

Engine failure on Malaysian Boeing 777-200ER over Stockholm



On Friday Nov.4, 2006, the Malaysian Boeing 777-200ER (9M-MRI) en route back to Kuala Lumpur as flight MH091 from New York Newark had to return shortly after takeoff from Stockholm Arlanda airport due to engine problem. The aircraft, with 279 passengers on board, suffered the failure on take-off (see pictures above) before continuing to go around 8,000ft (2,700m) to dump fuel. The aircraft landed without problems.

Unconfirmed details from maintenance workers at Arlanda indicate that the inner wall of the Rolls-Royce Trent 800's D Duct disintegrated on rotation, leading to glass fibre debris being exited from the engine. The left flaperon also suffered impact damage. Further speculation continues that the fan air stream pushed the exhaust nozzle into the core exit and the engine surged. The crew pulled controls back to idle, but had no cockpit indications, it is understood. After dumping 60t of fuel, the engine was left running at idle until the 777 landed.

Rolls Royce had reliability issues with the Trent 800 engines notably in 2002 when Emirates complained formally about the on wing time of the engines on its 777 fleet. Rolls Royce shipped a two-stage upgrade package that year to tackle faster than expected performance deterioration on Trent 800s operating in hot and heavy conditions.

The US Federal Aviation Administration imposed an airworthiness directive on the Trent 800 in January reducing maintenance cycle times to "prevent possible multiple uncontained low pressure compressor fan blade failure, due to cracking in the blade root caused by increased stresses in the shear key slots."

Initial inspections teams from Boeing Seattle and from R-R have concluded that blade delamination on the core of the reverser was the probable cause, as per the maintenance provider at Arlanda. No engine defect or operational issue was found by preliminary inspections.

Incidentally, the Boeing 777s operated by KAC have GE engines.