

Origin International Case Study

The Challenge

While launching a new and innovative production technology – an injected metal molding process that eliminates the need for secondary machining operations – this tier 1 autoparts maker faced a costly and time consuming development for a high volume, precision tolerance part.

The first program was a tool for a complex bracket. Production signoff had not been achieved despite close collaboration with the customer and the suppliers of both the precision tooling and the injected metal molding system.

The Story

Origin introduced the company to LaunchRite. This application leverages a unique integration of statistical methods and best fit technology to enable engineers to simulate tool iterations in software. This dramatically increases the number and scope of iterations while simultaneously slashing iterations of actual hard tools. Dimensional issues are usually resolved in one tool iteration, two at most.

To evaluate LaunchRite Origin proposed a “shadow project.” That is, Origin would work in parallel with the company’s engineering team, using the same dimensional data. LaunchRite would be used to run iterations of the effects of hard tool changes.

This enabled Origin to derive its own unique set of recommendations. It became to the engineers at the autoparts company after just one iteration, that Origin was able to quickly discover all the dimensional issues, accurately identify the root cause in each case, and predict the corrective action required on the tool.

“LaunchRite helped us resolve the issues that other technologies promised, but could not deliver”, said the company’s VP Engineering.

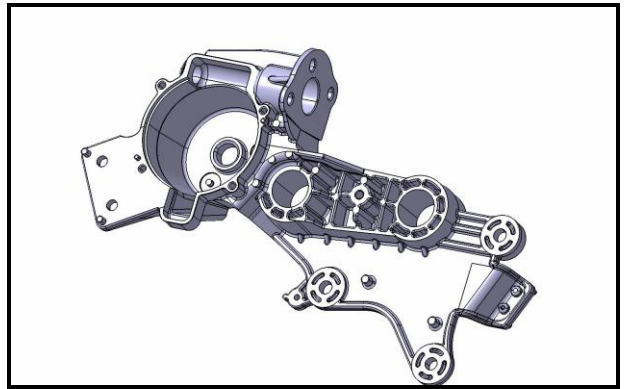


Figure 1 Injected metal (thixomolded) bracket

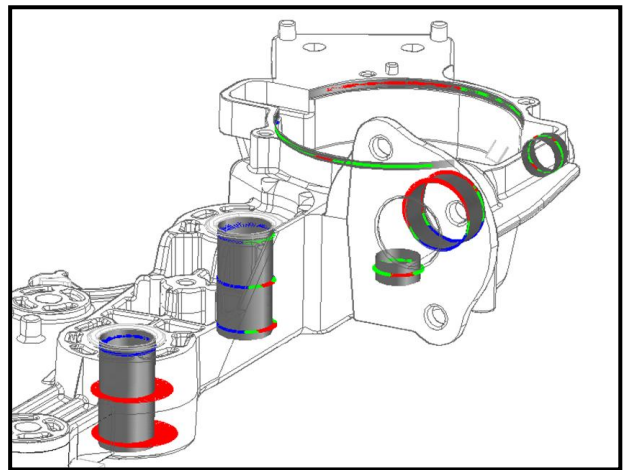


Figure 2 Issues with critical features – average of seven samples

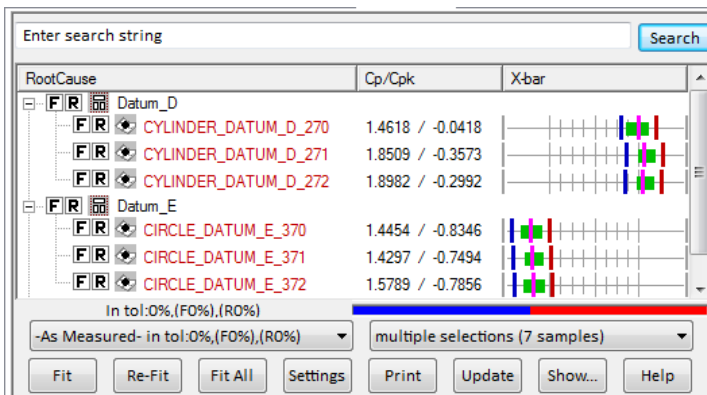


Figure 3 Process capability (Cp) and X-bar for critical features before corrective action

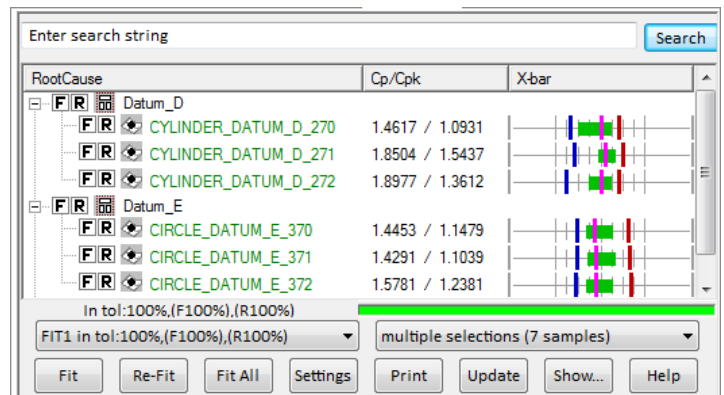


Figure 4 After simulating corrective action for each critical feature

The result

Using LaunchRite enabled the company’s engineers to finalize the buyoff for the first tool. As well, they completed the second tool in less than 25% of the time taken to launch the original. The second tool was launched with just 2 iterations of the hard tool, yet was much more robust than the original.