NYC 9/11 Public Portal Document

NEW YORK POST, WEDNESDAY, NOVEMBER 14, 2001

DOOMED PLANE'S

Engines had been a worry for years

By JOHN LEHMANN and BRAD HUNTER

For five years, air-safety inspectors have feared that engines like those powering New York's doomed Flight 587 could explode and trigger a catastrophe.

The National Transportation Safety Board released documents yesterday showing an ongoing tussle with the Federal Aviation Administration over the design of the General Electric CF6 engines.

The board warned less than a year ago that an in-flight failure of these engines could send hot metal fragments spinning with enough force to tear through metal and cause a plane to crash.

Last month, after years of pushing by the board, the FAA warned that its own study of problems with these engines indicated a need for tougher mandatory inspections of possibly worn parts.

One review involving CF6 engines found 12 fan midshaft failure events, usually caused by a high-pressure compressor air an rubbing on the duct.

In December 1995, a Pakistan International Airnes flight experienced problems shortly after takeoff from JFK.

"The flight crew reported that as the airliner was climbing through 1,000 feet, they heard a loud thud and grinding noise and that the airplane then yawed to the left," a board report said.

The plane was able to return to JFK safely, without injury to the 240 passengers, but the board pushed for design changes to "limit the amount of meshing that occurs in the event of a fan midshaft fracture."

Two other frightening incidents led to the FAA beefing up inspections.

■ A CF6-8 blew apart during a maintenance check in Philadelphia on Sept. 26, 2000.

■ A CF6-8 partly disintegrated on a Boeing 767 in Sao Paulo, Brazil, on June 7, 2000. The flight was safely aborted.

The FAA says in the documents released yesterday that General Electric had been working in recent years to "identify corrective action" to prevent engine parts from rubbing together dangerously.

A spokesman for GE said the problems had been corrected before the American Airlines crash Monday. He said earlier versions of the engine experienced "rubbing" problems with rotating components grinding against static parts.

A major overhaul of the engines is required every 10,000 flight hours.

American Airlines said the plane's right engine had its last overhaul 9,788 flying hours ago, while the engine on the left was relatively new, with only 600 flying hours.

Witnesses to Monday's crash say they saw one engine spitting flames just before the entire wing sheared off, just two minutes after takeoff from JFK.

One smoking engine was found intact at a Texaco station two blocks from the crash site.

Part of the second engine was found in a back yard.

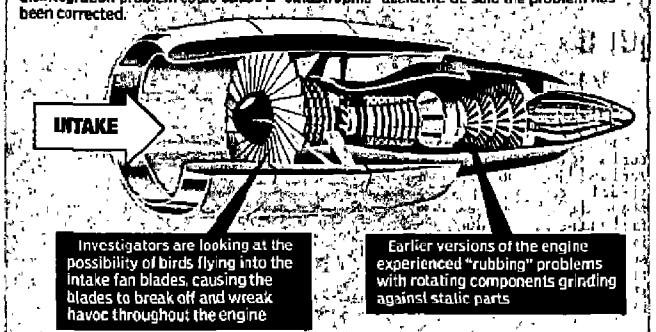
In September, GE Aircraft Engines issued a press release celebrating the 30th anniversary of the CF6 engine.

"The CF6 engine program has established an impressive operational record, including more than 6,000 CF6 engines in commercial service with over 212 million total flight hours," the statement said.

Focus on the engines

General Electric's CF6-80C2 jet engine boasts a strong safety record in its 17 years of service. But some have raised concerns.

In August 2000, the Federal Aviation Administration ordered increased inspections of the engine after National Transportation Safety Board investigators revealed an apparent disintegration problem could cause a "catastrophic" accident. GE said the problem has been corrected.



Why did the engines fall off?

Both engines were found separately a quarter-mile from the main wreckage. The engines are designed to come off cleanly if there is a problem, but this has never been tested.



The pylon is the section that holds the bolted engine to the wing. It is possible that undetected cracks and improper maintenance caused its failure, as happened in the 1979 crash of a DC10 in Chicago that killed 273.

CITY_21MC100_011832939

NYC-WTC_000414911