

PERFECTION AT EXTREMES: THE METICULOUS FINAL BUGATTI BOLIDE SHAKEDOWN



Every Bugatti that leaves Molsheim undergoes an uncompromising quality control process and, despite its raw and focused nature, the track-only Bolide¹ is no exception. Before being united with their owners, these mechanical masterpieces face one last challenge: an

intensive final inspection and circuit testing program that ensures absolute perfection.

The Bugatti Bolide represents the most extreme expression of Bugatti DNA, imbued with race-winning heritage and a pure celebration of the iconic W16 engine. With 1,600 horsepower propelling a lightweight carbon fiber chassis, complete with a number of top-tier motorsport innovations, it is an incomparable track machine. Yet each one still undergoes a meticulous shakedown process that ensures the very same quality and dedication to perfection as every other Bugatti model.

At the heart of Bugatti's quality control process lies a bespoke shakedown and a close collaboration with Circuit de Mirecourt, whose 3,750-meter track nestled within the Vosges department has become instrumental in validating the performance of every Bolide. This partnership provides Bugatti with exclusive track access regularly, creating an ideal environment with comprehensive, professional new facilities, close to Bugatti's spiritual Molsheim home, enabling the brand's expert team to conduct meticulous performance testing.

"Our relationship with Circuit de Mirecourt has been invaluable in ensuring that every Bolide meets our exacting standards. Their commitment to providing us with consistent track access has allowed our team to develop a rigorous and methodical approach to quality control for a car so extreme that there really was currently no benchmark for it. So, we developed our own, accepting nothing less than perfection."

PHILIPPE GRAND
DIRECTOR OF QUALITY AT BUGATTI

The shakedown process mobilizes a dedicated team of eight specialists for each session: two quality control drivers, a tire manager, a cooling manager, two mechanics, and two electricians. Working in orchestrated harmony, this expert team can validate two cars in a single day on track, assessing every single dynamic characteristic.

A TWO-PHASE APPROACH: PRECISION AND EXTREMES

Bugatti's track-focused shakedown process is divided into two distinct phases, each designed to validate different aspects of the Bolide's performance:

PHASE 1: PRECISION AND FUNDAMENTALS

The first phase focuses on establishing a solid foundation and ensuring the vehicle is prepared for more demanding tests. This begins with careful familiarization and steering validation at moderate speeds. Drivers then conduct progressive braking tests, starting at 50 km/h and gradually increasing to 250 km/h, to gently break in the braking system. The process includes detection of irregular noises through lateral maneuvers and varied braking scenarios, coupled with frequent technical inspections in the pits by specialized technicians. The team

also validates all dashboard parameters and driving functions to ensure systems are functioning optimally.

PHASE 2: EXTREME PERFORMANCE

Once the car is deemed ready, the second phase pushes its capabilities close to the limit while maintaining strict safety protocols. The team conducts intensive laps that allow gradual temperature increases for tires, brakes, and gearbox. Drivers perform thorough evaluations of stability and safety systems, including ABS and traction control functionality. The process incorporates Launch Control activations to simulate extreme starting conditions and racing scenario simulations with multiple laps at speeds reaching 300 km/h. Throughout testing, the team enforces precise cooling intervals with specific temperature targets: brakes must cool to below 300°C and the engine below 90°C before continuing with further performance validation.

The Bolide's performance is validated under near-extreme conditions, with braking forces reaching up to -2.5G and brake temperatures peaking at 1000°C. These intense tests ensure that each vehicle can deliver its extraordinary performance consistently and safely when in the hands of its owner. Bugatti's commitment to perfection in every single Bolide is undertaken with no regard to the cost, but focused instead on ensuring the Bolide has the same enduring quality and reliability as any other product of Molsheim.

Each test combines advanced telemetry derived from motorsport with expert human evaluation. Specialized software analyzes real-time data to detect even the slightest anomalies, while drivers trained in Bugatti's precise specifications provide invaluable feedback on the vehicle's performance and handling characteristics.

“Our dedicated quality team has crafted a process with as much care and attention as the Bolide’s aerodynamicists spent honing the downforce, or the engineers spent perfecting the dynamics. Their work ensures that the W16’s purest expression in the Bolide delivers not just extraordinary performance, but does so with the reliability and quality that defines Bugatti.”

PHILIPPE GRAND
DIRECTOR OF QUALITY AT BUGATTI

The rigorous testing process will be ongoing as more customers throughout the world continue to take delivery and enjoy their Bolide on-track, including at the Bugatti ‘Feeling the Track’ events, following the premiere gathering at Circuit Paul Ricard in February. A second ‘Feeling The Track’ event will take place at Circuit of the Americas in May.

¹Bolide: Not subject to Directive 1999/94/EC, as it is a racing vehicle not intended for use on public roads.