



Aviation Investigation Final Report

Location:	Hornell, New York	Accident Number:	ERA24LA194
Date & Time:	April 26, 2024, 12:00 Local	Registration:	N5632Q
Aircraft:	Mooney M20E	Aircraft Damage:	Substantial
Defining Event:	Miscellaneous/other	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot intended to depart his home airport for another airport to perform an owner-assisted annual inspection. While loading the airplane with supplies, the pilot placed a portable ADS-B receiver on the top of his airplane. The ADS-B receiver utilized a commercially available portable lithium-ion battery pack for power, and the battery was attached to the receiver via a hook and loop fastening. The receiver and battery pack fell from the top of the airplane onto the ramp which resulted in damage to the receiver and battery pack. The pilot attempted to power up the receiver but noted that the receiver was no longer working; he then placed the receiver and battery pack behind the front seats and underneath an airplane cover. The pilot subsequently taxied and began his runup of the engine, during which the pilot noted smoke coming from behind the front seats. The pilot lifted the airplane cover and saw that a fire had started. The pilot exited the airplane and unsuccessfully attempted to remove the airplane cover, which was on fire. The fire eventually consumed most of the cockpit area (including the battery pack itself) and substantially damaged both wings.

Based on this information, it is likely that the portable lithium-ion battery pack sustained damage to at least one of the battery cells when it was dropped onto the ramp, resulting in thermal runaway of the battery pack and subsequent fire.

Probable Cause and Findings

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

A cabin fire as a result of a damaged lithium-ion battery pack.

Findings

Aircraft	Battery/charger - Damaged/degraded
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Factual Information

History of Flight

Prior to flight	Miscellaneous/other (Defining event)
Taxi-to runway	Fire/smoke (non-impact)

Pilot Information

Certificate:	Private	Age:	47, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Lap only
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	December 10, 2024
Occupational Pilot:	No	Last Flight Review or Equivalent:	March 28, 2023
Flight Time:	534 hours (Total, all aircraft), 154 hours (Total, this make and model), 534 hours (Pilot In Command, all aircraft), 15 hours (Last 90 days, all aircraft), 5 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Mooney	Registration:	N5632Q
Model/Series:	M20E	Aircraft Category:	Airplane
Year of Manufacture:	1965	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	672
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	April 6, 2023 Annual	Certified Max Gross Wt.:	2575 lbs
Time Since Last Inspection:	52 Hrs	Engines:	1
Airframe Total Time:	2135.2 Hrs as of last inspection	Engine Manufacturer:	
ELT:	Installed, not activated	Engine Model/Series:	
Registered Owner:	On file	Rated Power:	
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:	DSV,662 ft msl	Distance from Accident Site:	11 Nautical Miles
Observation Time:	11:54 Local	Direction from Accident Site:	353°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	9 knots / 15 knots	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	170°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	30.4 inches Hg	Temperature/Dew Point:	16°C / -6°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Hornell, NY (HTF)	Type of Flight Plan Filed:	None
Destination:	Canandaigua, NY (IUA)	Type of Clearance:	None
Departure Time:	12:00 Local	Type of Airspace:	Class G

Airport Information

Airport:	HORNELL MUNI HTF	Runway Surface Type:	Asphalt
Airport Elevation:	1219 ft msl	Runway Surface Condition:	Dry
Runway Used:	18	IFR Approach:	None
Runway Length/Width:	5000 ft / 75 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	On-ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	42.382139,-77.682111(est)

Administrative Information

Investigator In Charge (IIC):	Gibson, Kurt
Additional Participating Persons:	Ryan Gillman; FAA/FSDO; Rochester, NY
Original Publish Date:	June 21, 2024
Last Revision Date:	
Investigation Class:	Class 4
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=194155

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).