

**NATIONAL TRANSPORTATION SAFETY BOARD
OFFICE OF AVIATION SAFETY
WASHINGTON, D.C.**

January 7, 2013

SURVIVAL FACTORS SPECIALIST REPORT

A. Accident : DCA12IA114

LOCATION	:	Charleston, South Carolina
DATE	:	July 28, 2012
TIME	:	1600 eastern daylight time (edt)
AIRCRAFT	:	Boeing 787-8, VT-ANJ
OPERATOR	:	Boeing Company

B. Survival Factors Group: None formed

C. Summary

On July 28, 2012, at 1600 eastern daylight time, a Boeing 787-8, registration VT-ANJ, experienced an engine failure during a taxi test at Charleston AFB / International Airport (CHS), Charleston, South Carolina. The airplane was being operated by Boeing under the provisions of Title 14 *Code of Federal Regulations* (CFR) Part 91 for the purpose of conducting a taxi test with no intention for flight. There were no injuries to the 5 people on board and the airplane sustained minor damage.

D. Details of the Investigation

The survival factors specialist was asked to collect and review airport operations and airport emergency response statements and reports. The attached statements and report were provided by Charleston County Aviation Authority (CCAA) and the US Air Force 437 Airlift Wing (AMOPS). The following is a summary of the statements and reports:

At 1610, the CHS Federal Aviation Administration air traffic control tower (ATC) notified AMOPS via the crash phone of a grass fire on the approach end of runway 21, right side. Both AMOPS and the fire department responded to the airfield and verified there was a fire. Due to the proximity of the fire to the runway, air traffic suspended all operations on runway 21 until the fire was extinguished. Once the fire department extinguished the fire, AMOPS conducted a runway inspection in preparation to reopen the runway. During the runway inspection, AMOPS noticed metal debris on the first 4,000 feet of runway 21 until the intersection of taxiway foxtrot.

At approximately 1615, AMOPS contacted the fire department to request the standby sweeper and information was passed on to the ATC that normal operations could not resume until the foreign object debris (FOD) was removed. The air traffic controller on duty

informed AMOPS that a Boeing 787 had just completed a high speed taxi test prior to the fire incident. Neither AMOPS nor the CCAA were notified about any testing being conducted by Boeing on the airfield. However, it was undetermined if this was the cause of the incident. The airfield manager (from AMOPS) was notified and asked to try to identify the possible reason for the FOD. Any information gathered was requested to be passed along to ATC. The ATC notified AMOPS they had also contacted the CCAA and Boeing to inquire about possible causes for the FOD.

The sweeper arrived at 1705 and began sweeping operations to collect and remove the FOD. The ATC notified AMOPS that two aircraft were in a holding pattern awaiting arrival and two were holding short for departure. The CCAA notified AMOPS that a Southwest 737 departed immediately after the Boeing 787 completed the high speed taxi test.

At 1710, severe weather with lightning, high winds and microbursts was reported on the airfield. AMOPS continued sweeping operations during this period so aircraft inbound in holding pattern could land safely. The runway was cleaned and returned to service at 1741 to allow the aircraft holding to land. The runway was then closed again for additional cleaning operations.

The CCAA became aware at 1720 the Southwest Airlines 737 that departed runway 21 immediately following the 787 had reported FOD related damage.

At 1750, after returning to Base Ops, AMOPS called ATC and was informed that Boeing had since notified ATC of an engine problem that occurred on the airplane conducting the high speed taxi test. Boeing indicated they were unaware of the problem until after the airplane had returned and was parked. At this time, the CCAA became aware that the Southwest 737 that departed immediately following the 787 incident had diverted from its intended arrival into Chicago Midway to Nashville after leaving Charleston to be checked for any possible FOD damage.

The CCAA called Southwest operations at 1818 to gather details regarding the diversion and was notified the aircraft landed safely in Nashville.