



ENGINE MAINTENANCE RECORDS

Aircraft Registration N444BZ
Engine Position Right
Engine Serial No. 503355



ENGINE MAINTENANCE RECORDS

Log No. 1

Aircraft Registration No. N444BZ

Engine Manufacturer TCM

Model TSID-520-NB

Serial No. 503355

Date installed on aircraft 10-14-02

Time Between Overhauls (TBO) 1600 Hours

If used on multi-engine aircraft:

Right Left

254/752-8381 Waco Regional Airport • P.O. Box 5219 • Waco, Texas 76708
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
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RAM Aircraft, Limited Partnership • Waco Regional Airport

Engine Previous Total: 3766.5
 Hour Meter: 1237.3
 Since Major Overhaul: 00.0
 Propeller Total: 00.0
 Date: 10-14-02

TCM TSIO-520-NB Series IV Right S/N 503355

Above referenced engine overhauled to new parts limits per FAR 43.2 (a) (1) (2) to conform with TCM SM X-30574A. All gears cleaned, polished when required, inspected, magnafluxed and no cracks found. Finish and dimensional limits within RAM Gear Inspection Specification No. 1818, Rev. E dated 5/18/98. Installed above referenced engine modified to TSIO-520-NB 325 HP per STC SE4327SW in right position of Cessna S/N 414-0490. See 337. Installed new RAM camshaft p/n 1058-1A, s/n G01039 per STC SE4327SW, Rev. 3. AD 97-26-17 C/W per installation of VAR crankshaft P/N 649898 S/N L139112N. C/W ultrasonic inspection per MSB96-10. Due at next overhaul or when crankshaft removed. AD 99-19-01 N/A per crankshaft date of manufacture I/A/W TCM CSB99-3C. AD 2000-23-21 N/A to crankshaft serial number/date of manufacture I/A/W TCM Mandatory Service Bulletin MSB00-5C. Engine assembled with heavy style crankcase p/n 654091 modified to RAM p/n 1157-7 per STC SE3630SW. Installed new ECI Nickel cylinders. Cylinder hold-down nuts replaced and torqued per Overhaul Manual Supplement. Installed Floscan transducer per STC SE5726SW. Installed new McCauley propeller model 3AF32C515, S/N 020036. Engine accessories exchanged for remanufactured or new units except as noted. Installed new prop governor. Re-used customer's tach generator. Installed new RAM turbocharger S/N EJL1213. Installed overhauled wet vacuum pump. New Slick pressurized magnetos p/n 6320 installed per STC SE4651SW and pressurized. SB94-8A on magneto timing procedure C/W per timing to data plate TC requirements with TDC locator and protractor with pointer. Engine modified to TSIO-520-NB per Continental Service Bulletin M-75-6. AD 86-13-04 R3 n/a per new ECI cylinders installed. SA02-7 (ECI) cylinders N/A per date of manufacture. Installed modified connecting rods n 1162-1 with bearing P/N 630826 per STC SE4327SW as FAA-PMA approved replacement. Installed RAM/FAA/PMA rocker arms p/n 1842-3 and 1842-4. AD 98-01-08 n/a per installation of RAM/FAA/PMA rocker arms. Cadmium plating of engine hardware and associated lines and fittings per QQ-P-416C Class 2, Type II. 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 NDM oil cooler P/N CAM 649479. See 337. Exhaust slip joints modified per STC SA4331SW. 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. Category 1 thru 3 TCM 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. AD 76-02-07 N/A per installation of ALV9510 alternator. Above referenced engine was made eligible for 1600 hr. TBO per TCM SIL98-9 Note 2 and RAM Service Letter 89-001. All aluminum alloy engine parts were coated per RAM Specification No. 1142. Propeller balanced per Service Manual with spinner and bulkhead installed. Installed spring loaded induction clamps p/n 1170-2 per STC SE3632SW. Installed RAM-FAA-PMA rocker box cover gaskets p/n 1387-1. Installed RAM FAA-PMA oil cooler baffle P/N 1253-1. C/W AD 93-16-15 per TCM SB MSB95-6 installation of fuel pump drive coupling P/N 653359. AD 93-10-02 (MSB 93-12) N/A per new ECI cylinders installed. All engine systems checked for leaks. Engine approved for return to service for RAM Aircraft test flight procedures. Pertinent details on file under project no. 407.

Stephen Wade

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

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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

Hour Meter: 1237.8
 SMOH: 5
 Date: 10-14-02

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. Details are on file under project no. 407.

Stephen Wade

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

I certify this ENGINE has been inspected in accordance with a/an 100 HR. inspection and has been determined to be in an airworthy condition.

Date 10-21-02 Tach 1238.8

Signed Stephen Wade

RAM AIRCRAFT, LIMITED PARTNERSHIP
 REPAIR STATION NO. VA1R551K



AIR IMPRESSIONS, INC.
 PROFESSIONAL AIRCRAFT SERVICE
 7929 Airport Rd.
 Waco, Texas 76708
 CRS No. AK6R541N

I certify this Engine has been inspected in accordance with a 100 HR. inspection and has been determined to be in an airworthy condition.

DATE 11/11/2002 TACH 1238.8

ENGINE SMOH 1.5

ENGINE TT 3768

SIGNED [Signature]

AIR IMPRESSIONS, INC
 REPAIR STATION # AK6R541N

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F

1. Approving National Aviation Authority/Country:
FAA/UNITED STATES

2. **AUTHORIZED RELEASE**
FAA Form 8130-3, AIRWORK

PERFORMED—
PERSON PERFORMING WORK

4. Organization Name and Address:
RAM Aircraft, Limited Partnership
7505 Karl May Dr.
Waco, Texas 76708

6. Item:	7. Description:	8. Part Number:	9. Eligibility:
	Cylinder Assembly (s)	TISN71.28CA -221	TBV By Ins'

DRAINED OIL, CHANGED FILTER/CHANGED OIL
SERVICED 11 QUARTS A/S 100W
WASHED AND GROUND OPERATED, NO OIL LEAKS
NOTED. REFERENCE WORK ORDER
DATE 5-8-03 TIME 1352.8
SIGNED [Signature]

ADVANTAGE AIRCRAFT SERVICES, INC
FAA CRS Q2AR598N
355 PINSON DRIVE, CORPUS CHRISTI, TX 78405

827-03 / 353.1 / 115.8 TSO 3882.3 TIF
4W RAM SB 03-7A BY INSTALLING NEW
#6 cylinder ASSY P/N TISN71.2-80A-221
S/N 10950-28. SERVICED ENGINE WITH
A/S 100 MINERAL OIL. PERFORMED GROUND
BREAKIN, NO FUEL/OIL LEAKS NOTED. 4/0.3062

ADVANTAGE AIRCRAFT SERVICES, INC
FAA CRS Q2AR598N
355 PINSON DRIVE, CORPUS CHRISTI, TX 78405

DRAINED OIL, CHANGED FILTER/CHANGED OIL
SERVICED 11 QUARTS A/S 100W
WASHED AND GROUND OPERATED, NO OIL LEAKS
NOTED. REFERENCE WORK ORDER 3099
DATE 8/14/03 TIME 1822.9
SIGNED [Signature]

ADVANTAGE AIRCRAFT SERVICES, INC
FAA CRS Q2AR598N
355 PINSON DRIVE, CORPUS CHRISTI, TX 78405

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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				



7929 Airport Rd.
Waco, Texas 76708
CRS No. AK6R541N

Engine TT: 3938.5
Engine SMOH: 172
Prop TT: 172
Hour Meter: 1409.3
Date: 12/15/2003

RAM Series IV TCM TSIO-520-NB S/N R-503355

On above referenced engine, removed all cowling for 100 Hour/Annual Inspection. Cleaned and gapped spark plugs. Drained oil, installed new oil filter, and refilled engine with Acrosshell 100w oil. Checked magneto timing. Inspected plug harness and all engine electrical. Checked all engine controls for movement and attach points. Inspected intake and exhaust system, condition and integrity of all engine accessories. Inspected engine mounts, all baffles and cowling. Inspected prop, spinner, and bulkhead. Inspected all fuel, oil, and hydraulic lines and fittings. Ran compression check and readings were: #1) 78/80, #2) 77/80, #3) 77/80, #4) 75/80, #5) 78/80, and #6) 75/80. C/W A.D. 2000-01-16 per para's (b), (c), and (f). (See A.D. listings.) A.D.'s researched through bi-weekly 2003-24. Above work done in accordance with TCM and Cessna 414 Service Manuals and Air Impressions, Inc. 100 Hour/Annual Checklist. Engine ground run-up leak checked good and approved for return to service. Pertinent details are on file under work order 1533.

Air Impressions, Inc.
CRS# AK6R541N



7929 Airport Rd.
Waco, Texas 76708
CRS No. AK6R541N

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

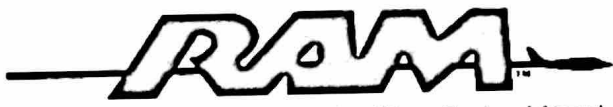
DATE 12/15/2003 TACH 1409.3
ENGINE SMOH 172
ENGINE TT 3938.5
SIGNED

AIR IMPRESSIONS, INC
REPAIR STATION # AK6R541N

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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
				DRAINED OIL, CHANGED FILTER, CLEANED SCREEN SERVICED <u>11</u> QUARTS <u>A/S 100W</u> WASHED AND GROUND OPERATED, NO OIL LEAKS NOTED REFERENCE WORK ORDER <u>3843</u> DATE <u>3-6-04</u> TIME <u>1328.1</u> SIGNED <u>[Signature]</u>
				ADVANTAGE AIRCRAFT SERVICES, INC. FAA CRS Q2AR598N 355 PINSON DRIVE, CORPUS CHRISTI, TX 78402



RAM Aircraft, Limited Partnership • Waco Regional Airport

Hour Meter: 1433.2
 SMOH: 195.9
 Date: 04-22-04

TCM TSIO-520-NB Series IV Right S/N 503355

On above referenced engine removed ECI cylinder assy's #1 thru #5 and installed new TCM cylinder assy's that were Nickel coated at ECI. Installed with new pistons, rings, pins, gaskets and seals. C/W ECI SB04-1, Rev 1 on cylinder #6 by verifying the letter "A" is stamped on rocker flange. Serviced with 12 qts. Phillips 20W50 Mineral oil and new CH48108 oil filter. Test flight for cylinder break-in and proper operation satisfactory. Pertinent details on file under project no. 1359.

[Signature: Stephen Wade]

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

				DRAINED OIL, CHANGED FILTER, CLEANED SCREEN SERVICED <u>11</u> QUARTS <u>A/S 100W</u> WASHED AND GROUND OPERATED, NO OIL LEAKS NOTED REFERENCE WORK ORDER <u>3932</u> DATE <u>6-2-04</u> TIME <u>1456.3</u> SIGNED <u>[Signature]</u>
				ADVANTAGE AIRCRAFT SERVICES, INC. FAA CRS Q2AR598N 355 PINSON DRIVE, CORPUS CHRISTI, TX 78402
				DRAINED OIL, CHANGED FILTER, CLEANED SCREEN SERVICED <u>11</u> QUARTS <u>A/S 100W</u> WASHED AND GROUND OPERATED, NO OIL LEAKS NOTED REFERENCE WORK ORDER <u>4050</u> DATE <u>10-22-04</u> TIME <u>1481.7</u> SIGNED <u>[Signature]</u>
				ADVANTAGE AIRCRAFT SERVICES, INC. FAA CRS Q2AR598N 355 PINSON DRIVE, CORPUS CHRISTI, TX 78402
				SUB-TOTALS this page
				TOTALS—Carry forward to next page

DATE	TOTAL TIME IN SERVICE	TOTAL TIME SINCE OVERHAUL	TACH OR RECORDING METER TIME	DESCRIPTION OF WORK PERFORMED— SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK
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ENGINE LOG BOOK ENTRY

Engine: RIGHT N444BZ TCM TSIO-520-NB 503355 Date: 1/12/2005
 Engine Total Time: 4039.9 TSO: 273.4 Indicated Time: 1510.7 HM W/O: 4112

COMPLETED A 100 HR / ANNUAL INSPECTION USING C414 SERVICE MANUAL CHAPTER 2A6. CHANGED OIL AND FILTER, SERVICED 11 QTS AEROSHELL 100W OIL. CLEANED, GAPPED, AND TESTED SPARK PLUGS. ADJUSTED IDLE AND MIXTURE. RESEARCHED AD'S THRU 2004-26 ISSUE. END.

I certify that this ENGINE has been inspected in accordance with a 100HR/Annual inspection and was determined to be in airworthy condition.
 Date 1-12-05 Tach reading 1510.7 Total time 4039.2

DIFFERENTIAL COMPRESSION

1-80/70 4-80/70
 2-80 70 5-80/74
 2-80/72 6-80/74

355 Pinson Drive
 Corpus Christi, TX 78406
 (361)289-1884

ADVANTAGE AIRCRAFT SERVICES, INC.
 FAA CRS Q2AR598N

David D. Holzschuh
 FAA CRS Q2AR598N

DRAINED OIL, CHANGED FILTER, CLEANED SPARK PLUGS. SERVICED 11 QUARTS AEROSHELL 100W OIL.	ADVANTAGE AIRCRAFT SERVICES, INC. FAA CRS Q2AR598N 355 PINSON DRIVE, CORPUS CHRISTI, TX 78406
WASHED AND GROUND OPERATED, NO OIL LEAKS. REFERENCED WORK ORDER 4421.	ADVANTAGE AIRCRAFT SERVICES, INC. FAA CRS Q2AR598N 355 PINSON DRIVE, CORPUS CHRISTI, TX 78406
DRAINED OIL, CHANGED FILTER, CLEANED SPARK PLUGS. SERVICED 11 QUARTS AEROSHELL 100W OIL.	e/w AD00-01-16 Para(b) 50HR EXHAUST insp. No Defects
WASHED AND GROUND OPERATED, NO OIL LEAKS. REFERENCED WORK ORDER 4423.	ADVANTAGE AIRCRAFT SERVICES, INC. FAA CRS Q2AR598N 355 PINSON DRIVE, CORPUS CHRISTI, TX 78406
DATE 11-23-05 TIME 1612.5	



ENGINE LOG BOOK ENTRY

Engine: RIGHT N444BZ TCM TSIO-520-NB S/N 218817-R Date: 2/3/2006
 Engine Total Time: 4152.0 TSO: 385.5 Indicated Time: 1622.8 HM W/O: 4478

COMPLETED A 100HR / ANNUAL INSPECTION USING CESSNA 414 SERVICE MANUAL CHAPTER 2. CHANGED OIL AND FILTER, SERVICED 11 QTS AEROSHELL 100W OIL. CLEANED, GAPPED, AND TESTED SPARKPLUGS. AD97-26-17 TCM CRANKS DUE AT O/H OR STRIKE. CLEANED #1 & 4 FUEL INJECTORS. RESEARCHED AD'S THRU 2006-2 ISSUE. END.

I certify that this ENGINE has been inspected in accordance with an Annual inspection and was determined to be in airworthy condition.
 Date 2/3/06 Tach reading 1622.8 Total time 4152.0

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 Corpus Christi, TX 78406
 (361) 289-1884

DIFFERENTIAL COMPRESSION

66	80/68
70	80/70
80	80/70

TOTALS—Carry forward to next page

David D. Holzschuh
 FAA CRS Q2AR598N

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
				DRAINED OIL, CHANGED FILTER/OIL SERVICED 11 QUARTS A/S 100W
				WASHED AND GRIND OPERATED. NO OIL LEAKS
				ADDED REFERENCE WORK ORDER #651
				DATE 8-8-06 TIME 1659.6
				SIGNED <i>[Signature]</i>
				ADVANTAGE AIRCRAFT SERVICES, INC. FAA CRS Q2AR598N 355 PINSON DRIVE, CORPUS CHRISTI, TX 78406

Date	Total Time In Service	Total Time Since Overhaul	Tach or Recording Meter Time
11-28-06	4217.8	451.3	1688.6



TCM TSIO-520-NB Right Engine S/N 503355

The above referenced engine was disassembled due to a prop strike. The engine was cleaned, inspected and reassembled to service limits per TCM Overhaul Manual X-30574A and SB96-11 prop strike. Re-used crankcase, crankshaft, camshaft, lifters, main and rod bearings. C/W MSB96-10 ultrasonic inspection. Rods balanced to RAM specifications and new bolts and nuts installed in rods. Clean and inspect #6 cylinder I/A/W ECI MSB06-2, Rev. 2. Honed to ring finish. Rings gapped and fit to piston and cylinder. #1, 2, 3, 4, and 5 TCM cylinders re-installed. Note: Pistons not removed from cylinders. Cleaned and flushed oil cooler, S/N F99-3504-7. Installed overhauled starter adapter S/N 205180 and governor S/N 930065. Installed new slick magnetos P/N 6320, left S/N 06101053, right S/N 06101048. Installed accessories in there respective positions with existing time in service. Installed oil return line from air/oil separator to scavenge pump I/A/W RAM Dwg. 2048. See 337. Serviced engine with 20W50 mineral oil. Engine approved for return to service per RAM Test Flight procedures. Pertinent details on file under project no. 3076.

Robert Franklin
RAM Aircraft, Limited Partnership, P.O. Box 5219, Waco, Texas 76708 CRS VA1R551K



ENGINE LOG BOOK ENTRY

Engine RIGHT N444BZ TCM TSIO-520-NB S/N 503355 Date: 3/2/2007
 Engine T.T: 4254.0 TSO: 487.5 Indicated Time: 1724.8 W/O: 4823

COMPLETED A 100HR / ANNUAL INSPECTION USING C414 SERVICE MANUAL CHAPTER 2. CHANGED OIL AND FILTER, SERVICED WITH 11 QTS A/S 100W OIL. INSTALLED 12 EA NEW CHAMPION RHB32E SPARK PLUGS. SET-UP FUEL INJECTION PER RAM SPEC 36A REV 57. AD 86-24-02 DUE AT 7291.8 T.T.A.F. RESEARCHED AD'S THRU 2007-03 END

DIFFERENTIAL COMPRESSION

71 4-80/68
 68 5-80/62
 3-80/68 6-80/70

I certify that this ENGINE has been inspected

355 Pinson Drive
 Corpus Christi, TX 78406
 (361) 289-1884

in accordance with a 100 HR / Annual inspection and was determined to be in airworthy condition

Date 3-2-07 Tach reading 1724.8 Total time 5254.0

Signed *[Signature]* for

ADVANTAGE AIRCRAFT SERVICES, INC.
 FAA CRS Q2AR598N
 355 PINSON DRIVE, CORPUS CHRISTI, TX 78406

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
C/W AD00-01-16				DRAINED OIL, CHANGED FILTER, CLEANED SCREW SERVICED 11 QUARTS A/S 100W WASHED AND GROUND OPERATED, NO OIL LEAKS NOTED: REFERENCE WORK ORDER 4911
PARA (b) 50 HR EXHAUST				DATE 6-25-07 TIME 12:30 SIGNED [Signature] FAA CRS Q2AR598N 355 PINSON DRIVE, CORPUS CHRISTI, TX 78403
INSP - NO DEFECTS				
C/W AD00-01-16				DRAINED OIL, CHANGED FILTER, CLEANED SCREW SERVICED 11 QUARTS A/S 100W WASHED AND GROUND OPERATED, NO OIL LEAKS NOTED: REFERENCE WORK ORDER 5025
PARA (b) 50 HR EXH.				DATE 12-27-07 TIME 1830 SIGNED [Signature] ADVANTAGE AIRCRAFT SERVICES, INC. FAA CRS Q2AR598N 355 PINSON DRIVE, CORPUS CHRISTI, TX 78403
INSP. NO DEFECTS				



ENGINE LOG BOOK ENTRY

Engine RIGHT N444BZ TCM TS10-520-NB S/N 503355 Date: 4/22/2008
 Engine T.T:4412.7 TSO: 646.2 Indicated Time:1883.5 HM W/O: 5119
 COMPLETED A 100HR / ANNUAL INSPECTION IN ACCORDANCE WITH C414 SERVICE MANUAL
 CHAPTER 2. CHANGED OIL AND FILTER, SERVICED 11 QTS A/S 100W OIL. CLEANED, GAPPED, AND
 TESTED SPARK PLUGS. AD 97-26-17 TCM CRANKSHAFTS DUE AT OH OR PROP STRIKE.
 RESEARCHED AD'S THRU 2008-08 ISSUE END.

I certify that this ENGINE has been inspected
 in accordance with a 100HR/Annual inspection
 and was determined to be in airworthy condition
 Date 4/22/08 High reading 8835 Total time 1412.7
 Signed [Signature] for

355 Pinson Drive
 Corpus Christi, TX 78406
 (361) 289-1884

David D. Holzschuh
 FAA CRS Q2AR598

ADVANTAGE AIRCRAFT SERVICES, INC.
 FAA CRS Q2AR598N
 355 PINSON DRIVE, CORPUS CHRISTI, TX 78403

DRAINED OIL, CHANGED FILTER
 SERVICED 11 QUARTS A/S 100W
 WASHED AND GROUND OPERATED, NO OIL LEAKS
 NOTED: REFERENCE WORK ORDER 5041
 DATE 10-20-08 TIME 1835
 SIGNED [Signature]

ADVANTAGE AIRCRAFT SERVICES, INC.
 FAA CRS Q2AR598N
 355 PINSON DRIVE, CORPUS CHRISTI, TX 78403

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				TOTALS brought forward from previous page
				CHANGED OIL AND FILTER, OIL 2400 SERVICED 11 QTS AEROSHELL 100 W OIL WASHED AND GAPPED AND TESTED. NO OIL LEAKS
				NOTED: REFERENCE WORK ORDER: 5575 DATE: 2/28/10 TIME: 2044.5 SIGNED: <i>[Signature]</i>
				ADVANTAGE AIRCRAFT SERVICES, INC. FAA CRS Q2AR598N 355 PINSON DRIVE, CORPUS CHRISTI, TX 78403



ENGINE LOG BOOK ENTRY

Engine: RIGHT N444BZ TCM TSIO-520-NB S/N 503355 Date: 5/28/2010
 Engine T.T: 4584.3 TSO: 817.8 Indicated Time: 2055.1 HM W/O: 5646
 COMPLETED A 100 HR / ANNUAL INSPECTION USING C414 SERVICE MANUAL CHAPTER 2.
 CHANGED OIL AND FILTER, SERVICED 11 QTS AEROSHELL 100 W OIL. CLEANED, GAPPED, AND
 TESTED SPARK PLUGS. AD 09-16-03 SAP CYLINDERS N/A TCM CYLINDERS INSTALLED AD 09-19-07
 TCM EQ3 CYLINDERS N/A ECI CYLINDERS INSTALLED 10/14/02. AD 09-24-52 TCM LIFTERS N/A BY
 P/N 653877, 65388. RESEARCHED AD'S THRU 2010-10 ISSUE.

DIFFERENTIAL COMPRESSION

1-80/64 4-80/64
 2-80/60 5-80/62
 3-80/66 6-80/74

355 Pinson Drive
 Corpus Christi, TX 78406
 (361) 289-1884

I certify that this ENGINE has been inspected
 in accordance with a 100HR/Annual inspection
 and was determined to be in airworthy condition
 Date: 5-28-10 Tach reading: 2055.1 Total time: 4584.3
 Signed: *[Signature]* for

ADVANTAGE AIRCRAFT SERVICES, INC.
 FAA CRS Q2AR598N
 355 PINSON DRIVE, CORPUS CHRISTI, TX 78406

David D. Holzschuh
 FAA CRS Q2AR598

6/3/11		2098.8	CHANGED OIL + FILTER SERVICED AND GAPPED
5/1/80			CHANGED OIL AND FILTER. CHECKED MAGS 500 HR INSPECTION
5/1/80			TUNED TO FAO LINES. CHANGED FUEL FILTERS CHECKED SPARK PLUGS
5/6/80			AD 2002-01-16 PARTS: CHECKED SPARK PLUGS. Leaked
6/0/80			OVERHAUL FAO SIDE RUDY OK
5/3/80			I certify that this aircraft/engine has been inspected in accordance with a <u>Annual</u> inspection and was determined to be in airworthy condition. Date: <u>6/3/11</u> Tach Time: <u>2098.8</u> Signature: <i>[Signature]</i>
6/4/80			
			SUB-TOTALS this page
			TOTALS—Carry forward to next page

Michael Muzyczyn
 A & P 1486790 IA

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



ENGINE LOG BOOK ENTRY

Engine: **RIGHT N444BZ TCM TSIO-520-NB S/N 503355** Date: **3/13/2012**

Engine T.T.: _____ Indicated Time: **2143.2 HM** W/O: **6080**

CHANGED OIL AND FILTER, INSPECTED OLD FILTER, NO METAL NOTED. SERVICED 11 QTS AEROSHELL 100W OIL. WASHED AND LEAK CHECKED OK. C/W AD 00-01-16 PARA(b) CESSNA 50 HR EXHAUST INSP., NO DEFECTS NOTED.

355 Pinson Drive
Corpus Christi, TX 78406
(361) 289-1884

[Signature]
David D. Holzschuh
FAA CRS Q2AR598



ENGINE LOG BOOK ENTRY

Engine: **RIGHT N444BZ TCM TSIO-520-NB S/N 503355** Date: **7/6/2012**

Engine T.T.: **4677.2** TSO: **910.7** Indicated Time: **2148.0 HM** W/O: **5646**

COMPLETED A 100 HR / ANNUAL INSPECTION USING FAR 43 APP D, AND C414 SERVICE MANUAL INSPECTED AND REPLACED OIL FILTER. SERVICED 1QT A/S 100W. CLEANED, GAPPED, AND TESTED SPARK PLUGS. RESEARCHED AD'S THRU 2012-12 ISSUE. END

I certify that this ENGINE has been inspected

in accordance with a 100HR/ANNUAL inspection and was determined to be in airworthy condition

Date 7-6-12 tach reading 2148.0 total time 4677.2

Signed *[Signature]* for

355 Pinson Drive
Corpus Christi, TX 78406
(361) 289-1884

ADVANTAGE AIRCRAFT SERVICES, INC.
FAA CRS Q2AR598
355 PINSON DRIVE, CORPUS CHRISTI, TX 78403

David D. Holzschuh
FAA CRS Q2AR598



Waco Regional Airport, Waco TX 76708

Reg. #: N444BZ Date: 11/11/13 Work Order #: 13-0804
Make: Cessna Model: 414 Serial #: 0490 Hour Meter: 2179.8 ACTT:
Eng: TSIO-520-NB S/N: 503355 (Right) ETT: ~~XXXX~~ TSMOH: ~~XXXX~~
4709.0 942.5

Performed annual inspection in accordance with FAR 43 Appendix D, Cessna 414 Maintenance manual and TCM manuals. Performed compression checks, results as follows: #1: 65/80, #2: 67/80, #3: 61/80, #4: 70/80, #5: 65/80 and #6: 75/80. Drained oil and changed filter. (CH48108-1) Replenished oil supply with 12 qts. Aeroshell 100W50wt. oil. Cleaned and gapped spark plugs. Checked magneto timing. C/W A.D. 2001-01-16 Paragraphs (b), (c) and (e), inspection of exhaust system components. Installed new CHT probe P/N 102-00007 for ships CHT indication. Washed engine. Run up checked O.K.

I certify that this engine has been inspected in accordance with an ANNUAL / 100 Hr Inspection and has been determined to be in an airworthy condition.

[Signature]

Gary Drapela A&P 3542901 IA

DATE	TOTAL TIME IN SERVICE	TOTAL TIME SINCE OVERHAUL	TACH OR RECORDING METER TIME	DESCRIPTION OF WORK PERFORMED— SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK
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McGregor Executive Airport, McGregor TX 76657

Reg. #: N444BZ Date: 2-9-2015 Work Order #: 14-0622
 Make: Cessna Model: 414 Serial #: 0490 Hour Meter: 2195.8 ACTT: 7476.9
 Eng: TSIO-520-NB S/N: 503355 (right) ETT: 4725.0 TSMOH: 958.5

Performed an Annual Inspection as required by FAR 91.409 in accordance with the Cessna service manual, and FAR 43 Appendix D. Accomplished the following items: Compressions check results: #1 65/80, #2 69/80, #3 70/80, #4 68/80, #5 65/80 and #6 64/80. Drained oil and serviced engine with 12 qts. of Aeroshell 100w. Removed and replaced oil filter with new CH48108-1. Installed new crush gasket p/n MS35769-11. Cut open filter and inspected for metal, none detected at this time. Cleaned and gapped spark plugs. Checked magneto timing. C/W A.D. 2001-1-16 Paragraphs (b), (c) and (e), inspection of exhaust system components. Washed engine. Run up and leak check ok.

I certify that this engine has been inspected in accordance with an ANNUAL / 100 Hr Inspection and has been determined to be in an airworthy condition.

Carl Farris A&P 3225044 I.A.



Reg#: N444BZ Date: 4/8/2016 W/O: 16-10618
 Make: Continental Model: TSIO-0520-NB S/N: 503355
 Engine tach: N/A TTSMOH: 968.3 TTSN: 4,734.8

Performed an annual inspection on this engine. Cleaned and checked spark plugs, soaked injector nozzles, changed engine oil and filter (CH48108 series), installed new crush gasket (MS35769-11). C/W AD 2001-1-16 paragraphs (B), (C) and (E). Ground ops checked OK.

I certify that this engine has been inspected IAW an annual inspection and was determined to be in an airworthy condition. Additional details are on file at Texas Aero under Work Order # 16-10618.

Russell Smith

3112876 IA

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N#: N444BZ **Date:** 6-20-17 **W/O:** 17-10674
Make: Continental **Model:** TSIO-520-NB **S/N:** 503355
TTSN: 4757.8 **TTSMOH:** 991.3 **Engine Tach:** N/A
Hobbs: 2228.4

Drained right engine oil and removed engine oil filter. Cut open and inspected engine oil filter. No metal found at this time. Removed and replaced right engine front main seal with new P/N 641250. Installed engine oil drain plug with gasket P/N MS35769-11. Installed new right engine oil filter P/N CH48108-1 and serviced engine with 12 quarts of Aeroshell 100W. Removed, cleaned, inspected and re-gapped right engine spark plugs. Checked timing. Compressions #1. 70/80 #2. 70/80 #3. 60/80 #4. 72/80. #5. 75/80 #6. 79/80. Complied with AD 2001-1-16 par (b), (c), and (e) exhaust component inspection. Run and Leak check good. All work done in accordance with C414 maintenance manual.

I certify that this aircraft has been inspected IAW FAR Part 43 appendix D for a 100 hr/Annual inspection and found to be airworthy at this time and approved for return to service. Additional details are on file at Texas Aero under Work Order # 17-10674

Louis Dean Louis Dean A&P 3804378
 Richard Hewgley RW Hewgley A&P IA 2695103




N#: N444BZ **Date:** 6-19-18 **RH engine**
Make: Continental **Model:** TSIO-520-NB **S/N:** 503355
TTSN: 4780.4 **TTSMOH:** 1013.9 **Engine Tach:** N/A
Hobbs: 2251.0

Compressions: #1, 72/80. #2, 74/80. #3, 63/80. #4, 74/80. #5, 60/80. #6, 75/80. Drained engine oil and R/R oil filter P/N CH48108-1. Inspected Removed oil filter, no contaminants found. Serviced engine with Aeroshell W100. Inspected spark plugs. Complied with AD 2001-1-16 par (b), (c), and (e) exhaust component inspection. Run and Leak check good. All work done in accordance with C414 maintenance manual.

I certify that this aircraft has been inspected IAW FAR Part 43 appendix D for a 100 hr/Annual inspection and found to be airworthy at this time and approved for return to service. Additional details are on file at Texas Aero under Work Order # 17-10674

Louis Dean Louis Dean A&P 3804378
 Richard Hewgley RW. Hewgley A&P IA 2695103

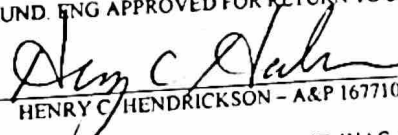
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MODEL CONTINENTAL TSIO-520-NB S/N: 503355 REG: N444BZ TTSN: 4798.4 SMOH: 1031.9	Trim-Aire Aviation, Inc P.O. Box 447 Limestone County Airport Mexia, Texas 76667 (254) 562-2857 R/H Engine Log Entry	DATE: 7/16/2019 W.O.: 19-0163 HOBBS: 2269.0 ACTT: 7550.1	3 WORK
<p>1 Performed a compression test as follows: 57, 58, 72, 75, 76, 62.</p> <p>2 Checked mag timing.</p> <p>3 Changed oil and filter p/n CH4S108-1 and refilled with Aeroshell 100W.</p> <p>4 Lubricated engine controls and cables.</p> <p>5 Removed and replace spark plugs p/n URJIB32E.</p> <p>6 Ground ran engine, no leaks found, operation normal.</p> <p>7 Complied with following AD's. AD2009-19-07 Previously Complied With, AD2010-11-04 N/A, AD2012-03-06 N/A, AD2012-10-13 N/A, AD2014-05-29 N/A, AD2016-16-12 Cylinder Due change at HM. 2397.3.</p>			
<p>I certify that this engine has been inspected in accordance with an Annual Inspection and was determined to be in airworthy condition.</p> <p style="text-align: center;"> Chris Savage A&P 32532381A</p>			

MODEL: ISIO-520-NB S/N: 503355 TSO: 1048.9	P.O. Box 447 Limestone County Airport Mexia, Texas 76667 (254) 562-2857 RIGHT ENGINE LOG ENTRY ANNUAL INSPECTION	DATE: 08-19-2020 W.O. 20-0170 HOBBS: 2285.6 ACTT: 7567.6
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1. ENG COMP. #1 78/80, #2 76/80, #3 75/80, #4 78/80, #5 75/80, #6 76/80
2. REMOVED OIL FILTER, CUT AND INSP'D, NO METAL OR CONTAMIATES FOUND. INSTALLED NEW CH-48108-1 OIL FILTER
3. REMOVED AND CLEANED ALL FUEL INJECTERS.
4. C/W AD 2000-01-16 DATED 02/15/2000. REF AIRFRAME LOG
5. INSTALLED NEW TURBO EXH PIPE PN: HWS-340414-2
6. INSTALLED NEW EXH CLAMP ON TURBO EXH PIPE PN 2265C400-SS

ENGINE TEST RAN, INSPECTED FOR OIL LEAKS NONE FOUND. ENG APPROVED FOR RETURN TO SERVICE


HENRY C HENDRICKSON - A&P 1677108

I CERTIFY THAT THIS ENGINE HAS BEEN INSPECTED IAW AN ANNUAL INSPECTION AND WAS DETERMINED TO BE IN AN AIRWORTHY CONDITION.


CHRIS SAVAGE A&P 32532381A

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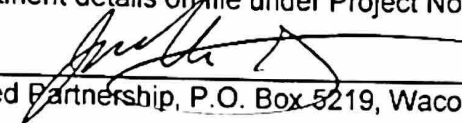
DATE	TOTAL TIME IN SERVICE	TOTAL TIME SINCE OVERHAUL	TACH OR RECORDING METER TIME	DESCRIPTION OF WORK PERFORMED— SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK
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Date	Total Time In Service	Total Time Since Overhaul	Tach or Recording Meter Time
1/29/2021	4821.4	1054.9	2291.6



Continental TSIO-520-NB Series IV Right S/N 503355

Above referenced engine removed cowling and inspected engine for cylinders affected by AD 2016-16-12. AD2016-16-12 N/A on cylinders #1 - #5. AD 2016-16-12 does apply to #6 cylinder s/n 10950-28. Installed in 2003 at 115.8 hours since overhaul. Total time in service on affected cylinder is 939.1 hours. This AD must be complied with per Par 5ii at no later than 60.9 hours TIS. Cowling reinstalled. Engine is approved for return to service for work performed. Pertinent details on file under Project No. 9777.


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

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Work Order: 22-1050 N444BZ

Engine Model: TCM TSIO-520-NB	Engine SN: 503355	Position: Right	TSOH 1077.1	Hobbs: 2314.4	Date: 19 Jan 23
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Performed an Annual Inspection as required by FAR 91.409 in accordance with the Cessna 414 series service manual, TCM Engine manual, and FAR 43 Appendix D. All AD's complied with through Bi-Weekly 2023-1.

- 1) Engine compressions as follows: #1)63/80, #2)60/80, #3)69/80, #4)67/80, #5)72/80, and #6)68/80, master orifice 45.
- 2) Removed oil filter and drained the oil. Installed a new oil filter P/N CH48108-1 and added 12 quarts of Phillips XC 20W50. Replaced drain plug crush gasket with new, PN MS35769-11.
- 3) Cleaned, gapped, and tested the spark plugs and replaced Gasket P/N M0674 (12).
- 4) Removed #2 cyl. EGT probe clamp assembly and installed new EGT probe P/N 86255. IAW AC 43.13-1B. Ops check required. During engine runs, ops checked satisfactory.
- 5) RH Engine Prop Governor Cable Heavily Corroded. Removed surface corrosion and applied corrosion inhibitor IAW AC 43.13-1B.
- 6) RH Engine Turbo Charger Inlet Baffle Seal tom. Drilled off old baffle seal and retainer. Cleaned surface and inspected for worn mounting edges. Fabricated new seal from P/N S111.7.938.36 seal material to shape of old seal. Riveted into place. Ref AC 43.13-1B.
- 7) Oil hoses overdue replacement. Manufacture date 01/02. Removed oil hoses on left engine and replaced with new hose (kit) P/N 1443-5R. Operational check satisfactory
- 8) Removed left and right engine magneto pressurization filters and replaced with two new filters P/N 1396-2. IAW AC43.13-1B.
- 9) Turbo charger tab washers rusted and deteriorated. Action deferred until next inspection.
- 10) RH engine exhaust clamp loose at tailpipe. RH engine exhaust system removed for AD 2000-01-16. During reinstallation of exhaust system, the exhaust clamp was positioned and tightened. Ref. MM 9-72. Engine run ops check good.
- 11) Complied with AD 2000-01-16 paragraphs b through g to detect and correct cracks and corrosion on the exhaust system (recurring). Removed exhaust components from right engine and forwarded to AWI to comply with inspection. Installed 1 new LH stack assy. P/N A9910295-13, 2 new slip joints P/N A9910296-7, 1 new RH elbow P/N A9910299-3, 1 new waste gate overboard P/N A9910299-6, 1 new waste gate bypass elbow P/N A9910299-5, 2 new waste gate gaskets P/N 2570-1, 1 new bypass gasket P/N 17189-200N1, 2 new end seals P/N 17189-250N1, 1 overhauled header P/N 8226-9, 2 new slip joint hardware kits P/N 1001-6, 1 new waste gate hardware kit P/N WGH8816, 1 new turbo hardware kit P/N TH448, 1 new RH stack assy. P/N A9910295-14, 1 new RH elbow P/N A9910299-4, 6 new exhaust stack gaskets P/N SA628260 on the LH engine. Installed 1 exhaust clamp P/Ns 2265C400-SS, 3 Screw and nut baffle fasteners P/N 41402-16 and 2 bolts P/N AN3C4A. IAW AMM 9-81. Ops check satisfactory. Next inspection due IAW AD 2000-01-16 column (b) January 2024 or 50 hours, whichever occurs first; IAW column c and e January 2024, IAW column g January 2035 or 10,095.5 total time whichever occurs first. Column f N/A, no multi segment v-band clamps installed.
- 12) Comply with AD 96-12-22, to prevent loss of engine oil due to loose filter adapter (recurring). Affected oil filter adapter not installed.
- 13) Comply with AD 2022-16-03, improperly lubricated magnetos. N/A by serial number. Affected magnetos not installed.
- 14) Comply with AD 2016-16-12. AD applies only to cylinder #6. Cylinder replacement required at 1115.8 TSO or 2352.5 on the aircraft Hobbs.
- 15) Comply with AD 2009-19-07C2, superior air parts cylinders (recurring). N/A, affected cylinders not installed.
- 16) Comply with AD 2009-16-03, prevent separation of the cylinder head (recurring). Previously complied with.
- 17) Comply With AD 97-26-17, to prevent crankshaft failure. Previously complied with.
- 18) Comply With AD 93-08-17, oil pickup tube. Complied with at overhaul.
- 19) #2 engine cylinder #1 exhaust studs broken off. Removed #1 cyl on #2 engine and sent for repair (Sal's) Ref EMM 72-10. Installed #1 cylinder on the #2 engine, torqued all the cylinder nuts. Reconnected fuel lines, baffles, panels, temp probs, intake manifold tube, bottom spark plug and wire and engine lines. Ops and leak check satisfactory during engine runs.

I certify that this engine has been inspected in accordance with an **ANNUAL Inspection** and has been determined to be airworthy.

[Handwritten Signature]

Charles Donley AP 3073534 IA

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7929 Karl May Dr.
Waco, Texas 76708
CRS No. AK6R541N

Engine TT: 4884.1
 Engine SMOH: 1117.6 (10/02)
 Prop SMOH: 40.5 (1/23)
 Hour Meter: 2354.9
 Date: 02/01/2024

Continental TSIO-520-NB RAM SIV S/N R-503355

On above referenced engine, removed all cowling for 100 Hour/Annual Inspection. Cleaned and gapped plugs. Drained oil, installed new oil filter, and refilled engine with Phillips XC 20W-50 oil. Checked magneto timing. Inspected plug harness and all engine electrical. Checked all engine controls for movement and attach points. Inspected intake and exhaust system, condition and integrity of all engine accessories. Inspected engine mounts, all baffles and cowling. Inspected prop, spinner, and bulkhead. Inspected all fuel, oil, and hydraulic lines and fittings. Ran compression check and readings were: #1) 60/80, #2) 65/80, #3) 70/80, #4) 76/80, #5) 65/80, and #6) 79/80. Installed new lifters, P/N's SA646277 and SA628488. Installed overhauled cylinder assembly, P/N CL71.4-231-OH, S/N 82598-09. (See tag.) Repaired prop deice wiring. Installed new exhaust elbow clamps, P/N N111000897-20. C/W A.D. 2000-01-16 per para's (b), (c), (d) and (e). (Paragraph (b) next due at 2404.9 H.M.) Cleaned induction air filter. Installed serviceable turbocharger, P/N 407810-9001 S/N YK033307. Resealed fuel control unit. Performed set-up of systems per service manual and RAM Specs. A.D.'s researched through bi-weekly 2024-01. Above work done in accordance with Continental and Cessna 414 Service Manuals and Air Impressions, Inc. 100 Hour/Annual Checklist. Engine ground run-up leak checked good and approved for return to service. Pertinent details are on file under work order 5815.

[Signature]
 Air Impressions, Inc.
 CRS# AK6R541N


AIR IMPRESSIONS, INC.
 PROFESSIONAL AIRCRAFT SERVICE
 7929 Karl May Dr.
 Waco, Texas 76708
 CRS No. AK6R541N

I certify this Engine has been inspected in accordance with a 100 HR. Inspection and has been determined to be in an airworthy condition.
 DATE 02/01/2024 TACH 2354.9
 ENGINE SMOH 1117.6 (10/02)
 ENGINE TT 4884.1
 WORK ORDER #5815
 SIGNED *[Signature]*
 AIR IMPRESSIONS, INC
 REPAIR STATION # AK6R541N

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