

Media Information

18 May 2007

The three lives of the BMW Baron

On 22 May BMW engineer Alexander von Falkenhausen would have celebrated his 100th birthday

Munich. As a racing competitor, designer and test driver, Baron Alexander von Falkenhausen had a greater influence on the history of BMW than almost any other man. On 22 May 2007 he would have been 100 years old. Von Falkenhausen joined Bayerische Motoren Werke in 1934. He began as a race rider and designer in the motorcycle division and then switched to car racing. After the war he had a spell as an independent manufacturer of racing cars, but in 1954 returned to BMW where he headed the motor racing division. From 1957 onward he additionally had overall responsibility for engine development. In 1976 von Falkenhausen retired as the oldest member of the company's staff. He died on May 28th 1989 at the age of 92 in his hometown, Munich.

At first glance Alexander von Falkenhausen might have seemed like a man of artistic temperament. But his modest demeanour, his alert mind and his unparalleled versatility propelled him into a unique career as an engineer and manager. He was respectfully dubbed "Lord of the Blue and White" or "Baron BMW".

Motorcycle racer and designer

Born in Munich's bohemian Schwabing district, the young Alexander von Falkenhausen grew up in a military family. But instead of embarking on an officer's career, the 17-year-old high-school boy mounted a DKW motorcycle in 1924 and scored his first racing success by coming second in a local hill-climb event. Shortly afterwards, the young man's growing enthusiasm for the internal combustion engine even led him to abandon his schooling when he was offered a job as a designer with a small engine company. After two years Falkenhausen resumed his studies and in 1928 passed his school-leaving examination. He then studied mechanical engineering at Munich's Technical University, specialising in motor vehicles and aero-engines.

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In the spring of 1934, with an engineering degree in his pocket, he could have joined Bayerische Flugzeugwerke, the aircraft company in Augsburg founded by his professor, Willy Messerschmidt. But since the beginning of the year he had already been under contract as a works driver with Bayerische Motoren Werke in Munich. Von Falkenhausen had caught the eye of BMW, riding motorcycles he had built himself, or else mounted on an English Calthorpe machine, when he proved to be a dogged adversary for the BMW riders on their single-cylinder R 4 machines.

As well as being contracted for racing in off-road events, von Falkenhausen worked as a designer on motorcycle frames. In 1935 BMW achieved a crucial improvement in the riding characteristics of their motorcycles with the introduction of the telescopic front fork. In 1936, for the first time, von Falkenhausen added rear-wheel suspension. With his experimental motorcycle, designated the BMW R 5, he returned to off-road racing and won gold medals in the toughest challenge of all, the International Six Day Trial, in both 1936 and 1937. This convinced his racing colleagues at BMW to stake everything on rear-wheel suspension in 1937. A year later von Falkenhausen's concept went into series production on the BMW R 51.

From 1938 onward von Falkenhausen played a key part in the continued development of BMW motorcycles. Large-scale test rides with the military sidecar machine, the BMW R 75, took him very close to the battle zone on the Russian front. Beyond that he was kept very busy with other military assignments, such as developing a one-man armoured vehicle and adapting a 9-cylinder radial engine from BMW's aero-engine range to drive a large battle tank. "There was no likelihood that the war would last long enough for us to get the thing finished," was von Falkenhausen's later comment on that period. Secretly the remaining motorcycle team were working on unusual new designs such as a 350 cc flat-twin machine and a frame with a self-supporting monocoque incorporating the fuel tank, as well as self-supporting sidecar bodywork.

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After his spell as an independent manufacturer of racing cars, Alexander von Falkenhausen returned to BMW in 1954. As well as managing the racing division, he took over the technical development of the road racers. This gave rise both to a short-stroke version of the 500 cc flat twin and to a 250 cc flat twin. With two joints for the drive shaft and a parallelogram support bracket for the rear swinging arm, von Falkenhausen designed the forerunner of the BMW Paralever, which has featured in the series production range since 1987.

Race car driver and designer

After his initial successes in the saddle of a motorcycle, Alexander von Falkenhausen worked his way into BMW's four-wheel stable. At first he had to make do with outings in sports cars he bought himself: a BMW Wartburg quickly followed by a BMW 315/1. The motorcycle reliability trials were joined by hill-climbs and circuit races in cars – some of which he won, gaining high placings in others. The next logical step would have been to continue his racing career in BMW 328s, but his sporting ambitions were interrupted by the Second World War.

In 1946 von Falkenhausen, driving a privately owned BMW 328, took part in the very first post-war motor races in Germany. A victory and a second place in these made even his more illustrious colleagues sit up and take notice. But the following year he attracted still greater attention with the first cars that he designed and built himself. To begin with he named them "Al-Fa", as he had once dubbed his motorcycles, but for obvious reasons the inventive designer soon re-christened his competition sports cars AFM (for Alexander von Falkenhausen Munich). Driving a lightweight self-built roadster powered by a modified 1.5-litre engine based on the BMW 328, he succeeded in winning the 1948 German Sports Car Championship.

As well as the boss himself, other celebrities like Hans Stuck Sr. took the wheel of an AFM. Once at Monza, driving the Formula 2 Munich monoposto racing car, Stuck even managed to beat the reigning world champion Ascari who was in a Ferrari. AFM also added a Swiss Championship to its list of triumphs. But

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although von Falkenhausen went down in motor sport history as a designer of racing cars, the big commercial breakthrough for the AFM company failed to materialise. Time and again, projects for the development of a series-produced car collapsed. Finally, in 1954 the end of the 2.0-litre Formula 2 forced von Falkenhausen to abandon hopes of entrepreneurial independence and accept an offer from BMW.

He celebrated some great international successes, especially in alpine rallies in Austria, France and Yugoslavia, on which his co-driver was his wife “Kitty” – the Baroness Katharina, born the Countess von der Mühle-Eckart. After this he competed in one last rally season in his 16-year-old BMW 328, before switching in 1956 to a BMW 502. Later, as a private driver, von Falkenhausen won further rallies and races in the BMW 600 fitted with a flat-twin motorcycle engine.

From 1 May 1957 onwards von Falkenhausen had the additional job of head of BMW’s engine development. Under his management the power unit of the BMW 700 was created, which he himself put to use with great success in motor racing. With the small BMWs in touring car and *grand tourisme* categories (with enhanced performance) he won no less than 17 mountain races in Germany and abroad between 1960 and 1964 – not to mention a number of rallies.

In 1961 the 4-cylinder high-performance engine known as the “New Class”, the design of which was substantially influenced by von Falkenhausen, made its debut in the BMW 1500, and now the perfect engine was available for racing cars of all kinds. In 1964 von Falkenhausen himself drove the sports version of the 4-door saloon, the BMW 1800 TI/SA, to victory in the Eberbach hill-climb and won a gold medal in the Munich-Vienna-Budapest Rally. He scored his final race victory on 16 August 1964, this time in the racing Spider BMW RS 850, at the airfield race in Neubiberg. The von Falkenhausen family continued to enjoy racing success, with Alexander’s son-in-law Dieter Quester driving BMW works cars to a number of wins in touring car events, Formula 2 and sports car races. In 1968 BMW’s racing division competed in all three categories simultaneously.

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However, the motor racing career of Alexander von Falkenhausen was not over yet. Another great turning point was still to come. In 1966 the 4-cylinder engine block formed the basis of a BMW racing engine with four valves per cylinder, controlled by two overhead camshafts. The 2-litre unit showed what it was capable of in world record-breaking runs at Hockenheim – where it was fitted in a Formula One Brabham. When the new best times were achieved over 500 m and a quarter-mile, at the wheel was none other than the 59-year-old BMW engine boss, Alexander von Falkenhausen in person.

Racing manager

At AFM, von Falkenhausen was designer, team manager and sometimes even driver all in one. This meant learning how to succeed in the motor racing circus with limited financial resources. Not only was the little company constantly short of money; when he moved to BMW to take up the job of motorcycle racing manager, the situation was scarcely any different. How he would have liked, in 1955, to put the British racing rider John Surtees under contract with BMW, but the budget did not stretch to that. In fact, BMW had officially given up competing in races altogether. Nevertheless, von Falkenhausen and his loyal team always found ways and means of getting BMW racing motorcycles first over the finishing line. The emphasis was on sidecar combinations, since here the BMW RS flat-twin engines had proved to be the ideal power source. In 1954, as well preparing engines for the contract riders, the workshop also guaranteed the supply of spare parts for private owners for up to 20 years after the small-series manufacture of the BMW RS racing motorcycle.

Rising sales of the BMW 700 and the New Class, as well his infectious passion for motor racing, helped von Falkenhausen to convince the BMW board of the necessity of a commitment to sport. In this way the sporting reputation of the BMW brand was established once and for all during this period. With the BMW 1800 TI/SA works cars, the company competed from 1964 onward in the long-distance races for the European Touring Car Championship. The BMW team made its first big mark in 1965 by winning the Spa-Francorchamps 24-hour

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event. A year later Hubert Hahne even won the European Championship in a BMW. Later on, the lighter 2-door BMW 2002 accumulated racing victories and championships. Thus did Alexander von Falkenhausen lead the BMW team to the very top in European touring car competitions.

However, as racing manager he set a great deal more in motion. With characteristic single-mindedness he wanted to take his passion for motor sport still further, both as technician and manager. From the 1967 to the 1971 season BMW competed in Formula 2 with its own monoposto cars powered by 1600 cc 4-cylinder engines. From 1973 onward 2-litre engines were used and "BMW Power" became the benchmark in Formula 2.

Engine chief

Writing in the Swiss *Automobil-Revue*, Robert Braunschweig used a telling phrase: "Alex von Falkenhausen was a human combustion chamber." That summed up both his work as a designer and developer of engines and his great passion for testing these power units himself, preferably in the sporting arena. At BMW he found the ideal set-up for this. In 1957, three years after rejoining BMW, he was appointed head of engine development without having to relinquish his function as manager of the racing division.

In this period BMW's road car range comprised the BMW Isetta and the BMW 600 micro-cars, the big 501 and 502 saloons and the 503 and 507 sports cars. As well as boosting the performance of the V8 engine for competitive purposes, another of his jobs was to develop the flat twin that was derived from the motorcycle engine. Ultimately, this engine provided the power for the hugely successful BMW 700. He was given the further objective of closing the gaping gap in the range between the small and the large cars. Long-term concepts for the mid-range were already in hand in the 1950s, but BMW's financial circumstances made immediate implementation impossible.

The New Class, brought to the market in 1962 with the BMW 1500, caught the public eye and sold successfully, not least because of its modern 4-cylinder

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engine. As the man responsible for design and development, von Falkenhausen had to fight his corner in some tough debates with the BMW board over the apparent extravagance of the five-bearing crankshaft, the overhead camshaft and the unusual combustion chamber design. His stubbornness would pay off in two respects: the 4-cylinder BMW M10, in its 1600 cc, 1800 cc and 2000 cc variants, formed the backbone of the engine range from 1962 to 1988 and at the same time enjoyed a unique second career as the basis for racing engine development.

Whereas touring car events stipulated production-type engines, for Formula 2 and sports car racing new cylinder heads were created with four valves per cylinder and twin overhead camshafts. BMW also supplied other race car manufacturers and teams with racing engines, in a volume that would far exceed 500 units. The successes of his racing cars and engines gave von Falkenhausen ever new motivation to go still further – at times with ideas that at first appeared rather adventurous. Even his closest colleagues were left speechless when, at Christmas 1968, he announced his next project: “Let’s try a turbocharger.”

Though described by some in-house technicians as a “schoolboy prank”, the thing worked brilliantly; the output of the BMW 2002 rose from 200 hp to 280 hp, and it won four rounds of the European Touring Car Championship in 1969, thus securing a repeat title for BMW. Four years later came the BMW 2002 Turbo, the first European production car to feature a turbocharged engine. When, in 1983, Nelson Piquet driving a Brabham-BMW BT52 became the first Formula One world champion to use a turbo engine, the “Lord of the Blue and White” once again had a victorious smile on his face: with the 4-cylinder engine block from 1962, the racing cylinder head and his turbocharger idea, BMW had scaled the absolute summit of motor sport.

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