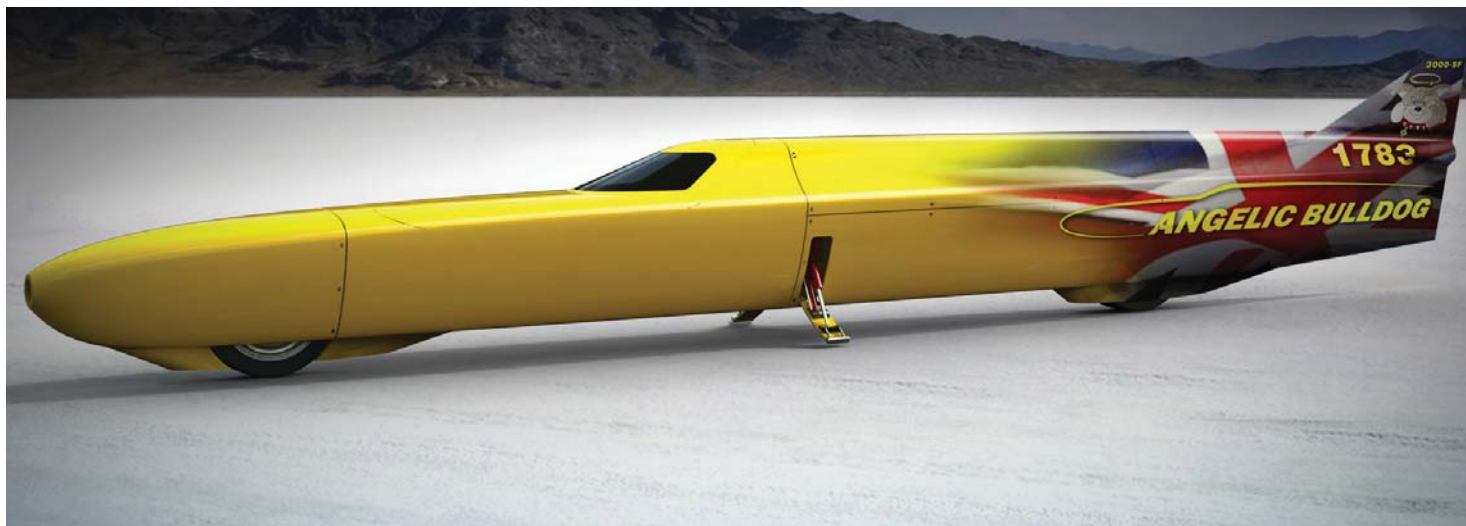


Unison supports world motorcycle land speed record attempt



Streamliner bike will be previewed at Scarborough Engineering Week

The tube bending machinery specialist Unison is helping the Angelic Bulldog Project – an attempt on the world motorcycle land speed record – by creating the roll cage for the streamliner bike.

Unison's work included the manufacture of custom tooling to accommodate the unique shape of the bike, together with the bending of various tube sections on a precision all-electric bending machine.

The Angelic Bulldog Project was started in 1996 by Gabriel Uttley, the former Manx GP racer. Since then, it has grown to include a team of over 65 volunteers – many from prestigious engineering companies – and a huge number of supporters.

According to Gabriel Uttley, "We knew of Unison's excellent reputation in metalworking machinery and initially approached the company's MD, Alan Pickering, for advice about the fabrication of the roll cage for the streamliner,

because some of the bends are very application specific and we lacked the necessary resources. After some discussion, during which it emerged that standard tooling wasn't suitable, Alan decided that the simplest way was for Unison to make the necessary tools and bend the cage's components on one of its all-electric tube benders."

The streamliner bike is designed specifically for forward speed; it measures 6.6m in length, with a height of 0.8m and

a width of just 0.6m. The engine is a twin supercharged 8-cylinder 2.3 litre unit, rated at 700 bhp, and is intended to propel the bike at over 400 mph. The bike's roll cage is constructed from high tensile aerospace grade T45 steel tube and has to be manufactured to extremely tight tolerances. It is designed to fit very closely around the rider and tightly within the bike's envelope, so that once the cladding is applied the entire structure is highly aerodynamic.





Although the roll cage was designed with standard bends of 5- and 6-inch centre-line-radius, the need to allow for material spring-back meant that they were not accommodated by off-the-shelf machine tooling, requiring Unison to design and manufacture a custom set. Furthermore, the roll cage was needed urgently by volunteer team members who give up their own spare time to work on the project, so Unison personnel worked through the night to create the necessary components.

After verifying the tooling, Unison fabricated the roll cage on a Breeze 90 machine, one of the latest additions to the company's range of all-electric tube benders, capable of producing the high torque levels necessary for accurately bending T45 steel. The Angelic Bulldog team used Solidworks' CAD software to develop the roll cage, and the model was transferred straight from the laptop to the bending machine's CNC system.

Alan Pickering stated, "We are delighted to be involved with such a worthwhile project. Aside from attempting to return the two-wheel land speed record to

Britain, the project's aims include promoting British design and engineering skills worldwide, and helping young people maximise their potential and consider careers in these important disciplines – which are aspirations we support wholeheartedly."

The frame and engine of the streamliner bike will be shown at Scarborough Engineering Week 2011, which runs from the 10th to the 12th October. The event is organised by Unison and other leading industrial businesses based in the area, together with regional educational establishments and public sector agencies.

A video showing the roll cage tubes for the streamliner bike being produced on a Unison tube bending machine can be viewed at <http://www.youtube.com/user/AngelicBulldogProject>

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SSC set for national roll-out after £800k investment

Staffordshire based SSC Laser, a leading laser cutting subcontractor, is expanding nationwide by opening a network of service centres across the UK.

SSC, who in June celebrated a record month for profit and turnover, has already opened sales offices in the North East, East Midlands and the South. Once the company raises its profile in a region and develops a local customer base, these sales offices, and others in the future, will be developed into stand-alone manufacturing sites. In addition to its roll-out programme, the company has been investing heavily in new equipment at its Hixon headquarters. The recent installation of an £800,000 Adige LT8 tube laser cutting machine and associated handling equipment – the biggest single investment the company has ever made.

"Our industry is quite parochial and you tend to find that buyers like to use suppliers that are in their area," explained Andy Evans, SSC's sales director. "So our vision is to develop a nationwide network of centres to give customers a local service. "I shall be extremely disappointed if 10 years from now we don't have at least 20 of these centres dotted around the country. This will make us by far the biggest laser cutting company in the UK, which is exactly what we want to be."

Regarding the company's £800k investment in machinery, Andy adds: "We didn't just want to be a flat bed laser business because there are already

500 of these in the country," he said. "The new tube laser facility gives us a unique selling point because customers can now come to us for all their laser cutting requirements.

"We can handle all kinds of sections – box, circular, hollow, angle, channel, flat, irregular – and manufacture parts up to 8.5m in length. There aren't many people who can do this. In addition, it's more cost-effective and more convenient for customers if their complete order can be processed under one roof rather than having to deal with separate suppliers."

A new state-of-the-art business management system has also enabled SSC to improve its customer service levels through better quotation, stock management, order tracking and traceability processes.

Founded in 2000, the company is co-owned by Andy and Austin Jarrett, the managing director. The company employs 36 people and works on a continuous 24/7 shift pattern, meaning orders can be turned around in as quick as two to three days. Turnover this year is expected to exceed £4 million. Founded in 2000, SSC Laser employs 36 people and operates from a 28,000 square foot site in Hixon, Staffordshire. Turnover this year is expected to exceed £4 million

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