



## BOEING GETS NEW ROBOTS ONBOARD FOR 737 PRODUCTION

News / Manufacturer



**Boeing is introducing a faster layer of automation into its 737 factory, adding a new robotic system to drill holes in the main beams inside each wing known as spars, industry sources said.**

The move deepens the US jetmaker's thrust into automation as it prepares to boost output of its best-selling airliner, while also preparing the ground work for future aircraft that will be designed with radical new manufacturing methods in mind.

Last year, Boeing started using an automated system known as the Panel Assembly Line (Pal) to drill holes and install fasteners in wing panels of 737 jets at its Renton, Washington, plant.

The upcoming system, known as the Spar Assembly Line, or Sal, will not carry out all the tasks performed by Pal but will speed drilling and install bolts in the wing spars in about half the space used by an earlier generation of machine.

Boeing has not yet announced details or said whether any jobs could be affected, but a

spokesman confirmed the "focus is on updating the spar assembly line".

Boeing says greater automation will cut the amount of "rework" caused by production glitches, reduce injuries and support sharp increases in output at factories such as Renton, where wings pulse through the assembly hall every 5.3 hours.

Sal will make sub-assemblies that go into the wings. Each 737 wing has two spars, front and back, running the length of the wing and to which panels are attached.

Other advanced robots include the fuselage automated upright build (Faub) used to fasten 777 fuselage panels.

"We are really pushing the envelope in terms of how to be more productive," said Pat Shanahan, the senior vice president of supply chain & operations.

The new systems replace older machinery and hand labour.

Overhauling entrenched methods on existing lines is more time-consuming and unpredictable than redesigning from scratch, and has led to some initial production problems, according to people familiar with the matter.

Mr Shanahan acknowledged Boeing had fallen behind on some of its most ambitious objectives, but said the company was still meeting its base targets with the new machines. He also acknowledged teething problems, which are initial technical issues with new machinery.

"We stressed it intentionally so people ... had to learn faster," he said.

"If you are on the outside and not working on the inner circle, you could hear about problems, but we are finding them really early and fixing them really fast."

In the Faub, robots fasten fuselage panels for big 777 jets.

"They just started doing it in September and the plan is to get to full rate in a short period of time, less than a year," Mr Shanahan said.

"We designed this implementation to give ourselves plenty of room so that when it gets to be used on the 777X we have got lots of margin," he added, referring to the next version due to carry passengers from 2020.

Because of the need to move cautiously when overhauling existing lines, analysts say the new automated systems will only really pay off only on future programmes, such as a new mid-market jet being studied by Boeing or a successor to the 737.

Future aerospace factories will look less cluttered, with production equipment moving around planes rather than standing in monumental structures, executives say.

After experimenting with radical changes to design and supplier relationships with its 787, which caused delays, Boeing stresses automation is not a "big bang" but an evolution, though it is under pressure to compete as rival Airbus also automates.

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