

# Rolls Royce comes short in Australia

SYDNEY, AUSTRALIA: Rolls Royce on Thursday (27 June) admitted its safety and quality standards "fell short" after Australia's transport safety watchdog found cracks in an oil feed pipe caused an engine to explode on a Qantas A380 in 2010.



The airline grounded its entire Airbus A380 fleet after one of the Sydney-bound double-decker superjumbos was forced to make a dramatic return to Singapore with smoke trailing from its Rolls-Royce Trent 900 engine and damage to its wing.

The mid-air blast in November 2010 sent debris raining down over Batam island in Indonesia, before pilots guided the plane carrying 469 passengers back to Changi Airport. No one was injured.

The Australian Transport Safety Bureau (ATSB) released its third and final report into the accident, which found that oil feed pipes in the A380's No. 2 engine did not conform to design specifications.

"The ATSB found that the engine failure was the result of a fatigue crack in an oil feed pipe," it said, calling the investigation one of the most complex it had ever undertaken.

"The crack allowed the release of oil that resulted in an internal oil fire. The oil fire led to one of the engine's turbine discs separating from the drive shaft.

"The disc then over-accelerated and broke apart, bursting through the engine casing and releasing other high energy debris," the report said.

## Manufacturing fault

The ATSB also found that the oil pipe, together with a number of similar pipes in other engines, had been made with a thin wall section and did not comply with design specifications.

"The thin wall substantially increased the likelihood of fatigue cracking," it said.

Since the incident, Rolls-Royce, aviation regulators, and operators of Trent 900-powered A380s have taken a range of steps to ensure that engines with incorrectly manufactured oil feed stub pipes were removed from service or fixed so aircraft could operate safely.

Rolls-Royce also introduced software that would automatically shut down a Trent 900 engine before its turbine disc over-speeds to prevent a similar occurrence. The company said it was also improving its quality management systems.

The company's director of engineering and technology Colin Smith said it was "a serious and rare event which we very much regret".

"At Rolls-Royce we continually strive to meet the high standards of safety, quality and reliability that our customers and their passengers are entitled to expect. On this occasion we clearly fell short," he added in a statement.

"The robustness of the Airbus A380 and the professionalism of the Qantas crew members assured that the aircraft and all its passengers landed safely," he said.

"We support the ATSB's conclusions and, as the report notes, have already applied the lessons learned throughout our engineering, manufacturing and quality assurance procedures to prevent this type of event from happening again," he added.

The ATSB report absolved the plane's crew from any error, saying they completed the required actions to overcome a multitude of system failures and land safely.

Qantas, which reached a settlement worth US\$104m with Rolls-Royce in June 2011 over the incident, welcomed the findings.

"The response of the crew and Qantas employees on the ground was a testament to the outstanding safety and training that Qantas is known for and we're pleased that the report reflects that," the airline said.

"This was an unprecedented event and, as the report confirms, all possible steps have been taken to ensure that it can never happen again," Qantas said.

Source: AFP via I-Net Bridge

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