



National Transportation Safety Board Aviation Accident Final Report

Location:	HOUSTON, TX	Accident Number:	FTW90MA161
Date & Time:	08/23/1990, 1720 CDT	Registration:	N80RD
Aircraft:	GRUMMAN G-159	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	3 Fatal, 4 Serious, 8 Minor

Flight Conducted Under: Part 91: General Aviation - Executive/Corporate

Analysis

THE PASSENGERS & WITNESSES REPORTED THAT DURING TAKEOFF, THE AIRCRAFT YAWED BOTH LEFT & RIGHT AFTER LIFT-OFF. IT THEN VEERED TO THE LEFT & CONTACTED THE GROUND IN A LEFT WING LOW ATTITUDE BETWEEN THE RUNWAY & A PARALLEL TAXIWAY. AN INVESTIGATION REVEALED EVIDENCE THAT THE LEFT ENGINE HAD SUSTAINED A PARTIAL LOSS OF POWER DUE TO A MALFUNCTIONING FUEL PUMP. THERE WERE INDICATIONS THE POWER LOSS WAS NOT SUFFICIENT TO TRIGGER OR ALLOW COMPLETION OF THE AUTOFEATHERING OPERATION OF THE LEFT PROPELLER. FEATHERING OF THE LEFT PROPELLER HAD BEEN MANUALLY INITIATED, BUT THE PROPELLER HAD NOT REACHED THE FEATHER POSITION BEFORE IMPACT. MANUAL FEATHERING OPERATION REQUIRED THE FEATHERING PUMP BUTTON BE HELD ABOUT 5 SEC. 'V' SPEEDS (KIAS) FOR THIS FLT WERE: V₁ 92, VR 99, V₂ 110, NORMAL VMCA (DEAD ENGINE PROPELLER FEATHERED, FLAPS SET FOR TAKEOFF & AIRCRAFT OUT OF GROUND EFFECT) 101, VMCA (DEAD ENGINE PROPELLER UNFEATHERED/WINDMILLING & FLAPS SET FOR TAKEOFF) 127 KTS. EXAM OF THE ACTUATORS REVEALED THE GEAR WAS RETRACTED & THE FLAPS WERE SET FOR TAKEOFF.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: PARTIAL FAILURE OF THE LEFT ENGINE FUEL PUMP, WHICH RESULTED IN A PARTIAL LOSS OF POWER IN THE LEFT ENGINE, BUT NOT ENOUGH OF A POWER LOSS TO TRIGGER AND/OR COMPLETE THE AUTOFEATHERING OPERATION OF THE LEFT PROPELLER, THUS ALLOWING INSUFFICIENT TIME FOR THE CREW TO MANUALLY FEATHER THE PROPELLER OR ATTAIN VMC (FOR THE AIRCRAFT CONFIGURED WITH AN UNFEATHERED PROPELLER).

Findings

Occurrence #1: LOSS OF ENGINE POWER(PARTIAL) - MECH FAILURE/MALF
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. 1 ENGINE - SURGE
2. (C) FUEL SYSTEM,PUMP - FAILURE,PARTIAL
3. (C) FUEL SYSTEM - OUTPUT LOW

Occurrence #2: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

4. PROPELLER FEATHERING - INITIATED - PILOT IN COMMAND
5. PROPELLER FEATHERING - NOT ATTAINED
6. AIRSPEED(VMC) - NOT POSSIBLE

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: TAKEOFF

Factual Information

Pilot Information

Certificate:	Commercial	Age:	60, 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):	None	Toxicology Performed:	Yes
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim.	Last Medical Exam:	12/04/1989
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	20200 hours (Total, all aircraft), 760 hours (Total, this make and model), 17500 hours (Pilot In Command, all aircraft), 100 hours (Last 90 days, all aircraft), 25 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	GRUMMAN	Registration:	N80RD
Model/Series:	G-159 G-159	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Transport	Serial Number:	198
Landing Gear Type:	Retractable - Tricycle	Seats:	17
Date/Type of Last Inspection:	06/03/1990, 100 Hour	Certified Max Gross Wt.:	36000 lbs
Time Since Last Inspection:	40 Hours	Engines:	2 Turbo Prop
Airframe Total Time:	5343 Hours	Engine Manufacturer:	ROLLS-ROYCE
ELT:	Installed, not activated	Engine Model/Series:	529-8X
Registered Owner:	RDC MARINE, INC	Rated Power:	2185 hp
Operator:	ROWAN COMPANIES	Air Carrier Operating Certificate:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	IAH, 110 ft msl	Observation Time:	1720 CDT
Distance from Accident Site:	0 Nautical Miles	Direction from Accident Site:	0°
Lowest Cloud Condition:	Scattered / 10000 ft agl	Temperature/Dew Point:	29° C / 22° C
Lowest Ceiling:	Broken / 20000 ft agl	Visibility	15 Miles
Wind Speed/Gusts, Direction:	8 knots, 180°	Visibility (RVR):	0 ft
Altimeter Setting:	29.9 inches Hg	Visibility (RVV):	0 Miles
Precipitation and Obscuration:			
Departure Point:	(IAH)	Type of Flight Plan Filed:	IFR
Destination:	NEW ORLEANS, LA (MSY)	Type of Clearance:	IFR
Departure Time:	1719 CDT	Type of Airspace:	

Airport Information

Airport:	HOUSTON INTL (IAH)	Runway Surface Type:	Concrete
Airport Elevation:	110 ft	Runway Surface Condition:	Dry
Runway Used:	14L	IFR Approach:	None
Runway Length/Width:	12000 ft / 150 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	2 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	1 Fatal, 4 Serious, 8 Minor	Aircraft Fire:	On-Ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 Fatal, 4 Serious, 8 Minor	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	WARREN V WANDEL	Adopted Date:	08/11/1992
Additional Participating Persons:			
Publish Date:			
Investigation Docket:	NTSB accident and incident docket 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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