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 *September 2016 Enquiries: Chris Pockett, Head of Communications (+44 1453 524133)*

**Renishaw additive manufacturing expertise revives Hawker Typhoon**

[Global engineering technologies company](http://www.renishaw.com/) Renishaw has helped bring a national treasure back to Gloucester. Using original 1938 drawings, the company worked with the Jet Age Museum to additively manufacture (3D print) four sets of unusual cockpit brackets for a Hawker Typhoon aircraft, built almost exclusively in the UK city during the 1940s.

Using original drawings from 1938, Renishaw’s engineers modelled each bracket from scratch using a computer-aided design (CAD) system. After prototyping in plastic polycarbonate, the company produced the final parts using a Renishaw [AM250 additive manufacturing machine](http://www.renishaw.com/en/am250--15253), which like the original brackets were recreated in an aluminium alloy.

"Reconstructing the brackets with traditional manufacturing technologies such as CNC machining was not feasible, so we suggested using additive manufacturing,” explained Joshua Whitmore, Development Technician at Renishaw. "The design flexibility of additive manufacturing allowed us to create and produce the cockpit brackets quickly and efficiently. It was inspiring to see the latest additive manufacturing technology being used to recreate a part of history.”

The Jet Age Museum rescued the Typhoon from a scrap yard in the early 90s and has been working on the restoration project of returning the aircraft to its original home ever since.

"There are currently no working Hawker Typhoons in existence and complete aircrafts are extremely rare," explained Trevor Davies, Typhoon Sponsor Coordinator for the Jet Age Museum.

"Renishaw has helped to bring a rare piece of heritage back to the area. We cannot put a price on what the company has done for the Typhoon, the museum and the local community. The aircraft will stand as inspiration to younger generations in the area for years to come. Without Renishaw's additive manufacturing capabilities, we would not have been able to reproduce the brackets as authentic parts of the restoration."

For a full case study and videos about the project, see [www.renishaw.com/hawkerjet](http://www.renishaw.com/hawkerjet)

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Notes to editors

**Renishaw**

UK-based Renishaw is a world leading engineering technologies company, supplying products used for applications as diverse as jet engine and wind turbine manufacture, through to dentistry and brain surgery. It has over 4,000 employees located in the 35 countries where it has wholly owned subsidiary operations.

For the year ended June 2016 Renishaw recorded sales of £436.6 million of which 95% was due to exports. The company’s largest markets are China, the USA, Japan and Germany.

Throughout its history Renishaw has made a significant commitment to research and development, with historically between 14 and 18% of annual sales invested in R&D and engineering. The majority of this R&D and manufacturing of the company’s products is carried out in the UK.

The Company’s success has been recognised with numerous international awards, including eighteen Queen’s Awards recognising achievements in technology, export and innovation.

Renishaw is listed on the London Stock Exchange (LSE:RSW) where it is a constituent of the FTSE 250, with a current valuation of around £1.8 billion.

Further information at [www.renishaw.com](http://www.renishaw.com)

**Jet Age Museum**

The Jet Age Museum opened in 2013 and has since had 65,000 visitors.

The project to bring a Hawker Typhoon back to Gloucester began in 1998, when the museum saved an almost complete cockpit from a scrap yard in Wiltshire.

Until the construction and opening of the Jet Age Museum exhibit hall on Staverton Airport, the project had been on-hold due to lack of funding and space in its Brockworth workshop.

Since the Museum's opening, the Restoration Team has grown and a suitable work area was built to carry out the complete restoration.

If you would like more information or would like to contact with the Jet Age Museum, go to www.jetagemuseum.org.