



National Transportation Safety Board Aviation Accident Final Report

Location:	SAVANNAH, GA	Accident Number:	ATL94GA111
Date & Time:	06/02/1994, 1716 EDT	Registration:	N9868
Aircraft:	GRUMMAN G-164A	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None

Flight Conducted Under: Part 91: General Aviation - Public Aircraft

Analysis

DURING THE TAKEOFF ROLL, THE PILOT REPORTED A VIBRATION IN THE TAILWHEEL ASSEMBLY. HE CONTINUED THE TAKEOFF PROCEDURE BUT ELECTED TO RETURN TO THE AIRPORT FOR A PRECAUTIONARY LANDING BEFORE DISPENSING OR DUMPING THE 1500 POUNDS OF CHEMICALS. AT TOUCHDOWN THE TAILWHEEL ASSEMBLY COLLAPSED AND SEPARATED FROM THE AIRFRAME. THE PILOT LOST CONTROL OF THE AIRPLANE AS IT SKIDDED TO A STOP ON THE RUNWAY. EXAMINATION OF THE AIRCRAFT FAILED TO DISCLOSE A MATERIAL FAILURE OR SYSTEM MALFUNCTION. ACCORDING TO THE OPERATOR, THE PILOT HAD NOT MADE A LANDING WITH THE AIRPLANE IN A HEAVY OR LOADED CONFIGURATION WITHIN THE LAST TWENTY FOUR MONTHS. THE OPERATOR HAD NO FORMAL EMERGENCY DUMP POLICY TO PREVENT LANDING WITH CHEMICALS ONBOARD DURING AN EMERGENCY.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE PILOT'S IMPROPER LANDING FLARE WHICH RESULTED IN A HARD LANDING. A FACTOR WAS THE OPERATORS FAILURE TO PROVIDE A FORMAL EMERGENCY DUMP PROCEDURE.

Findings

Occurrence #1: HARD LANDING

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

1. FLARE - IMPROPER - PILOT IN COMMAND
2. LACK OF RECENT EXPERIENCE - PILOT IN COMMAND
3. INSUFFICIENT STANDARDS/REQUIREMENTS - COMPANY/OPERATOR MGMT

Occurrence #2: TAIL GEAR COLLAPSED

Phase of Operation: LANDING

Findings

4. LANDING GEAR, TAILWHEEL ASSEMBLY - OVERLOAD

Occurrence #3: LOSS OF CONTROL - ON GROUND/WATER

Phase of Operation: LANDING

Factual Information

On June 2, 1994, at 1716 eastern daylight time, a Grumman G-164A, N9868, landed hard and ground looped on runway 09 at the Savannah International Airport, Savannah, Georgia. The public use flight operated under 14 CFR Part 91, with no flight plan filed. Visual weather conditions prevailed at the time of the accident. The airplane sustained substantial damage and the pilot was not injured. The aerial application flight departed Savannah at 1710 hours.

According to the pilot, during the previous takeoff, he felt a vibration in the tailwheel assembly. He elected to continue the takeoff procedure, but returned to the airport for a precautionary landing. Due to changing weather conditions at the airport, the pilot selected runway 09 for the landing (see attach pilot/operator aircraft accident report). During the landing attempt, the tailwheel broke off and was located several hundred feet west of where the airplane came to rest.

Examination of the aircraft failed to disclose a mechanical problem with the airplane. The examination of the tailwheel assembly also failed to reveal a mechanical problem (see attached FAA Inspector's Statement). According to flight operation personnel from the county commission, they had no formal emergency dump procedure for onboard chemicals. The pilot elected to land with 1500 pounds of chemicals onboard. According to the same flight operation person, most spray missions usually ended with the complete dispensing of all chemicals. The pilot estimated that he had not landed with a heavy load within the last two years.

Pilot Information

Certificate:	Commercial	Age:	41, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane Single-engine; None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	06/23/1993
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	2309 hours (Total, all aircraft), 402 hours (Total, this make and model), 1465 hours (Pilot In Command, all aircraft), 25 hours (Last 90 days, all aircraft), 17 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	GRUMMAN	Registration:	N9868
Model/Series:	G-164A G-164A	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Restricted; Normal	Serial Number:	1296
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	01/19/1994, Annual	Certified Max Gross Wt.:	4500 lbs
Time Since Last Inspection:	21 Hours	Engines:	1 Reciprocating
Airframe Total Time:	3446 Hours	Engine Manufacturer:	P&W
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	R-1340
Registered Owner:	CHATHAM COUNTY COMMISSIONERS	Rated Power:	600 hp
Operator:	CHATHAM COUNTY COMMISSIONERS	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	SAV, 40 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	1750 EDT	Direction from Accident Site:	0°
Lowest Cloud Condition:	Scattered / 4000 ft agl	Visibility	7 Miles
Lowest Ceiling:	Broken / 25000 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	11 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	220°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	30° C / 22° C
Precipitation and Obscuration:			
Departure Point:		Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	1710 EDT	Type of Airspace:	Class E

Airport Information

Airport:	SAVANNAH INTERNATIONAL (SAV)	Runway Surface Type:	Asphalt
Airport Elevation:	40 ft	Runway Surface Condition:	Dry
Runway Used:	9	IFR Approach:	None
Runway Length/Width:	9351 ft / 150 ft	VFR Approach/Landing:	Precautionary Landing; Traffic Pattern

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	PHILLIP POWELL,	Report Date:	01/25/1995
Additional Participating Persons:	GEORGE H GUNN; COLLEGE PARK, GA HURLEY A PERRY; COLLEGE PARK, GA		
Publish Date:			
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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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).