

Notizie

30.06.2004 THE ITALIAN AUTO INDUSTRY PRIDES ITSELF ON BEING AT THE CUTTING EDGE OF DESIGN AND TECHNOLOGY, AND TWO EXCITING EXHIBITS IN THE "FUTURISTIC" SECTION AT GOODWOOD BORE TESTIMONY TO THIS TRADITION

The Italian auto industry has always prided itself as being at the cutting edge of design and technology. Two exciting historic exhibits which were present at the futuristic section at last weekend's Goodwood Festival of Speed bore testimony to this unparalleled tradition.

The world-famous Bertone-bodied Alfa Romeo BAT 7 was joined by the Fiat Turbina. Both cars were designed exactly fifty years ago, although they are wildly differing machines.

The cars were exhibited in the 'Cartier Style' enclosure, exuding a style and appeal that was unmatched by surrounding, more contemporary offerings. Other cars on display included the horrific Ford-badged 'Thunderbirds' movie car and an American styling exercise that even Elvis would have shuddered at.

The Berlinetta Aerodinamica Tecnica 7, or BAT 7, was designed by Franco Scaglione and Nuccio Bertone. It is arguably the most beautiful and famous of the three aerodynamic coupe prototypes introduced successively by Carrozzeria Bertone during the 1953, 1954 and 1955 Turin Motor Shows. The other designs were coded BAT 5 and BAT 9 respectively, the latter being a more conventional, almost production-oriented design. There was also BAT 1 and BAT 8, but these designs never left the drawing board.

The design of the BAT 7 prototype was based on a study of aerodynamics. The shape of the front aimed to eliminate the problem of airflow disruption at high speeds. The design also aimed to do away with any extra resistance generated by the 16" wheels when revolving. This was achieved by the intriguing tiramisan nose, which channelled air into the inlets and extracted it behind the front wheels. The nose design also resulted in a structure which reduced the amount of air vortices.



Other aerodynamic details included the impressive tumble-home on the side windows, which were angled approximately 45° to the vertical, and a large windscreen which blended in perfectly with the almost flat roof.

The most surprising aspect of the design was the tail, with an extended rear window divided by a slim pillar; the whole affair being flanked either side by two elegant fins which tapered upwards and inwards. Flow patterns were shaped by these rear fins, which each included a small slot for pressure relief.

In practise, these rigorous criteria resulted in an astonishing Cd value of 0.19. This allowed the car to reach a top speed of 200km/h with its 115bhp, 1.975 cc Alfa Romeo 1900 engine.

The design which Franco Scaglione and Nuccio Bertone concocted was for a relatively light car, with a kerb weight of only 998 kg. It represented the ultimate in streamlining.

There was no shortage of positive feedback and the car was an immediate hit for its aerodynamics and noteworthy stability at high speeds. Carrozzeria Bertone had produced a design of great aerodynamic stability and with an excellent index of penetration.

The BAT 7 evolved the styling dictated by the BAT 5 (Cd 0.23) and worked them to the limit. As with the BAT 5, the BAT 7 was based on the general idea of the (recently unearthed) 1952 Abarth 1500 Biposto Coupe. For this 1954 design, as with the other BAT models, certain elements were included from first-hand experience of working on wing profiles in the aeronautical industry. The result was the exaggerated shape of the large, curved tail fins.

BAT 7 lived an interesting life, being used at one point as a daily driver by a young couple in San Francisco until the early 1980's.

The second futuristic Italian offering at Goodwood was the Fiat Turbina.



The Bertone-designed Alfa Romeo-based BAT 7, and the Fiat Turbina, both celebrated their 50th anniversaries, basking in the sunshine at the Goodwood Festival of Speed

Presented for the first time at the 1954 Turin Motor Show, the Fiat Turbina was a one-off experimental prototype, powered by a gas turbine engine. The Turbina represented the first European turbine-powered car and was, incidentally, also one of the first cars to be fitted with a Nardi steering wheel.

The project had started several years previously in 1948, the final design being chosen in 1950. With the engines being defined in 1953, it first ran at oval Lingotto track on the 14th of April, 1954.

The engine itself was composed of a twin-impeller compressor, powered by two separate turbines which fed the combustion chamber. The main turbine, mounted just behind the chamber, was directly geared through a reduction gearbox to the rear wheels. No gearshift was required, seeing that the turbine worked like a hydraulic torque converter. The engine produced 300bhp at a dizzying 20,000 rpm.

The Turbina was based on a tubular chassis with independent suspension, derived from the Fiat 8V. Flanking the chassis' central backbone were two 50 litre fuel tanks. The car had a dry weight of 1050kg, and weighed in at a reasonably hefty 1.275kg when fully fuelled.

Together, with beautiful aerodynamic bodywork, the jet-engined car could reach an impressive top speed of 250 km/h.

The project was discontinued after only one month of testing. This was due to high fuel costs and the car's constant overheating problems.

by James Granger & Edd Ellison

 **PHOTO GALLERY**