



Memorandum For Record

Timothy W. Monville
Sr. Air Safety Investigator
Eastern Region

Date: February 26, 2018
NTSB Accident Number: ERA17LA163

Narrative:

Mr. Don George of Don George LLC, provided an e-mail on May 9, 2017, at 1533 EDT, to the FAA inspector-in-charge, advising of the results of the engine inspection and run. The e-mail was sent from [REDACTED] The verbiage below is cut and pasted in its entirety without corrections.

“Ms. King,
Please see our findings regarding Lycoming IO-540-AE1A5, SN L-31062-48A visual inspection and test run.

- 1) Engine received 4/26/2017 a visual inspection was performed of the exterior engine casing, cylinder assemblies, including push rods, pushrod tubes, accessory casing, oil sump and attached engine accessories.
- 2) The spark plugs were removed and visually inspected for damage.
- 3) Engine rotated to check piston to crankshaft continuity
- 4) Compression was verified on each cylinder by placing a thumb over the top spark plug hole and rotating in direction of rotation
- 5) The fuel servo screen was removed and visually inspected for debris and o-ring placement, screen reinstalled as removed
- 6) Engine installed on test stand
- 7) Engine serviced with AEROSHELL 100W and rotated with starter to establish oil pressure
- 8) All spark plugs reinstalled and torqued
- 9) Engine operated for approx. 50 minutes at differing RPM,s , (first operation 15 minutes, second operation 25 minutes and the third operation 10 minutes) 10 minutes into the third run the left hand magneto failed magneto check.
- 10) Spark plugs and P leads were visually verified

- 11) CMI magneto, PN 10-600616-9, SN E05IA533 removed from the left position
- 12) Gear train ,exposed to view once magneto removed, was visually inspected for conformity
- 13) Right hand magneto timing verified at 20 degrees BTDC
- 14) CMI rebuilt magneto , PN BL-600616-9, SN E14GA221R installed in left position at 20 degrees BTDC
- 15) Engine operation resumed, normal magneto drop verified, operated approx. 15 minutes
- 16) Engine operated an additional 50 minutes in two separate runs. Operation appeared normal at this time
- 17) Engine removed from test stand, No other work performed

Sincerely,

Don George

Don George LLC.

PS. Please acknowledge receipt”

The digest was cut and pasted into this Memorandum For Record

Don George Aircraft
Orlando, Florida
407-422-0188

Date: 4/26/17

Engine Type: IO 540-AE1A5

Total Run Time:

Engine Serial #: L-31062-48A

Inspector: [REDACTED]

Work Order #: AIRFLORIDA

Engine Test Run Log

Elapsed Time Minutes	RPM	Manifold Pressure PSI	Oil Pressure Start / End	Oil Temperature Fahrenheit	CNH @ END OF RUN	Left / Right	Un-metered Fuel Pressure	Metered DATA Pressure DIFF	Remarks
5:00	1200	13.5	89 73	121	5-329				3 BLADE PROP
8:00	1500	15.5	78 73	145	3-300				O/S A/T 82°
10:00	1800	18.5	80 76	165	1-260	75 75			VEEDATHERM WORKS
12:00	1500	16	68 68	170	6-309				
14:00	1200	14	65 65	171	4-300				
10	800	14	65	171	2-240				
5:00	1200	13.5	70 67	126	5-372			64/63	O/S A/T 84°
10:00	1500	15.5	74 70	151	3-330			85 - 70 - 30"	
15:00	1900	18.5	76 72	179	1-275	100 75		@ 2600 RPM	
20:00	1500	15.5	66 67	181	6-339			52/58	
25:00	1200	14.5	61 59	181	4-326			53/58	
10	1200	14.5	62	181	2-265			54	
5:00	1200	13.5	74 68	126	5-368			66-63	O/S A/T 95°
10:00	1500	16	72 70	155	3-320				LT MAG FAILED
15:00	1900	18.5	78 73	180	1-278	75 75			INSTALLED NEW MAG
10	2750	30	84	182	6-340			72	
20:10	1500	16	65 66	182	4-328			57/58	
25:10	1200	14	60 60	183	2-268			53/53	
10	1200	14	60	181				54	
5:00	1200	13.5	72 67	135				65/63	O/S A/T 95°
10:00	1500	16	72 70	158	5-370			65/62	
15:00	1900	18.5	76 73	181	3-321	75 75		66/64	
16:00	1500	16	65 65	182	1-279			57/57	
17:00	1200	14	60 60	182	6-343			53/53	
(10 sec.)	2750	30	84	181	4-328			70	
20:10	1500	16	65 66	184	2-264			57/58	
23:10	1200	13.5	60 60					53/53	
10	1200	13.5	61					54	

WARM START

4/22

HOT START

4/10/91

	1200								
	800								
5:00	1200	14	85 75	118			74/67		O/S A/T 75°
10:00	1500	16	80 74	139	5-350		70/64		
15:00	1900	19.5	79	75	173	3-300	75 75	68/64	
18	2750	30	85	173	1-250		71		
20:10	1500	16	68 69	175	6-330		59/60		
25:10	1200	14	63 63	176	4-302		56/56		
	1200	14	63	176	2-244		56		
	1200								
	1500								
	1900								
	1500								
	1200								
(10 sec.)	2400								
	1500								
	1200								
	800								

