

### Higher train availability despite lower maintenance costs!

Maintenance costs have a substantial influence on the life cycle costs of a train unit. This is why rail operators are constantly engaged in optimising maintenance expenses. With its multitude of lubricants specially developed for the railway industry, Klüber Lubrication can help to extend oil change and relubrication intervals and increase the service life of components, thus reducing maintenance costs.



#### Starting off with the best possible performance

Special lubricants for the rail industry are developed for each application individually and tested thoroughly prior to use. So you can rest assured that you have a lubricant for each component that has been optimised especially for the requirements for the lubrication point in question. This enables you to get maximum performance from each component – whether in traction motor bearings, rail switches or train doors.

Additional benefits arise if your lubricant supplier can offer a wide product range from a single source and if they work with a solid international network. This will greatly simplify your procurement processes. As you can see: The right lubricant will bring you many benefits on your way towards more cost efficiency.



#### Getting the optimum out of every component

Train units are expected to travel long distances without malfunction. If the lubricants used have plenty of reserve performance capacity, components will not break down even under exceptional stresses. Railway lubricants from Klüber Lubrication ensure low wear and show high resistance to ageing. This increases the reliability of components and hence that of the whole train unit as well.



### Straightforward maintenance reduces stoppage duration

Even where specialty lubricants are used, the next maintenance stop is only a matter of time. So what remains is the wish for a rapid execution of the pertinent tasks. To get the train back on the line as soon as possible, each item on the maintenance checklist counts. With specialty lubricants made by Klüber Lubrication, relubrication intervals can be extended considerably. If relubrication is necessary only at every other maintenance stop, maintenance times will be cut by half, and material costs are lower as well. This is how you can save time and costs. Moreover, maintenance staff can be deployed more efficiently for other tasks rather than for routine jobs.



### Using the headstart of a strong partner

Which lubricant is right for which application? What does that mean for life cycle costs? And what can I do if the performance capacities of the lubricant I have been using is not sufficient? To get answers to these questions, you don't have to be an expert in lubrication – you can get one from outside. Klüber Lubrication can look back on more than 90 years of experience with the development of specialty lubricants. Many products for railway applications were developed in close cooperation with customers from the Railway Industry and tested comprehensively on our in-house test rigs. They have approvals from many leading manufacturers and haven been used with success in demanding day-to-day operation for many years. Moreover, we are already now working on the challenges of the future such as sustainability and digitalisation.



## A win-win situation that includes the environment

Sustainability is an important issue also in the rail industry. With regard to lubricants, a simple calculation applies: The longer relubrication and oil change intervals become, the smaller are the lubricant volumes consumed. High-performance gear oils often lead to oil change intervals that are twice as long. This means the volume of old oil to be disposed of is cut by half. At lubrication points with direct contact to the environment, biologically degradable lubricants are ideal solutions.

# Moving ahead together.

With specialty lubricants, winning the race for more cost efficiency becomes much easier. Klüber Lubrication is your perfect partner in this race – with its uniquely wide range of high-performance lubricants for numerous applications in the rail industry.

Our lubricant experts will be pleased to rev up for you too. Just contact us:

