

N2702L

1981 Cessna 414A Ram IV

#2 (RH) Engine Logbook SMOH 2016 - 2022

Aircraft S/N: 414A-0608



Prepared by the worldwide aviation specialists at RidgeAire, Inc.

MENA AIRCRAFT ENGINES, INC

ENGINE MAINTENANCE RECORDS

Aircraft Registration N2702L
Engine Position R/H
Engine Serial No. R-521612

MENA AIRCRAFT ENGINES, INC

ENGINE MAINTENANCE RECORDS

Log No. 1

Aircraft Registration No. N2702L

Engine Manufacturer TCM

Model TS10-520-NB

Serial No. A-521612

Date installed on aircraft 7-29-16

Time Between Overhauls (TBO) 11000 Hours

If used on multi-engine aircraft:

Right Left

103 Aviation Lane, Mena, AR 71953
479-394-7688

MENA AIRCRAFT ENGINES, INC. -- FAA CRS#S9QR340N

Date: July 5, 2016 Engine Total Time: hrs Time Since Major Overhaul: 00.00
Engine Data: Teledyne-Continental engine model TSIO-520-NB Serial Number: 521612 RH
Aircraft Data: Cessna model 414A Serial Number: 414A0608 Registration #2702L 1980

WORK PERFORMED: inspected and major overhauled in accordance with Teledyne-Continental overhaul manual #X30574A, Teledyne-Continental parts catalog #X30580A, and to RAM Aircraft specifications for RAM IV engine.

COMPONENTS

crankshaft/counterweight assembly(TCM s/n G139408N): magnafluxed, inspected, rods and mains ground to M010, renitrided, polished journals, cadmium plated and baked flange, rebushed damper blades, rebushed counterweights and installed with new pins, plates, and snap rings, ultra-sonic inspected i/a/w TCM mandatory service bulletin #MSB96-10, crank complies with AD#97-26-17 as VAR, dynamically balanced per procedure #98-002, and certified by Aircraft Specialties of Tulsa, OK w/o 236937 FAA CRS#DD2R764K.,

connecting rods(6): magnafluxed, inspected, resized, rebushed, balanced, and certified by Aircraft Specialties of Tulsa, OK w/o 236937 FAA CRS#DD2R764K

camshaft: RAM p/n 1058-3 – magnafluxed, inspected, reground, manganese phosphate coated, and certified by Aircraft Specialties of Tulsa, OK w/o 236937 FAA CRS#DD2R764K.

internal steel(28): cleaned, magnafluxed, inspected, and certified by Aircraft Specialties of Tulsa, OK w/o 236937 FAA CRS#DD2R764K.

hydraulic valve lifters(12): TCM part number 646277 – inspected, repaired i/a/w procedure #2002-01, flow matched, and certified by Aircraft Specialties of Tulsa, OK w/o 236937 FAA CRS#DD2R764K.

COMPONENTS CONTINUED

crankcase: casting #646201, match #860226P – cleaned, zygloed, inspected, repaired, surfaced, thru-bolt dowels installed, align-bored, stress relieved, and certified by DivCo of Tulsa, OK w/o WDC#117038 FAA CRS#DB2R762K.

cylinders(6): replaced with new CMI balanced cylinder assemblies p/n 658552A2-SPC complete with valves, springs, keepers, roto-coils, rocker shafts, pistons, and piston rings, purchased from A.E.R.O. of Granite City, IL sales order #B83710-1 dated 06/14/2016.

valve rocker arms(12): magnafluxed, inspected, refaced, rebushed, and certified by Aircraft Specialties of Tulsa, OK w/o 236937 FAA CRS#DD2R764K.

assembling hardware: bright cadmium plated i/a/w UPW SP-01 Rev B class3 type II, actual thickness .00035-.00045, hydrogen embrittlement relieve baked @375 +/- 25 degrees F for 3 hours min/no max, i/a/w UPW SP-17 Rev G & UPW SP-01 Rev B, and certified by United Plating Works of Tulsa, OK w/o 458576 FAA CRS#FA2R813K.

ACCESSORIES

magneto(LH): p/n 6320, s/n 15060074, mfg. Slick - cleaned, inspected, repaired, tested, and certified by Mena Aircraft Engines, Inc. of Mena, AR w/o 2146A FAA CRS#S9QR340N.

magneto(RH): p/n 6320, s/n 15060076, mfg. Slick - cleaned, inspected, repaired, tested, and certified by Mena Aircraft Engines, Inc. of Mena, AR w/o 2146B FAA CRS#S9QR340N.

starter: p/n MHJ4003, s/n A140528, mfg. Prestolite- inspected, overhauled, tested, and certified by Aerotech of Louisville, KY w/o 118244 FAA CRS#PU4R453M.

ACCESSORIES CONTINUED

alternator: p/n 649304, s/n 007KA203, mfg. CMI – inspected, overhauled, tested, and certified by Aerotech of Louisville, KY 40299 w/o 118243 FAA CRS#PU4R453M.

alternator drive coupling: p/n 646655, s/n DRK118794, mfg. CMI – inspected, overhauled, tested, and certified by Drake Air of Tulsa, OK w/o 496313/006394 FAA CRS#II2R899K

fuel injection system: fuel pump p/n 632818-11, s/n B108710RB;
flow divider p/n 640718-2A4, s/n C242102C; control valve p/n 632916-11, s/n J048006A;
fuel nozzles(6) p/n 632748-14D, and pressure limiter p/n 642100-5/6, s/n 496080; – inspected, overhauled, bench tested, and certified by Great Planes Fuel Metering of Tulsa, OK w/o 16-365 FAA CRS#1GPR022B.

starter adapter assembly: p/n 642085A2R, s/n CAS-3075, mfg. TCM – inspected, overhauled, and certified by Custom Airmotive of Tulsa, OK w/o 25067 FAA CRS#DC2R763K.

oil cooler: p/n 636900, s/n 35962, mfg. TCM – inspected, overhauled, tested, and certified by American Cooler Service of Arlington, TX w/o 59112 FAA CRS#OC8R986J.

tach generator: p/n 22A667, s/n AT-9247 – inspected, overhauled, tested, and certified by Quality Aircraft Accessories of Tulsa, OK w/o 015384 FAA CRS#QY1R334Y.

propeller governor: p/n A210710, s/n 2129079U, mfg. Woodward – inspected, overhauled, tested, and certified by South Coast Propeller Service of Bessemer, AL w/o SR-10979 FAA CRS#S6PR302X.

turbocharger, waste gate, relief valve, and controller: inspected, overhauled, tested, and certified by Main Turbo Systems of Visalia, CA w/o 40917 FAA CRS#MAMR190K. installed by engine installer, RH position Cessna 414A N2702L.

NEW PARTS INSTALLED

Major overhaul gasket and seal set, crankshaft oil seal p/n 641250, crankshaft damper bushings, counterweight bushings, counterweight pins, plates, and snap rings, connecting rod bushings, connecting rod nuts, connecting rod bearings M010, alternator face gear screws and lockplates, crankshaft attaching screws, camshaft gear attaching screws, cam gear woodruff key, crankcase thru-bolt dowels and o rings, starter adapter pilot needle bearing, piston pins, Continental steel cylinder assemblies with valves, springs, retainers, keepers, roto-coils, valve rocker shafts, rocker shaft bolts and washers, pistons, and piston rings, valve rocker arm bushings, silicone valve cover gaskets, Real Gasket push rod seal kit, 12-point cylinder base nuts, spark plugs p/n URHB32E, ignition harness, fuel pump drive coupling p/ 653359, magneto drive cushions, oil pressure kit, oil pressure relief valve plunger, nose seal retaining plates, induction tube hoses and clamps, internal crankcase nuts, dipstick housing adapter o rings, crankcase thru-bolts, magneto attaching nuts, oil filter p/n 48108-1, upper deck tube seals, fuel nozzle rubber and steel washers, oil temperature vernatherm valve, main bearing set M010, oil transfer collar M010. supplied exhaust nuts and gaskets.

Engine Test Run and Sign-Off: this engine overhauled and test run in accordance with current and applicable FAA data and procedures and is approved for return to service. pertinent details of the overhaul are on file at this repair station #S9QR340N under work order #16E-2146 by Mena Aircraft Engines, Inc. of Mena, AR *Robert Smith* #2549814 July 05, 2016 see back of this engine log book for listing of A.D.'s complied with.

Airworthiness Directives complied with during engine overhaul

#75-05-09	oil pressure relief valve	c/w by installation of new correct parts
#80-01-04	cylinder flanges	c/w by installation of new cylinders
#81-24-06	fuel pump	c/w by overhaul of fuel pump
#86-13-04-R3	cylinders	c/w by installation of new cylinders
#89-24-01 R1	scavenge pump gears	c/w by inspection, has correct serviceable gears
#93-10-02	cylinder valve key	c/w by inspection, all keepers installed
#93-16-15	fuel pump coupling	c/w by installation of new coupling p/n 653359
#96-12-22	oil filter adapter	n/a by inspection, has integral TCM adapter
#97-26-17	crankshaft	c/w by inspection, has VAR crankshaft
#98-01-08	roller rocker arms	n/a by inspection, has genuine TCM rocker arms
#98-17-11	crankshaft	n/a by inspection and date parameters
#99-19-01	crankshaft	n/a by inspection and date parameters
#00-23-21	crankshaft	n/a by inspection and date parameters
#04-08-10	ECI cylinders	c/w by installation of new CMI cylinders
#07-04-19 R1	SAP cylinders	n/a by inspection, has new CMI cylinders
#07-16-10	turbocharger	n/a by inspection, part number, and date parameters
#08-08-17	turbocharger	n/a by inspection and part number
#09-19-07	TCM cylinders	n/a by inspection, had new correct CMI cylinders
#10-11-04	hydraulic lifters	n/a by inspection, has p/n 646277
#12-063-06	AFS diaphragm	n/a by control valve part number
#12-10-13	starter adapter	n/a by adapter part number
#14-05-29	SAP cylinders	n/a by inspection, has CMI cylinders

Mena Aircraft Engines, Inc. - FAA CRS#S9QR340N - w/o 2146 - *Robert Smith* #2549814 July 05, 2016

Twelve Stone Aviation, LLC. 802 Airport Rd. Hangar 5 Springdale, AR 72764

REGISTRATION: N2702L	HOBBS: 484.6	DATE: 07/29/2016
MODEL: TSIO-520-NB	ENGINE TSMO: 00 0 RIGHT SIDE	SN: 521612

- INSTALLED ENGINE AFTER OVER HAUL BY MENA AIRCRAFT ENGINES, INC.
- SET MAG TIMING
- INSTALL NEW
- INSTALLED NEW AA48108-2 FILTER AND SERVICE WITH A/S100 MINERAL OIL.
- C/W AD00-01-16 EXHAUST VISUAL INSPECTION PER (PAR B) NEXT DUE 5926.3, AND PER (PAR (C) AND (E)) NEXT DUE 05/14/17. PAR (G) DUE ACTT 6903.1 OR 02-13-18. NO DEFECTS NOTED.
- GROUND RUN, ALL OPS NORMAL. NO LEAKS NOTED

I CERTIFY THIS ENGINE HAS BEEN INSPECTED IN ACCORDANCE WITH ANNUAL INSPECTION AND WAS FOUND TO BE IN AIRWORTHY CONDITION.

KEVIN S DAVIS *Kevin S Davis*
AP4314761481A

SUB-TOTALS this page

TOTALS—Carry forward to next page

Twelve Stone Aviation 802 Airport Ave. Hangar 5 Springdale, AR 72764 479-799-8065

N2702L HOBBS: 541.4 TSIO-520-NB RIGHT S.N. R521612 01/10/2017

DRAINED ENGINE OIL AND REMOVED OIL FILTER. INSPECTED FILTER FOR CONTAMINATION, NO DEFECTS NOTED. INSTALLED NEW CH48108-1 OIL FILTER SERVICED WITH AEROSHELL W80 PLUS OIL, GROUND RUN PERFORMED. NO LEAKS FOUND. RETURNED TO SERVICE.

BILL BUCKLAND

JOHN GEARHART

[Signature]

[Signature]

A&P 3138384

Twelve Stone Aviation 802 Airport Ave. Hangar 5 Springdale, AR 72764 479-799-8065

N2702L HOBBS: 610.7 TSIO-520-NB RIGHT S.N. R521612 07/26/2017

DRAINED ENGINE OIL AND REMOVED OIL FILTER. INSPECTED FILTER FOR CONTAMINATION, NO DEFECTS NOTED. INSTALLED NEW AA48108-2 OIL FILTER & SERVICED WITH AEROSHELL W100 PLUS OIL. GROUND RUN PERFORMED. NO LEAKS FOUND.

JOHN GEARHART

[Signature]

A&P 3138384

Twelve Stone Aviation, LLC. 802 Airport Rd. Hangar 5 Springdale, AR 72764

REGISTRATION: N2702L	HOBBS: 622.2	DATE: 09/01/2017
MODEL: TSIO-520-NB	ENGINE TSMO: 137.6 RIGHT SIDE	SN: 521612

- ANNUAL INSPECTION
- COMPRESSIONS #1 60 #2 62 #3 64 #4 64 #5 74 #6 66 ALL OVER 80 PSI. MO 42PSI
- SET MAG TIMING
- CLEAN, GAP AND TEST SPARK PLUGS.
- OIL AND FILTER CHANGE. INSPECT FILTER, NO DEFECTS NOTED. INSTALLED NEW AA48108-2 FILTER AND SERVICE WITH A/S W100 PLUS OIL.
- C/W AD00-01-16 EXHAUST VISUAL INSPECTION PER (PAR B) NEXT DUE 5926.3, AND PER (PAR (C) AND (E)) NEXT DUE 05/14/17. PAR (G) DUE ACTT 6903.1 OR 02-13-18. NO DEFECTS NOTED.
- GROUND RUN, ALL OPS NORMAL. NO LEAKS NOTED

I CERTIFY THIS ENGINE HAS BEEN INSPECTED IN ACCORDANCE WITH ANNUAL INSPECTION AND WAS FOUND TO BE IN AIRWORTHY CONDITION.

KEVIN S DAVIS *Kevin S Davis*
AP4314761481A

SUB-TOTALS this page

TOTALS—Carry forward to next page


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
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N2702L Model TSIO-520- NB, S# R-521612


Date 10/4/2018
(Right Side)
Hobbs 750.8
SMOH 266.2

Removed cowl and inspected engine. Compression test as follows: beginning with # 60,68,70,67,72,72. Removed upper deck lines and all injectors, Cleaned and replaced seals, P/N 633958-3, Washers Nozzle, P/N 640612, O-rings, P/N 630979-9 Washer, P/N 628556
Installed 12 new RHB 32E Spark Plugs. Checked Mag Timing. Drained oil and filled with 12 quarts 100W Plus oil. Installed new CH48108-1 oil filter. Cut open filter no contaminants noted. Installed new engine air filter P/N P128156. Completed exhaust inspection part B, C, D, E and G as referenced in airframe AD. Adjusted mixture and Idle settings. Test run engine to specs, no leaks noted.

All Ad's complied with as of this date. 10/4/2018


Ed Allen AP3602934

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



Tim Rogers IA430258276

10/5/2018, New Hobbs time 994.8

Right, SMOH 266.2

Due to Maintenance new Hobbs time is 994.8. This time reflects the same

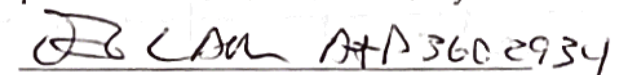
engine hours as previous Hobbs time reading of 750.8

Ed Allen  Cert# AP3602934

N2702L Model TSIO-520- NB, S# R-521612

Date 12/13/2018
(Right Side)
Hobbs 1024.6

Removed cowl right engine. Drained oil and filled with 12 quarts 100W oil. Installed new CH48108-1 oil filter. Cut open filter no contaminants noted. Torque exhaust system risers. Completed exhaust inspection part B as referenced in airframe AD. Adjusted mixture and Idle settings to specs, no leaks noted.


Ed Allen AP3602934

Page No. _____

N2702L Model TSIO-520- NB S/N R-521612

Date 7/16/2019
(Right Side) 355.1 SMOH

Removed cowlings and Changed Oil and filter. Filled with 12 Qts 100W oil and Installed new CH48108-1 Filter. Cut open filter, no contaminants noted. Completed Airframe Exhaust AD 00-01-16, para B. Test run engine and test flight, no leaks noted.

I certify that this engine has been inspected and was determined to be in airworthy condition.


Ed Allen, AP3602934

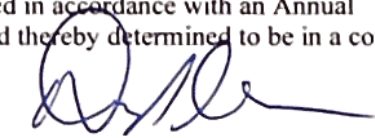


92nd WEST AVIATION, INC.

1423 Lingo Road
Lonoke, AR 72086
(501) 658-9092

25 March 2020 SMOH: 371.6 Total Time: UKN
Drained oil. Replaced oil filter. Serviced with 10qts Aeroshell 100W+ oil. Compression check: #1-54, #2-66, #3-67, #4-62, #5-67, #6-71 over 80. Cleaned and gapped spark plugs. Ran engine and checked for leaks and performance. AD00-01-06, Exhaust visual inspection complied with, next due Mar 2021.

I certify that this engine has been inspected in accordance with an Annual Inspection as per FAR 43 Appendix D and thereby determined to be in a condition for return to service.


Donald R. Adamson A&P 3528389 IA

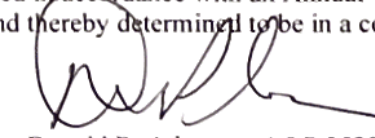


92nd WEST AVIATION, INC.

1423 Lingo Road
Lonoke, AR 72086
(501) 658-9092

5 May 2021 Hobbs: 1232.9 SMOH: 504.3 Total Time: UKN
Drained oil. Replaced oil filter. Serviced with 10qts Aeroshell 100W+ oil. Compression check: #1-54, #2-74, #3-70, #4-74, #5-74, #6-68 over 80. Cleaned and gapped spark plugs. Ran engine and checked for leaks and performance. AD00-01-06, Exhaust visual inspection complied with, next due May 2022.

I certify that this engine has been inspected in accordance with an Annual Inspection as per FAR 43 Appendix D and thereby determined to be in a condition for return to service.


Donald R. Adamson A&P 3528389 IA

