

Testing: New Vauxhall Mokka on the Road to Production Readiness

- Vauxhall engineers put the finishing touches to next-generation Mokka
- New Vauxhall Mokka up to 120 kilogrammes lighter than previous model
- Chassis and assistance systems set up during winter tests in the Arctic
- All-electric Vauxhall Mokka-e offers engaging drive
- Suspension tuning currently underway at Test Center Rodgau-Dudenhofen
- New Vauxhall Mokka in retailer showrooms in early 2021

Luton – Dynamic, efficient and high quality: these are just a few of the development objectives of the all-new Vauxhall Mokka. With typical precision, the engineers have been putting the finishing touches to the next-generation bestseller. They are currently setting up the new Mokka for optimum acoustic comfort in the interior, excellent driving safety at high speeds and Vauxhall-typical steering and pedal feel. Since February, the Vauxhall experts for chassis, powertrain, electronics and lighting have been using the Arctic winter for the tuning of chassis and assistance systems on frozen lakes and narrow country roads in Swedish Lapland.

The next Vauxhall Mokka generation is a completely new design based on the company's highly efficient CMP multi-energy platform (Common Modular Platform). This modular platform offers maximum flexibility in vehicle development. The CMP also allows the use of purely battery-electric drive as well as internal combustion engines. The customer has the choice. Thanks to the use of high-strength steels, the vehicle weight is low and the body stability is high. The new Mokka weighs up to 120 kilograms less than the previous model – with almost the same wheelbase and tyre sizes. With the electric Mokka-e, the batteries are installed deep in the vehicle floor, which lowers the centre of gravity and at the same time increases torsional rigidity by a further 30 per cent – excellent prerequisites for dynamic driving. Customers can look forward to a very agile second-generation Mokka, which will be available in dealerships from early 2021. Until then, the testing continues at full speed.

Phase 1: testing and fine-tuning at Arctic Circle

Engineer Gunnar Nees never tires of turning lap after lap on ice. He regularly stops for few minutes, reaches for the laptop, reads out measured values, and logs every mile covered. In the vast Arctic wilderness, it is still freezing cold in March. Exactly the right conditions for orchestrating the harmony between ABS, ESP, assistance systems and the rest of the new Vauxhall Mokka's chassis.



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The development cars are still hiding behind a green and black camouflage, with 3D-like graphics that blur the vehicle's contours. The engineer behind the steering wheel has come to the far north to set up the chassis. Like every Vauxhall, the new Mokka must respond precisely to steering inputs and give good feedback, be comfortable and at the same time have a firm enough ride. A Vauxhall must not display uncontrolled body movements, for example, when the vehicle is driving over a large bump at medium speed. The Vauxhall philosophy calls for safe and relaxing driving on the motorway. A Vauxhall must remain easily controllable in all situations and be fun to drive at the same time.

These characteristics must be present under all weather conditions everywhere – at the icy Arctic Circle as well as in high summer at the Mediterranean. However, nothing should change in terms of precise handling and consistently good-natured driving behaviour. Parts, components and systems are continuously fine-tuned by the Vauxhall engineers: dampers, springs, steering. In addition, the control software is adapted: for ideal pedal feel when accelerating and braking, for the right amount of steering power assistance and for the interaction between all assistance systems.

Phase 2: high-speed driving on German test tracks

Back in Germany: the same test engineer pilots the Mokka-prototype on home ground at the Rodgau-Dudenhofen Test Center. Karsten Bohle, the project coordinator for the second-generation Mokka, joins Gunnar Nees.

“We are all looking forward to seeing the new Mokka on the road in customer's hands. The test drives are running like clockwork, also because our new baby, with its low weight and compact external dimensions, reacts well to adjustments. Handling and comfort are super. The Mokka is a joy to drive,” said Bohle, “the development work has been great fun.”

The new Mokka is ready to take its final exams at the Test Center. While shaken, ride comfort and interior acoustics must remain unstirred – not even by the torture track. Here, not far from the Opel-Vauxhall base in Rüsselsheim, the tracks are replicas of the trickiest road surfaces in Europe. Vauxhall engineers have tested here for decades and built up a huge wealth of experience. The engineers repeatedly adjust springs and dampers, the balance between responsiveness and sporty precision continuously improved. The new Mokka features particularly low road noise for optimum acoustic comfort, which the high-quality materials in the interior further increase. Squeaks and rattles are taboo.

The steering and suspension get their Vauxhall “feel” on the Dudenhofen handling course. Two tie rods at the McPherson strut turrets are standard equipment; they provide further stiffness at the



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front end, adding a touch more precision and agility. The new Mokka turns into corners eagerly, is easy to handle at the limit and the assistance systems function perfectly. Then comes the ultimate discipline – the high-speed oval with its steep banking, followed by the long straight. This test demands rock-solid stability at all speeds. In real life, it also results in a huge safety benefit when taking avoidance manoeuvres at lower speeds. The Vauxhall engineers only award their seal of approval for the autobahn when they return satisfied from the high-speed oval. The new Vauxhall Mokka has already passed this test with flying colours. However, testing, testing and yet more testing will continue until the summer. When the Mokka has achieved production readiness, cars will start rolling off the assembly line at the end of the year

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Vauxhall Motors started making vehicles in the UK in 1903. Today, as the oldest and most familiar of Britain's automotive manufacturers, its philosophy is to build vehicles that are relevant to all. Vauxhall's two manufacturing plants in Ellesmere Port and Luton produced 120,000 cars and vans in 2019, and its sales accounted for 7.5 per cent of the UK market.

Vauxhall has been a Groupe PSA brand since 2017. By 2024, each of its models will offer an electrified version, part of the company's [PACE!](#) plan to become sustainably profitable, global and electric. www.vauxhall.co.uk

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