

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



WPR25LA037

EXAMINATION SUMMARY

July 27, 2026

A. ACCIDENT

Location: Los Angeles, CA
Date: November 14, 2024
Time: 0704PST
0004UTC
Airplane: (N46028) 1968 Cessna 172I, S/N: 17256998

B. EXAMINATION SUMMARY

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C. SUMMARY

Post-accident examination of the airframe and engine revealed no evidence of any preimpact mechanical malfunctions or failures that would have precluded normal operation.

D. DETAILS OF THE EXAMINATION

1.0 Accident Site

Sepulveda Basin Wildlife Reserve, about 1.75 NM southeast of the departure end of runway 16R at Van Nuys Airport (VNY), Van Nuys, CA.

Latitude: 34.173538°, Longitude: -118.469625°

2.0 Airframe Examination

Flight control cable continuity for the ailerons, elevators, and rudder was unremarkable. The status of the control lock could not be determined. The flap position indications showed the flap indicator at 0° and the flap actuator at 0°. The elevator trim indicator was positioned between neutral and full nose-up. Rudder trim was not applicable, and therefore no rudder trim indicator or actuator was installed.



Figure 1: Left front to aft view of the airplane prior to examination



Figure 2: Left side view of the airplane with both wings and the empennage

2.1 Cockpit

The airplane was equipped with digital primary flight instruments and was not equipped with an autopilot. The magnetic compass indicated approximately 354° in a vertical orientation, and the cockpit clock displayed 1050.

Primary Flight Display (PFD) 1 provided the flight instrument indications. The airspeed indication was 0 knots. The turn coordinator indicated a level turn condition, with the inclinometer ball displaced to the right of center. Aircraft attitude information for pitch and roll was displayed digitally. The heading indicator and heading bug were also displayed digitally. The altimeter indicated 638 ft with an altimeter setting of 30.00 inches of mercury (inHg). The vertical speed indicator displayed a descent rate of approximately 20 ft per minute.

The airplane's communication and navigation radios were equipped with digital controls and displays. COM 1 and COM 2 active and standby frequencies were displayed digitally. NAV 1 and NAV 2 active and standby frequencies were also displayed digitally. The OBS setting for NAV 1 was 159°, and the OBS setting for NAV 2 was 230°. The transponder was configured with a digital mode selector, active code display, and standby code display.

Examination of the electrical switch positions revealed that the master battery switch was in the OFF position, and the Avionics 1 switch was in the ON position. The lighting switches were found with the navigation lights ON and the strobe lights ON. The rotating beacon and landing light switches were OFF. Taxi and instrument lighting were not applicable. The ignition key switch was in the OFF position. uAvionix AV-30-C instruments had been installed in the attitude indicator and horizontal situation indicator (HSI) positions following removal of the airplane's vacuum system.

2.2 Survivability

The restraint and seat systems were examined for both occupied seats. Seat 1 and Seat 2 were occupied and equipped with a 3-point restraint system with signatures indicating that the lap belt was in use at the time of the accident, but not the shoulder harness. The Hooker Harness restraint system was intact and identified as a non-OEM installation. A second seat stop was not installed. The seat was forward-facing, and the seat feet, seat back, seat base, and seat rail were all intact.

2.3 Fuel/Fuel System

The airframe fuel system was examined. Both the left and right main fuel tank gauges indicated empty. The fuel selector handle was positioned to Both, which was consistent with the fuel selector valve position of Both. Examination of the engine controls revealed the cockpit throttle control was in the full-throttle position, while the throttle position at the engine showed impact damage. The throttle and carburetor heat cables were distorted as the engine displaced forward and downward from the firewall. The carburetor heat control was in the on position in the cockpit. At the engine, the throttle was found near the idle position, and the air door within the damaged air box was positioned for normal operation. The mixture control was in a fully rich position in the cockpit, with the engine-side fracture-separated at the carburetor during impact, and the carburetor mixture control arm was found near the cutoff position. The primer was found stowed and operated smoothly during functional testing.

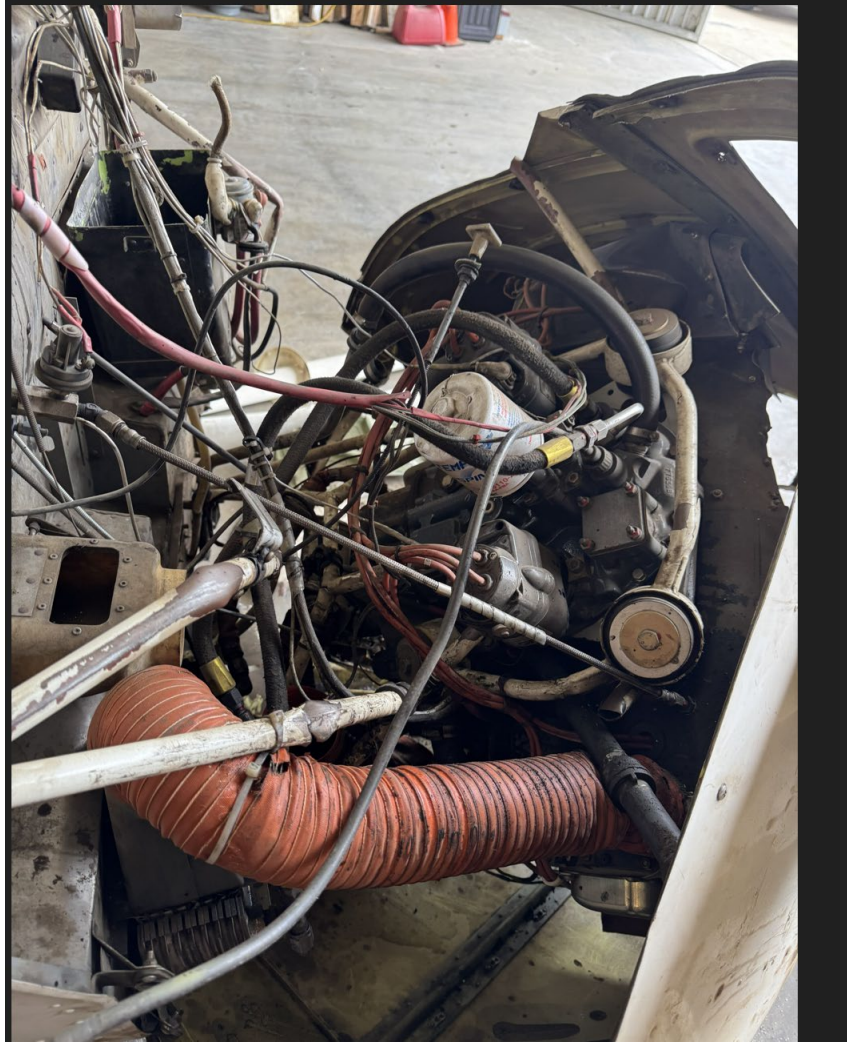


Figure 3: Initial overview of accessory case before examination



Figure 4: Left side view of the carburetor throttle control linkage and carburetor heat linkage intact



Figure 5: View of the impact damaged mixture control linkage

The recovery crew noted little fuel in either fuel tank at the site due to it leaking out while being inverted. Fuel smell was strong in both tanks. Fuel consistent with color and smell of 100LL was present at the fuel selector from both tanks. Fuel consistent with color and smell of 100LL was drained from the fuel strainer and tested negative for water using water finding paste.

Both fuel caps were secure on the filler necks, seals were firm, but still pliable. Fuel tank outlet screens were clean in both tanks. The fuel selector handle and body were determined to be in the Both position and tested using compressed air for proper functioning in all positions. All the detents were strong, and the linkage had minimal play in the joints. The shaft of the fuel selector exhibited scoring from contact with the floor structure. The fuel strainer screen was clean; the bowl had a limited amount of pitting in the bottom and was clean of debris.



Figure 6: View of the fuel selector removed from the airframe for examination and function test



Figure 7: View of the gascolator prior to removal for examination

The throttle shaft bushings in the carburetor had minimal play. The carburetor fuel inlet screen assembly was clean. The carburetor was disassembled. The fuel bowl was clean, and the float was tested for leaks. The accelerator pump inlet screen was clean. Compressed air was applied and passed through the passage from the mixture metering sleeve and the discharge nozzle to verify there were no obstructions or debris.

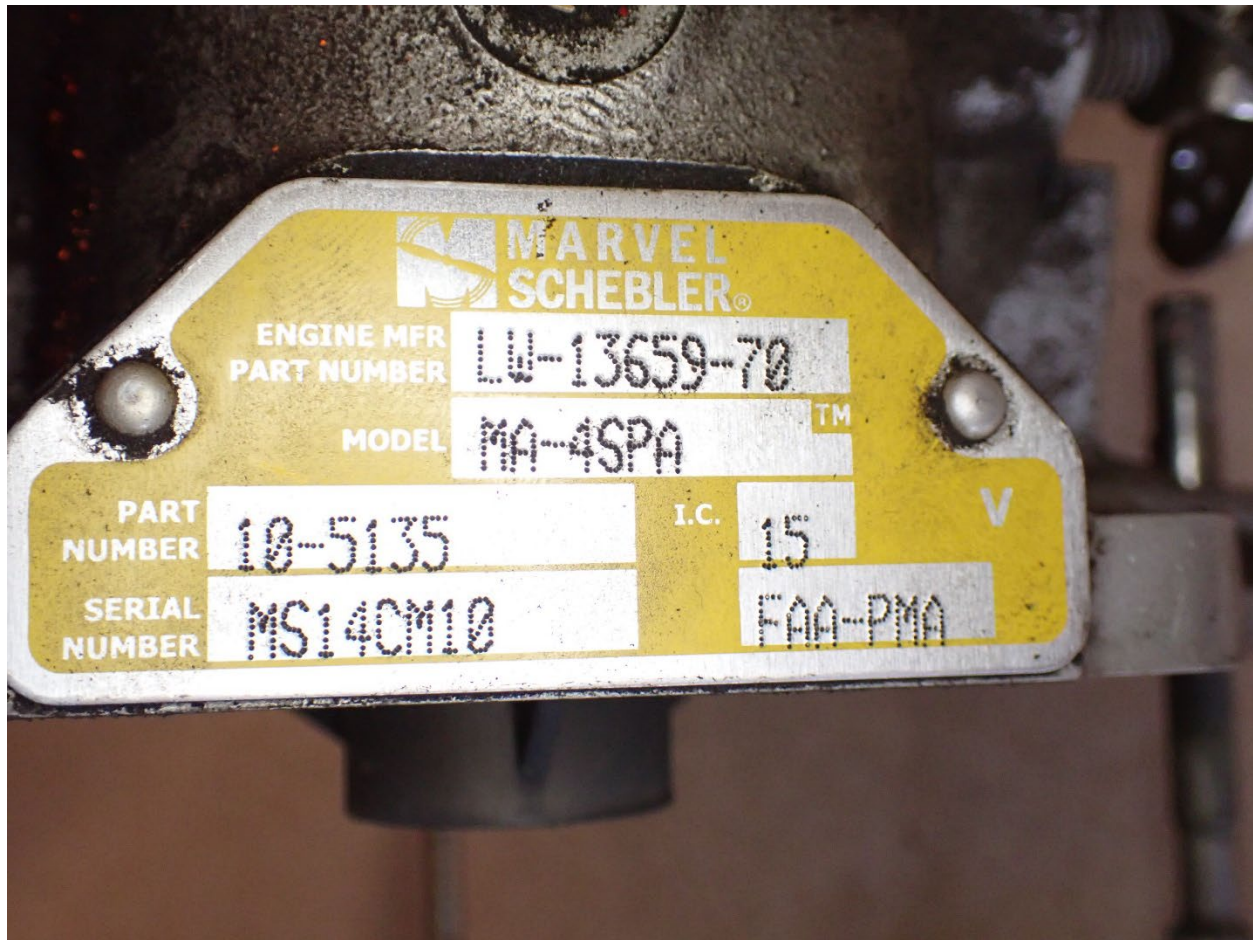


Figure 8: View of N46028's carburetor data plate

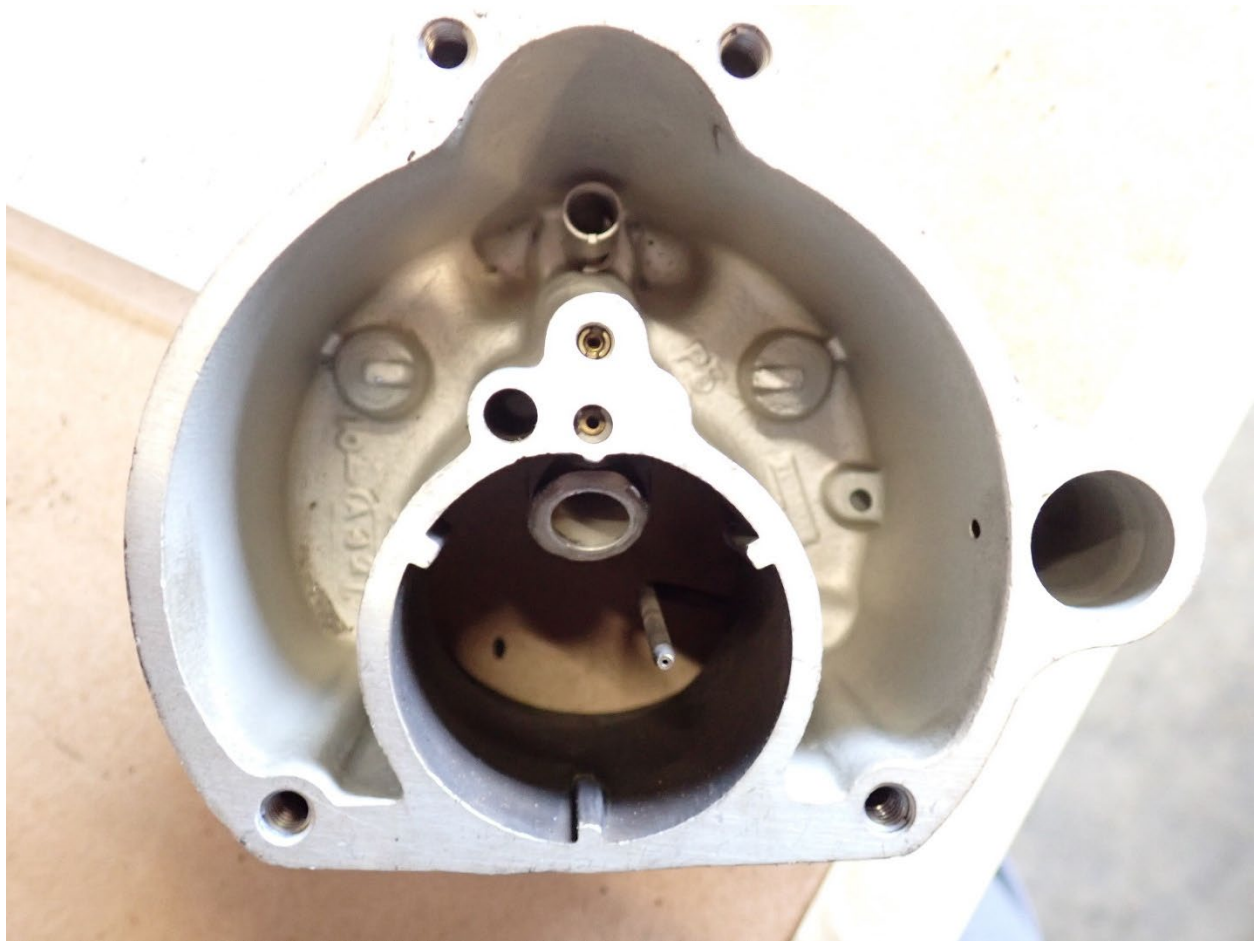


Figure 9: View of the carburetor bowl during disassembly for examination

3.0 Engine Examination

Manufacture: Lycoming
Model: O-320-E2D
S/N: L-22631-27A

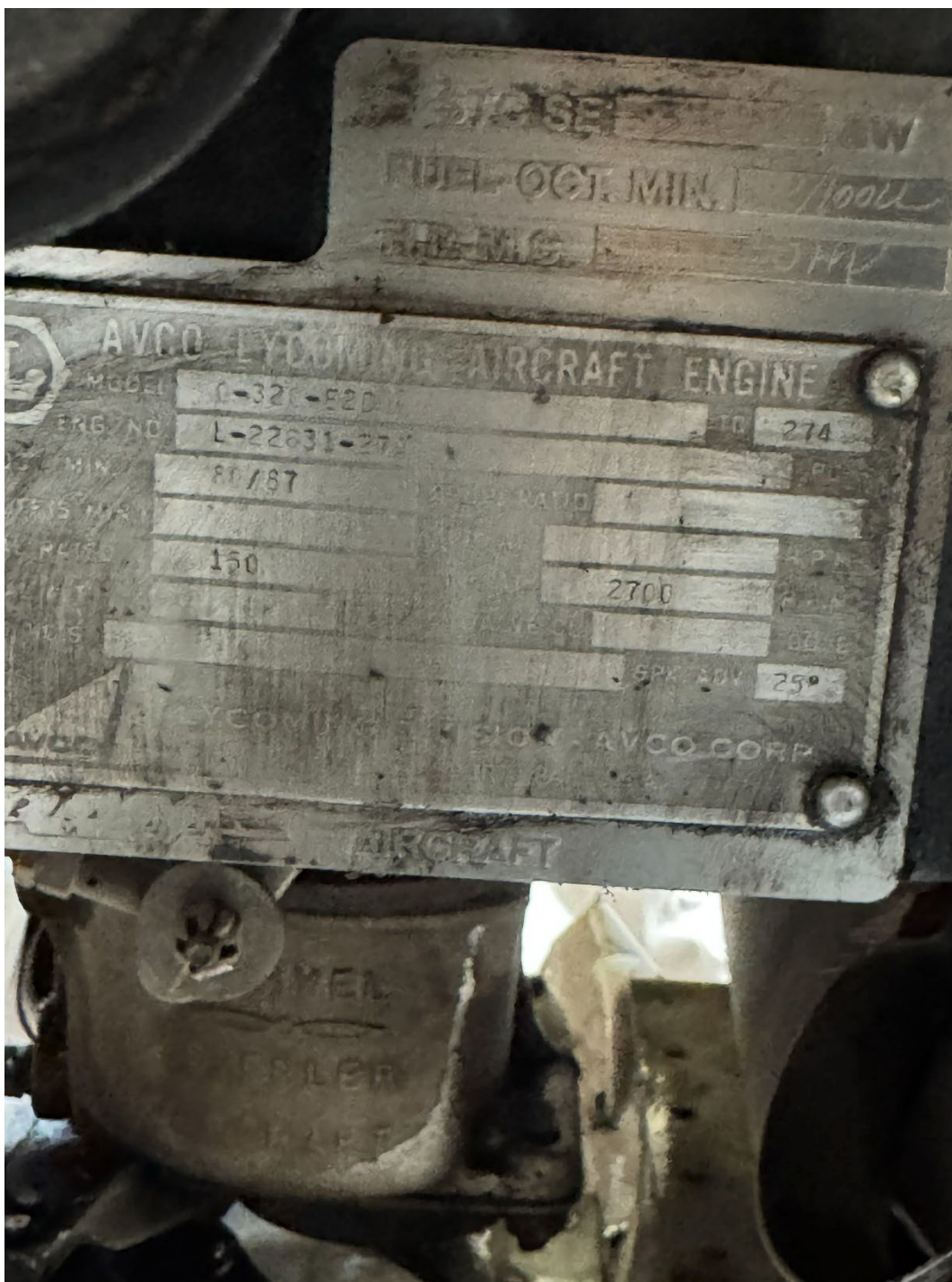


Figure 10: View of N46028's engine data plate

The engine instruments indicated an hour meter reading of 3,143.4 hours, a tachometer reading of 0 rpm, and 2,223.5 tach hours. The manifold pressure, cylinder head temperature (CHT), and fuel pressure gauges were unremarkable. Oil pressure indicated 0 psi, and oil temperature indicated 0°. The exhaust gas

temperature (EGT), fuel flow, ammeter, and voltmeter indications were displayed digitally.

The engine remained partially attached to the airframe with damage sustained to the engine mounts, and the propeller remained attached to the engine. The push pull tube housings were unremarkable, valve train continuity was established by rotating the propeller through by hand with equal travel of the intake and exhaust valves observed on all cylinders. Thumb compression was verified on all cylinders. The carburetor inlet screen was found clean. A lighted borescope was introduced to each cylinder with no anomalies observed within the cylinder, piston face, or intake and exhaust valves.

Both the left and right magnetos remained securely attached to the engine. Spark testing revealed that the left magneto produced spark on all leads, while the right magneto spark results required bench testing. Magneto-to-engine timing checks revealed the right magneto was equipped with an impulse coupling, timed to 25° before top dead center (BTDC), and the left magneto was timed to 15° BTDC. Unlike the left magneto, the right magneto was not equipped with an impulse coupling. Because the specified timing tolerance was $25^\circ \pm 2^\circ$, the left magneto timing was set beyond allowable limits. The left magneto produced spark on all leads. Although the right magneto did not produce spark during the initial examination, it was removed and bench tested, where it produced spark normally when rotated at sufficient speed. The ignition switch was accurately configured and operational when checked at the Left magneto, Right magneto, Both, and Off positions using a multimeter. All spark plugs were classified as worn when evaluated in accordance with the Champion Check-A-Plug chart, a condition consistent with normal wear.

The engine oil filter was removed, opened and no mantellic debris was observed within the filter material when assessed using a magnet to isolate particle. The oil sump filter screen was removed and was clean with no debris observed.

4.0 Propeller Examination

The fixed pitch propeller remained attached to the engine. One propeller blade was relatively straight, while the other blade exhibited an approximately 60° aft bend located about 21 inches from the hub, with the blade tip bent forward.

Submitted by:

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Air Safety Investigator