



## SUCCESS AT A RAILWAY COMPANY: 27% OF COSTS SAVED

### INDUSTRY:

passenger and freight transportation

### APPLICATION:

railway diesel engines

### PRODUCT:

MOL Dynamic MK 9 15W-40 multigrade diesel engine oil

### SERVICE:

LubCheck\* oil and machine diagnostics, engine oil development

**This company is the market leader in domestic passenger and freight transportation; transporting hundreds of thousands of passengers every day from one place to other. A significant part of passenger transportation is carried out by motor-coach trains. Tight competition between railway and road transportation causes this company to take every opportunity to reduce maintenance costs, a significant part of overall operations costs, and reduce maintenance-related downtime. By using the new MOL Dynamic MK 9 15W-40 multigrade diesel engine oil and applying continuous oil diagnostics the company has been able to cut down on the engine oil change costs of its 40 No. 6341 diesel-powered motor-coach trains by approximately 27 percent.**

The special operating conditions of railway transportation are a serious challenge to engine oils. Because of this, MOL-LUB research engineers have developed a new oil especially tailored for railway engine operations. This development has resulted in a high performance engine oil with viscosity characteristics and thermal and oxidation stability especially tailored for railway operations and suitable for extended oil change intervals as well.

After operational tests continuous oil diagnostic tests were performed on the engine oil. These tests showed what kind of physical and chemical processes take place and revealed the wear and tear process inside the engines as well. After this successful experimental period, MOL-LUB experts proposed the introduction of the new MOL Dynamic MK 9 15W-40 multigrade diesel engine oil and the extension of oil change intervals from 1500 to 2100 operating hours.

With the help of the new engine oil, the extended oil change interval and the customised maintenance program, the company was able to cut oil change costs for its No. 6341 motor-coach trains, which meant significant savings annually. In 2008, as part of on-going development, MOL Dynamic MK 9 15W-40 railway diesel engine oil was replaced by MOL Dynamic Synt Diesel 10W-40 diesel engine oil. Oil diagnostic tests have proven that the cost savings described above are still occurring.



\* At the time of the case study the name of our Oil- and machine diagnostics service was called „WearCheck”, which changed to “LubCheck” in 2017.

1

## CHALLENGE

Decreasing downtime and costs caused by maintenance of No. 6341 diesel motor-coach railway trains.

2

## SOLUTION

Developing a new engine oil especially for railway diesel engines, using LubCheck Oil and Machine Diagnostics.

3

## RESULTS

Using the product and the service together resulted in increased oil change intervals, provided an opportunity to modify the maintenance programme thus decreasing maintenance-related downtime. These changes meant millions in cost savings annually.

## LUBCHECK OIL AND MACHINE CONDITION MONITORING





LubCheck diagnostics is the world's leading lubricant-analysis process, which helps to precisely identify the degree of lubricant ageing, degradation and any kind of damage to machines well before its consequences might cause significant losses in production and lead to high repair costs.



## STATE-OF-THE-ART LABORATORY

As a pioneer in oil diagnostics and machine condition-monitoring in Central Europe, MOL-LUB Ltd. has been operating a state-of-the-art oil testing laboratory for 20 years. The accredited laboratory is a specialist member of LubCheck International and analyses and evaluates several thousand oil samples every year, thus saving its customers significant amounts of money and ensuring more efficient production scheduling.

## LUBCHECK DIAGNOSTICS IN 4 SIMPLE STEPS

Sampling	Forwarding samples	Analysis	Expert opinion
Please follow the process described in the attached Information booklet to ensure proper sampling!	Following sampling, please fill in the attached form, and forward the oil sample vessel to the MOL-LUB Ltd. LubCheck laboratory!	The samples received are analysed and a diagnosis is made by lubrication engineering experts.	Test results are summarised within 72 hours and the partner receives an e-mail describing any likely problems and effective preventive maintenance actions to be taken.
			

## WITH THE HELP OF LUBCHECK DIAGNOSTICS

- potential breakdowns can be recognised and identified at an early stage
- any hidden depreciation and irregular operation of machines can be identified and tested
- production losses can be reduced or eliminated
- machine repair costs can be reduced
- maintenance will be more precise and easier to plan
- machine oil change intervals can be optimised
- machine reliability can be improved

## INDICATORS ARE IMPROVING

- more efficient production scheduling
- optimised lubrication
- significant financial savings
- easy-to-plan maintenance costs

YOUR PARTNER:

