



National Transportation Safety Board Aviation Accident Final Report

Location:	Casper, WY	Accident Number:	DEN02TA037
Date & Time:	04/05/2002, 0845 MST	Registration:	N115Z
Aircraft:	Douglas/Basler DC-3C	Aircraft Damage:	Substantial
Defining Event:		Injuries:	3 None
Flight Conducted Under:	Part 91: General Aviation - Public Aircraft		

Analysis

The pilot said that the airplane had taxied out for departure on runway 3. He said that he and his copilot were completing the checklist for departure when the copilot noticed high hydraulic pressure on the landing gear system. The copilot began the landing gear pressure relief procedure, but instead performed the landing gear retraction procedure. The pilot called out to the copilot to intervene, but the left main landing gear had already commenced retracting. The airplane settled onto its left wing damaging several intercostal ribs and wrinkling the left wing's skin. The copilot said that he had taken two capsules of an over the counter medication (Benadryl Allergy) on the morning of the accident. This medication, known as diphenhydramine, commonly results in drowsiness, and has measurable effects on performance of complex cognitive and motor tasks.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The copilot's inadvertent retraction of the landing gear. A contributing factor was the use of inappropriate medication by the copilot.

Findings

Occurrence #1: GEAR RETRACTION ON GROUND
Phase of Operation: TAXI - TO TAKEOFF

Findings

1. (C) GEAR RETRACTION - INADVERTENT - COPILOT/SECOND PILOT
2. (F) USE OF INAPPROPRIATE MEDICATION/DRUG - COPILOT/SECOND PILOT

Factual Information

On April 5, 2002, at 0845 mountain standard time, a Douglas/Basler DC-3C, N115Z, was substantially damaged when its left main landing gear collapsed while standing at Natrona County International Airport, Casper, Wyoming. The airline transport pilot, the commercial copilot, and one passenger were not injured. The airplane was being operated by the U.S.D.A. Forest Service, Boise, Idaho, under Title 14 CFR Part 91. Visual meteorological conditions prevailed for the public use cross-country flight that was preparing to originate at the time of the accident. An IFR flight plan had been filed.

The pilot said that the airplane had taxied out for departure on runway 3. He said that he and his copilot were completing the checklist for departure when the copilot noticed high hydraulic pressure on the landing gear system. The copilot began the landing gear pressure relief procedure, but instead performed the landing gear retraction procedure. The pilot called out to the copilot to intervene, but the left main landing gear had already commenced retracting. The airplane settled onto its left wing damaging several intercostal ribs and wrinkling the left wing's skin.

The copilot said that he had taken two capsules of an over-the-counter Federal Aviation Administration non-approved medication (Benadryl Allergy) on the morning of the accident. This medication, known as Diphenhydramine, commonly results in drowsiness, and has measurable effects on performance of complex cognitive and motor tasks. In *Annals of Internal Medicine* 2000; 132:354-363, states that the effect of a normal 50 mg dose of Diphenhydramine on simulated driving is noted to be worse than the effect of a 0.10% blood alcohol level.

Pilot Information

Certificate:	Airline Transport; Commercial	Age:	44, 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:	Yes
Instructor Rating(s):	Airplane Multi-engine; Airplane Single-engine; Instrument Airplane	Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medical--w/ waivers/lim.	Last Medical Exam:	03/26/2002
Occupational Pilot:		Last Flight Review or Equivalent:	03/08/2002
Flight Time:	3134 hours (Total, all aircraft), 461 hours (Total, this make and model), 1808 hours (Pilot In Command, all aircraft), 33 hours (Last 90 days, all aircraft), 33 hours (Last 30 days, all aircraft), 8 hours (Last 24 hours, all aircraft)		

Co-Pilot Information

Certificate:	Commercial	Age:	50, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim.	Last Medical Exam:	04/04/2001
Occupational Pilot:		Last Flight Review or Equivalent:	08/28/2001
Flight Time:	3562 hours (Total, all aircraft), 1409 hours (Total, this make and model), 1794 hours (Pilot In Command, all aircraft), 92 hours (Last 90 days, all aircraft), 44 hours (Last 30 days, all aircraft), 8 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	Douglas/Basler	Registration:	N115Z
Model/Series:	DC-3C	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	33567
Landing Gear Type:	Retractable - Tailwheel	Seats:	24
Date/Type of Last Inspection:	02/08/2002, Continuous Airworthiness	Certified Max Gross Wt.:	28750 lbs
Time Since Last Inspection:	116 Hours	Engines:	2 Turbo Prop
Airframe Total Time:	16433 Hours	Engine Manufacturer:	Pratt & Whitney
ELT:	Installed, not activated	Engine Model/Series:	PT6-67R
Registered Owner:	U.S.D.A. Forest Service	Rated Power:	1281 hp
Operator:	U.S.D.A. Forest Service	Air Carrier Operating Certificate:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	
Observation Facility, Elevation:	CPR	Observation Time:	0845
Distance from Accident Site:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Temperature/Dew Point:	4° C / -3° C
Lowest Ceiling:	None	Visibility	10 Miles
Wind Speed/Gusts, Direction:	4 knots	Visibility (RVR):	
Altimeter Setting:	30.23 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:			
Departure Point:	Casper, WY (CPR)	Type of Flight Plan Filed:	IFR
Destination:	Missoula, MT (MSO)	Type of Clearance:	
Departure Time:	0845 MST	Type of Airspace:	

Airport Information

Airport:	Natrona County Intl Arpt (CPR)	Runway Surface Type:	Unknown
Airport Elevation:	5348 ft	Runway Surface Condition:	Unknown
Runway Used:		IFR Approach:	Unknown
Runway Length/Width:		VFR Approach/Landing:	Unknown

Wreckage and Impact Information

Crew Injuries:	3 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	
Ground Injuries:	N/A	Aircraft Explosion:	
Total Injuries:	3 None	Latitude, Longitude:	42.908333, -106.463889

Administrative Information

Investigator In Charge (IIC):	James F Struhsaker	Adopted Date:	04/01/2003
Additional Participating Persons:	Robert Hardwick; Federal Aviation Administration; Casper, WY		
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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