Aviation Investigation Final Report

Location:	Limerick, Maine	**Accident Number:**	NYC02LA120
Date & Time:	June 20, 2002, 19:54 Local	**Registration:**	N3023J
Aircraft:	Smith Kitfox Classic IV	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

After performing a "routine" inspection, the floatplane was taxied from the shoreline, to the center of the lake, where it departed. The pilot observed that something was wrong with the floats as soon as the floatplane lifted off the water. He felt a slight drag, as well as noise emitting from the floats. About 500 feet above the lake, the pilot elected to return for a landing. As the floatplane was about to touchdown, the noise from the floats increased. Observing that a landing could not be accomplished, and a collision with homes was approaching, the pilot aborted the landing. While setting up for a second approach to the lake, both float coverings separated from the forward section of the float shells. The floatplane then entered into a dive, and the pilot reduced power. The floatplane impacted the water nose first, and came to rest with the tail section protruding upward. The pilot egressed from the main cabin, and swam to the shore. Examination of the wreckage revealed that the floats were fabric covered, and had a hard plastic cover that zipped onto the bottom of each float. Both of the zippers were found partially unzipped. The manufacturer of the floats issued a Product Bulletin on November 20, 1998, which addressed a defect with the zippers installed on the floats. If any defects were observed with the zippers, the entire zipper would have to be replaced as a set. The manufacture also provided, free of charge, a kit that would provide a secondary means of keeping the hull cap attached to the float in the event of a zipper failure. The bulletin further stated, "This is a mandatory, permanent, modification that must be carried out before further flight." No maintenance logbooks for the airplane were recovered; however, the pilot stated that the previous owner of the floatplane had not complied with the manufacture's Product Bulletin, nor did he.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The pilot's failure to perform a modification required by the manufacturer, which resulted in a failure of the float covering.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: APPROACH

Findings
1. LANDING GEAR,FLOAT ASSEMBLY - FAILURE
2. (C) MAINTENANCE,MODIFICATION - NOT PERFORMED - OWNER/PILOT MECHANIC

Occurrence #2: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: APPROACH

Findings
3. AIRCRAFT CONTROL - REDUCED

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Findings
4. TERRAIN CONDITION - WATER

Factual Information

On June 20, 2002, about 1954 eastern daylight time, a homebuilt Kitfox Classic IV floatplane, N3023J, was substantially damaged while landing on Arrowhead Lake, Limerick, Maine. The certificated student pilot received serious injuries. Visual meteorological conditions prevailed and no flight plan was filed for the personal flight conducted under 14 CFR Part 91.

After performing a "routine" inspection, the floatplane was taxied from the shoreline, to the center of the lake, where it departed. The pilot observed that something was wrong with the floats as soon as the floatplane lifted off the water. He felt a slight drag, as well as noise emitting from the floats. About 500 feet above the lake, the pilot elected to return for a landing. As the floatplane was about to touchdown, the noise from the floats increased. Observing that a landing could not be accomplished, and a collision with homes was approaching, the pilot aborted the landing. While setting up for a second approach to the lake, both float coverings separated from the forward section of the float shells. The floatplane then entered into a dive, and the pilot reduced power. The floatplane impacted the water nose first, and came to rest with the tail section protruding upward. The pilot egressed from the main cabin, and swam to the shore.

The pilot stated to a Federal Aviation Administration (FAA) inspector, that he had recently purchased the floatplane from another individual. He had accumulated about 3 hours of dual instruction, and 17 hours of solo flight time, in the floatplane.

The FAA inspector examined the airplane after the accident. He observed that the floats were fabric covered, and had a hard plastic cover that zipped onto the bottom of each float. Both of the zippers were found partially unzipped, but the left was further than the right. The fuel mixture control and throttle were found in the closed position. The magnetos were in the "OFF" position. Flight control continuity was verified to the ailerons, elevator, and rudder.

The FAA inspector also added that the manufacturer of the floats issued a Product Bulletin on November 20, 1998, which addressed a defect with the zippers installed on the floats. If any defects were observed with the zippers, the entire zipper would have to be replaced as a set. The manufacture also provided, free of charge, a kit that would provide a secondary means of keeping the hull cap attached to the float in the event of a zipper failure. The bulletin further stated, "This is a mandatory, permanent, modification that must be carried out before further flight.

No maintenance logbooks for the airplane were recovered; however, the pilot stated to the FAA inspector that the previous owner of the floatplane had not complied with the manufacture's Product Bulletin. The inspector also did not observe any modifications to the floats during his examination of the wreckage.

Student pilot Information

Certificate:	Student	**Age:**	40,Male
Airplane Rating(s):	None	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	April 23, 1999
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	60 hours (Total, all aircraft), 17 hours (Total, this make and model), 14 hours (Last 90 days, all aircraft), 6 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Smith	**Registration:**	N3023J
Model/Series:	Kitfox Classic IV	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	C-95020103
Landing Gear Type:	Float	**Seats:**	2
Date/Type of Last Inspection:	February 1, 2002 Annual	**Certified Max Gross Wt.:**	1200 lbs
Time Since Last Inspection:	20 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	137 Hrs at time of accident	**Engine Manufacturer:**	Rotax
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	618
Registered Owner:	Daniel E. Desvergnes	**Rated Power:**	85 Horsepower
Operator:		**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	PWM,74 ft msl	**Distance from Accident Site:**	25 Nautical Miles
Observation Time:	19:51 Local	**Direction from Accident Site:**	100°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	7 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	320°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.97 inches Hg	**Temperature/Dew Point:**	23°C / 6°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Limerick, ME (NONE)	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:	19:50 Local	**Type of Airspace:**	Class G

Wreckage and Impact Information

Crew Injuries:	1 Serious	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Serious	**Latitude, Longitude:**	43.683612,-70.800552

Administrative Information

Investigator In Charge (IIC):	Demko, Steve
Additional Participating Persons:	Raymond Cloutier; FAA; Portland, ME
Original Publish Date:	June 25, 2003
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=55014