

RECORD OF ENGINE OVERHAUL
LYCOMING TIO540AE2A
SERIAL NUMBER L9629-61A
SEPTEMBER 01, 2019

WORK PERFORMED:

Engine completely dismantled-----the turbocharging system was discarded.

- The engine maincase was repaired by DIVCO, FAA repair station DB2R762K per work order 124035 dated 05/MAR/2019.
- The crankshaft was repaired by Aircraft Specialties Services, Inc., FAA repair station DD2R764K per work order 252821 dated 07/FEB/2019. The main bearing journals were ground M003.
- The crankshaft counterweights were inspected by Aircraft Specialties Services, Inc., FAA repair station DD2R764K per work order 252821 dated 06/FEB/2019.
- The camshaft was repaired by Aircraft Specialties Services, Inc., FAA repair station DD2R764K per work order 252821 dated 08/FEB/2019. Lobes ground and tach shaft bushing replaced.
- 6 each connecting rod assemblies were inspected by Aircraft Specialties Services, Inc., FAA repair station DD2R764K per work order 252821 dated 11/FEB/2019.
- 12 each rocker arms were repaired by Aircraft Specialties Services, Inc., FAA repair station DD2R764K per work order 252821 dated 11/FEB/2019. Installed new bushings.
- 12 each valve lifter assemblies were reconditioned by Aircraft Specialties Services Inc., FAA repair station DD2R764K per work order 252821 dated 08/FEB/2019.
- 7 each miscellaneous gears excepting the crankshaft gear and the oil pump gears were inspected by Aircraft Specialties Services, Inc., FAA repair Station DD2R764K per work order 252821 dated 08/FEB/2019.
- remainder of engine case including accessory housing, engine oil sump and induction housing inspected by this agency---no defects found.
- The engine maincase was reassembled with reference to the Lycoming Direct Drive Manual using new parts as detailed in the following new parts list.
- 6 new Continental cylinder assemblies part number TISN14.OCA were Installed.
- As of this date no accessories (fuel injection system, starter, electrical generating system, propeller governor or vacuum system) have been installed. Installation of these components will require a separate log entry.

PARTS LIST

- 1 each 73185-1 gasket ser
- 2 each 18B23885-M03 main bearing

parts list continued

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PAGE 2

PARTS LIST CONTINUED FROM PAGE 1

6 each 18E23886M03	main bearing
12 each 18M23887	rod bearing
12 each LW12596	rod bolt
12 each LW12186	rod nut
1 each 51A22618	oil pump body
1 each 13S19648	crankshaft gear
1 each 76220	stud
4 each STD2090	nut
4 each 68H22624	cushion
1 each 05K23464	kit—oil pump impellers
1 each LW18638	plate
1 each STD2247	bolt
1 each 71667	lockplate
1 each STD2209	bolt
1 each LW13383	baffle
miscellaneous hardware as required	

NOTES

AD 04-10-14C1 was complied with by installing a new crankshaft gear (13S19648) attaching bolt (STD2209) and lockplate (LW18638).

AD 12-19-01 crankshaft retirement is not applicable to this crank.

Engine Total Time 2086.7 hours



Richard Hyserman A&P 1476648

ENGINE MAINTENANCE RECORDS

Log No. 2

Aircraft Registration No. N792AD

Engine Manufacturer LYCOMING

Model IO-540 SERIES

Serial No. L-9620-G1A

Date installed on aircraft 8/27/2020

Time Between Overhauls (TBO) _____ Hours

If used on multi-engine aircraft:

- | | |
|--------------------------------|-------------------------------|
| ☐ Right | ☐ Left |
| ☐ Front | ☐ Rear |



(All applicable information must be filled in)

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DATE	TOTAL TIME IN SERVICE	TOTAL TIME SINCE OVERHAUL	TACH OR RECORDING METER TIME	DESCRIPTION OF WORK PERFORMED— SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK
				TOTALS brought forward from previous page
Date: 6/11/2011 TT: 2086.7 TSMOH: Tach/Hobbs: Acquired TIO-540-AE2A, serial number L9629-61A from Rocket Engineering Corp. Turbo-charger system, magnetos, alternators, starter, vacuum pumps and related mounting hardware were removed and discarded. The turbo scavenge pump mounting area was covered with a cover plate (Lycoming p/n 69106) using gasket (Lycoming p/n 69551).				
Date: 4/18/2012 TT: 2086.7 TSMOH: Tach/Hobbs: Removed Precision Airmotive RSA-10ED1, s/n 70106409 fuel injector servo, Bendix model AMS4290 Rev. F, s/n 0107531 flow divider and Romec RG9080J4A/M, s/n F2149 fuel pump. Per Airflow Performance J.W.O. #5148 the fuel injector servo was converted to an EXPERIMENTAL Airflow Performance EX-10, p/n 556EX, s/n 6403-EX, overhauled, recalibrated and airflow tested. The fuel divider was overhauled and flow tested and the fuel pump was overhauled.				
Date: 2/6/2014 TT: 2086.7 TSMOH: Tach/Hobbs: Removed Hartzell model V-5-2 (2500 rpm), s/n A916J propeller governor. Governor overhauled and converted to Hartzell model V-5-4 (2700 rpm) per Sensinich Propeller Service work order # L25681.				
Date: 9/1/2019 TT: 2086.7 TSMOH: 0 Tach/Hobbs: Engine overhauled: See Record of Engine Overhaul at the end of this engine maintenance log book.				
Date: 9/10/2019 TT: 2086.7 TSMOH: 0 Tach/Hobbs: Replaced engine mounting ears, Lycoming p/n 19770 with Lycoming p/n 70456. Replaced oil level gauge (Lycoming p/n LW-16783-12) and extension (Lycoming p/n 75675) with respective Lycoming part numbers LW-14729 and 77527. Replaced fuel drain valve (Lycoming p/n LW-13807) with Airflow Performance manifold drain valve (p/n 1090138). Reinstalled V-5-4, s/n A916J propeller governor per Hartzell Service Letter HC-SL-61-277. Reinstalled Romec fuel pump p/n RG9080J4A/M, s/n F2149. Installed 90 deg induction elbow, New Glasair p/n 223-1470-101 with Lycoming #77654 spacer and two #73032 gaskets per Glasair III Instruction Manual, Section G, Step AD-7. Removed flow divider support bracket, Lycoming p/n 07A23031, and replaced with Lycoming p/n 75009. Installed Romec RG9080J4A/M, s/n F2149 flow divider. Installed six new fuel injector nozzles (Airflow Performance p/n 1090152) and nozzle fuel lines (Airflow Performance p/n 1090187) per Lycoming Service Bulletin No. 342G and Airflow Performance Installation and Service Manual, Rev I. Replaced dual groove starter ring gear assembly (Lycoming p/n 31M19861) with single groove assembly (Lycoming p/n 77579).				
				SUB-TOTALS this page
				TOTALS -Carry forward to next page

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Date: 8/27/2020	TT: 2086.7	TSMOH: 0	Tach/Hobbs: 0	Installed engine on aircraft N792AD, Glasair III s/n 3382. Installed Plane Power model AL12-C60, s/n 2C-123811 alternator per Plane Power AL12-C60 Installation Instructions. Replaced alternator adjusting link, Lycoming p/n 07F21298, with Lycoming p/n 75380. Installed Sky-Tec model 149-NL, s/n FN-361233 starter. Installed a Plane Power model FS1-14, s/n FS-130809 back-up alternator with gasket (Lycoming p/n 8313) on upper AND2000 mounting pad where vacuum pump was removed.
Date: 9/6/2020	TT: 2086.7	TSMOH: 0	Tach/Hobbs: 0	Removed oil cooler bypass plug (Lycoming p/n 62417) and installed UMA 1B3-2.5R RTD resistive temperature detector (oil temperature sensor), installed Alcor 86253 Type K CHT thermocouple and Alcor 86255 Type K EGT thermocouple, installed an Electronics International FT-60 fuel flow meter between the mechanical fuel pump and the fuel injector servo inlet, installed a Kavlico P4055-150G-E4A oil pressure transducer, a Kavlico P0455-30A-E4A manifold pressure transducer and a Kavlico P4055-50G-E4A fuel pressure transducer at the firewall manifold with lines to the respective engine ports. All engine monitoring sensors were installed per instructions included with probes/sensors and Garmin G3X Installation Manual (190-01115-01 rev. AH), Section 24 Engine/Airframe Sensor Installation.
Date: 11/29/2020	TT: 2086.7	TSMOH: 0	Tach/Hobbs: 0	Fabricated wire harnesses and installed two E-Mag electronic ignitions, p/n EMB03001, s/n 0237 and s/n 0075 per E-Mag Electronic Ignition Series 200-6XL Installation and Operating Guide Rev 40.
Date: 6/26/2021	TT: 2086.7	TSMOH: 0	Tach/Hobbs: 0	Installed Lycoming 37A19773-376 alternator belt & adjusted tension per Lycoming Service Instruction 1129D, Method A. The alternator belt has a six-year shelf life.
Date: 10/23/2021	TT: 2086.7	TSMOH: 0	Tach/Hobbs: 0	Installed Brackett BA-23 induction air filter.
Date: 6/6/2022	TT: 2086.7	TSMOH: 0	Tach/Hobbs: 0	Removed E-Mag electronic ignitions and sent to E-Mag Ignitions, Azle, Texas for service under warranty, SO# 7283. This service covers Service Notes 10-28-20 and 05-18-21 and Service Bulletins 08-28-21 and 07-06-22. Reinstalled electronic ignitions. Installed Niagara Development Manufacturing Co. oil cooler, P/N 20100A, S/N: F95-1939-40, previously overhauled by Pacific Oil Cooler Services, La Verne, CA under WO# 132116 on 05/08/2019.
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Date: 12/20/2024 TT: 2086.7 TSMOH: 13.8 Tach/Hobbs: 13.8 Found clamp on cylinder #4, Alcor model No. 86255 exhaust gas temperature probe to be cracked. Replaced with new EGT of same model. Oil and filter change: Installed new Champion CH48103-1 oil filter. Removed and cleaned oil suction screen. Found metal fragments and soft debris. No concern with debris found. Most likely from overhaul. Oil analysis report N792AD-241124.pdf. Serviced with 10 quarts Phillips X/C 20W50. Removed, cleaned, reinstalled and flow tested fuel injector nozzles. Removed, cleaned and reinstalled throttle body inlet screen. Found contact between heat muff and engine frame. Lower right heat shield damaged but no sign of heat distress in frame. Shortened heat muff by 2", fabricated and installed new heat shield. Daniel Mark Brown  Repairman Cert #: 5055408				
Date: 7/19/2025 TT: 2117.1 TSMOH: 30.4 Tach/Hobbs: 30.4 Oil temperature consistently reading >240F. Found oil temperature probe to be in wrong location. Installed UMA Instruments oil temperature probe p/n 1B9R, s/n E21947 in correct location per TIO-540-AE2A Operator's Manual p/n 60297-27-2, Section 1 and Figure 7-2. Date: 9/27/2025 TT: 2130.9 TSMOH: 44.2 Tach/Hobbs: 44.2 Right main and nose gear transition lights remain lit after retraction. Found right main micro-switch arm not contacting the uplock hook. Bent arm to ensure contact. Found nose gear uplock bolt not fully engaging with uplock hook. Adjusted position of uplock bolt. Functioning normally on jacks. Date: 11/15/2025 TT: 2132.5 TSMOH: 45.8 Tach/Hobbs: 45.8 Drained oil, removed oil suction screen and filter. Found soft debris in screen, filter clean. Oil analysis report N792AD-251111.pdf. Cleaned oil suction screen with mineral spirits and reinstalled with new Champion CH48103-1 oil filter per Lycoming SB 480F, torque per SSP 1776. Serviced with 11 qts Phillips XC 20W50. Found drips from Cyl #4 rocker cover. Removed, clean & reinstalled. Daniel Mark Brown  Repairman Cert #: 5055408				
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