

RAM

AIRCRAFT CORPORATION

ENGINE MAINTENANCE RECORDS

Aircraft Registration

N 789WP

Engine Position

#2

Engine Serial No.

R-519303



ENGINE MAINTENANCE RECORDS

Log No. _____

Aircraft Registration No. N 789UP

Engine Manufacturer TCM

Model TSIO-520-NB

Serial No. R-519303

Date installed on aircraft _____

Time Between Overhauls (TBO) 1600 Hours

If used on multi-engine aircraft:

Right Left



Waco Regional Airport

Engine Previous Total:	2855.1
Since Remanufacture:	00.0
Date:	7/10/96

SERIES IV TCM TSIO-520-NB S/N R-519303

Above referenced engine remanufactured to new parts limits to conform w/TCM SM X-30574A. 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 dated 10/16/95. Installed new RAM Camshaft p/n 1058-3SL, s/n L95074 per STC SE4327SW, Rev. 3. Installed heavy style case p/n 642507 with new channel chrome cylinders. Cylinders modified to RAM p/n 1158-2 per STC SE3631SW. Crankcase modified to RAM p/n 1157-18 per STC SE3630SW. Cylinder hold-down nuts replaced and torqued per Overhaul Manual Supplement. Engine accessories exchanged for remanufactured units with exception of vacuum pump and propeller governor which were not installed per this work order. New Slick pressurized magnetos p/n 6320 installed per STC SE4651SW and pressurized. See 337. SB94-8 on magneto timing procedure c/w per timing to data plate TC or STC degree requirements with TDC locator and protractor with pointer. AD 86-13-04 R3 was complied with and found N/A per cylinder p/n. Installed modified connecting rods p/n 1162-1 with bearing p/n 630826 per STC SE4327SW as FAA-PMA approved replacement. Installed RAM/FAA/PMA rocker arms p/n 1158-4 and -5. (single-piece bushing). Cadmium plating of engine hardware and associated lines and fittings per QQ-P-416C Class 2, Type II. AD 93-08-17 not applicable to TSIO-520-NB. AD 78-06-01 c/w previously per new intake tube p/n 642590. AD 79-05-09 c/w previously per current design plunger assy. Replaced at this time with new assy. C/W AD 89-24-01 R1 per installation of starter adapter p/n 642085A11 with current scavenge pump gears. Service Bulletin compliance through SB96-3 in RAM Manual. AD 76-02-07 n/a per installation of Teledyne Crittender alternator. AD 87-23-08 is n/a per crankshaft p/n. TCM SB 92-16 n/a per TSIO-520"B" series crankshaft. Above referenced engine was made eligible for 1600 hr. TBO per TCM M91-08 Note 3. AD 88-03-06 is n/a per oil filter installed this date. AD 91-19-03 is n/a per code date of Champion oil filter p/n CH48108 or CH48109. All aluminum alloy engine parts were coated per RAM Specification No. 1142. Crankshaft assy., connecting rods, pistons, piston pins, alternator rotor and turbocharger wheel assembly were balanced per RAM Specification No. 1161. See RAM Certificate. Installed spring loaded induction clamps p/n 1170-2 per STC SE3632SW. Installed RAM-FAA-PMA rocker box cover gaskets p/n 1387-1. Cylinders flowed per RAM Cylinder Flowing Specification No. 1242. C/W AD 93-16-15 per TCM SB M94-9 R1 installation of fuel pump drive coupling p/n 653359. AD 93-10-02 (MSB 93-12) N/A per non-assembly new cylinder purchase and channel chrome. Engine ground run on test stand per RAM Specifications for three hours. Engine run-in with Phillips 20W-50 Type M mineral oil. RAM recommends 25 hours operation before next oil change. See RAM Recommended Oil Grade Maintenance Tip MT-1 for recommended oils. Do not use Mobil AV-1. Engine approved for return to service for installation and RAM Aircraft test flight procedures. Pertinent details on file under Work Order No. 2303/BB044.

RAM Aircraft Corporation, [redacted], 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
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7-20-96 HOBBS TIME 2774.0 COMPLIANT WITH ANNUAL INSPECTION PER CESSNA INSPECTION CHECK SHEETS. INSTALLED THIS ENGINE IN N789UP C-414A SET FUEL FLOWS PER RAM SPECS. LEAK CHECK AND TEST RUN GOOD. INSTALLED NEW ENGINE MOUNTS AND BOLTS AT INSTALLATION. 12 qts 20W50 PROCEEDS

MAINTENANCE RELEASE

The component identified was repaired and inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details of the repairs are on file at this repair station under Work Order 1154
 Date 7/20/96 Signed [Redacted]
 Crystal Shamrock, Inc. [Redacted] Mpls., MN 55429

I CERTIFY THAT THIS Engine HAS BEEN INSPECTED IN ACCORDANCE WITH A ANNUAL INSPECTION AND WAS FOUND TO BE IN AN AIRWORTHY CONDITION

7-25-96 HOBBS TIME 2779 REPLACED ENGINE DRIVEN FUEL PUMP PART #632818-11A5 S#C128101RB OPS CHECK GOOD. RESET MIXTURE AND IDLE. MAX TAKE OFF AT 206 GPH.

MAINTENANCE RELEASE

The component identified was repaired and inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details of the repairs are on file at this repair station under Work Order 1172
 Date 7-25-96 Signed [Redacted] for [Redacted]
 Crystal Shamrock, Inc. [Redacted] Mpls., MN 55429

8/21/96 2800.9 HOURS HOBBS. CHANGED OIL AND FILTER REFILLED WITH 12 QTS. ACROSHELL 50 AD OIL. OPS CHECK SATISFACTORY.

MAINTENANCE RELEASE


The component identified was repaired and inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details of the repairs are on file at this repair station under Work Order 1196
 Date 8/21/96 Signed [Redacted]
 Crystal Shamrock, Inc. [Redacted] Mpls., MN 55429

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2-22-00	HOBBS	346.5 HRS.		REPLACED ROCKERS ARM BUSHINGS AND SHAFTS AND INSTALLED NEW LEAFERS, INSTALLED NEW GRAPES AS NAWORD, CHANGED OIL AND FELTER, INSTALLED 10 gts 40 WT AD SHELL, RANCOZ #1 CYLINDER, INSTALLED NEW RINGS AND CLEANED UP CYLINDER AND CLEANED GRAPES AND TESTED SPARK PLUGS. LEAK CHECKED good.
MAINTENANCE RELEASE				
The component identified was repaired and inspected in accordance with the regulations of the Federal Aviation Administration and is approved for return to service. Details of the repairs are on file at the location under Work Order 13772				
Done 2-22-00	Signed	[Redacted Signature]		
Crystal Shamrock, Inc. [Redacted] Mpls, MN 55429				
4-18-00	HOBBS	386.2 HRS		CHANGED OIL AND FELTER, INSTALLED 10 gts 50 WT AD SHELL. LEAK AND FELTER CHECKED good. SBT Buy one Fuse Flaws.
MAINTENANCE RELEASE				
The component identified was repaired and inspected in accordance with the regulations of the Federal Aviation Administration and is approved for return to service. Details of the repairs are on file at the location under Work Order 14122				
Done 4-18-00	Signed	[Redacted Signature]		
Crystal Shamrock, Inc. [Redacted] Mpls, MN 55429				
6-13-00	HOBBS	411.7 HRS	TSMOH "0"	ENGINE TOTAL TIME 3908.6 HRS
REMOVED AND REINSTALLED BUYER AFTER OVERHAUL. INSTALLED REPLACEMENT CRANK CASE FROM DEVELCO S# H249011 ALL INSTALLED ALL NEW CYLINDERS (MECHANIZUM) FROM SUPERIOR. SEE W.O. # 14175 FOR DETAILED PARTS LIST. ACCESSORIES NOT OVERHAUL AT THIS TIME. ALL STEEL PARTS MAGNADIZED ALL NON FERROUS PARTS ZYGLOD. INSTALLED 13 gts 50 WT NON DETERGENT SHELL. AD NOTES CHECKED THRU 2000-08-51.				
LEAK AND OPS CHECKED good.				
MAINTENANCE RELEASE				
The component identified was repaired and inspected in accordance with the regulations of the Federal Aviation Administration and is approved for return to service. Details of the repairs are on file at the location under Work Order 14175				
Done 6-13-00	Signed	[Redacted Signature]		
Crystal Shamrock, Inc. [Redacted] Mpls, MN 55429				

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7-24-00		HOBBS 450.4 HRS		CHANGED OIL AND FUEL INSTALLED 10 qts 50 WT AO SHELL. LUBR AND FUEL CHECK GOOD. RE-INSTALLING NEW FUEL PUMP S# B 209101BR.
MAINTENANCE RELEASE				
The component identified was repaired and inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Particular details of the repairs are on file at this repair station under Work Order 14319				
Date 7-24-00 Signed [Redacted] Crystal Shamrock, Inc. [Redacted] Mpls., MN 55429				
8-29-00		HOBBS 489.7 HRS		CHANGED OIL + FUEL, INSTALLED 10 qts 50WT AO SHELL LUBR AND FUEL CHECK GOOD.
MAINTENANCE RELEASE				
The component identified was repaired and inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Particular details of the repairs are on file at this repair station under Work Order 14438				
Date 8-29-00 Signed [Redacted] Crystal Shamrock, Inc. [Redacted] Mpls., MN 55429				
 EXECUTIVE AIR TAXI CORP. P.O. BOX 2273 • MUNICIPAL AIRPORT BISMARCK, ND 58502				
10-12-00 Hobbs 530.6 N789UP Changed oil + fuel 100W - Collected oil sample - (NW Part (b)) of AD 2000-01-16 eff 1-5-2000 - DIE each 50HR				
Executive Air Taxi Corp. Maintenance Release-Repair Sta#CTYRO190				
The aircraft, and/or component identified above was inspected and/or repaired IAW Current FAR's and is found to be in an airworthy condition, with respect to the work performed and is approved for return to service.				
Details are on file on WO# 17025 10-12-00 Date				
Sign [Redacted]				

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11-10-00	HOBBS	551.7 HRS.		COMPLYING WITH ANNUAL INSPECTION OIL CHANGE INSPECTION GUDGEON SHAKES. CHANGED OIL AND FELTAC INSULATION 10 qts 50 WT AD SHELL. COMPRESSOR CHECK #1 70/160 #2 70/180 #3 70/180 #4 70/180 #5 75/180 #6 76/180 CLEANED GAPERS AND TASTER SPARK PLUGS. REPLACED ONE SPARK PLUG. CLEANED FUEL INJECTORS AND INSTALLED NEW O-RINGS. REMOVED TRIMMY AND HARNESS A.D. NUTS CHECKED THERM 8000-08-51E LIAR AND FUELER CHECK GOOD.

MAINTENANCE RELEASE

The component identified was repaired and inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details of the repairs are on file at this repair station under Work Order 14584

I CERTIFY THAT THIS Engine HAS BEEN INSPECTED IN ACCORDANCE WITH AN ANNUAL INSPECTION AND WAS FOUND TO BE IN AN AIRWORTHY CONDITION

Date 11-10-00 Signed [Signature] Crystal Shamrock, Inc. [Signature] Mpls., MN 55429

12-15-00	HOBBS	582.4 HRS.		CHANGING OIL AND FELTAC, INSTALLING 11 qts 40 WT AD SHELL. LIAR AND FELTAC CHECK GOOD. MOUSE MEXICAN WASTE GATES.
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MAINTENANCE RELEASE

The component identified was repaired and inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details of the repairs are on file at this repair station under Work Order 14645

Date 12-15-00 Signed [Signature] Crystal Shamrock, Inc. [Signature] Mpls., MN 55429

1-15-01	HOBBS	623.1 HRS.		CHANGING OIL AND FELTAC, INSTALLING 11 qts 40 WT AD SHELL. LIAR AND FELTAC CHECK GOOD.
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MAINTENANCE RELEASE

The component identified was repaired and inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details of the repairs are on file at this repair station under Work Order 14658

Date 1-15-01 Signed [Signature] Crystal Shamrock, Inc. [Signature] Mpls., MN 55429

2-8-01	HOBBS	655.7 HRS.		CHANGING OIL AND FELTAC, INSTALLING 40 WT A.D. SHELL. LIAR CHECKED GOOD.
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MAINTENANCE RELEASE

The component identified was repaired and inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details of the repairs are on file at this repair station under Work Order 14765

Date 2-8-01 Signed [Signature] Crystal Shamrock, Inc. [Signature] Mpls., MN 55429

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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5-4-01	HO3BS	685.0 HRS.		CHANGED OIL AND FILTER, INSTALLED 12 qts 50 WT AD SHAL. LEAK AND FILTER CHECK GOOD.
				<p align="center">MAINTENANCE RELEASE</p> <p>The component identified was repaired and inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details of the repairs are on file at this repair station under Work Order <u>14845</u></p> <p>Date <u>5-4-01</u> Signed _____ Crystal Shamrock, Inc. _____ Mpls., MN 55429</p>
7-10-01	HO3BS	730.2 HRS.		CHANGED OIL AND FILTER, INSTALLED 10 qts 50 WT AD SHAL. LEAK AND FILTER CHECK GOOD.
				<p align="center">MAINTENANCE RELEASE</p> <p>The component identified was repaired and inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details of the repairs are on file at this repair station under Work Order <u>14885</u></p> <p>Date <u>7-10-01</u> Signed _____ Crystal Shamrock, Inc. _____ Mpls., MN 55429</p>
9-5-01	HO3BS	770.3 HRS.		CHANGED OIL AND FILTER, INSTALLED 12 qts 50 WT AD SHAL. LEAK AND FILTER CHECK GOOD.
				<p align="center">MAINTENANCE RELEASE</p> <p>The component identified was repaired and inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details of the repairs are on file at this repair station under Work Order <u>15127</u></p> <p>Date <u>9-5-01</u> Signed _____ Crystal Shamrock, Inc. _____ Mpls., MN 55429</p>
10-24-01	HO3BS	845.5		CHANGED OIL AND FILTER, INSTALLED 12 qts 50 WT AD SHAL. LEAK AND FILTER CHECK GOOD.
				<p align="center">MAINTENANCE RELEASE</p> <p>The component identified was repaired and inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details of the repairs are on file at this repair station under Work Order <u>01-15246</u></p> <p>Date <u>10-24-01</u> Signed _____ Crystal Shamrock, Inc. _____ Mpls., MN 55429</p>
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12-5-01	864.6	HOBBS	TSMON 452.9	HRS. COMP-220 W/RT ANNUAL INSPECTION PER CESSNA INSPECTION GUIDE SHEETS. CHANGED OIL AND FILTER, INSTALLED 11 qts 40 WT AO SHOCK. COMPRESSED CIRCUIT #1 ⁶⁴ / ₈₀ #2 ⁶⁰ / ₈₀ #3 ⁶⁶ / ₈₀ #4 ⁶⁴ / ₈₀ #5 ⁶⁴ / ₈₀ #6 ⁶⁴ / ₈₀ (COLD) CLEANED CARBURETTORS AND TESTED SPARK PLUGS. CHECKED TENSION AND HARNESS. REPLACED FRONT CRANKSHAFT SCREW. SET TENSION TO 21" ON LEFT AND RIGHT MAGS. SECURED RIGHT MAGS TO CAB AIRSOX CLAMP. LBAE AND FUEL CHUCK GOOD. A.D. NOTES CHECKED TO DATE.

CERTIFY THAT THIS Engine
HAS BEEN INSPECTED IN ACCORDANCE
WITH A ANNUAL **INSPECTION AND WAS**
FOUND TO BE IN AN AIRWORTHY CONDITION

MAINTENANCE RELEASE
 The component identified was repaired and inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details of the repairs are on file at this repair station under Work Order 1-15286
 Date 12-5-01 Signed [Signature]
 Crystal Shamrock, Inc. [Signature] Mpls, MN 55426

1-25-02 HOBBS 901.9 HRS CHANGED OIL AND FILTER INSTALLED 10 qts 40 WT AO SHOCK. LBAE AND FUEL CHUCK GOOD.

MAINTENANCE RELEASE
 The component identified was repaired and inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details of the repairs are on file at this repair station under Work Order 1-15286
 Date 1-25-02 Signed [Signature]
 Crystal Shamrock, Inc. [Signature] Mpls, MN 55426

3-1-02 HOBBS 929.6 HRS. REPLACED LEFT MAGNETO WITH NEW, MOO 6320 S# 97091106

MAINTENANCE RELEASE
 The component identified was repaired and inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details of the repairs are on file at this repair station under Work Order 1-15452
 Date 3-1-02 Signed [Signature]
 Crystal Shamrock, Inc. 8000 Douglas Drive N.E., Mpls, MN 55426

3-6-02 HOBBS 934.8 HRS. CHANGED OIL AND FILTER INSTALLED 10 qts 50WT AO SHOCK. REPLACED RT MAGS RT MAGS. PN 6320

MAINTENANCE RELEASE
 The component identified was repaired and inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details of the repairs are on file at this repair station under Work Order 1-15724
 Date 3-6-02 Signed [Signature]
 Crystal Shamrock, Inc. [Signature] Mpls, MN 55426

S# 97061911 / CRANKS RT PARTIALLY O-KAY FOR REINSTALLATION.
 REWORKED #4 AND #6 PUSH ROD TUBES
 REPLACED OIL COOLING S# 3.552
 STRAPPED S# 3.552

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3-15-02	HOBS	938.8 HRS.		<p>Replaced right canopy base Assy MAINTENANCE RELEASE The component identified was repaired and inspected in accordance with current regulations of the Federal Aviation Administration and is approved for return to service. Pertinent details of the repairs are on file at this repair station under Work Order</p> <p>Date 3-15-02 Signed [Redacted] 02-15467 Crystal Shamrock, Inc. 4000 Douglas Lake Dr., Maple, MN 55485</p>
3-15-02	45-048-52X		S# 4068	
4-17-02	HOBS	975.8 HRS.		<p>SRT OIL PRESSURE DOWN 1 TURN. Replaced fuel pump mount bracket. MAINTENANCE RELEASE THE COMPONENT IDENTIFIED WAS REPAIRED AND INSPECTED IN ACCORDANCE WITH CURRENT REGULATIONS OF THE F.A.A. AND IS APPROVED FOR RETURN TO SERVICE. PERTINENT DETAILS OF THE REPAIRS ARE ON FILE AT THIS REPAIR STATION UNDER W.O. 02-15529 DATE 4-17-02 SIGNED [Redacted] CRYSTAL SHAMROCK, INC. [Redacted] CRYSTAL, MN 55429</p>
4-23-02	HOBS	978.3 HRS.		<p>Changed oil and filter, 200000 10 ft SRT AD SHALL SRT Fuel flows for right engine. MAINTENANCE RELEASE THE COMPONENT IDENTIFIED WAS REPAIRED AND INSPECTED IN ACCORDANCE WITH CURRENT REGULATIONS OF THE F.A.A. AND IS APPROVED FOR RETURN TO SERVICE. PERTINENT DETAILS OF THE REPAIRS ARE ON FILE AT THIS REPAIR STATION UNDER W.O. 02-15545 DATE 4-23-02 SIGNED [Redacted] CRYSTAL SHAMROCK, INC. [Redacted] CRYSTAL MN 55429</p>
6-07-02	HOBS	1026.7 HRS.		<p>Changed oil and filter 200000 10 ft SRT AD SHALL, LAMP AND FENTAL CHECK GOOD. MAINTENANCE RELEASE THE COMPONENT IDENTIFIED WAS REPAIRED AND INSPECTED IN ACCORDANCE WITH CURRENT REGULATIONS OF THE F.A.A. AND IS APPROVED FOR RETURN TO SERVICE. PERTINENT DETAILS OF THE REPAIRS ARE ON FILE AT THIS REPAIR STATION UNDER W.O. 02-15659 DATE 6-27-02 SIGNED [Redacted] CRYSTAL SHAMROCK, INC. [Redacted] CRYSTAL MN 55429</p>
9-16-02	HOBS	1074.1		<p>Changed oil and filter, 200000 10 ft RT SHALL, LAMP AND FENTAL CHECK GOOD. MAINTENANCE RELEASE THE COMPONENT IDENTIFIED WAS REPAIRED AND INSPECTED IN ACCORDANCE WITH CURRENT REGULATIONS OF THE F.A.A. AND IS APPROVED FOR RETURN TO SERVICE. PERTINENT DETAILS OF THE REPAIRS ARE ON FILE AT THIS REPAIR STATION UNDER W.O. 02-15801 DATE 9-16-02 SIGNED [Redacted] CRYSTAL SHAMROCK, INC. [Redacted] CRYSTAL MN 55429</p>
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				Reg # N789UP A/C TT 7530.8 RIGHT ENGINE TSMO: 840.5 Date: 01-21-2004 WO # 644 A/C TT: 7530.8 Tach: 1252.2
				I certify that this aircraft engine has been inspected in accordance with an ANNUAL inspection and has been found airworthy. Details on file at this agency under the work order number listed above.
				1. Engine inspected using Cessna 414A maintenance manual 100hr checklist and the scope and detail of FAR-43APP - (d) as guides.
				2. Run engine to operating temperatures, Drain oil, take oil sample, cut filter and inspect, de-grease engine.
				3. Compression checks #1 60/80 #2 62/80 #3 67/80 #4 66/80 #5 60/80 #6 68/80.
				4. Installed harness kit M2381 for left and right magnetos.
				5. Installed (12) new champion spark plugs RHB32E.
				6. Cleaned injectors, replaced all o-rings and seals on install.
				7. Replace cht probe for ships gauge checks airworthy.
				8. Installed new induction airfilter. PN#9913001-1.
				9. Installed new fuel and oil hoses.
				10. Replaced crankshaft seal due to oil leak.
				11. Replace vacuum pump due to time installed 442CW S/N 26090
				12. Applicable Airworthiness Directives complied with.
				13. Fill engine with 12qts 20w-50w exxon elite oil. Install new oil filter CH48109.
				14. Replaced outboard exhaust bracket PN#5650118-3 due to shear.
				15. Installed new clamps (no-life limit) on exhaust (y) section.
				16. Run engine, operational checks airworthy.
				BERNARD PAQUETTE [REDACTED] U.S. FLIGHT SERVICES



DATE: 3/1/04
INV: 731

RIGHT ENGINE
N789UP

HOBBS:
SMOH:

1. PILOT REPORTS RIGHT ENGINE INOP AT 21000FT WITH FUEL BOOST PUMP OFF.
2. TIGHTENED LOOSE FITTING AND CHAFFED UPPER DECK LINE, REPLACED.
3. C/W TELEDYNE CONTINENTAL SID-97-3 UNMETERED FUEL PRESSURE.
4. ADJUSTED LOW END TO 5-8PSI WAS (8.5PSI).
5. HIGH SIDE IN RANGE 33PSI.
6. RUN ENGINE, OPERATIONAL CHECKS AIRWORTHY, TEST FLIGHT AIRWORTHY.
7. BERNARD PAQUETTE [REDACTED]



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DATE: 7/23/04
INV: 890

RIGHT ENGINE
N789UP

HOBBS: 1304.1
TSMOH: 892.4

1. COMPLY WITH **50HR** INSPECTION PER CESSNA PROGRESSIVE CARE PROGRAM **OPERATION #1**.
2. COMPRESSION CK #1 64/80 #2 64/80 #3 67/80 #4 64/80 #5 60/80 #6 66/80.
3. REMOVED PROPELLER, INSTALLED NEW CRANKSHAFT SEAL PN# 641250, DUE TO OIL LEAK, INSTALL PROPELLER AND TORQUE PER CESSNA 414A MAINT MANUAL.
4. DRAINED OIL, REMOVE FILTER AND CUT FOR INSPECTION, CKS AIRWORTHY.
5. INSTALL NEW OIL FILTER CH48109-1, FILL ENGINE 12QTS EXXON ELITE 20W-50W OIL.
6. REMOVE FUEL INJECTOR NOZZLES AND CLEAN, REPLACE O-RINGS, INSTALL.
7. ADS CHECKED THRU 7/04
8. RUN ENGINE, OPERATIONAL CKS AIRWORTHY. [REDACTED]
9. BERNARD PAQUETTE [REDACTED]

Date: 10/27/04 136 Tower Rd. Hobbs: 1321.0
Westchester County Airport
White Plains NY 10604
WO:1015

1. RIGHT ENGINE NOT DEVELOPING FULL POWER AT ALTITUDE
2. PERFORMED COMPRESSION CHECK. CHECKS GOOD #1-60/80 #2-59/80 #3-65/80 #4-68/80 #5-60/80 #6-74/80. MASTER ORIFICE READS 50/80
3. INSPECTED INTAKE AND FOUND ELBOW TORN BADLY.
4. REMOVED AND REPLACED ELBOW WITH RAM P/N 1111-1.
5. OPERATIONAL CHECKS GOOD.

[REDACTED]
TRAVIS STEINMETZ [REDACTED]

Date: 1/14//05 136 Tower Rd. Hobbs. 1332.6
Westchester County Airport
White Plains NY 10604
WO:1096 / 4

1. *Installed* Replaced tachometer, p/n-C668016-0101, s/n-2686.
2. Replaced right engine tachometer generator, p/n-EM800RX, s/n-5216

[REDACTED]
Michael Pagni [REDACTED]

U.S. Flight Services

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



DATE: 2/14/05
INV: 43

RIGHT ENGINE
N789UP

HOBBS: 1345.4
TSMO: 1418.7
933.7

1. COMPLY WITH INSPECTION PER CESSNA PROGRESSIVE CARE INSPECTION PROGRAM
OPERATION #1 #2 #3 #4, AND ANNUAL INSPECTION.
2. COMPRESSION CK #1 64/80 #2 46/80 #3 66/80 #4 58/80 #5 58/80 #6 66/80
3. REMOVED FUEL INJECTORS AND CLEANED, INSTALLED WITH NEW SEALS.
4. SERVICED RIGHT PROPELLER DOME PRESSURES TO 38PSI.
5. RIGHT PROPELLER GOVENER SN#18191622 OVERHAULED AT THIS TIME, SEE 8130 TAG.
6. REPLACED ALL ROCKER COVER GASKETS WITH NEW SILICONE TYPE DUE TO OIL LEAKS, SECURED WITH NEW RETAINING HARDWARE.
7. REMOVED #2 CYLINDER DUE TO LOW COMPRESSION, BLOW BY VALVES, OVERHAULED BY PINE MOUNTAIN ENGINES, SEE YELLOW TAG, INSTALLED OVERHAULED CYLINDER PER TCM ENGINE MANUAL.
8. ADS CHECKED THRU *ADS* [REDACTED]
9. I CERTIFY THIS *Engine* WAS INSPECTED IN ACCORDANCE WITH AN ANNUAL INSPECTION AND CESSNA PROGRESSIVE #1 #2 #3 #4 AND WAS DETERMINED TO BE IN AIRWORTHY CONDITION.
10. BERNARD PAQUETTE [REDACTED]



DATE: 8/26/05
INV#329

C-414A
N297UP

HOBBS: 1391.5
RIGHT ENGINE

1. RIGHT ENGINE INSPECTED USING CESSNA C414A PROGRESSIVE CARE OPERATION NO.1 50HR.CHECKLIST AND THE SCOPE AND DETAIL OF FAR-43 APP-D AS GUIDES.
2. PERFORMED ENGINE GROUND OPERATIONAL TEST
3. COMPRESSION TEST #1 56/80 #2 65/80 #3 58/80 #4 66/80 #5 60/80 #6 64/80.
4. DRAINED OIL, INSP. FILTER, TORQUED, SECURED NEW ES48109 FILTER.
5. SERVICED ENGINE WITH EXXON ELITE 20W50
6. SERVICED ALL SPARK PLUGS.
7. SERVICED FUEL INJECTOR NOZZLES.
8. SERVICED INDUCTION AIR FILTER.
9. REPLACED INBD. EXHAUST GASKETS AND HARDWARE.
10. LUBRICATED ALL ENGINE CONTROLS.
11. PERFORMED POST INSPECTION GROUND OPERATIONAL TEST, FOUND AIRWORTHY.

MICHAEL PUGNI AP# [REDACTED]

DATE: 1/10/06
 INV: 604

RIGHT ENGINE
 N789UP

HOBBS: 1420.3
 TSMO: 1008.6

1. COMPLY WITH INSPECTION PER CESSNA PROGRESSIVE CARE INSPECTION PROGRAM
OPERATION #1 #2 #3 #4, AND ANNUAL INSPECTION.
2. COMPRESSION CK #1 72/80 #2 78/80 #3 70/80 #4 63/80 #5 63/80 #6 70/80.
3. DRAINED OIL, REMOVE FILTER AND CUT, NO METAL, INSTALLED NEW FILTER ES48109, FILL ENGINE 12QTS 20W-50W EXXON ELITE OIL.
4. C/W TELEDYNE CONTINENTAL **SID 97-3** UNMETERED AND METERED FUEL PRESSURES DUE EA 100HRS.
5. **C/W AD-2001-01-16** EXHAUST INSPECTION, "B""C" "D""E" CKS AIRWORTHY, DUE EA. 50, 100HRS 500HRS AND ANNUAL PER INSTRUCTIONS.
6. ADS CHECKED THRU 1/06.
7. I CERTIFY THIS AIRFRAME WAS INSPECTED IN ACCORDANCE WITH AN **ANNUAL INSPECTION** AND CESSNA PROGRESSIVE #1 #2 #3 #4 AND WAS DETERMINED TO BE IN AIRWORTHY CONDITION.
8. BERNARD PAQUETTE [REDACTED]



DATE: 1/10/06
 INV: 604

RIGHT ENGINE
 N789UP

HOBBS: 1420.3
 TSMO: 1008.6

1. REMOVED EXISTING STARTER AND INSTALL REBUILT LAMAR PM2407 STARTER.
2. START ENGINE CKS AIRWORTHY. [REDACTED]
3. BERNARD PAQUETTE [REDACTED]



DATE: 5/11/06
 INV: 966

RIGHT ENGINE
 N789UP

HOBBS: 1421.5
 SMOH: 1009.8

1. PILOT REPORTS RIGHT ALTERNATOR INOP WHEN AIRCONDITIONER SELECTED ON.
2. REPLACED WORN ALTERNATOR PN#649304A AND BLOWN REGULATOR PN#9910126-3.
3. RUN ENGINE, OPERATIONAL CHECKS AIRWORTHY, TEST FLIGHT AIRWORTHY.
4. BERNARD PAQUETTE [REDACTED]

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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
				TOTALS brought forward from previous page



DATE: 2/16/07
INV: 2499

RIGHT ENGINE
N789UP

HOBBS: 1494.0
TSMO: 1082.3

1. COMPLY WITH INSPECTION PER CESSNA PROGRESSIVE CARE INSPECTION PROGRAM **OPERATION #1 #2 #3 #4, AND ANNUAL INSPECTION.**
2. COMPRESSION CK **#1 70/80 #2 74/80 #3 67/80 #4 66/80 #5 66/80 #6 68/80.**
3. DRAINED OIL, REMOVE FILTER AND CUT, NO METAL, INSTALLED NEW FILTER ES48109, FILL ENGINE 12QTS 20W-50W EXXON ELJTE OIL.
4. C/W TELEDYNE CONTINENTAL **SID 97-3** UNMETERED AND METERED FUEL PRESSURES DUE EA 100HRS.
5. **C/W AD-2001-01-16** EXHAUST INSPECTION, "B""C""D""E" CKS AIRWORTHY, DUE EA. 50, 100HRS 500HRS AND ANNUAL PER INSTRUCTIONS.
6. FUEL INJECTOR NOZZLES ULTASONIC CLEANED AND INSTALLED WITH NEW SEALS.
7. 6-SPARK PLUGS FOUND WORN INSTALLED 6-NEW URHB32E SPARK PLUGS.
8. **ADS CHECKED THRU 2/07.**
9. I CERTIFY THIS **ENGINE** WAS INSPECTED IN ACCORDANCE WITH AN **ANNUAL INSPECTION** AND CESSNA PROGRESSIVE **#1 #2 #3 #4** AND WAS DETERMINED TO BE IN AIRWORTHY CONDITION.
10. BERNARD PAQUETTE [REDACTED]



DATE: 8-16-07
INV # 3033

RT. ENGINE
N789UP

414A
HOBBS: 1516.2

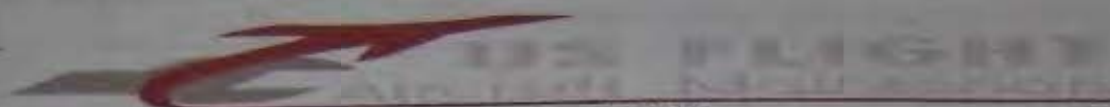

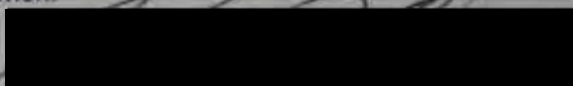
TSMO: 1104.5

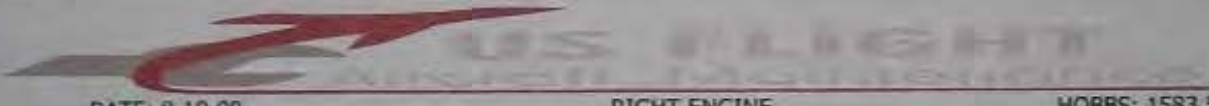

1. PERFORM OIL CHANGE, ENGINE WARMED TO OPERATING TEMPERATURES.
2. DRAINED OIL, REMOVED, OPENED AND INSPECT FILTER, NO METALS FOUND.
3. SECURED NEW AA48109 FILTER.
4. SERVICED ENGINE WITH 12 QTS. EXXON ELJTE 20W50 OIL.
5. PERFORMED GROUND FUNCTIONAL TEST, NO LEAKS NOTED, FOUND AIRWORTHY.

MICHAEL PUGNI AP # [REDACTED]

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
				
DATE: 4/17/08 INV:3647			RT ENGINE N789UP	TT: 4324.8 TACH: 1554.9 TSOH: 1143.2
				<ol style="list-style-type: none"> ENGINE INSPECTED USING CESSNA 414A PROGRESSIVE INSPECTION #1-4 AND THE SCOPE AND DETAIL OF FAR-43 APPENDIX "D" AS GUIDES. ENGINE RUN TO OPERATING TEMPERATURES, DRAINED OIL AND TAKE SAMPLE. REMOVE OIL FILTER AND CUT OPEN, NO-METAL, FILL ENGINE 12QTS EXXON ELITE 20W-50W OIL. REPLACED (6) WORN SPARK PLUGS WITH NEW URHB32E. SERVICED AND CLEANED FUEL INJECTOR NOZZLES PER TCM-SID-05-07. C/W AD-2000-01-16 EXHAUST SYSTEM INSPECTION, "B" "C" "D" "E" CKS AIRWORTHY, DUE- 50,100, 500HRS AND ANNUAL PER INSTRUCTIONS. I CERTIFY THIS ENGINE WAS INSPECTED IN ACCORDANCE WITH AN ANNUAL INSPECTION AND HAS BEEN DETERMINED TO BE IN AIRWORTHY CONDITION.
				7. BERNARD PAQUETTE  

				
DATE: 9-18-08 WO: 4262			RIGHT ENGINE N789UP	HOBBS: 1583.5 MODEL: 414A
				<ol style="list-style-type: none"> OPERATOR REQUESTS OIL CHANGE SERVICE, WITH NO FILTER CHANGE. RAN UP ENGINE TO PROPER OPERATING TEMPERATURE. DRAINED OIL, REINSTALLED OIL SUMP PLUG WITH NEW CRUSH GASKET AND SAFTIED. SERVICED ENGINE WITH 12QTS PHILLIPS X/C 20W-50 OIL. PERFORMED GROUND FUNCTIONAL TEST OF ENGINE AND RELATED SYSTEMS, ALL CHECKS OK, NO LEAKS PRESENT. AIRCRAFT AIRWORTHY.
			CHRISTOPHER A SZABO 	

ENGINE MODEL:
TS10-520-NB
ENGINE S/N (R) R-519303
REG. NO. N789UP
WORK ORDER:
05003-06-2009

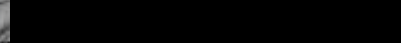

US Flight Aircraft Maintenance
White Plains, NY 10604
Phone: 914-288-8088

DATE: 15 July, 2009
A/C TSN: 7874 B
ENG TT (R): 4035.6
TSMOH (R): 1164.5
HOBBS: 1596.2

Right Engine Entries

(9) Removed worn exhaust gaskets from exhaust system and installed new exhaust manifold gaskets, P/N 652458. Secured exhaust system with new MS20500-428 nuts and torqued to specifications. All work performed in accordance with TCM TS10-520-NB MM. (14) Replaced overboard tailpipe with extended tip, P/N HWS340414-2, and right bank exhaust elbow with new, RAM P/N 8225-6 Inconel. All work done in accordance with Cessna 414A AMM D778-34-13AF. (48) Replaced vacuum pump garlock seal, P/N 25102, with new.

I certify that this engine has been approved for return to service:

DATE: 15 July, 2009 SIGNED:  Work Order: 05003-06-2009
Bernard Paquette,  Printed by EBis 3 (dalcmedia.com)

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 MODEL: TS10-520-NB
 ENGINE S/N (R): R-519303
 REG. NO: N789UP
 WORK ORDER: 04955-06-2009

US Flight Aircraft Maintenance

White Plains, NY 10604
 Phone: 914-288-6088

DATE: 15 July 2009
 A/C TSN: 7874.8
 ENG TT (R): 4039.6
 TSMOH (R): 1184.5
 HOBBS: 1596.2

Right Engine Entries

(3) Complied with **annual** inspection, performed pre-inspection ground functional check. Drained oil and took sample for analysis. Performed compression test: 1) 74/80 2) 72/80 3) 75/80 4) 72/80 5) 72/80 6) 73/80. Removed, opened, and inspected filter for metal with none found. Torqued and secured new AA48109 filter.

I certify that this engine has been approved for return to service.

DATE: 15 July, 2009

SIGNED

Bernard Paquette, IA

Work Order: 04955-06-2009

Printed by EBis 3 (datamedia.com)



Business Aircraft Group, Inc.

Cleveland, OH 44114

A/cft Mfg: Cessna Date: Jan. 26, 2010 Eng Mfg.
 Model: 414A Hobbs: 1651.7 Eng Model:
 S/N: 0495 A/cft TT: 7930.3 Left Eng TT Left Cycle
 Reg#: N789UP A/cft Cycle Right Eng TT 4095.1 Right Cycle

Right Alternator PN 649304R removed SN 005KA247R installed overhauled SN C199705.0R. Changed oil and installed new oil filter. Cleaned engine breather screen.

For Business Aircraft Group



East Alton, IL 62024
 Registration: N789UP W/O: 317577
 Serial#: 414A-0495 Date: 16MAR2010
 Engine 2 SN 519303 TSO 1216.1 Hour Meter: 1686.0 Engine T.T. 4071.2

Completed the following maintenance IAW the Cessna 414/414A Service Manual Rev 34 and Teledyne TS10-520 M.M

Section 2A

➤ This aircraft has been removed from the Cessna Progressive Inspection Program 91.409 (d) and now is inspected IAW 91.409 (a) Annual Inspections per FAR 43 Appendix D

Section 9

- Replaced the RH engine Bracket foam air filter with a new paper filter PN P12-8156 per customer's request
- Replaced the engine oil with new PN Phillips XOC 20W50 oil. Replaced the oil filter with a new unit PN CH48108-1. Completed a leak and performance check with no faults found.
- Replaced the leaking oil pump with an overhauled unit PN 632970 SN 209050 reference FAA Form 8130-3 from RAM CRS# VA1R551K WD# 55791 dated 21JAN2010. Completed a leak and performance run with no faults found.
- Replaced the two magnetos with new units PN's 6320 SN's 08111564 & 09101218. Completed a functional check with no faults found.
- Replaced the two RH engine compartment hoses with new units from RAM hose kits PN's 1442-1R, 1442-3R, & 1442-8R
- Completed a SOAP sample with normal results.

AD's completed this visit:

Completed the 50 hr recurring visual inspection per AD2000-01-16 part (b) to the RH engine exhaust. Next due in 50 hrs.

I certify that the above stated maintenance and/or inspection was performed in accordance with the current regulations of the FAA and the aircraft identified above has been inspected and determined to be airworthy with respect to the work performed and is presently approved for return to service.

Date: 16MAR2010 Inspected By: Andrew Crossman

for West Star Aviation, Inc. CRS PAZR068H

Registration: N789UP W/O: 317757
Serial#: 414A-0495 Date: 16APR2010
Engine 2 SN 519303 ISO 1259.9 Hour Meter: 1729.8 Engine T.T. 4113.0

Completed the following maintenance IAW the Cessna 414/414A Service Manual Rev34 and Teledyne TSIO-520 M.M.

Section 9

- Completed the oil change. Serviced the engine with 20W50 X/PC oil. Replaced the engine oil filter with a new unit PN CH48108-1. Completed a visual inspection of filter with no faults found. Completed a leak check with no faults found.
- Customer requested a compression check. 1 - 60/80 2 - 72/80 3 - 64/80 4 - 68/80 5 - 60/80 6 - 58/80
- Replaced one worn spark plug with a new unit PN RHB32E

AD's completed this visit:

- Completed the 50 hr recurring visual inspection per AD2000-01-16 part (b) to the RH engine exhausts. Part (b) due at Hour meter 1729 hrs. or at T.T. of 7991 or 17MAY2010. Part (c) due in JUL2010. Part (d) due at T.T. 8348 hrs. Part (e) due in JUL2010. Part (f) N/A multi-segment V-band clamps not installed. Part (g) due at 9124 hrs or FEB2012.

I certify that the above stated maintenance and/or inspection was performed in accordance with the current regulations of the FAA and the aircraft identified above has been inspected and determined to be airworthy with respect to the work performed and is presently approved for return to service.

Date 16MAR2010 Inspected By: Andrew Crossman [Signature] for West Star Aviation, Inc. CRS PAZR068H

5-17-10 Right engine log entry for N789UP

Hobbs 1781.0

Changed oil and filter, opened filter found satisfactory, refilled Aeroshell 15W50, engine ran and leak checked in accordance with Cessna 414 maintenance manual.

I certify that this work described above has been inspected and is determined to be in an airworthy condition with respect to the work performed. Pertinent details are on file at this agency under W.O.# 2079 Date 5/17/10

Tach/Hobbs: 1781.0 Signed [Signature]
LORAVCO Services, Inc. Central Illinois Regional Airport, Bloomington, IL. 61704
FAA Approved Repair Station #OLKR571L

MR-1

6-28-2010 Right engine log entry for N789UP

Hobbs 1829.0

Complied with oil and filter change in accordance with Cessna 414-A maintenance manual. Refilled with Aeroshell 15W50. Opened filter and found satisfactory. Complied with AD 2000-01-16 Exhaust inspection found satisfactory no defects noted. next due 1879.0

I certify that this work described above has been inspected and is determined to be in an airworthy condition with respect to the work performed. Pertinent details are on file at this agency under W.O.# 2072 Date 6/28/10

Tach/Hobbs: 1829.0 Signed [Signature]
LORAVCO Services, Inc. Central Illinois Regional Airport, Bloomington, IL. 61704
FAA Approved Repair Station #OLKR571L

MR-1

9-1-2010 Right engine log entry for N789UP

Hobbs 1882.3 TAT 8161.3 TSMOH 1471.0 Engine repair

Complied with Annual inspection in accordance with Cessna 414 and Continental TSIO 520 NB maintenance manuals. Engine was disassembled and cleaned and the following parts replaced in accordance with Continental TCM complete SKU#AV-TCMDVD manual for TSIO 520 NB. Crankshaft main bearings PN 646592A2, Connecting rod bearings PN 630826, new camshaft PN 654084A1 sn 54530, new Bevel-Gov Drive gear PN 654085, Rod bolts 655961, Rod nuts PN 654490, Gasket set PN 646550A1, Shaft seal PN 641250, Replaced all cylinders with overhaul cylinder kits from RAM Aircraft PN FRCN 71.2BCA-221, serial numbers, 37115-3,37115-5,37115-6,37115-7,37115-8,37115-12, with overhauled rocker arms from Ram Aircraft PN 1842-4 and PN 1842-3, Replaced all cam lifters PN 658077. Cleaned and gapped spark plugs and installed new oil filter and refilled oil with Phillips 20-50 mineral oil per RAM Aircraft instructions. Complied with AD 2000-01-16 Exhaust system visual inspection part (b). Slip joints adjusted in accordance with AD 2000-01-16, AD 2010-11-04 filter wear not applicable by Part number. Engine assembled and ran leak and ops checked in accordance with Continental TCM overhaul and maintenance manual, engine compression checked after run in as follows: #1 77/80, #2 75/80, #3 77/80, #4 77/80, #5 76/80, #6 76/80

I certify that this work described above has been inspected and is determined to be in an airworthy condition with respect to the work performed and that this engine has been inspected in accordance with an AEWAD and is determined to be in an airworthy condition. Pertinent details are on file at this agency under W.O.# 2085


Date: 9/1/10 Aircraft Tach/Hobbs: 1882.3 TAT 8161.3 TSMOH 1471.0 Signed [Signature]
LORAVCO Services, Inc. Central Illinois Regional Airport, Bloomington, IL. 61704
FAA Approved Repair Station # OLKR571L

MR-3

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				
09/02/2010	HM 1883.1	ATT 8161.7	TSO 1471.4	Removed RT.
wastegate P/N C165006-0107, S/N ACO23364. Installed wastegate P/N C165006-0107, S/N LEO00460 O/H'ed by AMETEC B+S Aircraft Parts w. O ² A10-04885. Ops and leak check good.				
I certify that this work described above has been inspected and is determined to be in an airworthy condition with respect to the work performed. Pertinent details are on file at this agency under W.O.# R 7095 Date 09/02/2010 Tech/Hobbs: 1883.1 Signed [Redacted] LORAVCO Services, Inc. Central Illinois Regional Airport, Bloomington, IL 61704 FAA Approved Repair Station #OLKR571L MR-1				
10/1/2010	HM 1927.5	Compression	$1 \frac{76}{80}, 2 \frac{75}{80}, 3 \frac{75}{80}, 4 \frac{75}{80}, 5 \frac{75}{80}, 6 \frac{75}{80}$	Changed oil and filter. Inspected filter. Installed CH48108 filter and added Aeroshell 15W50 oil. End run Ops and leak check good. C/W A-D. 2000-01-16 PT. (6), U-1501 Insp. of Exhaust System. Next due at 1977.5.
I certify that this work described above has been inspected and is determined to be in an airworthy condition with respect to the work performed. Pertinent details are on file at this agency under W.O.# R7133 Date 10/01/2010 Tech/Hobbs: 1927.5 Signed [Redacted] LORAVCO Services, Inc. Central Illinois Regional Airport, Bloomington, IL 61704 FAA Approved Repair Station #OLKR571L MR-1				
11/3/2011	HM 1977.6	ATT 8256.2	TSO 1565.7	Changed oil and filter. Inspected filter. Installed CH48108 filter and added Aeroshell 15W50 oil. Installed starter drive thru 642085A2 after O/H by G+N Aircraft. W.O.# 67443. End run. Ops and leak check good.
I certify that this work described above has been inspected and is determined to be in an airworthy condition with respect to the work performed. Pertinent details are on file at this agency under W.O.# R7170 Date 01/03/2011 Tech/Hobbs: 1977.6 Signed [Redacted] LORAVCO Services, Inc. Central Illinois Regional Airport, Bloomington, IL 61704 FAA Approved Repair Station #OLKR571L MR-1				
8/5/2013	HM 2007.6	ATT 8286.2	TSO 1595.9	Eng. TT 4722.8 ^{5487.0 hrs}
Inspected and serviced this Engine IAW the Cirrus 414A Maint. Manual and FAR 43 App. D. Tested compression Tester IAW TCM Service Bulletin SB 03-3. Minimum Acceptable Cylinder Pressure Leakage Limit is $50/80$. Compression $1 \frac{65}{80}, 2 \frac{75}{80}, 3 \frac{77}{80}, 4 \frac{75}{80}, 5 \frac{75}{80}, 6 \frac{76}{80}$. Changed oil and filter. Inspected filter.				
SUB-TOTALS this page				(cont. next 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
8/5/13	ATT	8286.2	2	TOTALS brought forward from previous page
Installed a CH48108 filter and added AeroShell 15W50 oil.				
A.D. 2012-03-06, 2/24/12 N/A by AUSTAR Fuel Servo				
Diaphragm not being installed. A.D. 2012-10-13, 6/8/12 N/A by				
StarStar Adapter P/N. A.D.'s checked thru 2013-25. Good run				
Ops and leak check good.				
I certify that this work described above has been inspected and is determined to be in an airworthy condition with respect to the work performed and that this <u>Engine</u> has been inspected in accordance with an <u>Annual</u> and is determined to be in an airworthy condition. Pertinent details are on file at this agency under W.O.# <u>R7614</u> Date <u>08/05/2013</u> Aircraft <u>20026</u> TTIS <u>1525.4</u> Signed, <u>[Redacted]</u> <u>Synergy Flight Center</u>				

*****MUNCIE AVIATION CO. CRS#AJVR135C*****

Right	DATE	Hobbs	Make	Model	Ser.No.	Reg.Mark
N789UP	12/5/2013	2017.8	Cessna	414A	414A0495	N789UP
Set up Engine Fuel System using SI97-3F & ram SID2006-01			The aircraft/component identified above was repaired inspected in accordance with current Regulations of the Federal Aviation Administration and found airworthy, and is approved for return to service for work performed			
Replaced Fuel Nozzles with New Ram P/N 2562-14D using new "O"rings P/N 630979-9 #1,3,5 & 2			Pertinent details of the repair are on file at the agency			
Replaced Intercooler clamp hardware, repositioned & secured			Work Order Number <u>S000547</u> Date <u>12/5/2013</u>			
Secured Prop Cable Sleeve			Signed, <u>[Redacted]</u> Inspector for			
Repaired Broken wire to Tach Generator			MUNCIE AVIATION CO. CRS#AJVR135C			
Items Noted Deferred by customer: Fuel pressure regulator			MUNCIE, IN 47308 			
Stuck, wastegate controller at full high adjustment						
Recommend both components be Overhauled						

13/11/2014 HM2020.4 ATT 8299.0 Rt. Engine log entry For N789UP
 Installed new Inner and outer Continental Valve springs PN/ 654442 , PN/654441 In all six Cylinders. I.A.W. TCM TS10-520 Overhaul manual. Ground ran aircraft, Ops and leak checked.
 I certify that this work described above has been inspected and is determined to be in an airworthy condition with respect to the work performed. Pertinent details are on file at this agency under W.O.# R7675 Date 03/11/2014
 Tach/Hobbs, 2020.4 Signed, [Redacted]
 SYNERGY FLIGHT CENTER LLC, Central Illinois Regional Airport, Bloomington, IL 61704

6/10/14 HM	2048.4	Changed oil and filter. Inspected filter		
Installed CH48108 filter. Added AeroShell 15W50 oil. Good run.				
Ops and leak check good.				
I certify that this work described above has been inspected and is determined to be in an airworthy condition with respect to the work performed. Pertinent details are on file at this agency under W.O.# <u>R7238</u> Date <u>06/10/2014</u> Tach/Hobbs, <u>2048.4</u> Signed, <u>[Redacted]</u> SYNERGY FLIGHT CENTER LLC, Central Illinois Regional Airport, Bloomington, IL 61704 FAA Approved Repair Station # 8SGR199C MR-1				

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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LOGBOOK ENTRY
RIGHT ENGINE

Ideal Aviation
Cahokia, IL 62205

MODEL: TSIO-520-NB
ENGINE S/N: R-519303
N789UP
S/N: 414A 0495

DATE: 10/01/2014
HOBBS: 2068.3
SMOH: 1656.6
ETT: 1656.6

SCHEDULED MAINTENANCE

- 1.) Performed an **Annual Inspection** IAW Cessna Service Manual and FAR43 appendix D.
- 2.) Cylinder compression check results are as follows: 1 70/80, 2 75/80, 3 74/80, 4 74/80, 5 73/80 & 6 79/80.
- 3.) Drained oil, removed filter element. Cut open to inspect for metal. None found. Installed new oil filter P/N: CH48108-1 and salted.
- 4.) Serviced engine with 11 quarts of Aeroshell 15W50 engine oil.
- 5.) Removed, disassembled, cleaned, reassembled and reinstalled the air oil separator I.A.W. TCM TSIO-520-NB maintenance manual.
- 6.) Removed R/H oil cooler P/N: 636900; S/N: 31552 and sent to Aircraft Accessories for overhaul; see Work Order Z4UR2220. Reinstalled same oil cooler P/N: 636900; S/N: 31552.
- 7.) Modified engine baffling to accommodate oil cooler and improve air flow.
- 8.) Removed and replaced magneto pressurization air filter P/N 1396-2.
- 9.) Repaired R/H forward top engine baffle seal.
- 10.) Re-timed R/H mag to engine timing to 21deg. per RAM STC.
- 11.) Removed 6 massive spark plugs and replaced with 6 fine wire type plugs P/N: URHB32S.
- 12.) Checked AD's through 2014-19.
- 13.) Complied with AD 2000-01-16 part C tail pipe inspection. No defects noted. **Next inspection due: 10/2015.**
- 14.) Washed down engine.
- 15.) Ran engine. Functional and leak checks are satisfactory.

I certify that this engine has been inspected in accordance with an Annual/100 hr. inspection and was determined to be in an airworthy condition and is approved for return to service.

Additional details of this work are on file under Work Order # 3009

SIGNED

Norman Walters

12/17/2014 Hobbs 2083.9 Rt. engine log entry for N789UP

Installed new intake coupling hose PN/ 633281 on Rt. turbo charger. Performed all maintenance actions I.A.W Cessna 414A Maintenance manual.

I certify that this work described above has been inspected and is determined to be in an airworthy condition with respect to the work performed. Pertinent details are on file at this agency under W.O.# R7822 Date 12/17/2014

Hobbs: 2083.9 Signed

SYNERGY FLIGHT CENTER LLC. Central Illinois Regional Airport, Bloomington, IL. 61704

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