
Loss of fan cowl, Airbus A320-233, July 13, 2004

Micro-summary: This Airbus A320-233 lost a fan cowl on takeoff.


Event Date: 2004-07-13 at 1200 EDT

Investigative Body: National Transportation Safety Board (NTSB), USA

Investigative Body's Web Site: <http://www.nts.gov/>

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		NTSB ID: ATL04IA156		Aircraft Registration Number: N951LF	
		Occurrence Date: 07/13/2004		Most Critical Injury: None	
		Occurrence Type: Incident		Investigated By: NTSB	
Location/Time					
Nearest City/Place Atlanta		State GA	Zip Code 30320	Local Time 1200	Time Zone EDT
Airport Proximity: On Airport		Distance From Landing Facility:		Direction From Airport:	
Aircraft Information Summary					
Aircraft Manufacturer Airbus Industrie		Model/Series A320-233		Type of Aircraft Airplane	
Sightseeing Flight: No			Air Medical Transport Flight: No		
Narrative					
<p>Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:</p> <p>On July 13, 2004, about 1200 eastern daylight time, an Airbus Industrie A320-233, N951LF, operated by Ryan International Airlines, Inc., as AirTran Airways Flight 4, returned for landing after the fan cowl doors of the No. 1 engine separated from the airplane in flight in the vicinity of Atlanta, Georgia. The scheduled domestic air carrier flight was operated under the provisions of Title 14 CFR Part 121 with an instrument flight plan filed. Visual meteorological conditions prevailed. The airline transport-rated captain, airline transport-rated first officer, four flight attendants, and 104 passengers were not injured, and the airplane sustained minor damage. The flight departed Hartsfield-Jackson Atlanta International Airport, Atlanta, Georgia, at 1140 on July 13, 2004.</p> <p>The captain stated he performed a preflight inspection of the airplane and noticed no irregularities. The flight departed runway 27R en route to Orlando, Florida. According to the captain, immediately after takeoff, the lead flight attendant called to inform him that a passenger reported seeing a "cover" come off the left [No. 1] engine. The captain received no cockpit indications of a problem, and the captain instructed the lead flight attendant to look out the window and verify. The captain stated he then felt the airplane "shutter," and he contacted air traffic control and requested to return for landing. The lead flight attendant confirmed to the captain the No. 1 engine fan cowl was missing. The captain stated the No. 1 engine oil quantity indicator illuminated amber, and he declared an emergency. The captain stated the engine continued to operate normally, and the flight returned for landing without further incident.</p> <p>Examination of the airplane revealed both sides of the No. 1 engine fan cowl were separated, the engine pylon cantilever was bent up, aft, and inboard; and the left wing slat outboard of the engine nacelle displayed an approximate 12-inch area with dent and puncture damage. The Union City Police Department retrieved the inboard fan cowl door from a dirt roadway approximately 7.5 nautical miles west southwest of Hartsfield-Jackson Atlanta International Airport. Airport authorities found the outboard fan cowl door in the grass beside runway 27R. Examination of the latching mechanism components on each cowl door revealed no evidence of failure or mechanical malfunction. Examination of the No. 2 engine fan cowls revealed they were closed and latched.</p> <p>A mechanic who performed a daily check on the airplane prior to the accident flight stated he opened the fan cowl for the No. 1 engine to check on what appeared to be an oil leak. The mechanic stated he found no leak and was in the process of closing the fan cowl when he was called away to another aircraft. The mechanic later returned to the incident airplane to finish the maintenance checks, and he stated he could not recall if the cowl doors on the No. 1 engine were fully latched.</p> <p>A review of data provided by the Transportation Safety Board (TSB) of Canada revealed that, between 1991 and September 2000, there were ten similar cowl door separation events involving Airbus single-aisle aircraft series documented worldwide. According to TSB report A0000199, "All of the occurrences happened at rotation, and in every instance the engine cowls had been opened prior to</p>					
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National Transportation Safety Board

FACTUAL REPORT

AVIATION

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Narrative (Continued)


the occurrence flight."

Federal Aviation Administration Airworthiness Directive (AD) 2003-18-06 amendment 39-13297, applicable to certain models of Airbus Industrie airplanes including the A320-233, mandates the installation of a hold-open device for the cowl doors, and it mandates a modification of the latch handles to ensure that unfastened latch handles will hang down. Examination of the incident airplane revealed the handle modifications and hold-open devices were installed on the No. 1 and No. 2 engine cowls, the forward handle on each cowl was painted orange, and the three aft handles on each cowl were painted orange on the surfaces exposed when in the unlatched hanging configuration.

A review of the operator's A320/321 preflight checklist revealed it included for each engine, "Check the fan cowl doors." During examination of the incident airplane, a visual walk-around was performed with the undamaged No. 2 engine cowl in various unlatched configurations. The examination revealed unlatched cowl doors can appear closed flush upon visual walk-around inspection when the hold-open device is overridden in preparation for latching. Examination of the undamaged No. 2 engine fan cowl also revealed unfastened latches that hang down may be obscured from view by the shape of the fan cowl; the unfastened latches are visible when a specific inspection of the latches is conducted (i.e., the person conducting the inspection can view the latches by bending, crouching, or stepping back from the fan cowl).

In response to the incident, on August 5, 2004, Airbus Industrie issued an Operator's Information Telex, reference number SE 999.0088/04, to "A319/A320/A321 V2500 operators." The telex referenced the incident and stated, "the purpose of this telex is to remind all operators ... of Airbus recommendations and available modifications that have been developed to prevent fan cowl loss events." The telex recommended that, in addition to mandatory compliance with AD 2003-18-06, operators consider the following: "4.1 Maintenance Recommendations ... strictly adhere to AMM Task 71-13-00 for proper latching and closing of fan cowl doors after each maintenance action requiring cowl opening. 4.2 Operational Recommendations ... It is essential that a flight crew member visually inspects the fan cowl doors prior to each flight to ensure that they are closed and latched. 5. Improvements ... fluorescent paint on the forward cowl door latch handles (IAE SB V2500-NAC-71-0227) [and] caution decal on the outboard fan cowl doors (IAE SB V2500-NAC-71-0235)."

 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: ATL04IA156				
		Occurrence Date: 07/13/2004				
		Occurrence Type: Incident				
Landing Facility/Approach Information						
Airport Name Hartsfield-Jackson Atlanta Int		Airport ID: KATL	Airport Elevation 1026 Ft. MSL	Runway Used NA	Runway Length	Runway Width
Runway Surface Type:						
Runway Surface Condition:						
Type Instrument Approach: Unknown						
VFR Approach/Landing: Precautionary Landing						
Aircraft Information						
Aircraft Manufacturer Airbus Industrie		Model/Series A320-233		Serial Number 460		
Airworthiness Certificate(s): Transport						
Landing Gear Type: Retractable - Tricycle						
Homebuilt Aircraft? No		Number of Seats: 166		Certified Max Gross Wt. 169754 LBS	Number of Engines: 2	
Engine Type: Turbo Fan		Engine Manufacturer: International Aero Engines		Model/Series: V2500-EA5		Rated Power: 31000 LBS
- Aircraft Inspection Information						
Type of Last Inspection Continuous Airworthiness		Date of Last Inspection 05/2004		Time Since Last Inspection 520 Hours		Airframe Total Time 32672.4 Hours
- Emergency Locator Transmitter (ELT) Information						
ELT Installed? No		ELT Operated?		ELT Aided in Locating Accident Site?		
Owner/Operator Information						
Registered Aircraft Owner First Security Bank Utah NA Trustee		Street Address 79 South Main Street				
		City Salt Lake City		State UT	Zip Code 84111	
Operator of Aircraft Ryan International Airlines, Inc.		Street Address 266 North Main Street				
		City Wichita		State KS	Zip Code 67202	
Operator Does Business As: AirTran Airways				Operator Designator Code: RYNA		
- Type of U.S. Certificate(s) Held:						
Air Carrier Operating Certificate(s): Flag Carrier/Domestic						
Operating Certificate:			Operator Certificate:			
Regulation Flight Conducted Under: Part 121: Air Carrier						
Type of Flight Operation Conducted: Scheduled; Domestic; Passenger Only						
FACTUAL REPORT - AVIATION						

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: ATL04IA156
	Occurrence Date: 07/13/2004
	Occurrence Type: Incident

First Pilot Information

Name On File	City On File	State On File	Date of Birth On File	Age 36
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Sex: M	Seat Occupied: Left	Principal Profession: Occupational Pilot	Certificate Number: On File
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Certificate(s): Airline Transport; Commercial

Airplane Rating(s): Multi-engine Land; Single-engine Land

Rotorcraft/Glider/LTA: None

Instrument Rating(s): Airplane

Instructor Rating(s): None

Type Rating/Endorsement for Accident/Incident Aircraft?	Current Biennial Flight Review? 06/2004
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Medical Cert.: Class 1	Medical Cert. Status: With Waivers/Limitations	Date of Last Medical Exam: 02/2004
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- Flight Time Matrix	All A/C	This Make and Model	Airplane Single Engine	Airplane Multi-Engine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air
						Actual	Simulated			
Total Time	5800	730		5800						
Pilot In Command(PIC)	2000	730		2000						
Instructor										
Last 90 Days	159	159		159						
Last 30 Days	56	56		56						
Last 24 Hours	5	5		5						

Seatbelt Used? Yes	Shoulder Harness Used? Yes	Toxicology Performed? No	Second Pilot? Yes
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Flight Plan/Itinerary

Type of Flight Plan Filed: IFR

Departure Point Atlanta	State GA	Airport Identifier KATL	Departure Time 1140	Time Zone EDT
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Destination Orlando	State FL	Airport Identifier KMCO	
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Type of Clearance: IFR

Type of Airspace:

Weather Information

Source of Briefing: Unknown

Method of Briefing:

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Weather Information

WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
KATL	1153	EDT	1026 Ft. MSL	0 NM	Deg. Mag.

Sky/Lowest Cloud Condition: Few 3000 Ft. AGL Condition of Light: Day

Lowest Ceiling: None Ft. AGL Visibility: 10 SM Altimeter: 30.03 "Hg

Temperature: 29 °C Dew Point: 23 °C Wind Direction: 310 Density Altitude: Ft.

Wind Speed: 10 Gusts: 15 Weather Conditions at Accident Site: Visual Conditions

Visibility (RVR): Ft. Visibility (RVV) SM Intensity of Precipitation:

Restrictions to Visibility: No Obscuration; No Precipitation


Type of Precipitation:

Accident Information

Aircraft Damage: Minor Aircraft Fire: None Aircraft Explosion: None

Classification:

- Injury Summary Matrix	Fatal	Serious	Minor	None	TOTAL
First Pilot				1	1
Second Pilot				1	1
Student Pilot					
Flight Instructor					
Check Pilot					
Flight Engineer					
Cabin Attendants				4	4
Other Crew					
Passengers				104	104
- TOTAL ABOARD -				110	110
Other Ground					
- GRAND TOTAL -				110	110

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Administrative Information

Investigator-In-Charge (IIC)

Catherine E. Gagne

Additional Persons Participating in This Accident/Incident Investigation:

Jerry Brooks
Atlanta FSDO - 11
College Park, GA

Terry Cox
Ryan International Airlines
Wichita, KS