



6-Appeal – the history of the first BMW 6 Series, 1976 to 1989

When the new BMW 645Ci was launched last year, BMW forged a link with the past that prompts aficionados of historic vehicles to break into rapturous praise. BMW was already setting new benchmarks in engineering and design when the first 6 Series was launched in 1976. Models such as the 630CS and the 633CSi were not just elegant and successful. The M635CSi with a top speed of 255 kilometres an hour was the fastest BMW four-seater BMW of all time. Later models were limited to 250 kilometres an hour.

by Walter Zeichner

14 years after production of the first BMW 6 Series came to an end, BMW recently introduced a new generation of Gran Turismo Coupés with the Type 645Ci. The design and innovative technologies have set new benchmarks, emulating the illustrious example of the 630CS and 633CSi models launched in 1976. The first BMW 6 Series is already one of the rarest models from the recent past and all the cars in the entire series are now approaching the status of automobile classics.

The company had already been considering a new, big BMW Coupé at the start of the 1970s when BMW was already very successful in this exclusive market segment with the Type 2800 CS

to 3.0 CSi Coupés. The 02 Series and the new big saloons with six-cylinder engines in the E3 Series enabled BMW to create a secure commercial base that made it possible to originate a new series in the luxury car class. Motorcycle business had been in the doldrums for some time now but even this sector started to flourish at the start of the 1970s (see page 30).

When designer Paul Bracq joined the company in 1970, BMW gained a man who was to reinvent the "face" of the brand. The first BMW 5 Series from 1972 created a style that belonged exclusively to BMW for some time to come, and design elements were presented with the BMW Turbo showcar

launched in 1972 that pointed way into the future. They were to shape the projected big BMW Coupé series.

The team under BMW development boss Bernhard Osswald took the floor assembly and chassis of the new 5 Series as the technical basis for the new Coupé line with the development code E 24. Independent wheel suspension with front spring suspension struts, semi-trailing arm, coil springs and torsion anti-roll bar at the rear of the car made the 5 Series models exceptionally sporty saloons with secure handling characteristics, in the typical BMW mould. This chassis therefore had the potential to accommodate the significantly enhanced engine performance



Left: The M635CSi was the fastest BMW four-seater of all times with a top speed of 255 km/h. Today, speed is limited to 250 km/h. Right: Invitation for journalists to the press conference on 8 March 1976 for the launch of the coupé.

for this B column ensured that it receded into the background.

A range of, high-capacity six-cylinder engines had been available to BMW since the end of the 1960s to provide a suitable power unit for the luxury coupé. These engines developed muscular power with silky smoothness, they ran quietly and the engines were extremely robust. A 185 bhp three-litre carburettor engine was finally selected for the start of the new series. This was fitted with a Solex dual-barrel, two-phase carburettor and an injection variant with 3.2 litres displacement and generating power of 197 bhp, familiar from the most powerful BMW saloon at the time, the Type 3.3 Li.

Incidentally, capacity constraints meant that the bodies for the new BMW 6 Series were not manufactured at the BMW Plant in Munich but were produced at specialist coach-builders Karmann in Osnabrück. Karmann had been producing the components for the bodies of the previous coupés since 1965. Final assembly was also carried out at Karmann.

Presentation in an exclusive setting

After the usual long testing and trial phase, the new series was launched in the public arena around four months after the last BMW 3.0 CSi had rolled off the production line. BMW selected what was traditionally the most exclusive setting for launches – the Geneva Motor Show. This had always been the stage



for the most extravagant creations in international automobile construction. Journalists were presented with a thick press kit announcing the new 630CS and 633CSi Coupés with stylish words and phrases: "Here the flair of the 'genuine' BMW experiences a rebirth." This referred to the impressively effortless handling, the power that could be generated at any time, and the convincing driving culture. The soft sound of the closing door gives no less pleasure than the purring of the engine as the car hugs the road. These two six-cylinders epitomize their class. Coupés with the driving experience of a saloon, whether the driver wants to take a sporty approach to the road or have a leisurely drive through the countryside. They can accelerate quickly, cruise for hours on end, or power to top speed when required."

The new 6 Series Coupé was nearly the same height but significantly wider and longer than its predecessor. It provided more interior space, particularly in the rear passenger compartment. Comfort was a higher priority in the first BMW 6 Series Coupés, but driving performance was not quite up to the dynam-

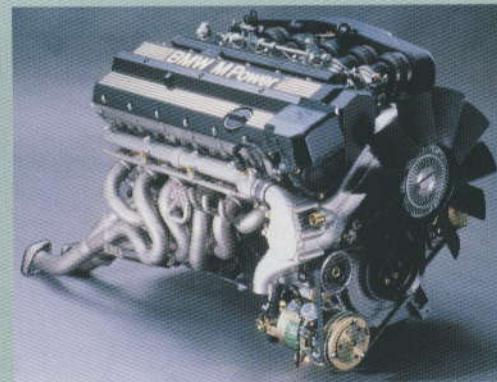
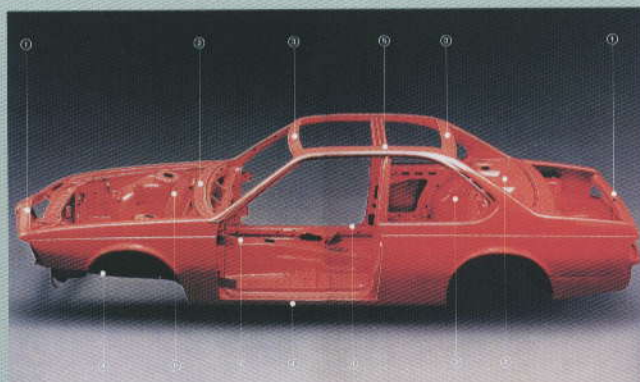
that was anticipated. The new coupés were also supposed to exceed significantly the standards set for space and comfort in the previous E 9 Series.

During development work, particular attention was paid to the aspect of passive safety. Intensive crash tests and ultramodern, computer-aided calculations and analyses resulted in a safety standard for the coupé passenger cell that was way ahead of the competition.

The 6 Series Coupé did not feature the solution without a B column which permitted the side windows to be opened fully. It was an elegant solution, but at that time it was by no means unproblematic from the perspective of safety. However, matt-black paintwork

6 Series chassis and engine

1. Energy-absorbing crash zones front and back.
2. Cross members in the area of the instrument panel, behind the rear seat bench and as a rear-window shelf.
3. Braces above the front and rear windows.
4. Particularly stiff longitudinal members.
5. Integrated rollover bar, strong B columns.
6. Stiff cardan tunnel and front bulkhead, no penetration of engine and gearbox into the passenger compartment.





Karmann stand in Geneva 1976.

ic standard of the 3.0 CSi. However, the move away from a pure sports coupé to a sporty luxury coupé was evident in some fascinating details in the interior. The middle section of the instrument panel, was designed in the clear, functional style of the new BMW generations and slanted towards the driver in the same way as in the new 3 Series, in line with ergonomic design principles. The steering wheel position and seat height could be adjusted precisely to match the wishes of the driver. Bronze-tinted safety glass reduces glare through the strikingly large windows and provides an exclusive visual accent.

Big success – despite high price

The two 6 Series Coupés could be supplied with a ZF three-speed automatic transmission right from the start. This luxury detail was ideally suited to the character of the car and was ordered by one third of 630CS customers. BMW tuned the chassis individually in the two models and the 633 CSi was delivered with a tauter setting for the shock absorbers to provide a more sporty response.

The Check Control System introduced in the 6 Series was an innovation in the automobile world. This was the first time that the driver was able to call up seven vehicle statuses at the touch of a button and with the aid of electronic sensors. If drivers pressed the "Test" button on the left of the instrument panel, LEDs lit up to provide information on levels for coolant, oil, washer water, the brake-fluid level, condition of brake linings and operation of the brake lights and tail lights.

A basic price of DM 40,600 for the BMW 630CS and DM 43,100 for the injection variant meant that the cost of purchasing one of the new 6 Series

Coupés in 1976 was significantly higher than the price of comparable previous models. And if customers wanted to order some of the special luxury equipment, such as automatic transmission, leather seats, electric sliding roof or the air-conditioning system, the price quickly approached the

DM 50,000 threshold.

Despite the fact that purchasers had to make these high investments, sales of the first BMW 6 Series cars were very good. Even in the first year of manufacture, 4,916 BMW 630CS and 633CSi Coupés were shipped to customers.

As was usual for BMW, it wasn't

to 100 km/h didn't exactly leave drivers with the sense that they were lacking performance. This mixture of high performance and comfort proved such a winner that this model remained in the programme until production of the entire series ceased in 1989.

A year later, the carburettor version of the 6 Series, the 630CS, was replaced by the 628CSi with 2.8 litre 184 bhp injection engine. This new "entry-level version" was supplied at a basic price of DM 46,000 until 1987, but it failed to achieve anything like the popularity of the more powerful sister models.

Even more powerful – thanks to Paul Rosche

A revised version of the BMW 6 Series was launched at the Geneva Motor Show in March 1982. On-board



A BMW 635CSi under the tent roof at Munich's Olympic Park.

long before further model variants complemented the new BMW Coupé line. The summer of 1978 witnessed the launch of the 635CSi. This was a new top model, easily recognizable by the front spoiler, rear spoiler in the shape of a strip of hardened rubber, and strips of trim along the side that are typical of that design era.

The new 3.5 litre short-stroke engine packed power of 218 bhp and was derived directly from the M49 racing engine: from 1973 onwards, this had powered the legendary BMW 3.0CSL lightweight coupé from one victory to the next. A top speed of 220 km/h and 7.3 seconds for the classic sprint from 0

computer and service interval display provided drivers of the 6 Series with an even more sophisticated level of electronic information. The revised models had a redesigned instrument panel and a three-spoke steering wheel in a sporty design. The power developed in the engine was transferred to the road by a five-speed gearbox, and a sports gearbox was available which had a shorter gear ratio. The current 6 Series had meanwhile been fitted with modest but effectively reworked front spoilers and bumpers. More importantly, the chassis had been developed further and now used the double-joint front axle familiar from the new 7 Series.

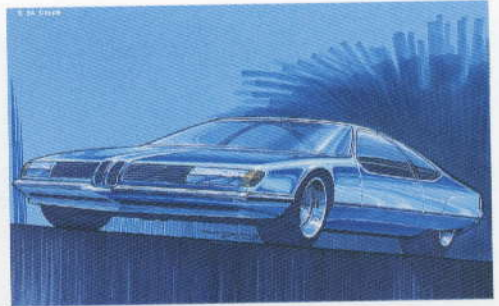
However, the most fascinating variant of the first BMW 6 Series was already poised on the starting grid at that point. "Racing engine guru" Paul Rosche was leading a team at BMW Motorsport GmbH, today M GmbH, that was working intensively on the potential offered by the 6 Series. In the end, the power unit of the new top model was the 3.5 litre four-valve S38 engine which had powered the BMW M1 super sports car in a similar form. The engine could generate 286 bhp with a compression of 10.5:1, almost 35 percent more than the most powerful model to date. As anticipated, the driving performance of this motorsport 6 Series version, designated M635CSi, left nothing to be desired on the road. Passengers were forced back into their seats during acceleration from 0 to 100 km/h in 6.4 seconds, and a top speed of 255 km/h made this 6 Series the fastest BMW four-seater to this day – later the top speed in all models was limited to 250 km/h.

Big brake discs in 4-piston fixed caliper disc brakes, gas shock absorbers and lowering of the car by 11 millimetres meant that the enormous increase in power could be transformed effortlessly and safely into sheer driving pleasure. Between the start of 1984 and 1989, only 5,855 BMW M635CSi cars were supplied. They appealed to coupé drivers with a penchant for sporty performance and the willingness to pay a basic price of DM 89,500. When production came to an end, the price had climbed to DM 108,000, and only the 7 Series with a twelve-cylinder engine was more expensive at this point in time.

Right: BMW 630CS from the year 1976.
Bottom: M6 for the US market, 1989



Design drawings for the 6 Series Coupé.



Although the M635CSi was the last new model in the 6 Series, the evolution of the series had by no means been concluded. In 1985, BMW launched the first four-speed automatic with three electronically controlled shift programmes. The driver was able to turn a knob to programme the automatic transmission for particularly smooth or dynamic gearshift. At the same time, the 6 Series Coupés were available with regulated catalytic converter and oxygen sensor. The M635CSi could also be supplied in this environment-friendly version, but in the final analysis only 117 purchasers opted for this variant with only 260 bhp.

Electronic Damper Control (EDC) was an option available from spring 1988 as the final important innovation in the production history of the first BMW 6 Series. This uses a complex sensor system and a computer which calculates

optimum shock-absorber characteristics to suit changing road conditions, speeds and the load being carried by the vehicle. The shock absorber settings are changed by means of control valves.

Also respected by racing drivers

When the last of a total of 86,216 coupés from the first BMW 6 Series rolled off the production line on 14 April 1989, the history of the most successful BMW Coupé to date was brought to an end. The 6 Series combined ride comfort, exclusivity and sportiness like no other BMW model series had done before.

The BMW 635CSi was even a success on the racing circuit. Racing drivers like Hans-Joachim Stuck, Dieter Quester, Gerhard Berger and Marc Surer proved in the mid-1980s that the 6 Series prepared by skilled tuners was quite capable of achieving spectacular wins, such as the 1983 European Touring Car Championship.

