

TEMPERATURE

Often the subject of how long compressor oil will last at a particular temperature is asked. This depends on several factors, including application, cleanliness of air, base fluid of the oil, etc.

We have predicted operating life of various compressor oils based on good operating conditions in our literature. Generally, they are:

1. 2-4000 hours for food grade USDA H-1 PAO oils.
2. 6-8000 hours for PAO.
3. 8000 hours for diester oils.
4. 8000 hours for polyglycol/ester base oils.
5. 8-10,000 hours for PAO/POE base oils.
6. 10-12,000 hours for POE base oils.

As temperatures increase, the oil life is drastically decreased, especially above 210°F.

Some typical numbers others and we have used are as follows:

Temperature	Diester	PAO	C-Plus 10	PE Fluids	900 Series
180-190°F	8000 hrs	8000 hrs	10,000 hrs	11,000 hrs	12,000 hrs
190-200°F	8000 hrs	6000 hrs	9,000 hrs	10,000 hrs	11,000 hrs
200-210°F	6000 hrs	4000 hrs	8,000 hrs	9,000 hrs	10,000 hrs
210-220°F	4000 hrs	2000 hrs	5,000 hrs	7,000 hrs	9,000 hrs

Diester oils will take more abuse and provide superior detergency to PAO products.

These figures are non-specific and "Rule of Thumb". Other factors to be considered (such as acids in the intake air) are outlined in our technical information letter, "Compressor Oil Service Life".