

N78805



The Standard

ENGINE LOG

ASA-SF-2

YEAR

20

DATE

wo: 25-1054

Engine page 1 of 1

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of
(S.)

Wingnuts Aviation, LLC - Mailing Address, 197 Bagwell Road, Clarksville, TN 37043 - Facility Address, 4428
Airport Road, Springfield, TN 37172 - 615-384-3200

N7880G**Lycoming, O-320-E2D, S/N: L-42136-27A****March 04, 2025**

HOBBS: 6053.8

TACH: 2341.2

ETT: 11258.0

ESMOH: 854.77

1. Complied with an Annual Inspection in accordance with our Checklist encompassing the scope and detail of 14CFR (FAR) 43 appendix D with reference to Cessna Model 172 Maintenance Manual and all applicable ICA's.
2. Compression test results over 80 PSI: 1) 73, 2) 71, 3) 70, 4) 66.
3. Removed, cleaned, gapped, tested, rotated and reinstalled spark plugs. Installed (8) P/N M674 - Gasket; Spark Plug.
4. Drained oil, removed and inspected filter and suction screen; no metal found. Installed new filter, reinstalled suction screen with new crush gasket and serviced engine with oil. Installed P/N MS35769-21 - Gasket. Crush. Installed P/N AA48110-2 - Filter; Oil, Installed (7 qt) P/N 20w50 Quart - Oil; Phillips X/C.
5. Researched AD's through bi-weekly 2025-03 and found to be in compliance.
6. Adjusted both mag timing to specs.
7. Engine run up completed, all systems satisfactory.

I certify that this Engine has been inspected in accordance with an Annual Inspection and was determined to be in airworthy condition.

David Bliss AP / IA 3456094



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.)
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wo: BNA1289

Engine - page 1 of 1



T&T Aviation - 1480 Murfreesboro Pike - Nashville, TN 37217 - 615-905-1734

N7880G

August 14, 2024

Tach: 2134.1

- Oil change due** - Drained engine oil. Removed oil filter. Serviced with 7 Qrts Phillips 20W/60. Replaced oil filter with Tempest 8110-2. Cut filter, no metal noted. Ran engine no leaks or other defects noted.

With respect to the work performed, this engine is approved for return to service. Details of work performed are on file with T&T Aviation under work order: BNA1289.

Doug Nehrbass A&P IA 2576751

YEAR 20 DATE	REG. # N7880G DATE: 9/3/2024 ACTT: 7038.8 HOBBS: 5795.5 W.O. # DETAILS: Complied with a 100 hour inspection in accordance with FAR 43 Appendix D and the Cessna 172L checklist. Drained oil and serviced with 8 quarts of Phillips 25W-60 oil. R&R oil filter P/N 48110. Inspected oil filter, no contaminants found. Engine compressions #1 74/80 #2 74/80 #3 78/80 #4 70/80. Operation and leak checks good. I CERTIFY THAT THIS ENGINE HAS BEEN INSPECTED IN ACCORDANCE WITH A 100 HOUR INSPECTION AND WAS DETERMINED TO BE IN AN AIRWORTHY CONDITION. SIGNATURE: PRINT NAME: Jeff B. Troynar	Jeff Troynar 272 Lakeside Park Drive Hendersonville, TN 37075 (724)-494-0250 ENG MODEL: O-320-E2D ENG S/N: L-42136-27A TACH: 2153.0 ETT: 11069.8 ETSMOH: 666.5 PTT: 4697.5 PTSMOH: N/A AP181622634IA	Alterations ite Number of pecific entries.)
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wo: BNA1360

Engine - page 1 of 1



T&T Aviation - 1480 Murfreesboro Pike - Nashville, TN 37217 - 615-905-1734

N7880G

October 18, 2024

Hobbs: 5862.9

Tac tiime: 2202.6

- Oil change due** - Drained engine oil. Removed engine oil filter. Serviced with 7quarts Phillips 15W/50. Installed new Tempest 48110-2 oil filter. Ran engines for leak check. No leaks noted at this time.

With respect to the work performed, this engine is approved for return to service. Details of work performed are on file with T&T Aviation under work order: BNA1360.

Doug Nehrbass A&P IA 2576751

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.)
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wo: WO-45



Engine - page 1 of 1

Tennessee Flight Training - 801 Hangar Lane, Hangar #7 - Nashville, TN 37217 - 6153669192

N7880G

May 30, 2024

TACH: 1989.7 Hobbs: 5571.58

Drained oil and removed filter after squawk for low oil pressure and high oil temp. See previous entries in this engine log for similar issues in hot weather. Cut open filter for inspection. No metal noted. Installed new filter P/N AA48110-2. Torqued and safety wired to the engine. Serviced engine with 8 qt. Phillips 25W-60 X/C oil. Ops check performed. Both pressure and temperature within spec. Aircraft is approved for return to service.

With respect to the work performed, this engine is approved for return to service. Details of work performed are on file with Tennessee Flight Training under work order: WO-45.

Matt Martin A&P 4257340

wo: WO-62



Engine - page 1 of 2
As determined to be

Tennessee Flight Training - 801 Hangar Lane, Hangar #7 - Nashville, TN 37217 - 6153669192

N7880G

Lycoming, O-320-E2D, S/N: L-42136-27A

June 26, 2024

TACH: 2054.3 Hobbs: 5658.9 TSMOH: 567.87 ETT: 10971.1

1. Complied with a 100 Hr. inspection IAW 14 CFR (FAR) 43 Appendix D, the Cessna 172 maintenance manual and checklist, and all corresponding ICA's.
2. Performed AD compliance check through 2024-13 bi weekly and found to be in compliance.
3. Compressions: #1 79/80, #2 74/80, #3 72/80, #4 72/80.
4. Drained oil and removed filter. Cut open for inspection. No metal noted. Installed new filter P/N AA48110-2. Torqued and safety wired to the engine. Serviced engine with 8 qts. Phillips 25W-60 X/C.
5. Removed and replaced all 8 spark plugs. New plugs P/N UREM40E. Torqued.
6. Checked magneto timing and adjusted both to fire at 25 degrees TDC. Torqued.
7. Removed and replaced engine air filter.
8. Tightened Alternator mounting bolt.
9. Tightened bolt for carb heat control cable.
10. Adjusted Idle and Mixture settings.

11. Removed oil dipstick tube and replaced gasket. New gasket P/N RG-72059. Torqued and safety wired dipstick tube.
 12. Cleaned engine and performed operational run up. No issues noted.
- I certify that this engine has been inspected IAW a 100 Hr. inspection and was determined to be in airworthy condition.

With respect to the work performed, this engine is approved for return to service. Details of work performed are on file with Tennessee Flight Training under work order: WO-62.

Matt Martin A&P 4257340

Engine - page 2 of 2

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pecific entries.)

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.)
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10/16/2023 Lycoming O-320-E2D S/N L-42136-27A

TACH: 1773.4 Hobbs: 5269.1 TSMOH: 286.97 ETT: 10,690.2

Complied with a 100 hr. Inspection IAW 14CFR (FAR) 43 Appendix D and the

Cessna 172L inspection checklist and all applicable ICA's.

Compressions:-> #1 73/80, #2 72/80, #3 73/80, #4 78/80.

Drained oil and removed filter. Cut open for inspection. No metal noted. Installed new filter P/N AA48110-2.

Torqued and safety wired to the engine. Serviced engine with 8 Qts. Phillips 20W-50 X/C.

Removed all spark plugs for cleaning, gap and operational check. Rotated and reinstalled with new gaskets.

New gasket P/N M-674. Torqued.

Checked magneto spark advance. Adjusted spark advance on right magneto to 25° BTDC and verified

left magneto spark advance at 25° BTDC.

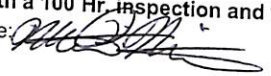
Inspected fuel bowl for contamination. None noted. Installed new o-rings P/N MS29513-111 and MS29513-138.

Torqued and safety wired.

Replaced ducting from baffling to muffler. Installed approx. 1.5 Feet of 3" skeet ducting.

Cleaned engine and performed operational run up. No issues noted.

I certify that this engine has been inspected in accordance with a 100 Hr. inspection and was determined to be in airworthy condition.

Matthew D. Martin A&P# 4257340 Date: 10/16/23 Signature: 

11/20/2023 TACH: 1821.2 Hobbs: 5337.2

Drained oil and removed filter. Cut open for inspection. No metal noted.

Installed new filter P/N AA48110-2. Torqued and safety wired to the engine.

Serviced engine with 8 Qts. Phillips 20W-50 X/C. Leak and ops check performed.

No issues noted. Aircraft is approved for return to service.

Matthew D. Martin A&P# 4257340 Date: 11/20/23 Signature: 

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DATE

wo: 24-1024

Engine page 1 of 1

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Number of
ific entries.)

Wingnuts Aviation, LLC Mailing Address: 197 Bagwell Road, Clarksville, TN 37043 Facility Address: 4426 Airport Road,
Springfield, TN 37172 - 615-384-3200

N7880G

HOBBS: 5394.7

Lycoming, O-320-E2D, S/N: L-33082-27A

TACH: 1860.9

ETT: 6746.7

February 02, 2024

ESMOH: 2534.5

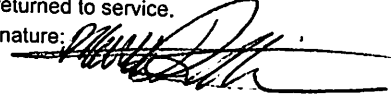
1. Complied with an Annual Inspection in accordance with our Checklist encompassing the scope and detail of 14CFR (FAR) 43 appendix D with reference to Cessna Model 172 Maintenance Manual and all applicable ICA's.
2. Compression test results over 80 psi. 1) 72.2) 69. 3) 69. 4) 70.
3. Removed, cleaned, gapped, tested, rotated and reinstalled spark plugs. Installed (8) P/N M674 - Gasket: Spark Plug, Installed (8) P/N M674 - Gasket: Spark Plug.
4. Drained oil, removed and inspected filter and suction screen; no metal found. Installed new filter, reinstalled suction screen with new crush gasket and serviced engine with oil. Installed P/N MS35763-21 - Gasket, Crush. Installed P/N AA48110-2 - Filter: Oil, Installed (8 qt) P/N 20w50 Quart - Oil. Phillips X/C.
5. Researched AD's through bi-weekly 2024-02 and found to be in compliance.
6. Timed both mags to spec.

I certify that this Engine has been inspected in accordance with an Annual Inspection and was determined to be in airworthy condition. Engine run up completed. all systems satisfactory.

Chris Ferraraccio AP / IA 2792477

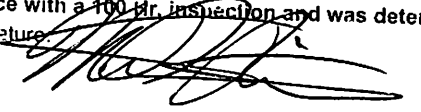


YEAR 20 DATE	RECORDING TACH TIME	TODAY'S FLIGHT	TOTAL TIME IN SERVICE	Description of Inspections, Tests, Repairs and Alterations Entries must be endorsed with Name, Rating and Certificate Number of Technician or Repair Facility. (See back pages for other specific entries.)
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06/05/2023 Lycoming O-320-E2D S/N L-42136-27A
TACH: 1632.8 Hobbs: 5069.5 TSMOH: 146.37 ETT: 10549.6
Drained oil and removed filter. Cut open for inspection. No metal noted. Installed new filter P/N CH48110-1.
Torqued and safety wired to the engine. Serviced engine with 8 Qts. Phillips 20W-50.
Leak and ops check performed. No issues noted. Aircraft returned to service.
Matthew D. Martin A&P# 4257340 Date: 6/5/23 Signature: 

06/26/2023 Lycoming O-320-E2D S/N L-42136-27A
TACH: 1653.8 Hobbs: 5099.4 TSMOH: 167.37 ETT: 10570.6
Received squawk for excessive oil temperature and low oil pressure. Inspected baffling. No issues noted.
Inspected oil cooler and all oil lines. No blockages noted. Inspected probe and gauge. No issues noted.
Checked oil pressure with analog gauge and verified results. Referenced Lycoming Operators Manual
O-320 Series 3rd edition P/N 60297-30. Referenced Pg. 3-7 "Fuel and Oil: Operating Conditions" and
performed oil change. Oil out Phillips 20W-50 X/C. Oil in Phillips 25W-60 X/C (8 Qts.). Replaced oil filter
P/N AA48110-2. Torqued and safety wired to the engine. Cut open old filter for inspection. No metal noted.
Leak and ops check performed. No issues noted. Note: Ambient air temperature Approx. 100 F (Approx. 38 C.).
Aircraft is approved for return to service.
Matthew D. Martin A&P# 4257340 Date: 6/26/23 Signature: 

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.)
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07/18/2023 Lycoming O-320-E2D S/N L-42136-27A
TACH: 1675.5 Hobbs: 5,130.0 TSMOH: 189.07 ETT: 10,592.3
Complied with a 100 hr. Inspection IAW 14CFR (FAR) 43 Appendix D and the
Cessna 172L inspection checklist and all applicable ICA's.
Performed AD compliance check thru 2023-14 and found to be in compliance.
Compressions:-> #1 77/80, #2 72/80, #3 78/80, #4 77/80.
Drained oil and removed filter. Cut open for inspection. No metal noted.
Installed new filter P/N AA48110-2 Torqued and safety wired to the engine.
Serviced engine with 8 Qts. Phillips 25W-50 X/C.
Pulled all spark plugs for cleaning and gap check. Set gap, rotated,
reinstalled with new crush gaskets P/N M-674.
Checked magneto timing. No issues noted.
Replaced hose for cabin heat. Installed aprox. 2 feet of skeet ducting.
Inspected fuel bowl for contamination. None noted.
Replaced O-rings P/N MS29513-111 and MS29513-138. Torqued and safety wired to the engine.
Cleaned engine and cowling. Leak and ops check performed. No issues noted.
I certify that this engine has been inspected in accordance with a 100 hr. inspection and was determined to be in airworthy condition.
Matthew D. Martin A&P# 4257340 Date: 7/18/23 Signature: 

08/29/2023 Lycoming O-320-E2D S/N L-42136-27A
TACH: 1727.3 Hobbs: 5202.5 TSMOH: 240.87 ETT: 10,644.1
Drained oil and removed filter. Cut open for inspection. No metal noted. Installed new filter P/N AA48110-2.
Torqued and safety wired to the engine. Serviced engine with 8 Qts. Phillips 25W-60 X/C.
Leak and ops check performed. No issues noted. Aircraft is returned to service.
Matthew D. Martin A&P# 4257340 Date: 8/29/23 Signature: 

Description of Inspections, Tests, Repairs and Alterations

02/20/2023 Lycoming O-320-E2D S/N L-32002-27A Tach 1510.20 Hobbs: 4903.5 TSMOH: 23.7
 Performed 25 Hr. break in oil change. Drained oil and removed filter. Cut open for inspection. No metal noted.
 Installed new filter P/N AA48110-2. Torqued and safety wired to engine. Serviced engine with 8 Qts.
 Phillips 20W-50. Leak and ops check performed. No issues noted. Aircraft is returned to service.
 Matthew D. Martin A&P#4257340 Date: 2/20/23 Signature: 

Ran engine to operating temps. Drained oil and removed filter. Cut open for inspection. No metal noted. Installed new filter P/N AA48110-2. Torqued and safety wired to the engine. Serviced engine with 8 Qts. Phillips 20W-50. leak and ops check performed. No issues noted. Aircraft returned to service.

Matthew D. Martin A&P# 4257340 Date: 4/3/23 Signature: 

Description of Inspections, Tests, Repairs and Alterations

05/17/2023 Lycoming O-320-E2D S/N L-42136-27A
TACH: 1579.9 Hobbs: 5002.2 TSMOH: 93.47 ETT: 10,496.7
Canada

Complied with a 100 Hr. inspection IAW FAR 43 Appendix D and the Cessna 172 L inspection checklist.
CW AD compliance check thru 2023-10 and found to be in compliance.
Compressions:-> #1 79/80, #2 70/80, #3 78/80, #4 78/60.
Drainage oil

Tightened oil dip stick tube and safety wired.

Removed all spark plugs for cleaning and gap check. Cleaned, set gap, rotated and reinstalled with new gaskets. Torqued.
Checked magneto to engine timing. No issues noted.
Removed and replaced engine air filter P/N BA-6108.
Checked for oil leaks. No issues noted.

I certify that this engine has been inspected in accordance with a 100 Hr. inspection and was determined to be in airworthy condition.
Matthew D. Martin A&P# 4257240 Date 5/17/20

Matthew D. Martin A&P# 4257340, Date: 5/17/23 Signature:

TACH: 1601.1 Hobbs: 5029.7 TSMOH: 114.67 ETT: 10517.9

Received squawk for outside of normal oil pressure and temperature. Checked baffling and baffling rubber. No issues noted. Blew compressed air through oil cooler. No issues noted. Replaced hose from baffling to oil cooler. New hose 2 foot section skeet hosing. Adjusted oil temperature and pressure gauge to read proper values from POH. Removed and replaced vacuum pump. Pump removed P/N AA3215CC S/N 0W6C01. Installed overhauled unit P/N 215CC S/N 199444. Serviced engine with 1 Qt. Phillips 20W-50 X/C oil. Leak and ops check performed. All systems satisfactory. Aircraft ready for flight.

Matthew D. Martin A&P# 4257340 Date: 5/25/23 Signature: 

YEAR 20 ____ DATE	RECORDING TACH TIME	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.)

MANUFACTURER: Lycoming **ENGINE MOD:** O-320-E2D **S/N:** L-42136-27A **WO#** 104651

AD #	DESCRIPTION	COMPLIANCE STATUS
55-02-02	accessory drive adapter gasket	N/A by engine S/N
59-10-07	baffle clamps	N/A has new style clamps
63-23-02	exhaust valves	N/A by 1/2" valves installed
64-16-05	fuel pump	N/A no fuel pump installed
66-20-04	oil filter adapter gasket	N/A by engine S/N
75-08-09 R3	oil pump drive shaft	N/A has drive shaft with flats
87-10-06 R1	rocker arm	N/A rocker LW-18790 not installed
90-04-06 R1	oil line	N/A has fixed pitch prop
92-12-05	piston pin	N/A by pin P/N
95-26-02	improper fuel	N/A by registration number
96-09-10 C	oil pump	P/C/W IAW SB524
97-15-11	piston pin P/N LW14077	N/A by pin P/N
98-02-08	crankshaft	C/W IAW SB505B and SB530B, has PID stamp
98-17-11 C	crankshaft (Nelson Balancing)	C/W by inspection IAW para. (b)
04-10-14 C	crankshaft gear	C/W IAW SB 475C, due any prop strike
06-12-07	ECI cylinders	N/A by cylinder S/N
07-04-19 R1	Superior cylinders	N/A to ECI cylinders
09-26-12	ECI cylinders	N/A by cylinder S/N
12-03-07	HA-6 carburetor	N/A by carburetor model
15-02-07	Prop Governor shaft set screw	N/A to this engine model
17-16-11	Lycoming con. rod bushings	N/A to new bushings installed, P/N AEL13923

Poplar Grove Airmotive, Inc.

FAA Approved Repair Station YYBR664L Terry Aavang

Date: 16/Dec/2022

YEAR 20 ____ DATE	RECORDING TACH TIME	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.)

MAKE	Lycoming	MODEL	O-320-E2D	S/N	L-42136-27A
Total Time	10403.30	Time Since Major Overhaul	ZERO	Hours	

This engine was disassembled, cleaned, inspected and reassembled with necessary new parts in accordance with a major overhaul as per the manufacturer's current overhaul manual 60294-7 New tolerances and clearances were maintained. A detailed parts list is on file at this agency. The following accessories were overhauled or exchanged. See maintenance releases in this logbook.

Assembled engine with crankcase repaired by DIVCO, WDC #128413. Installed new camshaft P/N AEL18840 and tappets P/N 15B26262. Installed overhauled ECI cylinders. Installed new magnetos, left P/N 4371, S/N 22070596, and right P/N 4370, S/N 20010680, from Champion Aerospace. Supplied carburetor P/N MA-4SPA / 10-5217, S/N 75109303, overhauled by Aircraft Accessories of Oklahoma. Supplied new starter P/N 149NL, S/N H-W032747, from Hartzell Engine Technologies. See A.D. Compliance Record and Parts List for more details.

END

All applicable airworthiness directives and related factory publications have been checked for compliance at this date. See list in this log book. This engine was test run in an FAA approved test cell and meets specifications. The aircraft engine identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service for the work performed. Pertinent details of repair are on file at this repair station under:

Work Order # 104651 **Date** 16/Dec/2022

Poplar Grove Airport, Poplar Grove, IL
FAA Approved Repair Station #YYBR664L

Terry Aavang
Signed for Poplar Grove Airmotive, Inc.

Engine Record General Information

Manufacturer Lycoming Model O-320-E2D

Serial L-42136-27A Type Certificate _____

This engine is currently installed in aircraft: _____

Minimum Octane Fuel _____ Oil Grade Summer _____ Winter _____

Magneto Time _____ Point Setting _____ Firing Order _____

Spark Plug Gap _____

Manufacturer's Recommended Overhaul at _____ hours



Phone: 815.544.2300 800.397.8181

LIMITED AIRCRAFT ENGINE WARRANTY

FAX: 815.544.8900

Poplar Grove Airmotive, Inc. (PGA) limits its warranty on the listed engine overhauled by PGA to be free from defects in material and workmanship under normal use and service for a period of two years or 500 hours, whichever occurs first from the completion date of the overhaul. All accessories overhauled by PGA are warranted for 250 hours of operation or one year, whichever event shall occur first.

Any engine, cylinder or component Repair not associated with a major engine overhaul is warranted to be free from defects in material and workmanship for six months.

The obligation of the Company under this warranty is limited to the repair or replacement, at the option of PGA, of any part, component or engine, which, in the opinion of PGA is defective. PGA assumes no obligation for work accomplished at a facility other than PGA unless prior notification is given and the owner receives authority from PGA to proceed. PGA additionally reserves the right to furnish any parts and/or components required. If requested by PGA, owner must return all warranted parts, transportation prepaid, to PGA for examination.

Warranty is not applicable to routine maintenance, inspection or adjustments. Replacement or repair of an engine component or accessory will not be construed to extend the initial warranty period.

This warranty shall not apply to engines, their component parts or accessories which have been improperly installed, adjusted, stored, handled, repaired, altered or operated contrary to current manufacturer's recommendations of FAA Airworthiness Directives, or subjected to misuse, neglect, accident, pre-ignition, detonation, hydrostatic lock or corrosion.

PGA does not warrant accessories, such as factory-remanufactured magnetos, carburetors, starters, etc. supplied by a vendor other than PGA when that vendor has its own warranty.

No express warranties and no implied warranties, whether of merchantability or fitness for any particular use, or otherwise (except to title) other than that expressly set forth above, which is made expressly in lieu of all other warranties, shall apply to products sold by PGA.

This warranty and this PGA's obligation thereunder is in lieu of all other warranties, expressed or implied, including warranties of merchantability and fitness for a particular purpose, and all other obligations or liabilities, including consequential damages or contingent liabilities arising out of the failure of any engine or part to operate properly, and no person is authorized to give any other warranty or to assume any additional obligation on PGA's behalf unless made in writing and signed by an officer of PGA.

Date 16 Dec, 2022 Model Lyc. B-320-E2D S/N L-42136-27A WO# 104651

POPLAR GROVE AIRMOTIVE, INC. CRS YYBR664L SUGGESTED BREAK-IN PROCEDURES

After starting the engine, ensure a normal warm up, but avoid prolonged ground running. Follow the airframe manufacturer's recommendations for takeoff power. When possible, reduce power to the climb power setting specified in the operator's manual. Establish a shallow climb angle to ensure good air speed for proper cooling. Use more cowl flaps than normal or step climb to help in this process. Adjust mixture per aircraft operating handbook. Excessive heat is the primary cause of cylinder bore glazing. Make every effort to keep your operating temperature well into the green arc.

If the engine is normally aspirated (non-turbocharged) it will be necessary to cruise at a low altitude to obtain the required cruise power levels. We recommend a density altitude less than 5,000 feet to allow the engine to develop sufficient cruise power for a good break-in.

For proper break-in/piston ring seating, operate the engine at 65-75% power during cruise while keeping engine temperatures well in the green arc. Maintain these power settings until oil consumption stabilizes, this will minimize the chance of glazing the cylinder bores. Glazing cylinder bores require cylinder removal, honing, and installing new piston rings. **Poplar grove Airmotive does not warranty this condition.**

Descend at low cruise power while closely monitoring the engine instruments. Avoid long descents at low manifold pressure and rapid descents, as this will cause the engine to cool too rapidly.

There is only one object to be accomplished during the break-in: the stabilization of oil consumption. Record all oil additions and flight hours in such a manner that quart per hour of flight is known. During this portion of the break-in, which could range 25 to 100 hours, mineral oil **must** be used in the engine. Change oil and inspect filter after approximately 10 hours - then 35 hours - then per your normal schedule, however, do not use AD (ashless dispersant) oil until consumption stabilizes.

Engine Oil Recommendation For Piston Ring Seating

Aero Shell 100	SAE 50
Aero Shell 80	SAE 40
Aero Shell 65	SAE 30
Phillips 20W-50	Type M
Phillips 20W-50	XC

Above 60 degrees F
30 degrees - 90 degrees F
0 degrees - 70 degrees F
All Season
Nickel Cylinders

Use mineral based AD oils only after break-in - NO synthetics