SECTION III

INSPECTION

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SECTION III

INSPECTION

3-1. INTRODUCTION. This section provides instructions for conducting inspections. These inspections are described in paragraphs 3-4 and 3-5. Repair or replacement instructions for those components found to be unserviceable at inspection may be found in the section covering the applicable aircraft system.

CAUTION

When working on engines, ground the magneto primary circuit before performing any operation.

3-2. RECOMMENDED LUBRICANTS. Refer to Recommended Lubricants, Section II, for lubrication servicing instructions.

3-3. INSPECTION PERIODS.

3-4. INSPECTION REQUIREMENTS. The required inspection procedures are listed in Table III-I. The inspection procedure is broken down into major groups which are Propeller, Engine, Turbocharger, Cabin, Fuselage and Empennage, Wing, Landing Gear, Operational Inspection and General. The first column in each group lists the inspection or procedure to be performed. The second column is divided into four columns indicating the required inspection intervals of 50 hours, 100 hours, 500 hours and 1000 hours. Each inspection or operation is required at each of the inspection intervals as indicated by a circle (O). If an item is not entirely accessible or must be removed, refer to the applicable section of this manual for instructions on how to gain access or remove the item. When performing inspection use forms furnished by the Piper Factory Service Department, available through Piper Dealers or Distributors.

NOTE

In addition to inspection intervals required in Table III-I a preflight check must be performed as described in Paragraph 3-5.

3-5. PREFLIGHT CHECK. The airplane must be given a thorough preflight and walk-around check. The pilot and/or mechanic must include the preflight check as a normal procedure necessary for the safe operation of the aircraft. Refer to the Pilot s Operating Manual for a listing of items that must be checked.

3-6. OVERLIMITS INSPECTION. If the airplane has been operated so that any of its components have exceeded their maximum operational limits, check with the appropriate manufacturer.

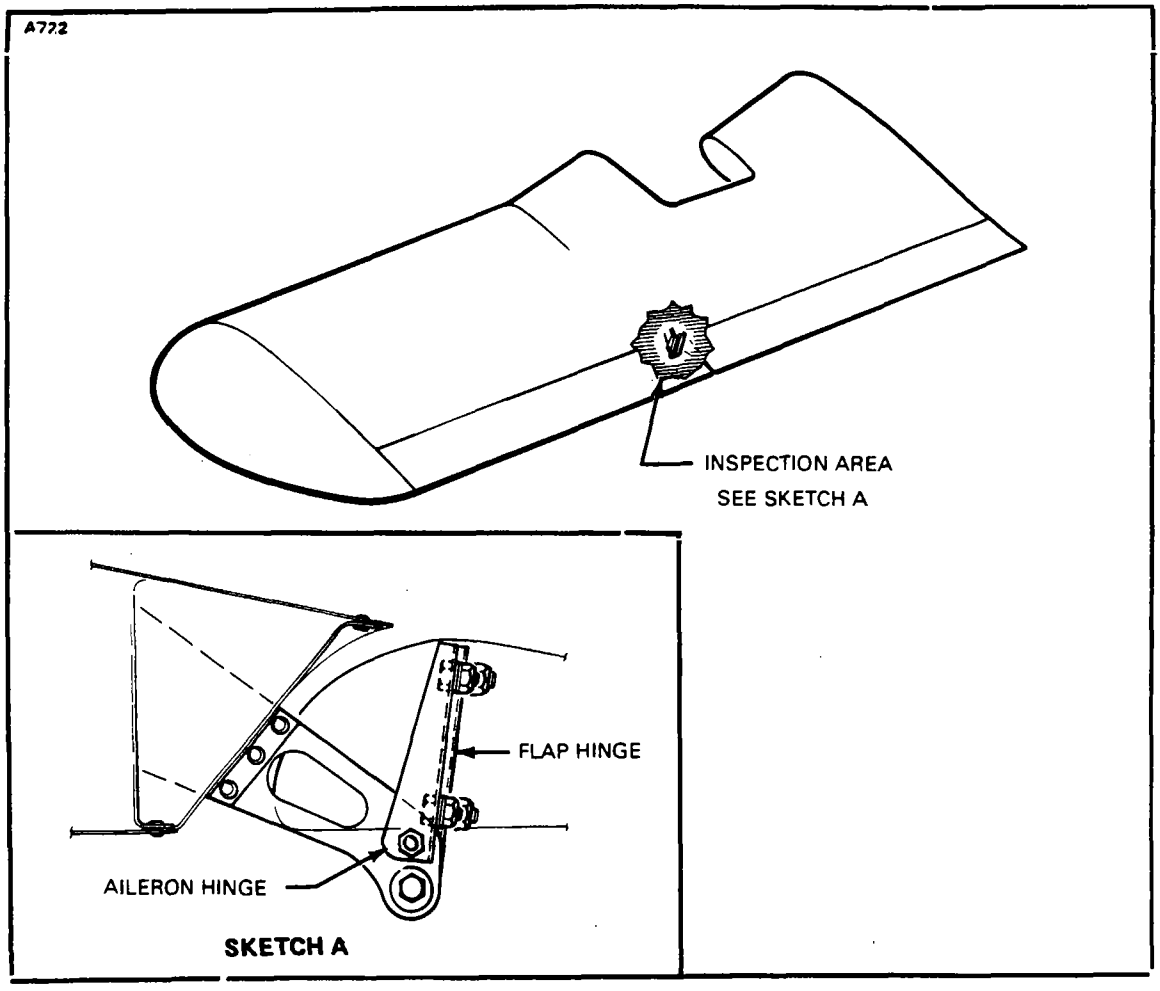

Figure 3-1. Inspection of Outboard Flap Hinge, Serial Nos. 27-3050, 27-3154 to 27-7405330 incl.

3-7. SPECIAL INSPECTIONS. The special inspections given in the following paragraphs supplement the scheduled inspections as outlined in the Inspection Report, Table III-I, to include inspection of items which are required to be examined at intervals not compatible with airframe operating time or airframe inspection intervals. Typical of this type are:

a. Inspections required because of special conditions or incidents that arise and because of these conditions or incidents, an immediate inspection would be required to insure further safe flight.

b. Inspection of airframe or components on a calendar basis. This type of inspection could often be accomplished during the nearest scheduled inspection.

c. Specific definitive inspection on engines based strictly upon engine operating time.

d. Those inspections not completely covered in other sections of this manual but outlined in the Inspection Report and must be explained in more detail to give a clearer and complete inspection.

3-8. INSPECTION OF FLAP OUTBOARD HINGES. (Refer to Figure 3-1.) This inspection must be accomplished at each 100 hours of operation or at each subsequent annual inspection (whichever comes first). The following steps should be used to perform this inspection:

a. Using the hydraulic hand pump, lower the flaps to the full down position.

b. Clean the flap outboard hinges thoroughly.

c. Using a 10 power magnifying glass, inspect the hinges thoroughly for evidence of cracks.

d. If hinge cracks are evident, replace with new replacement hinge, P/N 17103-04 (left) and/or 17103-05 (right).

e. If cracks are not apparent, no further action is required until the next inspection. Make appropriate logbook entry complying with latest revision of Piper Service Bulletin No. 408.

3-9. INSPECTION OF FUEL SELECTOR CONTROL CABLES. (Refer to Figure 3-2.) At each 100 hour inspection of the airplane, inspect the fuel selector control cable wires. (Refer to latest revision of Piper Service Bulletin No. 507.) Conduct the inspection as follows:

a. Remove the access panel covering the main spar from the bottom section of the nacelle and the access panel covering the main spar from the bottom of the fuselage.

b. Visually check control cable wires at swivel fittings for indications of binding, kinks or bends: Have someone in cockpit operate fuel controls while mechanic inspects wires at swivel fittings.

c. Replace cable(s) exhibiting any of the above conditions.

d. Check adjustments of selector valve per Section IX.

e. Replace access panels and covers.

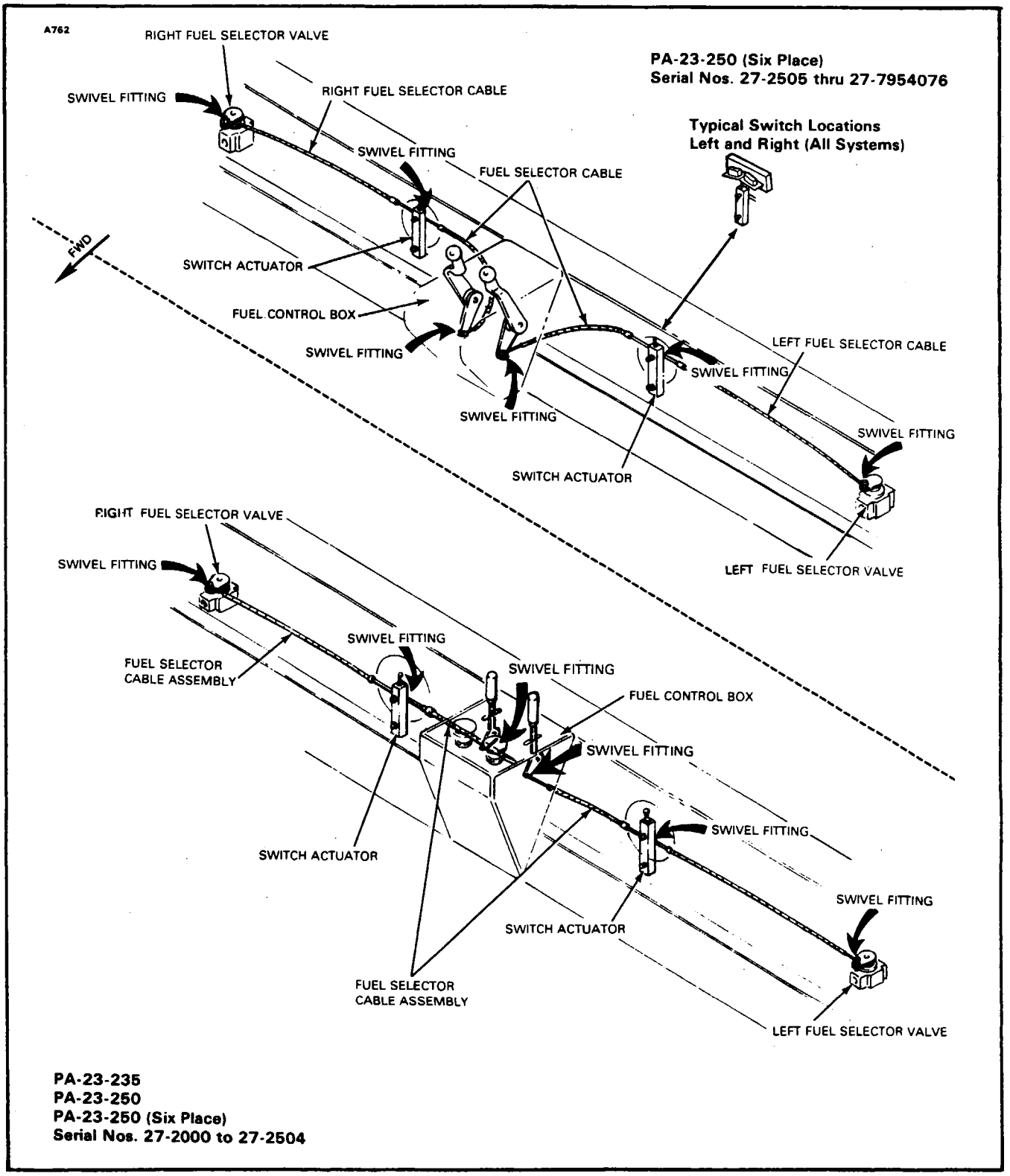

Figure 3-2. Fuel Selector Valve Control Cables, PA-23-235, PA-23-250, and PA-23-250 (six place), Serial Nos. 27-2000 thru 27-7954076

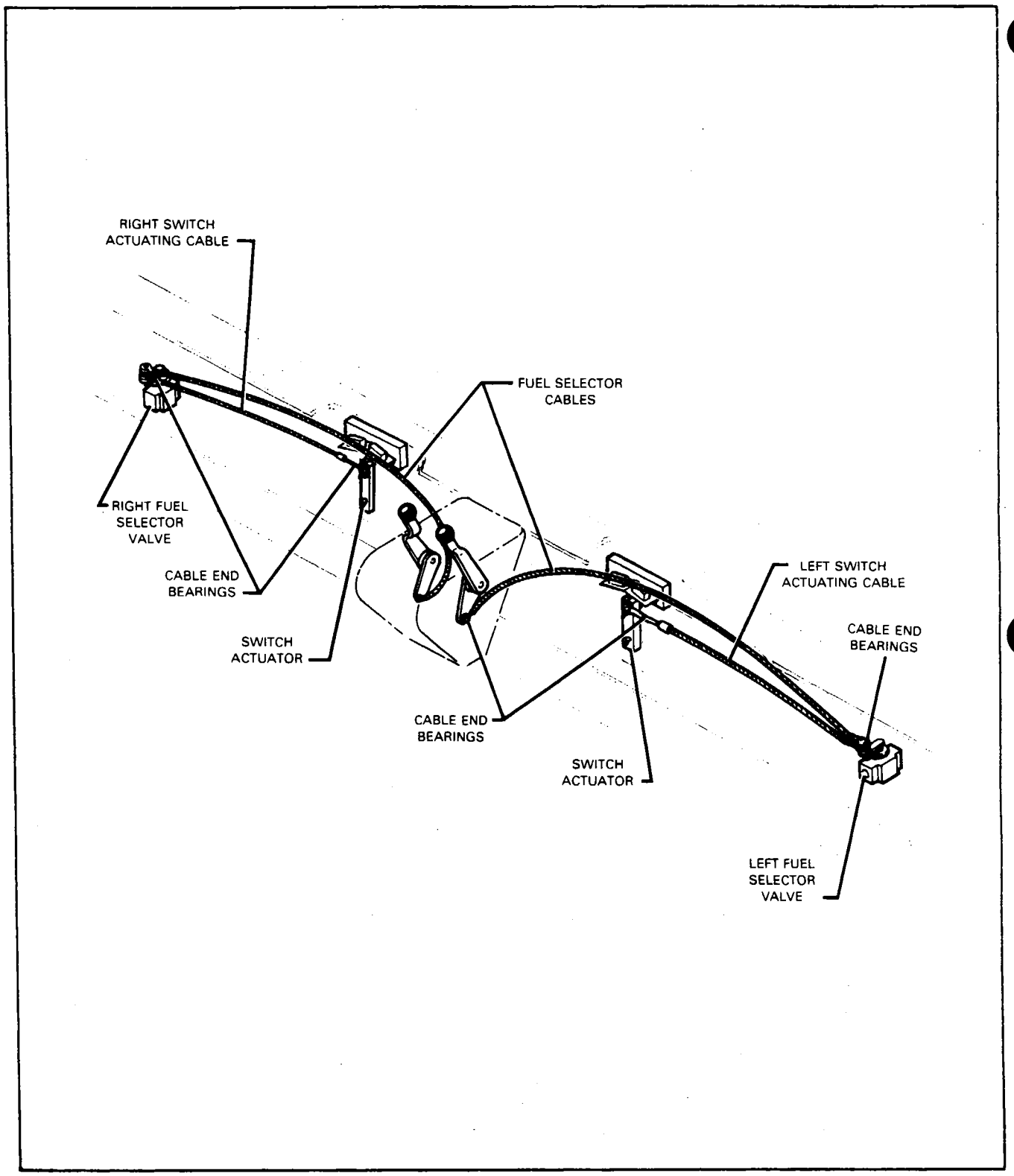

Figure 3-3. Fuel Selector Cables, PA-23-250 (six place), Serial Nos. 27-7954077 and up

TABLE III-I. INSPECTION REPORT

— NOTE —

Perform inspections or operations at each of the inspection intervals as indicated by a circle (O).

Nature of Inspection	Inspection Time (hrs)					
	L	R	50	100	500	1000
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 propeller per lubrication chart	O	O		O	O	O
5. Inspect spinner mounting brackets for cracks	O	O		O	O	O
6. Inspect propeller mounting bolts and safety (check torque if safety is broken)	O	O		O	O	O
7. Inspect hub parts for cracks and corrosion	O	O		O	O	O
8. Inspect pitch actuating arms and bolts	O	O		O	O	O
9. Rotate blades and check tightness in hub pilot tube (see note 17)	O	O		O	O	O
10. Check propeller air pressure (check at least once a month)	O	O		O	O	O
11. Inspect condition of propeller deicer system	O	O		O	O	O
12. Remove propellers; remove sludge from propeller and crankshaft	O	O			O	O
13. Overhaul propeller (per latest revision of Hartzell Service Letter 61)	O	O				
B. ENGINE GROUP						
WARNING: Ground magneto primary circuit before working on engine.						
NOTE: Read notes 7 and 22 before completing this inspection group.						
1. Remove the engine cowl	O	O		O	O	O
2. Clean and inspect cowling for cracks, distortion, and loose or missing fasteners	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
7. Inspect oil lines and fittings for leaks, security, chafing, dents, and cracks (see note 7)	O	O		O	O	O
8. Clean and inspect oil radiator cooling fins	O	O		O	O	O
9. Remove and flush oil radiator	O	O			O	O

TABLE III-1. INSPECTION REPORT (cont.)

Nature of Inspection	Inspection Time (hrs)					
	L	R	50	100	500	1000
B. ENGINE GROUP (cont.)						
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 10.)						
11. Inspect wiring to engine and accessories. Replace damaged wires and clamps. Inspect terminals for security and cleanliness	O	O		O	O	O
12. Inspect spark plug cable leads and ceramics for corrosion and deposits	O	O	O	O	O	O
13. Inspect condition of spark plugs. (Clean and adjust gap per latest revision of Lycoming Service Instruction No 1042)	O	O		O	O	O
NOTE: If fouling of spark plugs has been apparent, rotate bottom plugs to upper plugs.						
14. Inspect ignition harness and insulators for high tension leakage and continuity	O	O		O	O	O
15. Inspect magneto main points for clearance per Service Manual	O	O		O	O	O
16. Inspect magneto retard points for proper clearance or retard angle per Service Manual	O	O		O	O	O
17. Inspect magneto for oil seals leakage	O	O		O	O	O
18. Inspect breaker felts for proper lubrication	O	O		O	O	O
19. Inspect distributor block for cracks, burned areas, or corrosion and height of contact springs	O	O		O	O	O
20. Inspect magnetos to engine timing per Service Manual	O	O		O	O	O
21. Overhaul or replace magnetos (See Note 6)	O	O				O
22. Inspect cylinder compression (Ref: AC43.13-1A)	O	O		O	O	O
23. Inspect cylinders for cracked or broken fins (See Note 9)	O	O		O	O	O
24. Fill engine with oil per lubrication chart	O	O	O	O	O	O
25. Clean engine as required	O	O		O	O	O
26. Remove air cleaner screen and clean per Service Manual	O	O	O	O	O	O
27. Drain carburetor, remove and clean carburetor inlet screen or remove and clean fuel injector screen (Clean injector nozzles as required, clean with acetone only)	O	O	O	O	O	O
28. Inspect condition of carburetor heat or alternate air door and box	O	O	O	O	O	O
29. Inspect intake seals for leaks and clamps for tightness	O	O		O	O	O
30. Inspect condition of flexible fuel lines	O	O		O	O	O
31. Replace flexible lines	O	O				O
32. Inspect fuel system for leaks	O	O		O	O	O

TABLE III-I. INSPECTION REPORT (cont)

Nature of Inspection	Inspection Time (hrs)					
	L	R	50	100	500	1000
B. ENGINE GROUP (cont)						
33. Clean screens in electric fuel pumps (plunger type pump)	O	O	O	O	O	O
34. Check fuel pumps for operation (engine driven and electric)	O	O		O	O	O
35. Overhaul or replace fuel pumps (engine driven) (see vendor data)	O	O				
36. Replace hydraulic filter element (inspect filter element for contamination)	O	O		O	O	O
37. Inspect hydraulic pump and gasket for leaks	O	O		O	O	O
38. Overhaul or replace hydraulic pump (see note 6)	O	O				O
39. Inspect vacuum pumps, oil separators and lines	O	O		O	O	O
40. Overhaul or replace vacuum pumps (see note 16)	O	O				O
41. Inspect all engine and propeller controls for travel and operating condition (see latest revision of Piper Service Bulletin 550)	O	O		O	O	O
42. Inspect exhaust stacks, gaskets and augmentor tubes for condition and leakage (replace gaskets as required)	O	O		O	O	O
43. Inspect breather tube for obstructions and security	O	O		O	O	O
44. Inspect crankcase for cracks, leaks, and security of seam bolts	O	O		O	O	O
45. Inspect rubber engine mounts for cracks and loose mounting	O	O		O	O	O
46. Inspect rubber engine mount bushings for deterioration (see note 15)	O	O		O	O	O
47. Inspect all engine baffles for cracks	O	O		O	O	O
48. Inspect firewall for cracks	O	O		O	O	O
49. Inspect condition of firewall seals	O	O		O	O	O
50. Inspect condition and tension of generator or alternator drive belt	O	O		O	O	O
51. Inspect condition of generator or alternator and starter	O	O		O	O	O
52. Replace vacuum or pressure regulator filter	O	O		O	O	O
53. Lubricate all engine controls (DO NOT lubricate teflon liners of control cables)	O	O		O	O	O
54. Inspect cowl flap torque tube for axial play (min 0.005 - max. 0.012)	O	O		O	O	O
55. Inspect cowl flap doors for cracks, loose rivets, defective hinges, missing stop screws, and control rods for loose connections	O	O		O	O	O
56. With cowl installed, check cowl flap rigging per Service Manual	O	O		O	O	O
57. Overhaul or replace propeller governor (see latest revision of Hartzell Service Letter 61)	O	O		O	O	O
58. Complete overhaul of engine or replace with factory rebuilt (see note 6)	O	O				
59. Replace rubber lord mounts (see note 15)	O	O			O	
60. Reinstall engine cowl	O	O		O	O	O

TABLE III-I. INSPECTION REPORT (cont.)

Nature of Inspection	L	R	Inspection Time (hrs) 50	100	500	1000
C. TURBOCHARGER						
1. Change turbo oil (See Note 12)	O	O	O	O	O	O
2. Clean oil filter elements (See Note 5)	O	O	O	O	O	O
3. Visually inspect system for oil leaks, exhaust system leaks and general condition	O	O	O	O	O	O
4. Inspect the compressor wheel for nicks, cracks or broken blades	O	O		O	O	O
5. Inspect for excess bearing drag or wheel rubbing against housing	O	O	O	O	O	O
6. Inspect turbine wheel for broken blades or signs of rubbing	O	O		O	O	O
7. Check rigging of alternate air control	O	O		O	O	O
8. Inspect oil inlet and outlet ports in center housing for leaks	O	O		O	O	O
9. Inspect turbine heat blanket for condition and security	O	O		O	O	O
10. Inspect linkage between bypass valve and actuator	O	O		O	O	O
11. Inspect induction and exhaust components for worn or damaged areas, loose clamps, cracks and leaks (See Note 14)	O	O		O	O	O
12. Inspect fuel injection nozzle pressure reference manifold for deteriorated hose, loose connections, leaks or obstructions	O	O		O	O	O
13. Inspect fluid power lines leaks and security	O	O		O	O	O
14. Inspect for oil leakage from controller	O	O		O	O	O
15. Inspect rigging and action of transfer valve	O	O		O	O	O
16. Inspect all mounting brackets for tightness, damage or visible cracks	O	O		O	O	O
17. Reinstall engine cowl	O	O	O	O	O	O
D. CABIN GROUP						
1. Inspect cabin entrance door, baggage compartment door and windows for damage, operation and security				O	O	O
2. Check operation of emergency exit window (See Note 13)				O	O	O
3. Inspect upholstery for tears				O	O	O
4. Inspect seats, seat belts and securing hardware				O	O	O
5. Inspect trim operation				O	O	O
6. Check operation of rubber pedals				O	O	O
7. Check operation of parking brake				O	O	O
8. Inspect condition and security of control wheels, column, pulleys, cables and on Serial Nos. 27-8054001 and up, bobweight installation				O	O	O
9. Check operation of landing, navigation, cabin and instrument lights				O	O	O
10. Inspect instruments, lines and attachments for condition and security				O	O	O
11. Inspect instruments central air filter lines and replace filter				O	O	O
12. Inspect vacuum operated instruments and electric turn and bank (Overhaul or replace as required)				O	O	O
13. Replace filters, if installed, gyro horizon, directional gyro, and manifold pressure line					O	O

TABLE III-I. INSPECTION REPORT (cont.)

Nature of Inspection	Inspection Time (hrs)			
	50	100	500	1000
D. CABIN GROUP (cont.)				
14. Check altimeter (Calibrate altimeter system in accordance with FAR 91.170, if appropriate)		O	O	O
15. Drain crossfeed line	O	O	O	O
16. Check operation of crossfeed valve		O	O	O
17. Check operation of heater fuel valve		O	O	O
18. Inspect fuel selector and crossfeed valve control cables per Section III, Paragraph 3-9		O	O	O
19. Check operation of cowl flaps		O	O	O
20. Inspect oxygen outlets for defects and corrosion		O	O	O
21. Inspect oxygen system operation and components		O	O	O
E. FUSELAGE AND EMPENNAGE GROUP				
1. Remove inspection panels and plates		O	O	O
2. Check fluid in brake reservoir (Fill as required)		O	O	O
3. Check battery, box and cables (Check at least every 30 days. Flush box as required and fill battery per instructions on box)	O	O	O	O
4. Inspect heater for fuel or fume leaks		O	O	O
5. Inspect manual heater fuel shutoff valve for fuel leaks and capnut safety		O	O	O
6. Drain and clean heater gascolater bowl (South Wind)		O	O	O
7. Check recommended time for overhaul of heater per Piper Service Manual, Section XIII		O	O	O
8. Inspect electronic installations for security and operation		O	O	O
9. Inspect fuselage cabin entrance step attachments to fuselage frame for condition, security, etc. (See latest revision of Piper S/B. No. 672)		O	O	O
10. Inspect bulkheads and stringers for damage		O	O	O
11. Inspect antenna mounts and electric wiring for damaged insulation and security		O	O	O
12. Inspect E.L.T. installation and condition of battery and antenna (See latest revision of Piper S/L No. 820)		O	O	O
13. Inspect hydraulic power pack and lines for damage, leaks and proper fluid level (See Note 20)		O	O	O
14. Inspect flap torque tube, bearing supports, brackets and hydraulic actuator and bellcrank for security, loose rivets, cracks and leaks		O	O	O
15. Inspect CO2 system for fluid in lines and safeties on CO2 bottle (Weight CO2 bottle at 500 hours or at annual inspection, 132 grams unless otherwise noted on bottle) (See latest revision of Piper S/B No. 564)		O	O	O
16. Inspect fuel lines, valves, and gauges for damage and operation		O	O	O
17. Inspect security of all lines		O	O	O

TABLE III-1. INSPECTION REPORT (cont.)

Nature of Inspection	Inspection Time (hrs)			
	50	100	500	1000
E. FUSELAGE AND EMPENNAGE GROUP (cont.)				
18. Inspect stabilator fin and rudder surface for damage		O	O	O
19. Inspect stabilator bearing and horns for damage and operation		O	O	O
20. Inspect stabilator tip balance weight arms for cracks (Refer to latest revision of Piper S/B Nos. 540/547)		O	O	O
21. Inspect condition of stabilator attachment bolts			O	O
22. Inspect rudder and tab hinges, horns and attachments for damage and operation		O	O	O
23. Inspect rudder hinge bolts for excess wear		O	O	O
24. Inspect rudder trim mechanism		O	O	O
25. Inspect stabilator trim mechanism and control rod end bearing (See latest revision of Piper S/B No. 590)		O	O	O
26. Inspect aileron, rudder, stabilator cables, trim cables, turnbuckles, guides and pulleys for safeties, damage and operation (Refer to latest revision of Piper S/L No. 628)		O	O	O
27. Inspect stabilator and rudder control cable attachments		O	O	O
28. Replace rudder hinge bolts			O	O
29. Inspect anti-collision light for security and operation		O	O	O
30. Lubricate per lubrication chart		O	O	O
31. Inspect condition of pneumatic deicers		O	O	O
32. Inspect security of Autopilot pitch servo bridle cable clamps		O	O	O
33. Inspect fuel selector valve control cables per Section III, Paragraph 3-9 of Service Manual		O	O	O
34. Reinstall inspection panels and plates		O	O	O
F. WING GROUP (Refer to Note 16.)				
1. Remove inspection plates and fairings		O	O	O
2. Inspect surfaces, skins and tips for damage and loose rivets		O	O	O
3. Inspect condition of walkway and step		O	O	O
4. Inspect ailerons and attachments for damage and operation		O	O	O
5. Inspect aileron cables, pulleys and bellcranks for damage and operation		O	O	O
6. Inspect aileron balance weight and arm for security and condition		O	O	O
7. Inspect flaps and attachments for damage and operation (See Note 21)		O	O	O
8. Replace pins and bolts used as flap and aileron hinges				O
9. Lubricate per lubrication chart		O	O	O
10. Inspect wing attachment bolts and brackets		O	O	O
11. Inspect engine mount attaching structure		O	O	O
12. Inspect fuel cells and lines for leaks and water	O	O	O	O
13. Remove, drain, and clean fuel strainer bowl and screen (Drain and clean at least every 90 days)		O	O	O

TABLE III-I. INSPECTION REPORT (cont.)

Nature of Inspection	Inspection Time (hrs)			
	50	100	500	1000
F. WING GROUP (cont.)				
14. Fuel cells marked for capacity		O	O	O
15. Fuel cells marked for minimum octane rating		O	O	O
16. Inspect switches to indicators registering fuel cell quantity		O	O	O
17. Inspect fuel cell vents and vent lines		O	O	O
18. Inspect condition of pneumatic deicers		O	O	O
19. Inspect security of Autopilot roll servo bridle cable clamps		O	O	O
20. Reinstall inspection plates and fairings		O	O	O
G. LANDING GEAR GROUP (Refer to Note 16.)				
1. Inspect oleo struts for proper extension (3 in.) (Check for proper fluid level as required)	O	O	O	O
2. Inspect nose gear steering control and travel		O	O	O
3. Inspect wheels for alignment		O	O	O
4. Put airplane on jacks		O	O	O
5. Inspect tires for cuts, uneven or excessive wear and slippage		O	O	O
6. Remove wheels, clean, check and repack bearings		O	O	O
7. Inspect wheel for cracks, corrosion and broken bolts (Refer to Figure 7-22)		O	O	O
8. Check tire pressure (N27-M42) (M-46, 5200 lbs. gross wt.)		O	O	O
9. Inspect brake lining and disc for wear and cracks		O	O	O
10. Inspect brake backing plates for cracks		O	O	O
11. Inspect condition of brake and hydraulic lines (See Note 19)		O	O	O
12. Inspect shimmy dampener operation		O	O	O
13. Inspect gear forks for damage		O	O	O
14. Inspect oleo struts for fluid leaks and scoring		O	O	O
15. Inspect gear struts, attachments, torque links, retraction links and bolts for operation		O	O	O
16. Inspect downlocks for operation and adjustment		O	O	O
17. Inspect torque link bolts and bushings (Rebush if necessary)			O	O
18. Inspect drag link bolts (Replace as required)				O
19. Inspect gear doors and attachments		O	O	O
20. Check warning horn and light for operation		O	O	O
21. Retract gear - check operation		O	O	O
22. Retract gear - check doors for clearance and operation		O	O	O
23. Inspect anti-retraction system		O	O	O
24. Inspect actuating cylinders for leaking and security		O	O	O
25. Inspect position indicating switches and electrical leads for security		O	O	O
26. Lubricate per lubrication chart		O	O	O
27. Remove airplane from jacks		O	O	O

TABLE III-I. INSPECTION REPORT (cont.)

Nature of Inspection	Inspection Time (hrs)			
	50	100	500	1000
H. OPERATIONAL INSPECTION				
1. Check fuel pump, fuel cell selector and crossfeed operation	O	O	O	O
2. Check indication of fuel quantity and pressure of flow gauges	O	O	O	O
3. Check oil pressure and temperature indications	O	O	O	O
4. Check generator or alternator output	O	O	O	O
5. Check manifold pressure indication	O	O	O	O
6. Check operation of carburetor heat or alternate air	O	O	O	O
7. Check operation of parking brake	O	O	O	O
8. Check operation of vacuum gauge	O	O	O	O
9. Check gyros for noise and roughness	O	O	O	O
10. Check cabin heater operation	O	O	O	O
11. Check magneto switch operation	O	O	O	O
12. Check magneto RPM variation	O	O	O	O
13. Check throttle and mixture operation	O	O	O	O
14. Check propeller smoothness	O	O	O	O
15. Check propeller governor action	O	O	O	O
16. Check electronic equipment operation	O	O	O	O
17. Check operation of Autopilot, including automatic pitch trim, and Manual Electric Trim (See Note 11)	O	O	O	O
18. Check operation of pneumatic deicer system if installed	O	O	O	O
I. GENERAL				
1. Aircraft conforms to FAA specifications	O	O	O	O
2. All FAA Airworthiness Directives complied with	O	O	O	O
3. All Manufacturers Service Letters and Bulletins complied with	O	O	O	O
4. Check for proper Flight Manual	O	O	O	O
5. Aircraft papers in proper order	O	O	O	O

NOTES:

1. Refer to the last card of the Piper - Parts Price List - Aerofiche, for a checklist 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. 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 revision of Lycoming Service Letter No. L201.)
7. Replace flexible oil lines at engine T.B.O. as per latest revision Lycoming Service Bulletin No. 240.
8. Inspections given for power plant are based on the engine manufacturer's operator's manual (Lycoming Part No. 60297-10). Any changes issued to the engine manufacturer's operator's manual shall supersede or supplement the instructions outlined in this report. Occassionally, 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 revision of 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 Service Table of Limits No. SSP1776.
11. Refer to Flight Manual Supplement for preflight and flight check, for intended function in all modes.
12. Applies only to IO-540-J4A5 engines adapted with AirResearch Turbocharger Unit.
13. Check at each annual or 100 hour inspection, whichever comes first.
14. Latest revision of Lycoming Service Bulletin No. 347 should be complied with.
15. Inspect rubber mount for severe cracking, signs of high temperature or burning, separation of rubber from metal surfaces, excessive "sag" or permanent deflection resulting in internal bottoming With spacer, engine and cowl interference, unusual vibration. The mounts must be replaced in accordance with Piper Service Letter Number 592.
16. Refer to Piper Service Bulletin 822.

NOTES: (cont.):

16. Pressure pumps (431) installed with pneumatic deicer boots should be replaced or overhauled at 1000 hours intervals. All other pressure pumps installed on aircraft with or without pneumatic deicers can be replaced or overhauled at engine TBO or upon condition.
17. Does not apply to propellers with spring backup kit installed.
18. When using other than 80/87 octane rating fuel, refer to latest revision Lycoming Service Letter L185 for additional information and service procedures.
19. Comply with latest revision of Piper Service Bulletin 629.
20. Comply with latest revision of Piper Service Bulletin 635.
21. Refer to latest revision of Piper Service Bulletin 671, for flap control system inspection.
22. Refer to VSP 69.