



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	Marathon, FL	<b>Accident Number:</b>	MIA06LA105
<b>Date &amp; Time:</b>	05/08/2006, 0800 EDT	<b>Registration:</b>	N988GM
<b>Aircraft:</b>	Cessna 421B	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 Serious
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Executive/Corporate		

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## Analysis

The commercial certificated pilot was positioning the multi-engine, retractable landing gear airplane for a corporate passenger flight under Title 14, CFR Part 91, when the accident occurred. Upon landing at the destination, the pilot aborted the landing, and after climbing to about 100 feet agl descended, impacting in a canal. A witness who was not looking towards the runway, reported hearing the sound of a twin engine airplane approaching with the engines at reduced power, and then heard a scraping noise similar to the recent gear-up landing he had witnessed. Looking toward the runway, he said the airplane was midfield, left of the runway centerline, about 20 feet in the air with the landing gear retracted, and that he saw a cloud of dust, and heard what he thought was full engine power being applied. He said the airplane climbed to about 100 feet agl, and disappeared from view. Another witness with a portable VHF radio tuned to the unicom frequency, reported hearing the pilot say he was "doing an emergency go-around." The airplane descended striking utility poles, and impacted in a saltwater canal. An examination of the airport runway revealed a set of parallel propeller strike marks. The left and right sets of marks were 109 and 113 feet long, and the mark's center-to-center measurement is consistent with the engine centerline-to-centerline measurement for the accident airplane. No landing gear marks were observed. The airplane's six propeller blades had extensive torsional twisting and bending, as-well-as extensive chord wise scratching and abrasion. Several of the blades had fractured or missing tips. An examination of the cockpit showed the landing gear retraction/extension handle was in the up/retracted position, and the landing gear extension warning horn circuit breaker was in the pulled/tripped position. The landing gear emergency extension handle was in the stowed position. The nose landing gear was damaged during final impact, and was not functional. During the postimpact examination, both the left and right main landing gear were stowed in the up-and-locked/retracted position. The landing gear were released/unlocked and operated appropriately using the emergency extension handle. An examination of the left and right main landing gear showed no damage to the wheel doors, leg doors, wheels, or tires. All linkages and locking devices were undamaged, and appeared to function normally.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:  
The pilot's failure to extend the landing gear prior to landing, which resulted in the propellers striking the runway, an aborted landing, and an in-flight collision with terrain.

## Findings

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Occurrence #1: WHEELS UP LANDING

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

1. (C) WHEELS UP LANDING - INADVERTENT - PILOT IN COMMAND

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Occurrence #2: LOSS OF CONTROL - IN FLIGHT

Phase of Operation: LANDING - ABORTED

Findings

2. PROPELLER SYSTEM/ACCESSORIES, BLADE - BLADE STRIKE

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Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

Findings

3. TERRAIN CONDITION - WATER

## Factual Information

On May 8, 2006, about 0800 eastern daylight time, a twin-engine Cessna 421B, N988GM, operated by BCL, LLC, Pompano Beach, Florida, impacted in a canal following an aborted landing at The Florida Keys Marathon Airport, Marathon, Florida. Visual meteorological conditions prevailed, and an Instrument flight rules (IFR) flight plan was filed for the Title 14, CFR Part 91, corporate flight. The airplane sustained substantial damage, and the commercial pilot and sole pilot-rated passenger were seriously injured. The flight originated about 0720, from Pompano Beach Airpark, Pompano Beach.

According to witnesses on the airport, the airplane was observed near the midfield of runway 07/25, flying eastbound approximately 20 feet above ground level (agl), with the landing gear retracted. One witness who recently witnessed a gear-up landing, but was not looking towards the runway, reported hearing the sound of a twin engine airplane approaching with the engines at reduced power as if for landing. He then heard a scraping noise similar to the recent gear-up landing he had witnessed. He said he looked toward the runway, and the accident airplane was at midfield, left of the runway centerline, and he saw a cloud of dust and heard what he thought was full engine power being applied. He reported the airplane climbed to about 100 feet agl, then disappeared from his view to the east. Another witness with a portable VHF radio, reported hearing on the unicom frequency, "gulf mike doing emergency go around."

The airplane descended striking utility poles, and impacted in a saltwater canal about one mile east of the airport .

An on-site investigation commenced on May 11. In attendance were representatives of the airplane and engine manufacturers.

The airport runway revealed a set of parallel propeller strike marks near the area of the dust cloud observed by the witnesses. The left and right sets of marks were 109 and 113 feet long respectively, and the 16 feet, 10-inch center-to-center measurement is consistent with the engine centerline-to-centerline measurement for the Cessna 421 series airplane. There were no landing gear marks present.

An examination of the airplane's six propeller blades showed that all six blades had extensive torsional twisting and bending. All of the propeller blades had extensive chord-wise scratching and abrasion. Several of the blades had fractured or missing tips.

An examination of the airplane's cockpit showed the landing gear retraction/extension handle was in the up/retracted position during the final impact. The landing gear extension warning horn circuit breaker was in the pulled/tripped position. The landing gear emergency extension handle was in the stowed position.

During the final impact the nose landing gear was severely damaged and was not functional. At the impact site, both the left and right main landing gear were stowed in the up-and-locked/retracted position. The landing gear were released/unlocked and operated with the emergency extension handle. The main landing gear functioned appropriately. An examination of the left and right main landing gear showed no damage to the wheel doors, leg doors, wheels, or tires. All linkages and locking devices were undamaged, and appeared to function normally.

## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	35, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Without Waivers/Limitations	<b>Last FAA Medical Exam:</b>	10/01/2005
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	04/01/2006
<b>Flight Time:</b>	1450 hours (Total, all aircraft), 1100 hours (Pilot In Command, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Cessna	<b>Registration:</b>	N988GM
<b>Model/Series:</b>	421B	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	421B0535
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	8
<b>Date/Type of Last Inspection:</b>	04/01/2006, 100 Hour	<b>Certified Max Gross Wt.:</b>	6840 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	2 Reciprocating
<b>Airframe Total Time:</b>	5307 Hours as of last inspection	<b>Engine Manufacturer:</b>	Continental
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	GTSIO-520-H
<b>Registered Owner:</b>	BCL, LLC	<b>Rated Power:</b>	375 hp
<b>Operator:</b>	BCL, LLC	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	KMTH	Distance from Accident Site:	
Observation Time:	0753	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	160°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	26° C / 20° C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Pompano Beach, FL (KPMP)	Type of Flight Plan Filed:	IFR
Destination:	Marathon, FL (KMTH)	Type of Clearance:	IFR
Departure Time:	0720 EDT	Type of Airspace:	

## Airport Information

Airport:	Marathon (MTH)	Runway Surface Type:	Asphalt
Airport Elevation:	7 ft	Runway Surface Condition:	Dry
Runway Used:	070	IFR Approach:	Visual
Runway Length/Width:	5000 ft / 100 ft	VFR Approach/Landing:	Go Around

## Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:	1 Serious	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Serious	Latitude, Longitude:	24.732222, -81.036389

## Administrative Information

Investigator In Charge (IIC):	Timothy W Monville	Report Date:	01/31/2008
Additional Participating Persons:	Felix Molina; FAA; Miami, FL Peter Basile; Cessna; Wichita, KS Jason Lukasik; Teledyne Continental; Mobile, AL		
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 <a href="mailto:pubinquiry@ntsb.gov">pubinquiry@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).