



Staffordshire University Formula Student team turns to local engineering firm for laser cutting and bespoke fabrication

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Students at Staffordshire Uni Racing team finished in a superb second place at Formula Student 2023. While developing their new car for the Silverstone event, the team turned to local engineering business KMT, which used its laser cutting machine to produce a bespoke welding jig to allow the assembly of a custom racing exhaust for the project.

Formula Student is regarded as a critical milestone for aspiring engineers seeking careers in professional motorsport. Participants are tasked with developing, building and running a single seat race car, as well as managing all aspects of the race team. With 130 university teams from 30 countries taking part – competition is fierce. Custom engineering is important to gain an edge in car development, which is why when designing a new exhaust for its latest entry, the Staffordshire Uni Racing team approached KMT to produce a bespoke welding fixture.

Jayson Prince, a member of the race team and Project Engineer at Klarius, the UK's largest manufacturer of aftermarket exhausts, expands: "I designed a custom exhaust system to fit the high-revving 675cc bike engine fitted to our race car. A key process in assembling the exhaust is producing a jig so that the manifold and pipes can be welded together as a complete system. I had already designed a jig but



required a laser cutter and press brake to produce it. Thankfully, KMT was happy to help."

Staffordshire-based KMT has recently invested in a state-of-the-art laser cutting system and press brake, which it uses to produce bespoke fabrications in almost any quantity for customer projects. It proved a perfect fit for the jig, cutting precisely to the dimensions provided by Jayson. Once the jig had been welded, it was ready to support the assembly of the custom exhaust.

Joe Grimer, Team Leader at Staffordshire Uni Racing, adds: "Working with local suppliers is really important for Formula Student. Local manufacturers often provide things we can't do in-house, while their proximity means key assemblies and components can be delivered faster. That's a real advantage for us, as it means we can begin testing earlier, ahead of the event."

Adrian Degg, Group Engineering Director at KMT, commented: "Bespoke engineering is our specialty, and using our laser cutter and press brake to support the young engineers at Staffordshire Uni Racing team has been incredibly rewarding. Congratulations to the team for achieving a podium finish!"



Image captions:

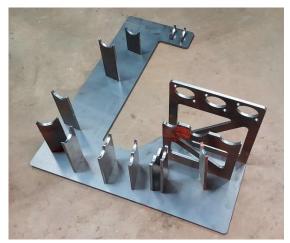


Image 1: KMT produced a bespoke welding jig to allow assembly of a custom racing exhaust for the Staffordshire Uni Racing team



Image 2: KMT produced a bespoke welding jig to allow assembly of a custom racing exhaust for the Staffordshire Uni Racing team



Image 3: KMT team alongside Jayson Prince of the Staffordshire University Formula Student team





Image 4: Joe Grimer, Team Leader at Staffordshire University Formula Student team



Image 5: Staffordshire University Formula Student team

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About KM Tools Ltd

KM Tools Ltd (KMT) specialises in manufacturing, maintaining and renewing specialised machines used for the manufacture of automotive components, with a specialist focus on emission control (Exhaust, CAT & DPF) product manufacture. It also specialises in providing precision assembly-line jigs and machines for the rail industry.

Its machines are used by leading brand manufacturers building parts for the OE market and the automotive aftermarket across the globe. Our manufacturing and service centre is based in a purpose built facility the Midlands from which it manufactures, services and rebuilds and supports hundreds of individual machines.

KMT can service, support and re-manufacture most machines from any original manufacturer, including one-off custom designs. It also develops tooling and workholding solutions such as bespoke automated, or semi-automated mandrels, jig and fixturing systems.

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