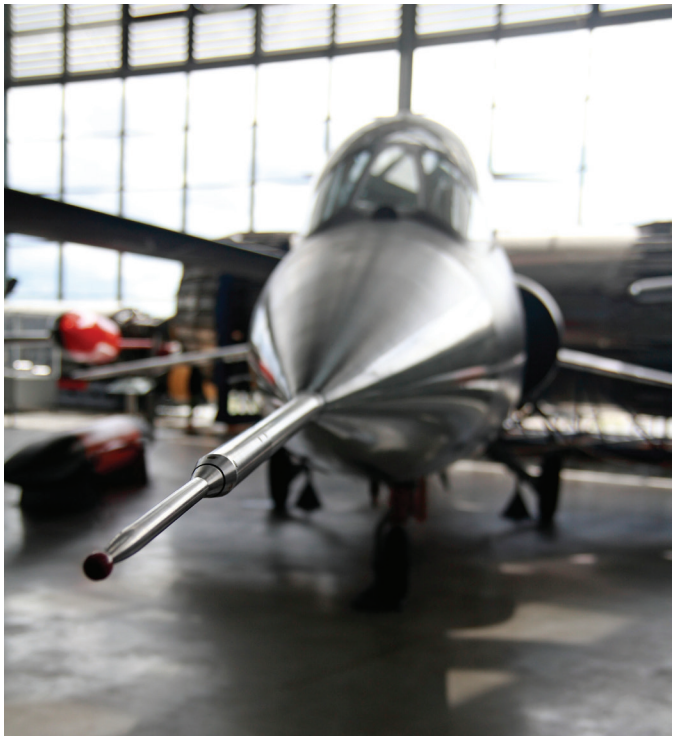
BAE Systems



Overview

The inboard journal of the taileron spigot of the Tornado fighter aircraft was wearing oval in use and needed to be made round again. A bespoke taileron turning machine was engineered by TEAM to provide in-situ machining to very tight tolerances, for the taileron spigot, providing substantial cost savings.

Project: New Machining Solution for Fighter Aircraft

TEAM Service: Field Machining

Need and Challenge: The inboard journal of the taileron spigot of the Tornado fighter aircraft was wearing oval in use and needed to be made round again. The machining operation needed to be carried out on the aircraft in a hangar, anywhere in the world. The alternative had been to remove and replace the taileron spigots; a costly and time-consuming process.

Solution and Outcome

A bespoke taileron turning machine was engineered by TEAM to provide in-situ machining to very tight tolerances, for the taileron spigot, providing substantial cost savings. The machine had to be relatively lightweight and portable.

TEAM's solution was an air-powered machine tool, which bolts on to the spigot for use, and can be set to the correct diameters for use by BAE SYSTEM's own technicians. (Training for the technicians is provided by TEAM as part of the package). Accuracy was the overriding factor in developing the design to meet the very tight tolerances required, and to get it right every time. The machine shaves off some 0.25mm from the diameter of the journal, and is accurate to within 0.01mm. A very smooth surface finish was also essential, the machine having to achieve 0.8 micrometers.

The TEAM machine met all requirements, and offered substantial savings on the previous estimated costs to repair each spigot.

This work may have been performed by a company subsequently acquired by TEAM.

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