

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



CEN24FA042

EXAMINATION SUMMARY STATEMENT

November 22, 2023/January 31, 2024

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A. ACCIDENT

Location: Plano, Texas
Date: November 21, 2023
Time: 1748 CST
2347 UTC
Airplane: Mooney M20C N1204X

B. EXAMINATION SUMMARY STATEMENT

IIC	Brian Rutt NTSB Aurora, Colorado
Investigator	Jennifer Rodi NTSB Aurora, Colorado
FAA Inspector	David Preston FAA Dallas, Texas
Group Member	David Harsanyi Lycoming Williamsport, Pennsylvania

C. SUMMARY

On November 21, 2023 at 1748 CST, a Mooney M20C, N1204X was substantially damaged when it was involved in an accident near Plano, Texas. The pilot was fatally injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

On November 22, 2023, the National Transportation Safety Board (NTSB) Investigator-In-Charge arrived at the accident site and conducted an onsite investigation. The NTSB IIC was assisted by a representative with the Federal Aviation Administration. A follow up examination was conducted on January 31, 2024 at an aircraft storage facility.

D. DETAILS OF THE EXAMINATION

1.0 Accident Site

The airplane impacted a shopping center parking lot. A post-impact fire ensued and spread to an unoccupied parked vehicle. The adjacent building was damaged by the airplane impact and post-impact fire. The main wreckage came to rest inverted. The engine, propeller, instrument panel, and flight control yokes were embedded about 2 feet in the ground about 30 ft north of the main wreckage. Ground scars and paint transfer consistent with wing leading edges extended in both

directions from the embedded engine (Figures 1 and 2).



Figure 1: Wing witness marks



Figure 2: Leading edge paint transfer

2.0 Airframe Examination

Flight control tubes were impact and fire damaged, but otherwise revealed no anomalies. All flight controls were traced back to the cabin. The forward/inboard portion of the aileron, elevator, and rudder, including the flight control yokes were impact separated and located with the engine and instrument panel.

2.1 Fuselage

The fuselage came to rest inverted and was impact damaged. It was charred, melted, and partially consumed by fire (Figure 3).

2.2 Empennage

The empennage remained attached to the aft fuselage and included the vertical stabilizer, rudder, and stabilator (Figure 3). The elevator trim jackscrew was found in a position consistent with the elevator trim in the takeoff position (Figure 4)

2.3 Wings

The wings remained attached to the fuselage and exhibited accordion crushing along the leading edges (Figure 3). The wings were impact and fire damaged. The right aileron and right flap remained attached to the right wing. The right aileron control tubes were impact and fire damaged. The left aileron remained attached to the left wing. The left flap was partially impact separated. The flap actuator was found impact separated. The hydraulic lines were fractured at the fittings. The flap pushrod was extended about 10.25 inches, of which about 9 inches were impact damaged (Figure 5).



Figure 3: Fuselage, wings, and Empennage



Figure 4: Elevator trim jackscrew

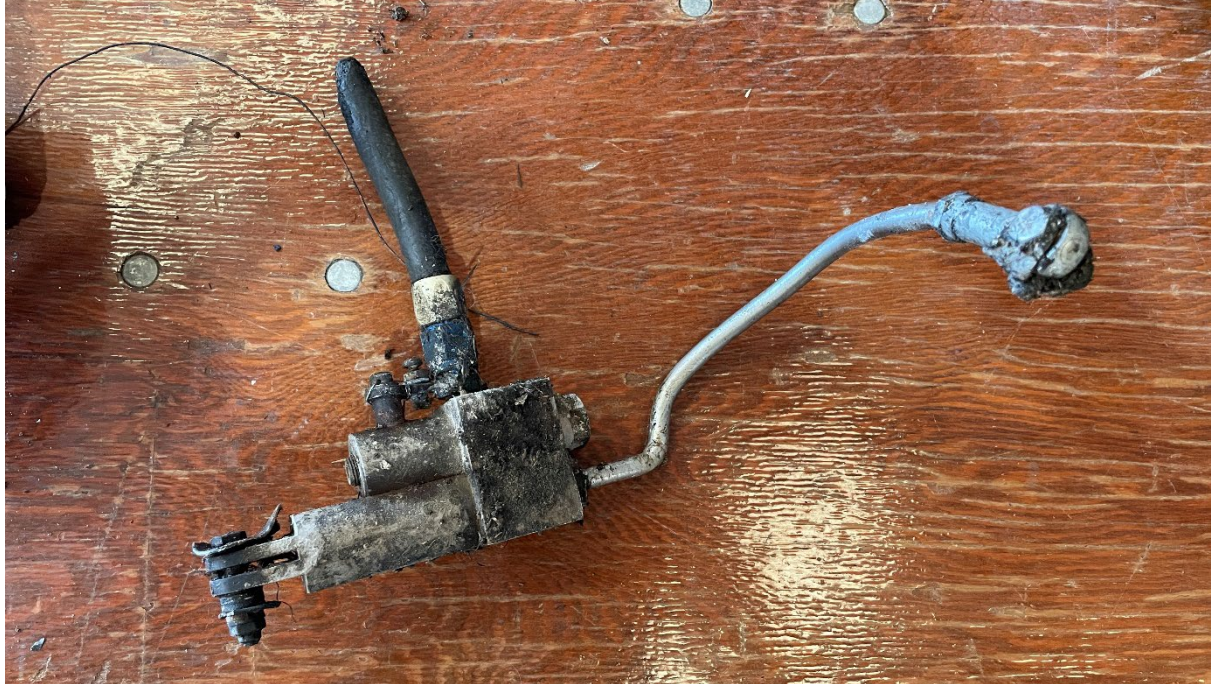


Figure 5: Hydraulic flap actuator

2.4 Landing Gear

The left main landing gear remained attached to the wing and had impact and fire damage. The right main landing gear was impact separated and located near the right wing and had impact and fire damage. The nose landing gear strut was located with the engine. The nose landing gear wheel and tire were impact separated and located about 150 ft south of the main wreckage. Witness marks consistent with an extended landing gear were found on the pavement (Figure 6).



Figure 6: Right landing gear ground scar and witness mark

2.5 Cockpit

The cockpit was consumed by fire. The instrument panel was destroyed by impact and fire damage. No reliable indications were readable from any of the instruments or gauges.

2.6 Fuel/Fuel System

Both fuel tanks were compromised by impact. The fuel system was impact and fire damaged. The fuel selector was found impact and thermal damaged in selected to the right tank position. The fuel selector could not be rotated by hand due to impact and thermal damage. The fuel selector was pressure tested in the found position and air was able to pass through. No anomalies were found with the fuel selector.

3.0 Engine Examination

The engine was a Lycoming O-360-A1A (s/n L1215-36). The engine case was impact damaged with a radial fracture. The entire engine exhibited impact damage. Cylinder #1 was impact separated. The fuel inlet screen was clean. The carburetor was impact separated. The brass carburetor floats moved freely and exhibited hydraulic deformation. The engine crankshaft was not able to be rotated due to impact damage. A borescope was used on cylinders #2, #3, and #4 with no anomalies noted. The starter was impact separated and exhibited rotational scoring on the housing consistent with the rotating starter ring gear making contact at impact. The oil suction screen and carburetor inlet screen were clean and clear of debris. The engine driven fuel pump was impact fragmented and could not be tested. The magnetos were found attached to the accessory section with thermal damage and could not be functionally tested.

4.0 Propeller Examination

The propeller was a McCauley (s/n C1206YS and 1B024YS). The propeller and hub assembly was impact separated from the crankshaft aft of the propeller flange. Both propeller blades were located with the engine. One blade tip was impact separated. Both blades showed rotational scoring. One blade was bent aft and showed leading edge damage (Figure 7). The propeller governor mount was fractured but remained attached to the accessory case. The propeller governor rotated by hand.



Figure 7: Propeller

5.0 Pilot Information

The pilot was an 87-year-old male. This pilot reported civil flight experience that included 3,042 total hours and 30 hours in last six months as of exam dated June 17, 2016. This pilot was issued a Third Class Medical Certificate by Special Issuance with the following limitation: "Must wear corrective lenses for distant, have glasses for near vision" and not valid for any class after 6/30/2017. The Medical Certificate expired for all classes in 2017, but this pilot had applied for BasicMed.

The pilot held a private pilot certificate with an Instrument Airplane rating.

6.0 Aircraft Information

The airplane was a Mooney M20C, N1204X (s/n 2607) with an original airworthiness date of August 20, 1963.

7.0 Meteorological Information

KADS 212347Z 32012G18KT 13SM SKC 13/03 A3024

Submitted by:

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Air Safety Investigator