



Engineered Bearings for Commercial Vehicles

Maximize vehicle performance and uptime with Timken® roller bearings

For commercial vehicle fleets and manufacturers, the success of your operation depends on reliable equipment and the components that keep them moving.

We work with the world's leading OEMs to engineer power-dense, fuel efficient bearing solutions that help enhance reliability and performance – delivering fleets a lower lifetime cost of ownership.

Our line of solutions for commercial vehicle axle centers and wheel ends includes tapered roller bearings, custom engineered for the demands of fuel efficiency, power density and long term reliability. Whether you're sourcing inch or metric bearings, you can find it – with the modifications you need – from Timken.

Timken Advantages

- **Technical support.** Gain bearing solutions that are engineered to your operating conditions. Our application engineers can help you in selecting the right bearing for your application. During system design, planning and bearing installation, Timken Engineers assist OEM customers to help ensure accurate setting.
- **Performance.** We have decades experience designing fuel-efficient, power-dense bearings – and a tradition of technical problem solving and engineering innovation for the world's most demanding applications.
- **Quality.** With Timken, you can expect products that are tested, proven and globally consistent. Our bearings are held to the same quality and engineering standards – no matter where in the world they are manufactured.

Gain Solutions That:

Extend bearing life.

Timken tapered roller bearings have enhanced internal geometries to distribute load and minimize bearing stresses, increasing bearing load ratings in a power-dense package.

Reduce misalignment.

Timken bearings are manufactured with tight tolerances, helping install your bearings consistently while reducing wear.

Improve fuel efficiency.

Timken fuel-efficient bearings operate with lower torque, generating less heat resulting in longer lubrication life, helping your system perform consistently.*

Simplify installation.

With tighter tolerances, Timken tapered roller bearings are designed to help ease bearing assembly into the application. We offer automated setting procedures to reduce bearing installation time and effort.

**Compared to standard bearings that lack fuel-efficient geometries.*

An Ideal Fit for Commercial Vehicle Applications

Axle Centers

Application Conditions	Damage Mode	Timken Solution	Use Advantages
Fuel efficiency	Increased operating costs	 Timken® tapered roller bearings	Reduces heat and torque, resulting in increased fuel efficiency
High loads	Peeling, spalling and fatigue		Enhanced internal geometry increases load ratings to carry heavier loads
Lower viscosity lubricants	Peeling and spalling		Improved surface finishes increase lubricant film and enhance bearing life
High misalignment	Spalling		Enhanced internal geometries minimize bearing stresses and reduce torque and heat
Variable operational speeds	Spalling	 Optimized cages with added thickness	Strengthen cage and bearing performance
Gear alignment and wear	Reduced gear life	 Timken® tapered roller bearings	Tight tolerances help set your bearings consistently and reduce gear wear
Correct bearing setting	Reduced gear and bearing life		• Tighter tolerances ease bearing assembly • Automated setting procedures reduce installation time and effort

Wheel Ends

Application Conditions	Damage Mode	Timken Solution	Use Advantages
Heavy loads	System deflection and spalling	 Timken® tapered roller bearings	Enhanced internal geometries and race profiles distribute load and minimize bearing stresses
High misalignment	System deflection and spalling		Specially engineered raceway profiles and surface finishes accommodate increased wheel outsets
Non-standard load distribution between inner and outer rows	System deflection and spalling	 Timken® 454-Series™ tapered roller bearings	Specially engineered raceway profiles and surface finishes accommodate increased wheel outsets
Ease of setting	Reduced bearing and seal life	 Timken® tapered roller bearings	Tighter width tolerances ease bearing assembly of Set-Right® wheel ends

TIMKEN

The Timken Company partners with customers to design and manufacture advanced motion technology systems and components for critical end markets including aerospace and defense, power and electrification, and automation and industrial solutions. With more than 125 years of specialized engineering expertise, we power performance across the application lifecycle.

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