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Boeing's woes

## Nightmareliner

Boeing's new 787 has been cleared for take-off. But its troubles continue

Sep 3rd 2011 | from the print edition

IT WAS tempting fate to call an ambitious new aircraft the "Dreamliner". A combination of radical technology and a novel outsourced system of manufacture has turned the Boeing 787 into a nightmare.

Since its launch in December 2003, delay has piled on delay. The 787's seal of approval from the American and European aviation authorities on August 26th and its first delivery—to All Nippon Airways in late September—come more than three years behind schedule.

Nor do the company's woes end there: it now faces the difficult task of ramping up production and delivering 787s to impatient customers. Three dozen part-finished 787s are lying around airfields by Boeing's Everett factory north of Seattle, with ten more inside. The original plan was to have delivered over 100 787s by the end of 2009. Instead the company will be lucky to dispatch seven by the end of this year, and it will be late 2013 before production reaches the ten planes a month needed to break into profit.

The delays were caused by suppliers. Vought in America and Alenia in Italy delivered defective chunks of the new composite plastic fuselage. Vought struggled so much that Boeing had to buy it. There were also hitches in the supply of smaller parts such as fasteners. Delays, reworking and compensation to customers all burned cash. Inventory costs at Boeing Commercial Airplanes swelled from about \$17 billion in December 2009 to more than \$24 billion by December 2010.

Bernstein, a research firm, estimates that Boeing will not start making money until it delivers its 45th aircraft, and the overall programme will not earn a profit until 1,000 aircraft have been delivered. Boeing officials suggest that this is too pessimistic. More details should emerge in October, with Boeing's third-quarter results.

The Dreamliner's delays are especially painful because its launch was Boeing's most successful ever. Attracted by the

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new plane's promise of fuel economy—20% better than competitors—customers flocked to order more than 950. The strong plastic fuselage also allows for a nicer cabin with bigger windows and fresher, less depressurised air. The current order book is still 821 after cancellations. But early orders were all booked either at discounted launch prices or at levels set before the plane's production costs soared, and Boeing has little hope of putting up the price.



Hopes were high in 2003 that the Dreamliner's revolutionary plastic airframe would make for easier assembly than conventional aluminium ones. This may yet prove to be true, as even Airbus has opted to follow Boeing, switching to plastic in its new aircraft. Privately, Boeing officials admit that an all-new plane, a new technology and a new way of working with manufacturers (which involved risk-sharing), was too much novelty all at once.

The nightmare is having knock-on effects. On August 29th Boeing's board approved the launch of an upgraded version of its best-selling 737 single-aisle model, to be called the 737 MAX. This is a sign that Boeing is playing catch-up with Airbus, which has won over 1,200 orders for its re-engined single-aisle A320. Boeing had been hoping to hold off until it could offer an all-new single-aisle aircraft, based on the 787's plastic technology. But in July American Airlines—one of Boeing's core customers—decided to give Airbus the lion's share of its order (the world's biggest) to renew its single-aisle fleet. Boeing had to scale back its ambitions. "We have the technology," says an insider. "But the lesson of the 787 is that we could not get the production up to scratch in time."

Correction: The original version of this article wrongly claimed that the cabin pressure of the 787 at altitude was lower than in other aircraft. In fact it is higher. This was corrected on September 5th.

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