



# Millennium Engine

## ENGINE MAINTENANCE RECORDS

Log No. 1

Aircraft Registration No. N1454M

Engine Manufacturer Continental

Model TSIO-520-RC

Serial No. 269781-R

Date installed on aircraft 4 August 2004

Time Between Overhauls (TBO) 1400.0

If used on multi-engine aircraft:


RIGHT

LEFT

FRONT

REAR



DATE	TACH OR RECORDING METER TIME	DESCRIPTION OF WORK PERFORMED SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK
		<div style="display: flex; justify-content: space-between;"> <div data-bbox="284 199 828 357">  <p><b>WESTERN Skyways</b> INC. GOLD SEAL AIRCRAFT ENGINES 21 Creative Place Montrose, CO 81401 CRS # WS9R575J</p> </div> <div data-bbox="876 210 1331 441"> <p>Aircraft Model: Cessna TU206E Serial Number: U20601454      Reg: N1454M Tach: 2165.09      TTAF: 2165.09 TTE: 1828.3      TSMOH: 0.0 Work Order: H2177      Date: 8/4/2004</p> </div> </div> <p>Removed engine TSIO-520-C, serial number 178449-R. Installed engine TSIO-520-RcC, serial number 269781-R. Installed new turbocharger outlet check valve part number S2361-1. Installed Cessna oil filter adapter part number 1250922-1. Complied with service bulletin SEB93-1R1 on oil filter adapter. Installed new Lord engine mounts part numbers: 2 each J12453-2, and 2 each J12453-1. Installed new engine compartment drain tubes. Installed new mixture cable part number C299507-0101. Installed new control cable rod ends part numbers S1104-3. Repaired and reinstalled forward left baffle. Installed new alternator belt part number S2416.131.0. Installed new alternator shock mount bushings part numbers 4 each J9534-20 and 1 each J2005.2. Installed new Reiff Hot Strip oil sump heater part number HSS. Installed Knisley Welding, Inc exhaust system per STC SA5010NM, STC SE5009NM, M-2-1 installation instructions, and Cessna 206 Maintenance manual section 12A-98. See 337 form this date. Runup, leak checks good. Adjusted fuel system per Continental SID 97-3B. All work done in accordance with Cessna 206 maintenance manual.</p> <p><b>Complied with AD76-07-12</b>, Bendix Ignition Switches, by functional check of ignition switch. Next due at 2265.09 Tach time. <b>Complied with AD71-09-07 R1</b>, Cessna, by pressure check of exhaust system. Next due at 2265.09 Tach time. <b>Complied with AD96-12-22</b>, Cessna Aircraft Company, by installation of serviceable oil filter adapter part number 1250922-1. Installed torque putty. Next due at oil filter removal or 2265.09 Tach time.</p> <p>Signed: <u>Ryan Dickerson</u> Ryan Dickerson Airframe and Powerplant 2670501</p>
10/13/04	tach = 2189.1	<p>changed oil &amp; filter 1ea ch48110 oil filter &amp; added 12 qts of 40wt aevo shell to sump. Replaced #4 cyl EGT probe 1ea PRB-2870. Run-up was satisfactory. -END-</p> <p style="text-align: right;"><u>Greg J Boom</u> IA 524118405</p>
4Mar2005	2207.2	<p>Completed annual/ 100 hour inspection IAW FAR 43 app. D. No oil change at this time. Remainder of Millennium Engine 25 hour scheduled maintenance completed. Oil consumption: 0.25 qt. per 18.1 hrs. No discrepancies noted. Compression check: #1. 70/80 #2. 74/80 #3. 76/80 #4. 74/80 #5. 74/80 #6. 78/80. Cleaned spark plugs, replaced Brackett induction air filter element, 1ea. BA 2405. Run-up and test flight satisfactory. Engine meets performance criteria specified in Millennium Engine 50 hr. sched. maint. checklist, step 1. I certify that this engine has been inspected IAW an annual/100 hour inspection and was determined to be in airworthy condition.</p> <p style="text-align: center;">Mountain Air Aviation, Inc. KBJC 303 469 1380</p> <p style="text-align: right;"><u>Greg J Boom</u> Greg J. Boom IA 524118405</p>
4/17/2005	2220.5	<p>Removed, cut and inspected engine oil filter, no debris found. Drained engine oil and re serviced with 11 qts Arasshell 15W-50 oil. Complied with Millennium 50 hr inspection and mailed card to Superior. Test run and leak checked. Returned to service. <u>Carey Smith 441900459 ATP</u></p>

DATE	TACH OR RECORDING METER TIME	DESCRIPTION OF WORK PERFORMED SIGNATURE & CERTIFICATE NO. OF PERSON PERFORMING WORK
6/8/2005	2229.1 Tach	Installed new CHT Probe PN S 2334-3 in factory location. Returned to service. Casey Smith 441900459 ATP _____
7/1/2005	2243.7 Tach	Drained oil - took samples. Removed & cut filter. - No debris. Installed new Champion CH48110-1 filter & serviced w/ 11 qts AS 15W-50 oil. Leak check good. Returned to service. Casey Smith 441900459 ATP _____
10/26/2005	2264.4 Tach	Drained oil - took samples. Removed & cut filter. Debris found was consistent with "Titeseal" and was sent to Eric Barker at Western Skyways (800) 575-9929. Installed CH48110-1 filter & serviced with 11 qts AS 15W-15 oil. Check engine. Leak check good. Casey Smith 441900459 ATP _____
10/24/2005	2264.4 Tach	c/w 96-12-22 AD by inspecting oil filter adapter. Next due in 100 hrs or oil filter removal. Casey Smith 441900459 ATP _____
4/4/2006	2300.7 Tach	135.6 SMOH. Drained oil. Serviced w/ 11 qts of Shell 15W-50. Removed & cut filter. Debris consistent w/ that found on 10/26/2006 but 1/10 quantity. Suggest monitor. Installed Champion CH48110-1 filter. Removed, cleaned, & gapped plugs. Checked timing. Compression as follows. #1 68/80, #2 71/80, #3 74/80, #4 74/80, #5 64/80, #6 74/80. Repaired intake pipe between turbo & fuel inj. unit by welding. Installed new rubber hoses PN 1250929-5(2). Took oil samples. CW AD 96-12-22 by inspecting torque putty on oil filter adapter. Run-up & leak check satisfactory. I certify this engine has been inspected in accordance with a 100 hr / Millennium 100 hr inspection and has been found to be in an air-worthy condition. Casey Smith 441900459 ATP _____
6/7/2006	2320.1 Tach	Installed Insight Instruments CHT adapter probe to use in conjunction w/ Cessna factory probe installed in Cyl #6. CHT Probe adapter PN 2856, SN 7303 was installed and checked. Returned to service. Casey Smith 441900459 ATP _____



# BLACKSTONE

## LABORATORIES

P.O. NUMBER CC: MC  
 CODE: 35/6909/37

UNIT NUMBER N1454M  
 REPORT DATE: 11/28/06  
 LAB NUMBER: C90546

### OIL REPORT

<b>CLIENT</b>	CONTACT: RUSSELL NOBLE	PHONE: (580) 226-4477
	NAME: SAMEDAN OIL CORP	FAX: (580) 223-3173
	ADDRESS: 1327 LAKE MURRAY DR.	E-MAIL: rnoble@brightok.net
	ARDMORE, OK 73401	

<b>UNIT</b>	EQUIPMENT MAKE: Continental	OIL USE INTERVAL: 23 Hours
	EQUIPMENT MODEL: TSIO-520-RC	OIL TYPE & GRADE: Aeroshell 15W/50
	FUEL TYPE: Gasoline (Leaded)	MAKE-UP OIL ADDED:
	ADDITIONAL INFO: TU206E; S/N 269781-R	

**COMMENTS** RUSSELL: Very little has changed since the last sample from this TSIO-520. All wear continues to read well within the average range for this type of engine, which, along with the steady wear trend, is a very good indication of normally wearing parts and careful operation. Aluminum has made a nice recovery from the quite high levels found earlier when the engine was new. We found nothing from our test data that would suggest any kind of mechanical problem at 213.8 engine hours. This has become a very nice wearing TCM engine.

<b>ELEMENTS IN PARTS PER MILLION</b>	MI/HR ON OIL	23	UNIT /	55	36	21	23	31	<b>UNIVERSAL AVERAGES</b>
	MI/HR ON UNIT	214	LOCATION	190	136	99	79	56	
	SAMPLE DATE	11/15/06	AVERAGES	08/02/06	03/30/06	10/26/05	07/01/05	04/17/05	
ALUMINUM	9	15	8	13	23	22	17	15	
CHROMIUM	16	31	13	25	46	54	33	28	
IRON	39	49	34	38	60	58	64	52	
COPPER	5	8	4	6	9	11	13	7	
LEAD	6105	5471	7307	5512	4873	4341	4688	5441	
TIN	2	4	3	2	1	7	9	3	
MOLYBDENUM	5	8	5	6	9	11	12	7	
NICKEL	6	6	4	5	7	7	9	9	
MANGANESE	0	0	0	1	0	1	0	1	
SILVER	0	0	0	0	0	0	0	0	
TITANIUM	0	0	0	0	0	0	0	0	
POTASSIUM	0	0	0	0	0	0	0	0	
BORON	0	0	0	0	0	0	0	0	
SILICON	9	12	10	10	13	13	14	11	
SODIUM	0	1	0	1	2	2	2	1	
CALCIUM	3	3	1	2	9	2	1	4	
MAGNESIUM	0	1	0	0	2	2	0	1	
PHOSPHORUS	1161	823	802	988	1161	823	0	913	
ZINC	1	3	3	2	6	4	3	4	
BARIUM	0	0	0	0	0	1	0	0	

<b>PROPERTIES</b>	TEST	cST VISCOSITY @ 40 °C	SUS VISCOSITY @ 100 °F	VISCOSITY INDEX	cST VISCOSITY @ 100 °C	SUS VISCOSITY @ 210 °F	FLASHPOINT IN °F	FUEL %	ANTIFREEZE %	WATER %	INSOLUBLES %
	VALUES SHOULD BE					82-105	>440	<1.0		<0.1	<0.6
	TESTED VALUES WERE					87.7	470	<0.5	-	0.0	0.4