



Space technology for McLaren at the British Grand Prix

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At the British Grand Prix next weekend, the McLaren team will have a special boost from space technology: their mechanics' suits will feature a cooling system, specially developed from the astronaut's suits by the Technology Transfer Programme of the European Space Agency.

The McLaren mechanics' suits are the unique product of a team grouping together the ESA Technology Transfer Programme (TTP), the Italian fashion manufacturer Karada and the designer Hugo Boss. The challenge was to produce a thermo-regulating garment, offering fire protection and a comfortable working temperature for the whole team servicing the car, whose overalls have the same safety standards as the pilot's. The ESA TTP offered the solution: 50 metres of plastic tubing, 2mm wide, developed for an astronaut's suit by the Canadian company Med-Eng, and installed by Karada in 55 overalls. The result is a miniaturised air conditioning system, offering maximum comfort when working under extreme heat.

The idea dates back to early 2001, when Karada spun off a company, "Grado Zero Espace", to investigate the use of engineering, chemistry and mechanics for innovative garments. Lead by Mauro Taliani, designer for Hugo Boss, the team first conceived a cooling jacket where plastic tubing was used, completing an internal cooling circuit controlled by a mini refrigerator. In late 2001 the crucial impulse came from the technology broker D'Appolonia, member of the TTP network, who mediated the know-how of European space experts and identified the space industry with the right product. The original jacket was also on display at the Cooper-Hewitt National Design Museum in New York, which is part of the Smithsonian Institute.

To stimulate the spin-off of space technologies, the Technology Transfer Programme of ESA makes European space technologies available for licensing or further development. D'Appolonia is one of the technology brokers across Europe and Canada who scout the space world and identify technologies with a potential for non-space applications. They then market the technology and provide assistance in the transfer process. The results since 1991: more than one billion euros in revenues will be generated by end of 2004 for all companies involved, more than 2,500 jobs created or saved, 25 new companies established and 150 successful transfers. The Programme currently costs 0.01 euro for every taxpayer per year.

"Another example of how European space technology can provide effective solutions to problems here on Earth" commented Pierre Brisson, Head of ESA TTP.

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For more information about the ESA Technology Transfer Programme:
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[Image 1: http://www.esa.int/export/esaCP/ESA9X1KE43D_index_1.html] A cooling system derived from the astronauts' suit ensures comfort in fire-proof suits. Credits: Courtesy West McLaren Mercedes

[Image 2: http://www.esa.int/export/esaCP/ESA9X1KE43D_index_1.html#subhead1] A cooling system derived from the astronauts' suit ensures comfort in fire-proof suits. The result is a miniaturised air conditioning system for the mechanics. Credits: Courtesy West McLaren Mercedes

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