

Review: Mercedes-AMG C43

 By [Naresh Maharaj](#)

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The new C43 hybrid, electrified Mercedes-Benz, promises a host of new experiences for prospective owners. It comes equipped with the world's first series production motor to feature an electric exhaust gas turbocharger, there's hybrid technology taken from F1, and rear axle steering.



Mercedes-AMG C43 differentiates from the rest of the C-class with signature AMG visual upgrades. Source: Supplied

During testing, the turbo-blips were an other-worldly symphony, more than music to my ears to be honest. And what makes it more appealing is that you can drive it in so many modes, from comfort, to sport plus, individual and then racetrack.

Fuel consumption from the 300kW (additional 10kW over boost) two-litre, four-cylinder turbocharged engine hovered around 9l/100km on a diet of both urban and open-road driving.

This C43 is in a class of its own. From the bold, signature AMG aesthetic and matching interior to the brisk 0-100km/h in just 4.6 seconds – the car will continue to an electronically limited top speed of 250km/h.



Racetrack technology on the road

With technology derived directly from the successful turbo-hybrid era F1 programme, C43 is chock full of innovative solutions.

A 4cm thin motor integrated directly on the turbocharger shaft between the turbine wheel on the exhaust side and the compressor wheel on the intake side.

This solution to characteristic turbo lag was developed by Garrett Motion and the electronically controlled motor drives the shaft of the turbocharger directly and thus accelerates the compressor wheel before the exhaust gas flow takes over the drive in the conventional way.

This significantly improves the response directly from idle speed and across the entire rev range. Mercedes-Benz has a long history of developing forced induction power units with Daimler-Benz first using superchargers in 1921.

The Kompressor engines used twin screw superchargers with belt systems to combat lag.

Under the hood

When this technology is deployed in the 2.0-litre four-cylinder in-line engine, it helps the C43 to achieve a rated output of 300kW at 6,750rpm.



The maximum torque of 500Nm is available at 5,000rpm and, depending on the situation, the system also briefly provides an additional boost of 10kW through the belt-driven starter generator, known as the *Riemenstartergeneratoren* (RSG).

The second-generation 48V system acts as a mild hybrid, providing this temporary power boost as well as functions such as gliding and recuperation for maximum efficiency, as well as powering the car from standstill in stop/start situations. Power is transmitted via the AMG Speedshift MCT 9G transmission (MCT = multi-clutch transmission), in which a wet start-off clutch replaces the torque converter.

It reduces weight and, thanks to its lower inertia, optimises response to

accelerator pedal input, especially during spurts and load changes.

The elaborately calibrated software ensures extremely short shift times as well as fast multiple downshifts if required. In addition, the intermediate throttle function in the "Sport" and "Sport+" driving modes delivers a particularly emotionally appealing gearshift experience.

There is also the "race start" function, which allows for rapid, heart racing launches.

Signature sound

Depending on the drive program selected, the noise level ranges from balanced and discreet to emotionally sporty.

Sound characteristics are controlled via an exhaust gas flap, depending on engine speed and load. For the occupants, the listening pleasure can be further enhanced by the "AMG Real Performance Sound" that pipes the actual engine sound into the cabin via an exhaust system "sensor" (Ed: microphone).



Refined looks

Outside as well as inside, numerous AMG-specific details underscore both the dynamic and the luxurious character of the C43.

In terms of exterior design, C43 differentiates from the rest of the C-class with an AMG-specific radiator grille with vertical struts in chrome, the AMG front apron with flics, sporty air intakes and chrome-plated trim element.

There's also matching side sill panels and a diffuser-look rear apron along with two round twin-tailpipe trim elements.

Final word

"Behind every Formula 1 championship is a series of innovations that give the world's greatest racers that extra bit of edge. With an ingenious new engine at its core, coupled with the innovative technology of the electric exhaust gas turbocharger, we are once again increasing the attractiveness of this latest generation of powerful sedan," says Mark Raine, co-CEO of Mercedes-Benz South Africa and executive director of passenger cars.



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“With the new C 43, we are also demonstrating the tremendous potential that lies in electrified combustion engines.”

Price (at launch)

New owners will pay R1,608,810 for the privilege of owning a C43, and this includes a 5 year/100km maintenance plan.

C43 will be built at Mercedes-Benz South Africa's plant in East London alongside the all-new C63 S E-Performance and other W206 C-Class models.

ABOUT NARESH MAHARAJ

Naresh Maharaj is a petrol head who loves cars and writing about them. He is also a Member of the SA Guild of Motoring Journalists. Naresh is also an international sports correspondent and an acclaimed corporate MC and voice-over artist. Naresh is a sports/news producer for community radio stations and also an award-winning sports journalist. Contact Naresh on nmaharaj321@gmail.com

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