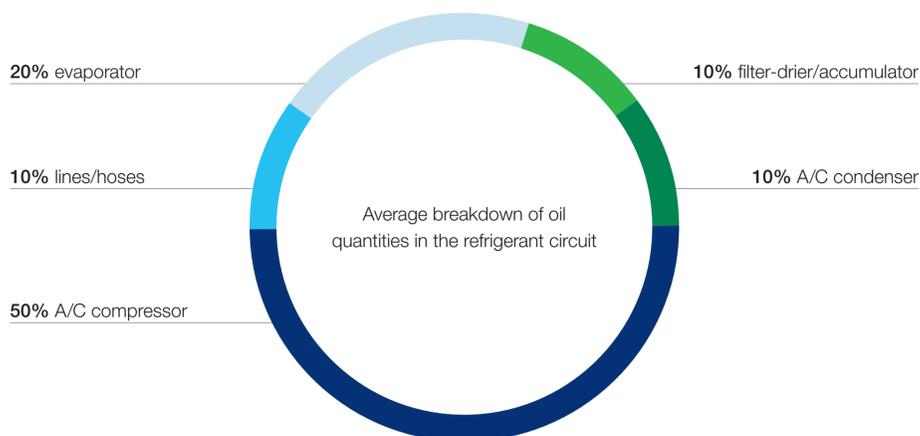


Oil diagnostics when replacing the air conditioning compressor

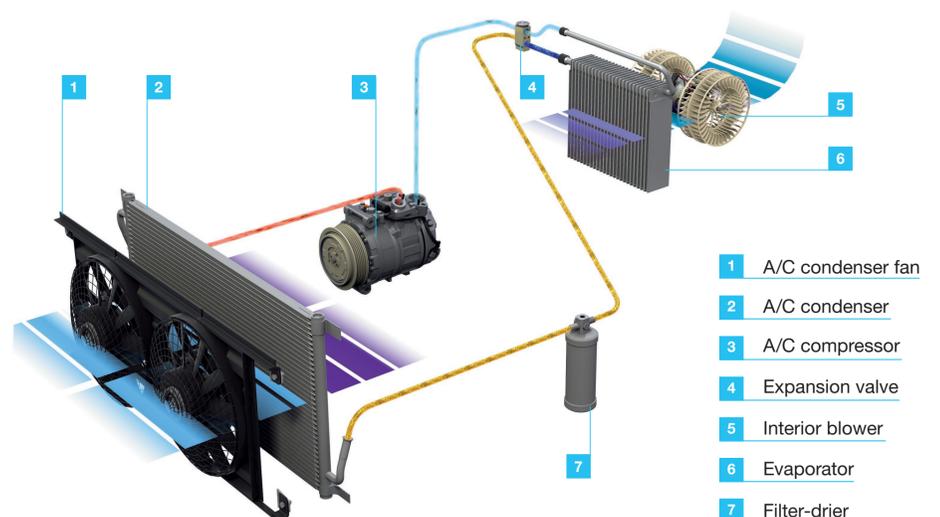
Before installing a new air conditioning compressor, always check the quantity and condition of the oil in the old compressor. Here are a few examples of what you might find in the old compressor:



Oil distribution in the air conditioning system



Refrigerant circuit with expansion valve



Always flush the refrigerant circuit

As a general rule, the refrigerant circuit must **always be flushed** if an air conditioning compressor has been damaged. This is the only way to prevent consequential damage caused by foreign objects, for example. Flushing completely removes the old compressor oil from the system (compressors, filter-driers, expansion valves, and multiflow condensers cannot be flushed). When refilling afterward, the new compressor is filled with the entire quantity of oil.

Replacement without flushing: always adjust the oil quantity

When replacing an air conditioning compressor, the flushing step can only be skipped **in very exceptional cases**, such as an electrical defect. However, it's still essential to ensure that the system is clean, leaktight, and filled with the right quantity and specification of compressor oil. If an air conditioning compressor is being replaced without flushing, it's especially important to reduce the quantity of oil in the new compressor to avoid overfilling and potentially causing serious damage. About 50% of the compressor oil is found in the compressor, while the rest is distributed among the system's other components. If further components are replaced, their percentage share of the total quantity of oil (see pie chart) must be taken into account during filling.

All MAHLE air conditioning compressors are filled with oil at the factory. To avoid overfilling the system, the oil from the new compressor must first be drained off into a clean container. The oil from the defective compressor should be drained off into a second container and the quantity gauged using a measuring jug. The quantity of fresh oil that is added to the new compressor should correspond to the quantity of used oil. The oil from the old compressor should not be reused and must be disposed of in an environmentally friendly manner.

Important!

If the old compressor contained more than 50% of the system's entire quantity of oil, it's safe to assume that the system had been overfilled. If less than 30% of the entire oil quantity is found in the compressor, there's probably a leak somewhere. The quantity of oil drawn off when using an air conditioning service unit to evacuate the A/C system also needs to be added. In either case, flushing the refrigerant circuit to remove the old oil is vital. Only then can you be sure that the system contains the correct amount of oil after the repair.



Brochure:
Air conditioning compressor oils



Online:
Filling quantity tool