

FLYING LIGHT: BRITISH AIRWAYS FLIGHT 268 (A)

“Speedbird 268 heavy, it appears you have flames coming out of either your No. 1 or No. 2 engine.”¹

The three pilots on “Speedbird,” British Airways Flight 268, were not surprised. Shortly after takeoff from Los Angeles International Airport (LAX)—in fact, no more than 300 feet off the ground—the pilots on this Boeing 747 had felt a surge (usually brought about by an incorrect mixture of fuel and air) in one of the RB211-524GH engines and heard the “pop” of an explosion. It was 9:24 p.m. on a rainy February evening in 2005, and the plane was headed for London’s Heathrow Airport, a nonstop flight that would cover more than 5,000 miles and take approximately 11 hours. There were 351 passengers and 18 crew members on board.

Immediately after the “pop,” the pilots had throttled the engine back to idle. “We’re shutting it down,” the captain told the air traffic controller, adding that the crew was going to check out the problem while the plane circled above the Santa Monica Bay. He sent the copilot back to the cabin to see if any flames were still visible through the window and consulted by radio with engineers and British Airways officials at Heathrow. The engineers could actually see what was happening with the engine in real time and alert the crew if the fire were still burning. After the initial burst of flames, the engineers reported, the fire had died out.

The three pilots had several choices. They could return to LAX immediately; continue to another major airport en route (such as Chicago’s O’Hare or New York’s JFK) to have the damage assessed and, if necessary, switch planes; or British Airways Flight 268 could continue on its regular course to Heathrow, flying with only three engines.

Returning to LAX immediately would mean dumping the full load of fuel (80 tons, worth approximately \$30,000) into the ocean before making an emergency landing. The passengers would obviously be delayed getting home. Also, under European Union rules, which had just been passed, the passengers were required to be compensated if the plane, for whatever reason,

¹ Scott McCartney, “After Engine Blew, Deciding to Fly On ‘As Far as We Can,’” *Wall Street Journal*, 23 September 2006, A-1.

This case was prepared by Research Assistant Jenny Mead under the supervision of R. Edward Freeman, Elis & Signe Olsson Professor of Business Ethics. It was written as a basis for class discussion rather than to illustrate effective or ineffective handling of an administrative situation. Copyright © 2006 by the University of Virginia Darden School Foundation, Charlottesville, VA. All rights reserved. *To order copies, send an e-mail to sales@ardenpublishing.com. No part of this publication may be reproduced, stored in a retrieval system, used in a spreadsheet, or transmitted in any form or by any means—electronic, mechanical, photocopying, recording, or otherwise—without the permission of the Darden School Foundation.*

was more than five hours late. In this particular case, that meant approximately \$275,000 in reimbursement.

The pilots knew that Boeing 747s were certified to fly on three engines and that under British regulations, flying on three engines was legal. It was rare for a plane to lose an engine on takeoff. According to the U.S. Federal Aviation Administration (FAA), there had been only 11 such shutdowns on any U.S. aircraft since January 1, 2000. Those shutdowns had occurred on a variety of plane types and airlines and, in each case, the plane returned to the departure airport. Only one incident had occurred on an international carrier (coincidentally, British Airways) as the Boeing 777 took off from Bush Intercontinental Airport in Houston; that flight had returned immediately to the airport.

FAA regulations covering this type of incident were fairly ambiguous (see **Exhibit 1** for “FAA Regulations Covering Engine Failure”) According to FAA regulations, pilots who lost an engine were required to land at the nearest “suitable” airport; however, with four-engine planes, pilots were allowed to continue if they decided that doing so was “just as safe as landing at the nearest suitable airport.”² While British Airways was flying in FAA territory, however, it was also subject to the rules, regulations, and standard operating procedures of its own airline industry and the U.K.’s Civil Aviation Authority (CAA). The national aviation authorities in each country set their own policies and procedures, and the countries’ airlines followed their rules no matter what airspace they were in, “unless specific exceptions to this practice have been published by an individual country.”³ According to CAA regulations, BA Flight 268 could continue to Heathrow.

Many aviation experts felt that flying on only three of four engines was safe, but the downside of having one inoperative engine was that the plane would fly more slowly and not be able to reach its normal high altitude (the higher a plane flies, the thinner the air and the less drag on the plane). Consequently, the amount of fuel consumed on flights using three engines was far greater than on flights where the plane could achieve proper altitude.

European Union rules

The new European Union rules, which had taken effect on February 17, two days before the British Airways incident, made it easier for passengers to receive compensation for delayed flights.⁴ Any passenger of any nationality flying in or out of one of the 25 E.U. member nations’ airports could receive financial compensation as well as hotel rooms, phone calls, and meals if their flight was delayed “for reasons that the airlines could have anticipated and resolved.”⁵ Fierce competition, in the form of new airline startups throughout Europe, had prompted the implementation of these rules. European airlines saw their busiest year in 2004 and with the

² McCartney.

³ Reed Business Information Limited, “Comment: Woolly Thinking,” *Flight International*, 11 April 2006, available at <http://81.144.183.107/Articles/2006/04/11/205868/Woolly+thinking.html> (accessed 5 October 2006).

⁴ For full list of regulations, see http://ec.europa.eu/transport/air_portal/passenger_rights/information_en.htm.

⁵ Micheline Maynard, “Passengers Gain From New Rules in Europe,” *New York Times*, 27 February 2005, 6.

immense growth (8.8 million flights, up 5% from 2003) had come an increase in flight delays; approximately 20% of flights to and from Britain were delayed in 2004.⁶ Already in a slump, the airlines claimed outrage at the new rules.

British Airways

British Airways had an exemplary safety record. For years, it had placed either first or second in a ranking of safest airlines in Europe.⁷ Along with many of the other established airlines, however, it was facing stiff competition from low-cost, no-frills rivals such as Jet2.com, easyJet, Flybe, and others. The summer of 2004 had been a disaster for British Airways, when it was forced to cancel more than 40 flights because of a shortage of operations staff. In a late 2004 poll, the airline had received only 31% high marks in customer satisfaction, while some established airlines (Singapore, for example), and many smaller companies (Jet2 and Palmar, among others) were far ahead in positive ratings. Still, British Airways still had a big customer base, ranking third in all European airlines behind number-one Air France-KLM (64.8 million passengers) and Lufthansa (50.9 million passengers).

All Systems Go?

In consulting via radio with the British Airways engineers at Heathrow shortly after the explosion, the pilots had determined that there was no longer any fire in the damaged engine, which they had shut down when they first discovered the problem. The engineers had said that continuing the flight would be safe. While British Airways regulations prevented a 747 with an inoperative engine from taking off with passengers onboard, it did not prevent a plane already in flight from continuing. The flight plan, should the plane continue, would take it over Greenland and Iceland; there were several airports in Labrador, Greenland, Iceland, and Ireland that were available for emergency stops. While the plane would fly over the ocean, its route ensured that it would not be over open water for long.

⁶ Maynard.

⁷ For more information, see <http://www.planecrashinfo.com/rates.htm>.

Exhibit 1

FLYING LIGHT: BRITISH AIRWAYS FLIGHT 268 (A)

Code of Federal Regulations
Title 14 Aeronautics and Space

§121.565 Engine inoperative: Landing; reporting.

- (a) Except as provided in paragraph (b) of this section, whenever an engine of an airplane fails or whenever the rotation of an engine is stopped to prevent possible damage, the pilot in command shall land the airplane at the nearest suitable airport, in point of time, at which a safe landing can be made.
- (b) If not more than one engine of an airplane that has three or more engines fails or its rotation is stopped, the pilot in command may proceed to an airport that he selects if, after considering the following, he decides that proceeding to that airport is as safe as landing at the nearest suitable airport:
 - (1) The nature of the malfunction and the possible mechanical difficulties that may occur if flight is continued.
 - (2) The altitude, weight, and usable fuel at the time of engine stoppage.
 - (3) The weather conditions en route and at possible landing points.
 - (4) The air traffic congestion.
 - (5) The kind of terrain.
 - (6) His familiarity with the airport to be used.
- (c) The pilot in command shall report each stoppage of engine rotation in flight to the appropriate ground radio station as soon as practicable and shall keep that station fully informed of the progress of the flight.
- (d) If the pilot in command lands at an airport other than the nearest suitable airport, in point of time, he or she shall (upon completing the trip) send a written report, in duplicate, to his or her director of operations stating the reasons for determining that the selection of an airport, other than the nearest airport, was as safe a course of action as landing at the nearest suitable airport. The director of operations shall, within 10 days after the pilot returns to his or her home base, send a copy of this report with the director of operation's comments to the certificate-holding district office.

[Doc. No. 6258, 29 FR 19219, Dec. 31, 1964, as amended by Amdt. 121-207, 54 FR 39293, Sept. 25, 1989; Amdt. 121-253, 61 FR 2614, Jan. 26, 1996]

Source: http://www.faa.gov/asd/international/TSO_FAR_AC/far-121%20-%20Notepad.pdf (accessed 8 January 2007).