

PIPER AIRCRAFT CORPORATION

INSPECTION REPORT

THIS FORM MEETS REQUIREMENTS OF FAR PART 43

Make PIPER TWIN COMANCHE		Model PA-30 and PA-39		Serial No.		Registration No.							
Circle Type of Inspection (See Notes 1, 2 and 3) 50 100 500 1000 Annual							Perform all inspections or operations at each of the inspection intervals as indicated by a circle (O). 50 100 500 1000						
DESCRIPTION A. PROPELLER GROUP 1. Inspect spinner and back plate for cracks. O O O O O O 2. Inspect blades for nicks and cracks O O O O O O 3. Inspect for grease and oil leaks O O O O O O 4. Lubricate per lubrication chart in Service Manual O O O O O O 5. Inspect spinner mounting brackets for cracks O O O O O O 6. Inspect propeller mounting bolts and safety (Check torque if safety is broken) O O O O O O 7. Inspect hub parts for cracks and corrosion O O O O O O 8. Check propeller air pressure (Check at least once a month) O O O O O O 9. Remove propellers; remove sludge from propeller and crankshaft O O O O O O 10. Overhaul propeller per latest Hartzell Service Letter No. 61 O O O O O O B. ENGINE GROUP NOTE: Read Note 8 prior to completing this inspection group. CAUTION: Ground Magneto Primary Circuit before working on engine. 1. Remove engine cowl. O O O O O O 2. Clean and inspect cowling for cracks, distortion and loose or missing fasteners O O O O O O 3. Drain oil sump (See Note 5) O O O O O O 4. Clean suction oil strainer at oil change (Inspect strainer for foreign particles) O O O O O O 5. Clean pressure oil strainer or change full flow (cartridge type) oil filter element (Inspect strainer or element for foreign particles) O O O O O O 6. Inspect oil temperature sender unit for leaks and security O O O O O O 7. Inspect oil lines and fittings for leaks, security, chafing, dents and cracks (See Note 7) O O O O O O 8. Clean and check oil radiator cooling fins. O O O O O O 9. Remove and flush oil radiator O O O O O O 10. Inspect rocker box covers for evidence of oil leaks. If found, replace gasket; torque cover screws 50 inch-pounds (See Note 9) O O O O O O NOTE: Lycoming requires a Valve Inspection be made after every 400 hours of operation. (See Note 8) 11. Inspect wiring to engine and accessories. Replace damaged wires and clamps. Inspect terminals for security and cleanliness. O O O O O O 12. Inspect spark plug cable leads and ceramics for corrosion and deposits O O O O O O 13. Check cylinder compression (Ref: AC 43.13-1A) O O O O O O							DESCRIPTION 14. Inspect cylinders for cracked or broken fins. O O O O O O 15. Fill engine with oil as per lubrication chart O O O O O O 16. Clean engine O O O O O O 17. Inspect condition of spark plugs (Clean and adjust gap as required, 0.015 to 0.018 or 0.018 to 0.022, as per latest Lycoming Service Instruction No. 1042) O O O O O O NOTE: If fouling of spark plugs has been apparent, rotate bottom plugs to upper plugs. 18. Inspect ignition harnesses and insulators (high tension leakage and continuity) O O O O O O 19. Check magneto main points for clearance - Maintain clearance at 0.018 ± 0.006. O O O O O O 20. Inspect magneto for oil seal leakage O O O O O O 21. Inspect breaker felts for proper lubrication O O O O O O 22. Inspect distributor block for cracks, burned areas or corrosion and height of contact springs O O O O O O 23. Check magnetos to engine timing O O O O O O 24. Overhaul or replace magnetos (See Note 6) O O O O O O 25. Remove induction air filter and clean. Replace as required O O O O O O 26. Remove and clean fuel injector inlet line screen (Clean injector nozzles as required) (Clean with acetone only) O O O O O O 27. Inspect injector system for signs of fuel dye indicating leaks. NOTE: If dye stains are present, inspect for loose connections and proper installation of air bleed nozzle shrouds O O O O O O 28. Inspect alternate air takeoff assembly. Remove air duct hose to inspect door spring and hinge inside the assembly O O O O O O 29. Inspect alternate air inlet valve bracket hinge pinholes for excessive wear (Refer to latest Piper Service Bulletin No. 623) O O O O O O 30. Inspect intake seals for leaks and clamps for tightness O O O O O O 31. Inspect condition of flexible fuel lines O O O O O O 32. Replace flexible fuel lines O O O O O O 33. Inspect fuel system for leaks O O O O O O 34. Check fuel pumps for operation (engine driven and electric) O O O O O O 35. Overhaul or replace fuel pumps (engine driven and electric) (See Note 6) O O O O O O 36. Inspect vacuum pumps and lines O O O O O O 37. Overhaul or replace vacuum pumps (See Note 6) O O O O O O 38. Inspect throttle, alternate air, mixture and propeller governor controls for travel and operating condition O O O O O O 39. Inspect exhaust stacks and gaskets O O O O O O 40. Inspect breather tube for obstructions and security O O O O O O						

Owner

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	Inspector	
DESCRIPTION						DESCRIPTION					
L	R										
B. ENGINE GROUP (cont)						D. CABIN GROUP					
41. Inspect crankcase for cracks, leaks and security of seam bolts	O	O		O	O	O		O	O	O	
42. Inspect engine mounts for cracks and loose mounting	O	O		O	O	O		O	O	O	
43. Inspect rubber engine mount bushings for deterioration (See Note 12)	O	O		O	O	O		O	O	O	
44. Inspect all engine baffles	O	O		O	O	O		O	O	O	
45. Inspect fire walls for cracks	O	O		O	O	O		O	O	O	
46. Inspect fire wall seals	O	O		O	O	O		O	O	O	
47. Inspect condition and tension of generator or alternator drive belt	O	O		O	O	O		O	O	O	
48. Inspect condition of generator or alternator and starter	O	O		O	O	O		O	O	O	
49. Replace vacuum regulator filter	O	O		O	O	O		O	O	O	
50. Lubricate all controls (DO NOT lubricate teflon liners of control cables) (Refer to Service Manual)	O	O		O	O	O		O	O	O	
51. Overhaul or replace propeller governor (Refer to latest Hartzell Service Letter No. 61)	O	O						O	O	O	
52. Complete overhaul of engine or replace with factory rebuilt (See Note 6)	O	O						O	O	O	
C. TURBOCHARGER GROUP						E. FUSELAGE AND EMPENNAGE GROUP					
1. Inspect all air inlet ducting and compressor discharger ducting for worn spots, loose clamps or leaks	O	O	O	O	O	O		O	O	O	
2. Inspect engine air inlet assembly for cracks, loose clamps and screws	O	O	O	O	O	O		O	O	O	
3. Inspect waste-gate housing, exhaust ducting and exhaust stacks for signs of leaks or cracks	O	O	O	O	O	O		O	O	O	
4. Carefully inspect all turbo support brackets, struts, etc., for breakage, sagging or wear	O	O	O	O	O	O		O	O	O	
5. Inspect all oil lines, fuel lines and fittings for wear, leakage, heat damage or fatigue	O	O	O	O	O	O		O	O	O	
6. Actuate waste-gate control; check spring preload and examine control for any pending sign of breakage	O	O	O	O	O	O		O	O	O	
7. Remove inlet hose to compressor and visually inspect compressor wheel	O	O		O	O	O		O	O	O	
8. Inspect the compressor wheel for nicks, cracks or broken blades	O	O		O	O	O		O	O	O	
9. Inspect for excess bearing drag or wheel rubbing against housing	O	O		O	O	O		O	O	O	
10. Inspect induction and exhaust components for worn or damaged areas, loose clamps, cracks and leaks	O	O		O	O	O		O	O	O	
11. Inspect turbine wheel for broken blades or signs of rubbing	O	O		O	O	O		O	O	O	
12. Inspect turbine heat blanket for condition and security	O	O		O	O	O		O	O	O	
13. Inspect rigging of exhaust waste gates	O	O		O	O	O		O	O	O	
14. Inspect rigging of alternate air control	O	O		O	O	O		O	O	O	
15. Run up engine; check instruments for smooth, steady response	O	O	O	O	O	O		O	O	O	
16. Remove all turbocharger components from the engine. Inspect and repair or replace as necessary	O	O				O		O	O	O	
17. Clean turbocharger oil filter per Turbo Oil Filter Cleaning Procedure, Section II, Service Manual at every oil change	O	O	O	O	O	O		O	O	O	
18. Reinstall engine cowl	O	O	O	O	O	O		O	O	O	
1. Remove inspection plates and panels								O	O	O	
2. Inspect cabin entrance door, baggage compartment door and windows for damage, operation and security								O	O	O	
3. Inspect upholstery for tears								O	O	O	
4. Inspect seats, seat belts, securing brackets and bolts								O	O	O	
5. Inspect trim operation								O	O	O	
6. Inspect rudder pedals, brake pedals and cylinders for operation and leaks								O	O	O	
7. Inspect parking brake								O	O	O	
8. Inspect control wheels, column, pulleys and cables								O	O	O	
9. Check landing, navigation, cabin and instrument lights								O	O	O	
10. Inspect instruments, lines and attachments								O	O	O	
11. Inspect instruments central air filter lines and replace filter								O	O	O	
12. Inspect condition of vacuum operated instruments and operation of electric turn and bank (Overhaul or replace as required)								O	O	O	
13. Replace filters, if installed, in gyro horizon and directional gyro								O	O	O	
14. Inspect altimeter (Calibrate altimeter system in accordance with FAR 91.170, if appropriate) ..								O	O	O	
15. Inspect operation of fuel selector valves (See Note 14)								O	O	O	
16. Inspect operation of crossfeed valve								O	O	O	
17. Inspect operation of heater fuel valve								O	O	O	
18. Inspect oxygen outlets for defects and corrosion								O	O	O	
19. Inspect oxygen system operation and components								O	O	O	
20. Reinstall inspection plates and panels								O	O	O	
1. Remove inspection plates and panels								O	O	O	
2. Check fluid in brake reservoir (Fill as required)								O	O	O	
3. Inspect battery, box and cables (Inspect at least every 30 days. Flush box as required and fill battery per instructions in Servicing Battery, Section II, Service Manual)	O							O	O	O	
4. Inspect heater for fuel or fume leaks								O	O	O	
5. Check recommended time for overhaul of heater per Overhaul Instructions, Section XIII, Service Manual								O	O	O	
6. Inspect electronic installations (See latest Piper Service Bulletin No. 553)								O	O	O	
7. Inspect bulkheads and stringers for damage								O	O	O	
8. Inspect loop and loop mount, antenna mount and electric wiring								O	O	O	
9. Inspect E.L.T. installation and condition of battery and antenna (See latest Piper S/L 820)								O	O	O	
10. Remove, drain and clean fuel filter bowl and screen (Drain and clean at least every 90 days)	O							O	O	O	
11. Inspect fuel lines, valves and gauges for damage and operation								O	O	O	
12. Inspect security of all lines								O	O	O	
13. Inspect stabilator, fin and rudder surfaces for damage (Refer to latest Piper Service Letter No. 679)								O	O	O	
14. Inspect fin front spar to fuselage attachment per latest Piper Service Letter No. 777 and AD No. 76-18-5								O	O	O	
15. Inspect stabilator attachment bolts per latest Piper Service Letter No. 667A								O	O	O	

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50	100	500	1000	Annual		50	100	500	1000	Inspector	
DESCRIPTION						DESCRIPTION					
E. FUSELAGE AND EMPENNAGE GROUP (cont)											
16.						7.					
Inspect stabilator bearings and horns for damage and operation (Refer to latest Piper Service Bulletin No. 464)						Inspect wheels for cracks, corrosion and broken bolts					
17.						8.					
Inspect rudder hinges, horn and attachments for damage and operation						Check tire pressure (42 psi, all)	O				
18.						9.					
Inspect rudder trim mechanism						Inspect brake lining and disc (1/64 min. lining)					
19.						10.					
Inspect stabilator trim mechanism						Inspect brake backing plates					
20.						11.					
Inspect stabilator free play (Refer to Service Manual, Section IV)						Inspect brake lines					
21.						12.					
Inspect aileron, rudder, stabilator, trim cables, turnbuckles, guides and pulleys for safeties, damage and operation						Inspect shimmy dampener					
22.						13.					
Replace rudder hinge bolts						Inspect gear forks for damage					
23.						14.					
Inspect rotating beacon for wear, etc.						Inspect oleo struts for fluid leaks and scoring ..					
24.						15.					
Lubricate per lubrication chart in Service Manual						Inspect gear struts, attachments, torque links, retraction links and bolts for proper installation and operation (See Note 11)					
25.						16.					
Inspect security of Autopilot bridle cable clamps						Inspect torque link bolts and bushings (Rebush as required)					
26.						17.					
Reinstall inspection plates and panels						Inspect drag link bolts (Replace as required)					
F. WING GROUP						18.					
1.						Inspect gear doors and attachments					
Remove inspection plates and fairings						19.					
2.						Inspect warning horn and light for operation					
Inspect wing, aileron and flap surfaces for damage, cracks, and loose rivets, and condition of wing tips						20.					
3.						Retract gear - check operation					
Inspect condition of walkway						21.					
4.						Retract gear - check doors for clearance and operation					
Inspect aileron attachments and hinges for damage, looseness and operation						22.					
5.						Inspect emergency operation of gear (See latest Piper Service Letter No. 782)					
Replace Aileron Outboard Hinge with Aileron Outboard Hinge Bracket Kit No. 760 914						23.					
6.						Inspect landing gear motor, transmission and attachments					
Inspect aileron cables, pulleys, bellcranks and control rods for corrosion, damage and operation						24.					
7.						Inspect anti-retraction system					
Inspect flap attachments, tracks and rollers for damage, looseness and operation. Clean tracks and rollers						25.					
8.						Inspect position indicating switches and electrical leads for security					
Inspect flap cables, pulleys, step lock, bellcranks and control rods for corrosion, damage and operation						26.					
9.						Inspect rubber assist cords (See Note 13)					
Replace bolts used with aileron hinges and flap tracks						27.					
10.						Lubricate per lubrication chart in Service Manual					
Lubricate per lubrication chart in Service Manual						28.					
11.						Remove airplane from jacks					
Inspect wing attachment bolts and brackets						H. OPERATIONAL INSPECTION					
12.						1.					
Inspect engine mount attaching structure						Check fuel pump and fuel tank selector operation					
13.						2.					
Inspect fuel cells and lines for leaks and water						Check indication of fuel quantity and pressure or flow gauges					
14.						3.					
Fuel cells marked for capacity						Check oil pressure and temperature indications					
15.						4.					
Fuel cells marked for minimum octane rating ..						Check generator or alternator output					
16.						5.					
Inspect switches to indicators registering fuel cell quantity						Check manifold pressure indications					
17.						6.					
Inspect fuel cell vents						Check operation of brakes and parking brake					
18.						7.					
Inspect thermos type fuel cap rubber seals for brittleness and deterioration						Check operation of vacuum gauge					
19.						8.					
Inspect for exhaust corrosion in wing panel cavity						Check gyros for noise and roughness					
20.						9.					
Reinstall inspection plates and fairings						Check cabin heat operation					
G. LANDING GEAR GROUP						10.					
1.						Check magneto switch operation					
Inspect oleo struts for proper extension (Inspect for proper fluid level as required)						11.					
2.						Check magneto RPM variation					
Inspect nose gear steering control						12.					
3.						Check throttle and mixture operation					
Inspect wheels for alignment						13.					
4.						Check engine idle					
Put airplane on jacks						14.					
5.						Check propeller smoothness					
Inspect tires for cuts, uneven or excessive wear and slippage						15.					
6.						Check propeller governor action					
Remove wheels; clean, inspect and repack bearings						16.					
						Check electronic equipment operation					
						17.					
						Check operation of controls					
						18.					
						Check operation of flaps					
						19.					
						Check override function of AutoControl, AutoFlite or Altimatec System if installed					
						20.					
						Check operation of Pitch Trim System if installed					
						I. GENERAL					
						1.					
						Aircraft conforms to FAA Specifications					
						2.					
						All FAA Airworthiness Directives complied with					
						3.					
						All Manufacturers Service Letters and Bulletins complied with					
						4.					
						Check for proper Flight Manual					
						5.					
						Aircraft papers in proper order					

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 (0). 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. 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.
6. Replace or overhaul as required or at engine overhaul. (For engine overhaul, refer to latest Lycoming Service Instructions No. 1009.)
7. Replace flexible oil lines at Engine T.B.O. per latest Lycoming S/B 240.
8. Inspections given for power plant are based on the engine manufacturer's operator's manual. Any changes issued to the engine manufacturer's operator's manual shall supersede or supplement the instructions 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 latest Lycoming Service Letter No. L114 for subscription information. Maintenance facilities should have an up-to-date file of these publications available at all times.
9. 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.
10. 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 Special Service Publication No. SSP-2070.
11. Refer to latest Piper Service Letter No. 782 for proper inspection and wear limits.
12. It is recommended that all engine support bushings be changed every 500 hours.
13. Replace rubber assist cords every 500 hours or every three years, whichever occurs first.
14. Refer to latest Piper Service Letter No. 851.

Signature of Mechanic or Inspector	Certificate No.	Date	Total Time On Airplane