

Petroleum and related products

Determination of ageing behavior - TOST test Part -1 to Part -4

In factories and industrial plants, gear oils, turbine oils and hydraulic fluids must remain in use over a long period of time.

Premature ageing of the lubricant or the hydraulic fluid causes damage to the systems and increases costs for maintenance and oil changes.



DIN EN ISO 4263-1:

This part of ISO 4263 specifies a method for determining the ageing behaviour of mineral oils used as turbine oil (categories TSA, TGA, TSE, TGE), as pressure fluid (categories HL, HM, HR, HV, HG) or as circulating oil (category CKB), containing active substances to increase ageing resistance and corrosion protection and whose density is lower than that of water.

Oils containing synthetic components may also be tested using this test method.

DIN EN ISO 4263-2:

This part of ISO 4263 specifies a method for determining the ageing behaviour of hydraulic fluids of class HFC.

Ageing is accelerated by the presence of oxygen, water and metal catalysts at elevated temperatures, and the signs of decay in the liquid are followed by the change in pH and by the content of insoluble matter.

DIN EN ISO 4263-3:

This part of ISO 4263 lays down a method for determining the ageing behaviour of synthetic pressure fluids of classes HFDU, HEES, HEPG and HETG. Ageing is accelerated by the presence of oxygen and metal catalysts at elevated temperatures, and the ageing of the liquid is monitored by changing the acid number.

DIN EN ISO 4263-4:

This part of ISO 4263 lays down a procedure for determining the ageing behaviour of gear oils of classes CKC, CKD, CKS and CKT. Ageing is accelerated by the presence of oxygen and by elevated temperatures, and the signs of decay in the liquid are followed by the change of the kinematic viscosity at 100 °C, by the content of insoluble fractions (precipitation number). If necessary, the increase of the acid number, the sediment content by filtration, changes in the additive content and the infrared oxidation are also used for the result evaluation.

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