

Australian Supercars Race Ahead With Edgecam



More than 500 components manufactured using Edgecam are fitted to each of two racing cars competing in the Australian V8 Supercar Championship.

Edgecam and their Australian reseller G-Zerofive provide software, post processors, customisation and full training to Brad Jones Racing (BJR), for their two Holden VF Commodore cars.

BJR use Edgecam to produce all machined parts used for the chassis build, along with specialised tooling, composite moulds and equipment for the operation of the race teams, as well as modifications made to purchased components.

Produced from a range of materials, including Aluminium alloys, mild steels, alloy and case hardened steels, and a number of polymers, the components and tooling are machined using two to five axis milling, and mill-turn techniques on a Haas SL30 C-axis lathe, Haas VF4 with a 4th axis, and an Okuma Multus B300W with B-axis and sub-spindle, fitted with the new OSP P300S control.

The cars compete in every major part of Australia, and at overseas races in New Zealand and the USA, on race tracks and street circuits. The rules require that each car is constructed from a controlled chassis, using a combination of fibre glass and metal panelling to give the appearance of a production car. Each BJR car costs around \$500,000 AUD to build.

BJR Production Manager Dave Morris Fontes says the post processor is vital in ensuring seamless integration from Edgecam to the machine controllers, saving time and increasing the quality of the finished product. "And we needed Edgecam's state-of-the-art functionality to optimise the full potential of our new Okuma machining centre."

When customising the Okuma post processor G-Zerofive had to take specific macros into account, created by Okuma Australia as safety measures recommended specifically for part transfer, and implement them into the post. G-Zerofive Managing Director Andrew Scott says: "We also had to develop support for twin tools and multipoint tools, as well as implementing the combination of coolant options available for that machine."

About The Company :

Name: Brad Jones Racing

Business: Car Racing

Website:

www.bradjonesracing.com.au

Benefits Achieved :

- Able to quickly manufacture replacement parts
- Edgecam can meet their diverse needs
- Edgecam gave them maximum output with minimal input

Comments :

"We needed Edgecam's state-of-the-art functionality to optimise the full potential of our new Okuma machining centre."

Dave Morris Fontes
Production Manager

All 500+ components on each car have a 'life' regulated by the cyclic loading, or ultimate load, that they will endure during their operation.

"Because of this, each component is 'lifted' differently from the next. Lifting is measured in kilometres, or, if it has either endured extreme stress during a crash or defects such as cracks and other damage are found during the regular inspection process.

"Which makes it all the more important that Dave Morris Fontes and his team of programmers/machinists can quickly use Edgecam to manufacture replacements."

Creating a wide variety of components for Brad Jones Racing demonstrates how Edgecam can meet such diverse needs as simple 2-axis machining through to complex mill-turn and 5-axis simultaneous machining, as well as providing the fast output that can be achieved through automation and seamless CAD integration as a stand-alone CAM solution.

G-Zerofive distributes Edgecam across Australia. As well as providing customisation, support and post processor development for individual machine requirements, they also supply tailored solutions for automation using a number of Edgecam tools, including Strategy Manager and PCi macro development. "This gives maximum output with minimal input for the manufacturers we work with across the aerospace, medical, oil and gas, mining and transport sectors."

Dave Morris Fontes concludes: "We heard about Edgecam and G-Zerofive from a machine tool company, and quickly discovered that the partnership would be perfect for our business model and requirements. The software, post processors and high level of technical support and expertise that G-Zerofive can offer us, along with full training, means we are well ahead in the race to improve consistency, quality and lead times for our machined components."

