



WORLDWIDE AVIATION • EST. 1967

N4AF

1968 CESSNA 421

RECORDS VOLUME

RIGHT ENGINE LOGBOOKS

YEAR
1968

REGISTRATION
N4AF

SERIAL NO.
421-0142

Prepared by the worldwide aviation specialists at RidgeAir, Inc.

RUSK, TX • HOUSTON, TX • TYLER, TX • (903) 586-1521 • RIDGEAIRE.COM

N4AF



The Standard

ENGINE LOG

ASA/SE-2



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6001 SIXTH AVENUE SO.
SEATTLE, WA 98108-3307

ENGINE RECORD — GENERAL INFORMATION

MANUFACTURER Continental MODEL GT510-320-D(22) Right

SERIAL 219344-R TYPE CERTIFICATE _____

THIS ENGINE IS CURRENTLY INSTALLED IN AIRCRAFT N4AF

MINIMUM OCTANE FUEL 100 LL OIL GRADE SUMMER Mobil AV-1 WINTER _____

MAGNETO TIME _____ POINT SETTING _____ FIRING ORDER _____

SPARK PLUG GAP _____

MFG. RECOMMENDED OVERHAUL AT 1600 HOURS.



The Standard

ENGINE LOG

REGISTERED OWNER RECORD

NAME BEVERLY L. HANDLIK ADDRESS 36052 HARDENBURG
CITY FARMINGTON HILLS STATE MICHIGAN FROM 19 APR 1988 TO _____

NAME _____ ADDRESS _____
CITY _____ STATE _____ FROM _____ TO _____

NAME _____ ADDRESS _____
CITY _____ STATE _____ FROM _____ TO _____

NAME _____ ADDRESS _____
CITY _____ STATE _____ FROM _____ TO _____

NAME _____ ADDRESS _____
CITY _____ STATE _____ FROM _____ TO _____

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NAME _____ ADDRESS _____
CITY _____ STATE _____ FROM _____ TO _____

NAME _____ ADDRESS _____
CITY _____ STATE _____ FROM _____ TO _____

NAME _____ ADDRESS _____
CITY _____ STATE _____ FROM _____ TO _____

NOTES

DATE 1989	RECORDING TACH TIME	TODAYS FLIGHT	TOTAL TIME IN SERVICE	DESCRIPTION OF INSPECTIONS, TESTS, REPAIRS AND ALTERATIONS ENTRIES MUST BE ENDORSED WITH NAME, RATING AND CERTIFICATE NUMBER OF MECHANIC OR REPAIR FACILITY. (SEE BACK PAGES FOR OTHER SPECIFIC ENTRIES.)
6/5		-	600	I THOMAS W HANDZLIK CERTIFY TO THE BEST OF MY KNOWLEDGE THROUGH PAST RESEARCH AND DISCUSSIONS WITH THE PREVIOUS OWNER THAT THIS ENGINE HAD APPROXIMATELY 600 HRS TSOH WHEN THE ORIGINAL LOG BOOKS WERE LOST. <i>Thomas W Handzlik</i> Com 363763851
Note:	Aircraft	Total	Time	
	Approved	2400	07/13/90	
				CHRISTINA L. GOODHUE Notary Public, Livingston County, MI My Commission Expires Jan. 27, 1990
6/5		-	600	I THOMAS W HANDZLIK CERTIFY TO THE BEST OF MY KNOWLEDGE THROUGH PAST RESEARCH AND DISCUSSIONS WITH THE PREVIOUS OWNER THAT THE RIGHT PROP HAD APPROXIMATELY 600 HRS TSOH WHEN THE ORIGINAL LOG BOOKS WERE LOST. <i>Thomas W Handzlik</i> Com 363763851
				CHRISTINA L. GOODHUE Notary Public, Livingston County, MI My Commission Expires Jan. 27, 1990
				Chris Goodhue

DATE 19	RECORDING TACH TIME	TODAYS FLIGHT	TOTAL TIME IN SERVICE	DESCRIPTION OF INSPECTIONS, TESTS, REPAIRS AND ALTERATIONS ENTRIES MUST BE ENDORSED WITH NAME, RATING AND CERTIFICATE NUMBER OF MECHANIC OR REPAIR FACILITY. (SEE BACK PAGES FOR OTHER SPECIFIC ENTRIES.)
6/7/89				Pre-flight inspection completed. Found to be airworth for the intended flight from 6:00 to 11:00 Livingston Co. Airport. MD-72-02-01 73-02-01 75-03-08 RE has been checked per attached letter. <i>Dr. C. Handzlik</i> MD-72-04543
12-29-89				CHANGED OIL & FILTER SERVICED WITH MOBILE #1 INSPECTED OIL FILTER NO METAL WAS FOUND. ALL WAS GOOD FOR NO LEAKS WERE NOTED. <i>John Handzlik</i> AP380041253
12-6-90				Installed prop and torque as per m/m - track blades - as normal <i>Carl Handzlik</i> A/P 375666343

DATE 19__	RECORDING TACH TIME	TODAYS FLIGHT	TOTAL TIME IN SERVICE	DESCRIPTION OF INSPECTIONS, TESTS, REPAIRS AND ALTERATIONS ENTRIES MUST BE ENDORSED WITH NAME, RATING AND CERTIFICATE NUMBER OF MECHANIC OR REPAIR FACILITY (SEE BACK PAGES FOR OTHER SPECIFIC ENTRIES)
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ADI - AN AUTHORIZED RAYTHEON SERVICE CENTER
MAINTENANCE RELEASE / LOGBOOK ENTRY

N7AF Serial Number 421-0142 Hourmeter 928 Date 5/8/97

Replaced the #3 & #5 cylinder assemblies with a new units, p/n 654655A1 All work completed
I/A/W the GTSIO 520 Manual. Operational check satisfactory

THIS AIRCRAFT AND/OR COMPONENT IDENTIFIED ABOVE WAS REPAIRED AND
INSPECTED IN ACCORDANCE WITH THE CURRENT REGULATIONS OF THE FAA
AND WAS FOUND TO BE AIRWORTHY AS AFFECTED BY THE WORK
ACCOMPLISHED. PERTINENT DETAILS ARE ON FILE AT THIS AGENCY UNDER

WORK ORDER NUMBER 33520MO DATED 5/8/97
SIGNATURE: Steve Miller AERODYNAMICS, INC. BUER634C

DATE 19__	RECORDING TACH TIME	TODAYS FLIGHT	TOTAL TIME IN SERVICE	DESCRIPTION OF INSPECTIONS, TESTS, REPAIRS AND ALTERATIONS ENTRIES MUST BE ENDORSED WITH NAME, RATING AND CERTIFICATE NUMBER OF MECHANIC OR REPAIR FACILITY (SEE BACK PAGES FOR OTHER SPECIFIC ENTRIES)
Sept 8	1997	at	93 hours	hobbs - Engine run-up, compression tested: #1 72/80 #2 74/80 #3 76/80 #4 76/80 #5 74/80 #6 72/80 cleaned, gapped and rotated spark plugs. Drained fuel sumps and gascolators, cleaned and re-installed fuel nozzles. Checked mag to engine timing 20° bte. Secured fuel in- jector lines. Retorqued rocker covers and sump bolts. Engine washed with spirits, ground run-up, and leak checked satisfactory. AD's researched to date, complied with AD 75-23-08 re exhaust inspection, complied with AD 97-01-13 hose inspection.
				I certify that this engine has been inspected in accordance with a <u>annual</u> inspection and was determined to be in airworthy condition.
				<u>Will Sepon</u> AIP 3837677721A

DATE 19__	RECORDING TACH TIME	TODAYS FLIGHT	TOTAL TIME IN SERVICE	DESCRIPTION OF INSPECTIONS, TESTS, REPAIRS AND ALTERATIONS ENTRIES MUST BE ENDORSED WITH NAME, RATING AND CERTIFICATE NUMBER OF MECHANIC OR REPAIR FACILITY. (SEE BACK PAGES FOR OTHER SPECIFIC ENTRIES.)
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2/14/2010 N4AF RH Engine

Hobbs 141.0

Drained and replaced engine oil, installed new oil filter p/n CH48111.
Performed engine run, no leaks noted.

THIS AIRCRAFT HAS BEEN INSPECTED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURES
MAINTENANCE PROGRAM. THIS AIRCRAFT IS APPROVED FOR RETURN TO SERVICE PERTAINING
TO THE WORK PERFORMED ON THIS DATE.

ERIC KELLER
A&P 3428700

Eric Keller

09/03/2010 N4AF RH Engine S/N 219344-R

TTSO 771.2 Hobbs 171.2

Performed 100-hour inspection IAW Cessna 421 Maintenance Manual. Drained and replaced engine oil with Aeroshell 100. Replaced CH148 oil filter. Cleaned gapped, tested spark plugs. Checked magneto to engine timing. Compression tested #1 71/80, #2 74/80, #3 74/80, #4 74/80, #5 72/80, #6 70/80 CW AD 2007-05-15 (i) Starter adapter assembly IAW Part 2 TCM MSB No. MSB94-4G, backlash measured 12:00-.040 in., 3:00-.040 in., 6:00-.040 in., 9:00-.040 in.. Next due: TTSO 871.2. For compliance details of AD 2000-01-16 Exhaust System, refer to Airframe logbook. Performed post inspection run up and leak check good.

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

Dennis Tanker

Dennis Tanker A&P 3165442

DATE 19__	RECORDING TACH TIME	TODAYS FLIGHT	TOTAL TIME IN SERVICE	DESCRIPTION OF INSPECTIONS, TESTS, REPAIRS AND ALTERATIONS ENTRIES MUST BE ENDORSED WITH NAME, RATING AND CERTIFICATE NUMBER OF MECHANIC OR REPAIR FACILITY. (SEE BACK PAGES FOR OTHER SPECIFIC ENTRIES.)
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ENGINE MAKE:
ENGINE TYPE:
SERIAL NUMBER:
A&P NUMBER:
DATE:

DFW Aero Mechanix Inc.

Right Engine Entries

DATE 6/13/2011

SIGNED

Jim Smith

Work Order: 5094-12-2010

Printed by: EDA's Datacommedia.com

N4AF (Right Engine Logs)
CMI GTSIO520-D S/N 219344-R

DATE 19__	RECORDING TACH TIME	TODAYS FLIGHT	TOTAL TIME IN SERVICE	DESCRIPTION OF INSPECTIONS, TESTS, REPAIRS AND ALTERATIONS ENTRIES MUST BE ENDORSED WITH NAME, RATING AND CERTIFICATE NUMBER OF MECHANIC OR REPAIR FACILITY. (SEE BACK PAGES FOR OTHER SPECIFIC ENTRIES.)
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16111 Addison Road, Suite 100, Addison, TX 75001
972-866-8814

Right engine Logbook Entry

N4AF

Cessna 421 S/N 421-0142 Hobbs: 205.0 AFTT: 2810.0 09/01/2017
GTSIO-520-D S/N 219344-R TSOH: 910.0 TSN: UNK

Annual inspection performed, C/W AD#07-05-15 per MSB 94-4G Part 2 Measurements were 0.10, 0.10, 0.10, 0.10, due again @ AFTT: 2910.0, Part 3 removal and inspection of gears due at AFTT: 3120.0 Compressions #1 64/80, #2 72/80, #3 64/80, #4 60/80, #5 62/80, #6 62/80, Change oil and filter, Cut removed filter inspect for metal with none found, Install AA48111-2 filter and service with Aeroshell 100W plus oil, C/W RAM recommended annual cleaning and lube of waste gate and controller, Clean all fuel nozzles and re-install using new P/N MS29513-010 and SA640612, SA633958-3, SA633958-5 Seals, Clean, gap and test plugs, Remove turbocharger P/N 406990-9004 S/N HDR0134 sent to CRS#MAMR190K for overhaul under WO# 52993 installed ops and leak checked normal, Installed new P/N 5155101-10 turbo support bracket, Install new P/N 1366-1 Rocker cover silicon gaskets on all cylinders, Install new P/N K9910379-18 3-bolt S/N 163410 R/H exhaust elbow, Install P/N 2265-210SH clamp on turbo bypass, Install new P/N AS3578-038 seal on starter, Install serviceable P/N 633730 intake flange on #1 cylinder, Wash engine ground run and leak checked. I certify this engine has been inspected and/or repaired in accordance with current Federal Aviation Regulations found to be in airworthy condition and is hereby returned to service with respect to work performed.

Joseph L Brown
A&P2226812IA

DATE 19__	RECORDING TACH TIME	TODAYS FLIGHT	TOTAL TIME IN SERVICE	DESCRIPTION OF INSPECTIONS, TESTS, REPAIRS AND ALTERATIONS ENTRIES MUST BE ENDORSED WITH NAME, RATING AND CERTIFICATE NUMBER OF MECHANIC OR REPAIR FACILITY. (SEE BACK PAGES FOR OTHER SPECIFIC ENTRIES.)
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16111 Addison Road, Suite 100, Addison, TX 75001
972-866-8814

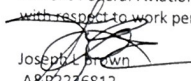
Right engine Logbook Entry

N4AF

Cessna 421 S/N 421-0142 Hobbs: 220.8 AFTT: 2825.8 04/23/2018
GTSIO-520-D S/N 219344-R TSOH: 925.8 TSN: UNK

Install Tanis heater in accordance with STC Number SE03309CH and Drawing 02927-115 Rev. F Dated March 26, 2018, This Tanis system is to be maintained in accordance with Tanis Document No. TICA2097 Revision C dated April 18, 2014, Install overhauled starter P/N MHJ-4003 S/N J091165 repaired at CRS# PU4R453M under WO#123554, Remove oil pump for replacement of gasket and cover plate seal, I certify this engine has been inspected and/or repaired in accordance with current Federal Aviation Regulations found to be in airworthy condition and is hereby returned to service with respect to work performed.

Joseph L Brown
A&P2226812

DATE 19__	RECORDING TACH TIME	TODAYS FLIGHT	TOTAL TIME IN SERVICE	DESCRIPTION OF INSPECTIONS, TESTS, REPAIRS AND ALTERATIONS ENTRIES MUST BE ENDORSED WITH NAME, RATING AND CERTIFICATE NUMBER OF MECHANIC OR REPAIR FACILITY. (SEE BACK PAGES FOR OTHER SPECIFIC ENTRIES.)	
 16111 Addison Road, Suite 100, Addison, TX 75001 972-866-8814 RIGHT engine Logbook Entry N4AF					
				Cessna 421 S/N 421-0142	Hobbs: 246.3 AFTT: 2851.3 08/01/2018
				GTSIO-520-D S/N 219344-R	TSOH: 1051.3 TSN: UNK
Change oil and filter, Cut removed filter inspect for metal with none found, Install AA48111-2 filter and service with Aeroshell 100W plus oil, C/W AD# 2000-01-16 on exhaust par (b) Visual due each 50 hours or 30 days whichever later. Install new P/N 649950 intake gasket # 5-cylinder, Install overhauled tach generator P/N 22A667 S/N AT11785 overhauled at CRS# TM2R192L under WO# 84777R, Wash engine ground run and leak checked. I certify this engine has been inspected and/or repaired in accordance with current Federal Aviation Regulations found to be in airworthy condition and is hereby returned to service with respect to work performed.					
 Joseph L Brown A&P2226812					

DATE 19__	RECORDING TACH TIME	TODAYS FLIGHT	TOTAL TIME IN SERVICE	DESCRIPTION OF INSPECTIONS, TESTS, REPAIRS AND ALTERATIONS ENTRIES MUST BE ENDORSED WITH NAME, RATING AND CERTIFICATE NUMBER OF MECHANIC OR REPAIR FACILITY. (SEE BACK PAGES FOR OTHER SPECIFIC ENTRIES.)	
				REG NO N4AF (RT) CHANDLER AVIATION INC	DATE 08/06/18
				MODEL C421	WO# 55285
				S/N 41-0142	TACH XXX
				Eng M/D XXX	hobbs 254.6
				Eng S/N XXX	TOTAL XXX
THE AIRCRAFT AND/OR EQUIPMENT ABOVE WAS REPAIRED AND INSPECTED IN ACCORDANCE WITH FEDERAL AVIATION REGULATIONS AND WAS FOUND AIRWORTHY FOR RETURN TO SERVICE ON THE DATE STATED ABOVE. (PRINT NAME OF TECHNICIAN AND CERTIFICATE NUMBER)					
SIGNATURE  TO 208463594 A&P					
Re-clock from exhaust cc to 0.00. Ops check satisfactory.					
END					

DATE 19__	RECORDING TACH TIME	TODAYS FLIGHT	TOTAL TIME IN SERVICE	DESCRIPTION OF INSPECTIONS, TESTS, REPAIRS AND ALTERATIONS ENTRIES MUST BE ENDORSED WITH NAME, RATING AND CERTIFICATE NUMBER OF MECHANIC OR REPAIR FACILITY. (SEE BACK PAGES FOR OTHER SPECIFIC ENTRIES.)
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1413 East Main Street, Clarksville Ar 72830 . 479-243-6604 . www.pvaviation.com

Date: 01/07/19

Model: GTSIO-520-D (22)

Serial Number: 219344-R

Tach: _____

Disassembled engine to replace camshaft. Installed a overhauled camshaft P/N 646273, S/N RS3073-8 reworked by Rick Romans Inc under work order # 53073. Installed 6 new intake lifters P/N SA628488 and 6 new exhaust lifters P/N SA646277. Reassembled engine in accordance with GTSIO-520 overhaul manual with new gasket kit P/N SA633025-A4. (note: bearings were not removed or disturbed from case, connection rods were not removed from crankshaft). Installed customer supplied cylinder assembly P/N 642344 in #6 position, that was repaired by Sal's Aircraft Cylinders under work order # S-5826. All other cylinders and components were reinstalled as removed. This engine was not removed or reinstalled by this agency.

Signed _____

Vernon Hampton A&P431417955IA

DATE 19__	RECORDING TACH TIME	TODAYS FLIGHT	TOTAL TIME IN SERVICE	DESCRIPTION OF INSPECTIONS, TESTS, REPAIRS AND ALTERATIONS ENTRIES MUST BE ENDORSED WITH NAME, RATING AND CERTIFICATE NUMBER OF MECHANIC OR REPAIR FACILITY. (SEE BACK PAGES FOR OTHER SPECIFIC ENTRIES.)
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16111 Addison Road, Suite 100, Addison, TX 75001

972-866-8814

Right engine Logbook Entry

N4AF

Cessna 421 S/N 421-0142

Hobbs: 262.8

AFTT: 2867.8

04/01/2019

GTSIO-520-D S/N 219344-R

TSOH: 1067.8

TSN: UNK

Annual inspection performed, Engine removed for repair and re-installed (see log entry) using existing mounts and hoses, C/W AD#07-05-15 per MSB 94-4G Part 2 Measurements were 0.10, 0.10, 0.10, 0.10, due again @ AFTT: 2910.0, Part 3 removal and inspection of gears due at AFTT: 3120.0 Compressions #1 74/80, #2 74/80, #3 70/80, #4 72/80, #5 66/80, #6 72/80, Change oil and filter, Cut removed filter inspect for metal with none found, Install AA48111-2 filter and service with Aeroshell 100 non-detergent for break in, C/W RAM recommended annual cleaning and lube of waste gate and controller, Clean all fuel nozzles and re-install using new P/N MS29513-010 and SA640612, SA633958-3, SA633958-5 Seals, Clean, gap and test plugs, Wash engine ground run and leak checked. I certify this engine has been inspected and/or repaired in accordance with current Federal Aviation Regulations found to be in airworthy condition and is hereby returned to service with respect to work performed.

Joseph L Brown
A&P2226812IA

DATE 19__	RECORDING TACH TIME	TODAYS FLIGHT	TOTAL TIME IN SERVICE	DESCRIPTION OF INSPECTIONS, TESTS, REPAIRS AND ALTERATIONS ENTRIES MUST BE ENDORSED WITH NAME, RATING AND CERTIFICATE NUMBER OF MECHANIC OR REPAIR FACILITY. (SEE BACK PAGES FOR OTHER SPECIFIC ENTRIES.)
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**N4AF (Right Engine Logs)
Continental GTSIO-520D S/N 219344-R**

Changed oil and filter (Aeroshell W100 plus) Cut and inspected filter OK. Collected oil samples. Pre-oiled engine prior to start.
Cleaned air/oil separators.

Removed right Prestolite ALV9510 alternators.

Installed new FAA/PMA Hartzell ALV9610 alternators:

Right: s/n H-T091455 with OVH with OVH drive coupling #646655 s/n QAA048984 by Quality Aircraft Acc. (QYIR334Y) w.o. # 048984
Installed Alternators front mount gear drive Coupling with new 630691 thrust washers and provided attach nuts meeting Hartzell engine technologies Service Bulletin #081 (attach nuts etched "H"). Attached per Continental M-O Procedures manual 10-4.1 through 10-4.1.5 (torque to 300-450 inch lbs.) and Hartzell Service Information letter A-140.

Removed right Starters #MHJ4003.

Installed Hartzell engine technologies new FAA/PMA starters #PM2407 Right s/n H-T091864.

DATE 10/29/2019 HOBBS 285.3 AIRCRAFT TOTAL TIME 2605.0 Engine TSMOVH 1090.3
The engine identified was repaired and/or serviced in accordance with current Federal Aviation Administration regulations and is hereby approved for return to service with respect to work performed.

Anthony R. Saxton AP32537461A



DATE 19__	RECORDING TACH TIME	TODAYS FLIGHT	TOTAL TIME IN SERVICE	DESCRIPTION OF INSPECTIONS, TESTS, REPAIRS AND ALTERATIONS ENTRIES MUST BE ENDORSED WITH NAME, RATING AND CERTIFICATE NUMBER OF MECHANIC OR REPAIR FACILITY. (SEE BACK PAGES FOR OTHER SPECIFIC ENTRIES.)
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wo: M20-0014

Engine R page 1 of 1



Force Aviation - 5025 Voyager Dr Suite A, LB 58 - Dallas, TX 75237 - 214-5581238

N4AF
Tach: 324.8

February 25, 2020

1. Drained oil and obtained oil sample. Serviced right engine with P/N: 13x Aeroshell W100Plus Oil and P/N: AA48111 Filter. No contaminants were found inside filter element. Work completed in accordance with Section 9 of the Cessna Maintenance manual.

With respect to the work performed, this engine r is approved for return to service. Details of work performed are on file with Force Aviation under work order: M20-0014.

Chad Shaver A&P IA 2857120

DATE 19__	RECORDING TACH TIME	TODAYS FLIGHT	TOTAL TIME IN SERVICE	DESCRIPTION OF INSPECTIONS, TESTS, REPAIRS AND ALTERATIONS ENTRIES MUST BE ENDORSED WITH NAME, RATING AND CERTIFICATE NUMBER OF MECHANIC OR REPAIR FACILITY. (SEE BACK PAGES FOR OTHER SPECIFIC ENTRIES.)
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wo: M20-0449

Engine R - page 1 of 1



Force Aviation - 5555 Apollo Drive - Dallas, Texas 75237 - 2143377000

N4AF
Hobbs: 356.2

GTSIO-520, S/N: 219344.R

December 3, 2020

1. **CHANGE ENG OIL #2 ENG WITH TEMPEST OIL FILTER CHANGE** – Drained engine oil and collected oil sample for analysis. Removed and Inspected oil filter for metallic contamination(particles). No contamination noted. Installed new oil filter P/N AA48111. Serviced engine with 12 quarts of Aeroshell W100 Plus oil. Performed engine ground runs. No leaks noted. Work performed in accordance with Cessna 421 Maintenance Manual Section 2-41. - Steven Uribe A&P#3937854 12/1/2020

With respect to the work performed, this engine r is approved for return to service. Details of work performed are on file with Force Aviation under work order: M20-0449.

Joe Kral A&P 4003458

DATE 19__	RECORDING TACH TIME	TODAYS FLIGHT	TOTAL TIME IN SERVICE	DESCRIPTION OF INSPECTIONS, TESTS, REPAIRS AND ALTERATIONS ENTRIES MUST BE ENDORSED WITH NAME, RATING AND CERTIFICATE NUMBER OF MECHANIC OR REPAIR FACILITY. (SEE BACK PAGES FOR OTHER SPECIFIC ENTRIES.)
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wo: AS20-0285

Engine R - page 1 of 1



Force Aviation - 5555 Apollo Drive - Dallas, Texas 75237 - 2143377000

N4AF
Hobbs: 411.9

GTSIO-520, S/N: 219344.R

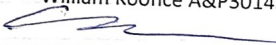
October 01, 2021

1. **Change right engine oil and filter with sample** – Drained engine oil and collected oil sample for analysis. Removed and Inspected oil filter for metallic contamination(particles). No contamination noted. Installed new oil filter P/N AA48111. Serviced engine with 13 quarts of Aeroshell W100 Plus oil. Performed engine ground runs. No leaks noted. Work performed in accordance with Cessna 421 AMM Section 2-41 Eric Davenport 3845900A&P 10/1/21 Installed P/N AA48111 - Filter , Rev/Lot: 21-3571, Installed (13) P/N Aeroshell W100Plus - OIL , Rev/Lot: 21-3581.

With respect to the work performed, this engine r is approved for return to service. Details of work performed are on file with Force Aviation under work order: AS20-0285.

Robert McCarthy A&P/IA 3772660

DATE	RECORDING	TOTAL	DESCRIPTION OF INSPECTIONS, TESTS, REPAIRS AND ALTERATIONS	OF ES.)
19__			Hangar 23, Tulsa International Airport-Tulsa, OK 74115 (918)836-6418	
			Date: 5/19/2022; Aircraft: N4AF N4AF, Cessna 421-0142, HM 448.0 hrs MA22-06694 dated 5/19/2022.	
			A. Connected pressurization cart to aircraft and pressurized on April 21, 2022. Found the following leak areas.	
			1. Large leak at belly panel just aft of the forward pressure bulkhead by the nose wheel tunnel.	
			2. Moderate leak at the belly ram air scoop.	
			3. Moderate leak at the ram dump valve in front of the heater.	
			4. Moderate leak at the rudder cables in the aft pressure bulkhead.	
			5. Minor leaks in the wing left and right wing root area at the wire bundles.	
			6. Moderate leak at the emergency exit door at the top area.	
			B. Made the following repair to the pressurization system.	
			1. Removed old sealant and deteriorated seal on the belly panel just aft of the front pressure bulkhead. Installed new seal and reinstalled panel with new hardware.	
			2. Adjusted ram dump valve setting and cable rigging.	
			3. Inspected belly duct vent and check valve. No parts were available for repair.	
			C. Flew a/c on May 18th to check pressurization for the above repairs.	
			1. Checked cabin pressurization at 65% power and had 4.2 psi when pressurizing off both sources.	
			2. Cabin pressure was 3.0 psi when pressurizing off the left engine source only.	
			3. Cabin pressure was 3.1 psi when pressurizing off the right engine source only.	
			These rate are acceptable and no other repairs are needed.	
			D. Elevator work. Removed elevators and inspect middle brackets and bearings. Found bearings and brackets were worn allowing excessive play. Installed new brackets, bearings and hardware. Installation was completed by installing parts per kit SK421-130B2 per SNL88-10 revision 1 dated Nov. 3, 2003. Performed an elevator and elevator trim tab travel check. Had to adjust rigging to get correct travels. No change in weight and balance figures. Flew a/c to check elevator system.	
			R/H B59.	

DATE	RECORDING	TOTAL	DESCRIPTION OF INSPECTIONS, TESTS, REPAIRS AND ALTERATIONS	OF ES.)
19__			Hangar 23, Tulsa International Airport-Tulsa, OK 74115 (918)836-6418	
			Sublet Service Completed: 5/09/2022 Description: Elevator Brackets drilling holes in stainless steel. Performed By: Cuccio, Rick PO #: PO22-23077	
			The articles and/or work hereon described is/are certified airworthy (unless otherwise specified).	
			Autopilots Central, Inc. FAA CRS CM2R7475	
			Authorized Signature 	
			Augustus Aviation Service	
			R/H engine	
			9000 N. Navarro Rd.	
			Corsicana Tx, 75109	
			(469)235-4674	
			Completed a 100hr inspection to this engine in accordance with FAR 43 appendix D with reference to Cessna 421 inspection guide. Ran engine and completed a deferential compression test, the numbers were as follows 1) 70 /80 2) 65 /80 3) 59 /80 4) 70 /80 5) 77 /80 6) 68 /80. Removed spark plugs, cleaned, gapped, tested, and reinstalled. C/W AD07-05-15 per MSB 94-4G part 2 measurements were 0.11, 0.11, 0.11, 0.11. Part 3 removal and inspection of gears due at AFTT: 3120.0. ADs checked through Biweekly 2022-23. Ran engine no defects noted. I certify this engine has been inspected in accordance with a 100hr inspection and was determined to be in Airworthy condition.	
			William Koonce A&P3014392IA	
				

Global Aviation Services WO 2312-6721						
Engine Model: Continental GTSIO-520-D(22)	Engine S/N: 219344-R	Reg No: N4AF	AC Tach: 490.3	AC Hobbs: 485.1	Engine TT: UKT AFTT: 3090.1	Engine TSOI: 1190.1 Date: 05/22/2024
Performed 100hr inspection and the following work in reference to Cessna Maintenance Manual P/N D8175-13, Continental M-0, and IAW 14 CFR 43 Appendix D: 1. Differential Pressures: (1) 72/80, (2) 74/80, (3) 71/80, (4) 76/80, (5) 51/80, (6) 73/80 2. Drained oil, removed oil filter, and inspected element. Installed new oil filter P/N AA48111, torqued, and safetied. Serviced engine with 11 qts. Aeroshell W100Plus. 3. Removed all spark plugs, cleaned, inspected, installed, and torqued. 4. Swapped cyl. 1 and 5 CHT probes. 5. Removed oil temp probe canon plug, cleaned contacts, and installed. 6. Adjusted L/H magneto timing. 7. Torqued cyl. 1 intake tube nuts. 8. Installed new hose clamp at exhaust bypass sleeve between wastegate and tailpipe. 9. Removed wastegate, installed new wastegate return spring pin P/N 476877-0001, and installed wastegate. 7. Adjusted idle mixture and idle speed. 8. Engine run OK. Leak check OK. Work performed by Joshua Drake, Ethan Perez, and Kevin Salisbury.						

I certify that this engine has been inspected IAW annual/100hr inspection and was determined to be in airworthy condition.

Greg Dukes AP3507138IA

[illegible]

RH Engine Log Entry

Date: 06-29-25
Reg. No.: N4AF
Engine M/N: Continental

ACTT:
Model: CE-421
Engine: GTSIO-520-D(22)

ACTL:
S/N: 421-0142
S/N: 219344-R

Complied with AD 2023-05-16, Amendment 39-22385 dated March 15, 2023 – “This AD was prompted by a report of a quality escape involving improper installation of counterweight retaining rings in the counterweight groove during manufacture. The FAA is issuing this AD to prevent departure of counterweight and retaining hardware from the crankshaft assembly. The unsafe condition, if not addressed, could result in loss of engine oil pressure, catastrophic engine damage, engine seizure, and consequent loss of the aircraft.” **This AD is N/A** due to engine having more than 200 hours in service, IAW Continental MSB23-01A, page 1 (page 1 of 8) compliance paragraph and engine model “D” is not listed as affected on page 9 (1 of 30) and page 10 (2 of 30).

Complied with AD 2023-02-12, Amendment 39-22319 dated Feb-17-2023 – “The FAA is adopting a new airworthiness directive (AD) for certain Continental Aerospace Technologies, Inc. (Continental) GTSIO-520, IO-470, IO-520, IO-550, IOF-550, LIO-470, LIO-520, LTSIO-520, O-470, TSIO-470, TSIO-520, TSIO-550, TSIOF-550, and TSIOL-550 model reciprocating engines with a certain Superior Air Parts, Inc. (SAP) cylinder assembly or intake valve installed. The affected cylinder assemblies and intake valves are installed as a replacement part under parts manufacturer approval (PMA) on certain affected Continental engines. This AD was prompted by three intake valve failures on reciprocating engines that resulted in engine damage and emergency landing or aborted takeoff. This AD requires replacement of the affected engine intake valve. The FAA is issuing this AD to address the unsafe condition on these products.” **This AD is N/A** IAW Superior Air Parts MSB22-01, none of the cylinders have been replaced or worked on, by any one from Jan-2022 to Feb-2022. Also, no log entries or 8130's from Superior Air Parts in log books.

Complied with AD 2022-16-03, Amendment 39-22132 dated Aug-15-2022 – “(1) Continental Aerospace Technologies, Inc. reciprocating engine models identified in Table 1 to paragraph (c) of this AD that are equipped with an S-1200 series magneto having a serial number (S/N) between F21EA057 and F21KA009R, inclusive, manufactured and sold between May and November 2021; and (2) Lycoming Engines and Textron Lycoming/Subsidiary of Textron, Inc. reciprocating engine models identified in Table 2 to paragraph (c) of this AD that are equipped with an S-1200 series magneto authorized by Continental Aerospace Technologies, Inc. Parts Manufacturer Approval (PMA) Supplements 1-54, having an S/N between F21EA057 and F21KA009R, inclusive, manufactured and sold between May and November 2021.” **This AD is N/A** IAW Continental Aerospace Technologies Critical Service Bulletin CSB673C. All four maneto's serial numbers do not fall under the list of defective serial numbers. Currently installed magnetos, RH engine magneto, outboard P/N 10-349260-7 S/N L078948FR and inboard P/N 10-349220-4 S/N (F059807FR this number is a best reading of the serial number. Serial number is very faded). LH engine magneto inboard P/N 10-349260-2 S/N A246903 and out board P/N 10-349220-4 S/N H119704FR.

Complied with AD 2020-16-11, Amendment 39-21195 dated Sep-21-2020 – “This AD applies to Continental Aerospace Technologies, Inc. (Type Certificate previously held by Continental Motors, Inc.) model GTSIO-520-C, GTSIO-520-D, GTSIO-520-H, GTSIO-520-K, GTSIO-520-L, GTSIO-520-M, GTSIO-520- , IO-550-G, IO-550- , IO-550-P, IO-550-R, IOF-550- IOF-550-P, IOF-550-R, TSIO-520-BE, TSIO-550-A, TSIO-550-B, TSIO-550-C, TSIO-550-E, TSIO-550-G, TSIO-550-K, TSIO-550- , TSIOF-550-D, TSIOF-550-J, TSIOF-550-K, and TSIOF-550-P reciprocating aviation gasoline (AvGas) engines, originally manufactured, rebuilt, or modified with a cross-flow cylinder assembly replacement, on or after November 1, 2014, and with a cross-flow cylinder assembly, part number (PIN) 658538, 658540, 658542, 658591, 658595, 658613, 658624, 658539, 658541, 658590, 658594, 658603, 658623, or 658630, installed.” **This AD is N/A** IAW Continental Aerospace Technologies MSB18-08B this engine was overhauled before Nov-2014. Engine was overhauled some time before the year 1989. This engine has not been rebuilt since then.

Complied with AD 2016-16-12, Amendment 39-18610 dated Sep-15-2016 – “This AD applies to all Continental Motors, Inc. (CMI) model -520 and -550 reciprocating engines, and to all other CMI engine models approved for the use of model -520 and -550 cylinder assemblies such as the CMI model -470 when modified by supplemental type certificate (STC), with Continental Motors Inc., San Antonio (formerly Airmotive Engineering Corp.), replacement parts manufacturer approval (PMA) cylinder assemblies, marketed by Engine Components International Division (hereinafter referred to as ECI), part number (PIN) AEC 631397, with ECI Class 71 or Class 76, serial number (SIN) 1 through SIN 61176, installed.” **This AD is N/A** IAW Eci Service Instruction No. 99-8-1. Eci service instructions call out for engines model O-470, IO-470, TISO-470, IO-520, TSIO-520, IO-550, IOF-550 series engines. What is currently installed is a GTISO-520.

Complied with AD 2012-03-06, Amendment 39-16947 dated Feb-24-2012 – “This AD applies to all Superior Air Parts, Lycoming Engines, and Continental Motors, Inc. fuel injected reciprocating engine models with an AVStar Fuel Systems, Inc. (AFS) fuel servo diaphragm, part number (PIN) AV2541801 or PIN AV2541803, installed.” **This AD is N/A** IAW Lycoming MSB# 596 and AVStar MSB# AFS-SB6 Rev2 due to engine model number. Both MSB's call out for engine model IO-360, IO-360, IO-540, IO-720, LIO-540 and TIO-540 series engines. What is currently installed is a GTISO-520. Also, the engines that are called out by the MSB's engine serial numbers are not installed on this aircraft.

Complied with AD 2011-13-03, Amendment 39-16726 dated Jul-13-2011 – “We are adopting a new airworthiness directive (AD) for the products listed above. This AD requires inspecting certain Lycoming and TCM reciprocating engines with certain Hartzell Engine Technologies, LLC (HET) turbochargers installed, and disassembly and cleaning of the turbocharger center housing and rotating assembly (CHRA) cavities of affected turbochargers. This AD was prompted by a turbocharger failure due to machining debris left in the cavities of the CHRA during manufacture. We are issuing this AD to prevent seizure of the turbocharger turbine, which could result in damage to the engine, and smoke in the airplane cabin.” **This AD is N/A** IAW Hartzell Engine Technologies SB# 040 Rev Nov-9-2010, page 1, compliance section. Both left and right hand engine turbo’s since overhaul has more than 50 hours in service. Currently installed LH turbo M/N Main Turbo Systems Cert#MAMR190K P/N 633274-4 S/N FBR1985 and RH turbo M/N Main Turbo Systems Cert#MAMR190K P/N 633274-4 S/N HDR0134.

Complied with AD 2010-11-04, Amendment 39-16309 dated Jun-16-2010 – “This AD applies to all Teledyne Continental Motors (TCM) 240,346,360,470, 520, and 550 series and Rolls-Royce Motors, Ltd. (R-RM) IO-240-A reciprocating engines with hydraulic lifters, part numbers (P/Ns) 657913, 657915, or 657916, installed. These engines are installed on, but not limited to, general aviation airplanes.” **This AD is N/A** IAW Teledyne Continental MSB09-8A both engine serials are not on the list of defective engines and engine model number is not on the list of defective engine models.

Complied with AD 2010-07-08, Amendment 39-16253 dated Apr-19-2010 – “The FAA is adopting a new airworthiness directive (AD) for certain Kelly Aerospace Energy Systems, LLC (KAES) rebuilt turbochargers. This AD requires removal from service of certain part number (PIN) and serial number (SIN) rebuilt turbochargers. This AD results from three reports of infant mortality turbine wheel failure in rebuilt turbochargers, since June of 2007. We are issuing this AD to prevent separation or seizure of the turbocharger turbine, which could result in full or partial engine power loss, loss of engine oil, and smoke in the airplane cabin.” **This AD is N/A** IAW Lycoming MSB# 591A. LH engine turbo P/N 633274-4 S/N FBR1985 and RH engine turbo P/N 633274-4 S/N HDR0134 turbo serial numbers are not on the list of defective turbo’s.

Complied with AD 2004-08-10, Amendment 39-13579 dated May-5-2004 – “The FAA is adopting a new airworthiness directive (AD) for Teledyne Continental Motors (TCM) models 520 and 550 series engines with certain ECi cylinders installed. This AD requires replacing certain serial-numbered (SN) cylinders supplied by ECi before further flight. This AD results from reports of 34 failures of cylinder heads marketed by ECi. We are issuing this AD to prevent loss of engine power due to cracks in the cylinder head and possible engine failure caused by separation of a cylinder head.” **This AD is N/A** IAW Eci Mandatory Service Bulletin S.I. No. 04-1 Rev1. The engine model and serial are not on the defective list.

Complied with AD 99-19-01, Amendment 39-1290 dated Sep-30-1999 – “This amendment adopts a new airworthiness directive (AD) that is applicable to Teledyne Continental Motors (TCM) O-470, IO-470, TSIO-470, IO-520, TSIO-520, LTSIO-520, GTSIO-520, IO-550, TSIO-550, and TSIOL-550 series reciprocating engines. This action supersedes priority letter AD 99-09-17 that currently requires a one-time visual and ultrasonic (UT) inspection of the No. 2 and No. 5 crankshaft cheeks for cracks. All crankshafts found with a cracked cheek must be replaced with a serviceable crankshaft prior to further flight. This action adds to the applicability TCM GTSIO-520 series engines and additional engines, identified by serial numbers (S/Ns), of currently affected engine series; references a revised service bulletin that clarifies snap ring installation; increases to 500 hours time-in-service (TIS) the cutoff for engines that require a more immediate inspection; and corrects the contact telephone number for TCM. This amendment is prompted by inspection results from the current priority letter AD. The actions specified by this AD are intended to prevent crankshaft failure due to crankshaft cheek cracks, which could result in total engine power loss, in-flight engine failure, and possible forced landing.” **This AD is N/A** IAW TCM CSB99-6, on page 2 of 13 both engine serial numbers are not on the list of defective engines.

Complied with AD 98-17-11, Amendment 39-10713 dated Oct-19-1998 – “This amendment adopts a new airworthiness directive (AD), applicable to certain Textron Lycoming and Teledyne Continental Motors reciprocating engines that had crankshafts repaired by Nelson Balancing Service, Repair Station Certificate No. NB7R820J, Bedford, Massachusetts, that requires removal from service of affected crankshafts, or a visual inspection, magnetic particle inspection, and dimensional check of the crankshaft journals, and, if necessary, rework or removal from service of affected crankshafts and replacement with serviceable parts. This amendment is prompted by reports of crankshafts exhibiting heat check cracking of the nitrided bearing surfaces which led to crankshaft cracking and subsequent failure. The actions specified by this AD are intended to prevent crankshaft failure due to cracking, which could result in an inflight engine failure and possible forced landing.” **This AD is N/A** IAW FAA AD 98-17-11 page 10 of 13, GTSIO-520 engine serial # 210114-70H is not installed on this aircraft.

Complied with AD 95-21-15, Amendment 39-9402 dated Nov-28-1995 – “This amendment adopts a new airworthiness directive (AD) that is applicable to certain Teledyne Continental Motors (TCM) reciprocating engines installed on certain aircraft identified by registration numbers. This action supersedes priority letter AD 94-14-12 that currently requires engines certified to operate on 91 octane or higher aviation gasoline (avgas) to undergo a teardown and analytical inspection for detonation damage, and engines certified to operate on 80 octane avgas to undergo inspection for evidence of possible internal engine damage. This action revises incorrect engine model numbers and aircraft registration numbers listed in the priority letter AD. This amendment is prompted by the Federal Aviation Administration (FAA) receiving more accurate information concerning which aircraft were fueled with the contaminated mixture at the affected airports. The actions specified by this AD are intended to prevent detonation due to low octane, which can result in severe engine damage and subsequent failure.” Reviewed log history of aircraft tail numbers since aircraft left the Cessna factory. Here is the list of tail number, N3179K, N542N and N4AF. These tail numbers are not on the list of failed aircraft tail numbers FAA AD 95-21-15 page 2 of 6.

Complied with AD 93-10-02, Amendment 39-8603 dated Aug-12-1993 – “Applicability: Teledyne Continental Motors (TCM) O-200, O-300, IO/TSIO/LTSIO-360, O/IO/TSIO-470, IO/TSIO/LTSIO/GTSIO-520, and IO/TSIO/TSIOL-550 series reciprocating engines listed by serial number in TCM Mandatory Service Bulletin (MSB) No. 93-12, dated May 12, 1993, or that contain cylinder assemblies purchased from TCM between July 29, 1992, and March 30, 1993; installed on but not limited to Aeronca Models 15AC and S15AC; American Champion (Bellanca) Models 7ACA and 402; Beagle Model 206S; Beech Models Debonaire, Bonanza, and Baron; Bellanca Models 14-19, 14-19-2, 14-19-3, 14-19-3A, 17-30, 17-31, and 17-31TC; Cessna Models 150, 170, 172, 180, 182, 185, 188, 205, 206, 207, 210, 303, 310, 320, 335, 336, 337, 340, 401, 402, 404, 414, 421, and T41; Aero Commander Models 200, 500, and 685; Champion Models Citabria and Lancer; Maule Models Bee Dee M-4, M-4, M-4C, M-4S, M-4T, M-4-210, M-4-210C, M-4-210S, M-4-210T, and M-5-210C; Mooney Models 231 and 252; Navion series; Piper Models Arrow, Seneca, and PA46-310P; and Taylorcraft Model F-19 aircraft.” This AD is N/A IAW Teledyne MSB No: 93-12 on page 5 of 7. Both engine serial number are not on the list of defective serial numbers.

Complied with AD 91-19-03, Amendment 39-8030 dated Sep-29-1991 – “Replace any removed filter with Champion filter P/N CH48108 or CH48109 having date codes other than those listed in paragraph (b) of the AD, or with any other FAA approved filter that is eligible for the applicable engines.” This AD has been complied with and both engine oil filters are P/N CH48111.

AD 81-24-06 has been complied with and in the back of engine log book dated 5-1-89.

AD 80-09-11 has been complied with and in the back of engine log book dated 5-1-89. Complied with by starter inspection.

AD 75-09-13 has been complied with and in the back of engine log book dated 5-1-89. N/A due to S/N

AD 79-05-09 has been complied with and in the back of engine log book dated 5-1-89. N/A due to S/N

AD 77-13-22 has been complied with and in the back of engine log book dated 5-1-89. N/A because of case markings.

AD 88-03-06 has been complied with and in the back of engine log book dated 5-1-89. N/A because of cylinder part number.

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I certify that this aircraft has been inspected with respect to the work performed in accordance with inspections and procedures for an inspection program required by FAR 91.409(f)(3), and has been found to be in airworthy condition, and is approved for return to service.

Marcel Massuda Marcel Massuda A&P A&P 3340475