

May 2009

Welcome

This edition provides updates on some of our most interesting technology applications for 2009. Our infrared tyre system has proven to be highly valuable for F1 teams. Limited testing, new regulations, and slicks have forced a steep learning curve. Our solution is providing engineers with valuable information that will allow them to better understand tyre behaviour.

For those interested in our bicycle programme, we are pleased to have recently started the final stages of testing. Designed and built by BERU f1systems, the bicycle is pushing our understanding of materials to invest in future programmes. Look out for the first ride in a prestigious newspaper very soon.

Regards,
John Bailey

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Spring Issue

Infra Red TPTMS

Factor 001

Rear Wing Pillar Loadcell

Low Cost Wiring Looms

Aerospace Activity

Multiple F1 teams now using IRTPTMS DigiTyre

A dramatic cut in testing coupled with the reintroduction of slicks is pushing engineers to acquire accurate and reliable tyre data. With several teams now using the system, the IRTPTMS DigiTyre solution from BERU f1systems is rapidly becoming a trusted source of tyre information. IRTPTMS DigiTyre offers a rim mounted sensor to measure the tyre's inner surface temperature, enabling accurate measurement, with excellent resolution (0.25°C).

With further tyre changes mooted for 2010, the use of the sensor in vehicle performance and tyre management is set to continue. Existing TPMS customers can upgrade their current systems, enabling them to use the new sensors.

"Teams have been impressed with the data," says Principal Engineer Gavin Skipper. "It is allowing Engineers and Designers to better understand tyre behaviour and optimize the car setup to best use the tyres. Outside of F1, BERU f1systems is working with tyre manufacturers and vehicle OEMs to develop road tyres and tune vehicle performance.

For further information, please contact gavin.skipper@bf1systems.com or call +44 1379 646230

BERU f1systems Factor 001 begins track testing

BERU f1systems Factor 001 programme is accelerating as it approaches the start of production. The first prototype is undergoing trials at a local test facility. The testing is demonstrating the effectiveness of the integrated electronic data acquisition systems. The volume and accuracy of the data, such as power, individual crank torques, lateral and longitudinal acceleration, ECG heart rate and breathing rates is of interest to elite athletes, who have been previously unable to acquire this data in the real world.

The bike made its debut at The Science Museum, one of two BERU f1systems exhibits on display, as part of the Fast Forward exhibition. From this launch, the bike has enjoyed significant global coverage, leading to hundreds of enquiries from buyers and potential distributors. The first customer deliveries will commence in late 2009. If you would like further information about the project please visit the website www.factor001.com or contact us directly at john.bailey@bf1systems.com



Increasing F1 Rear Wing Efficiency

Teams seeking to correlate wind tunnel test data and understand and acquire rear wing load data will now have the opportunity through BERU f1systems' rear wing pillar loadcell.

"Our front wing pillar is now being used by three teams," says strain gauge manager Simon Roberts.

"The data is proving to be useful and can be correlated back to wind tunnel information."

By working with the team from project conception the design of the loadcell is fully integrated into the structure of the wing. "All loading conditions are taken into consideration and the optimal geometry for the loadcell is determined," adds Roberts. BERU f1systems is able to offer the complete package by utilising our in house five axis machining capabilities.

Aerospace Activity



BERU f1systems is expanding its activities in the aerospace sector. Our high temperature/pressure autoclave together with our new machining centre is allowing us to design and manufacture parts for both civilian and defence programmes. Our unique Wire in Composite technology has great relevance to UAVs and we are already involved in numerous real world projects. Our in house engineers have experience of both airframe and engine applications and have already provided composites, wiring and strain gauging samples or products to the aerospace industry. Please contact John Bailey for further information about our involvement in this sector.

Email john.bailey@bf1systems.com

Did you know?

BERU f1systems is involved in the production of steering wheels for LMP and other leading formulae.

Contact john.bailey@bf1systems.com for more information.

Low Cost Looms



In partnership with sister company BF1 Connect, BERU f1systems now offers low cost wiring looms for lower classes of motorsport and "off car" systems. This has been achieved with the announcement that BF1 Connect will now sell Souriau's UTS range of plastic connectors. Already proven in one-make series racing and pit equipment, the connectors offer an affordable specification connector to withstand the motorsport environment.

"BERU f1systems now has access to the entire UTS range," says principal engineer Gary Norman. "These connectors offer IP68 (environmental sealing) and IP69 (high pressure water cleaning) making them eminently suitable for race cars or pit/truck equipment."

ROHS compliant and with a range of keyways and layouts, UTS offers much to motorsport usage. "We have been producing pit looms for an increasing number of teams," adds Norman. "Our expertise allows us to efficiently design looms for all areas of motorsport and industrial applications."

Further details about the complete range of UTS connectors can be found on the BF1 Connect website or why not speak to our technical specialist Gary Norman by emailing gary.norman@bf1systems.com or by phone on +44 1379 646203.

