



Mercedes-Benz

Magic number: "3.5"

Press Information

Premiere of the legendary Mercedes-Benz V8 models at the 1969 IAA

5 September 2019

International Motor Show in September 1969 in Frankfurt am Main:

Mercedes-Benz presented not one, but three luxury vehicles with the new M 116 V8 engine with 3.5 litres of displacement rated to 147 kW (200 hp): the 300 SEL 3.5 (W 109), 280 SE 3.5 Cabriolet and 280 SE 3.5 Coupé (W 111). In addition to the legendary C 111 experimental vehicle with a Wankel rotary engine, the "3.5" models were a real highlight of the show. Today, they are amongst the most sought-after variants of these predecessor models to the Mercedes-Benz S-Class.

Value appreciation: These vehicles fitted with 3.5-litre engine are coveted vintage cars of the brand, whereby the Cabriolet and Coupé appreciate in value particularly well since some years.

M 116: This was the official company-internal designation of the newly developed 3.5-litre engine. The unit was very successful, having enjoyed an almost 30-year production run and a variety of different output configurations.

The elegant two-door models: The 280 SE 3.5 Cabriolet and 280 SE 3.5 Coupé (W 111) are especially fascinating models. From August 1969 to July 1971, the plant in Sindelfingen, Germany manufactured 3,270 Coupé and 1,232 Cabriolet units. The 280 SE Cabriolet and 280 SE Coupé models also continued to be made during this time.

Driving excitement on demand: The 280 SE 3.5 Cabriolet and 280 SE 3.5 Coupé were available with a four-speed manual transmission in addition to the automatic, an option that appealed to many drivers looking for a sportier feel.

The saloons: The M 116 in the Mercedes-Benz 300 SEL 3.5 (W 109) replaced the 2.8-litre M 130 engine used since 1968. The long wheelbase, standard air suspension and automatic transmission underscored the luxury class character of the vehicle. A total of 9,583 vehicles were built up to 1972. As of 1971, the 280 SE (W 108) saloons were also fitted with the 3.5-litre engine. By September 1972, a total of 11,309 units of the 280 SE 3.5 were made, whereas only 951 280 SEL 3.5 models left the assembly line.

Sister engine: Starting in 1971, the M 117 with 4.5 litres of displacement expanded the offering and was initially available in the USA only. The M 117 found in the saloon car variants of the W 108/109 model series was rated to **146 kW** (198 hp). In the SL and SLC (R/C 107), however, this number jumped to **165 kW** (225 hp).

The developer: In the 1960s, it was not clear whether the new rotary piston engine according to Felix Wankel would really hold its own against conventional piston engine designs. This is why Mercedes-Benz decided in favour of a parallel development approach. The M 116 and M 117 piston engines can trace their beginnings back to engine designer Adolf Wente, who developed the first V8 injection engine offered by the brand – the 6.3-litre M 100 found in the Mercedes-Benz 600 (W 100).

The design: The M 116 and M 117 had an overhead camshaft and two banks of four cylinders mounted at a 90-degree angle to each other. On the M 116, the bore-to-stroke ratio measured 92×65.8 millimetres, giving the engine an extremely short stroke. In addition to its wonderful ability to rev, the power plant was also a very smooth runner. The M 116 was the second engine from Mercedes-Benz to have the D-Jetronic electronic fuel injection system by Bosch. The M 117, on the other hand, had a bore-to-stroke ratio measuring 92×85 millimetres, which made the unit an extremely pleasurable “cruiser”.

Weight: Both the M 116 and M 117 were comparably lightweight engines. The 4.5-litre engine with a cast-iron block weighed just 250 kilograms, whereas the M 110 six-cylinder unit of the time tipped the scales at 240 kilograms.

The market launch: Both engines were earmarked for the new SL (R 107) and SLC (C 107) –which debuted in 1971 –as well as the S-Class (116 model series). The launch of the S-Class was postponed, however, and the model was not showcased until 1972. Since the predecessor six-cylinder engines were technically outdated after having been around for a long time, the company decided to start using the new engine variants as soon as 1969 in the W 109 and W 111 model series as well as in the W 108 later on. All of these vehicles were predecessors to today's S-Class.

The career: The forward-looking design made it possible to keep both engines up to date for decades with only minor modifications and adjustments required. The M 116 and M 117 found their way into the S-Class, SLC-Class and S-Class Coupés, SL sports cars and G-Class.

The successor: In 1989, the thoroughly modernised M 119 V8 engine featuring two overhead camshafts was introduced and is largely the work of Wente's staff member Ralf Ohlendorf. The power plant was initially offered with two engine block heights of the M 116 for 4.2 litres and of the M 117 for 5 litres displacement. When the LH-Jetronic system was launched in 1991, a standardised version of the engine was offered based on the lower M 116 engine block.

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Captions:

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Mercedes-Benz 280 SE 3.5 Cabriolet (W 111) with the M 116 V8 engine. Photo from the premiere year in 1969, taken in front of the city skyline of Bad Wimpfen.

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Mercedes-Benz 280 SE 3.5 Coupé (W 111) with the M 116 V8 engine. Photo from the premiere year 1969, taken at the “Blue Tower” in Bad Wimpfen.

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Mercedes-Benz 280 SE 3.5 Coupé (W 111) with the M 116 V8 engine. Photo from the premiere year 1969.

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Mercedes-Benz 300 SEL 3.5 (W 109) with the M 116 V8 engine. The model premiered at the 1969 International Motor Show (IAA).

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Premiere vehicles at the 1969 IAA: The Mercedes-Benz C 111-I with the three-

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rotor Wankel rotary engine and the 280 SE 3.5 Cabriolet (W 111), 300 SEL 3.5 (W 109) and 280 SE 3.5 Coupé (W 111) with the M 116 V8 engine. Photo from 1969, taken on the test track in Untertürkheim.

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Mercedes-Benz M 116 V8 engine. In 1969, this power plant was initially available in the 300 SEL 3.5 (W 109), 280 SE 3.5 Cabriolet and 280 SE 3.5 Coupé (both W 111) models.