



Aviation Investigation Final Report

Location:	FAYETTEVILLE, North Carolina	Accident Number:	ATL97LA006
Date & Time:	October 13, 1996, 13:05 Local	Registration:	N20EC
Aircraft:	Cessna 337G	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

Upon entering the traffic pattern for a full stop landing at the original destination airport, the pilot placed the landing gear extension handle in the down position, and discovered that the landing gear would not extend. The pilot flew to Fayetteville and conducted several over-flights for the control tower to check the aircraft for the landing gear extension. After three hours of flight, the pilot shut down the front engine and landed the airplane with the rear engine running. An examination of the aircraft revealed that an unauthorized on/off switch had been installed under the instrument panel for the landing gear system. According to the pilot, when the switch was placed in the on position, the landing gear would retract but would not extend. There were no write-ups in the aircraft maintenance logs or the aircraft checklist that revealed the installation of this switch. Neither the pilot nor the new owner of the airplane were aware of the unauthorized switch installation.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The unapproved maintenance modification of the landing gear electrical system by maintenance personnel that prevented the extension of the landing gear.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: APPROACH

Findings

1. (C) ELECTRICAL SYSTEM,ELECTRIC SWITCH - IMPROPER
2. (C) MAINTENANCE,MODIFICATION - NOT APPROVED - OTHER MAINTENANCE PERSONNEL
3. (C) LANDING GEAR,NORMAL RETRACTION/EXTENSION ASSEMBLY - INOPERATIVE

Occurrence #2: WHEELS UP LANDING

Phase of Operation: EMERGENCY LANDING

Factual Information

On October 13, 1996, at 1305 eastern daylight time, a Cessna 337G , N20EC, landed gear-up on runway 28 at Fayetteville Regional Airport, in Fayetteville, North Carolina. The personal flight operated under the provisions of Title 14 CFR Part 91 with a flight plan filed. Visual weather conditions prevailed at the time of the accident. The airplane sustained substantial damage, the pilot and passenger were not injured. The flight departed Fayetteville, at 1000.

Upon entering the traffic pattern for a full stop landing, at the original destination airport, the pilot placed the landing gear extension handle in the down position, and discovered that the landing gear would not extend. The pilot radioed Fayetteville approach control and advised air traffic controllers of his problem. The pilot flew to Fayetteville and conducted several over-flights to check for the landing gear extension. After three hours of flight, the pilot shut down the front engine and made a gear up landing with the rear engine running.

An examination of the aircraft revealed that an unauthorized on/off switch for the landing gear system had been installed under the instrument panel. According to the pilot, when the switch was placed in the on position, the landing gear would retract but would not extend. There were no write-ups in the aircraft maintenance logs or the aircraft checklist that revealed the installation of this switch. Neither the pilot nor the new owner of the airplane were aware of the unauthorized switch installation.

Pilot Information

Certificate:	Airline transport	Age:	56, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim	Last FAA Medical Exam:	April 4, 1996
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	6730 hours (Total, all aircraft), 6 hours (Total, this make and model), 6451 hours (Pilot In Command, all aircraft), 70 hours (Last 90 days, all aircraft), 33 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N20EC
Model/Series:	337G 337G	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	33701654
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	September 27, 1996 Annual	Certified Max Gross Wt.:	4630 lbs
Time Since Last Inspection:	4 Hrs	Engines:	2 Reciprocating
Airframe Total Time:	2140 Hrs	Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	IO-360-G
Registered Owner:	PHILIP KROPP	Rated Power:	210 Horsepower
Operator:	RODNEY K FLACK	Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	FAY ,190 ft msl	Distance from Accident Site:	360 Nautical Miles
Observation Time:	13:05 Local	Direction from Accident Site:	1°
Lowest Cloud Condition:	Scattered / 15000 ft AGL	Visibility	7 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	300°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	20°C / 6°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(FAY)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	VFR
Departure Time:	09:50 Local	Type of Airspace:	Class C

Airport Information

Airport:	FAYETTEVILLE REGIONAL FAY	Runway Surface Type:	Asphalt
Airport Elevation:	190 ft msl	Runway Surface Condition:	Dry
Runway Used:	28	IFR Approach:	None
Runway Length/Width:	4802 ft / 150 ft	VFR Approach/Landing:	Full stop

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	34.9608,-78.900779(est)

Administrative Information

Investigator In Charge (IIC):	Powell, Phillip
Additional Participating Persons:	DENNIS SCARFEO; WINSTON SALEM , NC
Original Publish Date:	August 25, 1997
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=3796

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).