Real-Life Stories

Case Study: Aerospace Manufacturer's Holes Per Drill Soar with Master Fluid Solutions®

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At 30,000 feet, there's no room for error. Aerospace companies have to meet that high standard when they design, manufacture, and support products that keep airline passengers safe in flight. One aerospace components manufacturer based in the Northeast focuses on aerospace propulsion components, flight control components, and aero engine components – all of which require high quality and precision to meet safety standards and specifications. The company machines a variety of alloys, including low carbon, hardened steel, aluminum, titanium, and nickel, as well as stainless steel, using drilling, reaming, tapping, milling, turning, and grinding operations.

THE CHALLENGE

The aerospace components manufacturer could only get six holes per drill on a small drill with its incumbent coolant. This was not enough and led the company to start searching for a new coolant that could yield more holes per drill, as well as increase the life of its tools and reject tramp oil.

THE SOLUTION

Coolants used in the aerospace industry must meet the demands of high-pressure, high-volume applications. The aerospace components manufacturer began testing TRIM® E925AE for these rigorous applications, as it uses a proprietary lubricity package for a better surface finish and longer tool life when machining aerospace materials. TRIM E925AE protects sensitive aluminum and nonferrous alloys, and its soft fluid film protects chucks, ways, and tool holders.

THE RESULTS

The test run of TRIM E925AE was a resounding success for the components manufacturer. TRIM E925AE yielded 96 holes per drill, a **1500%** increase. Additionally, part finishes were excellent, and drilling and reaming sizes, along with turning, milling, drilling, and reaming results overall were very good. Tool life was extended, and TRIM E925AE rejected tramp oil well. The fluid ran clean in the

machine, leaving no residue.

For this aerospace company, using TRIM E925AE has allowed them to improve production and extend tool life.

THE NUMBERS

- 1500% increase in holes per drill
- 96 holes per drill with TRIM E925AE vs. 6 holes per drill with the previous coolant
- Total tooling spend decreased by 90%

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