Aviation Investigation Final Report

Location:	Finelyville, Pennsylvania	**Accident Number:**	ERA20CA291
Date & Time:	August 18, 2020, 13:10 Local	**Registration:**	N88XK
Aircraft:	Team Rocket F1 Rocket	**Aircraft Damage:**	Substantial
Defining Event:	Landing area overshoot	**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The owner of the airplane had recently purchased it, and a pilot had ferried the tailwheel-equipped, tandem seat airplane across the country and delivered it to him the day before the accident. The purpose of the accident flight was for the ferry pilot to familiarize the owner with the airplane's avionics. For the accident flight, the owner was seated in the front seat, while the ferry pilot (who did not hold a flight instructor certificate) was seated the rear. The airplane's rear seat was equipped with a limited set of flight controls that included a control stick, rudder pedals, and throttle. The rear seat was not equipped to control the airplane's brakes.

The pilots departed and flew to a nearby airport with a 4,000-ft-long runway, where the owner flew an approach to landing that terminated in a go-around. The ferry pilot then demonstrated a touch-and-go landing. On the third approach attempt the owner was unable to extend the airplane's flaps, so they aborted the approach to troubleshoot the problem. The pilots were ultimately unable to extend the flaps and elected to return to the owner's home airport and land on the 2,500-ft-long runway there. When the ferry pilot initially attempted to land the airplane, it bounced during both attempts and he aborted the landings. The owner described that during the final landing attempt, the ferry pilot approached the runway at a "slightly faster speed" and that the airplane "landed long." The airplane continued down the runway with its tail in the air. The ferry pilot, being unable to see the runway due to his vision being obstructed by his position in the rear seat, did not realize that the airplane was approaching the end of the runway until the owner called out to him. The owner stated that he began applying the airplane's brakes with about 400 feet of the runway remaining. The airplane subsequently overran the departure end of the runway. During the excursion both main landing gear collapsed, and the forward portion of the fuselage and engine mount area were substantially damaged.

Following the accident, a Federal Aviation Administration (FAA) inspector responded to the accident site and during his examination of the wreckage he turned on the master switch and extended the airplane's flaps. The flaps extended normally.

Probable Cause and Findings

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

The pilot's misjudgment of the airplane's speed and altitude during the landing approach, and his failure to attain the proper touchdown point during landing, which resulted in a runway overrun. Contributing to the accident were his access to a limited set of flight controls, his obstructed vision due to his seating position, and the pilot's decision to return to the relatively constrained runway following a perceived anomaly of the airplane's flaps.

Findings

Aircraft	Airspeed - Not attained/maintained
Aircraft	Altitude - Not attained/maintained
Aircraft	Landing flare - Not attained/maintained
Personnel issues	Decision making/judgment - Pilot
Aircraft	Brake - Not installed/available
Personnel issues	Visual function - Pilot
Aircraft	TE flap control system - Not used/operated

Factual Information

History of Flight

Landing-landing roll	Landing area overshoot (Defining event)
Landing-landing roll	Runway excursion

Pilot-rated passenger Information

Certificate:	Commercial	**Age:**	50,Male
Airplane Rating(s):	Multi-engine land	**Seat Occupied:**	Front
Other Aircraft Rating(s):	None	**Restraint Used:**	5-point
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 Without waivers/limitations	**Last FAA Medical Exam:**	August 5, 2019
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	October 15, 2019
Flight Time:	639 hours (Total, all aircraft), 9 hours (Total, this make and model), 205 hours (Pilot In Command, all aircraft)		

Pilot Information

Certificate:	Airline transport; Commercial	**Age:**	59,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Rear
Other Aircraft Rating(s):	None	**Restraint Used:**	5-point
Instrument Rating(s):	None	**Second Pilot Present:**	Yes
Instructor Rating(s):	None	**Toxicology Performed:**	
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	August 15, 2020
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	August 15, 2020
Flight Time:	3420 hours (Total, all aircraft), 11.5 hours (Total, this make and model), 20.3 hours (Last 90 days, all aircraft), 1.5 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Team Rocket	**Registration:**	N88XK
Model/Series:	F1 Rocket	**Aircraft Category:**	Airplane
Year of Manufacture:	2018	**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	128
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	December 9, 2019 Annual	**Certified Max Gross Wt.:**	2000 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	60 Hrs at time of accident	**Engine Manufacturer:**	Lycoming
ELT:	C91 installed, activated, did not aid in locating accident	**Engine Model/Series:**	D4A5
Registered Owner:	On file	**Rated Power:**	285 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:	KAGC,1273 ft msl	**Distance from Accident Site:**	8 Nautical Miles
Observation Time:	13:10 Local	**Direction from Accident Site:**	33°
Lowest Cloud Condition:	Scattered / 6000 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	Broken / 8500 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	5 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	300°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.95 inches Hg	**Temperature/Dew Point:**	24°C / 12°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Finelyville, PA	**Type of Flight Plan Filed:**	None
Destination:	Finelyville, PA	**Type of Clearance:**	None
Departure Time:		**Type of Airspace:**	Class G

Airport Information

Airport:	FINLEYVILLE AIRPARK G05	**Runway Surface Type:**	Asphalt
Airport Elevation:	1236 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	32	**IFR Approach:**	None
Runway Length/Width:	2497 ft / 50 ft	**VFR Approach/Landing:**	Full stop;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	2 None	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:		**Aircraft Explosion:**	None
Total Injuries:	2 None	**Latitude, Longitude:**	40.247776,-80.013336(est)

Administrative Information

Investigator In Charge (IIC):	Hill, Millicent
Additional Participating Persons:	David S Shanahan; FAA/FSDO; Pittsburgh, PA
Original Publish Date:	June 24, 2021
Last Revision Date:	
Investigation Class:	Class 4
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=101829