



FAA CERTIFIED REPAIR STATION # VI4R597M

813-788-3305

FAX 813-788-4412

39320 B AVE
ZEPHYRHILLS, FL 33542

DATE: 8/21/2023

W.O.# 223136

ACS Aviation, LLC
1101 W Airport Rd.
Pembroke Pines, FL 33023

DESCRIPTION OF SERVICES: N405ST
LYCOMING Y10-360-M1B ENGINE SN EL-37356-51E DISASSEMBLED DUE TO PROPELLER
STRIKE. ALL PARTS CLEANED & INSPECTED, STEEL PARTS MAGNA
FLUXED, ENGINE REASSEMBLED IN ACCORDANCE WITH OVERHAUL MANUAL.

FLAT RATE PRICE PER QUOTE	\$	11,000.00
Roller Tappets	\$	2,800.00
Hone and Ring Cylinders	\$	2,400.00

SUBTOTAL:	\$	16,200.00
SALES TAX: 6%		TNOF
SALES TAX: 1% DISCRETIONARY TAX ON \$5,000.00		
FREIGHT	\$	-
TOTAL:	\$	16,200.00

<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY</u>
SL-75439-1	Gasket Set	1
18A26093	Front Main	2
18D26098	Main Bearing	4
18M26105	Rod Bearing	8
SL-75061	Rod Bolts	8
SL-12186	Rod Nuts	8
STD-2246	C/S Bolt	1
LRT23381	Roller Tappets	8
STD1221	Snap Ring	1
YIO-360	IRAN Cylinders	4
SL-19001A	Ex. Valves (Cyl #1 & #2)	2
MS13997-3	Keys	8
SL-60009	Keys	8
ASC75089	Pistons	4
SL-3601-SC	Ring Sets	4
LW-12098-0-210	Fuel Inj. Line Assy	1
LW-12892	Thrust Buttons	8
M674	Plug Gaskets	8

Date: Aug. 22, 2023

EXPERIMENTAL ENGINE

Tach Time: _____

Model: YIO-360-M1B

S/N.EL-37356-51E

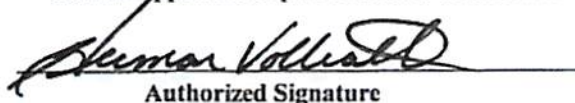
ZAE W.O.# 223136

EXPERIMENTAL Lycoming YIO-360-M1B. Engine disassembled for repair due to propeller strike. Engine parts cleaned & inspected. Engine repaired and reassembled using Lycoming Direct Drive overhaul manual 60294-7 rev. 14 as a reference. Crankcase florescent penetrant inspected and steel parts magnafluxed by Power/ Aviation CRS#ZLZR567 w.o.223136 dated 7/28/2023. Following parts was used in repair, gasket set, all new (STD) main bearing, new (STD) rod bearing, rod bolts & nuts, crankshaft gear bolt, (8) new LRT23384 roller tappets, rocker shaft thrust buttons, drain back hoses, and CH-48110-1 oil filter. All [4] cylinders were I.R.A.N. by doing the following, ground valve seats, reface valves, replace exhaust valves for number 1 & 2 cylinders. Barrels ring finished, (4)new ASC75089 pistons & (4)SL-3601-SC ring set used, valves reinstalled using all new keepers. Reinstalled cylinders. Reinstalled original fuel servo, flow divider, fuel pump, starter motor and spark plugs. No ignition system installed. Engine not test ran by Zephyr. Engine to be test run by installing agent. No engine accessories done or supplied at this time. For complete parts, see parts list supplied. A description of this repair is on file at this agency under W.O. 223136. Engine was repaired only with no accessories. This engine does not meet the Lycoming TC. Data sheet for a certificated engine, or any other TC Data sheet for a certificated engine. This is a Experimental Engine.

End of work done.

Zephyr Aircraft Engines Inc.
39320 B ave.
Zephyrhills, Florida 33542
813-788-3305

F.A.A. Approved Repair Station # VI4R597M



Authorized Signature

Herman Vollrath



POWER/AVIATION, INC.

FAA REPAIR STATION # ZLZR567L

MAGNETIC PARTICLE & LIQUID PENETRANT INSPECTION REPORT
FAA REPAIR STATION # ZLZR567L (Form PAI-MT/PT-1)

Client: Zephyr Aircraft Engines	Date: 07/28/2023	Page: 1 of 1
PAI Work Order #: 7231027	Client Purchase Order #: 223136	
Component: Engine Parts	Model: YIO-360-M1B	
Material: Aluminum & CS	Serial #: EL-37356-51E	
Procedure Specifications: ASTM E-1444 / ASTM-E-1417	Acceptance Standard: No Cracks	

TECHNIQUE DATA

Method: WFMT	Method: PT	Type: I
Amperage: 800-4000	Manufacturer: Magnaflux	
Magnetic Field Direction: Circ/Long	Batch #: 20D063 / 22F075	Lighting: 3000 μ W/cm ²
Particle Manufacturer: Magnaflux 14A	Cleaner: H2O	Developer: ZP-4B
Equipment Manufacturer: Magnaflux	Surface Condition: Clean	
Equipment Model #: AD2045	Part Temperature: Ambient	

Qty.	Acc.	Rej.	Description	Remarks
4	X		Connecting Rods	
4	X		Connecting Rod Caps	
8	X		Rocker Arms	
8	X		Push Rods	
4	X		Thru Bolts	
2	X		Idler Gears	
1	X		Tach Shaft	
1	X		Fuel Plunger	
2	X		Idler Post	
2	X		Mag Gears	
1	X		Crank Gear	
2	X		O/P Gears	
1	X		Vac. Pump Gear	
1	X		O/P Drive Shaft	
1	X		Prop Gov. Drive Shaft Gear	
1	X		Camshaft	
1	X		Crankshaft	
4	X		Rocker Arm Shafts	
4	X		Piston Pins	
1	X		Crank Case	

Berni Neulo

Power / Aviation Inspector

#

Level

7-28-23

Date

We hereby certify that the parts tested were in conformance with the specification noted. This report is expressly limited to Power / Aviation Inc.'s interpretation of the results obtained from the test specified and does not constitute a representation, warranty or guaranty of the actual condition of the materials tested. Power / Aviation Inc. expressly disclaims any responsibility for any loss, cost, damage or expense, including personal injury or death, caused by or attributable to Power/Aviation, Inc.'s representation of conditions or the performance of any test.

1. Approving Civil Aviation Authority/Country: FAA / United States		2. AUTHORIZED RELEASE CERTIFICATE FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG			3. Form Tracking Number: 7231027	
4. Organization Name and Address: POWER/ AVIATION, INC. 8440 Tradeport Drive Suite 109 Orlando, FL 32827				5. Work Order, Contract, or Invoice Number: 223136		
6. Item:		7. Description:	8. Part Number:	9. Quantity:	10. Serial Number:	11. Status/Work:
1		Engine Case	YIO-360-M1B	01 pcs.	EL-37356-51E	Inspected
12. Remarks: <p>Performed Fluorescent Liquid Penetrant Inspection per ASTM-E-1417 for possible cracks. No relevant indications were noted at the time of inspection.</p> <p>Returned to Service Per FAR 145.213 (b) (2)</p> <p>This article was inspected in accordance with current Federal Aviation Regulations and Military Specifications and is approved for return to service for the inspection work performed.</p>						
13a. Certifies the items identified above were manufactured in conformity to: <input type="checkbox"/> Approved design data and are in a condition for safe operation. <input type="checkbox"/> Non-approved design data specified in Block 12.				14a. <input checked="" type="checkbox"/> 14 CFR 43.9 Return to Service <input type="checkbox"/> Other regulation specified in Block 12 Certifies that unless otherwise specified in Block 12, the work identified in Block 11 and described in Block 12 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service.		
13b. Authorized Signature:		13c. Approval/Authorization No.:	14b. Authorized Signature: 		14c. Approval/Certificate No.: ZLZR567L	
13d. Name (Typed or Printed):		13e. Date (dd/mm/yyyy):	14d. Name (Typed or Printed): Brian Neuls		14e. Date (dd/mm/yyyy): 28/Jul/2023	
User/Installer Responsibilities						
<p>It is important to understand that the existence of this document alone does not automatically constitute authority to install the aircraft engine/propeller/article.</p> <p>Where the user/installer performs work in accordance with the national regulations of an airworthiness authority different than the airworthiness authority of the country specified in Block 1, it is essential that the user/installer ensures that his/her airworthiness authority accepts aircraft engines(s)/propeller(s)/articles(s) from the airworthiness authority of the country specified in Block 1.</p> <p>Statements in Blocks 13a and 14a do not constitute installation certification. In all cases, aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.</p>						

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6. Item:	7. Description:	8. Part Number:	9. Quantity:	10. Serial Number:	11. Status/Work:	
1	Crankshaft	YIO-360-M1B	1	EL-37356-51E	Inspected	
12. Remarks: Performed Magnetic Particle Inspection per ASTM-E 1444 for possible cracks. No relevant indications were noted at the time of inspection. Returned to Service Per FAR 145.213 (b) (2) This article was inspected in accordance with current Federal Aviation Regulations and Military Specifications and is approved for return to service for the inspection work performed.						
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6. Item:	7. Description:	8. Part Number:	9. Quantity:	10. Serial Number:	11. Status/Work:	
1	Engine Parts	YIO-360-M1B	51	EL-37356-51E	Inspected	
12. Remarks: <p>Performed Magnetic Particle Inspection per ASTM-E 1444 for possible cracks. No relevant indications were noted at the time of inspection.</p> <p>Returned to Service Per FAR 145..213 (b) (2)</p> <p>This article was inspected in accordance with current Federal Aviation Regulations and Military Specifications and is approved for return to service for the inspection work performed.</p>						
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