



PA-28-181
INSPECTION REPORT

ARCHER II
ARCHER III

PIPER AIRCRAFT CORPORATION

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INSPECTION REPORT

Make: **ARCHER II AND III** Model PA- **PA-28-181** Serial No. _____ Registration No. _____

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Signature of Owner:

Circle Type of Inspection					Inspector	Perform all inspections or operations at each of the inspection intervals as indicated by a circle (0)	Circle Type of Inspection					Inspector
50	100	500	1000	Annual			50	100	500	1000		
DESCRIPTION						DESCRIPTION						
B. ENGINE GROUP (continued)						D. FUSELAGE AND EMPENNAGE GROUP (continued)						
46. Inspect rubber engine mount bushings for deterioration. Replace as required.						3a. Archer II - Inspect battery, box, cables, and securing straps. Inspect at least every 30 days. Flush box as required and fill battery per box instructions.						
47. Inspect firewall seals.						3b. Archer III - Inspect battery condition and security. Clean and recharge acid recovery (vent) jar. (Refer to Maintenance Manual, Chapter 24).....						
48. Inspect alternator drive belt condition and tension.						4. Inspect electronic installation.						
49. Lubricate alternator idler pulley (if installed) per lubrication chart.						5. Inspect bulkheads and stringers for damage.						
50. Inspect condition of alternator and starter, and related electrical connections.						6. Inspect antenna mounts and electric wiring.						
51. Inspect security of alternator mounting.						7. Inspect air conditioning system for Freon leaks. (See Note 13.).....						
52. Inspect air conditioning compressor oil level. (See Note 13.).....						8. Inspect Freon level in sight gauge of receiver-dehydrator. (Refer to Maintenance Manual, Chapter 21 and see Note 13.).....						
53. Inspect compressor belt condition and tension. (90 to 100 lb.).....						9. Inspect air conditioning condenser air scoop rigging. (See Note 23).....						
54. Inspect compressor clutch security and wiring. (See Note 14.).....						10. Inspect fuel lines, valves, and gauges for damage and operation.						
55. Inspect security of compressor mounting.						11. Clean screen in fuel pumps.						
56. Check fluid in brake reservoir. Fill as required. ...						12. Remove, drain, clean fuel strainer bowl, and screen.....						
57. Lubricate all controls. (Refer to Maintenance Manual, Chapter 12.).....						13. Inspect security of all lines.						
58. Overhaul or replace propeller governor. (See Note 11.)						14. Inspect vertical fin and rudder surfaces for damage.						
59. Complete engine overhaul or replace with factory rebuilt. (Refer to latest revision of Textron Lycoming Service Letter 201.)						15. Inspect rudder hinges, horn, and attachments for damage and operation.						
60. Install engine cowl.						16. Inspect rudder control stops. Verify stops are not loose an locknuts are tight.....						
C. CABIN GROUP						17. Inspect vertical fin attachments.						
1. Inspect cabin entrance, doors, and windows for damage and operation.						18. Inspect rudder hinge bolts for excess wear. Replace as required.						
2. Inspect window sealants for cracks and deterioration. Reseal if necessary.						19. Inspect stabilator surfaces for damage.						
3. Inspect upholstery for tears.						20. Inspect stabilator, tab hinges, horn, and attachments for damage and operation.....						
4. Inspect seats, seat belts, security brackets, and bolts.....						21. Inspect stabilator control stops, verify stops are not loose and locknuts are tight.....						
5. Check trim operation. (See Note 15.).....						22. Inspect stabilator attachments. (See latest Piper Service Bulletin 856.)						
6. Inspect rudder pedals.						23. Inspect stabilator and tab hinge bolts and bearings for excess wear. Replace as required. .						
7. Inspect parking brake and brake handle for operation and cylinder leaks.....						24. Inspect stabilator trim mechanism.....						
8. Inspect control wheels, column, pulleys, and cables for condition. (See Note 16.).....						25. Inspect aileron, rudder, stabilator primary control cables, and stabilator trim cables, turnbuckles, guides, and pulleys for safety, damage, and operation. (See Note 16.).....						
9. Inspect flap control cable attachment bolt. (Refer to latest revision of Piper Service Bulletin 965.)						26. Use a tensiometer to inspect all cable tensions. (See Note 17.).....						
10. Inspect landing, navigation, cabin, and instrument lights.						27. Clean and lubricate stabilator trim drum screw. ...						
11. Inspect instruments, lines, and attachments.						28. Clean and lubricate all exterior needle bearings. .						
12. Inspect gyro operated instruments and electric turn and bank. (Overhaul or replace as required.).....						29. Lubricate per lubrication chart. (Refer to Maintenance Manual, Chapter 12.).....						
13. Replace central air filter.						30. Inspect anti-collision light for security and operation.						
14. Clean or replace vacuum regulator filter.....						31. Inspect security of autopilot bridle cable clamps. (See Note 18.).....						
15. Inspect altimeter. Calibrate altimeter system per FAR 91. _____ if appropriate.						32. Inspect all air ducts, electrical leads, lines, radio antenna leads, and attaching parts for security, routing, chafing, deterioration, wear, and proper,installation.						
16. Check fuel selector valve operation.						33. Inspect ELT installation, battery and antenna condition. (See the latest revision Piper Service Letter no. 820.)						
17. Inspect condition of heater controls and ducts.						34. Install inspection plates and panels						
18. Inspect air vents condition and operation.....						E. WING GROUP						
19. Inspect condition of air conditioning ducts.....						1. Remove inspection plates and fairings.....						
20. Remove and clean air conditioning evaporator filter.....												
D. FUSELAGE AND EMPENNAGE GROUP												
1. Remove inspection plates and panels.....												
2. Inspect baggage door, latch, and hinges.												

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50	100	500	1000	Annual					
DESCRIPTION					DESCRIPTION				
50	100	500	1000	Inspector	50	100	500	1000	Inspector
E. WING GROUP (continued)					G. FLOAT GROUP (Applicable to float equipped Archer I and Archer II only)				
2. Inspect surfaces and tips for damage, loose rivets, and condition of walk-way.....		0	0	0	1. Inspect float attachment fittings.....	0	0	0	
3. Inspect tip light shield for cracks, bonds, corrosion, or other damage.....		0	0	0	2. Inspect floats for damage.....	0	0	0	
4. Inspect aileron hinges and attachments.....		0	0	0	3. Inspect pulleys and cables (see Note 16).....	0	0	0	
5. Inspect aileron control stops, verify stops are not loose and locknuts are tight.....		0	0	0	H. OPERATIONAL INSPECTION				
6. Inspect aileron cables, pulleys, and bellcranks for damage and operation. (See Note 16.).....		0	0	0	1. Check fuel pump and fuel tank selector.....	0	0	0	0
7. Inspect flaps and attachments for damage and operation.....		0	0	0	2. Check fuel quantity, pressure and flow readings..	0	0	0	0
8. Inspect condition of bolts used with hinges. Replace as required.....		0	0	0	3. Check oil pressure and temperature.....	0	0	0	0
9. Lubricate per lubrication chart. (Refer to Maintenance Manual, Chapter 12.).....	0	0	0	0	4. Check alternator output.....	0	0	0	0
10. Inspect wing attachment bolts and brackets.....		0	0	0	5. Check manifold pressure.....	0	0	0	0
11. Inspect wing fore and aft attach fittings for security, corrosion and condition. See to note 25.).....		0	0	0	6. Check carburetor air.....	0	0	0	0
12. Inspect fuel tanks and lines for leaks and water. (See Note 23.).....		0	0	0	7. Check parking brake.....	0	0	0	0
13. Fuel tanks marked for capacity.....		0	0	0	8. Check operation of auxiliary vacuum pump system, if installed. (See note 21.).....	0	0	0	0
14. Fuel tanks marked for minimum octane rating.....		0	0	0	9. Check vacuum gauge.....	0	0	0	0
15. Inspect fuel cell vents. (See Note 20.).....		0	0	0	10. Check gyros for noise and roughness.....	0	0	0	0
16. Inspect all air ducts, electrical leads, lines, and attaching parts for security, routing, chafing, deterioration, wear, and proper installation.....		0	0	0	11. Check cabin heater operation.....	0	0	0	0
17. Install inspection plates and fairings.....		0	0	0	12. Check magneto switch operation.....	0	0	0	0
					13. Check magneto rpm variation.....	0	0	0	0
					14. Check throttle and mixture operation. (See latest revision Piper Service Bulletin No. 448.).....	0	0	0	0
					15. Check propeller smoothness.....	0	0	0	0
					16. Perform maximum power static rpm check per Maintenance Manual, Chapter 71.....	0	0	0	0
					17. Check engine idle.....	0	0	0	0
					18. Check electronic equipment operation.....	0	0	0	0
					19. Check air conditioner compressor clutch operation.....	0	0	0	0
					20. Check air conditioner condenser scoop operation.....	0	0	0	0
					21. Check operation of autopilot, including automatic pitch trim, and manual electric trim (if installed). (Refer to note 22.).....	0	0	0	0
F. LANDING GEAR GROUP					I. GENERAL				
1. Inspect oleo struts for proper extension. Check fluid level as required.....	0	0	0	0	1. Verify aircraft conforms to FAA Specifications.....	0	0	0	0
2. Inspect nose gear steering control and travel.....		0	0	0	2. Comply with all latest revision FAA Airworthiness Directives.....	0	0	0	0
3. Inspect wheels for alignment.....		0	0	0	3. Comply with all latest revision Manufacturers Service Bulletins and Letters.....	0	0	0	0
4. Put airplane on jacks.....		0	0	0	4. Check for proper flight manual.....	0	0	0	0
5. Inspect tires for cuts, uneven or excessive wear, and slippage.....		0	0	0	5. Verify aircraft papers in proper order.....	0	0	0	0
6. Remove wheels, clean, check, and repack bearings.....		0	0	0					
7. Inspect wheels for cracks, corrosion, and broken bolts.....		0	0	0					
8. Inspect tire pressure.....	0	0	0	0					
9. Inspect brake lining and disc for condition and wear.....		0	0	0					
10. Inspect brake backing plates for condition and wear.....		0	0	0					
11. Inspect brake lines.....		0	0	0					
12. Inspect shimmy dampener.....		0	0	0					
13. Inspect gear forks for damage.....		0	0	0					
14. Insect Archer II cast main landing gear oleo housing torque ling attach lugs for cracks. (Refer to Maintenance Manual, Chapter 32 and see note 26).....		0	0	0					
15. Inspect oleo struts for fluid leaks and scoring.....		0	0	0					
16. Inspect gear struts and mounting bolts for condition and security.....		0	0	0					
17. Inspect torque links for cracks, bolts for condition and security. (Serial No's. 28-7690001 thru 28-7890231 refer to latest Piper Service Letter 842.).....		0	0	0					
18. Check torque link assembly for excessive side play.....		0	0	0					
19. Inspect all hydraulic lines, electrical leads, and attaching parts for security, routing, chafing, deterioration, wear, and proper installation.....		0	0	0					
20. Lubricate per lubrication chart. (Refer to Maintenance Manual, Chapter 12.).....	0	0	0	0					
21. Remove airplane from jacks.....		0	0	0					

— END —

NOTES

1. Refer to last card of Piper parts price list Aerofiche, for a check list of current revision dates to Piper inspection reports and manuals.
2. All inspections or operations are required each inspection interval as indicated by a (O). Both the annual and 100 hour inspections are complete aircraft inspections, identical in scope. The 500 and 1000 hour inspections are extensions of the annual or 100 hour inspection and require more detailed aircraft examination, overhaul, or replacement of major components. Inspections must be by FAA authorized persons.
3. Piper Service Bulletins are of special importance and Piper considers compliance mandatory.
4. Piper Service Letters are product improvements and service hints pertaining to aircraft servicing, and require careful attention.
5. Recommended flight time between reconditioning of Sensenich fixed-pitch metal propellers is 1000 hours, if propeller has no prior damage. Reconditioning is removal of fatigued surface metal and accumulated small nicks too numerous to repair individually. Contact a Sensenich factory approved repair station. (Refer to latest revision of Sensenich Service Letter no. 80-1.)
6. Power plant inspections are based on the engine manufacturer's operator's manual. Changes to the engine manufacturer's operator's manual will supersede or supplement inspections outlined lined in this report. Refer to latest revision of Textron Lycoming Service Letter No. 114
7. Intervals between oil changes can be increased as much as 100 percent on engines equipped with full flow cartridge type oil filters, if element is replaced each 50 hours of operation. Refer to latest revision Lycoming Service Bulletin 480 for additional information.
8. Replace engine compartment flexible hoses (fuel, oil, etc.) every 1000 hours, 8 years or at engine TBO, whichever comes first. Refer to latest revision of Textron Lycoming Service Bulletin 240 and latest revision of Textron Lycoming Service Letter L201B.
9. Check cylinders for evidence of excessive heat (look for burned paint on cylinders. This condition indicates internal cylinder damage and, if found, its cause must be found and corrected before aircraft returns to service.
Heavy discoloration and appearance of seepage at cylinder head and barrel attachment area is usually due to emission of thread lubricant used during barrel assembly at the factory, or by slight gas leakage stopping after cylinder is in service awhile. This condition is not harmful to engine performance and operation. If leakage exceeds these condition, replace cylinder.
10. At every 400 hours of engine operation, remove rocker box covers and check for freedom of valve rockers when valves are closed. Look for evidence of abnormal wear or broken parts in area of valve tips, valve keeper, springs, and spring seat. If wear is found, remove the cylinder and all components (including piston and connecting rod assembly) and inspect for further damage. Replace any parts not conforming to limits in latest revision for Textron Lycoming Service Table of Limits SSPO 1776.
11. Replace (or overhaul, if applicable) at engine overhaul or 5 years, whichever comes first. (For engine overhaul, refer to latest revision of Textron Lycoming Service Bulletin 240 and Service Letter L201).
12. Check throttle body attaching screws for tightness. Tighten screws to a torque of 40 to 50 inch-pounds.
13. Compressor oil level should not be checked unless a Freon leak has occurred, requiring an addition of Freon to the system. **CAUTION: Environmental regulations may require special equipment and procedures be utilized when charging air conditioning system with Freon.**
14. Clean any traces of oil from clutch surface.
15. If airplane has electric trim system refer to latest revision Piper Service Bulletin no. 556.
16. Examine cables for broken strands by wiping the cable with a cloth along the entire length of the cable. Visually inspect the cable thoroughly for damage not detected by the cloth. Replace damaged or frayed cables. Refer to Chapter 27 and the latest edition of FAA Advisory Circular 43.13-1A, Paragraph 198.
17. Maintain cable tensions specified in chapter 27.
18. Check security and condition of autopilot servo bridle cables, clamps, and sheer pin per latest revision of Piper Service Letter No. 695.
19. Replace flexible fuel tank supply hose at engine overhaul.
20. Replace fuel tank vent line flexible connections as required, but no later than 1000 hours time-in-service.
21. The Airborne auxiliary vacuum pump/motor assembly (4A3-1) must be removed from service and replaced at 500 hours operating time as indicated on the elapsed time indicator, or at 10 years of installed time in the aircraft, whichever comes first.
22. Refer to Flight Manual Supplement for preflight and flight check for intended function in all modes.
23. Pressure check all fluid hoses in fuselage and wing areas after 10 years time-in-service. Visually check for leaks. Hoses that pass inspection may remain in service and checked thereafter each five years time-in-service.
24. Replace compressor belt each 1000 hours time-in-service, or 3 years, whichever comes first.
25. Inspect area around fore and aft attach fittings for evidence of wet interior insulation. Replace as necessary.
26. On Archer II airplanes used for training, and utilizing cast main gear cylinder housings, inspect the housing radii at the torque link attach lugs for cracks after the first 2000 hours time-in-service. Thereafter, the inspection must be performed each 100 time-in-service. Replacing the cast housings with a forged housings (Piper p/n 65490-0) will eliminate the need for this inspection.