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**3D printing builds success for Renishaw sponsored Moto2™ bike**

French Moto2 team TransFIORmers won its first race at the CEV Repsol European Championship in Barcelona in June 2016. The team used a revolutionary front suspension system including an additively manufactured (3D printed) titanium wishbone produced using [Renishaw](http://www.renishaw.com/)’s AM250 manufacturing system. The component is a perfect example of effective part consolidation, with a weight saving of 600 g compared to the original welded steel component.

The TransFIORmers team worked in partnership with I3D Concept to design and manufacture a unique front suspension system inspired by maverick race bike designer, Claude Fior. The system uses a design radically different from any other suspension system used in Moto2. The system bypasses traditional weight transfer phenomenon and the problems associated with ‘brake dive’.

Key components of the front suspension are the wishbones; components that attach the fork to the motorbike chassis, enabling movement of the forks. The original upper wishbone component was handmade and assembled using twelve individually machined and welded parts.

I3D Concept, topologically optimised the shape of the part using CAD software. The new design reduced assembly time, decreased the weight by a factor of 40%, but as importantly, reduced the unsprung mass of the bike. This improved the suspension in terms of vibration management and responsiveness to braking and acceleration.

“Additive manufacturing allowed the TransFIORmers team to produce a precisely manufactured component in a highly competitive environment,” explained Christophe Tisserand, Additive Manufacturing Product Manager for Renishaw S.A.S.

The Optical Control System of Renishaw’s AM250 additive manufacturing system enabled accurate control of laser steering, which enhanced precision, definition of features and surface finish.

The TransFIORmers team considers themselves the first in the Moto2 championship to use additive manufacturing in a structural, functional component.

The winning TransFIORmers bike will showcase on the Renishaw stand at BIMU, Milan, from 4-8 October 2016 and also at Formnext, in Frankfurt from 11-15 November 2016.

For a full case study and videos about the project, see www.renishaw.com/transfiormers

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Notes to editors

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 2015 Renishaw recorded sales of £494.7 million of which 95% was due to exports. The company’s largest markets are China, the USA, South Korea, Germany and Japan.

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 £1.5 billion.

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