

#1

ENGINE LOG
EL-13P

INSPECTION & MAINTENANCE RECORD

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INSPECTION & MAINTENANCE RECORD

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INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
5-2-19	1868 ² / 1563 ⁴	Complete annual condition inspection per checklist 90-89-b & Append. D, Part 43 FAR. See detailed 7 page check list. Gerald Sonrell 2516888
5-2-19	1869 ³ / 1563 ⁴	OA Test flight. All functions normal. <i>[Signature]</i>
7-5-19	1874 ² / 1567 ⁸	2 QT oil overfill OIL
7-26	1876 ² / 1569 ²	2 QT OIL
8-16	1880 ² / 1573 ¹	2 QT 5QT in 18 1880.4 1880.9 OIL
5-9-20	1895 ³ / 1585 ³	Complete annual condition insp, Part 43 App D & AC 90-89b Gerald Sonrell RP 2516888
5-15-20		Pouch on left mag. Install fresh plugs left mag only. Run smooth on mag, check & full run up RP 2516888
10-21-2020	1923 ² / 1608 ³	Change oil Phillips 66 XC 20-50 6QT
6-2-2021	1940 ³ / 1628 ¹	Complete annual condition inspection per 90-89b & Append. A Part 43 FAR See detailed 7 page check list Gerald Sonrell 2516888
		Oil change Phillips 66 XC 20-50 6QT
11-13-21	1979 ⁴ / 1635 ⁹	Change oil. Oil Phillips 66 XC 6QT. Brake fluid 2" high
1-18-21	1980 ² / 1636 ³	No squawks. Prop retorque 190" #. Track 1/16 Test flew J. Sonrell - Repairman 2516888

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2-25-22	1986 ² / 1640 ⁷	Replace RT. MAG with P-Mag. Grand run satisfactory. Pmag drops off c 700 RPM as expected <i>[Signature]</i>
		Since overhaul by Gerald Sonrell Repairman 2516888
	Tach Time 1646 ³ Total Time 1646 ³	
		I certify that this RV-A Ser. 2239 N1306Y
		Has been inspected on July 15, 2022
		In accordance with the scope and detail of appendix D to part 43, and was found to be in a condition for safe operation.
		Auth. Signature <i>[Signature]</i> 2516888
		Pmag self engaged OK to 800 RPM
7-19-22	Tach 1647 ⁴	KLS-Packwood KLS Test flight. All engine functions normal 10 mge. Gerald Sonrell Repairman 2516888
11-9-22	1652.0	add 1 Q oil <i>[Signature]</i>
11-22	1654.5	Put on oil cooler cover plate <i>[Signature]</i>
1-24-23	1655.6	At 4 QT oil <i>[Signature]</i>
3-6-23	1658.5	change oil 6QT. Phillips XC 20-50 <i>[Signature]</i>
4-28-23	1660.4	Remove cover plate over oil cooler inlet for summer <i>[Signature]</i>

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
7-9-14	1372 ³ / 1370 1640 ²	ADD 1 QT OIL SHELL 100 <i>Jennell</i>
11-26-14	1390 ² / 1390 1603 ⁰	ANNUAL CONDITION INSPECTION COMPLETED PER AC90-89-a CHECKLIST & PER APPEND D FAR 43 <i>Jennell</i> RC 2516888
11-26-14	1391 ¹ / 1391 1604 ²	TEST FLIGHT - ALL SYSTEMS OK <i>Jennell</i> oil change
4-5-15	1401 ¹ / 1401 1677 ²	Remove oil cooler cover CK Boost primer on #2 cyl - OK <i>Jennell</i>
6-13-15	1405 ² / 1405 1681 ⁰	Add 1 QT OIL, this M 2nd QT since change
7-7-15	1422 ² / 1422 1689 ²	Change oil shell 100w Torque prop 192 #in
8-		Add QT OIL
9-23	1428 ¹ / 1428 1707 ²	Add QT OIL
11-27-15	1435 ¹ / 1435 1716 ¹	Complete annual condition inspection per AC90-89-bk App D part 43 FAR. Test flown and found all systems satisfactory <i>Jennell</i> RC 2516888
4-15-16	1454 ⁴ / 1454 1738 ⁴	Change OIL 7QT AEROSHELL 100 - TORQUE PROP.
6-10-16	1460 ² / 1460 1746 ³	Add 1 QT OIL shell Aero 100 <i>J</i>
6-30-16	1463 ⁴ / 1463 1748 ⁰	Add 1 QT OIL shell Aero 100 <i>J</i>
7-20-16	1464 ¹ / 1464 1750 ³	Add 1 QT OIL shell Aero 100 <i>J</i>
7-20-16	1466 ¹ / 1466 1752 ³	Flight OK - Add 1 QT OIL shell Aero 100 7-22-16 <i>J</i>
9-4	1468 ² / 1468 1756 ⁰	Add 1 QT aeroshell 100 <i>J</i>

INSPECTION & MAINTENANCE RECORD

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3-4	1462 ² / 1462 1756 ¹	Add 1 QT Aeroshell 100 <i>Jennell</i>
7-10	1472 ² / 1472 1765 ¹	Add 1 QT Aeroshell 100 <i>Jennell</i>
9-10	1766 ² / 1766 1783 ²	Add 1 Q Aeroshell 100 <i>Jennell</i>
10-11	1768 ² / 1768 1479 ²	Add 1 QT OIL Aero 100 <i>J</i>
12-17	1777 ⁰ / 1777 1487 ¹	Perform annual condition insp. per FAR Part 43 app D & oil AC90-89-b checklist. Test flown a/c & is safe to fly. <i>Jennell</i> RP 2516888
4-11-17	1786 ⁰ / 1786 1494 ²	7 HRS - ADD 1 QT OIL <i>Jennell</i>
4-30	1789 ⁰ / 1789 1497 ²	Add 1 QT OIL <i>Jennell</i> 3 hrs
9-10	1798 ¹ / 1798 1505 ¹	CHANGE OIL 6QT AEROSHELL 100 <i>Jennell</i> RP 2516888
3-10-18	1810 ² / 1810 1515 ²	Perform annual condition inspection per FAR Part 43 App D & AC 90-89-b checklist. Test flown a/c & is safe to fly. <i>Gerald Jennell</i> RP 2516888
5-24-18	1821 ¹ / 1821 1522 ²	Change oil 6QT Aeroshell 100, Retorque prop 192 #in <i>Jennell</i> RP 2516888
9-20-18	1843 ² / 1843 1541 ²	Change oil 6QT Aeroshell 100 Replace plugs with Seneca REM 40E. Check primer ports for free flow. Test fly <i>Jennell</i> RP 2516888
11-27-18	1851 ¹ / 1851 1548 ⁴	CHANGE OIL 6QT AEROSHELL 80, cover oil cooler Reinstall top crankcase bolts 1, 2, 3 & 7. <i>Jennell</i> RP 2516888

TAH H083 INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
6-15-11	1178 ⁸ /1410 ¹	Remove Lt. mag. Impulse rivets OK. Set EGAP. Reinstall & time. Run up OK. <i>Glenn</i> RC 2516888
7-25-11	1183 ⁷ /1416 ⁰	Remove Rt mag. Set EGAP. Visual inspection of internal OK. Install & retime both mags. Run up OK. <i>Glenn</i> RC 2516888
8-1-11	1188 ³ /1421 ⁷	Remove Lt. mag. Adjust Impulse to 1/2 turn. Reinstall & time. Spark is strong. Startup good. Mag V OK. <i>Glenn</i>
9-2-11	1190 ⁴ /1425 ⁷	ANNUAL CONDITION INSPECTION COMPLETED PER AC 90-89-9 CHECKLIST & PER APPEND D FAR 43. <i>Glenn</i> RC 2516888
10-6	1194 ⁸ /1431 ¹	CHANGE OIL AEROSHELL 80 7QT. <i>Glenn</i> RC 2516888
3-2-12	1217 ⁸ /1459 ⁶	CHANGE OIL AEROSHELL 100 7QT. <i>Glenn</i> <i>check mixture OK</i>
3-2-12	" "	REMOVE STARTER
4-9-12	1220 ² /1462 ⁸	Remove oil cooler cover plate. Check prop torque <i>Glenn</i>
6-21	1235 ⁷ /1482 ¹	Add 1QT. Down 2 - <i>Glenn</i>
7-9	1238 ¹ /1485 ⁰	Add 1QT OILS <i>Glenn</i>
7-11	1243 ⁶ /1490 ⁷	OILC 6QT
8-14	1246 ² /1494 ⁰	CHANGE OIL AEROSHELL 100 6QT PROP TORQUE OK 192 ¹ / ₁₆
10-1	1256 ⁸ /1506 ²	ANNUAL CONDITION INSPECTION COMPLETED PER AC 90-89-9 CHECKLIST & PER APPEND D FAR 43. <i>Glenn</i> RC 2516888

TAH H083 INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
11-31-13	1271 ³ /1523 ¹	Remove -6 FUEL LINES & -8 OIL LINES. RE-USE 60/ FITTINGS ON FBA HOSES (701). RUN UP & CHECK FOR LOOSE AFTER INSTALL. CHANGED OIL 6QT 80WT SHELL
3-15-13	1276 ⁵ /1529 ³	Remove OIL COOLER COVER. ADD BRAKE FLUID. RETORQUE PROP 192 ¹ / ₁₆
3-15-13	1277 ⁵ /1530 ⁶	Add 1QT OIL #40 <i>Glenn</i>
4-24	1284 ⁰ /1538 ⁸	Add 1QT OIL #40 <i>Glenn</i> Shows 6QT
5-14	1287 ¹ /1541 ³	Add 1QT OIL #40. Remove prop. refinish, balance, install & torque 192 ¹ / ₁₆
6-26	1293 ⁶ /1549 ⁴	CHANGE OIL #50, RETORQUE PROP 192 ¹ / ₁₆
		TURBO COORDINATOR INSTALLED
8-5	1322 ⁹ /1551 ⁰	CHANGE OIL, CHECK BOTTOM PLUGS REMOVE TURN COORD (FAILED) CHECK PROP BOLT TORQUE 192 ¹ / ₁₆ . BREATHER TUBE CLEAR, VERIFIED
11-8-13	1592 ³ /1331 ⁰	ANNUAL CONDITION INSPECTION CKLIST AC-90-89-9 & APPEND D FAR 43. AIRCRAFT IS SAFE FOR FLIGHT <i>Glenn</i> 2516888
11-8-13	1592 ⁰ /1332 ³	Test Flight No SKWAKS <i>Glenn</i>
1-26-14	1609 ² /1346 ⁴	Change oil 6QT SHELL 100
6-13-14	1634 ⁰ /1367 ²	Change OIL 6QT SHELL 100 TRQ PROP 192 ¹ / ₁₆

2004 TACH HRS INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
6-1-04	870 ⁰ / 1033 ¹	Change oil 6QT Shell 50W. TORQUE PROP C192 [#] / _# Tighten Valve cover screws. Tighten Oil Return line hoses carb air box adhesive secure. NO SCREWS PULLED Fuel/Oil
11-10-04	905 ² / 1075 ²	Change oil 6QT Shell 50W TORQUE PROP C192 [#] / _# Install oil cooler block out Jhonell
5-1-05	920 ⁵ / 1094 ⁴	Complete annual condition inspection per AC 90/89 checklist & conformed to App. D FAR 43 Jhonell. only 920⁵ / 1094⁴ pulled gasolator screen. 6QT Shell 50W prop torque
10-17-05	944 ¹ / 1120.2	Change oil 7QT Shell 50W, No screws pulled torque prop.
4-10-06	961 ² / 1145.4	Complete annual condition inspection per AC 90/89 & checklist & conformed to App. D FAR #43 Jhonell
9-2-06	980 ⁰ / 1166.5	Change oil 6QT 7QT Shell 50W. RETORQUE PROP Jhonell
12-10-06	993 ³ / 1184.2	CHANGE OIL Shell 40W DET 7QT. RETORQUE PROP Jhonell
5-17-07	1007 ⁻ / 1201.3	Complete annual condition inspection per AC 90/89 & checklist & conformed to App. D FAR 43 Jhonell RC 2516888 7QT Shell 50W
2-11-07	1028.8 + 227.3	CHANGE OIL 7QT Shell 50W, RETORQUE PROP Jhonell

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DATE	TK TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
6-1-08	1053.2 / 1257 ⁰	Annual Condition Inspection Per AC 90-89 & Checklist & conformed to App D FAR part 43 Jhonell RC 2516888
8-28-08	1065.5 / 1272.6	Change oil Shell 100. Torque prop. Change Screen & O RING IN GASOLATOR
3-18-09	1091.1 / 1303.7	Change oil Shell 100 ✓ PROP TORQUE OK
7-20-09	1105 ² / 1320.8	Annual Condition Inspection Per AC 90-89 & checklist conformed to App. D FAR 43 Jhonell RC 2516888
8-8-09	1132 ⁻ / 1331 ⁻	CHANGE OIL 7QT Shell 100 Jhonell RC 2516888
3-6-10	1131 ⁻ / 1354 ²	CHANGE OIL 7QT Shell 100 PROP OK Jhonell RC 2516888
8-2-10	1146 ⁻ - 1371 ²	Annual Condition Inspection Per AC 90 89-A & checklist conformed to Appendix D FAR PART 43 Jhonell RC 2516888
3-4-11	1170 ⁻ / 1400 ²	PLUGS 1 & 3 Bottom cyl give oily. Engine using 1 QT Drained oil C2.5 HRS. PULL CYL. #1 & #3. Rings out of service limits. Exhaust guides out of service limits. Values OK. CYL #1 & #3 give choke bore & speed well within service limits. REPLACE EX.GUIDE IN #1 & #3. New RINGS BOTH. PREMIER ENGINE - TROUTDALE INSTALLED GUIDE & LAPPED EX VALVES.
4-1-11	1170 ² / 1401 ⁻	NO WORK ON INTAKE. TEST FLY 4-01-11 Jhonell RC 2516888

add 7 QTS
mixed oil
80W

TACH / HOBBS

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
5-6-00	644 ⁰ 762 ⁶	Change oil: GGT Shell Aero 100 1/2qt Marvel Mystery oil Torque prop, No Screens pulled. Jeyhaneel
8-21-00	676 ³ 797 ¹	Change oil GGT Shell Aero 100 1/2qt Marvel Mystery oil torque prop, No Screens pulled Jeyhaneel
12-26-00	699 ⁶ 826 ¹	Complete annual condition inspection per AC 90-89 checklist & conformance to App. D FAR 43. Jeyhaneel # 2516888
5-8-01	725 ⁰ / 855 ³	Change oil GGT Shell Aero 50 wgt. Torque prop, Clean off engine, No screen check, Jeyhaneel
9-23-01	754 ³ / 891 ⁶	Change oil GGT Shell Aero 50 [#] Torque prop, check brake fluid, No screen check, Jeyhaneel
1-10-02	770 ⁰ / 906 ³	Complete annual condition inspection per AC 90-89 checklist & conformance to App. D, FAR 43 Jeyhaneel # 2516888
2-27-02	779 ⁴ / 920 ³	Change oil GGT Shell 80 [#] , Torque prop, Clean engine, repair primer at cylinder fitting, oil screen check, Jeyhaneel
5-23-02	796 ³ / 941 ⁴	Change oil GGT Shell #100, Clean engine. Jeyhaneel 5-22-02 torque prop

TACH / HOBBS

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
2-2-2003	869 ⁴ / 957 ⁰	Complete annual condition inspection per AC 90-89 checklist & conformance to App. D FAR 43 Jeyhaneel # 2516888. install 4-Port primer, Time Rt mag 1° retard to 25°, Replace oil cooler duct from baffle to oil cooler & oil change Jeyhaneel # 2516888
6-26-03	918 ⁴ / 967 ³	Clean screen at fuel line to carb fitting. Remove float drain & check for debris. Nothing other than a small amount of tiny rust particles.
11-6-03	842 ¹	
8-26-03	826 ³ / 978 ⁰	OIL Change 7QT Shell Aero 100 Jeyhaneel
11-6-03	842 ¹ / 996 ³	OIL Change 7QT Shell Aero 100 Jeyhaneel install oil cover
3-1-04	855 ² / 1014 ¹	Complete annual condition inspection Per A/c 90-89 checklist & conformance to Appendix D / FAR 43. Jeyhaneel # 2516888
3-29-04	863 ³ / 1023 ²	TORQUE PROP BATS ADD 1QT 80W oil Jeyhaneel Remove oil cover plate on baffle

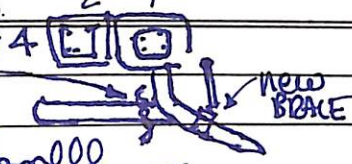
INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
7-22-97	397 ^E /478 ⁴	OIL change - 6QT 50W Shell. No screens checked. all prop bolts torqued @ 16 FT# jaydonell
11-5-97	429 ^E /516 ²	Complete Annual Condition Inspection per check list 90-89. Replace #4 intake rubber hose. Lift RT exhaust bracket up. Change oil Shell 40W 6QT. V screen OK. Rebuild back water pump & front water pump. V fuel screen replace carb-heater hose. See V list for details. jaydonell
3-10-98	461 ² /555 ²	OIL CHANGE, 6QTS 40# SHELLAC, PROP TORQUE CHECK, 16 FT# ADD BRAKE FLUID, PULL ALL SPARK PLUGS & CHECK GAP 0.19 PLUG TORQUE 35 FT# jaydonell
4-30	474 ² /570 ²	Remove oil cooler cover plate jaydonell
7-3-98	493 ² /590 ²	OIL CHANGE - 6QTS #50 SHELL. Remove STERBA PROP & REPLACE WITH SENSNICH 68-80 USE 16 FT#
7-17-98	495 ² /594 ²	✓ PROP TORQUE - BRING UP TO 16 FT#. 1/4 TURN NEEDED
10-16-98	570 ² /623 ²	✓ Prop Torque Bring up to 16 FT# jaydonell Replaced starter attach nuts w/ lock nuts jaydonell

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11-14-98	522 ³ /624 ²	Complete annual inspection per check list Ae 90-89 No repairs/replacements made or necessary. jaydonell 2516888 Rep. Certificate
3-18-99	541 ² /645 ²	Change oil 6QT Shell 100/RETORQUE & TRACK PROP No screens pulled jaydonell
7-1-99	570 ² /678 ²	change oil 6QT Shell 100/Retorque prop No screens pulled jaydonell
9-10-99	599 ² /712 ²	change oil 6QT Shell 100/Retorque prop No screens jaydonell
12-3-99	621 ² /737 ²	Complete annual condition inspection per check list Ae 90-89 Gap plugs - Clean lead 'big' #3, grease brake assy on axles. Torque prop - jaydonell 2516888 Rep Certificate Cleaned high speed carb & cleaned gasolator screen (oil changed / 6QT shell 100)
3-7-2000	632 ² /750 ²	Replace 8 ignition terminal ends due to cracking at mag distributors Plastic end, spring, insert (8) each - Replace bad spark plug cyl #3 with new champ REM 40E

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
9-9-95	1897/236 ⁰	EXHAUST PIPE BROKEN AT "Y" WHERE ITS BELOW #4  REWELD AND ADD FILLET. ALSO ADD NEW BRACE ON BACKSIDE OF "Y" CONNECTION <i>J. Howell</i>
10-7-95	1984/247 ³	#1 Exhaust stack broke at flange. See 8/20/95 entry. Aircraft down for Annual condition inspection.
10-30-95	1984/247 ³	Complete Annual condition Inspection per AC 90-89 Check-list. Replaced Tolle exhaust system with 4-pipe Vetterman System. Construct new heat muff, Construct new carb heat box at carburetor. Construct new exhaust pipe hangers off sump bolts. Rebuild prop spinner backing plate by adding 0.040 doubler. Balance prop & retorquer at 17 1/4#. Replacement of exhaust system was considered no weight & balance change. The new system may weigh slightly more. <i>J. Howell</i>
1-21-96	212 ² /262 ⁰	CHANGE OIL #40 Shell/Aero (W) 7 QTS Prop torque OK Exhaust OK <i>J. Howell</i>
5-27-96	237 ⁰ -292 ¹	#50 Shell/Aero change modify oil breather to clamp to exhaust pipe. Clean Engine Oil screen <i>J. Howell</i>
4-28		TORQUE CHECK OK

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
6-30-96	258 ² /319 ⁴	Torque prop bolts to 16 1/4#. Took 1/4 turn on all. <i>J. Howell</i>
7-8-96	267 ² /329 ¹	Torque prop bolts C16/FT 1/4 turn all check fuel strainer & screen, check breather pipe for clear, change oil C 6 1/2 QTS Shell Aero 100 (50w), <i>J. Howell</i>
9-10-96	293 ⁰ /358 ⁴	Change oil AeroShell 100 (50w). Repair carb heat hose, Torque prop C 16 1/4#. 6 QTS OIL
11-1-96	310 ⁴ /377 ⁴	Complete Annual condition Inspection per AC 90-89. Attached. Timed mag. - pt mag was found slightly advanced. Both @ 25° now. <i>J. Howell</i> 536460492
1-23-96	319 ⁵ /388 ¹	Change oil 6 QTS AeroShell 50w. Retorque prop. Check OIL screen. <i>J. Howell</i>
2-20-97	345 ⁰ /417 ³	change oil 6 QTS AeroShell 50w - prop torque <i>J. Howell</i>
4-30-97	370 ² /445 ⁵	Change oil 6 QTS AeroShell 50w change prop sterba <i>J. Howell</i> prop torque 16 1/4#

TACT Actual INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
6-10-94	56 ^E /73 ²	Replaced oil cooler with whitney #38-1481 X. Remove 2 washers from oil bypass. There is now 1 washer in the spring spacer. Tight test slowed 40# idle & 75# at full throttle - good. <i>Thomson</i>
7-16-94	66 ⁴ /85 ⁴	Drain oil & replace with Shell Aero 100. Relocate oil Breather tube to a direct connection on the exhaust pipe. Install tool kit in Lt cowl check fanning. <i>Thomson</i>
9-11-94	90 ² /113 ⁴	Drain OIL & Replace with Shell Aero 80. Pull lower sump screen. A few small particles of gasket material. No metal. Fuel stains around carb. Ran elect fuel pump to ✓ for leaks - None found. Return Spring on carb bellcrank broken.
10-15-94	99 ⁷ /123 ²	I have completed annual inspection on this engine per check list AC 90-89. DIT. Comp ✓ 1. 77/80 2. 77/80 3. 75/80 4. 73/80. PSI 125 125/144/127/132. <i>David Thomson</i> 536400492 / 2516888 <i>g</i>

TACT TRUE INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
11-18-94	107 ² /132 ²	Block off oil cooler inlet for winter temp. <i>Very fine</i> Check prop bolt torque 17 FT/# OK. No take ups.
1-7-95	115 ⁴ /141 ²	Change oil. Use 7QT. 15-50 Phillips 66. Check Prop bolts at 17 FT/#. NO CHANGE. WIPE DOWN ENGINE. VUVAL ✓ FITTINGS. NO screens pulled this time. <i>Very fine</i>
3-30-95	134 ² /164 ⁴	Change oil - 7QT 15-50 Phillips 66. Prop bolt torque watch exhaust contact point of pipe crossover below #1 Inspect thermostat 2. Bypass valve crimp nut <i>Very fine</i> SCREENS CLEAN
6/20/95	158 ⁴ /195 ¹	Change oil 40 Shell 7QT 15-50 Phillips 66. TORQUE PROP to 17 FT/# NO SCREENS PULLED <i>Thomson</i>
8/20/95	182 ⁴ /228 ²	Change oil #40 SHELL 7QT 15-50 Phillips 66. TORQUE PROP. #1 EXHAUST FLANGE FAILED. REWELD AND ADD ADDITIONAL BRACE OFF ENGINE. DECREASE ENGINE. NO SCREENS PULLED. <i>Thomson</i>

10-13.8 INSPECTION & MAINTENANCE RECORD

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11/27/93	116/15-	with the oil cooler vent closed, max shows 210° outside temp 40°. Check prop. track. just inside 1/16 tolerance. <i>Shorell</i>
1-28-94	218/295	Reconstruct rubber seals on Lt Rear baffle and Lt Side Cylinder Baffle. Evidence of air forcing baffle out. Found cross exhaust pipe bracket cracked on Rt. Side. Remove to repair & replace. Review AD-93-18-03. There is a "V" on the carb data plate - so it is a single venturi. <i>Shorell</i>
1-29-94	218/295	attach return spring to carburetor arm to pull "on". Place insulator on rubber manifold joiner. Cut off exhaust pipes flush with exit angle. Oil shows about 1/2 qt down in 11 hours. <i>Shorell</i>
3-25-94	350/45.8	Remove metal cover on oil inlet cooler. Air temps were up to 220°F. <i>Shorell</i> Torque prop bolts 80-25'PT#

10-13.8 INSPECTION & MAINTENANCE RECORD

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3/27/94	38.1/47°	Prop found with chip of epoxy leading edge. Probably picked up at Vista. Filled in chip with JB Weld. Must file & smooth & clear coat. <i>Shorell</i>
4-11-94	39.4/51.4	Drain oil & replace with 50 wt. Shell detergent. Found Lt exhaust support large at pan. Bolt missing. Replaced. Remove prop & add paper shim to bring into track. Now within 1/16 track. Torque of pan bolts. Some were in need of tightening. <i>Shorell</i>
5-1-94	448/585	Pul cover. Rt exhaust ^{support} bracket broken at pan bolt. Built alum. & brackets & re bent support tubes Lt/Rt. Retorque nuts bolts @ 20'#. <i>Shorell</i>
6-5-94	565/732	Reset mag timing. Found at about 28° BTC. Set 25 BTC checked all tip plugs & bottom plug #4. All spotless. Pal nuts on mag. At 56 HRS, I found the oil cooler leaking. it has been removed & to be replaced with new one. <i>Shorell</i>

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
9-26-93	1.7	Note small seepage of fuel at strainer outlet. tighten pipe thread & filling 1 full turn. Check for leaks - none. ✓ security of primer fuel line to solenoid ok. Note small oil leak at #4 cylinder oil return fitting at valve cover. Note small oil leak at oil cooler. More so on left fitting. This amounts to no more than 3 drops anywhere. Not need of maintenance yet, but keep a watch on it.
9-26-93	1.7	Conducted free flow test this date. RT. tank 15 seconds for 1 pint. LT. tank for 16 seconds for 1 pint. The longest time is therefore (16)(8) = 128 seconds per gallon or: $\frac{1 \text{ gallon}}{128 \text{ seconds}} \times \frac{60 \text{ seconds}}{1 \text{ min}} \times \frac{60 \text{ min}}{1 \text{ hr}} = 28.13 \text{ gallon/hr.}$
- continued -		

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
		Using formula from EPA Handbook, The time to flow 1 gallon should not be longer than the larger of the two computations.
①		At 1.2 # fuel per hr per hp = $\frac{18,000}{150 \text{ HP (T/D)}} = 120 \text{ seconds}$
②		at 0.6 #/hp/hr Specific fuel consumption -
		Seconds/gallon = $\frac{14400}{(0.6)(150)} = 160 \text{ seconds.} \leftarrow \text{The larger.}$
		The fuel flow was 128 seconds per gallon & is acceptable because it is less than computation #2
		James 9-26-93
11/18/93	Theat / Actual 10.6 / 13.8	Drain #50 shell mineral oil. Replace w/ 7QT #40 shell mineral oil. Pull screen. No metal. A few pieces of sludge & cloth threads. Lub carb heat cable. Cover oil cooler inlet vent 100% ✓ fuel strainer - clean. No debris in it.

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
26-93	0.5	Run up engine to heat oil. All functions normal. Short full power bursts. Pull cowl. Pull lower sump intake screen. No metal chips. minor carbon flakes ←. Magnetiz test across screen was clean. (Prior to sump screen, oil was drained.) Pulled screen at oil pump. Screen was free of metal chips. Magnetic test across screen was clean. Small carbon particles ··· ← were removed from screen. The contained oil was returned to the crankcase <i>ffmce</i>
36-93	0.8	Power runs. max 300° CHT 200° OIL. IDLE needs to be set. mixture is pulled about 1/2 back to get smooth run. Pulled cowl. possibly some seepage at the oil cooler reducers. max static is 2100 Indicated <i>ffmce</i>

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
3-11-93	0.8 -	check prop bolts - OK. no looseness. tighten alternator belt. Note it had been slack & rubbed on starter housing. <i>ffmce</i>
7-11-93	1.1	Run ups to set idle mixture & RPM. Some rough running at idle. Plugs show oil. Plug #4 gap does not look right. Must gap or replace. All plugs pulled to ✓ & clean. Soot & oil. Especially lower plugs. No oil leaks noted. add alternator blow tube at front baffle. The spark plugs were rotated top to bottom. Plug #4 replaced
9-19-93	1.4	Idle at 650 RPM - smoothed up. Now in taxi tests at airport. Static at 2100 ind.

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
MAR 1-91		Cyl #3. Lock shroud tube nut. Install - 14 push rods same as Cyl #1. Dry lifter clearance 0.050" exhaust and 0.039" intake
		Cyl #2. Lock shroud tube nut: push rods in place. See Feb 23/91.
		Cyl #4 lock shroud tube nut. push rods in place. See Feb 23/91
		All the above valve covers set in place with REAL gaskets RG-75906
MARCH 23-92		Install engine on airframe RV-4 # 2239 N1306Y
AUG 16-92		Install magz. Slick 4000 Series
OCT 6-92		Secure exhaust system (Allen Tolle system)
OCT 6 92		Secure carburetor See yellow tag (Rebuild)

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
NOV 92		Compe oil line connections, fuel line connections & engine controls. Engine is basically ready to start.
11-27-92		Torque up Sensenich 68-80 prop to factory specs
1-31-93	0.4	— 1993 — Wp plugs removed spin engine to get oil pressure. OK at 5 blades. Prime fuel lines. Torque plugs. Engine was then fully cowed. Engine started immediately when starter hit. 70-80# pressure on start at 1200-1500 RPM. Run up at 1000 RPM & greater per Lycoming instructions. 3 separate run ups were made this date. Max oil temp 200° max CHT 300. Mag drop OK. Seems rich. No adjustments attempted on this run up - 0.4 hr TACH

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
Feb 20-91	~	Install cyl. #1 to crankcase - not torqued yet
Feb 21-91	~	Install cyl # 2, 3, 4 to crankcase - not torqued yet The above were installed per Lycoming manual para. 6-121 thru 6-124. For new & serviceable parts see log, invoice & yellow tags.
Feb 22-91	~	Torque all bolts/nuts initially to 300 ⁱⁿ #. Sequence per Lycoming Fig G-32 para. 6-126. Then went back and torque 600 ⁱⁿ /# on 1/2" nuts, per sequence. Verified with 5 second hold. All 3/8" nuts checked again at 300 ⁱⁿ /# after 1/2" nuts brought up to 600 ⁱⁿ /#. CYL 1, 2, 3, 4 torquing completed.
Feb 23-91		Assemble push rod shroud tubes to all cyl. Assemble rockers on cyl. 2 & 4. These have dry collapse clearances of 0.063 - 0.075 all. This was accomplished with +3 pushrods.

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
Feb 23-91		Continued. The dry collapse clearances on valves in cyl 1 & 3 are in excess of 0.080 & must be filled w/-4 pushrods before proceeding
Feb 26-91	~	Assemble oil drain tube assemblies to cylinders. Nipples in crankcase @ 110 ⁱⁿ /#. Bolt oil sump assembly to crankcase & torque. Install intake manifold pipes to all cylinders & torque. The STD-91 Pipe plug was installed & torqued. 7160 ⁱⁿ #. External sump plugs torqued & safety wired.
Feb 27-91	~	Install pipe plugs in primer nozzles of all 4 cyl. torqued
MAR-91	~	CYL #1. Lock shroud tube nut, install 2 new pushrods # 15F19957-(14) (Superior). Exhaust dry tappet clearance at 0.041". Intake at 0.042"

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
Feb 5/91	—	Install new bearings on rods part # SL61662. Install rod bolts SL78027 & nuts SL12186 (8) & torque up to 480in# (40FT#) All torque values rechecked. All nuts marked c. 40FT# w/link Pen.
Feb 6/91	—	Lube lifter Tappet bodies & cam with special oil supplied with cam. Bring case halves together and pretorque according to Rycoing manual 7-88 thru 7-94. Co-Silk Thread based on case 1/2. Permatex Aviation #3H Form-A-Gasket for case halves.
Feb 8/91	—	Vacuum pump drive gear & adapter assembly will not be installed. Install 1/4" 6061-T6 cover plate & secure with 1/4-20 screws.
Feb 9/91	—	Install new oil pump gears SL18109-S impeller kit Safety wire nuts. Install tach shaft & circlip. Insure idler gear is aligned w/cam & crank marks Service Int 1341, Idler shaft lube hole drilled,

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
Continued	—	Install new fuel pump (Ac) follower. Lube gears & install accessory case to crankcase. Prelim. run out on crank with spacer gauge shows no perceptible shaft wobble. All screws set w/anti-sieze compound.
Feb-10-91	~	"Blue" check valve seats to valves, Intake valves are used (Caton P/N 72625) & check 0.60" + edge clearance. Stems true. Exhaust valves are new (4) P/N SL17540.
Feb 18/91	~	Install intake valves & exhaust valves on all 4 cylinders. Installed new P/N LW11475 (4) P/N 60009 (8) & P/N MSI3997-3 (8). Guides were lubed with special oil supplied with cylinders & also commercial engine assembly lube for value guides.

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
1-26-91	—	Install (5) new plugs (STD 1102) 1/8-27NPT in crankcase oil galleries front/back
		Install idler gear shaft to each case half torque 200#lb & secure lock plates.
		Install oil seal 'O' rings at rear studs & Rt case 1/2 at front main bearings
		Install Reconditioned Tappet bodies (see yellow tag 1-9-91) lube according to instructions
		Install front & center thru-studs in Lt. Case 1/2
1-27-91		Install new bearings SL67447 in case 1/2 each side
		CRANKSHAFT- INSTALL OIL seal over flange. INSTALL crankshaft gear 61155 on end of crankshaft
		Service Instruction 1141D is OK & complied. New SL-STD 2213 Bolt

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
2-1-91	New	Install compression & OIL RINGS on Pistons 1, 2, 4 Ring set SL5401-A1 & Piston set SL75413 (Superior Parts)
	Yellow tag UNKNOWN	Cylinders have been numbered to match pistons. Cylinders are yellow tagged (see file) and are chrome std. choke bore. All ring gaps per Lyc. Std. limits & all were checked for clearance .0015 min at top of travel. The .0015 gap was always exceeded & normally ran 0.020-0.022 for compression rings & 0.015 for oil rings. See later log entry for Piston, rings-cylinder on #3. I overgapped these rings & must replace. <i>gt</i>
2-5-91	New	Install compression & oil rings on piston 3, Ring set SL5401-A1 & Piston SL75413 (Superior Parts) Gap .00075 met or exceeded in top position. choke bore of 0.045 min met. on rings. 0.015 met on oil ring.

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
1-4-91	UNKNOWN	CRANKSHAFT. Per Wally Olsen, crankshaft was partially checked. Mic check on all main & rod journals showed within factory new dimensions. Crank stamped G1158AL F-48. FLANGE=76948 FC-978 A68457
4-17-89	UNKNOWN	CRANKSHAFT- Reground & yellow tagged A#E#A work order A31547 #76097 MB -Berg
4-4-91	UNKNOWN	EXHAUST ROCKERS PN 74636 (4) mic check shows bushing dimension at outer wear limit but acceptable for service
1-4-91	UNKNOWN	INTAKE ROCKERS PN 69444 (4) mic check shows bushings within service limits.

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
1-10-91	UNKNOWN	CONNECTING RODS - 4 Rods obtained Thru Hatfield Enterprises - McKinnon Airport I had rods magna fluxed - all OK. The upper bushings all were within manufacturer's tolerances for new bushings. Rods are 70467 W 1-3 (1-2-3-4). These are a matched set from a disassembled engine.
1-12-91	UNKNOWN	Purchased 149 tooth starter ring gear from Hatfield Enterprises. Heat soak to 350° & cold soak pulley. Drop-on fit & now snug.
1-15-91	UNKNOWN	CYLINDER HEADS (4) 0320 - yellow tagged chromed to std. Purchased from Western Skyways in 1980-. See backup files for yellow tags.

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
3-19-89	UNKNOWN	Purchased engine from Evergreen Flying Service. Engine disassembled. The crankshaft has reportedly been magnetic particle checked. The 4 cylinder heads are reman. chromed to std, yellow tagged. There are no accessories. The total time on the engine is not known.
1-7-91	UNKNOWN.	CRANKCASE — L-28433-27-A. On bottom of Sump - / 1-12-70 RT / 1-5-70 LT /. All OIL LINE Plugs remove & galleries cleaned w/ solvent under pressure. Visual inspection shows galleries clear. From my experience, I saw no fretting at the bearing match points on the case halves. Visual inspection of all accessible surfaces showed no distress cracks or damage. Outside case halves painted with engine gray paint.

ENGINE DESCRIPTION

MANUFACTURER LYCOMING- MODEL 0320 E2D
SERIAL NUMBER L-28433-27A DATE OF MANUFACTURE 1970 (See log entry)
RATED BHP 150 RPM 2700 MANIFOLD PRESSURE _____
FUEL REQUIRED 80/87