



Aviation Investigation Final Report

Location:	Espanola, New Mexico	Accident Number:	DEN03LA055
Date & Time:	March 23, 2003, 13:00 Local	Registration:	N3696
Aircraft:	Mohr Starduster Too	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Ferry		

Analysis

The pilot was ferrying the airplane to its new owner. He stopped en route and refueled the airplane with approximately 18 gallons of fuel. This filled the tank to capacity. He "stuck" (or dipsticked) the tank "to determine fuel capacity and figured it must be close to what we were told (30 gallons). Apparently, it doesn't hold quite that much." After takeoff, he lost sight of the airplane he had been following. He elected to continue the flight. The airplane was not equipped with a navigation or communication radio. During this leg of the flight, the navigation chart blew out of the open cockpit. The pilot said he thought he could remember where he was going, but misidentified a landmark and crossed the mountains south of where he thought he was. As he circled a town to reorient himself, the engine lost power "due to fuel exhaustion." The airplane had been aloft 2 hours, 20 minutes. The pilot made a forced landing on a golf course, which he described as "unsuitable terrain." During the landing, the airplane struck an earth berm that tore off the landing gear. The lower right wing tip on the biplane was crushed and the propeller was bent.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's improper inflight planning in that he failed to consult the airplane flight manual, his use of incorrect fuel consumption figures, and fuel exhaustion. Contributing factors were the loss of the en route chart, the unavailability of a nav/comm radio, the pilot becoming lost/disoriented, and the berm.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL
Phase of Operation: CRUISE - NORMAL

Findings

1. (F) EN ROUTE CHARTS - NOT AVAILABLE
2. (F) COMMUNICATIONS EQUIPMENT - NOT AVAILABLE
3. (F) NAVIGATION RECEIVER - NOT AVAILABLE
4. (F) BECAME LOST/DISORIENTED - PILOT IN COMMAND
5. (C) IN-FLIGHT PLANNING/DECISION - IMPROPER - PILOT IN COMMAND
6. (C) FLIGHT MANUALS - NOT USED - PILOT IN COMMAND
7. (C) FLUID,FUEL - EXHAUSTION
8. (C) FUEL CONSUMPTION CALCULATIONS - INCORRECT - PILOT IN COMMAND

Occurrence #2: FORCED LANDING
Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER
Phase of Operation: EMERGENCY LANDING

Findings

9. (F) TERRAIN CONDITION - BERM

Factual Information

On March 23, 2003, approximately 1300 mountain standard time, a Mohr Starduster Too, N3696, was substantially damaged when it impacted terrain during a forced landing at Espanola, New Mexico. The commercial pilot and a student pilot-passenger were not injured. Visual meteorological conditions prevailed, and no flight plan had been filed for the ferry flight being conducted under Title 14 CFR Part 91. The flight originated at Sterling, Colorado, approximately 1100.

The following is based on a telephone conversation with the pilot and the accident report he submitted. The pilot was ferrying the airplane to its new owner in Taos, New Mexico. He stopped in La Junta, Colorado, and refueled the airplane with approximately 18 gallons of fuel. This filled the tank to capacity. He also "stuck" (or dipsticked) the tank "to determine fuel capacity and figured it must be close to what we were told (30 gallons). Apparently, it doesn't hold quite that much." After departing La Junta, they lost sight of the airplane they had been following. He elected to continue the flight. The airplane was not equipped with a navigation or communication radio. During this leg of the flight, the navigation chart blew out of the open cockpit. The pilot said he thought he could remember where he was going, but misidentified a landmark and crossed the mountains south of where he thought he was. As he circled Espanola to reorient himself, the engine lost power "due to fuel exhaustion." The airplane had been aloft 2 hours, 20 minutes. The pilot made a forced landing on a golf course, which he described as "unsuitable terrain." During the landing, the airplane struck an earth berm that tore off the landing gear. The lower right wing tip on the biplane was crushed and the propeller was bent.

Pilot Information

Certificate:	Commercial; Flight instructor	Age:	55, Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	Seat Occupied:	Rear
Other Aircraft Rating(s):	None	Restraint Used:	
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 FAA Medical Exam:	November 20, 2002
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	June 4, 2003
Flight Time:	2800 hours (Total, all aircraft), 2500 hours (Pilot In Command, all aircraft)		

Information

Certificate:	Student	Age:	Male
Airplane Rating(s):	None	Seat Occupied:	Front
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:		Last FAA Medical Exam:	
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	Mohr	Registration:	N3696
Model/Series:	Starduster Too	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	LM2
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	Annual	Certified Max Gross Wt.:	1800 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Lycoming
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	O-360-A1F6
Registered Owner:	On file	Rated Power:	180 Horsepower
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	SAF,6348 ft msl	Distance from Accident Site:	25 Nautical Miles
Observation Time:	12:53 Local	Direction from Accident Site:	165°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	300°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.04 inches Hg	Temperature/Dew Point:	15°C / -2°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	La Junta, CO (LHX)	Type of Flight Plan Filed:	None
Destination:	Taos, NM (SKX)	Type of Clearance:	None
Departure Time:		Type of Airspace:	Class G

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:	36,-106.099998

Administrative Information

Investigator In Charge (IIC):	Scott, Arnold
Additional Participating Persons:	William R Roundtree; FAA Flight Standards District Office; Albuquerque, NM
Original Publish Date:	November 25, 2003
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=56697

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