



G&N Aircraft, Inc.

LEFT

Engine Log

**F.A.A. Certified Repair Station
MW2R020L**

1701 E.Main Street
Griffith, IN 46319
phone: 219.924.7110
toll free: 800.348.6504
fax: 219.924.1059

"Quality not Quantity"

G&N Aircraft, Inc. Engine Log Book

- Manufacturer _____
- Model _____
- Serial Number _____
- Engine Total Time _____
- Recommended TBO _____
- Minimum Octane Fuel _____

Important Notice to Installer

Even though this engine has been test run and set using our dynamometer it must be set in the correct manner and within the limitations as specified in the engine and airframe manufacturers service manuals when installed in the aircraft.

G & N AIRCRAFT, INC. / Limited Piston Engine Warranty

Effective 1/1/2006, G & N Aircraft, Inc., (hereinafter "G & N") makes the following warranty to its customer, subject to the limitations, conditions and exclusions set forth below.

WARRANTY COVERAGE - For a period of twelve (12) months after date of delivery to customer, G & N Aircraft, Inc. shall repair or replace, at its option, any aircraft engine, accessory, or part which is found to be defective, to G & N Aircraft, Inc.'s satisfaction, within said warranty period.

For engine warranty after twelve (12) months from the date of delivery to customer and prior to the expiration of the manufacturers recommended time between overhaul ("TBO"), the cost of repair or replacement (including the cost of parts and labor), at G & N Aircraft's option, shall be prorated in the following manner. The customer shall pay a prorated amount based upon the engine's TBO and the engine hours (which shall be deemed the greater of logbook hours, recorded tachometer hours, or a minimum of forty (40) hour per month from date of delivery). For instance, an engine with a TBO of 2000 hours and with 200 hours of usage in a 16 month period would have a prorated warranty coverage of 68% applied to cost of a replacement engine or to the cost of parts and labor for repair of this subject engine, either of which shall be at the option of G & N Aircraft, Inc. Reasonable labor costs associated with the repair of a warranted engine shall be prorated in the same manner on the basis of a flat rate schedule established by G & N Aircraft, Inc.

After the initial twelve (12) months from date of delivery, G & N Aircraft, Inc. will not assume any responsibility for the repair or replacement of engine accessories, including but not limited to the following: magnetos, starter, alternator, ignition harness, turbocharger, carburetor, fuel injection, etc.

Replacement parts supplied for warranted engines still covered by manufacturer's warranty are supplied on an exchange basis prepaid by customer. G & N Aircraft, Inc. will pursue warranty claims with the manufacturer on the owner's behalf. Any allowance by the manufacturer will be credited to the operator's account.

REQUIRED CONDITIONS AND PROCEDURES NECESSARY FOR OBTAINING WARRANTY WORK - The following conditions and procedures must be met before G & N Aircraft, Inc. is liable under the provisions of this written warranty. The foregoing warranty shall be effective only if the engine or component to be serviced is returned to G & N Aircraft, Inc.'s facility at customer's expense, together with a detailed description in writing of the nature of the defect. The customer or his representative should contact G & N Aircraft, Inc. for verification and authorization of warranty prior to return and/or repair. Written authorization

must be obtained from G & N Aircraft, Inc. before repairs covered by warranty can be performed other than by G & N Aircraft, Inc. In no event shall allowable repair costs exceed local published shop rates. This warranty shall apply if and only if the engine has been properly installed and maintained in accordance with current approved standards of the Federal Aviation Administration ("FAA") and current recommendations of the manufacturer as specified in applicable factory manuals and service bulletins. The performance of recommended inspections and maintenance must be documented by appropriate logbook entries which must accompany any engine returned for warranty work. Only defects which are reported to G & N Aircraft, Inc. within the warranty period are covered by this warranty and G & N Aircraft, Inc. must be given written notice, within ten (10) days after discovery.

LIMITATIONS, EXCLUSIONS, AND DISCLAIMERS - G & N Aircraft, Inc. shall not be liable for freight charges, transportation or delivery expenses, costs, or airframe repairs, all of which are excluded under this warranty. G & N Aircraft, Inc. does not warrant parts, materials or services supplied which are covered by manufacturer's warranty. This written warranty shall not apply to any engine which has been subject to misuse, neglect, accident or damage from the elements, or which has been installed repaired or maintained or altered in any manner which, in the judgment of G & N Aircraft, Inc. has had an adverse effect on the engine or its parts. This warranty shall not apply to any engine which has been operated under conditions which exceed the manufacturer's recommendations. Unless prior approval is given in writing by G & N Aircraft, Inc., this warranty shall not apply to any engine which has been repaired or altered, in any manner other than by G & N Aircraft, Inc. or its authorized representative.

THE FOREGOING WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED, ARISING BY OPERATION OF LAW OR OTHERWISE, INCLUDING WITHOUT LIMITATION THE WARRANTY OR MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE WHICH WARRANTIES ARE HEREBY EXCLUDED. G & N Aircraft, Inc.'s liability hereunder shall be limited to the repair or replacement of any engine or part found to be defective within the applicable warranty period as set forth above. IN NO EVENT SHALL G & N AIRCRAFT, INC. BE LIABLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES OR ECONOMIC LOSS OF ANY NATURE WHETHER ARISING IN CONTRACT OR TORT, INCLUDING STRICT LIABILITY IN TORT OR NEGLIGENCE ON THE PART OF G & N AIRCRAFT, INC. The laws of the State of Indiana will control the interpretation and application of this warranty. All disputes regarding this warranty and any related purchase or repair must be adjudicated in Lake County, Indiana.

Warranty No. 61006
Engine Serial No. 148040-7-V
Aircraft Registration No. _____



G & N AIRCRAFT, INC.
1701 East Main Street
Griffith, Indiana 46319
Tel: (219) 924-7110

G&N Aircraft Recommended oil after break in: Any approved straight weight AD oil of a viscosity respective of operating outside air temperature, i.e. Grade 65W through 100W.

This is to certify that the engine described hereafter has been overhauled to the manufacturer's new parts limits.

Engine disassembled, cleaned, inspected and reassembled in accordance with manufacturer's overhaul instructions. All steel parts magnafluxed. Engine test run in F.A.A. approved test cell. All applicable Airworthiness Directives and Manufacturer's Service Bulletins are in compliance as of date of overhaul.

A description of these repairs is on file at this agency under:

JOB NO. 61006 DATE 10/10/2006
MFG. Continental MODEL IO-470-V0
SERIAL NO. 148040-7-V TIME IN SVC. 5599.3



G & N Aircraft, Inc.

1701 E. Main St.
Griffith, IN 46319
(219) 924-7110

Tom Hall
Authorized Signature

C.R.S. #MW 2R020L

The Accessories Listed Below Were Overhauled and Supplied With This Engine

ENGINE	<u>IO-470-V0</u>	SN	<u>148040-7-V</u>	DATE	<u>10/10/06</u>
	P/N	S/N		P/N	S/N
MAG.	<u>10-600606-1</u>	<u>E06HGN01</u>	PROPELLER	<u>NONE</u>	
MAG.	<u>10-600656-1</u>	<u>E06HGN02</u>	PROP. GOV.	<u>NONE</u>	
ALT./GEN.	<u>NONE</u>		TACH. GEN.	<u>NONE</u>	
INJ./CARB.	<u>632916-2</u>	<u>C048604RA</u>	TURBO CHARGER	<u>NONE</u>	
FUEL PUMP	<u>646212-3</u>	<u>F129015BR</u>	WASTE GATE	<u>NONE</u>	
STARTER	<u>PM2407</u>	<u>85022911</u>	CONTROLLER	<u>NONE</u>	
VAC. PUMP	<u>NONE</u>		CONTROLLER	<u>NONE</u>	
DIS. VALVE	<u>631351-10A5</u>	<u>C227328</u>	REL. VALVE	<u>NONE</u>	



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W.O.# 61006
Tom Hall
Authorized Signature

C.R.S. #MW 2R020L

COMPLIANCE RECORD

S/N 148040-7-V W/O 61006

C/W complied with, P/C/W previously complied with, N/A not applicable.

CRS MW2R020L *10/2/01*

NEXT COMPLIANCE HRS. & DATE	METHOD OF COMPLIANCE
	N/A by P/N
	N/A by P/N
	N/A by P/N
	N/A by P/N
	P/C/W
	N/A by S/N
	N/A by S/N
	P/C/W
	C/W new capacitor

COMPLIANCE RECORD

S/N 148040-7-V W/O 61006

C/W complied with, P/C/W previously complied with, N/A not applicable.

CRS MW2R020L Tom Hall

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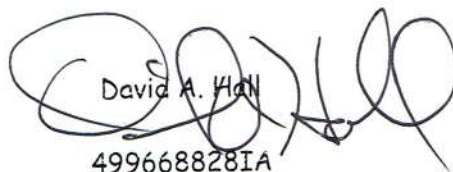


D & R AIRMOTIVE, L.L.C.
Kirksville Regional Airport
27165 Airport Trail • Kirksville, MO 63501
(660) 627-0390

ble

11/15/2006 N3311X Hobbs Time 351.0 hrs.
SMOH 000.0 hrs.

This engine Teledyne Continental M/N IO-470-VO, S/N 148040-7-V, installed in N3311X this date after overhaul @ G & N Aircraft, Inc. Installation with all new engine mounts, bolts, locks and misc hardware. Installed all new flexible hoses and lines from Precision Hose Technology, Inc. Serviced engine with (12) qts. Aeroshell 80 non-detergent oil. Test ran engine for operation, oil and fuel leaks. Ops checks are normal. I certify that this engine has been inspected in accordance with an annual inspection and was determined to be in airworthy condition.

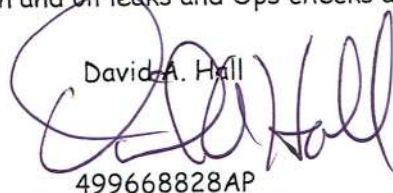

David A. Hall
499668828IA



D & R AIRMOTIVE, L.L.C.
Kirksville Regional Airport
27165 Airport Trail • Kirksville, MO 63501
(660) 627-0390

N3311X Hobbs Time 362.3 hrs.
SMOH 11.3 hrs.

Ran engine to operation temperatures, drained engine oil and removed oil screen to check for metal contaminations, none found. Checked for engine mounts security and all hardware for security. Checked exhaust system for security. Serviced engine with (11) qts. Aeroshell 80 non-detergent oil. Test ran for operation and oil leaks and Ops checks are normal.


David A. Hall
499668828AP

De



D & R AIRMOTIVE, L.L.C.
 Kirksville Regional Airport
 27165 Airport Trail • Kirksville, MO 63501
 (660) 627-0390

N3311X 2/27/2007 Hobbs Time 387.7 hrs.

Ran engine to operation temperatures, drained engine oil and removed oil screen to check for metal contaminations, none found. Serviced engine with (11) qts Aeroshell 15W50 oil, test ran for oil leaks and operations, all Ops checks are normal.

David A. Hall
 499668828 AP



D & R AIRMOTIVE, L.L.C.
 Kirksville Regional Airport
 27165 Airport Trail • Kirksville, MO 63501
 (660) 627-0390

N3311X 9/15/2007 Hobbs Time 419.5 hrs.

Ran engine to operation temperatures, drained engine oil and removed oil screen to check for metal contaminations, none found. Checked engine installation for security. Serviced engine with (11) qts. Aeroshell 15W50 oil. Washed engine compartment down, test ran for operation and oil leaks, all Ops checks are normal.

David A. Hall 499668828 AP







D & R AIRMOTIVE, L.L.C.
 Kirksville Regional Airport
 27165 Airport Trail • Kirksville, MO 63501
 (660) 627-0390

N3311X 12/21/07 Hobbs Time 442.7 hrs.
SMOH 91.7 hrs.

ANNUAL INSPECTION Ran engine to operation temperatures, drained engine oil and removed oil screens to check for metal contaminations, none found. Checked cylinder compressions as follows: Cylinder #1 80/72 #2 80/70 #3 80/73 #4 80/72 #5 80/75 #6 80/76. Cleaned, gapped, repainted, and rotated spark plugs. Checked exhaust system for security and condition. Checked all engine mounting hardware for condition and security. Serviced engine with (11) qts. Aeroshell 15W50 oil. Test ran for oil leaks and operations, all Ops checks are normal. I certify that this engine has been inspected in accordance with an annual inspection and was determined to be in airworthy condition.

David A. Hall
 499668828IA

Date	TACH	TTSN	Performed Work: Must include signature, certificate number, and repair station number if applicable
	Hobbs	SMOH	
			 <p>New Vision Aviation 25093 Ebony Av Callao, Missouri 63534 1-660-651-0326</p> <p>N3311X January 18, 2008 Hobbs time 470.4 Drained oil and removed oil screen and cleaned. Filled with 12 quarts of Philips 20/50 x/country oil. Replaced screen and safety tied. Washed down engine and test ran for leaks. None found. Returned to service this date.</p> <p></p> <p>Richard Castle AP 2759485 IA</p>
			 <p>New Vision Aviation 25093 Ebony Av Callao, Missouri 63534 1-660-651-0326</p> <p>N3311X Oct. 24, 2008. Hobbs time 510.7 Removed oil screen and drained oil from left engine. Replaced oil screen with FM Enterprises Model C6LC-L oil filter adapter and a Champion Ch48108-1 oil filter. Installed as per instructions with STC SE09356SC. Filled engine with 11 qts Aeroshell 15/50 oil and test ran and checked for leaks. None found. Removed all six fuel injectors and replaced with six modified fuel injectors from GAMI INC. Installed as per instructions with STC SE09217SC. Test ran engine and check all ops. Ops normal. Returned to service this date.</p> <p></p> <p>Richard Castle AP 2759485 IA</p>


G&N Aircraft Recommended oil after break in: Any approved straight weight AD oil of a viscosity respective of operating outside air temperature, i.e. Grade 65W through 100W.

Date	TACH	TTSN	Performed Work: Must include signature, certificate number, and repair station number if applicable
	Hobbs	SMOH	
			<p>New Vision Aviation 25093 Ebony Av Callao, Missouri 63534 1-660-651-0326</p> <p>N3311X January 15, 2009. Hobbs Time 567.5 Left Engine -Total time engine SMOH 216.5. Drained oil and removed oil filter and cut open and inspected for contamination, none found. Filled with 12 qts. Philips 20/50 oil. Installed new Champion oil filter and safetied. Ran compressions, #1-74, #2-71, #3-75, #4-68, #5-66, #6-74. Removed spark plugs on #1, #3, and #5 cylinders and G&N engines was notified. Borescoped those cyl and found no anomalies. Reset Mag timing. Inspected all plug wires, & fuel system components. Inspected oil radiator and all oil lines, controls and electrical systems. Removed Left exhaust stack and sent to Aero-fabricators for repair of broken flange. Reinstalled stack with new gaskets. Washed down engine and test ran for leaks, none found. I certify that this engine was inspected in accordance with an annual inspection and was determined to be in an airworthy condition.</p> <p><i>Richard Castle</i> Richard Castle AP 2759485 IA</p>
			<p><i>N3311X March 30, 2009 Hobbs time 620.0</i> <i>Drained oil & removed oil filter & cut open to check for contamination none found. Installed new oil filter & safetied. Filled with 11 qts Philips 20/50 xc oil. Test ran for leaks - none found. Returned to service this date - R. Castle AP 2759485 IA</i></p>
			<p><i>N3311X June 5, 2009. Hobbs time 684.5.</i> <i>Drained oil & removed filter & cut open & checked for contamination - none found. Installed new oil filter & safetied. Filled with 11 qts 20/50 xc oil and test ran for leaks - none found. Returned to service this date. R. Castle AP 2759485</i></p>

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Date	TACH	TTSN	Performed Work: Must include signature, certificate number, and repair station number if applicable
	Hobbs	SMOH	
7/30/09	743.2		N3311X - July 30, 2009 Hobbs time 743.2. Drained oil & removed oil filter. Installed new CR4808 and syticed. Cut open old filter & checked for contamination - none found. Filled with 12 qts 20/50 philips 7/6 oil. Removed right exhaust stack due to broken flange and replaced with new exhaust stack. Removed tach generator & installed new tach generator unit. OTH conditions. Washed down engine & test ran for leaks - none found. Approved for return to service this date. Mcclister AP 7759485 IA
8/18/09	791.6		Complied with MSB09-1A By inspection. No affected cylinder installed on this engine By date of Manufacture. Mcclister AP/IA 7759485
8/18/09	791.6		N3311X - 8-18-2009 Hobbs 791.6. Drained oil and removed filter & cut open, no contamination found. Installed new filter & 12 qts philips 20/50XC oil. Washed down engine & test ran for leaks - none found. Approved for return to service this date. Mcclister 7759485 AP/IA


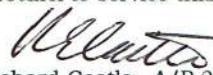




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Date	TACH Hobbs	TTSN SMOH	Performed Work: Must include signature, certificate number, and repair station number if applicable
DATE: 09/29/2009 HOBBS: 867.1 A/C# N3311X LEFT ENGINE: DRAINED OIL AND REMOVED FILTER. CUT FILTER AND INSPECTED, NO CONTAMINATES NOTED. INSTALLED NEW DRAIN PLUG CRUSH WASHER, P/N AN900-10. SERVICED ENGINE WITH NEW OIL FILTER, P/N CH48108-1 AND 12 QUARTS PHILLIPS X/C 20W50 OIL. ENGINE RUN UP NORMAL, NO LEAKS NOTED. MIZZOU WO# 11506.			
SIGNED <u>Michael P. Blakely</u> CERT. NO# <u>2656376</u> MIZZOU AVIATION REGIONAL AIRPORT JOPLIN MO. 64801			
10/22 2009	914.5		N3311X Hobbs 914.5 Drained oil & removed filter & cut open - no contamination. Installed new ch 48108 oil filter & soaked. Filled w/12 qts 20/50 xc oil. Removed all spark plugs & cleaned, gapped & tested. Reinstalled plug. Wash down eng. & test run for leaks - none found. Allocated 2759485-AP
12/4 2009	928.1		N3311X Hobbs 928.1 Drained oil & removed filter & cut open - No contamination found. Filled w/12 qts 20/50 xc oil. Installed new ch 48108 oil filter & soaked. test run engine for leaks no found. Approved for return to service this date - Allocated HP2759485
 New Vision Aviation 25093 Ebony Av Callao, Missouri 63534 1-660-651-0326			
N3311X Feb. 1, 2010 Hobbs Time 1035.7 Total time since major overhaul 684.7 TT. 6284.0			
Removed all engine cowlings and drained oil and removed filter and cut open and check for contamination - none found. Installed new Ch48108 filter and filled with 12 qts. 20/20 Philips oil. Washed down engine. Checked torque on all exhaust man. bolts. Replace airfilter with new element. Removed and replaced all 12 spark plugs with new units. Compressions checked as follows, #1-74, #2-64, #3-76, #4-64, #5-72, #6-72. Inspected magnetos and reset timing to factory specs. Inspected wiring harness, fuel lines, servos, injectors and all related systems. Test ran engine for leaks and none found.			
I certify that this engine was inspected in accordance with an annual inspection and found to be in an air worthy condition. Approved for return to service this date.			

G&N Aircraf
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Richard Castle
Richard Castle AP 2759485 IA

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N through 100W.

Date	TACH Hobbs	TTSN SMOH	Performed Work: Must include signature, certificate number, and repair station number if applicable
10/1 2010	1301.4	950.4	 New Vision Aviation 25093 Ebony Av Callao, Missouri 63534 1-660-651-0326 N3311X, Oct 1, 2010. Hobbs time 1301.4 Time SMOH left engine 950.4 Drained oil and removed oil filter and installed new filter and safety tied and filled with 12 qts. 20/50 X/C Philips oil. Washed down engine and test ran for leaks. All ops normal. This engine approved for return to service this date.  Richard Castle A/P 2759485 I/A
10/19 2010	1323.9		 New Vision Aviation 25093 Ebony Av Callao, Missouri 63534 1-660-651-0326 N3311X, Oct 19, 2010. Hobbs time 1323.9 Removed and replaced left magneto with overhauled unit. Reset timing on both mags. Inspected oil filter adapter for leak and retorqued unit and safetytied. Removed and replaced rod end on mixture control cable at servo and removed and replaced rod end on throttle cable at servo. Test ran engine and adjusted throttle cable fo proper idle. This engine approved for return to service this date.  Richard Castle A/P 2759485 I/A Mag Removed SN # installed SN #
10/26/10	1330.1		Removed Both Main gear wheels & installed new Disc Rotors and all new Brake pads on both MLG.  A/P 2759485 - See airframe log
11/3/10	1351.2		Drained oil and removed oil filter. Cut open filter & checked for contamination - none found. Filled oil 12 qts 20/50 X/C oil & installed new Ch 48408-2 oil filter. Installed oldmilt Magneto on Right Side & timed Both Mag. Installed 12 new spark plugs. Removed & replaced #3 EOT probe, Removed & replaced #4 CHT Probe. Washed down engine & test ran for leaks - none found. This engine is approved for return to service this date  A/P 2759485 I/A

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of a viscosity respective of operating outside air temperature, i.e. Grade 65W through 100W.

Date	TACH	TTSN	Performed Work: Must include signature, certificate number, and repair station number if applicable
	Hobbs	SMOH	



**N3311X (Left Engine Logs)
TCM IO470- VO S/N 148040-7-V**

Inspected engine as required by FAR91.409 (a) (1) per inspection checklist meeting requirements of FAR 43.15 (2)(c) and FAR 43 App. D.
 Performed post operational checks per FAR43.15 (c)
 Compression #1 70/80 #2 68/80 #3 72/80 #4 72/80 #5 74/80 #6 70/80.
 Current Compression Meets Requirements of **TCM SB84-15** Cylinder Leak Check dated 12/21/84. (Master Orifice reading Minimum 42 P
 Changed oil and filter (Phillips X-C 20W50) Cleaned fuel injector nozzles. Replaced induction air filter (BA2305)
 Replaced left mag gasket. Reset mag timing per **TCM MSB94-8D** Magneto to Engine Timing
 Installed missing left aft engine control cable support brackets #0850723-3 and 0850724-1. Replaced left side throttle support attach bushings #538468. Replaced damaged left engine top baffle #0851858-1. Repaired areas of neoprene flex baffles as required.
 Replaced both forward engine mounts #J12390-1 and repositioned rear inboard. Installed correct throttle control arm #0850689-1 and bushing 0850689-2. Tightened left alternator belt. Weld repaired left inboard exhaust aft riser 1/4" hole from cowl screw damage.
 Reinstalled Fuel manifold #631351-10A5 s/n GN81798C following OVH and return to service by Professional Aircraft (CRS#PO5R554Y) w.o. # 55032.
 CW TCM **SID97-3C** Fuel flow injection system adjustment.
 Installed OVH left side alternator Delco 1100747 s/n A7757 retruned to service by Aircraft Accessories of Oklahoma (CRS# RV3R829L) w.o. # 44849.
AD2009-16-03 eff. 9/9/2009 Superior Air Parts Cylinder Ass. NA parts not installed.
AD2009-19-07 eff. 10/7/2009 TCM EQ3 cylinder assy. Per TCM Service Bulletin MSB09-1B. NA cylinders not installed.
AD2009-24-52 eff 11/18/2009 (supersedes 2009-24-51) TCM Lifters. Found NA parts not installed per TCM Service Bulletin MSB09-8.

DATE 1/27/2011 TACH/HOBBS 1375.7 Engine TT 6624.0 TSMOVH 1024.7
"I CERTIFY THAT THIS ENGINE HAS BEEN INSPECTED IN ACCORDANCE WITH AN ANNUAL INSPECTION AND WAS DETERMINED TO BE IN AIRWORTHY CONDITION."

ANTHONY R. SAXTON

AP32537461A

03/06/2011	1423.7	Changed oil & filter (12 qts Phillips x/c 20W50 + Tempest AA48108-2). Checked filter for contamination - satisfactory. Retorqued F+M Enterprises oil filter adapter to 65 ft.lbs as per F+M. Secured loose ignition leads, alternator cables and loose fuel injector line clamps. Replaced worn clamp on starter cable. Resafetied improperly installed safety wire on crankshaft oil seal plate bolts. Post inspection run up and leak check satisfactory. END P. Mathewick AP2344541

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Date	TACH	TTSN	Performed Work: Must include signature, certificate number, and repair station number if applicable
	Hobbs	SMOH	
04/18/2011	HOBBS 1480.3		<p>Chained oil & removed filter. Cut open to check for contamination - none found. Installed new filter. Filled w/ 245 20/50 XC oil.</p> <p>Removed all spark plugs & installed cleaned & tested set.</p> <p>Checked compressions - #1-70, #2-64, #3-70, #4-62, #5-72, #6-66</p> <p>Inspected all eng. system w/ACI with a/coping. Test ran eng & check for leaks - all good normal. <i>W. L. Carter 2754485</i></p>
05/17/2011	HOBBS 1570.0		<p>Changed oil & filter (12 qts Phillips X/C 20W-50 & Tempest AA481032).</p> <p>Checked filter for contamination - satisfactory. Re-torqued F&M Enterprises oil filter adapter to 65 ft. lbs. as per F&M. Tightened all intake manifold hose clamps. Post inspection run up and leak check satisfactory. <i>ENO P. Matthew Cook A&P 2844541</i></p>
06/17/2011	hobbs 1556.5		<p>Drained oil & removed filter. Cut open to inspect - no contamination found. Installed new filter & supplied & filled w/ 12 qts 20/50 XC Phillips oil. Replaced Belt on alternator. Cleaned air filter. Inspected all prox mounts, fuel lines, pumps, exhaust, and oil lines all satisfactory. Compressions tested #1-66, #2-59, #3-69, #4-50, #5-72, #6-61. Removed all spark plugs & cleaned, gapped, & tested & reinstalled. Inspected Mag timing & harness. No anomalies found. Washed down engine & test ran for leaks - none found, all good normal. <i>W. L. Carter A&P 2754485-IA</i></p>

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Date	TACH	TTSN	Performed Work: Must include signature, certificate number, and repair station number if applicable
	Hobbs	SMOH	
7/21 2011	hobbs 16012		<p>Drained oil & Removed filter & cut open - no contamination found. Installed new oil filter & safetied. Filled w/12 QTs 20/50 xc oil. Tightened up Alternator Belt. Checked Compressions as follows #1-78, #2-63, #3-68, #4-50, #5-68, #6-66</p> <p>Test ran engine for leaks & Mag Check all ops Normal</p> <p>Master AP2759485</p>
08/18/ 2011	1650.0		<p>Changed oil & filter Uzots Phillips x/c 20W-50 & Tempest AA48108-2)</p> <p>Checked filter for contamination & took oil sample. Retorqued F+M Enterprises oil filter adapter to 65 ft. lbs. Compression test as follows #1 68/80, #2 65/80, #3 68/80, #4 58/80, #5 70/80, #6 64/80.</p> <p>Master office reading minimum 46/80 as per TCM SB 84-15.</p> <p>ops. checked satisfactory. END P. Matlow Cook ATP 2844541</p>
09-26 2011	1698.5 hobbs		<p>Changed oil & filter - cut open & checked for contamination - none found. Filled w/12 QTs 20/50 xc & installed New filter.</p> <p>Removed & Replaced vacuum pump w/new Jengin-tech pump model 1U12810 SAN #743799H. Removed all spark plugs & installed Fresh, tested plugs. Comp. tested #1-68, #2-60, #3-69, #4-48, #5 76, #6-65.</p> <p>Inspected engine mounts, exhaust system, fuel lines, oil lines & eng. controls, Washed down engine & test ran for leaks - none found - all ops normal. Master AP2759485</p>

G&N Aircraft Recommended oil after break in: Any approved straight weight AD oil of a viscosity respective of operating outside air temperature, i.e. Grade 65W through 100W.

Date	TACH	TTSN	Performed Work: Must include signature, certificate number, and repair station number if applicable
	Hobbs	SMOH	
10/12/2011	1751.7		<p>Drained oil & removed filter - attopen & checked for contamination - none found. Installed new filter & filled 16/12 oil 20/50 XC oil. Replaced Vacuum pump cooler hose w/ new hose of correct length. took oil sample. Test ran engine for leaks - none found. Approved for Return to service this date. McEster AP2754485</p>
11/4/2011	1764.6		<p>Removed Right Magneto SN #959151 and installed overhauled unit SN #A59747. Replaced Magneto gasket. Replaced P-lead ring connector. Reset timing on Both Magneto's to 20° BTDC. Test ran engine and all ops normal. McEster AP2754485</p> <p>Compressions tested as follows #1- 71/80, #2- 59/80, #3- 59/80, #4- 50/80, #5- 50/80, #6- 55/80. Hot check - McEster AP2754485</p>



N#: 3311X
Date: 21 November 2011

Midwest Corporate Aviation.

LEFT
~~Right~~ Engine Log


Cessna 310L
HM: 1792.6

S/N: 310L0161

Cleaned #4 cylinder fuel injector on left and right engines IAW IO-470-VO OHM.

I certify that this aircraft was repaired / inspected in accordance with current Regulations of the Federal Aviation Administration and is approved for return to service for the work performed. Pertinent details of the maintenance are on file at this repair station under W/O # OE

for Midwest Corporate Aviation, CRS# BVYR657C.

Date	TACH Hobbs	TTSN SMOH	Performed Work: Must include signature, certificate number, and repair station number if applicable																																
<p>MIDWEST AIRCRAFT SERVICES, INC. – Newton City-County Airport – Newton Kansas 03-05-12 TCM IO-470-VO, S/N 148040-7-V SMOH: 000.0 hrs Engine Total Time: 7081.4 hrs This engine was disassembled, cleaned, inspected, and overhauled using the following new parts: rod bearings, main bearings, rod bolts, rod nuts, crank gear bolts, cam gear bolts, counterweight rollers, counterweight washers, counterweight snap rings, piston pins, superior valve lifters, ignition harness, and spark plugs. The cylinders were replaced with new Nickel Assemblies from ECI, S/N's 82286-10, 82649-08, 79091-08, 82830-16, 78969-04, 79052-03. The new cylinders came with pistons, valves, springs, rocker shafts, and piston rings. The steel parts were magnafluxed by Air Capital NDI. The crankshaft was magnafluxed and ultrasonic inspected by Rick Romans Inc. The connecting rods, counterweights and camshaft were repaired by Rick Romans Inc. The magnetos were not repaired at this time. The fuel pump, flow divider, and throttle body/fuel control were overhauled by Great Planes Fuel Metering. The crankcase was repaired by DivCo Inc., Tulsa. The starter was replaced with an OH/exchange unit from Lamar. C/W AD#10-11-04 by installing new Superior lifters. AD#09-19-07 not applicable to new ECI cylinders installed. AD#07-04-19R1 not applicable to new ECI cylinders installed. The engine was serviced with Phillips 20w50X/C. The engine was test run and checked okay.</p> <p style="text-align: right;"><i>Kevin Collier</i> At P5152 2005</p>																																			
3/5/2012	TCM	IO-470-VO	S/N 148070-7-V																																
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">Description</th> <th style="width: 25%;">Part Number</th> <th style="width: 25%;">Serial Number</th> <th style="width: 25%;">Condition</th> </tr> </thead> <tbody> <tr> <td>Left magneto</td> <td>10-600606-1</td> <td>A57755</td> <td>32 hrs since OH</td> </tr> <tr> <td>Right magneto</td> <td>10-600656-1</td> <td>A59747</td> <td>68.5 hrs since OH</td> </tr> <tr> <td>Alternator</td> <td>None</td> <td></td> <td></td> </tr> <tr> <td>Fuel Pump</td> <td>646212-3</td> <td>F129015BR</td> <td>Overhauled</td> </tr> <tr> <td>Throttle Body/ Fuel Control</td> <td>631351-10A5</td> <td>C227328</td> <td>Overhauled</td> </tr> <tr> <td>Gami Nozzles</td> <td>GAD12D</td> <td></td> <td>Flowed & Tested</td> </tr> <tr> <td>Starter</td> <td>PM2407-8</td> <td></td> <td>Overhauled</td> </tr> </tbody> </table>				Description	Part Number	Serial Number	Condition	Left magneto	10-600606-1	A57755	32 hrs since OH	Right magneto	10-600656-1	A59747	68.5 hrs since OH	Alternator	None			Fuel Pump	646212-3	F129015BR	Overhauled	Throttle Body/ Fuel Control	631351-10A5	C227328	Overhauled	Gami Nozzles	GAD12D		Flowed & Tested	Starter	PM2407-8		Overhauled
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<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">  <p>Hobbs: 1833.1 Removed engine and sent to Midwest A/C for OH. Sent exhaust to ASW for OH. Reinstalled OH engine with new mounts and hoses. Installed OH Alt with new belt. Had A/C Access Of OK OH Alternator and Tach Generator and repair Governor. Exhaust system was OH by ASW. And installed with new gaskets and nuts. Serviced with Phillips x/c 20w50typeM. I certify that this Engine has been inspected I/A/W an Annual inspection and was determined to be airworthy condition.</p> </div> <div style="width: 45%;"> <p>785-354-7055 Billard Airport Topeka, Ks 66616 R. S. # M12R006L W.O.#12-3449 T.T:7081.4 hrs.</p> <p>Left engine log IO-470-VO S/N: 148040-7-V N3311X 3-26-2012 TSMOH 0.</p> <p style="text-align: right;"><i>Keith Hetrick</i> Keith Hetrick</p> </div> </div>																																			

G&N Aircraft Recommended oil after break in: Any approved straight weight AD oil of a viscosity respective of operating outside air temperature, i.e. Grade 65W through 100W.

Date	TACH	TTSN	Performed Work: Must include signature, certificate number, and repair station number if applicable
	Hobbs	SMOH	
04/05/ 2012	1839.9	6.8	Removed oil filter for post overhaul inspection. Found satisfactory. Installed new filter and added one quart Phillips Type M oil. <i>P. Natter Cash A+P 2844541</i>
04/23 2012	1854.4	21.3	Changed oil & filter (12 qts. Phillips 20W-50 x/c). Checked filter for contamination. Found Satisfactory. Post run and leak check satisfactory. <i>P. Natter Cash A+P 2844541</i>
05/23 2012	1878.0	44.9	Changed oil & filter (12 qts. Phillips 20W-50 x/c). Checked filter for contamination. Found Satisfactory. Post run and leak check satisfactory. <i>P. Natter Cash A+P 2844541</i>



785-354-7055
Billard Airport
Topeka, Ks 66616
R. S. # M12R006L
W.O.#12-3663
T.T:7184.5 hrs.

Left engine log
IO-470-VO
S/N: 148040-7-V
N3311X
9-12-2012
TSMOH 103.1.

Hobbs: 1936.2

Checked comp all 70/80 or better. Changed oil and filter, Serviced with Phillips x/c 20w50. Cleaned and gapped S.P. . Cleaned fuel injectors. Removed starter adapter and sent to Midwest A/C for repair and reinstalled.

Keith Hetrick
Keith Hetrick



785-354-7055
Billard Airport
Topeka, Ks 66616
R. S. # M12R006L
W.O.#12-3699 10-18-2012

Left engine log
IO-470-VO
S/N: 148040-7-V
N3311X
Hobbs: 1942.4

Removed starter adapter and sent to Aircraft Spec installed exchange 635050A-4. Removed both exhaust stacks and welded tabs and reinstalled. Replaced all mounts J12390-1.

Keith Hetrick
Keith Hetrick

11/20/2012 1988.7 155.6 Changed oil & filter (12 qts Phillips 20W-50 x/c). Filter, post run & leak check satisfactory. *P. Natter Cash A+P 2844541*

01/09/2013 2036.3 203.2 Changed oil & filter (12 qts Phillips 20W-50 x/c). Filter, post run and leak check satisfactory. *P. Natter Cash A+P 2844541*

G&N Aircraft Recommended oil after break in: Any approved straight weight AD oil of a viscosity respective of operating outside air temperature, i.e. Grade 65W through 100W.

Date

TACH

TTSN

Performed Work: Must include signature,
certificate number, and repair station number if applicable



785-354-7055
Billard Airport
Topeka, Ks 66616
R. S. # M12R006L
W.O.#13-3803

1-16-2013

Left engine log
IO-470-VO
S/N: 148040-7-V
N3311X
Hobbs: 2037.4

CLEANED SPARK PLUGS AND FUEL INJECTORS. CHECKED MAG TIMING OK. INSPECTED
ENGINE AND EXHAUST OK. REPLACED ALT AIR DOOR HINGE AND PIN. REPLACED FUEL
INJECTOR FLOW DIVIDER WITH OH 631351-1 UNIT.

Keith Hetrick
Keith Hetrick

DATE: 04/15/2013 HOBBS: 866.3 A/C# N421EW

LEFT ENGINE: WASHED DOWN ENGINE WITH SOLVENT. RAN ENGINE. FOUND LEAK TO BE COMING FROM
INLET SCREEN HOUSING. NO FURTHER ACTION TAKEN AT THIS TIME. MIZZOU WO# 12755R

SIGNED ROBERT T. HARRIS

MIZZOU AVIATION CRS AKCR139C

Robert T. Harris

REGIONAL AIRPORT

DATE 4-15-13

JOPLIN MO. 64801



785-354-7055
Billard Airport
Topeka, Ks 66616
R. S. # M12R006L
W.O.#13-3854
T.T: 7331.3 hrs.

Hobbs: 2083.0

Left engine log
IO-470-VO
S/N: 148040-7-V
N3311X
4-26-2013 ^{pvc}
TSMOH 2499

Drained oil, removed oil filter & inspected, okay. Installed new oil filter & serviced engine with 12 qts.
Phillips 20W50 XC. Ran up & leak checked, okay. Installed new map hose. Removed both magnetos & sent
to Midwest Aircraft for overhaul (warranty), left mag P/N 10-600606-1 S6RS-201, S/N A57755, right mag
P/N 10-600656 S6RSC-205, S/N A57747, reinstalled mags & checked mag timing. Removed starter adapter
& sent to Midwest Aircraft for warranty repair, reinstalled starter adapter & starter. Removed fuel bowl
screens, cleaned & reinstalled. Removed fuel injectors, cleaned & reinstalled. Cleaned & gapped sparkplugs.
Installed new nutplate on exhaust cover & outboard lower side of left cowl. Replaced fwd engine mounts P/N
96069-01. I certify that this Engine has been inspected I/A/W an Annual inspection and was determined to be
airworthy condition.

Keith Hetrick
Keith Hetrick



785-354-7055
Billard Airport
Topeka, Ks 66616
R. S. # M12R006L
W.O.#13-3890
Hobbs: 2089.8

Left engine log
IO-470-VO
S/N: 148040-7-V
N3311X
5-13-2013 ^{pvc}
TSMOH ~~2491~~ 256.7

Installed new vacuum pump from Wilco, P/N RAP216CW, S/N B27847. Replaced both fwd engine mounts,
P/N J12390-1. Replaced flow divider (warranty per Midwest A/C) P/N 631351-10A5P, S/N C227328, WO#
13-213, ran up & leak checked, found okay.

Keith Hetrick
Keith Hetrick

07/10/
2013

2130.8

297.7

Changed oil & filter (12 qts. Phillips 20W-50 XC). Checked filter
for contamination. Found satisfactory. Post run and leak check
satisfactory. P. Nuttall A&P 2844541

G&N Aircraft Recommended oil after break in: Any approved straight weight AD oil
of a viscosity respective of operating outside air temperature, i.e. Grade 65W through 100W.

Date

TACH

TTSN

Hobbs

SMOH

Performed Work: Must include signature,
certificate number, and repair station number if applicable



785-354-7055
Billard Airport
Topeka, Ks 66616
R. S. # M12R006L
W.O.#13-4060
Hobbs: 2187.5

Left engine log
IO-470-VO
S/N: 148040-7-V
N3311X
10-11-2013
TSMOH ~~249~~ 354.4 ^{PNC}

Drained oil, removed oil filter & inspected, no metal found. Installed new oil filter & serviced engine with 12 qts. Phillips 20W50 XC, ran up & leak checked, okay. Installed new Cessna Stack Assy from Aero Fabricator, WO# 0819093 & 0511116. Installed new fwd engine mounts, P/N J12390-1.

Keith Hetrick
Keith Hetrick



785-354-7055
Billard Airport
Topeka, Ks 66616
R. S. # M12R006L
W.O.#14-4221
T.T: 7467.3 hrs.

Left engine log
IO-470-VO
S/N: 148040-7-V
N3311X
5-28-2014
TSMOH 385.1

Hobbs: 2219.0

Drained oil, removed oil filter & inspected, okay. Installed new oil filter & serviced engine with 12 qts. Phillips 20W50 XC. Ran up & leak checked, okay. Installed new map hose. Removed both magnetos & insp left mag P/N 10-600606-1 S6RS-201, S/N A57755, right mag P/N 10-600656 S6RSC-205, S/N A57747, reinstalled mags & checked mag timing. Removed fuel bowl screens, cleaned & reinstalled. Removed fuel injectors, cleaned & reinstalled. Cleaned & gapped sparkplugs. Installed new nutplate on exhaust cover & outboard lower side of left cowl. Replaced fwd engine mounts P/N J12390-1. I certify that this Engine has been inspected I/A/W an Annual inspection and was determined to be airworthy condition.

Keith Hetrick
Keith Hetrick

01/14/2015 Hobbs: 2270.5

Changed oil and filter. Serviced with 12 qts. Phillips 20W-50 X/C. Post-run inspection and leak check satisfactory.

P. Nathan Cook
P. Nathan Cook A&P 2844541



785.354.7055
Billard Airport
Topeka, Ks 66616

R.S. #M12R006L
W.O. #15-4535
TSMOH: 484.4 HRS

LT Engine Log
N3311X
IO-470-VO
SN: 148040-7-V
6-1-2015
HOBBS: 2318.3 HRS
T.TIME: 7566.6 HRS

PERFORMED COMPRESSION TEST, ALL CYCLINDER AT 74/80 OR BETTER.
DRAINED OIL, REMOVED OIL FILTER, INSPECTED FOR METAL, NONE NOTED,
INSTALLED NEW FILTER, SERVICED WITH 12 QT OF PHILLIPS X/C 20/50. RAN TO OPS, NO
LEAKS FOUND.

REPLACED #4 R.B.C. GASKET, PN 655528.

CLEANED, GAPPED, TESTED SPARKPLUGS, AND ROTATED ALL SPARKPLUGS
REINSTALLED WITH NEW GASKETS, PN M674, AND TORQUED.

REMOVED, CLEANED AND REINSTALLED FUEL INJECTORS.

REPLACED LH ENGINE FORWARD SHOCK MOUNTS, PN J12390-1.

REPLACED LH ENGINE OIL TEMP PROBE CRUSH GASKET, PN MS35769-11.

I CERTIFY THIS ENGINE HAS BEEN INSPECTED I/A/W/ AN ANNUAL INSPECTION AND
FOUND TO BE IN AIR WORTHY CONDITION AND APPROVED FOR RETURN TO SERVICE.

Keith Hetrick
KEITH HETRICK

Date

TACH

TTSN

Hobbs

SMOH

Performed Work: Must include signature,
certificate number, and repair station number if applicable

NORTH-SCOUT AVIATION, INC. - FAA REPAIR STATION: 5NSR498C
27165 DAVID HALL TRAIL, KIRKSVILLE, MO 63501-7870 - TEL. 660-627-6023

MAINTENANCE RECORD

WO # WOM-00033

COMPLETION DATE 09/24/2015 AIRCRAFT Cessna 310L N# N3311X HOBBS 2325.7

Left Engine - Continental IO-470-OV S/N 148040-7-V. Replaced starter with overhauled Hartzell P/N MHJ-4003S (S/N-P070840), due to starter failure. See Form 8130-3 (W/O M617210) from Hartzell Engine Technologies (CRS 1HZR769B). Started engine and check for proper operation.

A complete description of work performed is on file at the organization under the work order number indicated above.

I certify that unless otherwise specified, the work was accomplished in accordance with 14 CFR Part 43 and in respect to that work, the article is approved for return to service.

Form: NSF0211
Revision Number: 001
Revision Date: 03/19/2015

Authorized Signature

North-Scout Aviation, Inc.
FAA CRS #5NSR498C

NORTH-SCOUT AVIATION, INC. - FAA REPAIR STATION: 5NSR498C
27165 DAVID HALL TRAIL, KIRKSVILLE, MO 63501-7870 - TEL. 660-627-6023

MAINTENANCE RECORD

WO # WOM-00074

COMPLETION DATE 02/26/2016 AIRCRAFT Cessna 310L N# N3311X HOBBS 2363.7

Left Engine - Continental IO-470-VO S/N 148040-7-V. Changed oil and filter. Serviced with 12 quarts Phillips 20W-50 X/C and Champion CH48108-1 filter. Disassembled and inspected original oil filter - no abnormalities found. Post-engine run inspection and leak check, found satisfactory.

A complete description of work performed is on file at the organization under the work order number indicated above.

I certify that unless otherwise specified, the work was accomplished in accordance with 14 CFR Part 43 and in respect to that work, the article is approved for return to service.

Form: NSF0211
Revision Number: 001
Revision Date: 03/19/2015

Authorized Signature

North-Scout Aviation, Inc.
FAA CRS #5NSR498C

NORTH-SCOUT AVIATION, INC. - FAA REPAIR STATION: 5NSR498C
27165 DAVID HALL TRAIL, KIRKSVILLE, MO 63501-7870 - TEL. 660-627-6023

N# N3311X

MAINTENANCE RECORD

WO # WOM-00101

COMPLETION DATE 05/31/2016 AIRCRAFT Cessna 310L TACH ----- HOBBS 2385.5

Maintenance - Continental IO-470-VO S/N 148040-7-V (Left). Extracted oil sample through drain plug and sent for analysis - replaced crush gasket. Checked drain plug for leaks - none found.

A complete description of work performed is on file at North-Scout Aviation, Inc. under the work order number indicated above.

I certify that unless otherwise specified, the work was accomplished in accordance with 14 CFR Part 43 and in respect to that work, the article is approved for return to service.

Form: NSF0211
Revision Number: 002
Revision Date: 05/05/2016

Authorized Signature

North-Scout Aviation, Inc.
FAA CRS #5NSR498C

G&N Aircraft Recommended oil after break in: Any approved straight weight AD oil
of a viscosity respective of operating outside air temperature, i.e. Grade 65W through 100W.

N# N3311X

MAINTENANCE RECORD

WO # WOM-00104

COMPLETION DATE 09/01/2016

AIRCRAFT Cessna 310L

TACH -----

HOBBS 2395.4

Annual Inspection - Left Engine - Continental IO-470-VO S/N 148040-7-V; TT on engine 7643.7 hrs. - SMOH 561.5 hrs. Drained oil, removed filter and inspected for contaminations - no discrepancies found. Serviced with 12 qts. Phillips 20W50 X/C oil and installed Champion CH48108-1 filter. Checked cylinder compression: #1 77/80, #2 72/80, #3 75/80, #4 74/80, #5 77/80, #6 76/80. Timed left and right magnetos. Cleaned, gapped and rotated spark plugs. Removed, cleaned and reinstalled all fuel injectors. Checked exhaust system for condition and security. Replaced oil cooler with O/H unit P/N 8000531 from Pacific Oil Cooler Service, see Form 8130-3 Tracking # 113612. Airworthiness Directives checked through 08/29/2016. Post engine run check found satisfactory.

A complete description of work performed is on file at North-Scout Aviation, Inc. under the work order number indicated above.

I certify that that this engine has been inspected in accordance with an annual inspection and was determined to be in airworthy condition.

Authorized Signature



Form: NSF0211

Revision Number: 002

Revision Date: 05/05/2016

North-Scout Aviation, Inc.

FAA CRS #5NSR498C

G&N Aircraft Recommended oil after break in: Any approved straight weight AD oil of a viscosity respective of operating outside air temperature, i.e. Grade 65W through 100W.

