



Torque Converter Bushings Delivered Against Aggressive Timeline



[CCTY Bearing](#) is a bearing manufacturing company that engineers, produces and formulates high-quality bearing products.

“CCTY Bearing’s quality and ability to hold super-precise tolerances of less than .0005ths of an inch is why the customer chose to work with us.”

*-Evan Poulakidas
North American Director*

Executive Summary

A prospective customer was in need of a solid ring bushing that could be held to super-precise inner diameter (ID) and outer diameter (OD) tolerances for a torque converter application. The Tier 1 supplier was under a tight prototyping schedule from their OEM customer and needed to hit specific benchmarks on time.

CCTY Bearing offered material selection and design assistance that met their customer’s needs – and timeline. CCTY Bearing’s solution proved to be:

- The Right Fit for OEM Requirements
- Time-sensitive
- Responsive to Multiple Sample Requests
- Scalable Based on Production Fluctuations

The Challenge

A Tier 1 automotive supplier was in need of a bushing to replace a flanged, split bearing in a new torque converter design. The bushing split in the previous design leaked fluid into the application, causing failure.

The design called for a solid ring bushing that was required to fit ID and OD tolerances of less than .0005ths of an inch. In addition, full production was scheduled to begin in less than two years, so time was of the essence.

The Solution

Within two months, CCTY's engineers and production teams presented a number of material selection options, received preliminary design approval and quoted the order.

Samples of the bronze bushing were sent to the customer within four weeks. Afterwards, the torque converter's design had been altered. New testing required additional samples to be sent in three sets of batches. Each time, CCTY Bearing expedited production to maintain the testing, evaluation and P-Pap schedules.

"Customers know that they can count on us for specialized requirements. By pairing our on-staff engineers and production departments, we are able to find the right solution on tighter timelines."

*Bob Zhao
CEO, CCTY Bearing*

The Results

The CCTY design passed all of the customer's and OEM's tolerance and testing requirements. In the end, the CCTY solution proved to be:

- A Super-Precise Tolerance
- The Correct Material Selection
- A Timeline-Friendly Solution

The customer is now preparing for a full production run that will start with more than 500,000 bearings the first year and scale to 1.4 million bearings in the second year.