



# ENGINE MAINTENANCE RECORDS

Aircraft Registration N414PH

Engine Position Left

Engine Serial No. 217826-72K



## ENGINE MAINTENANCE RECORDS

Log No. 1

Aircraft Registration No. N414PH

Engine Manufacturer Continental

Model T5TD-520-NB

Serial No. 217826-72K

Date installed on aircraft 3/1/13

Time Between Overhauls (TBO) 1600 Hours

If used on multi-engine aircraft:

☐ Right ☒ Left

| DATE | TOTAL TIME IN SERVICE | TOTAL TIME SINCE OVERHAUL | TACH OR RECORDING METER TIME | DESCRIPTION OF WORK PERFORMED—<br>SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK |
|------|-----------------------|---------------------------|------------------------------|-----------------------------------------------------------------------------------------|
|------|-----------------------|---------------------------|------------------------------|-----------------------------------------------------------------------------------------|

| Date   | Total Time In Service | Total Time Since Overhaul | Recording Meter Time |
|--------|-----------------------|---------------------------|----------------------|
| 3/1/13 | 5731.0                | 0.0                       | 5098.5               |



RAM Aircraft, Limited Partnership • Waco Regional Airport

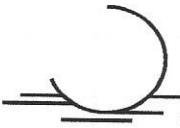
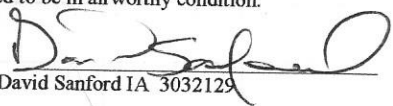
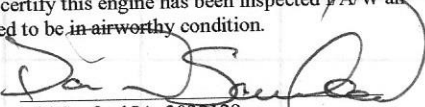
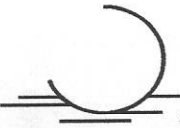
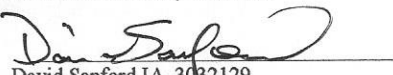
CONTINENTAL TSIO-520-NB Series IV Left S/N: 217826-72K

Above referenced engine overhauled to new parts limits per FAR 43.2(a)(1)(2) to conform w/Continental SM X-30574A. Applicable AD's and Service Bulletins C/W at this time. All gears cleaned, polished when required, inspected, magnafluxed, and no cracks found. Finish and dimensional limits within RAM Gear Inspection Specification No. 1818, Rev. K dated 2/08/10. Installed above referenced engine modified to TSIO-520-NB 325 HP per STC SE4327SW-D in left position of Cessna s/n 414A0421. See 337. Installed new RAM camshaft p/n 1058-1A, s/n XI11099 per STC SE4327SW-D. Installed new lifters p/n 658088 (int.) p/n 658077 (exh.). AD 10-11-04 n/a to lifter p/n installed. AD 97-26-17 c/w per installation of overhauled VAR crankshaft p/n 649898, s/n H069414N per Continental CSB96-8. C/W ultrasonic inspection per MSB96-10A. Due at next overhaul or when crankshaft removed. AD 99-19-01 n/a per crankshaft date of manufacture I/A/W Continental MSB99-3C. AD 2000-23-21 N/A to crankshaft serial number/date of manufacture I/A/W Continental Mandatory Service Bulletin MSB00-5D. Engine assembled with Continental heavy style crankcase p/n 654128-1, s/n 3B054PL. Installed new Continental nicked cylinders. Installed Floscan transducer per STC SE5726SW-D. Installed new Hartzell ScimitarPlus propeller model PHC-C3YF-2UF, s/n EB7541 per STC SA09971SC-D. Propeller balanced per Service Manual with spinner and bulkhead installed. Installed overhauled prop governor s/n 000146. Engine accessories exchanged for overhauled or new units except as noted. Re-used customer's vacuum pump s/n 62171, landing gear hydraulic pump s/n 1889 and tach generator s/n H7828. Installed new Hartzell ALV 9610 alternator (weight 12.75 lbs). See weight and balance change entered in P.O.H. Installed RAM overhauled turbocharger p/n 2060-1, s/n EJL1184. Installed RAM FAA-PMA fuel nozzles p/n 2562-14D. Continental Service Bulletin SB06-1A N/A per installation of RAM fuel nozzles. New Slick magnetos p/n 6320 installed per STC SE4651SW-D and pressurized. Slick Service Bulletin SB3-08A N/A to magneto serial numbers installed. Slick Service Bulletin SB1-12 N/A per S/N. MSB94-8D on magneto timing procedure c/w per timing to STC degree requirements with TDC locator and protractor with pointer. Engine modified to TSIO-520-NB per Continental Service Bulletin M-75-6 Rev. 1. Installed modified connecting rods p/n 1162 per STC SE4327SW-D as FAA-PMA approved replacement. P/N 652130 & 652131 rocker arms installed. AD 2000-01-16 c/w, see airframe log for details. Installed new Aeroquip integral firesleeved fuel, oil and hydraulic hoses meeting TSO- C53A Type D and TSO-C75 Type III. Installed new FAA-PMA oil cooler p/n 8000440, s/n 4082541. Installed RAM FAA-PMA oil cooler baffle p/n 1253-1. C/W AD 78-06-01 per installation of intake tube p/n 642590. C/W AD 79-05-09 per installation of new current design oil pressure plunger assy. C/W AD 89-24-01 R1 per installation of starter adapter p/n 642085A4 with current scavenge pump gears. AD 2012-10-13 AND MSB11-4B Starter adapter inspection n/a per p/n installed or manufacture date. C/W AD 93-16-15 per Continental MSB95-6 installation of fuel pump drive coupling p/n 653359. Category 1 thru 3 Continental Service Bulletin Compliance Listing in RAM Manual. Engine serviced with Phillips multi-grade 20W50 Type M mineral oil. See RAM Recommended Oil Grade Maintenance Tip MT-1 for recommended oils. Above referenced engine was made eligible for 1600 hr. TBO per Continental SIL98-9 Rev. A, Note 2. Installed RAM FAA-PMA spring loaded induction clamps p/n 1170-2. Installed RAM FAA-PMA rocker arm covers p/n 2766-1. Installed RAM FAA-PMA rocker arm cover gaskets p/n 1387-1. Engine ground run on test stand per RAM specifications for 4 hours. Engine pump pressure, idle, mixture, fuel flow, max RPM, manifold pressure, and oil pressure adjusted per RAM Series IV specifications. Engine ground run power test good. All engine systems checked for leaks. Engine approved for return to service for the work performed. Pertinent details on file under Project No 6607.

*Stephen H. Wade*  
RAM Aircraft, Limited Partnership, P.O. Box 5219, Waco, Texas 76708 CRS VA1R551K

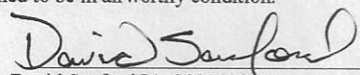
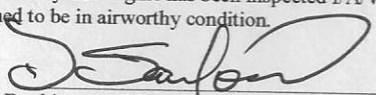
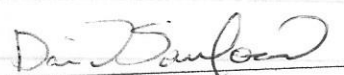
SUB-TOTALS this page

TOTALS—Carry forward to next page

| DATE                                                                                                                                                                                                                        | TOTAL TIME IN SERVICE | TOTAL TIME SINCE OVERHAUL | TACH OR RECORDING METER TIME | DESCRIPTION OF WORK PERFORMED—<br>SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------------|------------------------------|-----------------------------------------------------------------------------------------|
| TOTALS brought forward from previous page                                                                                                                                                                                   |                       |                           |                              |                                                                                         |
|  <b>AIRCRAFT INSPECTION &amp; REPAIR</b><br><b>709 Warehouse Dr. Laurel MS 39440</b><br><b>Phone: 601-270-5507</b>                         |                       |                           |                              |                                                                                         |
| DATE: 03-04-2013                                                                                                                                                                                                            | N414PH                | LEFT ENGINE               |                              |                                                                                         |
| TACH: 5124.4                                                                                                                                                                                                                | TSO:                  |                           |                              |                                                                                         |
| 1. Compression test 1. 76/80 2. 78/80 3. 79/80 4. 78/80 5. 77/80 6. 76/80<br>2. Oil changed service with AS W100 plus and installed CH48108-1 filter<br>3. Adjusted fuel pressures                                          |                       |                           |                              |                                                                                         |
| Performed annual inspection I/A/W Cessna 414 M.M. and FAR 43appendix D. See AD listing for AD compliance. I certify this engine has been inspected I/A/W an annual inspect and was determined to be in airworthy condition. |                       |                           |                              |                                                                                         |
| <br>David Sanford IA 3032129                                                                                                               |                       |                           |                              |                                                                                         |
|  <b>AIRCRAFT INSPECTION &amp; REPAIR</b><br><b>709 Warehouse Dr. Laurel MS 39440</b><br><b>Phone: 601-270-5507</b>                        |                       |                           |                              |                                                                                         |
| DATE: 04-02-14                                                                                                                                                                                                              | N414PH                | LEFT ENGINE               |                              |                                                                                         |
| TACH: 5161.5                                                                                                                                                                                                                | TSO: 37.1             |                           |                              |                                                                                         |
| 1. Compression test 1. 78/80 2. 78/80 3. 77/80 4. 78/80 5. 78/80 6. 78/80<br>2. Oil changed service with AS W100 plus and installed CH48108-1 filter                                                                        |                       |                           |                              |                                                                                         |
| Performed annual inspection I/A/W Cessna 414 M.M. and FAR 43appendix D. See AD listing for AD compliance. I certify this engine has been inspected I/A/W an annual inspect and was determined to be in airworthy condition. |                       |                           |                              |                                                                                         |
| <br>David Sanford IA 3032129                                                                                                             |                       |                           |                              |                                                                                         |
|  <b>AIRCRAFT INSPECTION &amp; REPAIR</b><br><b>709 Warehouse Dr. Laurel MS 39440</b><br><b>Phone: 601-270-5507</b>                       |                       |                           |                              |                                                                                         |
| DATE: 03-20-15                                                                                                                                                                                                              | N414PH                | LEFT ENGINE               |                              |                                                                                         |
| TACH: 5246.0                                                                                                                                                                                                                | TSO: 121.6            |                           |                              |                                                                                         |
| 1. Compression test 1. 75/80 2. 79/80 3. 77/80 4. 76/80 5. 76/80 6. 78/80<br>2. Oil changed service with AS W100 plus and installed CH48108-1 filter                                                                        |                       |                           |                              |                                                                                         |
| Performed annual inspection I/A/W Cessna 414 M.M. and FAR 43appendix D. See AD listing for AD compliance. I certify this engine has been inspected I/A/W an annual inspect and was determined to be in airworthy condition. |                       |                           |                              |                                                                                         |
| <br>David Sanford IA 3032129                                                                                                             |                       |                           |                              |                                                                                         |

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| DATE                                                                                                                                                                                                                        | TOTAL TIME IN SERVICE | TOTAL TIME SINCE OVERHAUL | TACH OR RECORDING METER TIME | DESCRIPTION OF WORK PERFORMED—<br>SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------------|------------------------------|-----------------------------------------------------------------------------------------|
| forward from previous page                                                                                                                                                                                                  |                       |                           |                              |                                                                                         |
|  <b>AIRCRAFT INSPECTION &amp; REPAIR</b><br><b>709 Warehouse Dr. Laurel MS 39440</b><br><b>Phone: 601-270-5507</b>                          |                       |                           |                              |                                                                                         |
| DATE: 03-14-16                                                                                                                                                                                                              | N414PH                | LEFT ENGINE               |                              |                                                                                         |
| TACH: 5279.7                                                                                                                                                                                                                | TSO: 155.3            |                           |                              |                                                                                         |
| 1. Compression test 1. 75/80 2. 76/80 3. 74/80 4. 77/80 5. 74/80 6. 75/80<br>2. Oil changed service with AS W100 plus and installed CH48108-1 filter                                                                        |                       |                           |                              |                                                                                         |
| Performed annual inspection I/A/W Cessna 414 M.M. and FAR 43appendix D. Set AD listing for AD compliance. I certify this engine has been inspected I/A/W an annual inspect and was determined to be in airworthy condition. |                       |                           |                              |                                                                                         |
| <br>David Sanford IA 3032129                                                                                                               |                       |                           |                              |                                                                                         |
|  <b>AIRCRAFT INSPECTION &amp; REPAIR</b><br><b>709 Warehouse Dr. Laurel MS 39440</b><br><b>Phone: 601-270-5507</b>                          |                       |                           |                              |                                                                                         |
| DATE: 05-19-17                                                                                                                                                                                                              | N414PH                | LEFT ENGINE               |                              |                                                                                         |
| TACH: 5334.0                                                                                                                                                                                                                | TSO: 209.6            |                           |                              |                                                                                         |
| 1. Compression test 1. 72/80 2. 70/80 3. 73/80 4. 75/80 5. 74/80 6. 72/80<br>2. Oil changed service with AS W100 plus and installed CH48108-1 filter                                                                        |                       |                           |                              |                                                                                         |
| Performed annual inspection I/A/W Cessna 414 M.M. and FAR 43appendix D. Set AD listing for AD compliance. I certify this engine has been inspected I/A/W an annual inspect and was determined to be in airworthy condition. |                       |                           |                              |                                                                                         |
| <br>David Sanford IA 3032129                                                                                                             |                       |                           |                              |                                                                                         |
|  <b>AIRCRAFT INSPECTION &amp; REPAIR</b><br><b>709 Warehouse Dr. Laurel MS 39440</b><br><b>Phone: 601-270-5507</b>                       |                       |                           |                              |                                                                                         |
| DATE: 04/20/18                                                                                                                                                                                                              | N414PH                | ENGINE: LEFT              |                              |                                                                                         |
| TACH: 5398.1                                                                                                                                                                                                                |                       |                           |                              |                                                                                         |
| 1. Removed engine for repairs<br>All work performed in accordance with Cessna 414 M.M. and current FARs. This aircraft is returned to service.                                                                              |                       |                           |                              |                                                                                         |
| <br>David Sanford IA 3032129                                                                                                            |                       |                           |                              |                                                                                         |
| SUB-TOTALS this page                                                                                                                                                                                                        |                       |                           |                              |                                                                                         |
| TOTALS—Carry forward to next page                                                                                                                                                                                           |                       |                           |                              |                                                                                         |

DATE

TOTAL  
TIME  
IN  
SERVICETOTAL  
TIME  
SINCE  
OVERHAULTACH OR  
RECORDING  
METER  
TIMEDESCRIPTION OF WORK PERFORMED—  
SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK

Holly Springs Marshall Co. Airport  
Hwy. 78 West, P.O. Box 399  
Holly Springs, MS 38635

Page 1

Disassembled engine due to lightning strike. Steel Parts Magnafluxed. Crankshaft UltraSonic Inspected. Crankcase Dye Checked OK. Engine reassembled using following parts: 6 #SA536379 crank screw; 16 #SA643629 plate; 16 #SA629104 snap ring; 12 #SA628109 rod nut; 12 #SA629340 rod bolt; 1 #SA646592A1 bearing set; 4 #SA649205 alt screw; 2 #SA641909 lock plate; 12 #SA642398 rod bearing; 4 #SA631088-.44 screw; 6 #CN110 ring; 4 #655269 mag rubber; 6 #SA628488 lifter; 6 #SA646277 lifter; 1 #SA630899 bearing; 1 #SA646550A1 gasket set; 1 #633189 crank plug; 1 #641250 crank seal; 6 #654857 serviceable pistons; 1 serviceable oil collar; Crankshaft S/N H069414N UltraSonic inspected by A/C Specialties W/O# 247978. 1 #6320 Magneto S/N 12120075 O/H by A/C Accessories W/O# 26850. 1 #6320 Magneto S/N 12120074 O/H by A/C Accessories W/O# 26851. CSB05-8C "Cam Gear" N/A Late Style 656818. SB08-12 "Crank Gear" N/A - Late Style Gear. Engine Run On Test Cell.

## MAINTENANCE RELEASE

MAKE CONTINENTAL SERIAL NO. 217826 MODEL TSIO520-NB TOTAL TIME UNKN  
THE ENGINE IDENTIFIED ABOVE WAS REPAIRED AND INSPECTED IN ACCORDANCE WITH CURRENT FEDERAL AVIATION REGULATIONS AND WAS FOUND AIRWORTHY FOR RETURN TO SERVICE. PERTINENT DETAILS OF THE REPAIR ARE ON FILE AT THIS AGENCY UNDER WORK ORDER NO. J7096 DATE: 4-16-2018  
SIGN: John Jewell FOR REPAIR STATION NO. JUJR300L



## AIRCRAFT INSPECTION &amp; REPAIR

709 Warehouse Dr. Laurel MS 39440

Phone: 601-270-5507

DATE: 04/20/18

N414PH

ENGINE: LEFT

TACH: 5398.1

1. Installed engine after repairs  
All work performed in accordance with Cessna 414 M.M. and current FARs. This aircraft is returned to service.

David Sanford  
David Sanford IA 3032129



## AIRCRAFT INSPECTION &amp; REPAIR

709 Warehouse Dr. Laurel MS 39440

Phone: 601-270-5507

DATE: 08-07-18

N414PH

LEFT ENGINE

TACH: 5400.1

TSO: 275.7

1. Compression test 1. 76/80 2. 78/80 3. 78/80 4. 77/80 5. 75/80 6. 79/80
2. Oil changed service with 12 Qts. of AS W100 Mineral and installed CH48108-1 filter
3. Remove left engine oil pressure relief valve & clean.

Performed annual inspection I/A/W Cessna 414 M.M. and FAR 43 appendix D. See AD listing for AD compliance. I certify this engine has been inspected I/A/W an annual inspect and was determined to be in airworthy condition.

SUB-TOTALS this page

TOTALS—Carry forward

David Sanford  
David Sanford IA 3032129

| DATE | TOTAL TIME IN SERVICE | TOTAL TIME SINCE OVERHAUL | TACH OR RECORDING METER TIME | DESCRIPTION OF WORK PERFORMED—<br>SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK |
|------|-----------------------|---------------------------|------------------------------|-----------------------------------------------------------------------------------------|
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**AIRCRAFT INSPECTION & REPAIR**

709 Warehouse Dr. Laurel MS 39440

Phone: 601-270-5507

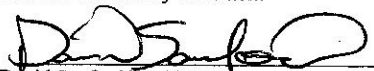
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DATE: 09-02-2019 N414PH LEFT ENGINE

TACH: 5441.2 TSO: 316.8

1. Compression test 1. 70/80 2. 68/80 3. 66/80 4. 66/80 5. 68/80 6. 69/80
2. Oil changed service with 10 Qts of AS W100 Mineral and installed CH48109 Filter
3. Remove left engine oil pressure relief valve & clean.

Performed annual inspection I/A/W Cessna 414 M.M. and FAR 43appendix D. See AD listing for AD compliance. I certify this engine has been inspected I/A/W an annual inspect and was determined to be in airworthy condition.

  
David Sanford IA 3032129

**AIRCRAFT INSPECTION & REPAIR**

709 Warehouse Dr. Laurel MS 39440

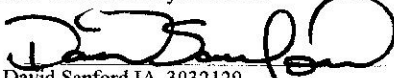
Phone: 601-270-5507

DATE: 10-13-2020 N414PH LEFT ENGINE

TACH: 5485.4 TSO: 361.0

1. Compression test 1. 70/80 2. 74/80 3. 76/80 4. 75/80 5. 72/80 6. 74/80
2. Oil changed service with 10 Qts of AS W100 and installed CH48109 Filter

Performed annual inspection I/A/W Cessna 414 M.M. and FAR 43appendix D. See AD listing for AD compliance. I certify this engine has been inspected I/A/W an annual inspect and was determined to be in airworthy condition.

  
David Sanford IA 3032129

wo: 20122901

Engine L - page 1 of 1



Classic Aviation - 69 Aviation Circle - Weyers Cave, VA 24486 - 5402340226

N414PH  
Hobbs: 5518.2

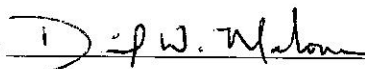
January 4, 2021

## L/H ENGINE

Ran engine to operating temperature. Performed diagnostic. Oil found around oil pump/tachometer drive. Removed rear engine mount bolts and hoisted engine. Removed, cleaned, and inspected oil pump housing and tach drive housing. Installed new Garloc seal P/N 531378 in tach drive, installed new tach generator gasket P/N 653487, installed new tach drive cover gasket P/N 653023. Used Permatex Aviation Form-A-Gasket #3H P/N P-80019, TCM Silk Thread P/N 641543, and Loctite 515 to seal oil pump housing in reference to TCM SIL99-2 Pg. 26, Rev. 27-AUG-2002. Reinstalled rear engine bolts, torqued to 350 in/lbs., and secured with lock washers P/N 0851559-1. Run up and leak check satisfactory.

The aircraft, airframe, aircraft engine, propeller or appliance identified was repaired and/or inspected in accordance with current Regulation of the Federal Aviation Agency and is approved for return to service for the work performed.

David Malone A&amp;P IA 3879748





| DATE | TOTAL TIME IN SERVICE | TOTAL TIME SINCE OVERHAUL | TACH OR RECORDING METER TIME | DESCRIPTION OF WORK PERFORMED—<br>SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------|-----------------------|---------------------------|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      |                       |                           |                              | <p><i>Signature.</i></p> <p><b>FLIGHT SUPPORT</b><br/>A BBA Aviation company<br/>100 Aviation Drive, Suite 100<br/>Charlottesville, VA 22911<br/>Tel (434) 978-1474</p> <p>CRS# H00R564Y</p> <p>N# 414PH<br/>Model TSIO-520-NB<br/>SN 217826-72K<br/>Hobbs 5507.9<br/>WO# S12-20-04974<br/>Date 03-22-2021</p> <p>Drained the oil and removed the oil filter, inspected the filter element for metal, none found. Installed new filter p/n Ch48109-1 and secured. Added 10 qts of Aeroshell W100 to engine. Performed an engine run for a leak and operational check, no defects noted. Removed and replaced induction fuel return hoses TCM p/n 628555-4 &amp; 628555-42 off/on. Leak and ops ck good. All maintenance was done in accordance Cessna 414A maintenance manual Complied with AD 2000-01-16 inspection of exhaust system by visual inspection I/A/W compliance table in figure 1 column B of this AD. No defects noted. This AD 2000-01-16 is due again at Hobbs 5557.9 or next Annual.</p> <p><i>The aircraft - Airframe - Engine - Propeller - or Appliance identified above was repaired and inspected in accordance with current Federal Aviation Regulations and was approved for return to service. Pertinent details of this repair are on file at this agency under the work order identified above.</i></p> <p>Daniel Little CRS#H00R564Y</p> <p><i>Daniel Little</i></p> |

wo: 5145

Engine L - page 1 of 1



Classic Aviation - 69 Aviation Circle - Weyers Cave, VA 24486 - 5402340226

**N414PH**  
HOBBS: 1538.1

July 23, 2021

## L/H ENGINE

Removed exhaust headers, welded six unusable EGT probe holes, and re-installed exhaust with six new exhaust gaskets P/N RA628260. Installed a new stud P/N 657985-1-38P003 at cylinder #4 and torqued exhaust nuts to 130" pounds.

The aircraft, airframe, aircraft engine, propeller or appliance identified was repaired and/or inspected in accordance with current Regulation of the Federal Aviation Agency and is approved for return to service for the work performed.

Kenneth Todd A&amp;P 3997642



KRUQ- Rowan County Airport  
3680 Airport Loop Rd  
Salisbury, NC 28147  
(704) 310-1421

Make: Continental Motors Reg: N4174PH

Date: 12/20/2021 Model: TSIO-520-NB SN: 217826-72K

Left Engine: Total Time Engine: UKN TSMOH:494.9 Aircraft Total Time: 5593.4 Hobbs: 5593.4

Performed 100 hour inspection on this engine. Washed down engine for inspection. Drained oil and serviced with 10 QTS of Aeroshell W100. Removed old oil filter and installed new filter P/N: AA48109. Torqued and saftied. Cut open old filter, no contaminants. Lubed engine controls and linkages. Compression test (Continental SB03-3) 76, 61, 70, 69, 70, 69. Checked magneto timing. Ground ran aircraft, and all systems checked normal. No leaks or defects were noted at this time. Work with reference to Cessna Model 414/414A Service Manual and Continental Service and Maintenance manuals.

*by date-adward: Murphy 12/21/21* AP227863044

I certify this Engine has been inspected in accordance with a 100 hour Inspection and was determined to be in airworthy condition.

*by date-adward: Murphy 12/21/21* AP227863044

TOTALS—Carry forward to next page

| DATE | TOTAL TIME IN SERVICE | TOTAL TIME SINCE OVERHAUL | TACH OR RECORDING METER TIME | DESCRIPTION OF WORK PERFORMED—<br>SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------|-----------------------|---------------------------|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      |                       |                           |                              | <b>TOTALS</b> brought forward from previous page                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|      |                       |                           |                              | <p><i>Signature.</i><br/> <b>FLIGHT SUPPORT</b><br/> A BBA Aviation company<br/> 100 Aviation Drive, Suite 100<br/> Charlottesville, VA 22911<br/> Tel (434) 978-1474</p> <p>CRS# H00R564Y</p> <p>N# 414PH<br/> Model TSIO-520-NB<br/> SN 217826-72K<br/> Hobbs 5632.5<br/> WO# S12-22-05381<br/> Date 03-24-2021</p> <p>Drained the oil and removed the oil filter, inspected the filter element for metal, none found. Installed new filter p/n Ch48109-1 and secured. Added 10 qts of Aeroshell W100 to engine. Performed an engine run for a leak and operational check, no defects noted. All maintenance was done in accordance Cessna 414A maintenance manual Complied with AD 2000-01-16 inspection of exhaust system by visual inspection I/A/W compliance table in figure 1 column B of this AD. No defects noted. This AD 2000-01-16 is due again at Hobbs 5682.5 or next oil change.</p> <p><i>The aircraft - Airframe - Engine - Propeller - or Appliance identified above was repaired and inspected in accordance with current Federal Aviation Regulations and was approved for return to service. Pertinent details of this repair are on file at this agency under the work order identified above.</i></p> <p>Daniel Little<br/> CRS#H00R564Y</p> <p><i>Daniel Little</i></p>                      |
|      |                       |                           |                              | <p><i>Signature.</i><br/> <b>FLIGHT SUPPORT</b><br/> A BBA Aviation company<br/> 100 Aviation Drive, Suite 100<br/> Charlottesville, VA 22911<br/> Tel (434) 978-1474</p> <p>CRS# H00R564Y</p> <p>N# 414PH<br/> Model TSIO-520-NB<br/> SN 217826<br/> Hobbs 5632.5<br/> WO# S12-22-05381<br/> Date 06-27-2022</p> <p>Removed LH engine starter drive assy p/n 658440A1 s/n TA27209 and sent to Triad Aviation for inspection and repair, unit was repaired by Triad Aviation under w/o# 27209 and was returned to service, reinstalled starter assy with new gasket and secured. Performed an engine run for a leak and ops ck, no defects noted. All maintenance done I/A/W Cessna 414A amm and Continental TSIO-520 overhaul manual.</p> <p><i>The aircraft - Airframe - Engine - Propeller - or Appliance identified above was repaired and inspected in accordance with current Federal Aviation Regulations and was approved for return to service. Pertinent details of this repair are on file at this agency under the work order identified above.</i></p> <p>Daniel Little<br/> CRS#H00R564Y</p> <p><i>Daniel Little</i></p>                                                                                                                                                                                |
|      |                       |                           |                              | <p><i>Signature.</i><br/> <b>FLIGHT SUPPORT</b><br/> A BBA Aviation company<br/> 100 Aviation Drive, Suite 100<br/> Charlottesville, VA 22911<br/> Tel (434) 978-1474</p> <p>CRS# H00R564Y</p> <p>N# 414PH<br/> Model TSIO-520-NB<br/> SN 217826-72K<br/> Tach 5688.5<br/> WO# S12-22-05551<br/> Date 07-21-2022</p> <p>Drained the oil and removed the oil filter, inspected the filter element for metal, none found. Installed new filter p/n Ch48109-1 and secured. Added 9 qts of Aeroshell W100 to engine. Performed an engine run for a leak and operational check, no defects noted. All maintenance was done in accordance Cessna 414A maintenance manual Complied with AD 2000-01-16 inspection of exhaust system by visual inspection I/A/W compliance table in figure 1 column B of this AD. No defects noted. This AD 2000-01-16 is due again at Hobbs 5738.5 or 30 calendar day whichever comes later.</p> <p><i>The aircraft - Airframe - Engine - Propeller - or Appliance identified above was repaired and inspected in accordance with current Federal Aviation Regulations and was approved for return to service. Pertinent details of this repair are on file at this agency under the work order identified above.</i></p> <p>Daniel Little<br/> CRS# H00R564Y</p> <p><i>Daniel Little</i></p> |

**TOTALS—**Carry forward to next page

| DATE | TOTAL TIME IN SERVICE | TOTAL TIME SINCE OVERHAUL | TACH OR RECORDING METER TIME | DESCRIPTION OF WORK PERFORMED—<br>SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK |
|------|-----------------------|---------------------------|------------------------------|-----------------------------------------------------------------------------------------|
|------|-----------------------|---------------------------|------------------------------|-----------------------------------------------------------------------------------------|

wo: 5951

Engine L - page 1 of 1



Classic Aviation · 69 Aviation Circle · Weyers Cave, VA 24486 · (540)234-0226

**N414PH**

ACTT: 6648.6

LH PROP SMOH: 688.1

RH PROP SMOH: 688.1

Heater Hobbs: 1589.0

LH PROP TT: 688.1

RH PROP TT: 688.1

LH ENG SMOH: 688.1

RH ENG SMOH: 688.1

TACH: 5786.6

**March 08, 2023**

LH ENG TT: 6419.1

RH ENG TT: 5460.4

**LH ENGINE:**

Performed inspection with reference to the Cessna 414A Inspection Checklist to include the scope and detail of 14 CFR Part 43 Appendix D. Ran engine to operating temperature. Performed compression test. Compressions 1)69/80 2)67/80 3)74/80 4)76/80 5)70/80 6)76/80. Borescoped all cylinders, no discrepancies. Drained oil. Cut open and inspected oil filter, no discrepancies found. Installed new oil filter P/N CH48109-1, torqued to 18 ft/lbs. and safety wired in place. Serviced engine with 11 quarts of Aeroshell W100 plus oil. Pressurized exhaust system, no leaks found. Removed, cleaned, inspected, gapped, and tested the spark plugs. Removed and replaced all spark plugs with new RHB32E and new copper gaskets, torqued to 30 ft/lbs. Removed left engine, left magneto, magneto harness, and distributor housing to gain access to the magneto points. Inspected distributor housing, points, all internal components and found no defects. Reassembled magneto and reinstalled with new magneto gasket P/N: 649954. Removed left engine, right magneto, magneto harness, and distributor housing to gain access to the magneto points. Inspected distributor housing, points, all internal components and reassembled with new seal kit. Adjusted and checked magneto to engine timing IAW engine data tag. Removed and replaced LH Engine Manifold Pressure Sensor. Torqued LH Engine sump pan bolts, hydraulic pump nuts, oil pump bolts, fuel pump bolts, oil filter adapter hardware, flexible and rigid oil lines, and fuel lines all with reference to Continental M-O Manual torque specs. Cleaned engine. Leak check satisfactory after post-maintenance engine runs.

The aircraft, airframe, aircraft engine, propeller or appliance identified was repaired and/or inspected in accordance with current Regulation of the Federal Aviation Agency and is approved for return to service for the work performed.

The above work was accomplished in reference to applicable maintenance manuals and other approved or acceptable data as appropriate. I certify that this Engine has been inspected as part of an Annual Inspection Checklist, was found to be in airworthy condition, and is released for return to service.

Josh Lucas A&amp;P IA 3534518

**Signature**  
 FLIGHT SUPPORT  
 A BBA Aviation company

 100 Aviation Drive, Suite 100  
 Charlottesville, VA 22911  
 Tel (434) 978-1474

CRS# H00R564Y

 N# 414PH  
 Model TSIO-520-NB  
 SN 217826-72K  
 Hobbs 5832.5  
 WO# S12-23-05802  
 Date 04-03-2023

Removed Lt eng left magneto p/n 6320 s/n 09061353 and installed Surefly STC SE04349CH by installing a Surefly SIM6C s/n 6C-4322032 on eng in left position and secured. Set dip switch for fixed advance, set SIM timing @ zero degrees and set dip switch to fire @ 22 degrees BTDC. Ran 16-gauge wire and connected SIM fused hot wire to battery contactor terminal. Leak & operational check good on engine run. Installation performed I/A/W Surefly STC instructions Doc #SF1003 Rev C. See FAA form 337. Drained the oil and removed the oil filter, inspected the filter element for metal, none found. Installed new filter p/n Ch48109-1 and secured. Added 10 qts of Aeroshell W100 to engine. Performed an engine run for a leak and operational check, no defects noted. All maintenance was done in accordance Cessna 414A maintenance manual. Removed and replaced vacuum pump gasket customer supplied and secured, lk & ops ck good. Complied with AD 2000-01-16 by inspection of exhaust system by visual inspection I/A/W compliance table in figure 1 column B of this AD. No defects noted. This AD 2000-01-16 is due again at Hobbs 5882.5 or next oil change.

The aircraft - Airframe - Engine - Propeller - or Appliance identified above was repaired and inspected in accordance with current Federal Aviation Regulations and was approved for return to service. Pertinent details of this repair are on file at this agency under the work order identified above.

Daniel Little

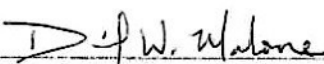
CRS#H00R564Y

Form LB-1

SUB-TOTALS this page

TOTALS—Carry forward to next page

| DATE | TOTAL<br>TIME<br>IN<br>SERVICE | TOTAL<br>TIME<br>SINCE<br>OVERHAUL | TACH OR<br>RECORDING<br>METER<br>TIME | DESCRIPTION OF WORK PERFORMED—<br>SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------|--------------------------------|------------------------------------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      |                                |                                    |                                       | <p><i>Signature.</i></p> <p>FLIGHT SUPPORT<br/>A BBA Aviation company<br/>100 Aviation Drive, Suite 100<br/>Charlottesville, VA 22911<br/>Tel (434) 978-1474</p> <p>CRS# H00R564Y</p> <p>N# 414PH<br/>Model TSIO-520-NB<br/>SN 217826-72K<br/>Hobbs 5904.7<br/>WO# S12-23-05894<br/>Date 06-21-2023</p> <p>Drained the oil and removed the oil filter, inspected the filter element for metal, none found. Installed new filter p/n AA48109-2 customer supplied and secured. Added 10 qts of Aeroshell W100 Plus customer supplied oil to engine. Performed an engine run for a leak and operational check, no defects noted. All maintenance was done in accordance Cessna 414A maintenance manual Complied with AD 2000-01-16 inspection of exhaust system by visual inspection I/A/W compliance table in figure 1 column B of this AD. No defects noted. This AD 2000-01-16 is due again at Hobbs 5954.7 or next oil change.</p> <p><i>The aircraft - Airframe - Engine - Propeller - or Appliance identified above was repaired and inspected in accordance with current Federal Aviation Regulations and was approved for return to service. Pertinent details of this repair are on file at this agency under the work order identified above.</i></p> <p>Daniel Little CRS#H00R564Y</p>                                                                                                                                                                          |
|      |                                |                                    |                                       | <p><i>Signature.</i></p> <p>FLIGHT SUPPORT<br/>A BBA Aviation company<br/>100 Aviation Drive, Suite 100<br/>Charlottesville, VA 22911<br/>Tel (434) 978-1474</p> <p>CRS# H00R564Y</p> <p>N# 414PH<br/>Model TSIO-520-NB<br/>SN 217826-72K<br/>Hobbs 5955.9<br/>WO# S12-23-05949<br/>Date 09-01-2023</p> <p>Drained the oil and removed the oil filter, inspected the filter element for metal, none found. Installed new filter p/n AA48109-2 customer supplied and secured. Added 10 qts of Aeroshell W100 Plus customer supplied oil to engine. Performed an engine run for a leak and operational check, no defects noted. All maintenance was done in accordance Cessna 414A maintenance manual Complied with AD 2000-01-16 inspection of exhaust system by visual inspection I/A/W compliance table in figure 1 column B of this AD. No defects noted. This AD 2000-01-16 is due again at Hobbs 6005.9 or next oil change. Removed the eng oil drain plug and installed FAA/PMA approved Saf-Air model F62 quick drain oil valve I/A/W Saf-Air installation instructions and secured. Leak ck good.</p> <p><i>The aircraft - Airframe - Engine - Propeller - or Appliance identified above was repaired and inspected in accordance with current Federal Aviation Regulations and was approved for return to service. Pertinent details of this repair are on file at this agency under the work order identified above.</i></p> <p>Daniel Little CRS#H00R564Y</p> |
|      |                                |                                    |                                       | <p><i>Signature.</i></p> <p>FLIGHT SUPPORT<br/>A BBA Aviation company<br/>100 Aviation Drive, Suite 100<br/>Charlottesville, VA 22911<br/>Tel (434) 978-1474</p> <p>CRS# H00R564Y</p> <p>N# 414PH<br/>Model TSIO520NB<br/>SN 217826-72K<br/>Hobbs 5982.3<br/>WO# S12-23-05974<br/>Date 09-29-2023</p> <p>Complied with AD 2000-01-16 inspection of exhaust system by visual inspection of the engine beams, firewalls, and canted bulkheads I/A/W compliance table in figure 1 column D of this AD. No defects noted. This AD 2000-01-16 table 1 column (d) is due again in 500 hours at Hobbs 6482.3.</p> <p><i>The aircraft - Airframe - Engine - Propeller - or Appliance identified above was repaired and inspected in accordance with current Federal Aviation Regulations and was approved for return to service. Pertinent details of this repair are on file at this agency under the work order identified above.</i></p> <p>Daniel Little CRS#H00R564Y</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

| DATE | TOTAL TIME IN SERVICE | TOTAL TIME SINCE OVERHAUL | TACH OR RECORDING METER TIME | DESCRIPTION OF WORK PERFORMED—<br>SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------|-----------------------|---------------------------|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      |                       |                           |                              | <p>wo: 6319 <span style="float: right;">Engine L - page 1 of 1</span></p> <p style="text-align: center;"></p> <p style="text-align: center;">Classic Aviation - 69 Aviation Circle - Weyers Cave, VA 24486 - (540)234-0226</p> <hr/> <p><b>N414PH</b> <span style="float: right;"><b>November 13, 2023</b></span><br/> <b>TACH: 5785.6</b></p> <p><b>LEFT ENGINE</b></p> <p>Removed LH vacuum pump and accessory housing. Extracted old garlock seal and replaced with new P/N 25102AC. Replaced accessory housing gasket P/N 654012 and reinstalled accessory housing, torquing hardware to 165 in/lbs. Reinstalled vacuum pump with new gasket P/N AS3491-01 and torqued mounting hardware to 90 in/lbs.</p> <p>The above work was performed in reference to applicable maintenance manuals and other approved or acceptable data as appropriate. I certify that this Engine is airworthy with respect to the work performed and is released for return to service.</p> <p>David Malone A&amp;P IA 3879748 </p> |

*Signature.*

FLIGHT SUPPORT  
A BBA Aviation company

100 Aviation Drive, Suite 100  
Charlottesville, VA 22911  
Tel (434) 978-1474

CRS# H00R564Y

N# 414PH  
Model TSIO-520-NB  
SN 217826-72K  
Hobbs 6005.7  
WO# S12-23-06010  
Date 11-21-2023

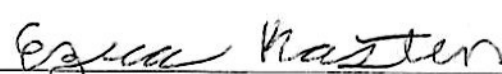
Drained the oil and removed the oil filter, inspected the filter element for metal, none found. Installed new filter p/n AA48108-2 customer supplied and secured. Added 10 qts of Aeroshell W100 customer supplied oil to engine. Removed and replaced #4-cylinder valve cover gasket with p/n 655528 and secured. Performed an engine run for a leak and operational check, no defects noted. All maintenance was done in accordance Cessna 414A maintenance manual. Complied with AD 2000-01-16 inspection of exhaust system by visual inspection I/A/W compliance table in figure 1 column B of this AD. No defects noted. This AD 2000-01-16 is due again at Hobbs 6055.7 or next oil change.

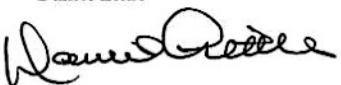
The aircraft - Airframe - Engine - Propeller - or Appliance identified above was repaired and inspected in accordance with current Federal Aviation Regulations and was approved for return to service. Pertinent details of this repair are on file at this agency under the work order identified above.

Daniel Little

CRS#H00R564Y

Form LB-1

| DATE | TOTAL TIME IN SERVICE | TOTAL TIME SINCE OVERHAUL | TACH OR RECORDING METER TIME | DESCRIPTION OF WORK PERFORMED—<br>SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------|-----------------------|---------------------------|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      |                       |                           |                              | <p>wo: 6409 <span style="float: right;">Engine L - page 1 of 1</span></p> <p style="text-align: center;"></p> <p style="text-align: center;">Classic Aviation - 69 Aviation Circle - Weyers Cave, VA 24486 - (540)234-0226</p> <hr/> <p><b>N414PH</b> <span style="float: right;"><b>January 31, 2024</b></span><br/> <b>HOBBS : 6049.1</b> <span style="margin-left: 50px;"><b>LH ENG TSMOH:</b></span> <span style="margin-left: 50px;"><b>LH ENG TT: 6681.6</b></span><br/> <span style="margin-left: 300px;"><b>950.6</b></span></p> <p><b>LEFT ENGINE</b></p> <p>Replaced cylinder #4 intake and exhaust pushrod shroud packings with four new packings PN# 534610. Reinstalled rocker and torqued rocker shaft bolts to 110 in-lb. Reinstalled #4 rocker cover with new gasket PN# 655528-S and torqued screws to 35 in-lb. Reinstalled removed intake risers with three new gaskets PN# 649959 and torqued bolts to 100 in-lb. Installed P/N AN363-832 - Nut, Lock, Metal, Installed (4) P/N 534610 - Packing, Push Rod, Installed P/N 655528-S - Gasket, Rocker Cover (Silicone), Installed (3) P/N 649959 - Gasket, Intake.</p> <p>The aircraft, airframe, aircraft engine, propeller or appliance identified was repaired and/or inspected in accordance with current Regulation of the Federal Aviation Agency and is approved for return to service for the work performed.</p> <p>Ezra Kasten A&amp;P 4560262 </p> |

| DATE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | TOTAL TIME IN SERVICE | TOTAL TIME SINCE OVERHAUL | TACH OR RECORDING METER TIME | DESCRIPTION OF WORK PERFORMED—<br>SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------------|------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| <br><b>Signature</b><br>FLIGHT SUPPORT<br>A BBA Aviation company<br>100 Aviation Drive, Suite 100<br>Charlottesville, VA 22911<br>Tel (434) 978-1474                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                       |                           |                              | CRS# H00R564Y<br><br>N# 414PH<br>Model TSIO-520-NB<br>SN 217826-72K<br>Hobbs 6058.2<br>WO# S12-24-06084<br>Date 02-15-2024 |
| <p>Drained the oil and removed the oil filter, inspected the filter element for metal, none found. Installed new filter p/n CH48109-1 customer supplied and secured. Added 10 qts of Aeroshell W100 customer supplied oil to engine. Performed an engine run for a leak and operational check, no defects noted. All maintenance was done in accordance Cessna 414A maintenance manual. Complied with AD 2000-01-16 inspection of exhaust system by visual inspection I/A/W compliance table in figure 1 column B of this AD. No defects noted. This AD 2000-01-16 is due again at Hobbs 6108.2 or next oil change. Removed and replaced left and right induction tube flex elbow couplers RAM p/n 1111-1 off/on. Leak and op's ck good. Removed and replace left side exhaust support clip bracket RAM p/n 2849-2 off/on and secured.</p> <p><small>The aircraft - Airframe - Engine - Propeller - or Appliance identified above was repaired and inspected in accordance with current Federal Aviation Regulations and was approved for return to service. Permanent details of this repair are on file at this agency under the work order identified above.</small></p> <p>Daniel Little<br/> <br/>           CRS#H00R564Y</p> |                       |                           |                              |                                                                                                                            |
| Form LB-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                       |                           |                              |                                                                                                                            |

wo: 6474

Engine L - page 1 of 1



Classic Aviation - 69 Aviation Circle - Weyers Cave, VA 24486 - (540)234-0226

N414PH

 AFTT: 6940.5  
 LH ENG TT: 6711.0  
 TACH: 6078.5

 Heater Hobbs: 1688.2  
 LH PROP TT: 980.0

 LH ENG SMOH: 980.0  
 RH ENG SMOH: 980.0

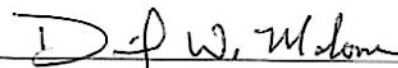
 April 01, 2024  
 LH ENG TT: 6711.0  
 RH PROP TT: 980.0

## 1. LEFT ENGINE:

Ran engine to operational temperature. Compressions are as follows: 1)74/80 2)68/80 3)72/80 4)70/80 5)72/80 6)72/80. Master orifice reading 44/80. Borescoped all cylinders, no defects found. No oil change at this time. Removed, cut open, and inspected oil filter, with nothing remarkable found. Installed new oil filter P/N CH48109-1, torqued to 18 ft/lbs., and safety wired. Pressure tested exhaust system with no discrepancies noted. Cleaned, gapped, inspected, bench tested, rotated, and reinstalled all spark plugs with new copper gaskets and torqued them to 30 ft/lbs. Removed and inspected fuel servo screen, nothing found, reinstalled with new gasket P/N 649983 and safety wired. Removed, hydroponically cleaned, and inspected all fuel injector nozzles. Reinstalled nozzles using a new seal kit P/N ORW-6 and torqued to 60 in/lbs. Replaced 6 fuel injector air rail seals P/N 633958-3. Installed new LH and RH customer supplied Air/Oil Separator Filters P/N AM108535A0 and installed new stat-o-seals P/N NAS1523-4B under cap nut. Adjusted timing of SureFly Magneto on LH engine to TDC on Cylinder #1, replaced lock washers, and torqued mounting hardware to 110 in/lbs. Removed starter and removed and replaced starter O-ring with new AS3578-038 O-ring. Reinstalled and torqued nuts to 210 in/lbs., ops check normal. Installed new Gasket P/N 642892 for Oil Filler Tube Cap. Moved LH engine Fuel Distribution Valve to RH engine and RH engine fuel distribution valve to LH side for troubleshooting purposes per request of customer with no change to RH engine fuel flow. Installed new EGT Probe P/N P-110-R for cylinder #1 using standard ring terminals. Operational test satisfactory. Post maintenance run-up and leak check satisfactory.

The above work was accomplished in reference to applicable maintenance manuals and other approved or acceptable data as appropriate. I certify that this Engine has been inspected in reference to a an Annual Inspection Checklist, including the scope and detail of 14 CFR Part 43 Appendix D., was found to be in airworthy condition, and is released for return to service.

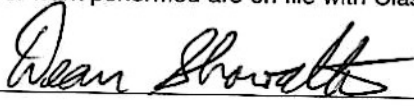
David Malone A&amp;P IA 3879748



SUB-TOTALS this page

TOTALS—Carry forward to next page

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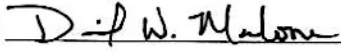
| DATE | TOTAL TIME IN SERVICE | TOTAL TIME SINCE OVERHAUL | TACH OR RECORDING METER TIME | DESCRIPTION OF WORK PERFORMED—<br>SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------|-----------------------|---------------------------|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      |                       |                           |                              | <p>wo: 6722</p> <p style="text-align: right;">Engine - page 1 of 1</p> <p style="text-align: center;"><br/><b>CLASSIC AVIATION</b></p> <p style="text-align: center;">Classic Aviation - 69 Aviation Circle - Weyers Cave, VA 24486 - (540)234-0226</p> <p><b>N414PH</b><br/>TACH: 6202.1</p> <p style="text-align: right;"><b>August 27, 2024</b></p> <p><b>LEFT ENGINE:</b></p> <p>Removed left engine vacuum pump Airborne 442CW, S/N 26498, adapter plate and drive gear; installed new vacuum pump oil seal P/N 65102; installed 2 new magneto drive bushings P/N 655269 for SureFly (left) magneto; reinstalled magneto / vacuum pump gear and shaft and adjusted SureFly magneto timing in reference to SureFly installation instructions; reinstalled vacuum pump adapter plate with new gasket P/N 654012; installed overhauled Tempest vacuum pump P/N AA442CW, S/N 18P902 with drain plug kit 82-50155-DPK; ground run normal; no leaks noted.</p> <p>The aircraft, airframe, aircraft engine, propeller or appliance identified was repaired and/or inspected in accordance with current Regulation of the Federal Aviation Agency and is approved for return to service for the work performed.</p> <p>I certify that this Engine has been inspected in accordance with a 100-Hour Inspection and was determined to be in airworthy condition. Details of work performed are on file with Classic Aviation under work order: 6722.</p> <p>Dean Showalter A&amp;P IA 3126788 </p> |

**Clear Sky Aviation LLC, Tel: 434-284-5109**

|                   |           |                |           |             |            |                                                                                                          |
|-------------------|-----------|----------------|-----------|-------------|------------|----------------------------------------------------------------------------------------------------------|
| Aircraft Regist.: | N414PH    | Tach Time:     | 6202.8    | Lt Eng S/N: | 217826-72K | <br><b>CLEAR SKY</b> |
| Date Opened:      | 9/11/2024 | Date Complete: | 9/11/2024 | WO#:        | 0002       |                                                                                                          |

Work Performed: Left Engine - drained oil, removed and cut oil filter, installed and safetied new oil filter Tempest P/N 48108, added 10qts Aeroshell W100 Plus. Nothing detected upon filter media examination. Ran and leak checked engine, all ok. All work completed per manufacturer's instructions and applicable FAR's.

Mechanic Name: TR Proven      A&P Cert.: 1715019  
 Signature:       Not performed under repair station.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| wo: 6743                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Engine L - page 1 of 1    |
| <br><b>CLASSIC AVIATION</b><br>Classic Aviation - 69 Aviation Circle - Weyers Cave, VA 24486 - (540)234-0226                                                                                                                                                                                                                                                                                                                                                                                                                         |                           |
| <b>N414PH</b><br>TACH: 6203.1<br><b>LEFT ENGINE:</b><br>Complied with AD 00-01-16 Exhaust System Corrosion, Part b) by visual inspection with no discrepancies discovered. This AD is due every 50 hours TIS. Next due 6253.1 LH ENG Tach.<br>The above work was accomplished in reference to applicable maintenance manuals and other approved or acceptable data as appropriate. I certify that this Engine is airworthy with respect to the work performed and is released for return to service.<br>David Malone A&P IA 3879748  | <b>September 12, 2024</b> |

TOTALS—Carry forward to next page

| DATE | TOTAL TIME IN SERVICE | TOTAL TIME SINCE OVERHAUL | TACH OR RECORDING METER TIME | DESCRIPTION OF WORK PERFORMED—<br>SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK |
|------|-----------------------|---------------------------|------------------------------|-----------------------------------------------------------------------------------------|
|------|-----------------------|---------------------------|------------------------------|-----------------------------------------------------------------------------------------|



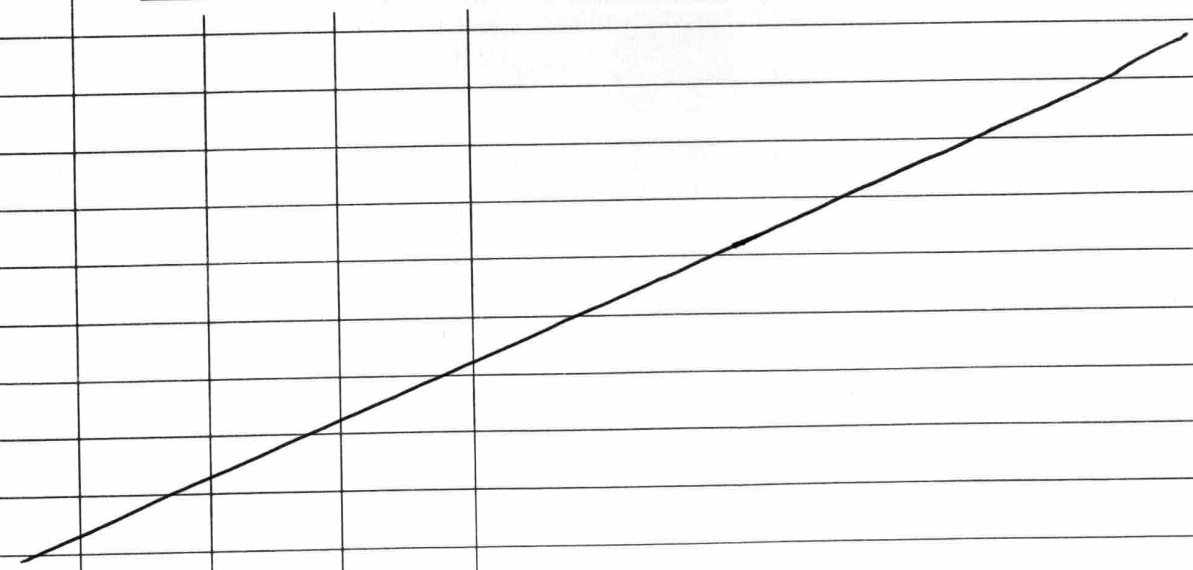
ACE Flight Solutions 95 Aviation Way  
Fredericksburg VA 22406

Engine 1  
Aircraft Registration: N414PH Aircraft Make & Model: Cessna 414A A/C S/N: 414A0421  
Engine Make/Model: Continental TSIO-520-NB S/N: 217826-72k Hobbs: 6255.9

- Drained old oil and removed old filter.
- Installed replacement oil filter and serviced with 20W-50.
- Completed runup and leak check all ops ok, no faults noted.
- Complied with AD 00-01-16 by inspection of exhaust system. Ok to continue.
- Aircraft returned to service with respect to work performed.
- All work performed Ref. Cessna MM, Ref. AC 43.13, Ref. Continental MM.

Signed: Date: 11/25/2024  
Name (Printed): Andrew L. Gordon A&P License Number: 4219619

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| wo: 6903                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Engine L · page 1 of 1  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                         |
| Classic Aviation · 69 Aviation Circle · Weyers Cave, VA 24486 · (540)234-0226                                                                                                                                                                                                                                                                                                                                                                                                 |                         |
| <b>N414PH</b><br>LEFT TACH: 6294.6<br>LEFT ENGINE:<br>Reduced LH High End Manifold Pressure per adjustment at Variable Absolute Pressure Controller to prevent over-boosting. Post maintenance run-up satisfactory.<br>The above work was accomplished in reference to applicable maintenance manuals and other approved or acceptable data as appropriate. I certify that this Engine is airworthy with respect to the work performed and is released for return to service. | <b>January 16, 2025</b> |
| David Malone A&P IA 3879748                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                         |



|                                   |  |  |
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| SUB-TOTALS this page              |  |  |
| TOTALS—Carry forward to next page |  |  |

| Page No. | DATE | TOTAL TIME IN SERVICE | TOTAL TIME SINCE OVERHAUL | TACH OR RECORDING METER TIME | DESCRIPTION OF WORK PERFORMED—<br>SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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|          |      |                       |                           |                              | <div style="display: flex; justify-content: space-between;"> <div>  </div> <div> <p>ACE Flight Solutions 95<br/>Aviation Way<br/>Fredericksburg VA 22406</p> </div> </div> <p><b>Engine L</b></p> <p><b>Aircraft Registration: N414PH      Aircraft Make &amp; Model: Cessna 414A   A/C S/N: 414A0421</b></p> <p><b>Engine Make/Model: TSIO-520-NB      S/N: 217826      Hobbs: 6299.9</b></p> <ul style="list-style-type: none"> <li>• Drained old oil and removed old filter. Cut open and inspected for particulate, significant particulate noted.</li> <li>• Installed replacement 48108 filter and serviced with 10 qts of Type M engine oil.</li> <li>• Removed and replaced with new, all spark plugs with fine wire plugs.</li> <li>• Removed all 6 cylinders and discovered significant degradation of cylinders, pistons, rings, piston pins and rods.</li> <li>• Removed all rods and rod bearings.</li> <li>• Removed all pistons and piston pins.</li> <li>• Installed set of 6 serviceable used cylinders from RAM aircraft engines. Rings had already been matched and gapped by RAM.</li> <li>• Installed all new exhaust gaskets and new intake gaskets.</li> <li>• Installed new set of pistons and new piston pins in all cylinder.</li> <li>• Reinstalled all rods with new bearings, bolts, nuts and cotter keys post overhaul by aircraft specialties services.</li> <li>• Repaired Slick mag with new coil and condenser and cleaned distributor posts and tab.</li> <li>• Reset timing and reinstalled on engine. Timed mags to engine.</li> <li>• Replaced fuse for digital magneto.</li> <li>• Remove and replace with new, all rocker shafts and hardware.</li> <li>• Performed compression test, results as follows: 1: 74/80. 2: 78/80. 3: 78/80. 4: 72/80. 5: 68/80. 6: 78/80.</li> <li>• AD search completed through 2/20/2026. No ADs applicable at this time.</li> <li>• Work performed referencing Cessna 414/414A Shop Manual, IPC, Continental IPC &amp; Shop Manual and AC 43.13</li> <li>• This engine has been inspected per the requirements of an annual inspection, referencing FAR 43 App. D, and has been found to be in an airworthy condition at this time.</li> </ul> <p>Signed: <u>Paul Wilkinson</u>      Date: 2/18/2026</p> <p>Name (Printed): Paul Wilkinson      A&amp;P/IA License Number: 2650852</p> |
|          |      |                       |                           |                              | <div style="display: flex; justify-content: space-between;"> <div>  </div> <div> <p>ACE Flight Solutions 95<br/>Aviation Way<br/>Fredericksburg VA 22406</p> </div> </div> <p><b>Engine L</b></p> <p><b>Aircraft Registration: N414PH      Aircraft Make &amp; Model: Cessna 414A   A/C S/N: 414A0421</b></p> <p><b>Engine Make/Model: TSIO-520-NB      S/N: 217826      Hobbs: 6299.9</b></p> <ul style="list-style-type: none"> <li>• Removed LH bank of fuel injectors and cleaned. Debris found in cyl 2 injector.</li> <li>• Reinstalled injectors, torqued to correct values and reinstalled air rail and hoses.</li> <li>• Work performed referencing Cessna 414/414A Shop Manual, IPC, Continental IPC &amp; Shop Manual and AC 43.13</li> </ul> <p>Signed: <u>Andrew L. Gordon</u>      Date: 2/28/2026</p> <p>Name (Printed): Andrew L. Gordon      A&amp;P/IA License Number: 4219619</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|          |      |                       |                           |                              | <p><b>SUB-TOTALS</b> this page</p> <p><b>TOTALS</b>—Carry forward to next page</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

| DATE                                             | TOTAL TIME IN SERVICE | TOTAL TIME SINCE OVERHAUL | TACH OR RECORDING METER TIME | DESCRIPTION OF WORK PERFORMED—<br>SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK |
|--------------------------------------------------|-----------------------|---------------------------|------------------------------|-----------------------------------------------------------------------------------------|
| <b>TOTALS</b> brought forward from previous page |                       |                           |                              |                                                                                         |

  
**SIGNATURE AVIATION**  
 100 Aviation Dr., Suite 100  
 Charlottesville, VA 22911  
 Tel (434) 978-1474

Registration: N414PH  
 Aircraft: Cessna 414A  
 Aircraft Serial Number: 414A0421  
 L Engine Make: Continental  
 L Engine Model: TSIO-520-NB  
 L Engine Serial #: 217826-72K  
 Tach: 6337.7  
 Date: June-2-2026

**ENGINE:**

Left Engine:

Removed rocker box cover and gasket on cylinder 4. Cleaned mating surfaces and installed new gasket (PN: 655528).  
 Applied Continental PN: 658517 to screws and torqued rocker box cover screws. Removed plug on oil pump assembly and replaced crush gasket (PN: MS35769-12). Torqued plug and safetied.

All work done IRT Continental Standard MM - Spark Ignited Engines M-0.

The aircraft, airframe, engine, propeller, or appliance identified was repaired and/or inspected in accordance with current Regulations of the FAA and is approved for return to service for the work performed.

Nathan Kilduff AP5211225

  
**SIGNATURE AVIATION**  
 100 Aviation Dr., Suite 100  
 Charlottesville, VA 22911  
 Tel (434) 978-1474

Registration: N414PH  
 Make: Lycoming  
 Model: TSIO-520-NB  
 Serial Number: 217826-72K  
 Tach: 6301.2  
 Date: Mar-9-2026

**ENGINE:**

Removed cowling. Removed and cleaned fuel nozzles on cylinders 2, 4 & 6 of left engine. Reinstalled fuel nozzles with new Compression Seal (PN: 633958-3), O-rings (PN: 630979-9) and rubber washer (PN: 640612). Torqued fuel nozzles. Reinstalled cowling. All work done IRT Continental Standard Practice Maintenance Manual- Spark Ignited Engines (M-0) Chapter 10 Section 10-2 Continental Standard Practice Maintenance Manual- Spark Ignited Engine (M-0) Appendix B and Cessna Service Manual - Model 414 and 414A Chancellor 1970 thru 1985 Section 9.

The aircraft, airframe, engine, propeller, or appliance identified was repaired and/or inspected in accordance with current Regulations of the FAA and is approved for return to service for the work performed.

Nathan Kilduff AP5211225

Clear Sky Aviation LLC, Tel: 434-284-5109

Aircraft Regist.: N414PH Tach Time: 6350.4 Lt Eng S/N: 217826-72K  
 Date Opened: 6/30/2026 Date Complete: 6/30/2026 WO#: 18



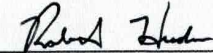
Work Performed: Left Engine - drained oil, removed and cut oil filter to inspect for metal particles. No particles found. Installed and safetied new oil filter tempest P/N: 48108, added 10 qts Aeroshell W100 Plus. Ran and leak checked engine, checks good. All work completed per manufacturer's instructions and applicable FAR's.

Mechanic Name: Robert Hudson

A&amp;P Cert.: 4381314

Not performed under repair station.

Signature:


**TOTALS**—Carry forward to next page