PAO-Oil 68 / PAO-Oil 68 Plus UV

Universal compressor oil

PAO-Oil 68 is an air conditioning compressor oil for universal use, available exclusively from *Behr Hella Service*.
In the past, garages have had to stock up with different oils for servicing air conditioning systems. Thanks to **PAO-Oil 68** this is no longer necessary. The oil is supplied without (PAO-Oil 68 - Fig. 1) and with contrasting agent added (PAO-Oil 68 Plus UV - Fig. 2).
PAO-Oil 68 is a high-quality multigrade synthetic oil which has been developed for universal application in all car and truck air conditioning systems, as well as for air conditioning systems installed in construction and agricultural machinery. The molecules in **PAO-Oil 68** adhere to all metallic surfaces in the system, dispel other molecules and form a thin film on the surface of the system components. Since the molecules do not try to combine, this oil film is just one molecule "thick". This means that in contrast to many other oils, there is no danger of oil accumulation in the evaporator and a resulting reduction in cooling capacity when PAO Oil 68 is used. Since the PAO-Oil only combines with the refrigerant to a minimum extent, only a small part of the oil (approx. 8 Vol %) circulates through the system. The rest remains where the oil is actually needed – in the compressor. Thanks to the highly active oil film in the components, the seal is improved and there is less friction between the moving parts in the compressor, thus reducing operating temperature and wear. This makes a major contribution to operational safety and reducing noises and ensures shorter running times and lower power consumption for the compressor. PAO-Oil 68 does not

Fig. 1

Bild 3
PAG und PAO Oil vermischt
Fig. 2

corrode fluoric elastomer materials such as hoses or seals and is excellently suited for conversion from R12 to R134a refrigerant. Since **PAO-Oil 68** is compatible with many other lubricants and refrigerants, it can be used both to refill oil quantities and replace the whole quantity of system oil. Due to its independent molecular structure and density, PAO-Oil 68 mixes with other oils to a certain extent, but separates from them again when "at rest" (see Figs. 3 + 4) and thus does not form a solution in the same way as salt and water, for example. Thanks to its unique combination of highly refined synthetic hydrocarbon oil and special additives to increase performance, PAO-Oil 68 has a very large operating range (-68 °C to +315 °C).
PAO-Oil 68 is not hygroscopic, i.e. it does not absorb humidity from the environmental air, again in contrast to other oils. Thus humidity problems such as components icing up or acids being produced can be counteracted simply by using PAO-Oil.
The application possibilities and storage ability of **PAO-Oil 68** are significantly greater than with conventional oils.
PAO-Oil 68 contributes to the improved performance of the air conditioning system and has been successfully used by many international air conditioning specialists for years.

Fig. 3

PAG and PAO-Oil mixed

Fig. 4

PAG and PAO-Oil separated

PAO-Oil 68 Plus UV
has the same positive properties as PAO-Oil 68.
In addition, a concentrated and highly effective contrasting agent has been added, which is used for UV leak detection. The advantage of the low Vol. % concentration of the contrasting agent is that the

complete properties of the oil are retained
and it has no negative effects on system components or service units. 10 Vol. % of the system oil quantity are quite sufficient to achieve a sufficient troubleshooting effect.
This corresponds to only 18 ml PAO-Oil Plus UV in the

case of an overall system oil quantity of 180 ml, for example.
PAO-Oil 68 Plus UV can also be used as the only oil to fill the whole system, without this having any negative effect.
PAO-Oil 68 Plus UV has been tested by the manufacturer and independent institues. Thus, for example, the chemical stability in connection with refrigerant and various O-ring materials was tested on the basis of the so-called "sealed tube test" in accordance with standard ASHRAE 97. All the tests returned a positive result, so that negative effects on components of vehicle air conditioning systems or air conditioner service stations can be excluded.
Thus **PAO-Oil 68 Plus UV** can be filled directly into a component, e.g. the compressor, or be added to the refrigerant circuit via the air conditioner service station.

To ensure that all application possibilities (refrigerant and compressor type) are covered, PAO-Oil 68 and PAO-Oil 68 Plus UV are available in the following versions:

- **AA1** (ISO Grad 68)
- **AA2** (ISO Grad 32)
- **AA3** (ISO Grad 100)

Refer to the table below for the correct oil type to be used for your specific application:

 | 10th March 2006 |

Use	Compressor type	Refrigerant	PAO-Oil type	PAO-Oil type Plus UV
Vehicle air conditioning systems* Refrigerator trucks (fresh product vehicles) Refrigerator trucks (frozen product vehicles)	all types (except impeller type) Piston compressors Piston compressors	R134a, R413a, R22, R12 R134a, R507a, R500, R12 R507a, R502, R22	PAO-Oil 68 AA1 8FX 351 213-091 240 ml 8FX 351 214-031 0,5 l 8FX 351 214-021 1,0 l 8FX 351 214-101 5,0 l 8FX 351 214-051 205 l	PAO-Oil 68 AA1 Plus UV 8FX 351 214-201 0,5 l 8FX 351 214-211 1,0 l 8FX 351 214-221 5,0 l 8FX 351 214-231 10,0 l 8FX 351 214-241 20,0 l
Vehicle air conditioning systems* Refrigerator trucks (fresh product vehicles) Refrigerator trucks (frozen product vehicles)	all types (except impeller type) Piston compressors Piston compressors	R404a, R407c, R401b, R401c, R409a, R409b R404a, R407c, R409b R404a, R407c, R402a, R403a, R408a	PAO-Oil 68 AA2 8FX 351 214-061 1,0 l 8FX 351 214-071 5,0 l	PAO-Oil 68 AA2 Plus UV 8FX 351 214-261 1,0 l
Vehicle air conditioning systems*	Impeller type compressors	R134a, R413a	PAO-Oil 68 AA3 8FX 351 214-081 1,0 l 8FX 351 214-091 5,0 l	PAO-Oil 68 AA3 Plus UV 8FX 351 214-281 1,0 l

*Cars, trucks, agricultural and construction machinery

Whether to use PAO-Oil 68 or PAO-Oil 68 Plus UV depends on the type of compressor selected and the refrigerant used. The wrong selection of oil can lead to damage. Vehicle or manufacturer-specific instructions must be considered separately.