INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.

11/01/2017 Engine log entry Cessna 150G Sn: 65831 N3131J Tach: 859.00
TCM O-200A (converted to key start) Sn: 64177-6-A
(0425) C/W STC Continued Airworthiness Instructions by inspecting Brackett air filter I/A/W document 1-194. (0550) AD96-12-22 Loose / separated Cessna oil filter adapters N/A, Cessna oil filter adaptor not installed. Verified compliance with AD 96-09-06 Bracket air filter gasket by visual inspection. (1200) Emulsified and pressure washed engine and inside bottom cowling. (1220) Oil change completed after pre-oiling / engine flush; serviced with 6 qts **Aeroshell W100**. (2434) Removed alternator Cessna PN: C611501-0204RX alternator sn: A110606 due to excess free play drive coupling. Assembled and installed following new TCM alternator drive parts on new replacement alternator: **653983** hub, **530407** sleeve, **632050** bushings / cushions, **653982** retainer, **530412** nut. Torqued drive nut to 175 in/lbs, cotter pin hole aligned with castellation slot. Installed new **MS24665-227** cotter pin. Checked alternator for freedom of rotation and drive cushion function. See section 7420 for other alternator installation details. Installed new Hartzell Engine Technologies **ES4001** alternator sn: H-R061729 15 volts with new **652072** alternator / tach drive gasket.
(7102) Compression checks 1-4/80 **(hot) on 09/25/2017** (Chrome Cylinder Bores)

Top of stroke	77	79	**64**	78	#3 exhaust valve leakage
Bottom of stroke	75	79	**63**	75	
Simultaneous Direct	120	125	**100**	130	

Crankcase pressure at full static power on pre-inspection run-up 9+H20". Was 6 at last check. Substituted breather tube from another Cessna 150 aircraft, case pressure still 9" plus. Removed breather elbow in engine case and visually inspected, no restriction. Reinstalled existing breather. Compression check retake after flushing cylinder walls with fuel. 1-4/80 (cold) on 10/06/2017 (Chrome Cylinder Bores)

Top of stroke	76	79	**71**	**78**	#3 exhaust valve leakage
Bottom of stroke	**71**	79	**61**	76	

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.

Page 2 11/01/2017 Engine log entry Cessna 150G N3131J TCM O-200A Sn: 64177-6-A
Compression check retake after fuel dissipated from cylinders. 1-4/80 (cold) on 10/13/17. Checked for ring snap before pistons started down, none.

74 **79** 68 **79** #3 exhaust valve leakage
68 75 **60** 75

Previous Oil Sample reports from Black Stone Report Dated 7/11/2017

Sample Number	Date Taken	Oil Hours	TSN TSO	ALUM-INUM	IRON	COP-PER	NICKEL	CHRO-ME	SILVER	SILI-CON	CODES
….4865	6.30/17	66	416	10	54	32	2	15	7	7	

TIM: Thanks for the note about the oil going out the breather tube. Typically that can be a sign of high pressure in the crankcase, and that can be caused by a problem with the piston rings or something in the valves. We found high chrome in this sample, but these are chrome cylinders, so that's fine. Iron (steel) might show ring wear but there are a lot of other steel parts, and this level isn't out of line given the long oil run (averages are based on 30 hours of oil use). Copper comes from brass/bronze, and could show exhaust valve guide wear in this type of engine.

10. Previous Oil Sample reports from Black Stone Print date 7/15/17

Sample Number	Date Taken	Oil Hours	TSN TSO	ALUM-INUM	IRON	COP-PER	NICKEL	CHRO-ME	SILVER	SILI-CON	CODES
P83	4/5/17	52	350	16.4	49.6	27.4	0.9	17.1	N/A	6.4	

11. Previous Oil Sample reports from Black Stone Print date 7/15/17

Sample Number	Date Taken	Oil Hours	TSN TSO	ALUM-INUM	IRON	COP-PER	NICKEL	CHRO-ME	SILVER	SILI-CON	CODES
P01	7/29/16	53	297	6.3	26.3	25.6	<0.1	6.9	N/A	4.3	

12. Previous Oil Sample reports from Black Stone Print date 7/15/17

Sample Number	Date Taken	Oil Hours	TSN TSO	ALUM-INUM	IRON	COP-PER	NICKEL	CHRO-ME	SILVER	SILI-CON	CODES
P92	4.18/16	50	244	6.3	21.7	23.1	<0.1	9.2	N/A	1.3	

FORMED

64177-6-A
n 10/13/17. Checked for

leakage

	SILVER	SILI-CON	CODES
	7	7	

can be a sign of high
rings or something in the
that's fine. Iron (steel)
ut of line given the long
onze, and could show

SILVER	SILI-CON	CODES
I/A	6.4	

ILVER	SILI-CON	CODES
A	4.3	

LVER	SILI-CON	CODES
	1.3	

INSPECTION & MAINTENANCE RECORD

TOTAL	INSPECTION OR MAINTENANCE PERFORMED

Page 3 11/01/2017 Engine log entry Cessna 150G N3131J TCM O-200A Sn: 64177-6-A
Oil sample not taken this oil change due to know metal contamination from severely worn alternator drive. (7165) Carb heat box filter attach flange holes way oversize for #8 screws, drilled out 4 new **A3236-012** dimpled washers to #19. Removed remains of air lock receptacles and straightened mounting lips. Reinstalled filter frame with 4 new **MS35206-245** screws. Frame dated Feb 2017, has steel screen, gasket retaining lip. (7172) Substituted breather tube from another Cessna 150, ground operated engine, same case pressure. Installed new **MS35489-17** grommet at forward baffle . Installed new **8RX1/2THA** screw with flat Tinnerman nut on aft side clamp bottom breather tube. (7220) Checked crankshaft rotational force and end play, normal. See (7240) for correction nearly failed alternator drive coupling. Removed oil sump. Strained oil thru paint strainer, retrieved sections of broken cotter pin same size as would be use in alternator drive nut. Extracted forward worn stud oil sump attach. Installed new **401893** standard stud. Cleaned mating surfaces and chased mounting stud threads. Reinstalled sump with new **652248** gasket and new hardware. (7231) Completed intake and exhaust valve stem / guide inspection all cylinders. Report given to owner operator. Lightly reamed out raised bronze scuffings #4 intake valve guide. Flushed reamings out with electrical cleaner. Oil guide and reinstalled valve. Clearance and action normal. Checked intake valve push rod for straightness, was straight. (7232) Installed 4 new **GB30162** silicon gaskets rocker covers. Installed 7 longer **649353-62** screws at cooling baffle attach. (7240) Removed alternator Cessna PN: C611501-0204RX sn: A110606, drive fell apart on removal. Rotor shaft worn at coupling mounting area, retaining nut / drive shaft stripped, coupling sleeve internal diameter worn. Found generator drive cushions installed instead of alternator, cushions hard. Retaining nut cotter pin missing; see item 7220 for retrieval. Assembled and installed following new TCM alternator drive parts on new replacement alternator, used existing gear: **653983** hub, **530407** sleeve, **632050** bushings / cushions, **653982** retainer, **530412** nut. Torqued drive nut to 175 in/lbs, cotter pin hole aligned with castellation slot. Installed new **MS24665-227** cotter pin. Checked alternator for freedom of rotation and drive cushion function. Removed tach drive, removed alternator / tach drive gasket. Cleaned mounting pad. Chased mounting stud threads. Applied torque seal to end of shaft / cotter pin. Lubed gear with Lubriplate 105. Installed without gasket and tightened. Turned engine over a number of times. Removed alternator, torque seal was not contacted. Lubricate indicated correct gear engagement. Installed new

INSPECTION & MAINTENANCE RECORD

DATE | TOTAL | INSPECTION OR

Page 4 11/01/2017 Engine log entry Cessna 150G N3131J TCM O-200A Sn: 64177-6-A **652072** alternator / tach drive gasket, installed tach drive. Installed new **ES4001** alternator assembly sn: H-R061729. Torqued nuts to 190 in / lbs. Ground operated engine, immediate oil pressure, no unusual engine noises. (7310) Removed aluminum nipple at carb fuel supply inlet. Installed new AN816-6 steel fitting. (7322) Carb bowl fuel level 0.5" from parting surface, normal. (7325) Removed and inspected carb fuel inlet screen, no observable contaminates, cleaned. Reinstalled with new 16A36 gasket. (7414) Checked engine / magneto timing I/A/W TCM MSB 94-8D Magneto timing specs.

Timing BTC Spec LH 24 RH 24	Actual LH 25.2 RH 24.6
Left timing	25.2 BTDC #1, 25.5 BTDC #3 breaker cam symmetry reasonable
Right timing	24.6 BTDC #1, 24.1 BTDC #3 breaker cam symmetry reasonable.

(7421) Measured all spark plug resistor values with Tempest AT5K resistance tester, all under 5,000 ohms. Reinstalled existing bottom spark plugs without servicing with 4 new **M-674** gaskets. (7430) Verified correct ignition switching using timing light. Tightened right "P" lead on magneto. (7605) Shimmed out excess free side play carb heat control bug nut. (7800) Pressure / soap tested exhaust system, no faults. (7822) Removed AN3 bolts exhaust stack brace / clamps. Reformed clamp bolt hoes with tapper punch. Installed 2 new **AN4-5A** bolts with 2 new **MS21042L4** reduced dimension nuts. (7900) Pre oiled / flushed engine via oil filter adapter with 3 qts **Aeroshell SAE 80** straight mineral oil, Continued until only clean oil drained out. (7912) Removed oil drain valve, removed trash from "O' ring. Reinstalled oil quick drain with new **MS35769-11** gasket and safety wired. (7925) Open up removed oil filter, removed filter media, visually inspected, checked for metal contamination. Back flush half of media with fuel, checked for steel filings with magnet, there was a few steel filings, probably from worn alternator drive coupling. Otherwise clean and free of contaminates. Bagged other half, identified, dated, and given to owner. Installed new **CH48108-1** oil filter, torqued and safety wired. (7926) Removed oil pump pick tube due to end of screen restricted with gasket material / sealant, cleaned out non metallic contamination and reinstalled with new **MS35769-11** gasket and doubled safety wired with .040". (7932) Checked calibration of dip stick blade on servicing with oil; right on. (9010) Completed repair / post inspection leak checks. (9020) Completed post repair / inspection function and operational checks. (9025) Review above for possible maintenance induced failures. Little Flyers WO 4205 Roger A. Stern A&P [redacted]

Vertical Perf
Benso

N3131J
Date 12/22/17
Tach 865.92
Drained oil and filled wit
and replaced filter with h
in 10 hrs
Eric Seabase
A&P3014906IA

Oil Change Logbook

29 Jan 2018. Tach
CH48108-1, safety
in accordance wit

13 March 2018.
CH48108-1, safe
leak-checked e
Blackstone Lab

RECORD

00A Sn: 64177-6-A
w **ES4001** alternator assembly sn:
mediate oil pressure, no unusual
let. Installed new AN816-6 steel
325) Removed and inspected carb
n new 16A36 gasket. (7414)
ng specs.

metry reasonable
metry reasonable.
tance tester, all under 5,000
w **M-674** gaskets. (7430)
ad on magneto. (7605)
ssure / soap tested exhaust
s. Reformed clamp bolt hoes
reduced dimension nuts.
SAE 80 straight mineral oil,
removed trash from "O' ring.
7925) Open up removed oil
tion. Back flush half of media
probably from worn alternator
f, identified, dated, and given
) Removed oil pump pick
ut non metallic contamination
040". (7932) Checked
epair / post inspection leak
ecks. (9025) Review above
rn A&P [redacted]

Vertical Performance Aviation
Benson AZ (E95)

N3131J
Date 12/22/17
Tach 865.92
Drained oil and filled with 6qts aero shell w100 mineral oil and replaced filter with hartzell 108 filter, next oil change due in 10 hrs
Eric Seabase
A&P [redacted] A [redacted]

TENANCE RECORD

TION OR MAINTENANCE PERFORMED
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TACH REPLACED AT 866.4

Oil Change Logbook entry – ENGINE LOGBOOK

29 Jan 2018. Tach time: **14.8** HRS. Drained oil, removed oil filter, replaced filter with Champion CH48108-1, safety-wired filter, added 5 quarts of Aeroshell 100 mineral oil, ran and leak-checked engine in accordance with Cessna maintenance manual. Tim Timmons, Owner , ATP [redacted]

13 March 2018. Tach time: **47.7** HRS. Drained oil, removed oil filter, replaced filter with Champion CH48108-1, safety-wired filter, added 5 quarts of Aeroshell 100W oil & 12oz AvBlend additive, ran and leak-checked engine in accordance with Cessna maintenance manual. Oil sample taken and sent to Blackstone Labs for analysis. Tim Timmons, Owner , ATP [redacted]

INSPECTION & MAINTENANCE RECORD

TOTAL	INSPECTION OR MAINTENANCE PERFORMED

17 DEC 2018. Tach time: **210.5** HRS. Drained oil, removed oil filter, replaced filter with Champion CH48108-1, safety-wired filter, added 5 quarts of Aeroshell 100W oil & 12oz AvBlend additive, ran and leak-checked engine in accordance with Cessna maintenance manual. Oil sample taken and sent to Blackstone Labs for analysis. Tim Timmons, Owner , ATP [redacted]

Vertical Performance Aviation
Benson AZ (E95)

N3131J
Date 2/13/2019
Tach 221.1
TT 1087.8
SMOH 674.9
Drained oil and filled with 6qts aero shell w100 and tempest 108 filter, repaired lh mag wires, replaced mag gaskets and timed to 28Deg , replaced alternator gasket and tach seal, replaced cabin heat hose, replaced air filter, cleaned and washed engine, cleaned and lubed tach cable, compression as follows #1 77/80 #2 76/80 #3 76/80 #4 73/80 cold, I certify this engine has been inspected IAW an annual inspection and found to be airworthy this date.
Eric Seabase
A&P[redacted] IA [redacted]

TENANCE RECORD

ION OR MAINTENANCE PERFORMED
AGENCY & CERTIFICATE NO.

, set

ilter, replaced filter with Champion
00W+ oil & 12oz AvBlend additive, ran and
manual. Oil sample taken and sent to
t with Brackett BA-4108. Tim Timmons,

laced filter with Champion CH48108-1, safety-
ran and leak-checked engine in accordance with
or analysis. Tim Timmons, Owner , ATP [redacted]

INSPECTION & MAINTENANCE RECORD

DATE		

9 MAR 2019. Tach time: **242.2** HRS. Drained oil, removed oil filter, replaced filter with Champion CH48108-1, safety-wired filter, added 5 quarts of Aeroshell 100W oil & 12oz AvBlend additive, ran and leak-checked engine in accordance with Cessna maintenance manual. Tim Timmons, Owner , ATP [redacted]

8 APR 2019. Tach time: **291.8** HRS. Drained oil, removed oil filter, replaced filter with Champion CH48108-1, safety-wired filter, added 5 quarts of Aeroshell 100W oil & 12oz AvBlend additive, ran and leak-checked engine in accordance with Cessna maintenance manual. Oil sample taken and sent to Blackstone Labs for analysis. Tim Timmons, Owner , [redacted]

3 JAN 2020. Tach time: **347.1** HRS. Drained oil, removed oil filter, replaced filter with Champion CH48108-1, safety-wired filter, added 6 quarts of Phillips 66 Victory 100AW oil & 12oz AvBlend additive, ran and leak-checked engine in accordance with Cessna maintenance manual. Oil sample taken and sent to Blackstone Labs for analysis. Tim Timmons, Owner , [redacted]

4-17-2020	Tach	361.3 Total time eng. 5876.1 SMOH 815.4
	Performed	100 HRS Inspection I/A/W FAR 43 appendix "D"
	Removed	both L+R Magnetos for 500 HRS Insp.
	Installed	both magnetos RT with 500 HRS Inspection.
	left	Mag. Installed set to 28° BTC.
	Comp. check	OK cyl. # ① 78/80 ② 78/80 ③ 76/80 ④ 74/80

I certify that this Engine has been inspected in accordance with a 100 Hrs inspection and was determined to be in airworthy condition. [redacted]

S/N 890702 43
RT. mag 4201
left mag 4301
S/N 200204 04

DATE	TOTAL TIME	
8-10-20	TACH 38	

2 JUN 2020. Tach time
filter, added 6 quarts
manual. Oil sample t
normal wear and unr

1 DEC 2020. Tach time:
added 6 quarts of Aero
Timothy Timmons, Ow

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.

Vertical Performance Aviation
Benson AZ (E95)

N3131J
Date 5/1/21
Tach 463.0
TT 5928.1
SMOH 916.8
Drained oil and filled with 6qts aero shell w100 and tempest 108 filter, replaced mag gasket and timed to 28Deg replaced air filter, cleaned and gapped plugs, re positioned push rod seals on cyl no 3 all ads checked for compliance this date, cleaned and washed engine, compression as follows #1 70/80 #2 72/80 #3 72/80 #4 70/80 I certify this engine has been inspected IAW an annual inspection and found to be airworthy this date.
Eric Seabase
A&P [redacted] A [redacted]

4 January 2022. Tach time: **516.0** HRS. Drained oil, removed oil filter, replaced filter with Tempest AA48108-2, safety-wired filter, added 5 quarts of Aeroshell 100W oil & 6oz CAMGUARD additive, ran and leak-checked engine in accordance with Cessna maintenance manual. Tim Timmons, Owner , [redacted] ATP [redacted]

DATE

N3131J
Date 5/
Tach 5
TT 600
SMOH
Draine
108 fi
ads ch
engin
74/80
inspe
Eric
A&P

RECORD

NCE PERFORMED
CATE NO.

nce Aviation
(E95)

o shell w100 and tempest
timed to 28Deg replaced
re positioned push rod
r compliance this date,
ssion as follows #1 70/80
this engine has been
and found to be airworthy

eplaced filter with Tempest
5oz CAMGUARD additive, ran
l. Tim Timmons, Owner ,

DATE

INSPECTION & MAINTENANCE RECORD

NTENANCE PERFORMED
ERTIFICATE NO.

Vertical Performance Aviation
Benson AZ (E95)

N3131J
Date 5/13/22
Tach 539.3
TT 6004.4
SMOH 993.1
Drained oil and filled with 5qts aero shell w100 and tempest 108 filter, replaced air filter, cleaned and gapped plugs, all ads checked for compliance this date, cleaned and washed engine, compression as follows #1 80/80 #2 80/80 #3 74/80 #4 74/80 I certify this engine has been inspected IAW an annual inspection and found to be airworthy this date.
Eric Seabase
A&P [redacted] [redacted]

DATE

19____

Vertical Performance Aviation
Benson AZ (E95)

N3131J
Date 5/13/22
Tach 539.3
AFTT 6004.4

Performed Annual Inspection This date. Cleaned all fuel screens, lubed all controls, Inspected ELT IAW far 91.207D Batteries due May 2027 packed wheel bearings and serviced brakes, replaced air filter changed oil and filter, serviced plugs .All AD's checked for compliance this date see compliance list. , I Certify this Aircraft has been inspected IAW an Annual Inspection and found to be airworthy this date.

Eric Seabase
A&P[redacted]A_[redacted]

ns, Tests, Repairs and Alterations
Name, Rating and Certificate Number of
See back pages for other specific entries.)

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ERVICE HISTORY

Vertical Performance Aviation
Benson AZ (E95)

N3131J
Date 5/13/22
Tach 539.3
PTT 6004.4
SMOH 993.1
Performed Annual Inspection This date., Cleaned and dressed Prop, All AD's checked for compliance this date see compliance list. , I Certify this Propeller has been inspected IAW an Annual Inspection and found to be airworthy this date.

Eric Seabase
A&P [redacted] IA [redacted]