



## Engineered Solutions for Freight Railroads

### Timken® Products and Services Help Trains Run Safely and Efficiently

With a long history of delivering bearings to the rail industry, Timken continues to provide the engineering expertise, manufacturing, training and bearing remanufacturing services to meet the growing demand for this form of transportation.

#### We're focused.

Locomotive and rail car manufacturers and operators seek to transport freight predictably while using less energy. Timken has a team dedicated to designing and delivering solutions to meet those objectives.

Unexpected downtime in the form of hot-box setouts or unplanned maintenance costs money, time, productivity and reputation. Timken bearings, seals and backing rings are made specifically to keep wheels running cooler and keep bearings in service longer.

As countries seek ways to reduce carbon emissions, they are growing more dependent on rail for transporting people and freight. Timken's presence in all regions of the world makes it easier for original equipment makers and rail operators to access the products and expertise needed to respond to today's demands.

### Timken Advantage

- **Collaborative problem-solving.** Our history and success within the rail industry make Timken a trusted resource to manufacturers around the world. Customers rely on us to bring lessons learned to discussions regarding new designs and applications.
- **Product and process advancements.** We evaluate lifecycle costs of products and provide estimates on performance gained through various bearing types. We are helping locomotive and car makers incorporate performance technology into journal designs.
- **Consistency.** Thanks to our stringent quality standards, no matter where in the world Timken rail bearings are manufactured, customers are assured reliable operation.
- **Reliability.** New and remanufactured Timken rail bearings are the go-to choice as replacements. Readily available, our bearings are easy to install and will operate as expected to keep locomotives, passenger cars and freight cars running optimally.

### Gain Solutions That:

#### Promote safety.

Whether transporting people or goods, railroads must confidently move them from point to point. Timken journal bearings are engineered to keep journals running reliably, cooler and longer in service.

#### Save time and money.

Customers can opt for reconditioned or remanufactured bearings as replacements, saving money over new bearings and deliveries within weeks instead of months. These bearings come with the same guarantee as new bearings.

#### Operate effectively.

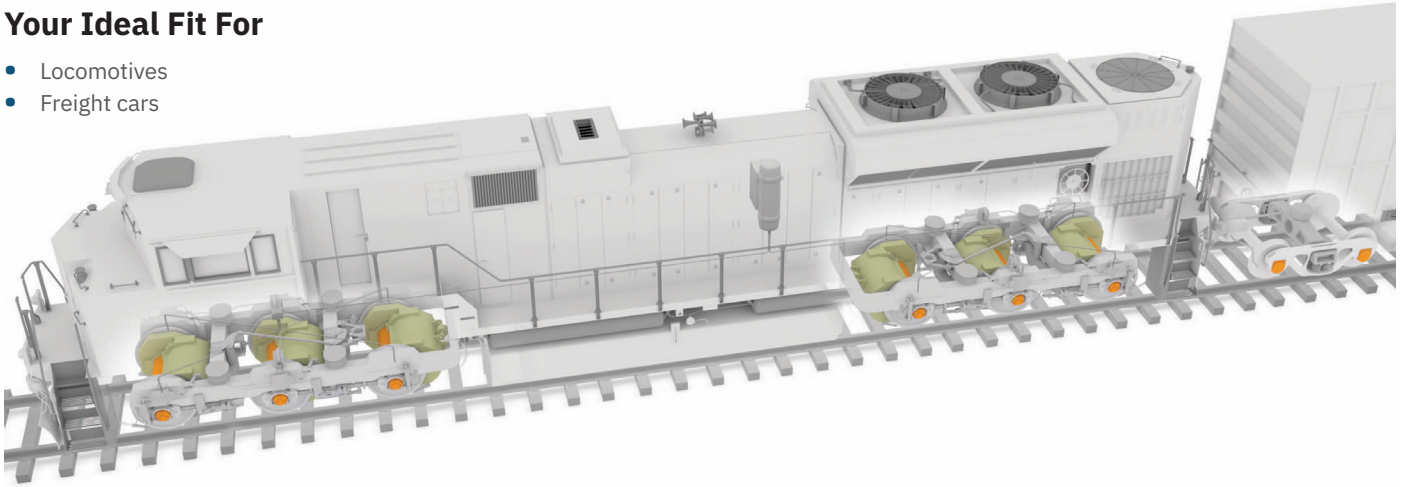
Timken has introduced innovative components that help maintain peak performance. The Timken® EcoTurn® seal reduces friction and torque, which affects fuel consumption. The Timken® Sure-Fit® universal backing ring forms an interference fit between the axle dust guard and the backing ring to improve stability.

#### Reduce Energy.

EnviroSpexx® roller bearings are engineered for energy efficiency, using optimized internal geometries to reduce torque, lower energy consumption, and cut operating costs across industrial applications. By decreasing the power required to run equipment, they also help reduce emissions and support your CSR goals.






## Your Ideal Fit For

- Locomotives
- Freight cars



## Products Designed for the Freight Industry

**ENVIRO SPEXX™** *Engineered for Energy Efficiency*

Timken AP™ and AP-2™ Bearings	Timken EcoTurn® Seal	Timken Rail Greases
 <ul style="list-style-type: none"> <li>• Journal roller bearings</li> <li>• Pre-sealed and lubricated</li> <li>• Accommodate a wide range of speeds and loads</li> <li>• AP-2 reduces fretting</li> </ul>	 <ul style="list-style-type: none"> <li>• Available upgrade for popular AP and AP-2 designs</li> <li>• Essentially-zero-torque design</li> <li>• Can lower annual fuel consumption on a 100-car train by more than 13,500 gallons</li> </ul>	 <ul style="list-style-type: none"> <li>• Timken® AquaBlock™ grease protects the bearing in corrosive and wet environments - resulting in longer life and less damage. First grease to meet AAR M-942-98 specification</li> <li>• Timken® Premium Rail Grease delivers long-lasting protection for railroad car wheel journals, offering superior resistance to water, corrosion, and wear</li> </ul>
Motor Suspension Unit Bearings for Locomotives		Timken Sure-Fit® Universal Backing
 <ul style="list-style-type: none"> <li>• Feature reduced radial clearance and low-starting torque for consistent performance</li> <li>• Supplied individually and as fully machined and assembled packages with Timken® tapered roller bearings</li> </ul>		 <ul style="list-style-type: none"> <li>• Forms an interference fit between the axle dust guard diameter and backing ring</li> <li>• Deters loose backing rings</li> </ul>

# TIMKEN

The Timken team applies their know-how to improve the reliability and performance of machinery in diverse markets worldwide. The company designs, makes and markets bearings, gear drives, automated lubrication systems, belts, brakes, clutches, chain, couplings, linear motion products and related industrial motion rebuild and repair services.