



## **A TIMELY SOLUTION**

Custom Roller Bearing Solves  
a Critical Boom Retraction Issue  
Within One Week



**CCTY**



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CCTY supplied bearings faster than our current supplier could decide which plant they should use to manufacture the bearings.

– OEM Purchasing Manager

## EXECUTIVE SUMMARY

An OEM faced critical challenges with its telehandler's boom retraction system, leading to widespread operational failures. The existing supplier was unable to deliver a timely solution, prompting the OEM to seek assistance from CCTY after receiving a recommendation from one of its suppliers.

In less than one week, CCTY's engineering team had an approved custom roller bearing design that was tailored to the OEM's specific load requirements and application. Just six weeks later, the OEM received the custom-engineered bearings, effectively resolving its operational issues.

CCTY's ability to provide an expedited timeline for the exclusive design was made possible by its open communication with the OEM, deep engineering expertise and in-house manufacturing capabilities.

## THE CHALLENGE

The OEM's telehandlers were equipped with traditional plain bearings, which failed to perform effectively during the retraction phase of the boom's reach. This failure resulted in a surge of global complaints, necessitating an immediate alternative. The OEM required a reliable solution that could be developed and implemented within a tight timeframe.



As a results-focused manufacturer with an exclusive product line, we are able to leverage our engineering knowledge base with on-site critical processes to provide custom bearing designs within an expedited timeline.”

– CCTY Director of Engineering

## THE SOLUTION

CCTY’s engineering team proposed a transition from traditional plain bearings to custom-designed roller bearings to enhance the performance of the boom retraction system. The new roller bearings were specifically designed to reduce wear and friction, providing superior load capacity compared to the existing bearings. This shift not only addressed the immediate operational failures but also offered a maintenance-free solution, eliminating the need for regular relubrication.

With access to an extensive product line that includes both chain roller products and bushings, CCTY’s engineers leveraged their in-depth understanding of each bearing’s capabilities and features. This facilitated a collaborative approach with the OEM that streamlined the design and production process for the custom roller bearings to just six weeks.

The sketch-to-sample timeline included:

- Finalizing the roller bearing design during the initial OEM meeting
- Obtaining bearing print approval within a few days
- Clarifying the sample production process with the OEM and manufacturing plant
- Receiving the sample order
- Beginning production of the custom roller bearings
- Shipping the parts to the OEM

## THE RESULTS

This open collaboration between the OEM and CCTY resulted in the successful delivery of replacement parts within just six weeks. The newly implemented roller bearings significantly improved the boom retraction performance, providing a smoother operation while reducing friction and wear.

This advancement extended the lifespan of the telehandler’s boom components and simplified maintenance, as the roller bearings operate without the need for regular relubrication.

Ultimately, the OEM’s commitment to quality and performance in the market was reinforced, showcasing the effectiveness of CCTY’s innovative solutions.

Ideal for high rotational speeds, roller bearings are designed to support rotating movement and transfer loads.





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**CHINA**

TEL: +86-511-88883388

[INFO.CN@CCTYGROUP.COM](mailto:INFO.CN@CCTYGROUP.COM)

**NORTH AMERICA**

TEL: +1-847-540-8196

[INFO@CCTYGROUP-US.COM](mailto:INFO@CCTYGROUP-US.COM)

**EUROPE**

TEL: +49-(0)-9723-9339-000

[INFO.DE@CCTYGROUP.COM](mailto:INFO.DE@CCTYGROUP.COM)

**INDIA**

TEL: +91 96014 95610 / +91 98230 17144

[INFO.IN@CCTYGROUP.COM](mailto:INFO.IN@CCTYGROUP.COM)

**JAPAN**

TEL: +81-3-5444-4451

[INFO.JP@CCTYGROUP.COM](mailto:INFO.JP@CCTYGROUP.COM)

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