DEKRA Rail brochure

Lubricated systems

Condition assessment and degradation of lubricated systems

Analyzing the oil and grease, it's possible to determine the state of a lubricated system. DEKRA Rail monitors thousands of lubricated systems by analyzing oil and grease samples in its laboratory. Among other things, these tests involve engines, gear boxes, transmissions and hydraulic systems. Fleet managers are able to use the results to plan and optimize their maintenance processes.

Lubricants ensure that systems keep running with the least possible friction. If the oil contains any particles from other materials, this indicates that wear or contamination is occurring. Oil samples thus provide a good indication of whether there is something wrong with the system.

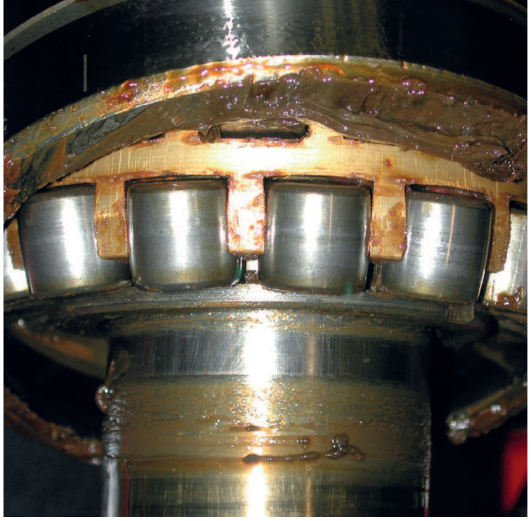
Targeted analysis

DEKRA Rail analyzes samples from the oil or magnetic plug and examines the wear particles. What is the material: for example, iron, chrome, tin, steel, sand or rust? How many particles are involved? How large are the particles? Are they grouped together or isolated from each other in the oil? The data is then analyzed. Is it normal to expect these small particles or can the process of wear be said to be abnormal? What does this say about the individual system, or is it more an indication of what may be amiss with the whole fleet?

If degradation is quicker than expected, DEKRA Rail will investigate the technical causes and any external causes that might be at play. How was maintenance carried out? Was the asset more intensively used than anticipated? Or is the problem connected to some other aspect of usage? For example, is the engine of a diesel locomotive running idle too frequently? Based on this information, a fleet manager can make reasoned decisions, for example, about the best moment for a recondition. A decision can also be taken to carry out tests more frequently and so keep closer track of any potential problems.

Quick results

DEKRA Rail has its own testing laboratory with equipment that can help identify relevant data more quickly. In addition, we have a data-analysis and modeling lab with access to large amounts of historical data. On the back of more than 90 years' expertise, DEKRA Rail can deliver results quickly and reliably.




Optimization of maintenance, the right action at the right time

Using the available data, we will carry out a risk analysis for an individual system or a complete fleet. Any anomalous data can be quickly identified. This enables the specific maintenance of individual items, thus keeping the condition of the entire fleet under control. DEKRA Rail is able to draw quick and reliable conclusions about the condition of a fleet and come up with a concrete forecast for the remaining useful life. This allows you wto optimize your maintenance schedule. Experience shows that proper assessment of the condition of lubricated systems can identify excessive wear in its early stages and so allow for the timely adjustment of maintenance.

Other services provided by DEKRA Rail

> Railway Certification and Assessment Services
> ERTMS services
> Wheel-Rail optimization
> Product Testing
> NDT services
> Remaining useful life assessment

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