

R

RAM

AIRCRAFT CORPORATION

ENGINE MAINTENANCE RECORDS

Aircraft Registration

N 79TD

Engine Position

Right

Engine Serial No.

R-218298-R



ENGINE MAINTENANCE RECORDS

Log No. 2

Aircraft Registration No. N79TD

Engine Manufacturer TCM

Model GTSIO-520-H

Serial No. R-218298-R

Date installed on aircraft 4-21-98

Time Between Overhauls (TBO) 1600 Hours

If used on multi-engine aircraft:

☒ Right ☐ Left

Waco Regional Airport • P.O. Box 5219 • Waco, Texas 76708
254/752-8381 FAX 254-752-3307

1-800-445-9713

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DATE	TOTAL TIME IN SERVICE	TOTAL TIME SINCE OVERHAUL	TACH OR RECORDING METER TIME	DESCRIPTION OF WORK PERFORMED— SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK
				TOTALS brought forward from previous page 1,885.0



Waco Regional Airport

TCM GTSIO-520-H S/N R-218298-R

Engine Previous Total:	2142.6
Hour Meter:	79.6
Since Remanufacture:	00.0
Propeller Total:	00.0
Date:	4/21/98

Above referenced engine remanufactured to new parts limits to conform w/TCM SM X-30045A. All gears cleaned, polished when required, inspected, magnafluxed, and no cracks found. Finish and dimensional limits within RAM Gear Inspection Criteria - RAM Repair Station Report No. 1818, Rev. B dated 11/25/96. Installed above referenced engine in right position of Cessna 421B, s/n 421B-0325. Installed new camshaft p/n 653056, s/n QQ017-3. Installed heavy style case p/n 642133 with new channel chrome cylinders. Crankcase modified to RAM p/n 1509-2 per STC SE8338SW. Cylinder hold-down nuts replaced and torqued per Overhaul Manual Supplement. Installed Floscan transducer per STC SE5726SW. Installed new McCauley propeller model 3AF37C516/90LFB-0, s/n 971374. Engine accessories exchanged for remanufactured or new units except as noted. Installed new prop governor, s/n 970071. Installed factory overhauled turbocharger, s/n AF003434. Installed overhauled tach generator m/n 22A667, s/n 8903 and overhauled vacuum pump m/n 3P207JA, s/n PE4135 See serviceable tags. Bendix type magnetos installed per STC SE4591SW and pressurized. See 337, SB94-8 on magneto timing procedure c/w per timing to data plate TC degree requirements with TDC locator and protractor with pointer. AD 86-13-04 R3 N/A per cylinder p/n. Cadmium plating of engine hardware and associated lines and fittings per QQ-P-416 C Class 2, Type II. C/W AD 75-23-08 R5 per inspections outlined in para's I A (1)(2)(3) of components in Table II. Turbo inlet clamp replaced with life-limited clamp p/n MVT68892-200. Due replacement in 400 hours. Inspected complete exhaust system upon disassembly. Installed new Aeroquip integral firesleeved fuel and oil hoses meeting TSO-C53A Type D and TSO-C75 Type III. Installed overhauled oil cooler p/n 636912. See 8130-3 Airworthiness Approval tag. C/W AD 79-05-09 per installation of new current design oil pressure plunger assy. Starter adapter shaftgear and crankshaft gear inspection c/w per TCM Service Bulletin CSB94-4 per installation of Service Kit EQ6642. Category 1 thru 3 TCM Service Bulletin Compliance Listing in RAM Manual. AD 87-04-05 n/a per engine model. Engine serviced with Phillips multi-grade 20W-50 Type M mineral oil. See RAM Recommended Oil Grade Maintenance Tip MT-1web for recommended oils. AD 76-02-07 n/a per installation of ALV9510 alternator. AD 97-26-17 ultrasonic inspection per SB MSB96-10 c/w at engine overhaul this date. Due again at next overhaul or when crankshaft removed. TCM CSB96-8 c/w per installation of VAR crankshaft. AD 82-13-01 (Bendix Magnetos) is N/A per Black distributor block installation on factory rebuilt units. All aluminum alloy engine parts were coated per RAM Specification No. 1142. Crankshaft assy., connecting rods, pistons, piston pins and turbocharger compressor wheel assy's. were balanced per RAM Specification No. 1161. See RAM Certificate. Propeller balanced per Service Manual with spinner and bulkhead installed. Installed spring loaded induction clamps p/n 1170-1 per STC SE3767SW. Installed RAM-FAA-PMA rocker box cover gaskets p/n 1366-1. All engine systems checked for leaks. Engine approved for return to service for RAM Aircraft test flight procedures. Pertinent details on file under Work Order No. 3225.

Larry L. Lynn
RAM Aircraft Corporation, P.O. Box 5219, Waco, Texas 76708 CRS VA1R551K

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 RAM AIRCRAFT CORPORATION Waco Regional Airport				Hour Meter: <u>89.2</u> SMOH: <u>9.6</u> Date: <u>4/23/98</u>
Engine pump pressure, idle, mixture, fuel flow, max RPM, manifold pressure, and oil pressure adjusted per GTSIO-520-H specifications. Engine ground run power test good. Details are on file under Work Order No. 3225. <u>Larry L. Lynn</u> RAM Aircraft Corporation, P.O. Box 5219, Waco, Texas 76708 CRS VA1R551K				
				Hour Meter: <u>89.2</u> Since Remanufacture: <u>9.6</u> Date: <u>4/23/98</u>
Changed oil and oil filter. Filter inspected for metal particles and found satisfactory. Serviced with Phillips Multi-Grade 20W-50 Type M mineral oil. Run and leak checked satisfactory. Pertinent details are on file under Work Order No. 3225. <u>Larry L. Lynn</u> RAM Aircraft Corporation, P.O. Box 5219, Waco, Texas 76708 CRS VA1R551K				
5-27-98				Changed oil and filter. Changed
Hobbs				wash onto strainer filter.
103.5				Serviced with 11 qts Aeroshell 50W
				det. oil. Test run checked for leaks.
				<u>Larry</u>
				<u>Michael Watson</u>
				ATP 438929507
				SUB-TOTALS this page
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10-12-98	41.3	130.5		changed oil and serviced with 11 qts. aeroshell 50 WT. det. oil. END Michael Watson A+B 438929507
12-19-98	50.1	139.5		changed oil and filter changed waste Gato filter Serviced with 11 qts aeroshell 50 WT. det oil. performed all 50 HR insp. END. --- Michael Watson A+B 438929507 I.A.
				Date <u>12-19-98</u> Total Time <u>50.1</u> I certify that this engine engine has been inspected in accordance with an annual visual inspection, and de- termined to be in airworthy condition.

RAM
AIRCRAFT CORPORATION

Waco Regional Airport

TCM GTSIO-520-H S/N L-231517-R

Left Engine

Date: 12-11-98

Above referenced engine was overhauled at RAM Aircraft Corporation 4-21-98 at total time of 2142.6 under Work Order 3225. Engine is eligible for 1600 hr. TBO per TCM SIL 98-9 Note 1.

RAM Aircraft Corporation, P.O. Box 5219, Waco, Texas 76708 CRS VA1R551K

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7-18-01				504R Inspection -
Holbs				Changed oil and filter.
238.0				removed alternator and
				Changed Shaft Seal. Re-
				installed alternator using New
				Gasket. Changed No ² 4+16
				intake tubes and Gaskets.
				Replaced blown exhaust Gasket
				in Turbo waste Gate (large) and
				Torqued Clamps. Checked all 504R
				Ad's to date. END - - -
				Michael Watson
				A+B 438929507
3-15-02				ANNUAL - Took Compression
296.7				checked and lubricated controls.
				changed oil and filter. changed
				mag. filter. CIW exhaust Ad.
				changed Elbow from waste Gate to
				Slip joint. checked all Ad's to
				date. → END - - -
				Date <u>3-15-02</u> Total Time <u>217.1</u>
				I certify that this engine engine has
				been inspected in accordance with an
				annual airframe inspection, and is
				deemed to be in airworthy condition.
				Michael Watson A+B 438929507/A
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12-5-02				ANNUAL - checked and
Hobbs				lubricated all controls. checked
330.6				mag. timing, changed oil and filter
				changed mag filters and turbo controller
				filter. checked Exhaust system
				and changed turbo tail pipe.
				changed Tach Generator. checked
				all ADS to date.
				END
Compressor				Date 12-5-02 Total Time 241.1
#1 73	#2 70	I certify that this engine has		been inspected in accordance with an
#3 70	#4 75	annual 100-hour inspection, and de-		termined to be in airworthy condition.
#5 75	#6 70	Michael Watson		
		A# 438929507 E.A.		
728-04				Changed oil & Filter. Installed 12 qts. Aeroshell W100-50wt.
Hobbs: 438.0				& Champion CH48111 Filter. Compression ck'd. - #1 = 68/80
SMOH: 358.4				#2 = 68/80 #3 = 66/80 #4 = 68/80 #5 = 60/80 #6 = 66/80. Installed
358.4				12ea. new Champion RHB-32 \$(Five wire) spark plugs
				Replaced engine air Filter element, Brackett P/N#BA-108.
				Cleaned waste-gate oil Filter cartridge in ultra-sonic
				cleaner. lubed waste gate. Decoked turbo charger with
				Berryman B-12. Reset L&R Engine to magneto timing to 20°
				Installed new wastegate bypass elbow, P/N# 5155156-5-N,
				Furnished by Aerospace welding Florida, inc. on invoice # 6413.
				Replaced several exhaust joint springs & bolts, IFAW A.O.
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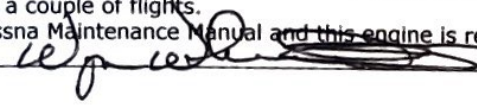
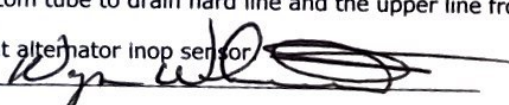
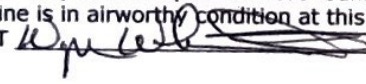
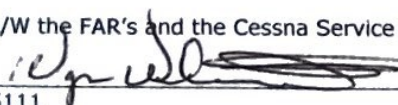
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2-28-04				<i>*Continued*</i> - cleaned air-oil separator. Reset engine idle speed, mixture & fuel pressure per m.m.
Hobbs: 438.0				Replaced loose/working rivets on oil Filter mount bracket.
SMOH: 358.4				washed down engine & cowling, lubed controls. Performed run-up, op's & lk. ck'd. ok. A.D.#2004-08-10 is N/A - no ECI cylinders installed. All A.D.'s checked thru ATP revision dated 7-19-04. Engine returned to service.
				I certify this <u>Engine</u> has been inspected in accordance with an <u>Annual</u> inspection and was found to be in an <u>airworthy condition at this time.</u> Mark Sutton A & P 648046776 I.A.
				
2-12-06				Changed oil & Filter - installed 12 qts. A/S W100-50 wt. & Champion CH48111 Filter. Compression ck'd. - #1 = $\frac{69}{80}$ #2 = $\frac{71}{80}$ #3 = $\frac{68}{80}$ #4 = $\frac{65}{80}$ #5 = $\frac{63}{80}$ #6 = $\frac{63}{80}$. cleaned, gapped, tested & rotated plugs. Ckd. mag. to Eng. timing. Removed wastegate Filter - per RAM instructions (no longer used). Replaced engine air Filter element, Brackett P/N#RA-108. Cleaned air-oil separator. Adjusted max. m.p. down 3". Complied with A.D.#2005-20-04, (Starter adapter), Para.(F), (H) & (I). Replaced needle bearing with bushing, P/N#654422. Gear backlash measured .050" at all 4 positions. - due reinspection ea. 100 hrs. Removed adapter and performed 400hr. visual inspection - gear teeth wear ck'd. ok. - due reinspection ea. 400hrs. per A.D. - Reassembled starter-adapter using new base gasket. washed down engine & cowling. Performed run-up, op's & lk. ck'd. ok. All A.D.'s ckd. for compliance thru ATP revision #2005-26, dated 12-30-05.
				I certify this <u>Engine</u> has been inspected in accordance with an <u>Annual</u> inspection and was found to be in an <u>airworthy condition at this time.</u> Mark Sutton A & P 648046776 I.A.
				

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JULY 10, 2007				ANNUAL INSPECTION RIGHT ENGINE, N79TD
HOBBS: 542.7 TSMOH: 463.1 AD 2007-05-15(h)(2) due @ 642.7 hrs AD 2007-05-15(j)(2) due @ 923.2 hrs				
1. Performed annual inspection I/A/W the annual inspection requirements as listed in the Cessna Maintenance Manual. 2. Compression test: #1 68/80, #3 72/80, #5 70/80, #2 68/80, #4 70/80, #6 74/80. 3. Changed oil and serviced engine with 12 qts Aeroshell W100 oil. 4. Installed new CH48111-1 oil filters, cut open old filters, found no metal. 5. Reset mag timing to proper setting. 6. Installed new exhaust heat shield from RAM Aircraft, p/n 5155122-1. 7. Installed new alternate air intake seal. 8. CW AD 2007-05-15, (h)(1) inspection of the starter adapter assembly, next due @ 100hr interval, 642.7 hobbs. (j)(2), next inspection due @ 923.2 hobbs. 9. Checked AD's through July 2007 with ATP AD library.				
I certify this engine has been inspected I/A/W the annual inspection requirements listed in the Cessna Maintenance Manual and has been determined to be in airworthy condition at this time and is returned to service. A&P 4186472141A Wayne Whisenant GADSDEN AVIATION LLC. 256-442-5111				
JULY 25, 2007				ALTERNATOR RIGHT ENGINE, N79TD
HOBBS: 543.4 SMOH: 463.8				
1. Right alternator inop. Bench test showed failed alternator. Replaced with O/H unit, p/n ALV9510-R-E. 2. "Right alternator inop" annunciator light remained on even though alternator indicator showed normal output. Installed new alternator output sensor, p/n 9910094-3, tested ok.				
This work was done I/A/W the Cessna Maintenance Manual and this engine is returned to service in airworthy condition with respect to the work performed. A&P 232788707 Mike Jones GADSDEN AVIATION LLC. 256-442-5111				
AUGUST 20, 2007				ALTERNATOR RIGHT ENGINE, N79TD
HOBBS: 549.2 SMOH: 459.6				
1. Right alternator failed after 5.7 hrs of use. Verified alternator failure with a bench test. 2. Installed O/H alternator, p/n ALV 9510-R, s/n H013493 and ground test shows normal.				
All work was done I/A/W the Cessna Maintenance Manual and this engine is returned to service in airworthy condition with respect to the work performed. A&P 232788707 Mike Jones GADSDEN AVIATION LLC. 256-442-5111				
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APRIL 23, 2008				RIGHT ENGINE MAINTENANCE N79TD
HOBBS: 600.0				
1. Changed oil and serviced with 12 qts of the Aeroshell W100 oil and new CH48111-1 oil filter. 2. C/W AD 2000-01-16(B), 50 hr exhaust system inspection, next inspection due @ 650.0 hrs hobbs time. 3. Researched small oil leak around oil cooler and could not find source. Cleaned engine and advised owner. Will check again after a couple of flights.				
All work was done I/A/W the FAR's and the Cessna Maintenance Manual and this engine is returned to service. A&P/IA 1984373 WAYNE WHISENANT 				
GADSDEN AVIATION, LLC. 256-442-5111				
MAY 23, 2008				MAINTENANCE N79TD
HOBBS: 641.9				
1. Compression test: #1-70/80, #3-65/80, #5-72/80, #2-75/80, #4-64/80, #6-70/80. 2. Researching oil leaks and found broken tube on bottom of wet pump oil/air separator. Replaced with new part from RAM Aircraft, item number AM107835AO. 3. Installed 2 new hoses from the bottom tube to drain hard line and the upper line from the air/oil separator to the distribution valve. 4. Reattached the red lead on the right alternator inop sensor				
A&P/IA 418647214 WAYNE WHISENANT 				
GADSDEN AVIATION, LLC. 256-442-5111				
AUGUST 19, 2008				ANNUAL INSPECTION RIGHT ENGINE, N79TD
Hobbs: 666.8				
TTSMOH: 587.2				
1. Performed annual inspection I/A/W the guidelines found in the C-421B Maintenance Manual. 2. Compression test results: #1-58/80, #3-66/80, #5-72/80, #2-78/80, #4-78/80 and #6-72/80. 3. Changed oil and serviced with 13 qts. Aeroshell 100 wt oil and new filter, CH48111-1. 4. Reset both magnetos to 20 degrees BTC. 5. C/W AD 2007-05-15(h)(1), inspection of the starter adapter assembly, next due @ 766.8 hrs. 6. AD 2007-05-15(j)(2), this inspection due @ 923.2hrs. 7. C/W AD 08-08-17, Turbine housing exhaust flange, N/A due to part name.				
I certify this engine has been inspected I/A/W the 100hr/annual inspection requirements as found in the C-421 Maintenance Manual and it has been determined this engine is in airworthy condition at this time and is returned to service. A&P/IA 1984373, WAYNE WHISENANT 				
GADSDEN AVIATION, LLC. 256-442-5111				
DECEMBER 17, 2008				MAINTENANCE RIGHT ENGINE N79TD
HOBBS: 711.0				
1. Installed newly overhauled PESCO Vacuum Pump, p/n 3P207JA, s/n 68066 with new gasket. Vacuum pump removed was s/n 4135. Ran engine and found no leaks. 2. C/W AD 2000-01-16(b) Visual inspection of exhaust system, next due @ 761.0				
I certify that all work was preformed I/A/W the FAR's and the Cessna Service Manual and this engine is returned to service.				
A&P/IA 1984373 WAYNE WHISENANT 				
GADSDEN AVIATION, LLC. 256-442-5111				
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DATE

RainAir Aircraft Services, LLC

Located at Oneonta Airport, Oneonta AL 35121 (205)625-4664

Right Engine Log Entry

WORK

Work Order: 140 Date: 6/11/09
Reg. #: N79TD Hobbs: 736.5

Changed oil & filter, oil sample taken. (Skywatch) Installed 12 qts Aeroshell 15W-50 wt. & AA48111 oil filter Replaced drain plug gasket, PN# AN900-10. Replaced tach gen. cannon plug, PN#MS3106R10SL-3S. Washed down engine. Performed run up, op's checked ok. All work performed I/A/W M/M. Engine returned to service.

Date: 6/11/09 Name: Mark Sutton LIC # A&P 548046776

RainAir Aircraft Services, LLC

Located at Oneonta Airport, Oneonta AL 35121 (205)625-4664

Right Engine Log Entry

Work Order: 161 Date: 9/18/09 Reg. #: N79TD Hobbs: 744.3 SMOH: 664.7
TT: 2807.3 Engine Model: GTSIO-520-H Engine S/N#: R-218298-R

Engine inspected for Annual in accordance with FAR 43, appd. (d), using Cessna 421 inspection guide and RAM instructions as a reference. No oil change at this time per customer's request, (oil changed 7.8 hrs.). Compression checked #1=0/80, #2=70/80, #3=75/80, #4=70/80, #5=73/80, #6=72/80. Master orifice=43 psi. Removed #1 cyl. due to low compression, found burnt exhaust valve. Replaced valve with new TCM P/N#655771, using new keys, P/N# 24802. Hand lapped new exhaust and intake valves, leak checked ok. Reinstalled cylinder using new o-rings, gaskets and seals. Replaced right bank exhaust gaskets, 3 ea., P/N#628260, (no-blo). Rechecked compression on #1 cyl after repairs, checked ok at 68 psi, (cold). Replaced EGT Probe with new Alcor P/N# 86255. Removed all fuel injection nozzles, ultrasonic cleaned and flow checked. Reassembled using all new gaskets, seals and o-rings. Checked mag to engine timing. Replaced engine air filter element, Brackett P/N# BA-13. Checked fuel control inlet screen. Performed run up, reset M.P. to 39 1/2". Reset prop. high RPM to 2250. Complied with A.D. #2000-01-16, para (b), (c), & (e), checked ok. Complied with A.D. #2007-05-15, I/A/W TCM MSB94-4G, part 2, gear back lash measured .050" at all four positions. Part 3 of SB is due at Hobbs: 923.2. All AD's checked for compliance thru "T" Data, revision # 2009-19, dated 9/14/09. Washed down engine and cowling, performed run up, op's & leak checked ok.

I certify this engine has been inspected I/A/W an Annual inspection and was found to be in an airworthy condition at this time. Engine returned to service.

Date: 9/18/09 Name: Mark Sutton LIC # A&P 548046776 I.A.

RainAir Aircraft Services, LLC

Located at Oneonta Airport, Oneonta AL 35121 (205)625-4664

Right Engine Log Entry

Work Order: 189 Date: 01/13/10
Reg. #: N79TD Hobbs: 786.6

Troubleshoot oil leak. Washed down engine and cowling. Performed run up - leak located in area of alternator. Retorqued alternator attachment bolts. Leak still present. Removed alternator, replaced base gasket, PN#653981. Leak check ok. Reinstalled cowling. All work performed I/A/W M/M. Engine returned to service.

Date: 01/13/10
Name: Mark Sutton Mech. Cert. # 548046776 A&P

DATE

RainAir Aircraft Services, LLC

Located at Oneonta Airport, Oneonta AL 35121 (205)625-4664
Right Engine Log Entry

D—
FORMING WORK

Work Order: 197 Date: 3/5/10
Reg. #, N79TD Hobbs: 800.6

Replaced alternator with overhauled unit, PN# ALV9510, SN# A809014, furnished by Aerotech of Louisville, Inc., CRS#PU4R453M, under W/O #97060. Performed run-up, op's checked ok. Engine returned to service.

Date: 3/5/10 Name: Mark Sutton Mech. Cert. # 548046776 A&P

RainAir Aircraft Services, LLC

Located at Oneonta Airport, Oneonta AL 35121 (205)625-4664
Right Engine Log Entry

Work Order: 200 Date: 3/12/10 Reg. #: N79TD Hobbs: 800.8
Changed oil and filter. Installed 12 qts. Aeroshell W100-50wt oil and Champion CH48111 filter. Performed run-up, op's and leak checked ok. Engine returned to service.

Date: 3/12/10 Name: Mark Sutton Lic. # 548046776 A&P

JULY 25, 2010
HOBBS: 822.5

R/H ENGINE

N79TD

1. Changed oil and filter, serviced with 12qts Aeroshell W100 . New Tempest AA48111 installed, cut open old filter and inspected, filter normal. No debris noted at this time.
2. Cleaned engine bay and belly of aircraft.

This engine is returned to service, with respect to work performed.
C.Deven Mundy A&P 2848967C C. Deven Mundy
Gadsden Aviation LLC. 256-442-5111

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DATE _____

RK

RainAir Aircraft Services, LLCLocated at Oneonta Airport, Oneonta AL 35121 (205)625-4664
Right Engine Log EntryWork Order: 240 Date: 11/11/2010 Reg. #: N79TD Hobbs: 831.0
Engine Model: GTS10-520-H S/N#: 218298-R SMOH: 751.4 TTE: 2894.0

Engine inspected for Annual in accordance with FAR 43, appd. "D", using Cessna 421 inspection guide and RAM instructions as a reference. Compression checked: #1=72/80 #2=72/80 #3=74/80 #4=74/80 #5=64/80 #6=70/80. Master orifice=43psi. Changed oil and filter. Installed 12 qts. Aeroshell W100-50wt. and Champion CH48111-1 filter, replaced oil drain plug gasket, P/N#AN900-10. Checked mag to engine timing, checked ok @ 20°. Replaced engine air filter element, Brackett P/N# BA-13. Checked fuel control inlet screen. Cleaned, gapped, tested and rotated plugs. Complied with A. D. #2000-01-16, (Exhaust Inspection), parts (b), (c), (d), (e) and (f), see airframe log for details. Complied with A.D. #2007-05-15, I/A/W TCM MSB94-4G, part 2. Part 3 of MSB is due at Hobbs: 923.2. Backlash measurement is 0.05" at all 4 positions. All A.D.'s checked for compliance thru "T" Data, revision #2010-22, dated 10/25/10. Washed down engine and cowling, lubed controls. Mouse-milked wastegate and controller. Performed run up, op's and leak checked ok. I certify that this engine has been inspected in accordance with an Annual inspection and was found to be in an Airworthy condition at this time. Engine returned service.

Mark Sutton

Date: 11/11/2010 Name: [Signature] LIC # A&P 548046776 I.A.**RainAir Aircraft Services, LLC**Located at Albertville Regional Airport, Albertville, Alabama
Right Engine Log EntryWork Order: 307 Date: 6/9/11 Reg. #: N79TD Hobbs: 880.0 Cessna 421B

Changed oil and filter, installed 12 qts. Aeroshell W100-50 wt., and Champion CH48111-1 filter. Washed down engine and cowlings, performed run up, operational and leak check ok. Engine returned to service.

Mark Sutton

Name: [Signature] Lic. # 548046776 A&P**RainAir Aircraft Services, LLC**

300 Aldredge Dr. Albertville, Al. 35950 (256) 660-1311

W/O# 412

R/H ENGINE LOG ENTRY

3 March, 2012

N79TDContinental Model: GTS10-520-H S/N# 218298-R Hobbs: 916.7 TTAE: 2979.7 SMOH: 837.1

Engine inspected for Annual I/A/W FAR part 43, appd. "d", using Cessna 421 inspection guide and RAM instructions as a reference. Performed compression test, all cylinders tested 62/80 psi or better, master orifice= 44psi. Cleaned, gapped, tested and rotated plugs. Changed oil and filter, installed 12 qts. Aeroshell W100-50wt. and Champion CH48111-1 filter. Replaced oil drain plug gasket, P/N# AN900-10. Checked fuel control inlet screen. Replaced air filter element, Brackett P/N# BA-13. Complied with A.D.#00-01-16, (exhaust insp.), on exhaust system, para. (b), (c), and (e). Replaced #6 cylinder exhaust riser, P/N# 5155156-22, with overhauled unit furnished by Aerospace Welding of Minneapolis, Inc., CRS# UWDR792L, under W/O# 144186. Riser installed using new exhaust gaskets, 3ea P/N# 628260, and springs, Sea. P/N# 186-225. Balance of exhaust components checked ok. Complied with A.D.# 2007-05-15 on starter adapter, unit failed inspection I/A/W TCM MSB94-4G, part 2. Removed adapter and inspected I/A/W part 3 of SB, unit failed inspection. Installed overhauled starter adapter, P/N# 643259A43, and new crankshaft gear, P/N#653580, furnished in kit P/N# R-EQ6642, furnished by Continental Motors, Inc. PC# 508. Installation completed I/A/W service kit installation instructions and TCM maintenance manual. Assembled using all new gaskets, seals and hardware furnished in kit. All A.D.'s ck'd. for compliance thru T-Data revision# 2012-04, dated 02/27/2012. Washed down engine and cowling. Performed run up, op's and leak ck'd. ok. I certify that this Engine has been inspected I/A/W an Annual inspection and was found to be in an Airworthy condition at this time. Engine returned to service.

Mark Sutton, A&P 548046776 I.A.

[Signature]

RainAir
Located at the Alber
Ph
Rt

Engine Repair

Date: 4/18/2013 W/O# 594 GTSIO-520-H S/

OH: 855.1

Engine removed for outside repair.

Mark Sutton

Date 04/18/2013 Signature *[Signature]*

Certificate #: A&P 548046776 I.A.



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

Page 1

Disassembled engine to C/W TCM SB96-11B. Steel parts magnafluxed. Crankshaft Ultrasonic Inspected by A/C Specialties W/O# 218916. Engine reassembled using following new parts: 1 #633024A2M010 bearing set; 1 #646556A1 gasket set; 1 #535823 seal; 1 #629281 bearing; 1 #SA641250 crank seal; 2 #646920 screw; 2 #SA641909 lock; 4 #SA649205 screw; 6 #SA536379 screw; 12 #SA628975 bushing; 24 #628978 bushing; 12 #AEC643626-104 pin; 24 #SA631808 plate; 24 #SA629004 snap ring; 4 #654588 screw; 1 #MS35756-8 key; 4 #654589 cam screw; 12 #AEC653826 rocker shaft; 12 #654490 rod nut; 12 #655961 rod bolt; 12 #SA630826M010 rod bearing; 6 #CC110 ring set; 24 #501868 lock; 1 #MS35756-6 key; 4 #655269 mag rubber; 1 #539523 bushing; 4 #630046 piston pin; 12 #630979-9 o-ring; 24 #MS20500-428 ex. nut; 1 #630691 thrust washer; 1 #642589 alt. nut; 6 #653888 Lifters certified by A/C Specialties W/O# 217121. 6 #653877 Lifters certified by A/C Specialties W/O# 215421 & 217547. 1 #646655 Alt. Drive Gear O/H by Drake Air W/O# 81759. 1 #633265 (M010) Prop Drive Gear certified by A/C Specialties W/O# 209477. 1 Oil Pump Housing repaired by Divco W/O# 104975. 1 #646211-2 Fuel Pump S/N H089715BR repaired by Mike's A/C Fuel Metering W/O# 25761. 1 #10-349460-2 Magneto S/N G309103FR O/H by Continental Motors W/O# 825657-2. 1 #10-349420-2 Magneto S/N H029139FR O/H by Continental Motors W/O# 825654-2. 1 #DCFS290DA/T6 Prop Governor S/N 970071 O/H by Quality A/C Accessories W/O# WO1170008685. 1 Prop Drive Shaft (M010) certified by A/C Specialties W/O# 217831. 1 Quill Shaft inspected by A/C Specialties W/O# 218917. 1 #629402 Serviceable Gear. 1 #629218 Serviceable Gear. Engine Was Not Run On Test Cell.

MAINTENANCE RELEASE

MAKE CONTINENTAL SERIAL NO. R-218298-R MODEL GTSIO-520-H 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. J6495 DATE 6-05-2013
SIGN *[Signature]* FOR REPAIR STATION NO JUJR300L

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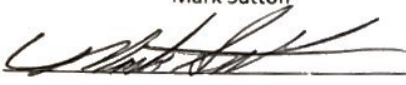
RainAir Aircraft Services, LLC
 Located at the Albertville Airport, Albertville, AL 35950
 Ph.#(256) 660-1311
Right Engine Log Entry

N79TD

Date: 07/12/2013 W/O# 594 Continental Model: GTSIO-520H S/N#: 218298-R Hobbs: 934.7 TTE: 2997.7 SMOH: 855.1

Engine re-installed, using original lord mounts and hoses, after outside repair, (see previous entry). Torqued mount bolts to spec. Performed Annual Inspection I/A/W FAR 43 Appendix D, using Cessna 421 Inspection Chart and RAM instructions as a reference. Drained oil, refilled sump with 12qts Aeroshell 50 wt. mineral oil. Replaced oil filter with new Champion CH48111-1. Cut open old filter and inspected, no defects noted. Checked mag. to engine timing, ck'd. ok. Cleaned, gapped, tested and rotated spark plugs, re-installed with new P/N# M-674 gaskets. Inspected fuel control inlet screen, checked ok. Replaced engine alternator, P/N# ALV-9510, with overhauled unit furnished by Aerotech of Louisville, Inc. CRS# PU4R453M, under W/O# 108371. Installed S/N# A021583, using new base gasket. Alternator installed using overhauled drive gear, P/N# 646655, S/N# DRK116644, furnished by Drake Air Inc. CRS#112R899K, under W/O#480144. Washed down engine and cowling. Lubricated control rod ends and linkage. Lubed waste gate and controller with mouse milk. Performed numerous ground runs, for initial ring seating, operational and leak check ok. All AD's checked for compliance thru T-data revision# 2013-13, dated 07/01/2013. I certify that this engine has been inspected in accordance with an Annual Inspection and is determined to be in an Airworthy condition at this time. Engine approved for return to service.

Mark Sutton

Date: 07/12/2013 Signature:  Certificate #: A&P 548046776 IA

7741.2

RainAir Aircraft Services, LLC
 Located at the Albertville Airport, Albertville, AL 35950
 Ph.#(256) 660-1311
Right Engine Log Entry

N79TD

Date: 07/01/2014 W/O# 770 Continental Model: GTSIO-520H S/N#: 218298-R Hobbs: 935.8 TTE: 2998.8 SMOH: 856.2

Performed Annual inspection I/A/W FAR 43 Appendix D, using Cessna 421 Inspection Chart and RAM instructions as a reference. Drained oil, refilled sump with 12qts Aeroshell 50 wt. mineral oil. Replaced oil filter with new Champion CH48111-1. Cut open old filter and inspected, no defects noted. Checked mag. to engine timing, ck'd. ok. Cleaned, gapped, tested and rotated spark plugs, re-installed with new P/N# M-674 gaskets. Inspected fuel control inlet screen, checked ok. Washed down engine and cowling. Lubricated control rod ends and linkage. Lubed waste gate and controller with mouse milk. Performed run up, operational and leak check ok. Verified fuel pressure and flow settings per TCM SID 97-3. checked ok. All AD's checked for compliance thru T-data revision# 2014-12, dated 06/16/2014. I certify that this engine has been inspected in accordance with an Annual Inspection and is determined to be in an Airworthy condition at this time. Engine approved for return to service.

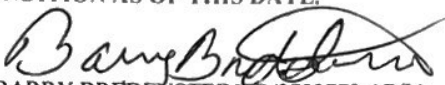
Mark Sutton

Date: 07/01/2014 Signature:  Certificate #: A&P 548046776 IA

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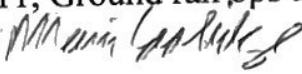
DATE	TOTAL TIME IN SERVICE	TOTAL TIME SINCE OVERHAUL	TACH OR RECORDING METER TIME	DESCRIPTION OF WORK PERFORMED— SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK
				Gilmer Aviation LLC 5/4/2016 N79TD Right engine H.M. 956.7 SMOH 877.1 Annual 100 hour inspection completed this date as per FAR43 appendix D. Compression #1 61/80 #2 74/80 #3 72/80 #4 63/80 #5 63/80 #6 73/80 .Changed oil Aeroshell 50 weight mineral. Installed new oil filter. Cleaned spark plugs. Checked engine timing. C/W AD 20007-05-15 Starter drive measurements normal. Next due @1056.7. Ground run and leak checked normal. I certify this aircraft has been inspected for an annual inspection and was determined to be in an airworthy condition this date. Rickey Gilmer A&AP 1955732 I.A. <i>Rickey Gilmer</i>
				<u>N79TD Right Engine Logbook Entry</u> 10/5/2017 HM: 975.8 TTEng: 3038.8 SMOH: 896.2 Conley Aero Service W.O. # 468140 Annual inspection completed this date. Compression check as follows: #1)78, #2)74, #3)72, #4)77, #5)75, #6)70, all over 80. Oil & filter not changed. Replaced broken exhaust hanger bracket. I certify this engine has been inspected in accordance with an annual inspection and was found to be in an airworthy condition. <i>Clinton Conley</i> Clinton Conley A&P 3503079 IA
10-19-17				HM: 988.2 Replaced R/H alternator - see A/F log. <i>Clinton Conley</i> 3503079 IA
				<u>N79TD Engine Logbook Entry</u> <i>Right</i> 11/2/2017 HM: 1002.1 TT: 7808.5 Conley Aero Service W.O. # 468146 Installed factory new alternators on both engines, Hartzell ALV-9610s. LH s/n # H-R051452, RH s/n # H-R060356. Changed oil & filters both sides. Installed 10 qts Aeroshell W-100 and new Tempest 48111 filters. Performed exhaust inspections per AD 2000-01-16(b) both sides. Clinton Conley A&P 3503079 IA <i>Clinton Conley</i>
				SUB-TOTALS this page
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DATE	TOTAL TIME IN SERVICE	TOTAL TIME SINCE OVERHAUL	TACH OR RECORDING METER TIME	DESCRIPTION OF WORK PERFORMED— SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK
 A.I.R. Aircraft Inspection & Repair LLC R.L. Jones Airport (RVS)-Tulsa, Oklahoma 74132 (918)296-0901			ENGINE RH	
REG.# N79TD	SERIAL #	WORK ORDER # 79TD.0618		SMOH TACH 7854.5
HOBBS 1048.1				
REMOVED RH ENGINE VALVE COVERS, CLEANED MATING SURFACES AND INSTALLED NEW GASKETS P/N 655705. REMOVED INOPERATIVE RH ENGINE AUXILIARY PUMP AND INSTALLED NEW EXCHANGED WELDON PUMP P/N 8150B S/N 198948. LEAK AND OPERATIONAL CHECK OK. ADJUSTED RH PROP GOVERNOR TO FEATHER AT CORRECT TIME. COMPLIED WITH AD 2000-01-16 BY VISUAL INSPECTION OF THE LH & RH EXHAUST SYSTEM FOR LEAKS, CRACKS, OR DAMAGE IN ACCORDANCE WITH PARAGRAPHS b, c, d & e. REPLACED RH ENGINE OVERBOARD EXHAUST STACK P/N K5155156-4 DUE TO PIN HOLES. COMPLIED WITH AD 72-14-08 BY PRESSURE TESTING ALL FLEXIBLE FUEL HOSES IN ENGINE COMPARTMENT FOR LEAKS, CRACKS, CUTS, BULGES, DISCOLORATION, HARDNESS, CHAFFING & EXCESSIVE WEAR. COMPLETED AD 2005-20-04 BY INSPECTION OF LH & RH ENGINE START DRIVE ADAPTORS PER PARAGRAPH H. CHECKED CYLINDER COMPRESSIONS, FOUND ALL IN SERVICEABLE CONDITION. DRAINED OIL AND CHANGED FILTER. SERVICED WITH AEROSHELL 100W OIL AND INSTALLED NEW CH48111-1 FILTER. GROUND RUN, LEAK CHECK OK. I CERTIFY THIS ENGINE HAS BEEN INSPECTED IN ACCORDANCE WITH AN ANNUAL INSPECTION AND FOUND TO BE IN AIRWORTHINESS CONDITION AS OF THIS DATE.				
DATE: 09/07/2018		 BARRY BREIDENSTEINER/2793773 AP/IA		

Right Engine

Continental GTSIO-520-H S/N R-218298-R

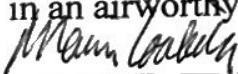
11/19/2018 Engine TTSN 3128.8 TSOH 986.2 Aircraft Hobbs 1065.8

Removed #6 cylinder due to leakage by exhaust valve. Cylinder was found to be un-airworthy due to crack. Installed repaired cylinder assy (Steel) see Avian Aeronautics, Inc Serviceable Repair tag dated 11-14-18. Drained engine oil and serviced with 12 qts Aero Shell 100 Mineral oil, Removed and installed new Tempest oil filter P/N AA48111, Ground ran ops and leak checked good. Airwerks LLC. Marvin Coolidge 
 AP2757107.

Right Engine

Continental GTSIO-520-H S/N R-218298-R

2/1/2020 Engine TTSN 3161.6 TSOH 1019.0 Aircraft Hobbs 1098.6

Complied with annual inspection this date as per Cessna 421 inspection guide. Compression checked as follows #1 72/80 #2 68/80 #3 77/80 #4 75/80 #5 78/80 #6 77/80 Drained engine oil, And serviced with 12 qts AS W100 oil. Removed, cut and inspected oil filters, Installed new Champion filter P/N CH48111. All AD's checked through By-Weekly 2020-1 AD 2007-05-15 (Starter Adapter Backlash Inspection) not due at this time. Ground ran ops and leak checked good. I certify that this engine has been inspected in accordance with an Annual inspection and has been found to be in an airworthy condition at this time. Airwerks LLC. Marvin Coolidge 
 AP2757107IA.

Page No. Right Engine

Continental GTSIO-520-H S/N R-218298-R

DATE 6/19/2020 Engine TTSN 3172.2 TSOH 1029.6 Aircraft Hobbs 1109.2

Removed Oil Cooler and reinstalled after Overhaul by (Pacific Oil Cooler Service). Installed new Vernatherm P/N 07-06905. Installed new Oil Temp Sensor P/N MS28034-3. Ground run ops and leak checked good. I certify that this engine has been inspected as to the above work and has been found to be in an airworthy condition at this time. Airwerks LLC. Marvin Coolidge

Marvin Coolidge AP2757107IA.

Right Engine

Continental GTSIO-520-H S/N R-218298-R

5/11/2021 Engine TTSN 3188.0 TSOH 1045.4 Aircraft Hobbs 1125.0

Complied with annual inspection this date as per Cessna 421 inspection guide. Compression checked as follows #1 72/80 #2 68/80 #3 77/80 #4 75/80 #5 78/80 #6 77/80 Drained engine oil, And serviced with 12 qts AS W100 oil. Removed, cut and inspected oil filters, Installed new Champion filter P/N CH48111. All AD's checked through By-Weekly 2021-11 AD 2007-05-15 (Starter Adapter Backlash Inspection) not due at this time. Ground ran ops and leak checked good. I certify that this engine has been inspected in accordance with an Annual inspection and has been found to be in an airworthy condition at this time. Airwerks LLC. Marvin Coolidge

Marvin Coolidge AP2757107IA.

Right Engine

Continental GTSIO-520-H S/N R-218298-R

6/8/2022 Engine TTSN 3210.1 TSOH 1067.5 Aircraft Hobbs 1147.7

Complied with annual inspection this date as per Cessna 421 inspection guide. Compression checked as follows #1 74/80 #2 62/80 #3 74/80 #4 76/80 #5 69/80 #6 66/80 All AD's checked through By-Weekly 2022-13 AD 2007-05-15 (Starter Adapter Backlash Inspection) not due at this time.

Ground ran ops and leak checked good. I certify that this engine has been inspected in accordance with an Annual inspection and has been found to be in an airworthy condition at this time. Airwerks LLC. Marvin Coolidge

Marvin Coolidge AP2757107IA.

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DA Right Engine
Continental GTSIO-520-H S/N R-218298-R
8/16/2023 Engine TTSN 3221.7 TSOH 1079.1 Aircraft Hobbs 1159.3 Complied with annual inspection this date as per Cessna 421 inspection guide. Compression checked as follows #1 72/80 #2 64/80 #3 74/80 #4 68/80 #5 69/80 #6 72/80 Drained engine oil, And serviced with 12 qts AS W100 oil. Removed, cut and inspected oil filters, Installed new Champion filter P/N CH48110-1. All AD's checked through By-Weekly 2023-17 Found AD 2023-05-16 (Crankshaft) N/A by not having any crankshaft work done after June 1, 2021. Found AD 2023-02-12 (SAP Valves) N/A by not having any cylinder work after Jan 20, 2022. AD 2007-05-15 (Starter Adapter Backlash Inspection) not due at this time. Ground ran ops and leak checked good. I certify that this engine has been inspected in accordance with an Annual inspection and has been found to be in an airworthy condition at this time. Airwerks LLC. Marvin Coolidge *Marvin Coolidge* AP2757107IA.

Right Engine
Continental GTSIO-520-H S/N R-218298-R
9/13/2024 Engine TTSN 3233.3 TSOH 1090.7 Aircraft Hobbs 1170.9 Complied with annual inspection this date as per Cessna 421 inspection guide. Compression checked as follows #1 72/80 #2 64/80 #3 74/80 #4 68/80 #5 69/80 #6 72/80 Drained engine oil, And serviced with 12 qts AS W100 oil. Removed, cut and inspected oil filters, Installed new Champion filter P/N CH48110-1. All AD's checked through By-Weekly 2024-18 Found AD 2023-05-16 (Crankshaft) N/A by not having any crankshaft work done after June 1, 2021. Found AD 2023-02-12 (SAP Valves) N/A by not having any cylinder work after Jan 20, 2022. AD 2007-05-15 (Starter Adapter Backlash Inspection) not due at this time. Ground ran ops and leak checked good. I certify that this engine has been inspected in accordance with an Annual inspection and has been found to be in an airworthy condition at this time. Airwerks LLC. Marvin Coolidge *Marvin Coolidge* AP2757107IA.

Right Engine
Continental GTSIO-520-H S/N R-218298-R
11/25/2024 Engine TTSN 3252.8 TSOH 1110.2 Aircraft Hobbs 1190.4 Removed engine and installed new Oil Sump Gasket P/N 655546 and reinstalled engine. Ground run ops and leak checked good. I certify that this engine has been inspection and has been found to be in an airworthy condition at this time. Airwerks LLC. Marvin Coolidge *Marvin Coolidge* AP2757107IA.

Right Engine
Continental GTSIO-520-H S/N R-218298-R
11/12/2025 Engine TTSN 3255.7 TSOH 1113.1 Aircraft Hobbs 1193.3 Complied with annual inspection this date as per Cessna 421 inspection guide. Compression checked as follows #1 72/80 #2 64/80 #3 74/80 #4 68/80 #5 69/80 #6 72/80 All AD's checked through By-Weekly 2025-20 Found AD 2007-05-15 (Starter Adapter Backlash Inspection) next due at 1416.7. Ground ran ops and leak checked good. I certify that this engine has been inspected in accordance with an Annual inspection and has been found to be in an airworthy condition at this time. Airwerks LLC. Marvin Coolidge *Marvin Coolidge* AP2757107IA.

