

PIPER AIRCRAFT CORPORATION

INSPECTION REPORT

THIS FORM MEETS REQUIREMENTS OF FAR PART 43

Make PIPER SEMINOLE		Model PA-44-180/180T		Serial No.	Registration No.	
Circle Type of Inspection (See Notes 1, 2 and 3) 50 100 500 1000 Annual		50	100	500	1000	Inspector
DESCRIPTION		DESCRIPTION				
A. PROPELLER GROUP 1. Inspect spinner and back plate for cracks 2. Inspect blades for nicks and cracks 3. Inspect for grease and oil leaks 4. Lubricate propeller per lubrication chart in Maintenance Manual 5. Inspect spinner mounting brackets for cracks (See Note 20) 6. Inspect propeller mounting bolts and safety (Check torque if safety is broken) 7. Inspect hub parts for cracks and corrosion 8. Rotate blades of constant speed propeller and check for tightness in hub pilot tube (See Note 20) 9. Remove constant speed propeller, remove sludge from propeller and crankshaft 10. Inspect complete propeller and spinner assembly for security, chafing, cracks, deterioration, wear and correct installation 11. Check propeller air pressure (at least once a month) 12. Overhaul propeller (See Note 15) 13. Inspect electric tachometer pickups for security (PA-44-180T only) B. ENGINE GROUP NOTE: Read Note 5 prior to completing this inspection group. CAUTION: Ground Magneto Primary Circuit before working on engine. 1. Remove engine cowl 2. Clean and inspect cowling for cracks, distortion, and loose or missing fasteners 3. Drain oil sump (See Note 6) Drain while engine is warm 4. Clean suction oil strainer at oil change (Inspect strainer for foreign particles) 5. Clean pressure oil strainer or change full flow (cartridge type) oil filter element (Inspect strainer or element for foreign particles) 6. Inspect oil temperature sender unit for leaks and security 7. Inspect oil lines and fitting for leaks, security chafing, dents and cracks (See Note 8) 8. Clean and inspect oil radiator cooling fins 9. Remove and flush oil radiators 10. Fill engine with oil per information on cowl or lubrication chart in Maintenance Manual (See Note 6) 11. Clean engine CAUTION: Use caution not to contaminate vacuum pump with cleaning fluid. (Refer to latest Lycoming Service Letter No. 1221.) 12. Inspect condition of spark plugs (Clean and adjust gap as required; adjust per latest Lycoming Service Instruction No. 1042) NOTE: If fouling of spark plugs has been apparent, rotate bottom plugs to upper plugs.		Perform all inspections or operations at each of the inspection intervals as indicated by a circle (O). 13. Inspect spark plug cable leads and ceramics for corrosion and deposits 14. Check cylinder compression (Ref: AC 43.13-1A) 15. Inspect cylinders for cracked or broken fins (See Note 11) 16. Inspect rocker box covers for evidence of oil leaks. If found, replace gasket; torque cover screws 50 inch-pounds NOTE: Lycoming requires a Valve Inspection be made after every 400 hours of operation. (See Note 12.) 17. Inspect ignition harness and insulators for high tension leakage and continuity 18. Check magneto points for proper clearance (Maintain clearance at .018 ± .006) 19. Inspect magneto for oil seal leakage 20. Inspect breaker felts for proper lubrication 21. Inspect distributor block for cracks, burned areas or corrosion, and height of contact springs 22. Check magnetos to engine timing 23. Overhaul or replace magnetos (See Note 7) 24. Remove air filters and tap gently to remove dirt particles (Replace as required) 25. Inspect security of carburetor throttle arm 26. Remove air filters from housing and inspect and/or replace 27. Drain carburetor and clean inlet line fuel strainer 28. Inspect condition of carburetor heat air door and box (PA-44-180 only) (See Note 13) 29. Inspect intake seals for leaks and clamps for tightness 30. Inspect all air inlet duct hoses (Replace as required) (PA-44-180 only) 31. On 180T installation inspect turbocharger compressor inlet and outlet ducts and mating flange at carburetor 32. Inspect condition of flexible fuel lines 33. Inspect primer lines 34. Inspect primer for condition and security 35. Inspect sniffle valve for signs of leakage 36. Inspect sniffle valve lines for condition and security 37. Clean screens in electric fuel pump (180 only) .. 38. Remove, drain, and clean fuel filter bowl and screen (Drain and clean at least every 90 days) 39. Replace flexible fuel lines 40. Inspect fuel system for leaks 41. Inspect fuel pumps for operation (engine driven and electric) 42. Overhaul or replace fuel pumps (engine driven and electric) (See Note 7) 43. Check vacuum pumps and lines 44. Overhaul or replace vacuum pumps (See Note 7) CAUTION: The only dry air pump mounting gasket authorized and approved for use on the Airborne dry air pump is the Airborne gasket B3-1-2, Piper part number 751 859. Use of any other gasket may result in oil seepage or leakage at the mounting surface.				
Owner		50	100	500	1000	Inspector

Continued on reverse side

Circle Type of Inspection (See Notes 1, 2 and 3)						Perform all inspections or operations at each of the inspection intervals as indicated by a circle (O).					
50	100	500	1000	Annual		50	100	500	1000		
DESCRIPTION						DESCRIPTION					
B. ENGINE GROUP (cont)											
45. Inspect throttle, carburetor heat, mixture and propeller governor controls for security, travel and operating condition.....		O	O	O		14. Clean or replace vacuum regulator filter	O	O	O		
46. Inspect exhaust stacks, connections and gaskets (Replace gaskets as required) (Refer to latest Piper Service Letter No. 860).....		O	O	O		15. Perform pitot-static test if appropriate (Refer to FAR 91.170)	O	O	O		
47. Inspect condition and security of turbocharger mounting bracket (PA-44-180T only).....		O	O	O		16. Inspect altimeter (Calibrate altimeter system in accordance with FAR 91.170, if appropriate)	O	O	O		
48. Inspect turbocharger insulation for condition and security (PA-44-180T only).....		O	O	O		17. Inspect operation of fuel selector valves	O	O	O		
49. Inspect turbocharger turbine for coking		O	O	O		18. Inspect operation of fuel drains	O	O	O		
50. Check operation of alternate air doors		O	O	O		19. Inspect condition of heater controls and ducts...	O	O	O		
51. Inspect muffler heat exchanger and baffles		O	O	O		20. Inspect condition and operation of air vents	O	O	O		
52. Inspect breather tubes for obstructions and security		O	O	O		D. FUSELAGE AND EMPENNAGE GROUP					
53. Inspect crankcase for cracks, leaks and security of seam bolts		O	O	O		1. Remove inspection plates and panels	O	O	O		
54. Inspect engine mounts for cracks and loose mountings		O	O	O		2. Inspect baggage doors, latches and hinges	O	O	O		
55. Inspect engine baffles for cracks and loose mountings		O	O	O		3. Inspect battery, box and cables (Inspect at least every 30 days. Flush box as required and fill battery per instructions on box)	O	O	O		
56. Inspect rubber engine mount bushings for deterioration (Replace as required)		O	O	O		4. Inspect electronic installation	O	O	O		
57. Inspect fire wall seals		O	O	O		5. Inspect bulkheads and stringers for damage	O	O	O		
58. Inspect condition and tension of alternator drive belt		O	O	O		6. Inspect antenna mounts and electric wiring	O	O	O		
59. Inspect condition of alternator and starter and security of mounting		O	O	O		7. Inspect hydraulic pump motor brushes (Refer to Note 19)	O	O	O		
60. Check fluid in brake reservoir (Fill as required)	O	O	O	O		8. Check hydraulic pump fluid level (Fill as required)	O	O	O		
61. Inspect all lines, air ducts, electrical leads and engine attachments for security, proper routing, chafing, cracks, deterioration and correct installation	O	O	O	O		9. Inspect hydraulic pump lines for damage and leaks	O	O	O		
62. Lubricate all controls per lubrication chart in Chapter 12 of Maintenance Manual	O	O	O	O		10. Inspect fuel lines, valves and gauges for damage and operation	O	O	O		
63. Overhaul or replace propeller governor (Refer to latest Hartzell Service Letter No. 61)						11. Remove, drain and clean fuel gascolator bowls (Drain and clean at least every 90 days)	O	O	O		
64. Complete overhaul of engine or replace with factory rebuilt (See Note 7)						12. Inspect security of all lines	O	O	O		
65. Reinstall engine cowl	O	O	O	O		13. Inspect vertical fin and rudder surfaces for damage	O	O	O		
C. CABIN GROUP						14. Inspect rudder hinges, horn and attachments for damage and operation	O	O	O		
1. Inspect cabin entrance, doors and windows for damage and operation		O	O	O		15. Inspect vertical fin attachments	O	O	O		
2. Check operation of emergency exit window (See Note 21)		O	O	O		16. Inspect ELT installation and condition of battery and antenna (See latest Piper S/L No. 820)	O	O	O		
3. Inspect upholstery for tears		O	O	O		17. Inspect rudder, tab hinge bolts for excess wear (Replace as required)	O	O	O		
4. Inspect seats, seat belts, security brackets and bolts		O	O	O		18. Inspect rudder trim mechanism	O	O	O		
5. Inspect trim operation		O	O	O		19. Inspect stabilator surfaces for damage	O	O	O		
6. Inspect operation and condition of rudder pedals		O	O	O		20. Inspect stabilator, tab hinges, horn and attachments for damage and operation	O	O	O		
7. Inspect parking brake valve and toe brakes for operation and cylinder leaks		O	O	O		21. Inspect stabilator attachments	O	O	O		
8. Inspect control wheels, column, pulleys and cables		O	O	O		22. Inspect stabilator and tab hinge bolts and bearings for excess wear (Replace as required)	O	O	O		
9. Inspect condition of flap control cable attachment bolt		O	O	O		23. Inspect stabilator trim mechanism	O	O	O		
10. Check landing, navigation, cabin and instrument lights	O	O	O	O		24. Inspect aileron, rudder, stabilator, stabilator trim cables, stabilator actuator tube, bellcrank, turnbuckles, guides and pulleys for safety, condition of bearings, damage and operation	O	O	O		
11. Inspect instruments, lines and attachments		O	O	O		25. Inspect all control cables, air ducts, electrical leads and attaching parts for security, routing, chafing, deterioration, wear and correct installation	O	O	O		
12. Inspect gyro operated instruments and electric turn and bank (Overhaul or replace as required) ..		O	O	O		26. Clean and lubricate stabilator trim drum screw ..		O	O		
13. Replace filters on gyro horizon and directional gyro or replace central air filter		O	O	O		27. Clean and lubricate all exterior needle bearings ..			O		
						28. Lubricate per lubrication chart in Maintenance Manual	O	O	O	O	
						29. Inspect rotating beacon for security and operation	O	O	O		
						30. Inspect security of Autopilot bridle cable clamps	O	O	O		
						31. Inspect oxygen system as required (Refer to Chapter 35)	O	O	O		
						32. Reinstall inspection plates and panels	O	O	O		

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DESCRIPTION						DESCRIPTION					
E. WING GROUP						22. Retract gear - inspect doors for clearance and operation					
1. Remove inspection plates and fairings						23. Inspect operation of squat switch					
2. Inspect surfaces and tips for damage, loose rivets, and condition of walkway						24. Inspect downlock switches, up switches, and electrical leads for security					
3. Inspect aileron hinges and attachments						25. Lubricate per lubrication chart in Maintenance Manual					
4. Inspect aileron cables, pulleys and bellcranks for damage and operation (Inspect bellcrank bearing for freedom of movement)						26. Remove airplane from jacks					
5. Inspect flaps and attachments for damage and operation						27. Inspect wearing surfaces of brake discs for "Heat Checks" (Refer to Chapter 32, Maintenance Manual)					
6. Inspect condition of bolts used with hinges (Replace as required)						G. OPERATIONAL INSPECTION					
7. Lubricate per lubrication chart in Maintenance Manual						1. Check fuel pump and fuel tank selector and crossfeed operation					
8. Inspect wing attachment bolts and brackets						2. Check fuel quantity and pressure or flow gauges					
9. Inspect all control cables, air ducts, electrical leads, lines, and attaching parts for security, routing, chafing, deterioration, wear and correct installation						3. Check oil pressure and temperatures					
10. Inspect fuel tanks and lines for leaks and water (See Note 16)						4. Check alternator output					
11. Fuel tanks marked for capacity						5. Check carburetor heat (PA-44-180 only)					
12. Fuel tanks marked for minimum octane rating						6. Check parking brake and toe brakes					
13. Inspect fuel tank vents (See Note 17)						7. Check vacuum gauge					
14. Inspect fuel tank nipple fittings for damage and proper torque (Refer to Chapter 28, Maintenance Manual)						8. Check gyros for noise and roughness					
15. Reinstall inspection plates and fairings						9. Check cabin heater operation					
F. LANDING GEAR GROUP						10. Check magneto switch operation					
1. Inspect oleo struts for proper extension (N-2.70 M-2.60) (Check for proper fluid level as required)						11. Check magneto RPM variation					
2. Inspect nose gear steering control and travel						12. Check throttle and mixture operation					
3. Inspect wheel alignment						13. Check propeller smoothness					
4. Put airplane on jacks (Refer to Maintenance Manual)						14. Check constant speed propeller action					
5. Inspect tires for cuts, uneven or excessive wear and slippage						15. Check engine idle					
6. Remove wheels, clean, check and repack bearings						16. Check electronic equipment operation					
7. Inspect wheels for cracks, corrosion and broken bolts						17. Check operation of controls					
8. Check tire pressure (N-31 psi/M-53 psi)						18. Check operation of flaps					
9. Inspect brake lining and disc						19. Check manifold pressure indicating					
10. Inspect brake backing plates						20. Check operation of cowl flaps					
11. Inspect brake lines and retaining clamps						H. GENERAL					
12. Inspect condition of centering spring						1. Aircraft conforms to FAA Specifications					
13. Inspect gear forks for damage						2. All FAA Airworthiness Directives complied with					
14. Inspect oleo struts for fluid leaks and scoring						3. All Manufacturers Service Letters and Bulletins complied with					
15. Inspect gear struts, attachments, torque links, retraction links and bolts for condition and security						4. Check for proper Flight Manual					
16. Inspect downlocks for operation and adjustment						5. Aircraft papers in proper order					
17. Inspect torque link bolts and bushings (Rebush as required)											
18. Inspect drag end side brace link bolts (Replace as required)											
19. Inspect gear doors and attachments											
20. Inspect gear warning horn and light for operation											
21. Retract gear - check operation											

NOTES:

1. Refer to the last card of the 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 at each of the inspection intervals as indicated by a (O). Both the annual and 100 hour inspections are complete inspections of the airplane, identical in scope, while both the **500** and **1000** hour inspections are extensions of the annual or 100 hour inspection, which require a more detailed examination of the airplane, and overhaul or replacement of some major components. Inspections must be accomplished by persons authorized by the FAA.
3. Piper Service Bulletins are of special importance and must be complied with promptly.
4. Piper Service Letters are product improvements and service hints pertaining to servicing the airplane and should be given careful attention.
5. Inspections given for the power plant are based on the engine manufacturer's operator's manual (Lycoming Part Number 60297-12) for this airplane. Any changes issued to the engine manufacturer's operator's manual after this date shall supersede or supplement the inspections outlined in this report. Occasionally, service bulletins or service instructions are issued by Avco Lycoming Division that require inspection procedures that are not listed in this manual. Such publications usually are limited to specific models and become obsolete after corrective steps have been accomplished. All such publications are available from Avco Lycoming distributors, or from the factory by subscription. Consult Lycoming Service Letter No. L114 for subscription information. Maintenance facilities should have an up-to-date file of these publications available at all times.
6. Intervals between oil changes can be increased as much as 100% on engines equipped with full flow (cartridge type) oil filters - provided the element is replaced each 50 hours of operation. As required by Lycoming Service Bulletin No. 446, oil additive LW-16702 must be added at each 50 hour oil change. The additive can be purchased through Lycoming and Piper Distribution Systems.
7. Replace or overhaul as required or at engine overhaul. (For engine overhaul, refer to latest Lycoming Service Instructions No. 1009.)
8. Replace flexible oil lines at Engine T.B.O. per latest Lycoming Service Bulletin No. 240.
9. Torque all attachment nuts to 135-150 inch-pounds; seat "Pal" nuts fingertight against plain nuts, and then tighten an additional 1/3 to 1/2 turn.
10. Deleted.
11. Check cylinders for evidence of excessive heat which is indicated by burned paint on the cylinders. This condition is indicative of internal damage to the cylinder and, if found, its cause must be determined and corrected before the aircraft is returned to service.
Heavy discoloration and appearance of seepage at the cylinder head and barrel attachment area is usually due to emission of thread lubricant used during assembly of the barrel at the factory, or by slight gas leakage which stops after the cylinder has been in service for awhile. This condition is neither harmful nor detrimental to engine performance and operation. If it can be proven that leakage exceeds these conditions, the cylinder should be replaced.
12. At every 400 hours of engine operation, remove the rocker box covers and check for freedom of valve rockers when valves are closed. Look for evidence of abnormal wear or broken parts in the area of the valve tips, valve keeper, springs and spring seat. If any indications are found, the cylinder and all of its components should be removed (including the piston and connecting rod assembly) and inspected for further damage. Replace any parts that do not conform with limits shown in the latest revision for Lycoming Special Service Publication No. SSP-2070.
13. Check carburetor throttle body attaching screws for tightness; the correct torque for these screws is 40 to 50 inch-pounds.
14. Check landing gear system in accordance with instructions given in Chapter 32 of Maintenance Manual.
15. Inspect and service in accordance with latest Hartzell Service Bulletin No. 110 and Service Letter No. 61.
16. Replace flexible fuel tank supply hoses at time of engine overhaul.
17. Replace fuel tank vent line flexible connections as required, but no later than 1000 hours of service.
18. When using alternate fuels, refer to latest Lycoming Service Letter No. L185 for additional information and service procedures.
19. Inspect brushes every 100 hours if airplane is used for training or every 500 hours if used for normal service. (Refer to Maintenance Manual, Chapter 29.)
20. For information on changing propeller spinner dome attaching locknuts, refer to latest Hartzell Service Instruction No. 118.
21. Check at each annual or 100 hour inspection, whichever comes first. Refer to Maintenance Manual, Chapter 52 for test procedures.

Signature of Mechanic or Inspector

Certificate No.

Date

Total Time On Airplane