



Aviation Investigation Final Report

Location:	Mason City, Iowa	Accident Number:	GAA18CA545
Date & Time:	September 8, 2018, 11:45 Local	Registration:	N669HT
Aircraft:	Cirrus SR22	Aircraft Damage:	Substantial
Defining Event:	Loss of control on ground	Injuries:	2 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that the battery was too low to start the engine, so he asked fixed-base operator personnel if they could assist with a jumper pack. They told him that they did not have anyone on duty authorized to assist and that he would have to wait a couple of days. He decided to start the engine by hand propping. Before he began hand propping, he set the parking brake. Following the engine start, the airplane began to move forward. The pilot attempted to re-enter the airplane to apply the brakes, but the airplane struck a hangar.

The airplane sustained substantial damage to the left wing.

The Federal Aviation Administration inspector who examined the airplane after the accident reported that the parking brake functioned normally. He added that the pilot stated that he was sure he set the brakes but that he may not have gotten enough pressure to hold the airplane.

The Federal Aviation Administration's Airplane Flying Handbook, FAA-H-8083-3A, contained a section titled "Hand Propping" which states the following:

An engine should not be hand propped unless two people, both familiar with the airplane and hand propping techniques, are available to perform the procedure. The person pulling the propeller blades through directs all activity and is in charge of the procedure. The other person, thoroughly familiar with the controls, must be seated in the airplane with the brakes set. As an additional precaution, chocks may be placed in front of the main wheels. If this is not feasible, the airplane's tail may be securely tied. Never allow a person unfamiliar with the controls to occupy the pilot's seat when hand propping. The procedure should never be attempted alone.

Probable Cause and Findings

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

The pilot's improper hand propping procedure, which resulted in a runaway airplane and subsequent impact with a hangar.

Findings

Personnel issues	Aircraft control - Pilot
Environmental issues	Airport structure - Effect on operation
Aircraft	Battery/charger - Not serviced/maintained

Factual Information

History of Flight

Standing-engine(s) start-up	Electrical system malf/failure
Standing-engine(s) start-up	Loss of control on ground (Defining event)
Standing-engine(s) start-up	Attempted remediation/recovery
Standing-engine(s) start-up	Ground collision

Pilot Information

Certificate:	Private	Age:	39,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	None
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	July 1, 2014
Occupational Pilot:	No	Last Flight Review or Equivalent:	June 13, 2018
Flight Time:	(Estimated) 373 hours (Total, all aircraft), 373 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cirrus	Registration:	N669HT
Model/Series:	SR22 Undesignat	Aircraft Category:	Airplane
Year of Manufacture:	2005	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	1679
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	Annual	Certified Max Gross Wt.:	3120 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	845 Hrs	Engine Manufacturer:	Continental
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	IO-550
Registered Owner:		Rated Power:	310 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:	KMCW, 1225 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	16:53 Local	Direction from Accident Site:	82°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	9 knots / 18 knots	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	90°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	30.25 inches Hg	Temperature/Dew Point:	20°C / 12°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Mason City, IA (MCW)	Type of Flight Plan Filed:	Unknown
Destination:		Type of Clearance:	None
Departure Time:		Type of Airspace:	Class E

Airport Information

Airport:	MASON CITY MUNI MCW	Runway Surface Type:	Asphalt
Airport Elevation:	1213 ft msl	Runway Surface Condition:	Dry
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Minor	Latitude, Longitude:	43.153057,-93.336112(est)

Administrative Information

Investigator In Charge (IIC):	Swenson, Eric
Additional Participating Persons:	Brett Hoben; FAA; Des Moines, IA
Original Publish Date:	March 18, 2019
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=98277

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

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](#).