



National Transportation Safety Board Aviation Incident Data Summary

Location:	Auburn, AL	Incident Number:	ATL04IA073
Date & Time:	02/03/2004, 1400 CST	Registration:	N125AR
Aircraft:	Cessna 208B	Injuries:	2 None
Flight Conducted Under:	Part 91: General Aviation - Positioning		

Analysis

According to the flight crew, during the takeoff roll the co-pilot noticed that the right rudder and trim controls were not responding. During the flight they began to diagnose the problem. The pilot continued the flight and made an uneventfully landing. During the post-landing examination of the airplane, the right rudder cable was found broken. Examination of the rudder cable by the NTSB Materials Laboratory found that the wire rope portion of the cable was fractured just inside the clevis fitting at the forward end of the cable. The fracture of the wire rope portion on the control cable assembly was the result of fatigue cracking that initiated because of the introduction of bending loads due to the over-torque of the clevis bolt during the manufacturing process.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this incident to be: The fatigue fracture of the wire rope portion on the rudder control cable assembly due to improper installation and inadequate procedures by the aircraft manufacturer.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: CRUISE - NORMAL

Findings

1. (C) FLT CONTROL SYST, RUDDER CONTROL CABLE/ROD - OVERTORQUE
2. FLT CONTROL SYST, RUDDER CONTROL CABLE/ROD - FRACTURED
3. (C) MAINTENANCE, INSTALLATION - IMPROPER - MANUFACTURER
4. (C) PROCEDURE INADEQUATE - MANUFACTURER

Pilot Information

Certificate:	Flight Instructor; Commercial	Age:	28
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	Airplane Single-engine
Flight Time:	3000 hours (Total, all aircraft), 2000 hours (Total, this make and model), 2500 hours (Pilot In Command, all aircraft), 150 hours (Last 90 days, all aircraft), 50 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Co-Pilot Information

Certificate:	Flight Instructor; Commercial	Age:	28
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	Airplane Multi-engine; Airplane Single-engine; Instrument Airplane
Flight Time:	1300 hours (Total, all aircraft), 130 hours (Total, this make and model), 950 hours (Pilot In Command, all aircraft), 150 hours (Last 90 days, all aircraft), 40 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	Cessna	Registration:	N125AR
Model/Series:	208B	Engines:	1 Turbo Prop
Operator:	Rushton Air	Engine Manufacturer:	Pratt & Whitney
Air Carrier Operating Certificate:	On-demand Air Taxi (135)	Engine Model/Series:	PT6-114A
Flight Conducted Under:	Part 91: General Aviation - Positioning		

Meteorological Information and Flight Plan

Observation Facility, Elevation:	AUO, 640 ft msl	Weather Information Source:	Weather Observation Facility
Conditions at Accident Site:	Visual Conditions	Lowest Ceiling:	None
Condition of Light:	Day	Wind Speed/Gusts, Direction:	9 knots/ 12 knots, 280°
Temperature:	15°C / -1°C	Visibility	10 Miles
Precipitation and Obscuration:			
Departure Point:	Columbus, GA (CSG)	Destination:	Auburn, AL (AUO)

Airport Information

Airport:	Auburn - Opelika (AUO)	Runway Surface Type:	Asphalt
Runway Used:	36	Runway Surface Condition:	Dry
Runway Length/Width:	5000 ft / 100 ft		

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	None
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None

Administrative Information

Investigator In Charge (IIC): Butch Wilson

Adopted Date: 06/08/2005

Investigation Docket: NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov, or at 800-877-6799. Dockets released after this date are available at <http://dms.nts.gov/pubdms/>.

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