National Transportation Safety Board
Washington, DC 20594

Brief of Accident

Adopted 06/14/2012

ERA11FA233
File No. 29848 | 04/10/2011 | Biddeford, ME | Aircraft Reg No. N402RC | Time (Local): 18:05 EDT

Make/Model:	Cessna / 402B
Engine Make/Model:	Cont Motor / TSIO-520 SER
Aircraft Damage:	Substantial
Number of Engines:	2
Operating Certificate(s):	None
Type of Flight Operation:	Positioning
Reg. Flight Conducted Under:	Part 91: General Aviation

	Fatal	Serious	Minor/None
Crew	1	0	0
Pass	0	0	0

Last Depart. Point:	White Plains, NY
Destination:	Same as Accident/Incident Location
Airport Proximity:	Off Airport/Airstrip

Condition of Light:	Day
Weather Info Src:	Weather Observation Facility
Basic Weather:	Visual Conditions
Lowest Ceiling:	None
Visibility:	10.00 SM
Wind Dir/Speed:	140 / 005 Kts
Temperature (°C):	11
Precip/Obscuration:	No Obscuration; No Precipitation

Pilot-in-Command Age: 71

Certificate(s)/Rating(s)
Airline Transport; Commercial; Multi-engine Land; Single-engine Land

Instrument Ratings
Airplane

Flight Time (Hours)

Total All Aircraft:	4735
Last 90 Days:	Unk/Nr
Total Make/Model:	120
Total Instrument Time:	UnK/Nr

*** Note: NTSB investigators either traveled in support of this investigation or conducted a significant amount of investigative work without any travel, and used data obtained from various sources to prepare this aircraft accident report. ***

The multi-engine airplane was being repositioned to its base airport, and the pilot had requested to change the destination, but gave no reason for the destination change. Radar data indicated that the airplane entered the left downwind leg of the traffic pattern, flew at pattern attitude, and then performed a right approximate 250-degree turn to enter the final leg of the approach. During the final leg of the approach, the airplane crashed short of the runway into a house located in a residential neighborhood near the airport. According to the airplane's pilot operating handbook, the minimum multi-engine approach speed was 95 knots indicated airspeed (KIAS), and the minimum controllable airspeed was 82 KIAS. According to radar data, the airplane's groundspeed was about 69 knots with the probability of a direct crosswind.

Postaccident examination of the propellers indicated that both propellers were turning at a low power setting at impact. During a controlled test run of the right engine, a partial power loss was noted. After examination of the throttle and control assembly, two o-rings within the assembly were found to be damaged. The o-rings were replaced with comparable o-rings and the assembly was reinstalled. During the subsequent test run, the engine operated smoothly with no noted anomalies. Examination of the o-rings revealed that the damage was consistent with the o-rings being pinched between the corner of the top o-ring groove and the fuel inlet surface during installation. It is probable that the right engine had a partial loss of engine power while on final approach to the runway due to the damaged o-ring

and that the pilot retarded the engine power to prevent the airplane from rolling to the right. The investigation found no mechanical malfunction of the left engine that would have prevented the airplane from maintaining the published airspeed.
Updated at Jun 14 2012 9:59AM

ERA11FA233
File No. 29848 | 04/10/2011 | Biddeford, ME | Aircraft Reg No. N402RC | Time (Local): 18:05 EDT

OCCURRENCES

Approach-VFR pattern final - Powerplant sys/comp malf/fail
Approach-VFR pattern final - Loss of engine power (partial)
Approach-VFR pattern final - Loss of control in flight
Uncontrolled descent - Collision with terr/obj (non-CFIT)

FINDINGS

Personnel issues-Action/decision-Info processing/decision-Decision making/judgment-Pilot - C
Personnel issues-Task performance-Use of equip/info-Aircraft control-Pilot - C
Aircraft-Aircraft oper/perf/capability-Performance/control parameters-Airspeed-Not attained/maintained - C
Aircraft-Aircraft power plant-Engine fuel and control-Fuel control/carburetor-Damaged/degraded - F

Findings Legend: (C) = Cause, (F) = Factor

The National Transportation Safety Board determines the probable cause(s) of this accident to be:
The pilot did not maintain minimum controllable airspeed while on final approach with a partial loss of power in the right engine, which resulted in a loss of control. Contributing to the accident was the partial loss of engine power in the right engine due to the improperly installed o-rings in the engine’s throttle and control assembly.