



Redesign Response: Case Study



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

"Thanks for your help. It has never been so easy to get a new part!"

-Off Road Design Engineer

Executive Summary

A snowmobile customer needed a stronger ball joint than what was originally specified for a new design. The part had been approved and orders placed. However, after analyzing the ball joint in field tests, it was determined that the stud needed to be enlarged without expanding the housing.

CCTY Bearing's engineers designed a solution that adhered to part specifications in just one week. Due to the timely response, the client was able to reorder without delaying the production schedule and continue testing the sled without interruption.

The Challenge

A client's off road team was in the final stages of testing a newly designed snowmobile. Additional laboratory and field tests showed that the stud was not strong enough to be used on their high-end racing sleds which encounter heavier shock loads and stresses.

The Solution

Knowing that time was of the essence, CCTY's engineers designed a solution based on a client sketch that strengthened the ball joint without enlarging the housing - within one week.

CCTY presented a new drawing that included additional heat forging and machining. A new boot and injection boot molds were also explored.

As a result of having on-staff engineers and complete manufacturing facilities, new part samples were shipped to the customer within 70 days.

The Results

CCTY's design and manufacturing capabilities allowed the client to continue testing the sled without interruption.

In the end, the CCTY solution proved to be:

- A time sensitive response
- The right solution that passed all of the client's life and durability testing
- Streamlined as the client could continue to use one ball joint for their entire range of sleds

The client was able to keep production on schedule and did not need to use two different ball joints in their sleds.

"With more than 100 engineers on staff, we can quickly provide solutions for our customer's biggest challenges."

*Dave Olson
Strategic Sales Manager*