Aviation Investigation Final Report

Location:	Sherrills Ford, North Carolina	**Accident Number:**	ERA23LA262
Date & Time:	May 31, 2023, 15:30 Local	**Registration:**	N2440S
Aircraft:	BURTON Searey	**Aircraft Damage:**	Substantial
Defining Event:	Fuel starvation	**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot of the amphibious, amateur-built airplane, who had purchased the airplane several months earlier and did not hold a rating for airplane single-engine sea, departed the lakefront grass runway and performed a sharp left turn to assume his enroute heading without retracting the airplane's landing gear.

The pilot reported that, about halfway through the turn, the engine exhibited a sudden loss of power but continued running with excessive vibration. Remedial actions to restore power were unsuccessful. The pilot stated that he selected a forced landing site on the lake and moved the landing gear selector to the "up" position with "about 25 ft of altitude nearing 50 mph of airspeed." Photographs taken by a witness showed that the airplane contacted the water with the landing gear extended. The pilot stated that the airplane pitched forward upon water contact and came to rest upright in the water with substantial damage to the fuselage and right wing strut.

Months before the accident, the pilot experienced a power loss event with the airplane that he and other owners of the same airplane make/model could not diagnose, ultimately agreeing that it was a case of the fuel tank unporting due to a low fuel state.

Immediately after the accident, the pilot started the engine several times, but it would "choke out" each time. Postaccident examination of the airplane revealed a gascolator occluded by rusty particles and containing water and trace amounts of fuel. The pilot reported that he was unaware of this gascolator in the fuel system, and that its occlusion could have led to both engine power loss events.

The owner declined to test run the engine after clearing the gascolator of contaminants, citing fears of further damage to the airplane since the engine was loose on its mounts.

Probable Cause and Findings

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

The pilot's failure to configure the amphibious airplane's landing gear before conducting a forced landing to a lake after a loss of engine power. Also causal was the occluded gascolator and the pilot's lack of knowledge about the airplane's fuel system, which resulted in his failure to locate and identify the condition of the gascolator following a previous loss of engine power event.

Findings

Personnel issues	Lack of action - Pilot
Aircraft	Gear extension and retract sys - Not used/operated
Personnel issues	Knowledge of equipment - Pilot
Aircraft	Fuel filter-strainer - Not serviced/maintained

Factual Information

History of Flight

Takeoff	Fuel starvation (Defining event)
Landing	Landing gear not configured

On May 31, 2023, at 1530 eastern daylight time, an experimental, amateur-built SeaRey amphibious airplane, N2440S, was substantially damaged when it was involved in an accident near Sherrills Ford, North Carolina. The pilot and the passenger were not injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

The pilot, who was also the owner of the airplane, provided a written statement and was later interviewed by telephone. He said that he departed Lake Norman Airpark (14A), Mooresville, North Carolina, which was his home airport, and flew about 3 minutes across the lake to Long Island Airpark (NC26). Before the flight, he performed a preflight inspection and engine run-up with no anomalies noted, and the flight was uneventful.

According to the pilot, he and the passenger visited with a friend at NC26 before boarding the airplane for a flight to Statesville Regional Airport (SVH), Statesville, North Carolina. He stated that the airplane was airborne within the first 1/4 of the 3,000-ft-long turf runway, but had only climbed to 100 ft above ground level at the departure end, which abutted Lake Catawba. The pilot said he “immediately” performed a sharp left turn to assume his enroute heading because “there was no need to maintain runway heading once clear of obstacles.”

The pilot reported that, about halfway through the turn, the engine exhibited a sudden loss of power, but continued running with excessive vibration. Remedial actions to restore power were unsuccessful. The pilot stated that he selected a forced landing spot on the lake and moved the landing gear selector to the “up” position with “about 25 ft of altitude nearing 50 mph of airspeed.” Photographs taken by a witness showed that the airplane contacted the water with the landing gear extended. The pilot stated that the airplane pitched forward upon water contact and came to rest upright and afloat in the water with substantial damage to the fuselage and right wing strut.

After recovery of the airplane, the pilot started the engine for the Federal Aviation Administration (FAA) inspector who responded to the accident site. The engine started and ran before it “choked out” and stopped operating. This sequence was repeated multiple times.

The pilot held a private pilot certificate with a rating for airplane single-engine land. He did not possess a rating for airplane single-engine sea. His most recent FAA third-class medical

certificate was issued on May 15, 2022, at which time the pilot declared 361 total hours of flight experience, 36 hours of which were in the accident airplane.

According to FAA and maintenance records, the airplane was manufactured in 1998 and was powered by a Rotax 914, 115-horsepower engine. The pilot purchased the airplane in February 2023. The airplane's most recent condition inspection was completed February 6, 2023, at 724 total aircraft hours.

The pilot explained that he had experienced an engine power loss on February 18, 2023, and enlisted the help of other local SeaRey owners to diagnose the issue. He explained in detail their inspection of the airplane's fuel system as they understood it. When asked if any licensed airframe and powerplant mechanics were part of the assembled troubleshooters, he said no. According to the pilot, he "deemed them to be qualified SeaRey mechanics" due to their histories with SeaRey airplanes and Rotax engines.

After their draining and inspection of the fuel system revealed no anomalies, the consensus among the group was that the engine stoppage was likely due to an unported fuel tank, as there was only 4.5 gallons of fuel on board at the time of the power loss.

Following the accident, the airplane was inspected by an FAA aviation safety inspector and a representative of the engine manufacturer. A gascolator mounted in the root of the wing was removed and found occluded by rusted particles, water, and traces of fuel (see Figure 1). A "witness hole" below the gascolator provided access to the drain, but it was not placarded, and the pilot/owner stated that he had not known of it before the inspection.

Figure 1. – View of gascolator with rusted particles, water, and trace amounts of fuel as found (source FAA).

Once the gascolator was cleared and the engine was ready for a test run, the owner declined, fearing further damage to the airplane, as the engine was loose in its mounts.

According to the pilot, “Given all of the facts and my knowledge of engine fundamentals and performance, my best guess at this point would be the gascolator could have caused loss of power in both referenced flights.”

According to the SeaRey Pilot Operation Handbook, *Normal Land Takeoff:*

Throttle Maximum 5800 RPM	OPEN
LAND ONLY: Elevator Control Forward	AS REQUIRED to Lift Tail
Lift Off	46-52 mph
Accelerate to	65 mph
Climb Out and When Established Retract Undercarriage (Ground Operation)	COMPLETE
At Safe Height, Reduce Flaps to 10°	COMPLETE

Pilot Information

Certificate:	Private	**Age:**	43,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	3-point
Instrument Rating(s):	None	**Second Pilot Present:**	
Instructor Rating(s):	None	**Toxicology Performed:**	
Medical Certification:	Class 3 Without waivers/limitations	**Last FAA Medical Exam:**	May 15, 2022
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	October 26, 2021
Flight Time:	(Estimated) 361.5 hours (Total, all aircraft), 36 hours (Total, this make and model), 320 hours (Pilot In Command, all aircraft), 42.7 hours (Last 90 days, all aircraft), 18.3 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BURTON	**Registration:**	N2440S
Model/Series:	Searey	**Aircraft Category:**	Airplane
Year of Manufacture:	1998	**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental light sport (Special)	**Serial Number:**	1MK162
Landing Gear Type:	Retractable - Tailwheel; Amphibian	**Seats:**	2
Date/Type of Last Inspection:	February 6, 2023 Condition	**Certified Max Gross Wt.:**	1430 lbs
Time Since Last Inspection:	40 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	724 Hrs at time of accident	**Engine Manufacturer:**	Rotax
ELT:	C91 installed, not activated	**Engine Model/Series:**	914
Registered Owner:	HUNT JACK A	**Rated Power:**	115 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	SVH,965 ft msl	**Distance from Accident Site:**	5 Nautical Miles
Observation Time:	14:25 Local	**Direction from Accident Site:**	8°
Lowest Cloud Condition:		**Visibility**	10 miles
Lowest Ceiling:	Overcast / 4100 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	6 knots / None	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	50°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.12 inches Hg	**Temperature/Dew Point:**	22°C / 15°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Sherrills Ford, NC	**Type of Flight Plan Filed:**	None
Destination:	Statesville, NC (KSVH)	**Type of Clearance:**	None
Departure Time:		**Type of Airspace:**	Class G

Airport Information

Airport:	LONG ISLAND AIRPARK NC26	**Runway Surface Type:**	Grass/turf
Airport Elevation:	864 ft msl	**Runway Surface Condition:**	Water-calm
Runway Used:	05	**IFR Approach:**	None
Runway Length/Width:	3000 ft / 100 ft	**VFR Approach/Landing:**	Forced landing;Straight-in

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 None	**Latitude, Longitude:**	35.675319,-80.971728(est)

Administrative Information

Investigator In Charge (IIC):	Rayner, Brian
Additional Participating Persons:	Eric Newsome; FAA/FSDO; Charlotte, NC Jordan Paskevich; Rotax Engines; Vernon Christoph Ringl; Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology; Radetzkystraße 2, PO Box 201, 1000 Vienna
Original Publish Date:	March 19, 2025
Last Revision Date:	
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=192333