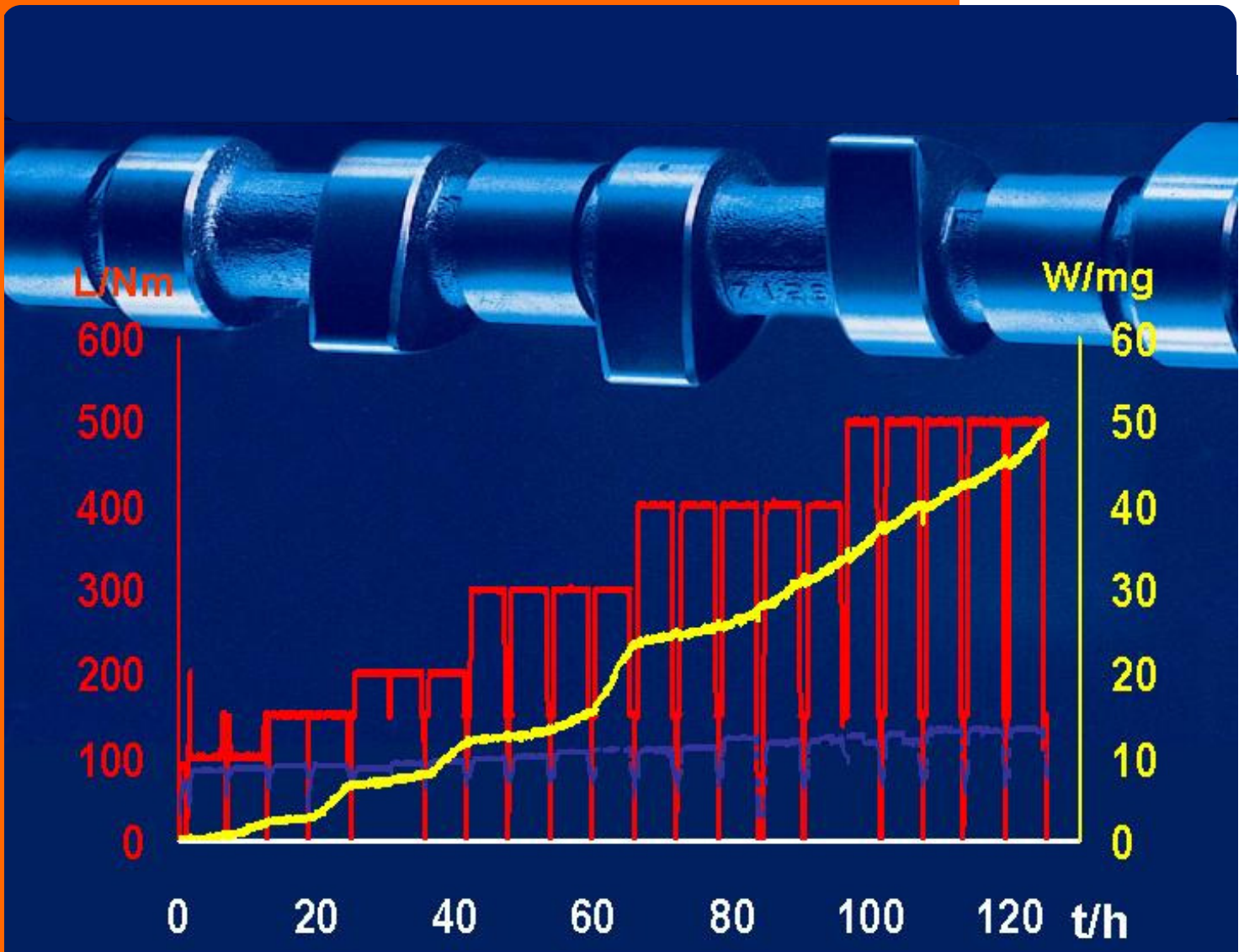




RADIOISOTOPES FOR ENGINEERING AND MEDICINE



QUALITY TEST OF ENGINE OIL

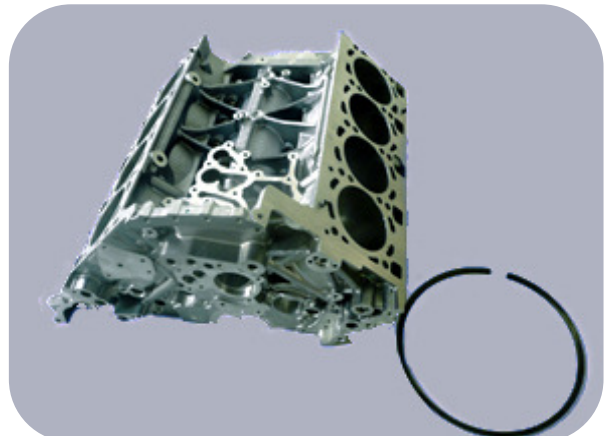
The RTM Quality Test of Engine Oils

Dynamic RTM Wear Test in fired full-scale engines, gasoline or diesel engines, truck or ship diesel engines.

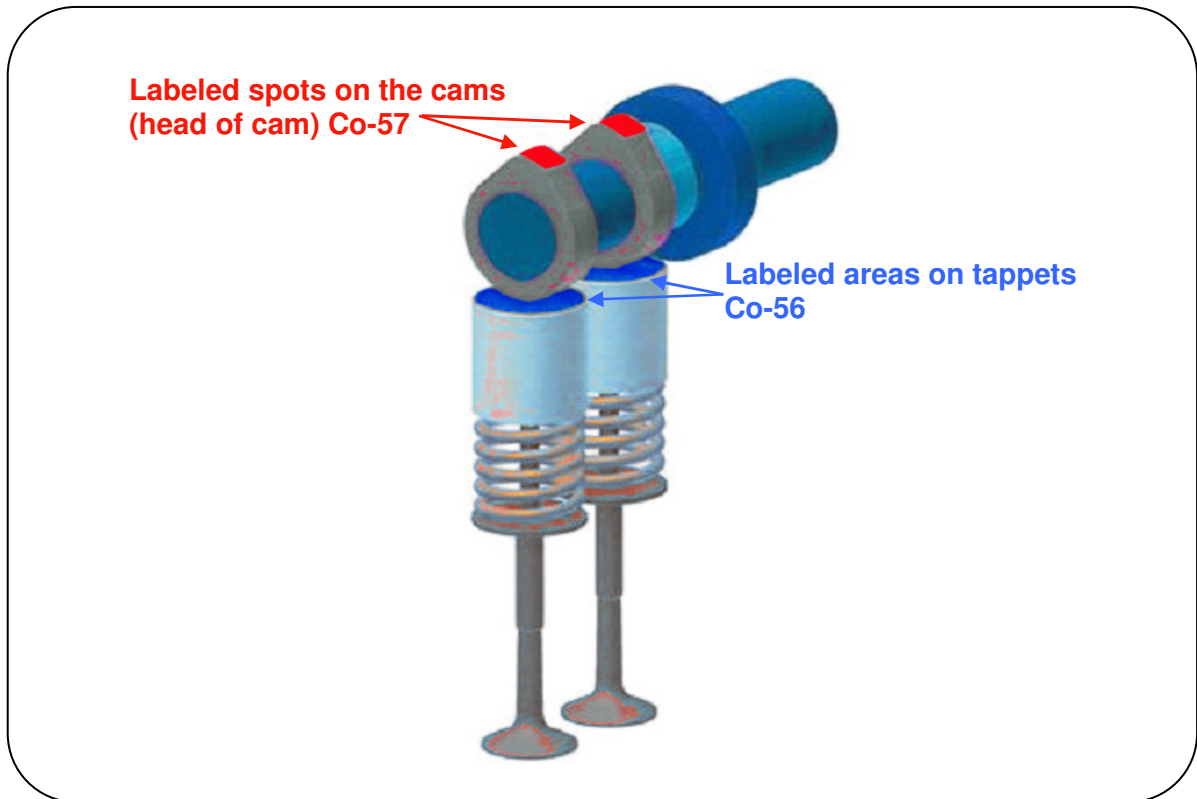
+ **Real-Time Measurement** of anti wear and corrosion protective properties of the lubricant over the full range of oil temperature up to 180 °C, of engine speed, and of engine load in one test run, Applying high resolution, nanoscale **RTM wear test** of friction partners, either **camshaft - tappet** or **piston ring - cylinder wall (UDC)** or other partners.

+ **Analysis of the effects on the oil quality** from

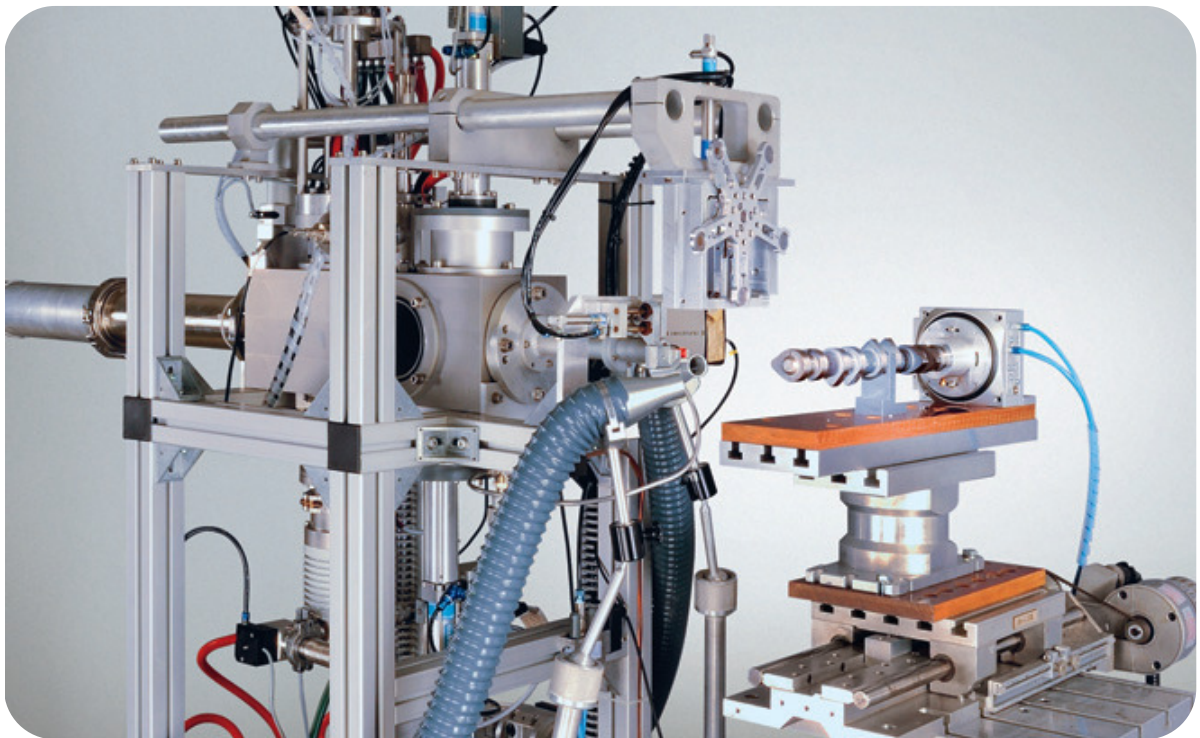
- Additives
- Soot
- Fuel
- Bio fuel (BtL, etc.)
- Ethanol
- Aqueous Acids



Engine oil quality test based on in-situ wear diagnosis of friction partners, either camshaft (head of cam) and tappet, or piston ring and cylinder wall (top dead point centre), or journal bearing and shaft.

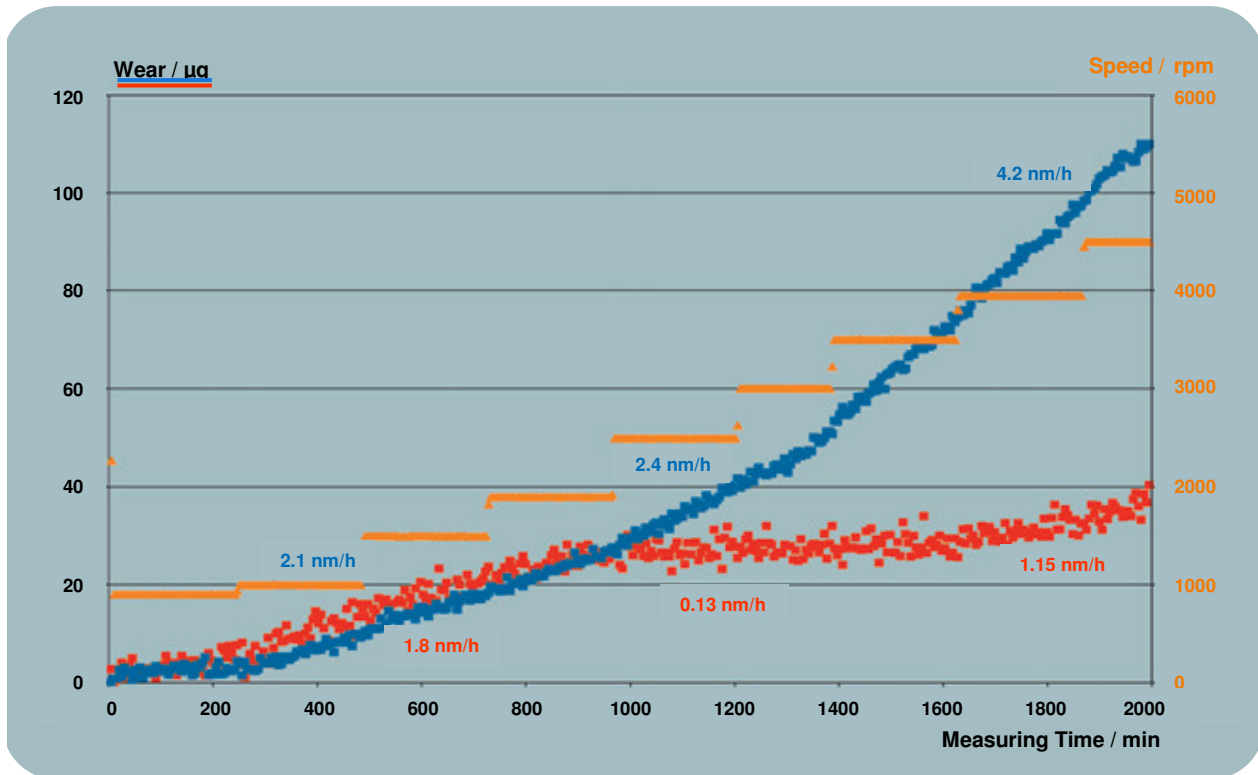


Typical Parts for Engine Oil Quality Test: Camshaft and Tappets.



Labeling of a Camshaft. For Thin Layer Activation (TLA) of engine Parts ZAG Operates Two Autonomous Ion Accelerators (Cyclotrons).

The RTM Quality Test of Engine Oils



Results: Simultaneous Wear Measurement of Camshaft and Tappet for Speed Levels from 800 rpm – 4500 rpm.

Based on our broad know-how and many years of international experience and contacts, we offer qualified consultation in all current and future applications of radioactivity in the wear measurement technique. We are much looking forward to your call.



ZAG Zyklotron AG : Hermann-von-Helmholtz-Platz 1
D-76344 Eggenstein-Leopoldshafen : Germany
www.zyklotron-ag.de : info@zyklotron-ag.de
Tel (+49) (0) 721 608 22683 : Fax (+49) (0) 721 608 23156

All data are non-committal. They do not guarantee specific characteristics. Subject to change. The conditions specified in the respective offer apply.
© ZAG Zyklotron AG, Germany, 2010