Aviation Investigation Final Report

Location:	GARDNER, Kansas	**Accident Number:**	CHI00LA173
Date & Time:	June 24, 2000, 17:10 Local	**Registration:**	N24120
Aircraft:	MCCLISH FUNK B85C	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The accident occurred during the aircraft's maiden flight. The pilot reported that after takeoff while on downwind leg, the engine 'stopped immediately.' A forced landing was made in a water saturated bean field during which the airplane nosed over. Inspection of the engine revealed the thrust bearings were improperly installed on an improperly located locator pin in the engine case. The dislocated pin resulted in the bearing half being askew which resulted in a subsequent loss of lubrication.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: an improper modification to the engine which allowed a bearing to be misaligned, thus restricted the flow of oil through the engine. A factor associated with the accident was the wet field in which the forced landing was made.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF
Phase of Operation: APPROACH - VFR PATTERN - DOWNWIND

Findings
1. (C) ENGINE ASSEMBLY,BEARING - SHIFTED
2. (C) MAINTENANCE,MODIFICATION - IMPROPER - UNKNOWN
3. (C) FLUID,OIL - FLOW RESTRICTED

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

Occurrence #3: NOSE OVER
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings
4. (F) TERRAIN CONDITION - CROP
5. (F) TERRAIN CONDITION - WET

Factual Information

On June 24, 2000, at 1710 central daylight time, a McClish Funk B85C, N24120, nosed over during a forced landing following a total loss of engine power while on downwind at the Gardner Municipal Airport, Gardner, Kansas. The pilot received minor injuries. The airplane was substantially damaged. The 14 CFR Part 91 flight was operating in visual meteorological conditions without a flight plan. The pilot reported the accident occurred during the aircraft's maiden flight. The flight had originated just prior to the accident.

The pilot reported that the accident occurred on the maiden flight for the airplane. He stated he departed runway 35 at the Gardner Municipal Airport and climbed to 400 feet above ground level. He reported that everything was normal at this point. He then turned downwind and was about halfway down the downwind leg when the engine "stopped immediately." He reported, "It made a metal sound just as the engine stopped."

The pilot located a bean field in which to make a forced landing. He reported, "I touched down between thirty and forty miles per hour. The bean field was very saturated with water from heavy rains during the week. I rolled about fifteen feet. The mud on the bean field resulted in rapid deceleration causing the left main gear to collapse. Then the airplane sank very deep into the mud causing the airplane to flip on its top."

The airplane and engine were examined by an inspector from the Federal Aviation Administration Kansas City, Missouri, Flight Standards District Office. The inspector reported, "It was determined that the thrust bearings had been improperly installed on an improperly located locator pin in the engine case. At some unknown time, the locator pin hole was redrilled in the wrong location and a pin installed. ... The dislocated pin caused the bearing half to ride askew, not flush with the parting surface of the case. The mating bearing half was located on its pin properly, causing an interference between the bearing ends. When the case halves were forced together under torque from the case bolts, the bearings shifted against their respective pins and were swelled out at the locator cutouts. ... This removed the required clearance of the crankshaft thrust boss to thrust bearing surface. Without this clearance, lubrication of the thrust bearing was interrupted."

Pilot Information

Certificate:	Commercial	**Age:**	58,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	February 11, 1999
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	3992 hours (Total, all aircraft), 3662 hours (Pilot In Command, all aircraft), 6 hours (Last 90 days, all aircraft), 5 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	MCCLISH	**Registration:**	N24120
Model/Series:	FUNK B85C FUNK B85C	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	46
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	June 6, 2000 Annual	**Certified Max Gross Wt.:**	1350 lbs
Time Since Last Inspection:	1 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	Continental
ELT:	Installed, not activated	**Engine Model/Series:**	C85F
Registered Owner:	LANNY J. TURNER	**Rated Power:**	85 Horsepower
Operator:		**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:	MKC ,759 ft msl	**Distance from Accident Site:**	26 Nautical Miles
Observation Time:	16:54 Local	**Direction from Accident Site:**	45°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	6 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	300°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	28°C / 21°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(K34)	**Type of Flight Plan Filed:**	None
Destination:	(K34)	**Type of Clearance:**	None
Departure Time:	17:10 Local	**Type of Airspace:**	Class E

Airport Information

Airport:	GARDNER K34	**Runway Surface Type:**	Grass/turf
Airport Elevation:	1040 ft msl	**Runway Surface Condition:**	Wet
Runway Used:	0	**IFR Approach:**	
Runway Length/Width:		**VFR Approach/Landing:**	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Minor	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Minor	**Latitude, Longitude:**	38.809146,-94.919265(est)

Administrative Information

Investigator In Charge (IIC):	Sullivan, Pamela
Additional Participating Persons:	TOM BARTELS;
Original Publish Date:	May 8, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=49532