

INSPECTION OPERATION 1

Date: _____
Registration Number: _____
Serial Number: _____
Total Time: _____

1. Description

- A. Operation 1 gives a list of item(s), which has all 50-hour interval inspection items and those 100- or 200-hour interval inspection items contained in the fuselage area. Items from other areas are included to meet their required time interval. The Progressive inspections are performed in the following order once an aircraft is placed on the Progressive care program in lieu of the Traditional (Annual/100 Hour) inspection program: (1.) Inspection Operation 1 is due 50 hours time in service after the aircraft is placed on the Progressive Care Program. (2.) The inspection operation cycle (Inspection Operation 1, Inspection Operation 2, Inspection Operation 3 and Inspection Operation 4) will repeat again 50 hours time in service after Inspection Operation 4 was completed.
- B. Inspection items are given in the order of the zone in which the inspection is to be completed. A general description of the inspection required and the Item Code Number for cross-reference to Section 5-10-01 are shown. Frequently, the tasks define more specifically the scope and extent of each required inspection. These tasks are printed in the individual chapters of this manual.
- C. The right portion of each page gives space for the mechanic's and inspector's initials and remarks. A copy of these pages can be used as a checklist when these inspections are completed.

2. General Inspection Criteria

- A. During each of the specified inspection tasks in this section, more general inspections of the adjacent areas must be done while access is available. These general inspections are used to find apparent conditions which can need more maintenance.
- B. If a component or system is changed after a required task has been completed, then that specified task must be done again to make sure it is correct before the system or component is returned to service.
- C. Do a preflight inspection after these inspections are completed to make sure all the required items are correctly serviced. Refer to the Pilot's Operating Handbook and FAA Approved Airplane Flight Manual.

ITEM CODE NUMBER	TASK	ZONE	MECH	INSP	REMARKS
214002	Heater Components, Inlets, and Outlets - Inspect all lines, ducts, clamps, seals, and gaskets for condition, restriction, and security.	211			
214003	Cabin Heat and Ventilation Controls - Check freedom of movement through full travel. Check friction locks for proper operation.	211			
235001	Microphones, Headsets, and Jacks - Inspect for cleanliness, security, and evidence of damage.	211			
235002	Microphone Push-To-Talk Switch - Clean the pilot's and copilot's microphone switches. Refer to Chapter 23, NAV/COM - Maintenance Practices.	222, 223			
242001	Alternator, Mounting Bracket, and Electrical Connections - Check condition and security. Check alternator belts for condition and proper adjustment. Check belt tension.	120			

243003	General Airplane and System Wiring - Inspect for proper routing, chafing, broken or loose terminals, general condition, broken or inadequate clamps, and sharp bends in wiring.	210
246001	Switch and Circuit Breaker Panel, Terminal Blocks, and Junction Boxes - Inspect wiring and terminals for condition and security.	222
246002	Power Junction Box - Check operation and condition. Check availability and condition of spare fuse (if applicable).	222
251001	Seats - Examine the seats to make sure they are serviceable and installed correctly. Make sure the seat stops and adjustment mechanism operate correctly. Examine the seat recline control and attaching hardware to make sure the hardware and lock are not damaged and are correctly installed. Lubricate the threads of the Seat Crank Handle Assembly with MIL-PRF-81322 general purpose grease.	211
251101	Restraint System, front and rear - Check belts for thinning, fraying, cutting, broken stitches, or ultra-violet deterioration. Check system hardware for security of installation.	211
256001	Emergency Locator Transmitter - Inspect for security of attachment and check operation by verifying transmitter output. Check cumulative time and useful life of batteries in accordance with 14 CFR Part 91.207.	310
262001	Portable Hand Fire Extinguisher - Inspect for proper operating pressure, condition, security of installation, and servicing date. (Applicable to Halon and Non-Halon Fire Extinguishers)	230
271001	Aileron Controls - Check freedom of movement and proper operation through full travel.	120, 520, 620
271003	Aileron Structure, Control Rods, Hinges, Balance Weights, Bellcranks, Linkage, Bolts, Pulleys, and Pulley Brackets - Check condition, operation, and security of attachment.	520, 620
271004	Ailerons and Hinges - Check condition, security, and operation.	520, 620
271005	Control Wheel Lock - Check general condition and operation.	222
271006	Control Yoke - Inspect pulleys, cables, bearings, and turnbuckles for condition and security.	222, 223
272002	Rudder - Inspect the rudder skins for cracks and loose rivets, rudder hinges for condition, cracks and security; hinge bolts, nuts, hinge bearings, hinge attach fittings, and bonding jumper for evidence of damage and wear, failed fasteners, and security. Inspect balance weight for looseness and the supporting structure for damage.	340

272003	Rudder, Tips, Hinges, Stops, Clips and Cable Attachment - Check condition, security, and operation.	340
272004	Rudder Pedals and Linkage - Check for general condition, proper rigging, and operation. Check for security of attachment.	230
272005	Rudder Control - Check freedom of movement and proper operation through full travel. Check rudder stops for damage and security.	340
272010	Rudder Control System - Inspect pulleys, cables, sprockets, bearings, and turnbuckles for condition, security, and operation. Check cables for tension, routing, fraying, corrosion, and turnbuckle safety.	340
273001	Elevator Control - Check freedom of movement and proper operation through full travel.	222, 223
273002	Elevator Control System - Inspect pulleys, cables, sprockets, bearings, chains, and turnbuckles for condition, security, and operation. Check cables for tension, routing, fraying, corrosion, and turnbuckle safety.	222, 223
273003	Elevator, Hinges, Stops, and Cable Attachment - Check condition, security, and operation.	320, 330
273101	Elevator Trim System - Check cables, push-pull rods, bellcranks, pulleys, turnbuckles, fairleads, rub strips, etc. for proper routing, condition, and security.	224, 240, 310
273102	Elevator Trim Control and Indicator - Check freedom of movement and proper operation through full travel. Check pulleys, cables, sprockets, bearings, chains, and turnbuckles for condition and security. Check cables for tension, routing, fraying, corrosion, and turnbuckle safety.	224, 240, 310
273103	Elevator Trim Tab and Hinges - Check condition, security, and operation.	224

273104	Elevator Trim Tab Actuator - Examine the free play limits. Refer to Chapter 27, Elevator Trim Control - Maintenance Practices, Trim Tab Free Play Inspection. If the free play is more than the permitted limits, lubricate the actuator and examine the free play limits again. If the free play is still more than the permitted limits, replace the actuator.	320
273106	Elevator Trim Tab Stop Blocks - Inspect for damage and security.	240
275001	Flaps - Check tracks, rollers, and control rods for security of attachment. Check rod end bearings for corrosion. Check operation.	510, 610
275002	Wing Flap Control - Check operation through full travel and observe Flap Position indicator for proper indication.	221
275006	Flap Actuator Threads - Clean and lubricate. Refer to Chapter 12, Flight Controls - Servicing.	610
282001	Fuel System - Inspect plumbing and components for mounting and security.	510, 610
282002	Fuel Tank Vent Lines and Vent Valves - Check vents for obstruction and proper positioning. Check valves for operation.	510, 610
282003	Fuel Selector Valve - Check controls for detent in each position, security of attachment, and for proper placarding.	224
282004	Integral Fuel Bays - Check for evidence of leakage and condition of fuel caps, adapters, and placards. Using quick drains, ensure no contamination exists. Check quick drains for proper shut off.	510, 610
282005	Fuel Reservoir - Using quick drain, ensure no contamination exists.	510, 610
282006	Fuel Selector - Using quick drain, ensure no contamination exists.	224
282007	Fuel Strainer, Drain Valve, and Controls - Check freedom of movement, security, and proper operation. Disassemble, flush, and clean screen and bowl.	510, 610
311001	Instruments - Check general condition and markings for legibility.	220
311003	Instrument Lines, Fittings, Ducting, and Instrument Panel Wiring - Check for proper routing, support, and security of attachment.	220

331001	Instrument and Cabin Lights - Check operation, condition of lens, 220, 211, 221 and security of attachment.	
334001	Navigation, Beacon, Strobe, and Landing Lights - Check operation, condition of lens, and security of attachment.	340, 520, 620
341103	Pitot Tube and Stall Warning System - Examine for condition and obstructions and make sure the anti-ice heat operates correctly. Apply vacuum to stall warning horn scoop assembly and make sure horn is audible.	510
342101	Magnetic Compass - Inspect for security of installation, cleanliness, and evidence of damage.	225
345001	Instrument Panel Mounted Avionics Units (Including Audio Panel, VHF Nav/Com(s), ADF, GPS, Transponder, and Compass System) - Inspect for deterioration, cracks, and security of instrument panel mounts. Inspect for security of electrical connections, condition, and security of wire routing.	225
345002	Avionics Operating Controls - Inspect for security and proper operation of controls and switches and ensure that all digital segments will illuminate properly.	225
345003	Navigation Indicators, Controls, and Components - Inspect for condition and security.	220, 225
345004	Navigation Antennas and Cables - Inspect for security of attachment, connection, and condition.	310
521001	Doors - Inspect general condition. Check latches, hinges, and seals for condition, operation, and security of attachment.	210
531001	Fuselage Surface - Inspect for skin damage, loose rivets, condition of paint, and check pitot-static ports and drain holes for obstruction. Inspect covers and fairings for security.	210
531003	Internal Fuselage Structure - Inspect bulkheads, doorposts, stringers, doublers, and skins for corrosion, cracks, buckles, and loose rivets, bolts and nuts.	211
551001	Horizontal Stabilizer and Tailcone structure - Inspect bulkheads, spars, ribs, and skins, for cracks, wrinkles, loose rivets, corrosion, or other damage. Inspect horizontal stabilizer attach bolts for looseness. Retorque as necessary. Check security of inspection covers, fairings, and tips.	320, 330
551002	Horizontal Stabilizer and Tips - Inspect externally for skin damage and condition of paint.	320, 330

553001	Vertical Stabilizer Fin - Inspect bulkheads, spars, ribs, and skins for cracks, wrinkles, loose rivets, corrosion, or other damage. Inspect vertical stabilizer attach bolts for looseness. Retorque as necessary. Check security of inspection covers, fairings, and tip.	340
553002	Vertical Stabilizer Fin and Tailcone - Inspect externally for skin damage and condition of paint.	340
561001	Windows and Windshield - Inspect general condition. Check latches, hinges, and seals for condition, operation, and security of attachment.	210
571001	Wing Surfaces and Tips - Inspect for skin damage, loose rivets, and condition of paint.	510, 520, 610, 620
571002	Wing Struts and Strut Fairings - Check for dents, cracks, loose screws and rivets, and condition of paint.	510, 610
611001	Spinner - Check general condition and attachment.	110
611003	Propeller Blades - Inspect for cracks, dents, nicks, scratches, erosion, corrosion, or other damage.	110
611005	Propeller Mounting - Check for security of installation.	110
711001	Cowling - Inspect for cracks, dents, other damage and security of fasteners.	120
712002	Do a check of the engine mount and the oil filler tube for evidence of contact. Refer to SB99-71-02.	120
716001	Alternate Induction Air System - Check for obstructions, operation, and security.	120
716002	Induction System - Check security of clamps, tubes, and ducting. Inspect for evidence of leakage.	120
716003	Induction Airbox, Valves, Doors, and Controls - Remove air filter and inspect hinges, doors, seals, and attaching parts for wear and security. Check operation.	120
716004	Induction Air Filter - Remove and clean. Inspect for damage and service.	120
722001	Engine - Inspect for evidence of oil and fuel leaks. Wash engine and check for security of accessories.	120

722003 Hoses, Metal Lines, and Fittings - Inspect for signs of oil and fuel leaks. Check for abrasions, chafing, security, proper routing and support and for evidence of deterioration. 120

723003 Engine Baffles and Seals - Check condition and security of attachment. 120

761001 Engine Controls and Linkage - Examine the general condition and freedom of movement through the full range. Complete a check for the proper travel, security of attachment, and for evidence of wear. Complete a check of the friction lock and vernier adjustment for proper operation. Complete a check to make sure the throttle, fuel mixture, and propeller governor arms operate through their full arc of travel. The maximum linear freeplay is 0.050 inch. 120, 225

781001 Exhaust System - Inspect for cracks and security. Special check in area of heat exchanger. Refer to Chapter 78, Exhaust system - Maintenance Practices. 120

792001 Oil Cooler - Check for obstructions, leaks, and security of attachment. 120

801002 Bendix Drive Starter Assembly - Clean and lubricate starter drive assembly. 120

*** End of Inspection Document 1 Inspection Items ***

	742001	Ignition Harness and Insulators - Check for proper routing, deterioration, and condition of terminals.	B	05-12-02	120
	742002	Spark Plugs - Remove, clean, analyze, test, gap, and rotate top plugs to bottom and bottom plugs to top.	B	05-12-02	120
	743001	Ignition Switch and Electrical Harness - Inspect for damage, condition, and security.	B	05-12-02	120
Revised Aug 1/00	743002	Inspect and lubricate ACS brand ignition switch. Refer to Chapter 74, Ignition System - Maintenance Practices.	N	05-12-15	224
Revised Jul 1/05	761001	Engine Controls and Linkage - Examine the general condition and freedom of movement through the full range. Complete a check for the proper travel, security of attachment, and for evidence of wear. Complete a check of the friction lock and vernier adjustment for proper operation. Complete a check to make sure the throttle, fuel mixture, and propeller governor arms operate through their full arc of travel. The maximum linear freeplay is 0.050 inch.	A	05-12-01	120, 225
Revised Aug 1/00	781001	Exhaust System - Inspect for cracks and security. Special check in area of heat exchanger. Refer to Chapter 78, Exhaust system - Maintenance Practices.	A	05-12-01	120
Revised Feb 15/02	791001	Engine Oil - Drain oil sump and oil cooler. Check for metal particles or foreign material in filter, on sump drain plug, and on engine suction screen. Replace filter, and refill with recommended grade aviation oil.	L	05-12-13	120
	792001	Oil Cooler - Check for obstructions, leaks, and security of attachment.	A	05-12-01	120
Revised May 3/99	801001	Starter and Electrical Connections - Check security and condition of starter, electrical connection, and cable.	B	05-12-02	120
Revised Feb 15/02	801002	Bendix Drive Starter Assembly - Clean and lubricate starter drive assembly.	A	05-12-01	120