PIPER AIRCRAFT CORPORATION INSPECTION REPORT This form meets requirements of FAR Part 43 • Inspections must be performed by persons authorized by the FAA.													
Model	Name: COMANCHE Model No.: PA - 2	24 /					Serial No.: Registration No.:						
0	Sircle Type of Inspection (See Notes 1, 2, 3 and 4) 50 100 Annual			Inspector		Ī	Perform all inspections or operations at each of the inspection intervals as indicated by a circle (O)			Inspector			
	DESCRIPTION	50	10	Inspe			DESCRIPTION	50	10	Inspe			
WAF 1. Insp 2. Insp	PPELLER GROUP RNING: USE EXTREME CAUTION WHEN ROTATING PROPELLER BY HAND; PROPELLER MAY KICK BACK. PRIOR TO ROTATING PROPELLER ENSURE BOTH MAGNETO SWITCHES ARE OFF (GROUNDED). IF MAGNETOS ARE NOT GROUNDED). IF TURNING PROPELLER MAY START ENGINE. ect spinner and back plate for cracks	0	000			1 2 2 2 2 2	 Inspect magnetos. (See Notes 6 and 9.)	0	00000				
 Lubr Insp Insp Insp If sa Insp 8. Insp Rota 	icate per lubrication chart in Section II ect spinner mounting brackets for cracks ect propeller mounting bolts for condition and security. fety is broken, re-torque and safety ect pitch actuating arms and bolts ect hub parts for cracks and corrosion te blades and check for tightness in hub pilot tube					2	 26. Inspect engine-driven and electric fuel pumps for condition and operation. (See Note 6.) 27. Inspect vacuum pumps and lines. (See Notes 15 and 25.) 28. Inspect throttle, carburetor heat or alternate air, mixture and propeller governor controls for travel and operating condition		000				
WAF NOT	AINE GROUP RNING: GROUND MAGNETO PRIMARY CIRCUIT BEFORE WORKING ON ENGINE. TE: Read Notes 5 and 13 prior to completing this inspection group.					3	 Procedures. Replace gaskets as required. (See Note 26.) Inspect muffler, heat exchanger and baffles per Exhaust System Inspection under Special Inspections, Procedures	0	0				
 Cleatings Drai Drai Cleating Cleating	n and check cowling for cracks, distortion and loose or ing fasteners	0				3 3 3 3 3 3	 security of seam bolts						
and 8. Clea 9. Insp	ect oil lines and fittings for leaks, security, chafing, dents cracks. (See Special Inspections.) n and inspect oil radiator cooling fins ect rocker box covers for evidence of oil leaks. If found,		00				 Reinstall engine cowling; except for PA-24-260 Turbo, proceed to Turbocharger Group TURBOCHARGER GROUP (PA-24-260 TURBO ONLY) 	0	0				
(See 10. Insp wire secu 11. Insp and 12. Insp	ace gasket. Torque cover screws 50 inch-pounds. Note 8.) ect wiring to engine and accessories. Replace damaged s and clamps. Inspect terminals for Inity and cleanliness ect spark plug cable leads and ceramics for corrosion deposits ect cylinder compression.	0	0 0 0			2	 Inspect all air inlet ducting and compressor discharge ducting for worn spots, loose clamps or leaks	0 0 0	0 0 0				
13. Insp 14. Fill e CAL 15. Clea 16. Insp requ of Ly	 Platest revision of AC 43.13-1.) Platest revision of AC 43.13-1.) Perturbation of the problem o	0	0 0 0			6 7 8 9 1	 Inspect all oil lines, fuel lines, and fittings for wear, leakage, heat damage or fatigue (See Special Inspections) Actuate wastegate control; check spring pre-load and examine control for any pending sign of breakage	0	0				
· ·	ect ignition harnesses and insulators for high tension age and continuity		0				damaged areas, loose clamps, cracks and leaks.		0				

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	DESCRIPTION	50	100	lnsp	DESCRIPTION
c.	TURBOCHARGER GROUP (CONT.)				E. FUSELAGE AND EMPENNAGE GROUP
12. 13. 14. 15. 16. 17. D. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10.	TURBOCHARGER GROUP (CONT.) Inspect turbine heat blanket for condition and security Inspect rigging of exhaust wastegates Inspect rigging of alternate air control Reinstall engine cowling Run up engine, check instruments for smooth, steady response. CABIN AND COCKPIT GROUP Inspect cabin entrance door, baggage compartment door and windows for damage, operation and security Inspect upholstery for tears Inspect seats and attaching brackets and hardware for condition, security and operation Inspect trim operation Inspect trim operation Inspect rodder pedals, brake handle and/or toe brake pedals, and cylinders for condition, security, operation and leaks. (See Note 10.) Inspect control wheels, column, pulleys and cables Inspect landing, navigation, cabin and instrument lights Inspect instruments, lines and attachments	0	0 0 0 0 0	_	
	operation of electric turn and bank. (Overhaul or replace as required.)		00		control rod and trim mechanism for security of installation, O damage and operation O 14. Inspect stabilator tip balance weight arm for cracks O 15. Inspect vertical fin front spar to fuselage attachment, per latest revision of FAA AD No. 75-12-06 O 16. Inspect vertical fin for surface damage or irregularities (i.e., O
15. 16. 17. 18.	respectively Inspect and test ELT per FAR 91.207. (See paragraph 12-3.). Inspect oxygen outlets for defects and corrosion Inspect oxygen system operation and components Inspect fuel selector valve for ease of rotation. If difficult to rotate, see paragraphs 8-14, 8-15, or 8-16, as appropriate In PA-24-400s, inspect the fuel selector valve for internal leaks per paragraph 8-16 If installed, inspect disposable-type (non-gauged) fire	0			skin cracks, distortion, dents, and corrosion); structural defects (i.e loose or or missing rivets); and attachment O 17. Inspect rudder for surface damage or irregularities (i.e., skin cracks, distortion, dents, and corrosion); structural O defects (i.e loose or missing rivets); misrigging; hinge damage, excessive wear, freedom of movement and proper O 18. Inspect rudder binges, being or worn hardware O
20.	extinguisher minimum weight as specified on nameplate If installed, have any rechargeable (gauged) fire extinguisher professionally inspected		0		18. Inspect rudder hinges, horns and attachments for security, damage and operation 0 19. Inspect rudder trim mechanism operation 0 20. Inspect rudder, stabilator, and stabilator trim cables; and cable terminals, turnbuckles, guides, fittings, and pulleys for safety, condition, and operation. (See Note 14.)
					21. Inspect rudder, stabilator, and stabilator trim cable tension per Table V-I. Use a tensiometer. 0 22. Inspect rotating beacon for wear, etc 0 23. Lubricate per lubrication chart in Section II 0 24. Inspect security and condition of Autopilot bridle cables and clamps

	Circle Type of Inspection (See Notes 1, 2, 3 and 4) 50 100 Annual			nspector	Perform all inspections or operations at each of the inspection intervals as indicated by a circle (O)			nspector
	DESCRIPTION	50	100	Insp	DESCRIPTION		9 9	lnsr
1. 2.	WING GROUP Remove inspection plates and fairings Inspect wing surfaces for damage, loose rivets, and condition of wing tips		0		 21. Inspect landing gear motor, transmission and attachments 22. Inspect Landing Gear Transmission Retract Spring for condition, security and operation. (See Figure 6-13, Item 14 or 15.)		0	
4. 5.	Inspect condition of walkway (right wing only) Inspect wing attachment bolts and brackets Inspect aileron for surface damage or irregularities (i.e.,		0 0		 24. Inspect position indicating switches and electrical leads for security		0	
	skin cracks, distortion, dents, and corrosion); structural defects (i.e loose or missing rivets); misrigging; hinge damage, excessive wear, freedom of movement and				for wear, cracks and/or deformation 26. Lubricate per lubrication chart in Section II 27. Remove airplane from jacks		0 0 0	
6.	proper lubrication; and attachment points for missing or worn hardware. (See Notes 23 and 24.) Inspect aileron cable tension per Table V-I. Use a tensiometer		0 0		H. SPECIAL INSPECTIONS See Special Inspections, Requirements, below.			
7.	Inspect aileron attachments and hinges for damage,				I. OPERATIONAL INSPECTION			
8.	looseness and operation Inspect aileron balance weights and arms for security and condition		0 0		 Check fuel pump and fuel tank selector operation Check indication of fuel quantity and pressure or 		0	
	Inspect aileron cables; and cable terminals, turnbuckles, guides, fittings, pulleys, and bellcranks for safety, condition, and operation. (See Note 14)		0		flow gauges C 3. Check oil pressure and temperature indications C 4. Check generator or alternator output C	5 5	0 0 0	
	Inspect flaps for surface damage or irregularities (i.e., skin cracks, distortion, dents, and corrosion); structural defects (i.e loose or missing rivets); misrigging; hinge damage, excessive wear, freedom of movement and proper	1			5. Check manifold pressure indications	2 2	0 0 0 0	
	lubrication; and attachment points for missing or worn hardware Inspect flap attachments and hinges, or tracks and rollers for		0		9. Check gyros for noise and roughness C 10. Check cabin heat operation C 11. Check magneto switch operation C	2 2	0 0 0	
12.	damage, looseness and operation. Clean tracks and rollers Inspect flap cables, pulleys, step lock, bellcranks and rods for safety, condition, and operation. (See Note 14.)	0	0 0		12. Check magneto RPM variation	2 2	0 0 0	
13. 14.	Lubricate per lubrication chart in Section II Inspect fuel cells and lines for leaks and water. Visually inspect the lower wing surfaces for tell-tale fuel stains.	0	0		15. Check propeller smoothness)))	0 0 0	
15.	(See Note 22.) Inspect thermos type fuel filler cap for condition and security. Inspect rubber seals for brittleness and deterioration		0		18. Check operation of controls. C 19. Check operation of flaps. C 20. Check operation of Autopilot, including automatic pitch trim, C	כ	0	
17. 18.	Fuel fillers marked for capacity Fuel fillers marked for minimum octane rating Inspect switches to indicators registering fuel tank quantity		000		and Manual Electric Trim. (See Note 12.) C		0	
	Inspect fuel cell vents Reinstall inspection plates and fairings		0		2. Latest revision of applicable FAA Airworthiness Directives		0	
-	LANDING GEAR GROUP				complied with Complied with 3. Current and correct Airplane Flight Manual (AFM) is in the Complexity		0	
	Inspect oleo struts for proper extension and evidence of fluid leakage. (See Landing Gear, Section II.) Inspect nose gear steering control	0	0 0		airplane C 4. Check airplane for required placards as identified in the Limitations section of the AFM C		0 0	
З.	Inspect wheels for alignment Put airplane on jacks		0 0		5. Appropriate entries made in the Aircraft and Engine Log books	5	0	
6.	Inspect tires for cuts, uneven or excessive wear and slippage. Remove wheels, clean, inspect and repack bearings Inspect wheels for cracks, corrosion and broken bolts		0 0 0		 Airworthiness & Registration Certificate in the aircraft and properly displayed Aircraft Equipment List, Weight and Balance and FAA 	o	0	
8.	Check tire pressure. (Refer to Section II.) Inspect brake linings and discs for condition and wear. (See Note 21.)	0 0	0		Form(s) 337 (if applicable) are in the aircraft and in proper order		0	
11.	Inspect brake backing plates for cracks Inspect hydraulic lines, electrical leads, and attaching parts for condition and security (i.e routing, chafing, damage,		0		Le cherrie e cherrie e cherrie herre	-	õ	
12. 13.	wear, etc) Inspect condition of shimmy dampener Inspect gear forks for damage		0000					
15.	Inspect oleo struts for fluid leaks and scoring Inspect gears struts, attachments, torque links, retraction links and bolts for operation. (See Note 11.)		0 0					
	Inspect gear doors and attachments. (See Notes 16, 17 and 18)		0					
	Inspect warning horn and light for operation Retract gear - Check operation		0					

K. NOTES

1. Refer to Piper's Customer Service Information File P/N 1753-755 for latest revision dates to Piper Inspection Reports/Manuals and this service manual. References to section, paragraph, figure, or table are to the appropriate section, paragraph, figure, or table in this manual.

WARNING: INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (ICA) FOR ALL NON-PIPER APPROVED STC INSTALLATIONS ARE NOT INCLUDED IN THIS MANUAL. WHEN A NON-PIPER APPROVED STC INSTALLATION IS INCORPORATED ON THE AIRPLANE, THOSE PORTIONS OF THE AIRPLANE AFFECTED BY THE INSTALLATION MUST BE INSPECTED IN ACCORDANCE WITH THE ICA PUBLISHED BY THE OWNER OF THE STC. SINCE NON-PIPER APPROVED STC INSTALLATIONS MAY CHANGE SYSTEMS INTERFACE, OPERATING CHARACTERISTICS AND COMPONENT LOADS OR STRESSES ON ADJACENT STRUCTURES, THE PIPER PROVIDED ICA MAY NOT BE VALID FOR AIRPLANES SO MODIFIED.

Inspections or operations are to be performed as indicated by a "O" at the 50 or 100 hour inspection interval. Inspections or operations (i.e. - component overhauls/replacements, etc.) required outside the 50 / 100 hour cycle are listed as special inspections in paragraph 3-8. Inspections must be accomplished by persons authorized by the FAA.

(a) The 50 hour inspection accomplishes preventive maintenance, lubrication and servicing as well as inspecting critical components.

(b) The 100 hour inspection is a complete inspection of the airplane, identical to an annual inspection.

NOTE: A log book entry should be made upon completion of any inspections.

- 3. Piper Service Bulletins are of special importance and Piper considers compliance mandatory. In all cases, see Service Bulletin/Service Letter Index P/N 762-332 to verify latest revision. See also Table III-II.
- 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 P/N 60297-19) for this airplane. Any changes issued to the engine manufacturer's operator's manual supersede or supplement the inspections outlined in this report. Should fuel other than the specified octane rating for the power plant be used, refer to the latest revision of Lycoming Service Letter No. L185 for additional information and recommended service procedures.
- 6. Replace or overhaul as required or at engine overhaul.
- 7. Refer to latest revisions of Lycoming Service Bulletin No. 480 and Lycoming Service Instruction No. 1014. Lycoming recommends the following oil change intervals:
 - (a) For engines equipped with full-flow oil filters, change the oil and filter each 50 hours of engine operation or every four months, whichever comes first;
 - (b) For engines relying upon pressure screen filtration alone, change the oil and clean the pressure and suction screens each 25 hours of engine operation or every four months, whichever comes first.
- 8. Check cylinders for evidence of excessive heat 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.

- 9. Inspect and clean magneto(s) per the procedures in the Periodic Maintenance section of the applicable Service Support Manual, available from Teledyne Continental Motors, Inc., PH: (800) 718-3411, or http://www.tcmlink.com/.
- 10. In PA-24 / PA-24-250 S/N's 24-1 thru 24-2298, less 24-2175: perform Hand Brake / Master Cylinder Control Cable Inspection per paragraph 6-88a.
- 11. Refer to Section VI for proper inspection and wear limits.
- 12. Refer to Flight Manual supplement for preflight and flight check, for intended function in all modes.
- 13. In PA-24-260 Turbo airplanes equipped with Bendix S-1200 series magnetos, S/N's lower than "86100025" and data plates not stamped with a "T," that have brown magneto distributor blocks P/N 10-391586 with molded batch codes 0000 thru 8601: inspect in accordance with Bendix Service Bulletin No. 629 per Piper Vendor Service Publication No. 69.
- 14. 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.
 - (a) See Control Cable Inspection, paragraph 5-4A, or the latest edition of FAA Advisory Circular 43.13-1.
 - (b) At fifteen (15) years time-in-service, begin Cable Fittings 100 Hour Special Inspection, paragraph 5-4A.
- 15. For airplanes equipped with Parker Hannifin / Airborne vacuum pump(s), verify compliance with Parker Hannifen / Airborne Service Letter No. 72.
- 16. In PA-24 and PA-24-250 Serial Nos. 24-1 thru 24-2620, 24-2632 thru 24-2634, 24-2642, 24-2648, 24-2648 thru 24-2652, and 24-2683 thru 24-2684 for those airplanes which have not installed a stainless steel door hinge P/N 21065-12, on the left main landing gear, visually inspect hinges for cracks.
- 17. In PA-24 and PA-24-250 S/N's 24-1 thru 24-2438, 24-2640 thru 24-2666, 24-2668 thru 24-2674, 24-2676, and 24-2678 thru 24-2679 for airplanes which have not installed a stainless steel door hinge, P/N 21065-12, on the right main gear: visually inspect hinges for cracks.
- 18. In PA-24, PA-24-250, and PA-24-260 S/N's 24-1 thru 24-4803, less 24-4783: inspect nose gear door hinge bushings, P/N 80012-97, for evidence of excessive wear. Replace as required.
- 19. In PA-24-260 S/N's 24-4783, 24-4804 thru 24-5034, and PA-24-400 S/N's 26-2 thru 26-148 only, for airplanes equipped with an AN-type enginedriven fuel pump, Lear/Romec P/N RG17980, without a "/M" suffix following the Lear/Romec part number: visually inspect the split lines between the pump housing, relief valve housing, and relief valve cover for evidence of fuel leakage or noticeable gasket extrusion adjacent to the pump inlet or outlet ports. If noticeable gasket extrusion or fuel leakage is evident, see latest revisions of Crane/Lear Romec Service Bulletin No. 101SB020, Rev. 3, per Lycoming Service Bulletin No. 529B and Piper Service Bulletin No. 1035A.
- 20. For airplanes which have not installed Piper Kit No. 763-893, inspect aileron nose rib/bulkheads per Paragraph 4-7a.

K. NOTES (CONT.)

- 21. In PA-24-400s equipped with Cleveland Main Wheel Assembly Model No. 40-90, at each tire change, or annually, whichever comes first, inspect the brake disc per Cleveland Service Bulletin No. 7071 (Piper Vendor Service Publication No. 134.)
- 22. In PA-24 and PA-24-250 S/N's 24-2882 thru 24-3687 and PA-24-400 S/N's 26-1 thru 26-69, 26-71 thru 26-79, 26-81 thru 26-98, 26-98, 26-99, 26-101 thru 26-103, 26-106, 26-108, 26-109, 26-112 thru 26-114, 26-116, 26-119 thru 26-121, 26-123 thru 26-125, and 26-147; if fuel stains are observed on the lower surfaces of a wing, inspect the fuel lines and fittings for any indication of leaks. If no leakage is attributable to the fuel lines and fittings then carefully inspect the upper panels of the fuel cells for evidence of seepage. If such evidence is found, replace the fuel cells.
- 23. For airplanes which have accumulated 1000 hours time-in-service or more and have not installed Piper Kit No. 760-914, inspect aileron spar per Paragraph 4-27a.
- 24. In PA-24-260 S/N's 24-4567 and up, for airplaces equipped with Piper AutoControl III, AltiMatic III, AltiMatic IIIB or AltiMatic IIIB-1 Automated Flight Control Systems, perform the 100 Hour AutoControl III / AltiMatic III Autopilot Inspection in paragraph 12-7a.
- 25. In airplanes equipped with Aero Accessories, Inc. service replacement dry air pumps, which have accumulated 500 hours time-in-service or more, inspect vacuum pump vane wear per Paragraph 11-16a.
- 26. In PA-24-250 S/N's 24-103 thru 24-1629, for airplanes which have not installed the improved right exhaust stack assembly P/N 24543-000, or have not modified the original equipment right exhaust stack assembly P/N 21664-003 with Piper Kit No. 754-396: each 50 hours time-in-service inspect the right exhaust stack assembly for any indication of cracks or deterioration. Thoroughly examine the area where the rear cylinder exhaust stack is welded to the right exhaust stack assembly.

NOTE: Installation of P/N 24543-000 or Kit No. 754-396 relieves this inspection requirement.

Signature of Mechanic or Inspe	ector:
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Date:

DDER