

ENGINE LOG BOOK



Engine Log & Maintenance Record

LOG #: 1

RECORD OF Lycoming 10-540-AE1A5 L-20153-48E
(MAKE) (MODEL) (SERIAL)

AIRCRAFT REGISTRATION NUMBER: N440AH

FROM May, 020 2016 TO _____ 20____

DETAILING TIME FROM 2200 TO _____
(HOURS) (HOURS)

If used on a multi-engine aircraft: ____Right ____Left ____Front ____Rear

Overhaul Reciprocating Engine Certificate

This is to certify that the engine as described hereinafter has been OVERHAULED in accordance with the applicable Lycoming specifications. It has been determined airworthy to return to service and is in a condition for safe operation. All applicable Federal Aviation Administration Airworthiness Directives and Lycoming Service Publications have been complied with. All accessories as part of the type certificate are new or newly rebuilt or newly overhauled. Refer to enclosed Form ET001 for applicable accessory part numbers and serial numbers.

Part Number: HENPL-RT10356
Serial Number: L-20153-48E
Engine Model: IO-540-AE1A5
Work Order: HP633939
Total Time: 1993.4

Form 2480 Rev 05/13

Repair Station EJ1R115K

652 Oliver Street Williamsport, PA 17701 U.S.A
Lycoming Engines is a division of Avco Corporation

Engine Log

Serial # _____

Date	Time Run (Hours)	Total Time Since Overhaul	Repairs, Adjustments, Service, Remarks	Signature	Licence #
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BROUGHT FORWARD

05-02-2016 N440AH Lycoming IO-540-AE1A5 s/n: L-20153-48E
Aircraft Total Time: 2200.0 Hobbs: 2200.0 Engine Total Time: 1993.4 Engine TSMOH: 0.0
Installed this engine IO-540-AE1A5 s/n: L-20153-48E in Robinson R44-II N440AH at 2200hr Overhaul and Inspection. Serviced engine with 8qts Aeroshell W100 mineral oil, and new filter p/n CH48108-1. Ground ran aircraft and checked for leaks, none found.

05-02-2016 N440AH Hobbs: 2200.0 Engine TT: 1993.4 Engine TSMOH: 0.0
Performed an ANNUAL inspection per Lycoming O-540/IO-540 Operators Manual, P/N 60297-10 section 4, per RMM section 1.000. Performed cylinder compression check IAW Lycoming SI 1191A, compressions were all better than 70/80. Complied with Lycoming SI 1080C by inspection of items for special attention. C/W AD 2015-19-07 by inspection of fuel injector lines and clamps IAW Lycoming SB324F. Checked alternator belt tension IAW Lycoming SI 1129B. Performed operational check of engine IAW FAR 43.15 (c) (2) and found satisfactory. No outstanding AD's found against this engine through BW 2016-08. All maintenance accomplished IAW Lycoming Operators Manual P/N 60297-10, Sec 4, per RMM section 1.000. I certify that this engine has been inspected IAW an ANNUAL inspection and was determined to be in airworthy condition.

05-17-2016 N440AH Hobbs Time: 2209.82
Changed oil and filter serviced with 8qts Aeroshell W100 plus and new CH48108-1 filter. Checked magneto to engine timing. Ran engine no leaks found.

05-26-2016 N440AH Hobbs Time: 2227.62
Performed 25hr oil change (oil only) serviced with 8qts Aeroshell Mineral 100 oil. Ran engine and checked for leaks.

06-08-2016 N440AH Hobbs Time: 2249.65
Performed 50hr inspection Per Lycoming Operators Manual chapter 5 and Lycoming SB 480E. Changed oil and filter serviced with 8qts Aeroshell W100 plus and new CH48108-1 filter. Ran engine no leaks found. I certify that this engine was inspected IAW a 50hr inspection and was determined to be in airworthy condition.

07-06-2016 N440AH Hobbs: 2300.33 Engine TT: 2093.73 Engine TSMOH: 100.33
Performed a 100hr inspection per Lycoming O-540/IO-540 Operators Manual, P/N 60297-10 section 4, per RMM section 1.000. Performed cylinder compression check IAW Lycoming SI 1191A, compressions: 1-78/80, 2-68/80, 3-70/80, 4-70/80, 5-72/80, 6-70/80. Changed oil and filter, serviced with 8qts Aeroshell W100 plus and new CH48108-1 filter. Adjusted exhaust clamps on RH side. Complied with Lycoming SI 1080C by inspection of items for special attention. C/W AD 2015-19-07 by inspection of fuel injector lines and clamps IAW Lycoming SB324F. Checked alternator belt tension IAW Lycoming SI 1129B. Performed operational check of engine IAW FAR 43.15 (c) (2) and found satisfactory. No outstanding AD's found against this engine through BW 2016-13. All maintenance accomplished IAW Lycoming Operators Manual P/N 60297-10, Sec 4, per RMM section 1.000. I certify that this engine has been inspected IAW a 100hr inspection and was determined to be in airworthy condition.

Brought Forward:

Total to Date:

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Serial # _____

Date	Time Run (Hours)	Total Time Since Overhaul	Repairs, Adjustments, Service, Remarks	Signature	Licence #
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07-26-2016 N440AH Hobbs Time: 2349.93
Performed 50hr inspection Per Lycoming Operators Manual chapter 5 and Lycoming SB 480E. Changed oil and filter serviced with 8qts Aeroshell W100 plus and new CH48108-1 filter. Ran engine no leaks found. I certify that this engine was inspected IAW a 50hr inspection and was determined to be in airworthy condition.

08-08-2016 N440AH Hobbs Time: 2377.41
Performed 75hr oil change (oil only) serviced with 8qts Aeroshell W100 plus oil. Ran engine and checked for leaks.

08-17-2016 N440AH Hobbs: 2399.28 Engine TT: 2192.68 Engine TSMOH: 199.28
Performed a 100hr inspection per Lycoming O-540/IO-540 Operators Manual, P/N 60297-10 section 4, per RMM section 1.000. Performed cylinder compression check IAW Lycoming SI 1191A, compressions: 1-70/80, 2-70/80, 3-72/80, 4-70/80, 5-72/80, 6-70/80. Changed oil and filter, serviced with 8qts Aeroshell W100 plus and new CH48108-1 filter. Complied with Lycoming SI 1080C by inspection of items for special attention. C/W AD 2015-19-07 by inspection of fuel injector lines and clamps IAW Lycoming SB324F. Checked alternator belt tension IAW Lycoming SI 1129B. Performed operational check of engine IAW FAR 43.15 (c) (2) and found satisfactory. No outstanding AD's found against this engine through BW 2016-16. All maintenance accomplished IAW Lycoming Operators Manual P/N 60297-10, Sec 4, per RMM section 1.000. I certify that this engine has been inspected IAW a 100hr inspection and was determined to be in airworthy condition.

08-26-2016 N440AH Hobbs Time: 2421.70
Replaced bent push rod p/n 15F19957-53 on #2 cylinder exhaust valve, checked and reamed #2 exhaust valve guide IAW Lycoming SB388C. Ran engine, functionally checked operation, no leaks found.

08-31-2016 N440AH Hobbs Time: 2431.47
Performed 25hr oil change (oil only) serviced with 8qts Aeroshell W 100 plus oil. Ran engine and checked for leaks.

09-06-2016 N440AH Hobbs Time: 2449.78
Performed 50hr inspection Per Lycoming Operators Manual chapter 5 and Lycoming SB 480E. Changed oil and filter serviced with 8qts Aeroshell W100 plus and new B123-2 filter. Ran engine no leaks found. I certify that this engine was inspected IAW a 50hr inspection and was determined to be in airworthy condition.

09-22-2016 N440AH Hobbs Time: 2470.68
Checked and reamed #1,3,4,5,6 exhaust valve guides IAW Lycoming SB388C, reassembled and ran engine, functionally checked operation, no leaks found.

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Engine Log

Serial # _____

Date	Time Run (Hours)	Total Time Since Overhaul	Repairs, Adjustments, Service, Remarks	Signature	Licence #
BROUGHT FC					
09-26-2016	N440AH	Hobbs Time: 2475.46	Performed 75hr oil change (oil only) serviced with 8qts Aeroshell W 100 plus oil. Ran engine and checked for leaks.		
11-16-2016	N440AH	Hobbs: 2499.86 Engine TT: 2293.26 Engine TSMOH: 299.86	Performed a 100hr inspection per Lycoming O-540/IO-540 Operators Manual, P/N 60297-10 section 4, per RMM section 1.000. Performed cylinder compression check IAW Lycoming SI 1191A, compressions: 1-72/80, 2-74/80, 3-75/80, 4-74/80, 5-74/80, 6-74/80. Changed oil and filter, serviced with 8qts Aeroshell W100 plus and new B123-2 filter. Complied with Lycoming SI 1080C by inspection of items for special attention. Replaced all spark plugs with new spark plugs p/n REM38E. C/W AD 2015-19-07 by inspection of fuel injector lines and clamps IAW Lycoming SB324F. Checked alternator belt tension IAW Lycoming SI 1129B. Performed operational check of engine IAW FAR 43.15 (c) (2) and found satisfactory. No outstanding AD's found against this engine through BW 2016-23. All maintenance accomplished IAW Lycoming Operators Manual P/N 60297-10, Sec 4, per RMM section 1.000. I certify that this engine has been inspected IAW a 100hr inspection and was determined to be in airworthy condition.		
12-21-2016	N440AH	Hobbs Time: 2526.49	Performed 25hr oil change (oil only) serviced with 7qts Aeroshell W100 plus oil. Ran engine and checked for leaks.		
01-27-2017	N440AH	Hobbs Time: 2549.36	Performed 50hr inspection Per Lycoming Operators Manual chapter 5 and Lycoming SB 480E. Changed oil and filter serviced with 8qts Aeroshell W100 plus and new CH48108-1 filter. Ran engine no leaks found. I certify that this engine was inspected IAW a 50hr inspection and was determined to be in airworthy condition.		
02-20-2017	N440AH	Hobbs Time: 2575.7	Performed 25hr oil change (oil only) serviced with 7qts Aeroshell W100 plus oil. Ran engine and checked for leaks.		

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Date	Time Run (Hours)	Total Time Since Overhaul	Repairs, Adjustments, Service, Remarks	Signature	Licence #
BRO					
03-16-2017	N440AH	Hobbs: 2599.51 Engine TT: 2392.91 Engine TSMOH: 399.51	Performed a 100hr inspection per Lycoming O-540/IO-540 Operators Manual, P/N 60297-10 section 4, per RMM section 1.000. Performed cylinder compression check IAW Lycoming SI 1191A, compressions: 1-73/80, 2-69/80, 3-76/80, 4-74/80, 5-78/80, 6-71/80. Changed oil and filter, serviced with 8qts Aeroshell W100 plus and new CH48108-1 filter. Complied with Lycoming SI 1080C by inspection of items for special attention. C/W AD 2015-19-07 by inspection of fuel injector lines and clamps IAW Lycoming SB324F. Checked alternator belt tension IAW Lycoming SI 1129B. Performed operational check of engine IAW FAR 43.15 (c) (2) and found satisfactory. No outstanding AD's found against this engine through BW 2016-23. All maintenance accomplished IAW Lycoming Operators Manual P/N 60297-10, Sec 4, per RMM section 1.000. I certify that this engine has been inspected IAW a 100hr inspection and was determined to be in airworthy condition.		
04-20-2017	N440AH	Hobbs Time: 2648.30	Performed 50hr inspection Per Lycoming Operators Manual chapter 5 and Lycoming SB 480E. Changed oil and filter serviced with 8qts Aeroshell W100 plus and new CH48108-1 filter. Ran engine no leaks found. I certify that this engine was inspected IAW a 50hr inspection and was determined to be in airworthy condition.		
05-11-2017	N440AH	Hobbs Time: 2674.64	Performed 75hr oil change (oil only) serviced with 7qts Aeroshell W100 plus oil. Ran engine and checked for leaks.		
06-02-2017	N440AH	Hobbs: 2692.93 Engine TT: 2486.33 Engine TSMOH: 492.93	Performed an ANNUAL inspection per Lycoming O-540/IO-540 Operators Manual, P/N 60297-10 section 4, per RMM section 1.000. Performed cylinder compression check IAW Lycoming SI 1191A, compressions were: 1-77/80, 2-60/80, 3-70/80, 4-70/80, 5-70/80, 6-72/80. Complied with Lycoming SB 388C by inspection of exhaust valve guides. Removed both breaker points p/n AB382585 in both magnetos. Installed doubler on LH FWD baffle to repair crack IAW AC43.13-1(b). Complied with Lycoming SI 1080C by inspection of items for special attention. C/W AD 2015-19-07 by inspection of fuel injector lines and clamps IAW Lycoming SB324F. Checked alternator belt tension IAW Lycoming SI 1129B. Performed operational check of engine IAW FAR 43.15 (c) (2) and found satisfactory. No outstanding AD's found against this engine through BW 2017-11. All maintenance accomplished IAW Lycoming Operators Manual P/N 60297-10, Sec 4, per RMM section 1.000. I certify that this engine has been inspected IAW an ANNUAL inspection and was determined to be in airworthy condition.		
07-19-2017	N440AH	Hobbs Time: 2741.57	Performed 50hr inspection Per Lycoming Operators Manual chapter 5 and Lycoming SB 480E. Changed oil and filter serviced with 8qts Aeroshell W100 plus and new CH48108-1 filter. Ran engine no leaks found. I certify that this engine was inspected IAW a 50hr inspection and was determined to be in airworthy condition.		

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Engine Log

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Date	Time Run (Hours)	Total Time Since Overhaul	Repairs, Adjustments, Service, Remarks	Signature	Licence #
09-01-2017	N440AH	Hobbs Time: 2768.57	Performed 50hr inspection Per Lycoming Operators Manual chapter 5 and Lycoming SB 480E. Changed oil and filter serviced with 8qts Aeroshell W100 plus and new CH48108-1 filter. Ran engine no leaks found. I certify that this engine was inspected IAW a 50hr inspection and was determined to be in airworthy condition.	[Redacted]	[Redacted]
10-25-2017	N440AH	Hobbs: 2793.08 Engine TT: 2586.48 Engine TSMOH: 593.08	Performed a 100hr inspection per Lycoming O-540/IO-540 Operators Manual, P/N 60297-10 section 4, per RMM section 1.000. Performed cylinder compression check IAW Lycoming SI 1191A, compressions: 1-75/80, 2-68/80, 3-74/80, 4-74/80, 5-75/80, 6-73/80. Changed oil and filter, serviced with 8qts Aeroshell W100 plus and new CH48108-1 filter. Removed RH mag to adjust internal timing and adjusted LH mag timing to engine. Complied with Lycoming SI 1080C by inspection of items for special attention. C/W AD 2015-19-07 by inspection of fuel injector lines and clamps IAW Lycoming SB324F. Checked and adjusted alternator belt tension IAW Lycoming SI 1129B. Performed operational check of engine IAW FAR 43.15 (c) (2) and found satisfactory. No outstanding AD's found against this engine through BW 2017-21. All maintenance accomplished IAW Lycoming Operators Manual P/N 60297-10, Sec 4, per RMM section 1.000. I certify that this engine has been inspected IAW a 100hr inspection and was determined to be in airworthy condition.	[Redacted]	[Redacted]
11-24-2017	N440AH	Hobbs Time: 2813.78	Replaced defective crankshaft seal p/n SL13792, reinstalled all components in same orientation. Ran engine no leaks found, checked fan balance IAW RMM no defects noted. Repaired lower fan shroud A-185 bracket IAW R44 SL 61 in order to comply with R44 SB-94.	[Redacted]	[Redacted]
01-11-2018	N440AH	Hobbs Time: 2843.29	Performed 50hr inspection Per Lycoming Operators Manual chapter 5 and Lycoming SB 480E. Changed oil and filter serviced with 8qts Aeroshell W100 plus and new CH48108-1 filter. Replaced defective CHT probe p/n 3080-38. Ran engine no leaks found. I certify that this engine was inspected IAW a 50hr inspection and was determined to be in airworthy condition.	[Redacted]	[Redacted]

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1. Approving National Aviation Authority/Country: FAA/United States		2. AUTHORIZED RELEASE FAA Form 8130-3, AIRWORTHINESS	
4. Organization B & C SPECIALTY PRODUCTS INC. 123 EAST 4 TH ST. NEWTON, KS. 67114-0894		Customer: Al 85H: 682.49 S-M section 1.000. -74/80, 5-76/80, d mag timing to by inspection of Elig. Performed Ninst this engine er RMM section rthy condition.	
6. Item 1	7. Description Starter	8. Part Number BC315-100-4	9. ZG9R933X
13. Remarks: Item 1: Overhauled in accordance with B&C Specialty Products component A complete description of work performed is on file at the above referenced invoice number indicated in block 5.			

06-04-2018	N440AH	Hobbs Time: 2961.53	Replaced defective starter with overhauled starter B&C Specialty Products p/n BC315-100-4 s/n 0210240213, overhauled by B&C Specialty Products Inc. under work order 070312-0213. Functionally checked operation, and aircraft is returned to service for work performed herein.	[Redacted]	[Redacted]
06-27-2018	N440AH	Hobbs: 2982.67 Engine TT: 2776.07 Engine TSMOH: 782.67	Performed an ANNUAL inspection per Lycoming O-540/IO-540 Operators Manual, P/N 60297-10 section 4, per RMM section 1.000. Performed cylinder compression check IAW Lycoming SI 1191A, compressions were: 1-75/80, 2-66/80, 3-70/80, 4-76/80, 5-70/80, 6-76/80. Complied with Lycoming SB 388C by inspection of exhaust valve guides. Complied with Lycoming SI 1080C by inspection of items for special attention. C/W AD 2015-19-07 by inspection of fuel injector lines and clamps IAW Lycoming SB324F. Checked alternator belt tension IAW Lycoming SI 1129B. Performed operational check of engine IAW FAR 43.15 (c) (2) and found satisfactory. No outstanding AD's found against this engine through BW 2018-12. All maintenance accomplished IAW Lycoming Operators Manual P/N 60297-10, Sec 4, per RMM section 1.000. I certify that this engine has been inspected IAW an ANNUAL inspection and was determined to be in airworthy condition.	[Redacted]	[Redacted]
08-02-2018	N440AH	Hobbs Time: 3033.66	Performed 50hr inspection Per Lycoming Operators Manual chapter 5 and Lycoming SB 480E. Changed oil and filter serviced with 8qts Aeroshell W100 plus and new CH48108-1 filter. Ran engine no leaks found. I certify that this engine was inspected IAW a 50hr inspection and was determined to be in airworthy condition.	[Redacted]	[Redacted]

Brought Forward: _____

Total to Date: _____

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Authorized Signature

16. Approval/Authorization No.:

17. Name (Typed or Printed)

18. Date (m/d/y):

*User/Installer Re

It is important to understand that the existence of this document alone does not automatical

Where the user/installer work in accordance with the national regulations of an airworthiness
is essential that the user/installer ensures that his/her airworthiness authority serial #
Block 1.

Licence #

03-13-2018

N440AH

Hobbs: 2882.49

Engine TT: 2675.89

Engine TSMOH:

682.498

Performed a 100hr inspection per Lycoming O-540/IO-540 Operators Manual, P/N 60297-10 section 4, per RMM section 1.000. Performed cylinder compression check IAW Lycoming SI 1191A, compressions: 1-72/80, 2-74/80, 3-76/80, 4-74/80, 5-76/80, 6-72/80. Changed oil and filter, serviced with 8qts Aeroshell W100 plus and new CH48108-1 filter. Checked mag timing to engine. Complied with Lycoming SI 1080C by inspection of items for special attention. C/W AD 2015-19-07 by inspection of fuel injector lines and clamps IAW Lycoming SB324F. Checked alternator belt tension IAW Lycoming SI 1129B. Performed operational check of engine IAW FAR 43.15 (c) (2) and found satisfactory. No outstanding AD's found against this engine through BW 2018-05. All maintenance accomplished IAW Lycoming Operators Manual P/N 60297-10, Sec 4, per RMM section 1.000. I certify that this engine has been inspected IAW a 100hr inspection and was determined to be in airworthy condition.

05-11-2018

N440AH

Hobbs Time: 2933.98

Performed 50hr inspection Per Lycoming Operators Manual chapter 5 and Lycoming SB 480E. Changed oil and filter serviced with 8qts Aeroshell W100 plus and new CH48108-1 filter. Ran engine no leaks found. I certify that this engine was inspected IAW a 50hr inspection and was determined to be in airworthy condition.

06-04-2018

N440AH

Hobbs Time: 2961.53

Replaced defective starter with overhauled starter B&C Specialty Products p/n BC315-100-4 s/n 0210240213, overhauled by B&C Specialty Products Inc. under work order 070312-0213. Functionally checked operation, and aircraft is returned to service for work performed herein.

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BROUGHT FORWARD

10-02-2018 N440AH Hobbs: 3083.66 Engine TT: 2877.06 Engine TSMOH: 883.66
 Performed a 100hr inspection per Lycoming O-540/IO-540 Operators Manual, P/N 60297-10 section 4, per RMM section 1.000. Performed cylinder compression check IAW Lycoming SI 1191A, compressions: 1-64/80, 2-68/80, 3-76/80, 4-72/80, 5-70/80, 6-70/80. Changed oil and filter, serviced with 8qts Aeroshell W100 plus and new CH48108-1 filter. Checked mag timing to engine. Complied with Lycoming SI 1080C by inspection of items for special attention. C/W AD 2015-19-07 by inspection of fuel injector lines and clamps IAW Lycoming SB324F, next due @ Hobbs: 3183.66. Checked alternator belt tension IAW Lycoming SI 1129B. Performed operational check of engine IAW FAR 43.15 (c) (2) and found satisfactory. No outstanding AD's found against this engine through BW 2018-19, see list in back of logbook. All maintenance accomplished IAW Lycoming Operators Manual P/N 60297-10, Sec 4, per RMM section 1.000. I certify that this engine has been inspected IAW a 100hr inspection and was determined to be in airworthy condition.

10-08-2018 N440AH Hobbs Time: 3092.5
 Removed both magnetos, cleaned, inspected, lubricated, set internal timing, and reinstalled. Functionally checked operation, and aircraft is returned to service for work performed herein.

12-10-2018 N440AH Hobbs Time: 3133.22
 Performed 50hr inspection Per Lycoming Operators Manual chapter 5 and Lycoming SB 480E. Changed oil and filter serviced with 8qts Aeroshell W100 plus and new CH48108-1 filter. Ran engine no leaks found. I certify that this engine was inspected IAW a 50hr inspection and was determined to be in airworthy condition.

02-13-2019 N440AH Hobbs: 3180.07 Engine TT: 2973.47 Engine TSMOH: 980.07
 Performed an ANNUAL inspection per Lycoming O-540/IO-540 Operators Manual, P/N 60297-10 section 4, per RMM section 1.000. Performed cylinder compression check IAW Lycoming SI 1191A, compressions were: 1-75/80, 2-76/80, 3-78/80, 4-70/80, 5-77/80, 6-70/80. Complied with Lycoming SI 1080C by inspection of items for special attention. C/W AD 2015-19-07 by inspection of fuel injector lines and clamps IAW Lycoming SB324F Next Due @ 3280.07. Checked alternator belt tension IAW Lycoming SI 1129B. Performed operational check of engine IAW FAR 43.15 (c) (2) and found satisfactory. No outstanding AD's found against this engine through BW 2019-03. All maintenance accomplished IAW Lycoming Operators Manual P/N 60297-10, Sec 4, per RMM section 1.000. I certify that this engine has been inspected IAW an ANNUAL inspection and was determined to be in airworthy condition.

04-02-2019 N440AH Hobbs Time: 3231.73
 Performed 50hr inspection Per Lycoming Operators Manual chapter 5 and Lycoming SB 480E. Changed oil and filter serviced with 8qts Aeroshell W100 plus and new CH48108-1 filter. Ran engine no leaks found. I certify that this engine was inspected IAW a 50hr inspection and was determined to be in airworthy condition.

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BROUGHT FORWARD

06-16-2019 N440AH Hobbs: 3280.06 Engine TT: 3073.46 Engine TSMOH: 1080.06
 Performed a 100hr inspection per Lycoming O-540/IO-540 Operators Manual, P/N 60297-10 section 4, per RMM section 1.000. Performed cylinder compression check IAW Lycoming SI 1191A, compressions were: 1-75/80, 2-72/80, 3-75/80, 4-74/80, 5-78/80, 6-73/80. Replaced #1 & #2 intake gaskets p/n 71973. Complied with Lycoming SB 388C by inspection of exhaust valve guides. Complied with Lycoming SI 1080C by inspection of items for special attention. C/W AD 2015-19-07 by inspection of fuel injector lines and clamps IAW Lycoming SB324F. Checked alternator belt tension IAW Lycoming SI 1129B. Performed operational check of engine IAW FAR 43.15 (c) (2) and found satisfactory. No outstanding AD's found against this engine through BW 2019-12. All maintenance accomplished IAW Lycoming Operators Manual P/N 60297-10, Sec 4, per RMM section 1.000. I certify that this engine has been inspected IAW a 100hr inspection and was determined to be in airworthy condition.

07-04-2019 N440AH Hobbs Time: 3306.02
 Performed 25hr oil change only, no filter, serviced with 7qts Aeroshell W100 Plus. Ran engine checked for leaks, none found.

07-28-2019 N440AH Hobbs Time: 3334.66
 Performed 50hr inspection Per Lycoming Operators Manual chapter 5 and Lycoming SB 480E. Changed oil and filter serviced with 8qts Aeroshell W100 plus and new CH48108-1 filter. Ran engine no leaks found. I certify that this engine was inspected IAW a 50hr inspection and was determined to be in airworthy condition.

07-30-2019 N440AH Hobbs Time: 3341.07
 Removed both magnetos, cleaned, inspected, set internal timing, lubricated, and re-installed. Ran aircraft, functionally checked operation and found satisfactory.

09-21-2019 N440AH Hobbs: 3380.27 Engine TT: 3173.67 Engine TSMOH: 1180.27
 Performed a 100hr inspection per Lycoming O-540/IO-540 Operators Manual, P/N 60297-10 section 4, per RMM section 1.000. Performed cylinder compression check IAW Lycoming SI 1191A, compressions: 1-79/80, 2-68/80, 3-78/80, 4-76/80, 5-76/80, 6-74/80. Changed oil and filter, serviced with 8qts Aeroshell W100 plus and new B123-2 filter. Checked mag timing to engine. Complied with Lycoming SI 1080C by inspection of items for special attention. Complied with Lycoming SB 388C by inspection of exhaust valve guides, all valves were within tolerance. C/W AD 2015-19-07 by inspection of fuel injector lines and clamps IAW Lycoming SB324F, next due @ Hobbs: 3482.44. Checked alternator belt tension IAW Lycoming SI 1129B. Performed operational check of engine IAW FAR 43.15 (c) (2) and found satisfactory. No outstanding AD's found against this engine through BW 2019-19, see list in back of logbook. All maintenance accomplished IAW Lycoming Operators Manual P/N 60297-10, Sec 4, per RMM section 1.000. I certify that this engine has been inspected IAW a 100hr inspection and was determined to be in airworthy condition.

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Service Bulletins, Letters, Instructions & A.D. Notes

Date: _____

AD2015-19-07 Fuel injector line Insp	%w@ 2499.86
Lyc SB 480E Oil Chg filter Insp	%w@ 2499.86
AD2015-19-07 Fuel Injector line Insp	%w@ 2599.51
Lyc SB 480E Oil Chg filter insp	%w@ 2599.51
Lyc SB 480E Oil Chg filter insp	%w@ 2692.93
Lyc SB 388C Exhaust Valve Insp	%w@ 2692.93
Lyc SB 480E Oil chg filter Insp	%w@ 2793.08
AD2015-19-07 Fuel Injector line Insp	%w@ 2793.08
AD2017-16-11 Connecting Rod Assy	N/A ^{By OVA Rate} not listed in Tables
AD2015-19-07 Fuel Inj line Insp	%w@ 2882.49
Lyc SB 480E Oil & Filter Change	%w@ 2882.49
Lyc SB 480E Oil & Filter chg	%w@ 2982.67
AD2015-19-07 Fuel Injector lines	%w@ 2982.67
Lyc SB 388C Exh Valve Insp	%w@ 2982.67
Lyc SB 480E Oil & Filter chg	%w@ 3085.64
AD2015-19-07 Fuel Inj line Insp	%w@ 3082.67
Lyc SB 480E oil & Filter Chg	%w@ 3180.07
AD2015-19-07 Fuel Inj line Insp	%w@ 3180.07
AD2015-19-07 Fuel Inj line Insp	%w@ 3280.06
Lyc SB 480E Oil & Filter Chg	%w@ 3280.06
Lyc SB 388C Exh Valve Guide Insp	%w@ 3280.06
Lyc SB 480E Oil Chg	%w@ 3382.44
AD2015-19-07 Fuel Injector line Insp	%w@ 3382.44
SB 388C Exhaust Valve Guide insp	%w@ 3382.44

Service Bulletins, Letters, Instructions & A.D. Notes

Date: _____

uctions & A.D. Notes

LYCOMING

652 Oliver Street Williamsport, PA 17701 U.S.A.

Airworthiness Directive Compliance List

Engine Model No: **IO-540-AE1A5**

Sign for AD's Coded 1 (Applicable to Engine Model) 

Engine SN: **L-20153-48E**

Feb 10, 2016

AD No. / Rev	SB / rev	Description /	Method of Compliance	Next Due	Code
73-23-01	367 / F	INSP FOR CRACKS IN PISTON PINS	INST NEW PARTS	N/A-Once	1
75-09-15	382	BENDIX FUEL INJ RS-43 INSP OF MOD OF FLOW DIVIDERS	NEW P/N GASKET INSTALLED	N/A-Once	1
94-06-09	517	INCOMPLETE INTERNAL GROUNDING ON MAG CAPACITORS	NEW CONF. CAPACITORS INSTALLED	N/A-Once	1
95-26-02	398	ENGINES OPERATED WITH LOW OCTANE FUEL	ENGINE IS NEW OR HAS BEEN REBUILT AT MANUFACTURER	N/A-Once	1
96-09-10	524	REPLACEMENT OF OIL PUMP IMPELLERS	STEEL IMPELLERS INSTALLED	N/A-Once	1
96-23-03	525 / A	HIGH PRESSURE FUEL PUMP INSTALLED LW-15473	NEWLY MANUFACTURED PUMPS INST.	N/A-Once	1
2004-10-14	475 / C	CRANKSHAFT GEAR MODIFICATION AND ASSY PROCEDURES	NEW P/N INSTALLED	N/A-Once	1
2005-12-06	425 / C	Inspection of impulse couplings and stop pins	New snap ring configured magneto installed	as per AD	1
2005-19-11	566	Crankshaft replacement	Replace Crankshaft	N/A-Once	1
2009-02-03	581	Inspection of Precision Airmotive Hex Plug in regulator cover	New improved gasket P/N 2577258 installed	N/A-Once	1
2011-26-04	342 / F	FUEL LINE AND SUPPORT CLAMP INSPECTION & INSTALL.	NEW LINES INST. WITH NEW CLAMP	100 HOURS	1
2012-03-06	596	Avstar Fuel System fuel servo diaphragm	New configuration diaphragm installed	N/A-Once	1
2012-19-01	569 / A	CRANKSHAFT REPLACEMENT	REPLACE CRANKSHAFT	N/A-Once	1
63-14-03	295	OIL PUMP DRIVE SHAFT	NEW CONF. PART INSTALLED	N/A-Once	2
64-16-05	298 / Inacti	AC FUEL PUMP OIL SEAL	NEW CONF. FUEL PUMP INSTALLED	N/A-Once	2
66-20-04	307	OIL FILTER ADAPTER GASKET	NEW CONF. GASKET INSTALLED	N/A-Once	2
67-22-06 / 4	305 / B	REPLACEMENT OF BENDIX FUEL DIAPHRAGM ASSY	NEW OR NEWLY O/H INSTALLED	N/A-Once	2
78-23-08	421	FUEL LINE BETWEEN FUEL PUMP AND FUEL INJECTOR	NEW FLEXIBLE HOSE USED	N/A-Once	2
78-23-10	428	BENDIX FUEL INJ. BULLETIN RS-42	NEW P/N INSTALLED	N/A-Once	2
79-04-05	433 / A	BENDIX FUEL INJ. BULLETIN RS-57	NEW P/N INSTALLED	N/A-Once	2
81-03-05	444 / A	BENDIX FUEL INJ BULL. #RS-62 REV 2	NEW P/N INSTALLED	N/A-Once	2
83-22-04	467	BENDIX BULLETIN #RS-88	BENDIX INJ NOT INSTALLED	N/A-Once	2
87-10-06 / R1	477 / A	INSPECTION AND REWORK OF LW-18790 ROCKER ARM ASSY	NEW CONFIGURATION P/N INST.	N/A-Once	2
92-12-05	501 / B	LW-14077 PISTON PIN	NEW PARTS INSTALLED	N/A-Once	2
97-15-11	527 / C	RECALL OF PISTON PIN P/N LW-14077	NEW CONFIGURATION P/N INST.	N/A-Once	2
99-04-04	537	MAGNETO IMPLUSE COUPLING	NEW OR NEWLY OVERHAULED MAGNETO INSTALLED	250 HOURS	2
2002-12-07	543 / B	OIL FILTER CONVERTER PLATE GASKET REPLACEMENT	NEW P/N CONVERTER PLATE INSTALLED	N/A-Once	2
2002-19-03	553	CRANKSHAFT INSP. FOR LYC. 6 CYL. TURBO ENGINES	CRANKSHAFT INSTALLED NOT AFFECTED BY THIS AD	N/A-Once	2
2003-14-03	529 / B	ROTARY FUEL PUMP TORQUE.	NEW PUMP WITH "/M" SUFFIX INSTALLED	N/A	2
2004-05-24	554	CRANKSHAFT GEAR RETAINING BOLT REPLACEMENT.	NEW BOLT P/N INSTALLED.	N/A-Once	2

Instructions & A.D. Notes

LYCOMING

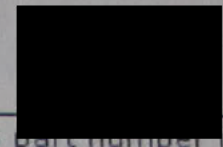
Form ET-001 (Rev 10/10)

Record of Accessories and Major Parts Shipped with Engine

Model No: **IO-540-AE1A5**
Order No: **HP633939**

Serial No: **L-20153-48E**
TC No: **1E4**

ENPL: **HENPL-RT10356**
Date: **Feb 10 2016**

Inspector: 

All accessories listed are 0 (zero) time since New or 0 (zero) time since Overhaul. All accessories are new unless part number is succeeded by -85 or -70

<u>Part Name</u>	<u>Part Number</u>	<u>Manufacturer</u>	<u>Serial #</u>	<u>Setting</u>
Injector	61M26405	AvStar	AV207971777	AV2576630-4
Magneto, Left	66B21784	TCM	E15JA175	
Magneto, Right	66B21783	TCM	E15JA214	
Ignition Harness L	LW-M-2463	SLICK		
Ignition Harness R	LW-M-2464	SLICK		
Spark Plug	1182-E7	Champion		
Fuel Pump	62B26931	LYC	RC45154900	
Alternator Right	32C19553	Hartzell Eng	H-P111161	
Crankcase Match No			K0873C	
Crankshaft Serial No.			V537948600	

Engine #: L-20153-48E
Operator 1: B. BOEHMER
Operator 2:
Fuel Serial #: AV207971777
Fuel Slave: NO
Fuel Curve: C-13570-B
Pre-Oil Temp: 165
ETS #: 784

Model #: IO-540-AE1A5
Accept/Date:
Accept/Date:
Ignition Left: E15JA175
Ignit_L Slave: NO
Float Bowl Connected to Fuel Pump Inlet: YES
Pre-Oil Pres: 90
ETS Rev: ECO-26839

Order #: HP633939
Test Mode: Final
BOM: HENPL-RT10356
Ignition Right: E15JA214
Ignit_R Slave: NO
Setting #: AV2576630-4
Date/Time: 2/4/16 08:12

Preservation: LPS 486
Part 3.2 Test
Sign:
SW Rev: LSW20001-A LCY
Barometer: 29.53
Read Time: 2/4/16 08:49
Test Status: Pass

Comments

Variations

The following minor variations to the applicable engine test specification were observed during this test and determined to be acceptable 'as is'. The acceptance of these variations will not affect air worthiness or performance.

- 1) _____
 - 2) _____
 - 3) _____
 - 4) _____
- Engr. _____ Q.C. _____ Date _____

When / Test	Low Limit	Value	High Limit	Status
2 Runin @ 1500 for 5 min				
Allowable Speed Variation (RPM)	-75	1.8	75	Pass
Cylinder Head Temperature (DegF)		240.7	500	Pass
Inlet Air Temp (DegF)	0	60.2	110	Pass
5 Runin @ 1800 for 10 min				
Allowable Speed Variation (RPM)	-75	1	75	Pass
Cylinder Head Temperature (DegF)		271.4	500	Pass
Inlet Air Temp (DegF)	0	60.8	110	Pass
8 Runin @ 2200 for 10 min				
Allowable Speed Variation (RPM)	-75	1.8	75	Pass
Cylinder Head Temperature (DegF)		329.8	500	Pass
Inlet Air Temp (DegF)	0	62.2	110	Pass
11 MagChk @ 2200 for 1 min				
Magneto Dropoff - Each Mag (RPM)		72	150	Pass
Magneto Dropoff - Difference (RPM)		17.3	35	Pass
Cylinder Head Temperature (DegF)		329.8	500	Pass
Inlet Air Temp (DegF)	0	62.3	110	Pass
15 Idle @ 0 for 4 min				
Idle Speed (RPM)	600	625.5	700	Pass
Cylinder Head Temperature (DegF)		260.6	500	Pass
Oil Pressure @ Idle (PSI)	25	48.6		Pass
Inlet Air Temp (DegF)	0	60.4	110	Pass

atters, Instructions & A.D. Notes

Cell No. 1-4

LYCOMING

Production Automated Engine Test Log

Form# T-001

Engine #: L-20153-48E	Model #: 10-510-1511	Order #: HP633939
Operator 1: B. BOEHMER	Accept/Date: [REDACTED]	Test Mode: Final
Operator 2:	Accept/Date: [REDACTED]	BOM: HENPL-RT10356
Fuel Serial #: AV207971777	Ignition Left: E15JA175	Ignition Right: E15JA214
Fuel Slave: NO	Ignit_L Slave: NO	Ignit_R Slave: NO
Fuel Curve: C-13570-B	Float Bowl Connected to Fuel Pump Inlet: YES	SW Rev: LSW20001-A LCY
Pre-Oil Temp: 165	Pre-Oil Pres: 90	Barometer: 29.56
ETS #: 784	ETS Rev: ECO-26839	Setting #: AV2576630-4
		Date/Time: 2/4/16 09:27
		Read Time: 2/4/16 09:59
		Test Status: Pass

Comments

Variations

The following minor variations to the applicable engine test specification were observed during this test and determined to be acceptable 'as is'. The acceptance of these variations will not affect air worthiness or performance.

- 1) _____
 - 2) _____
 - 3) _____
 - 4) _____
- Engr. _____ Q.C. _____ Date _____

When / Test	Low Limit	Value	High Limit	Status
2 Airflow @ AF-600 for 4 min				
Fuel Flow Limits (PPH)	40	46.69	49.6 @ AF-601	Pass
Fuel Nozzle Limits ("HG)	N/A	0.96	N/A	Pass
Cylinder Head Temperature (DegF)		285.3	500	Pass
Inlet Air Temp (DegF)	0	61.2	110	Pass
4 Airflow @ AF-1000 for 4 min				
Fuel Flow Limits (PPH)	67	70.41	78.0 @ AF-999	Pass
Fuel Nozzle Limits ("HG)	N/A	2.71	N/A	Pass
Cylinder Head Temperature (DegF)		337	500	Pass
Inlet Air Temp (DegF)	0	62.3	110	Pass
6 Airflow @ AF-1400 for 4 min				
Fuel Flow Limits (PPH)	95.5	101.12	107.5 @ AF-1393	Pass
Fuel Nozzle Limits ("HG)	5.5	6.28	8.5 @ AF-1393	Pass
Cylinder Head Temperature (DegF)		381	500	Pass
Inlet Air Temp (DegF)	0	63	110	Pass
8 Rated @ Rated for 15 min				
Rated Speed (RPM)	2750	2828	2850	Pass
Manifold Pressure @ Rated ("HG)	25.5	25.93	26.5	Pass
Fuel Pressure @ Rated (PSI)	18	26	28	Pass
Oil Pressure @ Rated (PSI)	75	79.6	85	Pass
Air Flow Limits (PPH)	1610.3	1686.3		Pass
Cylinder Head Temperature (DegF)		407.9	500	Pass
Oil Gallery Temp @ Rated (DegF)	165	185.6	215	Pass
Inlet Air Temp (DegF)	0	63.8	110	Pass
11 Final_Idle @ 0 for 4 min				
Idle Speed (RPM)	600	675.7	700	Pass
Cylinder Head Temperature (DegF)		291	500	Pass
Oil Gallery Temp @ Final_Idle (DegF)	140	179.1	215	Pass
Oil Pressure @ Idle (PSI)	25	48.6		Pass
Manifold Pressure @ Final Idle (In Hg)	8	13.1	17	Pass
Inlet Air Temp (DegF)	0	62.8	110	Pass
13 Manual @ N/A for 0 min				
Acceleration Check (sec)	2	4	5	Pass
Idle Cut-off Time (sec)	0	4	5	Pass