

A Reinforced Bearing Design Reduces Forklift Friction Failure

■ A partnership with TriStar gives you a competitive edge.



Warehouses depend on their forklifts to move cargo efficiently so they can deliver goods and meet tight shipping deadlines. After all, equipment productivity has a direct impact on warehouse profits.

Our partner, a major forklift manufacturer, had a significant production problem when the sealed ball bearings in the mast rollers would freeze due to lubrication failure. This caused the mast bearings to seize and wear out the roller unit.

The solution required some simple design changes, which actually downsized the bearing, but eliminated the root problem of lubrication failure.

TriSteel™ eliminates friction to extend lifecycle

Our bearing engineering team solved the problem with [TriSteel](#), a reinforced material that combines a steel backing and PTFE liner. With a friction coefficient of 0.08-0.12 and no required lubrication, TriSteel completely eliminates stick/slip, and delivers smooth bearing movement.

After our simple design modification and a brief trial, our partner reports TriSteel has given the mast bearings superior load tolerance, plus better force and stroke characteristics. TriSteel has even corrected misalignment by centering the shaft to spread the weight of the load evenly over the full surface of the bearing.

Why chose TriSteel's innovative bearing engineering?

- Dual-layer design to stop friction erosion
- Automatic correction of shaft misalignment
- Self-lubricating design for longer bearing lifecycle
- Good tolerance for variable loads

For more information get the [TriSteel brochure](#).

We're ready to put our engineering expertise to work for you from prototype to production.

Engineering | Custom Fabrication | Manufacturing



CJ Composite

- Self-Lubricating
- Low weight | High Strength
- Chemical Resistance
- Direct replacement for Bronze



Ultracomp[®]

- Self-Lubricating
- High Load | Low Speed
- 54,400 PSI Compressive Strength
- Exceptional Resistance to Vibration and Impact



TriSteel[™]

- Self-Lubricating
- High Load | High Speed
- Metal Backed Bearing System
- 100% Lead Free



Rulon[®]

- Self-Lubricating
- Low weight | High Strength
- Low Coefficient of Friction
- Chemically Resistant



Enhanced Materials Division

- Plasma Surface Treatment
- Specialized Primers & Coatings
- Material ID & Selection
- Process Engineering | Analysis & Testing



TriStar



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