



Memorandum For Record

Timothy W. Monville
Sr. Air Safety Investigator
Eastern Region

Date: 9/13/2023
NTSB Accident Number: ERA23LA162

A review of the engine logbook revealed the following information.

12/31/1979-Factory Overhauled Magneto (Accident) SN 6156 installed in accordance with (IAW) Airworthiness Directive 79-18-06. Tach Time 180 (Figure 1).

10/25/2006 -CW AD 05-12-06 and SB 645 at tach time 1,241.4 due next 1,341.

7/24/2019- 500-Hour Service on Magneto Performed ALL parts Re-used. Tach time 1,542.3 (Figure 2).

7/24/2020 – Annual engine inspection IAW 14 *CFR* Part 43 Appendix D, which included checking magneto to engine timing. This entry was signed by the same mechanic who did the 500-Hour Magneto service. Tach Time 1,565.9 (Figure 3).

11/4/2021 - Annual engine inspection IAW 14 *CFR* Part 43 Appendix D, which included checking magneto to engine timing. This entry was signed by the same mechanic who did the 500-Hour Magneto service. Tach Time 1,596.2 (Figure 4).

12/12/2022 – Annual inspection. The entry did not specify the source for the inspection or whether magneto to engine timing was completed. The entry was signed by a different mechanic than the one who had done the 500-Hour Magneto service and then 2 subsequent annual inspections. Tach Time 1,635.0 (Figure 5).

3/23/2023- Accident. Tach time 1,654.0 (Figure 6).

Thus, the magneto had accrued 1,474 hours and 43 years, 2 months and 23 days since it was last overhauled, and 111.7 hours and 3 years, 7 months and 30 days since the last 500-hour service was performed.

ENGINE LOG					SIGNATURE	LICENSE NUMBER
DATE	DURATION	ACCUMULATED TOTAL TIME		REPAIRS --- ADJUSTMENTS		
18		HOURS	10THS			
DATE 12-31-79	TACH - 180			W.D. 0721 NASHUA AVIATION & SUPPLY CO. INC. Boire Field, Nashua, NH FAA Approved Repair Station #E15-20 CHIEF OF MAINT AEP		
				① CW AD 79-18-06 BENDIX DUAL MAG. A. INSTALLED FACTORY OVERHAULED MAGNETO SN 6156		
				② CHANGE OIL PRESS & LT FUEL GAUGE LUSTER USING CESSNA KIT JK 177-370		
				③ CHANGE OIL & REFILL AD 65W		
1-17-80	TACH 194			INSTALLED NEW ALTERNATOR TAG BACK OF LOG AEP		

CARRY ACCUMULATED TOTAL TIME FORWARD TO TOP OF NEXT PAGE

Figure 1: Entry December 31, 1979.

YEAR	RECORDING TACH	TODAY'S FLIGHT	TOTAL TIME IN	Description of Inspections, Tests, Repairs and Alterations
20	SAM		20.4hrs	ENGINE LOG N13612 CESSNA C177B M/N: O-360-A1F6D S/N: L-21128-36A TACH: 1542.3 TT: 1542.3 July 24, 2019
DATE	HUDSON, NH			C/W ANNUAL ENGINE INSPECTION IAW 14CFR 43 APPENDIX D - PERFORMED COMPRESSION CHECK (1/72, 2/76, 3/73, 4/75) - CHECKED FOR ENGINE AND EXHAUST PROBLEMS - OIL & FILTER CHANGED 20 HOURS AGO - INSPECTED CARBURETOR, STARTER, PROPELLER GOVERNOR AND OTHER ENGINE ACCESSORIES FOR SECURITY AND CONDITION - CHECKED ENGINE CONTROLS TRAVEL, SAFETYING & LUBRICATED CONTROLS - REPLACED FAILED THROTTLE CABLE (SEE AIRFRAME LOG) - CLEANED & INSPECTED SPARK PLUGS - CLEANED, TESTED FUEL PRIMERS - PERFORMED 500 HOUR SERVICE ON BENDIX DUAL MAGNETO M/N: D4LN-2021, S/N: 6156K; CLEANED, TESTED (MEASURED) AND REUSED ALL PARTS - INTERNALLY TIMED MAGNETO AND TIMED MAGNETO TO ENGINE - CHECKED CARBURETOR AIR BOX FOR CONDITION AND INSTALLATION - RAN ENGINE & CHECKED FOR CORRECT OPERATION AND LEAKS - END.
				I CERTIFY THIS ENGINE HAS BEEN INSPECTED IN ACCORDANCE WITH AN ANNUAL INSPECTION AND IS AIRWORTHY.
	FRANK E. SOUSA			
	IA [REDACTED] AP [REDACTED]			
	MAGS DUE: 2042			
7/27/19	TACH 1542.3			Replaced air filter dammit- Brackett BA5705 [REDACTED]

Figure 2: Entry July 24, 2019.

YEAR	RECORDING TACH TIME	TODAY'S FLIGHT	TOTAL TIME IN SERVICE	Description of Inspections, Tests, Repairs and Alterations Entries must be endorsed with Name, Rating and Certificate Number of Technician or
20				
SAM HUDSON, NH P:				23.6hrs ENGINE LOG N13612 CESSNA C177B M/N: O-360-A1F6D S/N: L-21128-36A TACH: 1565.9 TT: 1565.9 July 24, 2020
C/W ANNUAL ENGINE INSPECTION IAW 14CFR 43 APPENDIX D - PERFORMED COMPRESSION CHECK (1/70, 2/74, 3/73, 4/74) - CHECKED FOR ENGINE AND EXHAUST PROBLEMS - CHANGED OIL AND SERVICED WITH 7 QUARTS PHILLIPS X/C 20W-50 AVIATION OIL - R&R OIL FILTER AND INSTALLED NEW AA48103-1 OIL FILTER (CHECKED OLD FILTER FOR DEBRIS - NONE) - INSPECTED CARBURETOR, STARTER, PROPELLER GOVERNOR AND OTHER ENGINE ACCESSORIES FOR SECURITY AND CONDITION - CHECKED ENGINE CONTROLS TRAVEL, SAFETYING & LUBRICATED CONTROLS - CLEANED, INSPECTED & GAPPED SPARK PLUGS - CLEANED, INSPECTED & TESTED FUEL PRIMERS - CHECKED MAGNETO TIMING TO ENGINE - CHECKED CARBURETOR AIR BOX FOR CONDITION AND INSTALLATION - RAN ENGINE & CHECKED FOR CORRECT OPERATION AND LEAKS - END.				
I CERTIFY THIS ENGINE HAS BEEN INSPECTED IN ACCORDANCE WITH AN ANNUAL INSPECTION AND IS AIRWORTHY.				
FRANK E. SOUSA IA [REDACTED] RP [REDACTED]				
MAGS DUE: 2042				
7/27/21	1565.9			Replaced air filter element - Brackett BA5705

Figure 3: Entry July 24, 2020.

YEAR	RECORDING TACH TIME	TODAY'S FLIGHT	TOTAL TIME IN SERVICE	Description of Inspections, Tests, Repairs and Alterations Entries must be endorsed with Name, Rating and Certificate Number of Technician or
SAM HUDSON, NH P:				30.2hrs ENGINE LOG N13612 CESSNA C177B M/N: O-360-A1F6D S/N: L-21128-36A TACH: 1596.2 TT: 1596.2 November 4, 2021
C/W ANNUAL ENGINE INSPECTION IAW 14CFR 43 APPENDIX D - PERFORMED COMPRESSION CHECK (1/76, 2/75, 3/74, 4/76) - CHECKED FOR ENGINE AND EXHAUST PROBLEMS - INSPECTED CARBURETOR, STARTER, PROPELLER GOVERNOR AND OTHER ENGINE ACCESSORIES FOR SECURITY AND CONDITION - CHECKED ENGINE CONTROLS TRAVEL, SAFETYING & LUBRICATED CONTROLS - CLEANED, INSPECTED & GAPPED SPARK PLUGS - CLEANED, INSPECTED & TESTED FUEL PRIMERS - CHECKED MAGNETO TIMING TO ENGINE - CHECKED CARBURETOR AIR BOX FOR CONDITION AND INSTALLATION - RAN ENGINE & CHECKED FOR CORRECT OPERATION AND LEAKS - END.				
I CERTIFY THIS ENGINE HAS BEEN INSPECTED IN ACCORDANCE WITH AN ANNUAL INSPECTION AND IS AIRWORTHY.				
FRANK E. SOUSA IA [REDACTED] RP [REDACTED]				
MAGS DUE: 2042				
11/7/21	TACH: 1596.2			Replaced air filter element - Brackett BA-5705

Figure 4: Entry November 4, 2021.

YEAR 20 DATE	RECORDING TACH TIME	TODAY'S FLIGHT	TOTAL TIME IN SERVICE	Description of Inspections, Tests, Repairs and Alterations Entries must be endorsed with Name, Rating and Certificate Number of Technician or Repair Facility. (See back pages for other specific entries.)																		
12-12-22	1635.0		1635.0	<p>CHANGED OIL AND FILTER. SERVICED w/ 8 QT. PHILLIPS XC AND CAM GUARD. CLEAN, INSP. AND REGAP SPARK PLUGS. LEAK CHECK AND RUN UP OK</p> <table border="1"> <tr> <th colspan="6">COMPRESSION</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> </tr> <tr> <td>70</td> <td>80</td> <td>72</td> <td>80</td> <td>70</td> <td>80</td> </tr> </table> <p>I Certify That This <u>ENGINE</u> Has Been Inspected In Accordance With <u>AN ANNUAL</u> Inspection And Was Determined To Be In Airworthy Condition. Time In Service: <u>1635.0</u> Date <u>12-12-22</u> Signed <u>[Signature]</u> <u>IA</u></p>	COMPRESSION						1	2	3	4	5	6	70	80	72	80	70	80
COMPRESSION																						
1	2	3	4	5	6																	
70	80	72	80	70	80																	

Figure 5: Entry December 12, 2022.



Figure 6: FAA Digital Photograph. View of the Tachometer Taken PostAccident. Note the reading 1,654.0.