



Transport
Canada
Aviation

Transports
Canada
Aviation

TP3910E

AIRCRAFT TECHNICAL LOGS

Section 3. ENGINE

10-360 B1E / FALCO

Second Edition

January 1987

Canada

NAME
NO.

NAME _____

ENGINE SERVICE AND

[illegible]

Engine Overhauled for
Experimental Aircraft

SERVICEABLE



PROGRESSIVE AIR
2965 Airport Drive
Kamloops, B.C. V2B 7W8

Nomenclature CRANKSHAFT

Nomenclature

Part No.	13B27120	Model or Type	O-360-ALA
Make	LYCOMING		

Make	LYCOMING
Model or type	500-A1A

Make LYCOMING

Serial No. V537913811

Previous Certification	FACTORY NEW

New XX Overhauled

Overhauled	Repaired

I hereby certify that the aircraft parts, appliances and/or materials described hereon were acquired from a source of supply that is consistent with the conditions under which the Department of Transport certificate approved No. 15-82 has been granted.

Date JAN 7/00

Inspector's Signature, Stamp

CARRIED FORWARD

TOTAL THIS PAGE

TOTAL FROM
PREVIOUS SUMMARY

TOTAL
SINCE MFG.

MAXIMUM HOURS BETWEEN OVERHAULS _____ HOURS.

AERO SPORT POWER

IO 360-B1F S/N I-3326-51A

Page: 1

QTY	Part Number	Description
1	05K19423S	OIL PUMP GEAR KIT
1	05K22806	CRANKSHAFT KIT (HEAVY FLANGE)
1	1028B	OIL PRESSURE BYPASS BALL
1	111F417-4S-0335	FUEL HOSE
1	111F417-6S-0180	FUEL HOSE
1	149-12LSX	SKYTECH STARTER
1	4373	MAGNETO
1	60297	OPERATORS HAND BOOK
1	61084	OIL PRESSURE SPRINGS
1	61665	MAGNETO DRIVE GEAR
1	68759	DRAIN TUBE

IO-360-B1E S/N L-3326-51A

AERO SPORT POWER

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1	60297	OPERATORS HAND BOOK
1	61084	OIL PRESSURE SPRINGS
1	61665	MAGNETO DRIVE GEAR
1	68759	DRAIN TUBE
2	68760	DRAIN TUBE
4	68761	DRAIN TUBE
2	69603	INTAKE HOSES
2	71610	HOOKS
2	71611	RETAINERS
8	72877	TAPPET BODIES
2	73136	BRACKETS
4	73772	PISTON COOLING NOZZLES
1	75736	DIPSTICK TUBE
8	74637	ROCKER BUSHINGS
1	75009	MANIFOLD BRACKET
1	75165	BRACKET
1	75167	GOVERNOR OIL LINE
2	75334	INTER CYLINDER BAFFLES
1	76121	TACH SHAFT
1	77579	RING GEAR ASSEMBLY
1	78528	OIL PUMP BODY
1	AEL11840	CAMSHAFT
1	AEL72075	FUEL PUMP IDLER GEAR
1	AEL72970	VACUUM PUMP DRIVE GEAR
1	AEL91646	CRANK GEAR
8	LW11485	PUSH ROD TUBES
8	LW12186	ROD BOLT NUTS
4	LW12427LR	LYCOMING CYLINDER KITS
8	LW12596	CON ROD BOLTS
2	LW13884	MAIN BEARINGS
4	LW13923	CON ROD BUSHINGS
1	LW15473	FUEL PUMP

HOURS

MAXIMUM HOURS BETWEEN OVERHAULS

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INSTALLATIONS, INI
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CARRIED FORWARD

AERO SPORT POWER

IO-360-B1E S/N L-3326-51A

Page: 2

QTY	Part Number	Description
1	M1795	HARNESS
6	MS21919WDG2	CLAMPS
4	MS21919WDG12	CLAMPS
8	QS100-M04	CLAMPS
8	QS100-M28	CLAMPS
4	UREM38	SPARK PLUG
1	RSA5AD1	BENDIX FUEL SYSTEM
1	SL11997	CRANKSHAFT SEAL
8	SL12892	THRUST BUTTONS
4	SL13444-1	PISTON PINS
8	SL13521	ROD BEARINGS
4	SL13790	ROCKER SHAFT
4	SL16711	MAIN BEARINGS
16	SL383B	CYLINDER HOLD DOWN NUTS
1	SL69371-1	GASKET SET
18	SLSTD2090	CYLINDER HOLD DOWN NUTS
1	STD1221	SNAP RING
4	STD1821	DRAIN HOSE
4	STD1901	DRIVE SCREWS
24	STD1925	ROCKER BOX SCREWS
3	STD2167	IDLER SHAFT BOLTS
1	STD2213	CRANK GEAR BOLTS
2	STD557	CRANKCASE DOWELS
1	ELECTROAIR	JEFF ROSE ELECTRONIC IGNITION
1	NPN	CHROME PACKAGE (VALVE COVERS, INTAKE PIPES, BAFFLE RETAINERS, LIFTING HOOK).

HOURS.

MAXIMUM HOURS BETWEEN OVERHAULS

ENGINE SE

INSTALLATION
USE BOTH PAGES AND AS SHOWNEngine Over
ExperimentsWeather *Overcast - Windy*
Air Temp. *-2°C*
Barometric Pressure *29.84*
Humidity *74%*

ENGINE TEST LOG

TIME	TOTAL	R.P.M.	MAN. PRES.	OIL PRES.	OIL TEMP	FUEL PRES.	FUEL FLOW	METERED PRESSURE	CYL. HEAD TEMP °F			
									#4	#	#	#
2:55	5	1200	11.5	80	30	27	—	1.2	155			
3:00	5	1500	13.9	78	55	27	4.4	1.4	262			
3:05	5	2000	18.2	82	80	26.3	7	2	334			
3:10	5	2400	22.9	85	85	25.8	10	4.5	377			
3:15	20	2700	27.2	85	90	24.5	15	8.8	406			
3:35	10	Cool Down, Check Filter, Wash Pan, Check										
4:20	5	4:20	27.2	85	70	24.8	15	8.8	340			
4:25	30	2700	27.2	82	90	24.8	15	8.8	410			
4:55		Accept										
9:05	4:10	Warm Up Set Point At 75% Power For Extended Run										

REMARKS
L-5 x 1
ADJUST OIL PRESSURE
TO 40 PSI AT 80 °C. 2400 R.P.M.
40 R.P.M. INCREASE
ON IDLE CUTOFF AT 1000 R.P.M.
30 RPM Rise At Full Power.
Engine Inhibited For Storage.
CYLINDER LEAKAGE CHECK Per 100
#1 94 #3 92 #5 — #7 —
#2 94 #4 96 #6 — #8 —

ENGINE DATA:

Manufacturer

Lycoming

Model

IO-360-B1E

Serial #

L-3326-51A

Owner

Mike Wiebe

ACCESSORY DATA

PERFORMANCE DATA											
Total Oil Con.	0 pts	lbs.		Inj/Carb	P/N 2524450-8	S/N 65929		Turbo	P/N	—	S/N —
Idle RPM	650			Fuel Pump	P/N LW15473	S/N 154724799		Cont.	P/N	—	S/N —
Idle Oil Pres.	50	Temp.	80°C	Distributor	P/N 2524219-2	S/N 75279		Cont.	P/N	—	S/N —
Fuel Octane	100 LL			L. Mag	P/N 4373	S/N 98060347		W'Gate	P/N	—	S/N —
Oil Grade	Pennshell	100		R. Mag	P/N —	S/N —		Governor	P/N	—	S/N —
RPM Drop L. Mag.	80	R. Mag.	—	Starter	P/N 149-12 L5X	S/N F2LX-489808		Oil Cooler	P/N	—	S/N —
Acceleration check	Good			Alt/Gen	P/N —	S/N —					
NOTES:											

TESTLOG.XLS

03/03/97

MAXIMUM HOURS BETWEEN

INSTALLATIONS, INSPECTIONS,
NOTE: USE BOTH PAGES AND AS MANY LINES AS REQUIRED FOR COMPLETE

CARRIED FORWARD

TOTAL
SINCE MFG.

REPAIRS, ADJUSTMENTS, MODIFICATIONS

ENTRIES. DRAW A DIAGONAL LINE THROUGH ANY UNUSED LINES IN DATE AND TIME COLUMNS.

MAXIMUM HOURS BETWEEN OVERHAULS _____ HOURS.

ENGINE SERVICE AND

MAINTENANCE RECORD

DATE	TIME RUN		TIME SINCE OVERHAUL		INSTALLATIONS, INSPECTIONS, NOTE: USE BOTH PAGES AND AS MANY LINES AS REQUIRED FOR COMPLETE
	HRS.	MIN.	HRS.	MIN.	
JUNE 23/06					ANNUAL INSPECTION - SEE CHECKLIST - PLUGS CLEANED COMPRESSION (DIFFERENTIAL) AT AMBIENT TS #1 #2 #3 #4 76 74 78 77 OIL/FILTER CHANGED AEROSHELL 15W50

November 24th, 2006. Aircraft removed from service after a gear up landing incident. Pursuant to CAR 605.88, a detailed inspection of the aircraft was undertaken and the following engine repairs were undertaken:

- Engine removed and sent to Aerosport Power in Kamloops BC for full teardown and inspection.
- Work done by Aerosport Power is per Lycoming SL's and AD's. See paper documentation from Aerosport Power in this logbook.
- Magneto 500 hour inspection.
- Cylinders - hone and re-ring at request of owners.
- Engine test run by Aerosport Power.
- Installed Aeroshell 100 mineral oil. NOTE: RUN MINERAL OIL FOR NEW BREAK IN PERIOD.
- Engine reinstalled on aircraft by owners.
- Engine test run. EGT/CHT's all normal. Oil pressure 52 psi at 700 RPM, 70 at 1500 RPM. All controls checked for safe and smooth operation during engine run.
- Mag check at 1500 RPM. - 75 RPM drop when running on Mag. 10 RPM drop when running on electronic ignition.

Damage repairs were undertaken using acceptable techniques from the manufacturer and applicable airworthiness requirements. Details of repairs are outlined in appropriate technical logs. An airframe and engine control check was performed.

Grad Wals Apr 27/07

Independent check of airframe and engine controls was performed.

Wale Apr 27/07

OK for return to service, subject to a satisfactory test flight.

Grad Wals Apr 27/07

REPAIRS, ADJUSTMENTS, MODIFICATIONS
ENTRIES. DRAW A DIAGONAL LINE THROUGH ANY UNUSED LINES IN DATE AND TIME COLUMNS.

SIGNATURE

LICENCE NUMBER

Wale

PA344

CHAMPION CH48100

CARRIED FORWARD

MAXIMUM HOURS BETWEEN OVERHAULS _____ HOURS.

TOTAL THIS PAGE

TOTAL FROM PREVIOUS SUMMARY

TOTAL SINCE MFG.

AERO SPORT POWER

2965 Airport Road, Kamloops B.C. V2B 7W8 Canada

LOGBOOK INSERT

Engine Make: Lycoming Engine Hours: _____
Engine Model: IO-360-B1E Work Order # U13830
Engine Serial Number: L-3326-51A Inspection # 10060

The engine was dismantled and inspected as per Service Letter 163. Ferrous parts were magnetic particle inspected and non ferrous parts were liquid penetrant inspected. The engine was reassembled using replacement parts as per work order # U13830, test run and is returned to service.

A.D. 91-14-22 (S.B. 533A) (S.L. 163C) prop strike inspection.
A.D. 04-10-14 (M.S.B. 475C) crankshaft gear retaining bolt.

Magneto - 500 hours inspection.
Cylinders - hone & re-ring.

Date: February 15, 2007

Logbook insert

REPAIRS, ADJUSTMENTS
THROUGH ANY
DIAGONAL LINE

79%

V2B 7WB

Tester: Corey A. / Rob H.

Work Order: U13830

ENGINE TEST LOG

COOL DOWN, CHECK ENGINE, WASH,
CHECK OIL LEVEL FOR OIL CONSUMPTION RUN

Notes:

Inj/Carb	P/N	2524476-8	S/N	65928
Fuel Pump	P/N	LW-15473	S/N	n/a
Flow Divider	P/N	2524219	S/N	0187
L. Magneto	P/N	4373	S/N	98060347
R. Magneto	P/N	n/a	S/N	n/a
Starter	P/N	149-12LSX	S/N	F2LX-489808
Alternator	P/N	n/a	S/N	n/a
Crankcase	P/N	n/a	M/N	4871
Crankshaft	P/N	13B27120	S/N	V537913361

TIME SINCE REPAUL	USE BOTH PAGES AND A
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ENGINE SERVICE AND

REPAIRS, ADJUSTMENTS, MODIFICATIONS
THROUGH ANY UNUSED LINES IN DATE AND TIME COLUMNS.
ENTRIES. DRAW A DIAGONAL LINE

SIGNATURE

ENGINE SERVICE AND

MAINTENANCE RECORD

4

DATE	TIME RUN		TIME SINCE OVERHAUL		INSTALLATIONS, INSPECTIONS, NOTE: USE BOTH PAGES AND AS MANY LINES AS REQUIRED FOR COMPLETE	REPAIRS, ADJUSTMENTS, MODIFICATIONS ENTRIES. DRAW A DIAGONAL LINE THROUGH ANY UNUSED LINES IN DATE AND TIME COLUMNS.	SIGNATURE	LICENCE NUMBER
	HRS.	MIN.	HRS.	MIN.				
APR 29/07								
JUNE 30/07					Annual Inspection General inspection - All OK. Plugs, compression & oil change all handled through recent engine work - see previous entries.	Test flight - all test OK	NO. 6	PA346774
JUNE 23/08					Annual Inspection General inspection - no flaws Plugs inspected & cleaned - All OK Cold compression check #1 - 78 #2 - 78 #3 - 78 #4 - 78 INSTALLED MODIFIED PLUG WIRE ENDS (AT ENGINE END) OF FOUR WIRES FOR ELECTRONIC IGNITION MOD KIT PURCHASED FROM MANUFACTURER OF IGNITION SYSTEM (ELECTROAIR) AND INSTALLED TO PREVENT LOSING OF PLUG WIRES OVER TIME.	Test flight - All test OK	NO. 6	PA346774
Feb 10/09					Oil/Filter changed Aeroshell W100, Champion CH48 100	Test flight - all test OK	NO. 6	PA346774
July 4/09					Annual inspection - see checklist General inspection - no flaws Gasolator cleaned - very good. Air Filter OK			
Aug 24/09					Oil/Filter changed Aeroshell 15W50, Champion CH 48100		NO. 6	PA346774
MAY 10/10					Replaced 4 spark plug wires on electronic ignition with new wires from Electroair Corp		NO. 6	PA346774
July 18/10 408.59 (Fishtime)					Annual inspection completed. Engine and systems serviceable. Header pipe on cyl. #3 moved to provide clearance with intake tube. Exhaust system wrapped with thermotec insulating tape. Fuel & air filters checked OK. Oil and oil filter changed. Aeroshell 15W50 / Champion 48100. Oil filter internal inspection unremarkable. Differential compression test - engine at ambient temp: #1 - 77 #2 - 75 #3 - 73 #4 - 75		NO. 6	PA149357
August 13 411 89					Starter clutch failure starter R&R (overhaul by manufacturer (Sky-Tech))		NO. 6	PA149357
CARRIED FORWARD								
TOTAL THIS PAGE								
TOTAL FROM PREVIOUS SUMMARY								
TOTAL SINCE MFG.								

MAXIMUM HOURS BETWEEN OVERHAULS _____ HOURS.

ENGINE SERVICE AND

DATE	TIME RUN		TIME SINCE OVERHAUL		INSTALLATIONS, INSPECTIONS, NOTE: USE BOTH PAGES AND AS MANY LINES AS REQUIRED FOR COMPLETE
	HRS.	MIN.	HRS.	MIN.	

BROUGHT FORWARD

328.4

Nov. 12 2011 328.4 Annual inspection completed. Engine and systems serviceable. Electronics instruments engine monitor removed & replaced. Oil and

Dec. 15 2012 347.9 Annual inspection completed. Engine & systems serviceable. Engine compression test: #1-75 #2-74 #3-73 #4-74

Dec 13 2014 354.3 Annual inspection completed. Engine & systems serviceable. Injectors removed checked and cleaned. Battery replaced.

Jan 18 2016 366.4 Annual inspection completed. Engine and systems serviceable. Heater & 12 injection lines OK. Compression #1-74 #2-74 #3-76 #4-76 Runup test

Annual inspection completed in accordance with Chapter 507, paragraph 507.325(d), and the maintenance requirements set out in Chapter 571, paragraph 571.101(a). Mag to engine timing completed. Comp test completed #1 75 #2 77 #3 70 #4 74. Spark plugs were cleaned gaped and tested. Removed elevator for repair 3 patches were installed L/H outboard upper and lower skins approximately 18 inches from the tip. Repairs were carried out IAW AC 43 13-1B Section 4 Par 1-51 Scarf Patch. Elevator was painted and checked for balance. Elevator and rudder were installed with new hardware as required. Installed 1 of P/N ARB3-5-1=4 vacuum relief filter. Compass cal and tach check completed. ELT recertified by SOS Avionics. C/W CF90-03R2,

TOTAL THIS PAGE

TOTAL FROM PREVIOUS SUMMARY

TOTAL SINCE MFG.

CARRIED FORWARD

MAINTENANCE RECORD

5

REPAIRS, ADJUSTMENTS, MODIFICATIONS
ENTRIES. DRAW A DIAGONAL LINE THROUGH ANY UNUSED LINES IN DATE AND TIME COLUMNS.

SIGNATURE

LICENCE NUMBER

filter changed. Aeroshell 15w50 Champion. CH48100
Screen fitted. Runup test OK.
#3-73 #4-74

W. Head

owner

Oil and filter changed. Aeroshell 15w50 Champion. CH48100
Runup test OK.

W. Head

owner

Oil changed (w/afilter) Aeroshell 15w50 Check/clean plugs.
replaced - electrical system checked.

W. Head

owner

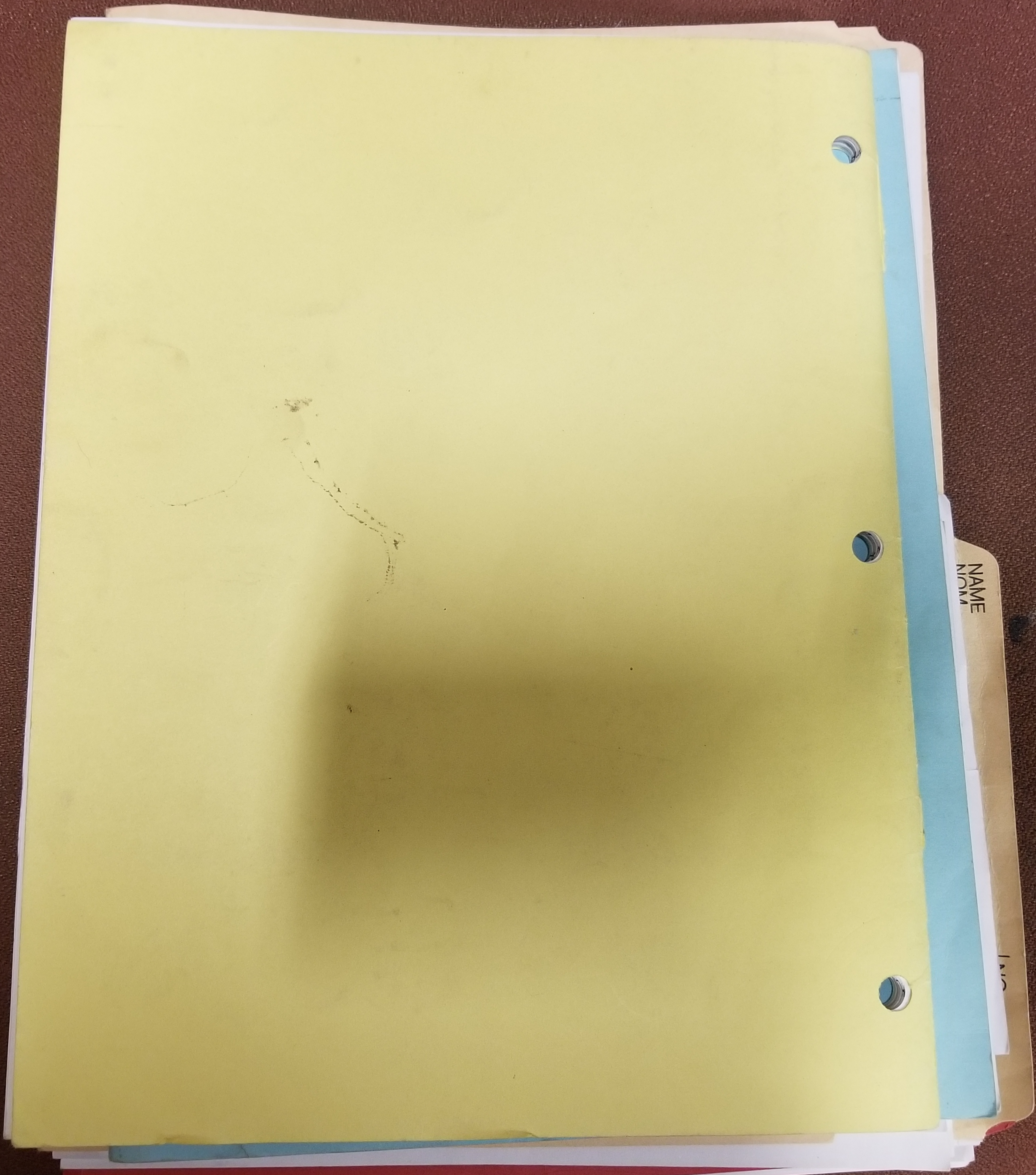
Oil & filter changed. Phillips 20w50 / Champion. CH48100
#1-74 #3-76 #4-76 Runup test

W. Head

owner

MAXIMUM HOURS BETWEEN OVERHAULS _____ HOURS.

W. Head



NAME
NOVA

1/10