Made Perfect 3 – the assembly of the Macan

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02/09/2014 A Symphony with 225 single stations: the assembly of the Macan culminates in the wedding. That's how experts call the union of body and engine.

Like every Porsche, the Macan epitomizes the optimal interaction of man and machine. The intelligently controlled production process involves multiple locations and many suppliers, and culminates in state-of-the-art production at the Leipzig plant. In our series "Made perfect – the journey of the Macan" we accompany the entire production process of the compact SUV. The third part takes a look behind the scenes of the assembly.

Indispensable for the entire value chain is the quality assurance measures, as reflected in the zero-defect principle, among others: “Don’t accept defects, don’t make mistakes, don’t pass errors forward,” is the motto. One quality assurance measure introduced by Porsche is a special master jig, called a

Meisterbock, for body and assembly parts. The precise fit of assembly add-on parts, for example, is tested by the inner Meisterbock. “With the joint wheel and these joint pins we check the measurements of the gaps,” explains production director Dirk Kolar as he places one of the pins in the joint between the rear light and rear valance. Perfect. “At regular intervals we invite the suppliers and show them where they have to be more precise.”

The Macan has left the underbody line with important parts such as the brake lines and the tank on-board. On the exterior line it not only gets its doors back but also receives its rear window and windshield – and the Porsche crest now decorates the hood. Now it heads to the mix line. It's called the mix line because this is where the Cayenne comes in, bringing together the factory's three models on a single line – a specialty of the Leipzig plant. By the way, the six-cylinder gas engines come from Stuttgart-Zuffenhausen. They're delivered to the assembly supply center in Leipzig in trucks, and from there to the drivetrain enhancement line, which operates parallel to the body assembly.

The wedding happens fully automatically

While the body swings in on the overhead conveyor unit, the chassis and drivetrain approach their union on a driverless transport system. The special moment of joining happens fully automatically. The witnesses are the employees one station later, who screw the spring struts into the mounts. This step is followed by the filling with fuel, brake fluid, coolant, and motor oil. At the end of the mix line, the Macan is standing on its own four wheels. All that's left now is the test facility, or finish.

Porsche added an extra line for the new SUV. This is where the software is uploaded, brakes tested, headlights set up, driver assistance systems calibrated, and – for the first time – the engine is started. Before it undertakes its journey to the customer, Porsche asks the Macan for one last dance. But this time, it is not for a round with the robots, but a whirl around the warm-up track. The Macan is ready for the world.

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Dr. Ing. h.c. F. Porsche Aktiengesellschaft
Porscheplatz 1
70435 Stuttgart