

Engine O-540-E4B5 (s/n L-15805-40)

Date	TTAF	Tach	SMOH	Hobbs	Work Performed	Performed By	Notes
8/23/1977	2065				Overhaul		
3/28/1986	4177.2				Overhaul		
11/11/1996	5320.6				Top Overhaul		
6/30/2010	5836.3				Engine Failure from no vacuum pump		
10/10/2010	5836.3	3728.37			Overhaul	Corona Engines	Installed on Airplane
8/3/2018		4188.21			Remove Engine	Bruce Wilson	
11/8/2018	6279.91	4188.21			Repair	Bob Walmsley (Allied)	Case sent to Divco, New pushrods, 4 cylinder nuts
11/26/2018	6279.91	4188.21			Mag Overhaul	David Baker	500 hr inspection
3/18/2019		4188.21	487.71		Annual - Engine	David Baker	Replaced scat hosing
8/23/2019	6291.7	4199.99			Oil Pressure	Bruce Wilson	Adjusted Oil Pressure
8/10/2020	6308.62	4216.91		987.4	Annual - Airframe	Bruce Wilson	IA: Emmanuel Njah
8/10/2020	6308.62	4216.91		987.4	Annual - Engine	Bruce Wilson	Replaced kinked brass manifold pressure line

MAINTENANCE LOGBOOK EXCERPTS

OVERHAUL 10.10.10

10/01/10 5836.3 0SMOH

LYCOMING IO-540-C4B5 SER.# L-15805-40 Complied with all Current AD's, SB's, and SI's 0-SMOH

This engine was cleaned and inspected for overhaul per **LYCOMING OVERHAUL MANUAL and TABLE OF LIMITS**. All steel parts were cleaned, inspected and magnafluxed **WORK ORDER 12253**. The crankcase was overhauled by CSI under work order 5122. The crankshaft was overhauled to M06 mains and M10 rods by AEA under work order 161137. The rods were cleaned, inspected, rebushed and magnafluxed and certified. The camshaft was overhauled by ECI, under work order 92677.1. The lifter bodies were overhauled by Aircraft Specialties under work order 178602. The engine was re-assembled in accordance with **LYCOMING OVERHAUL MANUAL and TABLE OF LIMITS**. The following parts were replaced at overhaul.

12ea. 18M26105 M10 Con Rod Bearing	6ea. 18D26096 M06 Main Bearings	1ea. SL 71569-1 Gasket Set
12ea. SL75061 Rod Bolts	2ea. SL13884 M06 Main Bearings	2ea. 67542 Mag Bearing
12ea. SL 12186 Rod Nuts	1ea. 76148 Camshaft, Overhauled	4ea. SL 31H.088 Bolt
12ea. SL 74637 Rocker Bushings	6ea. AEL 13923 Rod Bushings	4ea. SL 13641 Cushion
12ea. 72877 Overhauled Lifter Bodies	1ea. 18109A-S Oil Pump IMP.	1ea. SL STD-1028 ball
12ea. 78290 Hydraulics	1ea. 78531 Oil Pump Body	8ea. SL 14820 Circlips
12ea. 72198 Pin Plugs	2ea. 72801 Overhauled C/W's	2ea. 72965 C/W Rollers
12ea. SL11795 Valve Spring	1ea. 76155 Tach Shaft	6ea. SL13790 Rocker Shaft
12ea. SL11800 Valve Spring	6ea. 69603 Intake Hose	6ea. SL19001A Exhaust Valve
12ea. LW12892 Thrust Button	6ea. SL75089 STD Piston	6ea. CC203 Ring Set
12ea. 17C21191 Keeper	1ea. SL STD 2209 Crankshaft Bolt	2ea. 72797 C/W Rollers
12ea. SL60009 Keeper	6ea. SL STD-1821 Drain Hose	8ea. SL 71907 C/W Plates
6ea. LW 14078 Piston Pins	1ea. SL 61084 Oil Press. Spring	2ea. STD 737 Woodruff
4ea. SL 73810 Blade Bushings	1ea. SL 53E19600 Vernatherm	1ea. STD-2247 Gear Bolt
6ea. Overhauled New Limit Chrome Cylinder Assemblies		

ENGINE REMOVAL/DISASSEMBLY/REINSTALLATION 08.03.18

8/3/18 4188.21 Removed engine per Piper Service manual. [redacted] A/P [redacted] Bruce Wilson

Allied Aircraft Engine
Torrance Airport
REPAIR

11/8/18 6279.91 0.0 4188.21

Engine Type: LYCOMING O540E4B5 **Serial No.** 15805-40

Work Performed: TEAR DOWN ENGINE SEND CASE TO DIV CO FOR O/H REASSEMBLE WITH NEW SEALS, GASKET, HOSES, PUSHRODS P/R TUBES 4 CYLINDER NUTS OIL & FILTER NO OTHER WORK PERFORMED

For Allied Engine: [redacted] **Date:** 8-NOV 2018

12-12-18 6279.91 4188.21 Installed engine on A/C 51n32-7400014 I/A/W Piper Service manual. Test Ram engine - no leaks. [redacted] A/P [redacted] Bruce Wilson

PARTS ORDERED

S.O.#	S.O. DATE	P.O. #	P.O. DATE	SHIP DATE
171591	09/10/2018	250721		09/07/2018
ORDER QUAN.	SHIP QUAN.	B/O QUAN.	PART NUMBER	DESCRIPTION
2	2		AEL67542	BEARING, RADIAL BALL
4	4		MS13997-3	KEY
6	6		E180124223	
4	4		SL-STD-1821	HOSE
12	12		G180125509	
6	6		SL12136	BUSHING
1	1		D180123230	
			SL12892	THRUST BUTTON
			G180125596	
			SL69603	INDUCTION HOSE
			G180125855	
			SL71569-1	GASKET SET MAJOR OVERHAUL
			E180124247	

REPAIR ORDER					R. G. Walmsley Aircraft Engineer Engine & Cylinder Overhaul 310-530-8716	
MATERIAL USED					NAME	
QTY.	PART NO.	DESCRIPTION	PRICE	WARRANTY YES NO	DATE	
		OIL A.P. FISCHER	74.97		MR DAN WOODSIDE NOV 8. 2018	
		FILTERS OMAHA	57.54		ADDRESS	
		NUT ASS.	196.91		MAKE	
		TUBES ASS.	393.68		TYPE OR MODEL	
					YEAR	
					RECEIVED	
					A.M. P.M.	
					PROMISED	
					A.M. P.M.	
					PHONE WHEN READY	
					☐ YES ☐ NO	
					PHONE	
					ORDER WRITTEN BY	
					OPER NO.	
					INSTRUCTIONS	

L	ALLIED AERO ENGINES	I	ALLIED AERO ENGINES
L	2785 PACIFIC COAST - SUITE 234	P	2785 PACIFIC COAST
T	TORRANCE, CA 90505	T	SUITE 234
O		O	TORRANCE, CA
			Sales Person
S.O. #	173156	SHIP DATE:	11/05/2018
P.O. #	VERBAL		
ORDER QUAN.	SHIP QUAN.	B/O QUAN.	PART NUMBER & DESCRIPTION
8	8		SL11485 /TUBE - SHROUD (360)
8	8		SL15F19957-34 /PUSHROD (360)

S.O. # 173127			SHIP DATE: 11/05/2018	
P.O. # VERBAL				
ORDER QUAN.	SHIP QUAN.	B/O QUAN.	PART NUMBER & DESCRIPTION	
2	2	71133	/NUT-.500-20 NF-3	
2	2	71134	/NUT-.375-24 NF-3	

CASE REBUILD

WDC NO. <u>122791</u>		DATE RECEIVED <u>8-8-18</u>	
Customer <u>Alvied Eng</u>		P.O. No. <u>73958</u>	
Address <u>TORRANCE CA</u>		Carrier	
Phone <u>[REDACTED]</u>		Model <u>70-540</u>	
Case Mfg. <u>LYC</u> S.N. <u>[REDACTED]</u>		Match No. <u>100</u>	
Customer Orders and Discrepancies			
RECEIVING/REPAIR SEQUENCE			DATE MECH. I.D.
1. Preliminary Insp. clean and Prep. Includes removal of LYC anchored Thru bolts			8-8
2. Record Previous Repair W.O.s			8-8
3. Record Deck Height LH <u>488</u> RH <u>490</u>			8-28
4. NDI (HIDDEN DAMAGE) Mark Discontinuities			
5. Preheat and Arc Insp. (min. 400 F)			
6. Prep. For Welding and Weld (if required)			8-29
7. Heat (4 Hrs. 400 F)			
8. Post Weld Inspection			
9. Mach. Cyl. Bore Surface			9-6
10. Misc Deck Work			9-10
11. Cut Mating Surface			
12. Rough Machine Bearing Bores (if required)			
13. If applicable install LYC anchored thru bolts Assemble/Torque			9-21
Description of Repair <u>UR#3</u>			
Cut mating surfaces and resized bores to factory limits.			
Reject Remarks <u>[REDACTED]</u>			Dated <u>10-11-2018</u>
P-10120-3 Issued by <u>[REDACTED]</u>			

SERVICEABLE

3-18-19	N57014	Tach: 4188.21	Eng. SMOH: 0487.71
BAKER AERO ELECTRIC			
Engine is clean for annual inspection. Inspected and lubricated engine controls. Inspected engine mount and vibration isolators. Pressure tested exhaust system. Checked timing. Replaced air filter. Changed oil and oil filter. Serviced engine with Aero Shell W100 oil. -- Compression -- #1) 70/80 #2) 70/80 #3) 78/80 #4) 75/80 #5) 72/80 #6) 72/80 1. Replaced all engine compartment SCAT hoses. 2. Repaired "P" leads from firewall to magnetos. 3. Replaced engine vibration isolators with new Piper isolators p/n) 475-111. 4. Replaced engine mount to airframe hardware with Mil spec bolts, and nuts. 5. Replaced alternator to starter support strut with new Piper strut p/n) 78483-000. 6. Replaced carburetor heat shroud with new Piper heat shroud p/n) 69675-00. 7. Replaced alternator belt. -----CONTINUED NEXT PAGE----- PAGE 1 OF 2			
3-18-19	N57014	Tach: 4188.21	Eng. SMOH: 0487.71
BAKER AERO ELECTRIC			
-----CONTINUED FROM PREVIOUS PAGE----- 8. Replaced heat shroud baffle ties with new Piper baffle ties p/n) 65103-02. 9. Replaced and repaired various engine baffle sections as needed. A.D.# 84-26-02. Paper induction filters. Complied with by air filter replacement. Next due on condition or 4688.21 tach. A.D.# 05-12-06. Left magneto impulse coupling. Complied with by Baker Aero. See engine log entry dated, 11-26-18. Next due at 4688.21 tach. Engine inspected and maintained as per the Piper service manual and FAR43.13. Ran engine, all normal.			

ENGINE

10 Aug 2020, N57014 – Lycoming IO-540-E4B5, Engine Serial #: L-15805-40		
Tach: 4216.91	HOBBS: 987.4	TTAF: 6,308.62 Hours
Engine is clean for annual inspection. Inspected and lubricated engine controls. Inspected engine mount and vibration isolators. Pressure tested exhaust system. Checked magneto timing. 1. Compression Test Results: - Cylinder #1: 72 of 80 - Cylinder #2: 78 of 80 - Cylinder #3: 72 of 80 - Cylinder #4: 74 of 80 - Cylinder #5: 74 of 80 - Cylinder #6: 72 of 80 2. Engine Oil & Filter Change Next Due at 4230.91 Tach 2. Replaced Engine Air Filter (Aeronca Napa Air Filter 2030 - PL161CA) 3. Checked Carburetor Integral Fuel Screen 4. Repaired Broken Fuel Primer Line on #1 Cylinder 5. Replaced kinked Brass Manifold Pressure Line 6. Removed, Cleaned, Re-Installed & Torqued all (12) Spark Plugs 7. Performed Leak Check and All Run-Up Checks – All Checks Good A.D. # 84-26-02; Paper induction filters; Next Due on condition or 4688.21 Tach A.D. # 05-12-06; Next Due at 4688.21 Tach ----- I certify that this engine has been inspected and maintained per the scope and detail of the IO-540-E4B5 Engine Maintenance Manual and FAR 43.13 and was found to be in an airworthy condition.		

AIRFRAME

10 Aug 2020, N57014 - Piper Cherokee Six, Airframe Serial #: 32-7400014

Tach: 4216.91

HOBBS: 987.4

TTAF: 6,308.62 Hours

Removed all panels for preliminary inspection. Inspected & lubricated wings, fuselage, empennage and landing gear. Checked tires, wheels, brakes and brake reservoir. All wheel bearings cleaned & greased (w/ Aeroshell 5). Checked lights, battery & battery box. Checked main & carburetor fuel strainers. Complied with FAR 91.207d. ELT batteries good thru Aug 2021.

1. Replaced Nose Wheel Tire (Aero Trainer AD4E4 06-01800, 6x6.00, 6-ply) & Nose Wheel Tube (LeakGuard GL-6020B 06-00754)
2. Replaced both Firewall Mounted Nose Wheel Steering Boots (Piper Part #: 35270-00)
3. Inspected Flap Handle Attachment Bolt - Next Due Tach: 4716.91
4. Removed, Repaired / Reinforced & Re-Installed Left Rear Engine Baffle (Piper Part #: 65030-00)
5. Inspected & Lubricated all Flight Controls, Pulley's and Chains
6. Replaced Rudder Fairing Fin w/ New (Piper Part #: 99619-00)
7. Removed & Replaced ELT Batteries with (6) D-Cell Duracell Batteries
8. Cleaned Vacuumed & Wiped Aft Fuselage & Cabin Wing Box Area
9. Replaced Windscreen Trim Plastics (in Sun Visor area (Piper Part #'s: 68688-04 & 05)
10. Replaced Cockpit GlareShield (Knots2U Part#: ADS-PG003)
11. Installed One-Piece Windshield in accordance with Kosola and Associates, Inc. Drawing 95032, No Revision, dated 16 December 1995, with Drawing Change Notice (DCN) A1, dated January 30, 1997, or later FAA approved revision. [Supplemental Type Certificate #: SA1261AT]; (LP AeroPlastics Part #: 95034-005 UV-SG / Serial #: 89749)
12. Replaced Rear Entry Door Seals & Rear Baggage Door Seals (Knots2U Part #: ADS-P305)
13. Inspected & Replaced Sealed 12 Volt Main Battery w/ factory new Concorde Sealed Battery RG-35A; Battery Serial #: 41084556

10 Aug 2020, N57014 - Piper Cherokee Six, Airframe Serial #: 32-7400014

CONTINUED PREVIOUS PAGE

14. Replaced all Scat Tubing in Empennage Fresh Air Duct
15. Replaced Overhead Center Plastic Trim Piece (Piper Part #: 69746-02)
16. Replaced both Rear Cabin Vent Covers (Piper Part #: 66788-14)
17. Serviced Pilot Seat Hydraulic Raise/Lower Actuator (Porter Hydrolok Part #: 000010-01)
18. Completed new "Current Weight & Balance Information" [See Section]

A.D. # 75-24-02; Seat Retention; Complied with as per Piper SL# 763A;

Next Due at 2021 Conditional Inspection

A.D. # 78-23-01; Fuel Drain Door; Complied with (b), (1-3) of this A.D.;

Next due at 4316.91 Tach

A.D. # 13-02-13; Horizontal Stabilator Cables;

Next Due at 6188.2 Tach or 2026 Conditional Inspection

A.D. # 17-16-01; Ameri-King ELT; Complied with (g) of this A.D. as per Sec. 3.4 of Ameri-King Doc. # IM-450; Next due at 2021 Conditional Inspection

A.D. # 76-07-12; Bendix Ignition Switch; Complied with (1), (a-d) of this A.D.;

Next due at 4316.91 Tach

I certify that this airframe was inspected in accordance with an annual inspection as per the scope and detail of 14 CFR Part 43.13 and the Piper Service Manual and has been determined to be in an airworthy condition.

FUEL RECEIPTS

Feb 2021

OUT	IN	TOTAL	FUEL
2/2	94.2		
*Mx Runs			
2/5	94.2	95.8	1.6 (05.76)

Receipt from
GREAT AMERICAN AVIATION
MEMPHIS, TN 38119
Piper Cherokee Six
Batch: 103100-003
Invoice: 129240
AUTH CODE: 07/082
CARD: 02/05/21 11:08:37
ACCT: 1111111111
BILL: 1111111111
PUMP: 1111111111
PRODUCT: 1111111111
AVIATION: 1111111111
QUANTITY: 1111111111
PRICE/UNIT: 1111111111
TOTAL COST: 1111111111
THANK YOU!
HAVE A SAFE FLIGHT
AND HAPPY BACK!