Aviation Investigation Final Report

Location:	KNOXVILLE, Tennessee	**Accident Number:**	ATL99LA054
Date & Time:	March 12, 1999, 18:00 Local	**Registration:**	N176BJ
Aircraft:	Mitsubishi MU-2B-20	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	3 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

About 30 minutes into the flight, the right engine lost power. The pilot attempted to restart the engine, but was unsuccessful. The pilot secured the right engine and feathered the right propeller. Shortly after attempting to restart the right engine, the pilot said he also experienced a complete loss of electrical power, and was unable to use his radios. The pilot said he placed the landing gear lever in the down position, and established an approach to runway 5R for an emergency landing. The airplane touched down and skidded off the left side of the runway. Examination of the airplane and the engine assemblies failed to disclose a mechanical malfunction or component failure. During the extensive airplane examination the electrical system was also functionally checked; the examination failed to disclose any mechanical problems. When the master switch was placed in the on position 75% of the battery power was restored to the airplane. The electrical power source was sufficient to activate the landing gear doors. During the examination of the fuel system, fuel was traced from the fuel tank to the fuel control unit. There was no mechanical problems discovered with the right fuel shut-off valve; the right fuel shut-off valve functioned normally.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A loss of engine power for undetermined reasons. Contributing to the accident was the failure of the landing gear to extend for undetermined reasons.

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings
1. (F) 1 ENGINE
2. REASON FOR OCCURRENCE UNDETERMINED

Occurrence #2: FORCED LANDING
Phase of Operation: EMERGENCY LANDING AFTER TAKEOFF

Occurrence #3: WHEELS UP LANDING
Phase of Operation: EMERGENCY DESCENT/LANDING

Findings
3. (C) GEAR EXTENSION - NOT ATTAINED
4. REASON FOR OCCURRENCE UNDETERMINED

Factual Information

On March 12, 1999 about 1800 eastern standard time, a Mitsubishi MU-2B-20, N176BJ, made a gear-up landing following a loss of engine power about 30 minutes after takeoff in Knoxville, Tennessee. The airplane was operated by the pilot under the provisions of Title 14 CFR Part 91, and visual flight rules. Visual meteorological conditions prevailed and no flight plan was filed for the local flight. The commercial pilot and two passengers were not injured and the airplane sustained substantial damage. The flight originated at Knoxville, Tennessee, at 1730.

The pilot stated that after takeoff, the flight progressed normally and he leveled off 4,500 feet above ground level. At about 15 nautical miles east of Knoxville, the right engine lost power. The pilot attempted to restart the engine but was unsuccessful. The pilot secured the right engine and feathered the right propeller. Shortly after attempting to restart the right engine, the pilot said he also experienced a complete loss of electrical power, and was unable to use his radios. Knoxville Tower reported that they received no radio calls or transponder reply from the airplane on its emergency approach into Knoxville. The pilot said he placed the landing gear lever in the down position, and continued the approach to runway 5R for an emergency landing. Knoxville Tower reported that the right engine was apparently "windmilling" and that the airplane landed gear-up. The airplane touched down approximately 150 feet southwest of taxiway A7 on runway 5R, with the gear retracted and gear doors closed, skidding approximately 1100 feet and exiting the paved surface on the sod left edge of the runway.

As the aircraft skidded, the left tip tank contacted the ground. The left propeller blades also struck the ground. The airplane rested aligned with the runway, after skidding about 200 feet in the sod.

Examination of the airplane and the engine assemblies failed to disclose a mechanical malfunction or component failure. During the extensive airplane examination the electrical system was also functionally checked; the examination failed to disclose any mechanical problems. When the master switch was placed in the on position 75% of the battery power was restored to the airplane. The electrical power source was sufficient to activate the landing gear doors. According to on site investigators, cockpit switch positions had been moved during the crash fire rescue effort.

During the examination of the fuel system, fuel was traces from the fuel tank to the fuel control unit. Examination of the entire fuel filtration system failed to disclose the presence of visible contaminates. There was no mechanical problems discovered with the right fuel shut-off valve; the right fuel shut-off valve functioned normally (see attached accident notification report).

The right engine examination failed to disclose any mechanical problems. The general examination of the engine revealed that drive train components rotated freely from the first

stage compressor to the accessory gearbox. Normal lubrication was found throughout the engine.

Reportedly, the pilot made no attempt to lower the landing gear. A review of the pilot's flight experience data had flown 104 hours in the MU-2.

Pilot Information

Certificate:	Commercial	**Age:**	67,Male
Airplane Rating(s):	Single-engine land; Single-engine sea; 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--w/ waivers/lim	**Last FAA Medical Exam:**	November 14, 1997
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	3811 hours (Total, all aircraft), 104 hours (Total, this make and model), 3811 hours (Pilot In Command, all aircraft), 10 hours (Last 90 days, all aircraft), 5 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Mitsubishi	**Registration:**	N176BJ
Model/Series:	MU-2B-20 MU-2B-20	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	144
Landing Gear Type:	Retractable - Tricycle	**Seats:**	7
Date/Type of Last Inspection:	July 15, 1999 100 hour	**Certified Max Gross Wt.:**	9920 lbs
Time Since Last Inspection:	40 Hrs	**Engines:**	2 Turbo prop
Airframe Total Time:	4589 Hrs	**Engine Manufacturer:**	Garrett
ELT:		**Engine Model/Series:**	331-1-151
Registered Owner:	HARTFORD FINANCIAL CORP	**Rated Power:**	665 Horsepower
Operator:	GREGORY K. BENSON	**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:	TYS ,981 ft msl	**Distance from Accident Site:**	
Observation Time:	18:40 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	7 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	70°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	13°C / 12°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(TYS)	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:	00:00 Local	**Type of Airspace:**	Class C

Airport Information

Airport:	MC GHEE TYSON TYS	**Runway Surface Type:**	Asphalt
Airport Elevation:	981 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	5R	**IFR Approach:**	None
Runway Length/Width:	9008 ft / 150 ft	**VFR Approach/Landing:**	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	2 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	3 None	**Latitude, Longitude:**	35.909866,-84.000915(est)

Administrative Information

Investigator In Charge (IIC):	Wilson, Butch
Additional Participating Persons:	RICH HUDGENS; NASHVILLE , TN ROCKY DAVIDSON; NASHVILLE , TN
Original Publish Date:	March 31, 2000
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=45915