I INSPECTION REQUIREMENTS

As required by Federal Aviation Regulations, all civil aircraft of U.S. registry must undergo a complete inspection (ANNUAL) each twelve calendar months. In addition to the required ANNUAL inspection, aircraft operated commercially (for hire) must also have a complete inspection every 100 hours of operation.

In lieu of the above requirements, an aircraft may be inspected in accordance with progressive inspection schedule, which allows the work load to be divided into smaller operations that can be accomplished in shorter time periods.

CESSNA PROGRESSIVE CARE PROGRAM has been developed to provide a modern progressive inspection schedule that satisfies the COMPLETE AIRCRAFT INSPECTION (refer to paragraph II, c., for definition) requirements of both the 100 HOUR and ANNUAL inspection as applicable to Cessna Aircraft.

II INSPECTION CHARTS

The following Inspection Charts show the recommended intervals at which items are to be inspected.

As shown in the charts, there are items to be checked each 50 hours, each 100 hours, each 200 hours, and also Special Inspection Items which require servicing or inspection at intervals other than 50, 100 or 200 hours.

a. When conducting an inspection at 50 hours, all items marked under EACH 50 HOURS would be inspected, serviced or otherwise accomplished as necessary to insure continuous airworthiness.

b. At each 100 hours, the 50 hour items would be accomplished in addition to the items marked under EACH 100 HOURS as necessary to insure continuous airworthiness.

c. At each 200 hours, the 50 hour items and 100 hour items would be accomplished in addition to the items marked under EACH 200 HOURS as necessary to insure continuous airworthiness.

d. The numbers appearing in the SPECIAL INSPECTION ITEMS column refer to data listed at the end of the inspection charts. These items should be checked at each inspection interval to insure that applicable servicing and inspection requirements are accomplished at the specified intervals.

e. A COMPLETE AIRCRAFT INSPECTION includes all 50, 100 and 200 hour items plus those Special Inspection Items which are due at the time of the inspection.

III INSPECTION PROGRAM SELECTION

AS A GUIDE FOR SELECTING THE INSPECTION PROGRAM THAT BEST SUITS THE OPERATION OF THE AIRCRAFT, THE FOLLOWING IS PROVIDED.

1. IF THE AIRCRAFT IS FLOWN LESS THAN 200 HOURS ANNUALLY
   a. IF FLOWN FOR HIRE
      An aircraft operation in this category must have a COMPLETE AIRCRAFT INSPECTION each 100 hours of operation and each 12 calendar months of operation (ANNUAL). A COMPLETE AIRCRAFT INSPECTION consists of all 50, 100, 200 and Special Inspection Items shown in the inspection charts as defined in paragraph II above.

   b. IF NOT FLOWN FOR HIRE
      An aircraft operating in this category must have a COMPLETE AIRCRAFT INSPECTION each 12 calendar months of operation (ANNUAL). A COMPLETE AIRCRAFT INSPECTION consists of all 50, 100, 200 and Special Inspection Items shown in the inspection charts as defined in paragraph II above. In addition, it is recommended that between annual inspections, all items be inspected at the intervals specified in the inspection charts.

2. IF THE AIRCRAFT IS FLOWN MORE THAN 200 HOURS ANNUALLY
   Whether flown for hire or not, it is recommended that aircraft operating in this category be placed on the CESSNA PROGRESSIVE CARE PROGRAM. However, if not placed on Progressive Care, the inspection requirements for aircraft in this category are the same as those defined under paragraph III, 1., a. and b.

   Cessna Progressive Care may be utilized as a total concept program which insures that the inspection intervals in the inspection charts are not exceeded. Manuals and forms which are required for conducting Progressive Care inspections are available from the Cessna Service Parts Center.

IV INSPECTION GUIDE LINES

a. MOVABLE PARTS for: lubrication, servicing, security of attachment, binding, excessive wear, safetying, proper operation, proper adjustment, correct travel, cracked fittings, security of hinges, defective bearings, cleanliness, corrosion, deformation, sealing and tension.

b. FLUID LINES AND HOSES for: leaks, cracks, dents, kinks, chafing, proper radius, security, corrosion, deterioration, obstruction and foreign matter.

c. METAL PARTS for: security of attachment, cracks, metal distortion, broken spotwelds, corrosion, condition of paint and any other apparent damage.

d. WIRING for: security, chafing, burning, defective insulation, loose or broken terminals, heat deterioration and corroded terminals.

e. BOLTS IN CRITICAL AREAS for: correct torque in accordance with torque values given in the chart in Section 1, when installed or when visual inspection indicates the need for a torque check.

NOTE

Torque values listed in Section 1 are derived from oil-free cadmium-plated threads, and are recommended for all installation procedures contained in this book except where other values are stipulated. They are not to be used for checking tightness of installed parts during service.

f. FILTERS, SCREENS & FLUIDS for: cleanliness, contamination and/or replacement at specified intervals.

g. AIRCRAFT FILE.

Miscellaneous data, information and licenses are a part of the aircraft file. Check that the following documents are up-to-date and in accordance with current Federal Aviation Regulations. Most of the items listed are required by the United States Federal Aviation Regulations. Since the regulations of other nations may require other documents and data, owners of exported aircraft should check with their own aviation officials to determine their individual requirements.

To be displayed in the aircraft at all times:

1. Aircraft Airworthiness Certificate (FAA Form 8100-2).
2. Aircraft Registration Certificate (FAA Form 8050-3).
3. Aircraft Radio Station License, if transmitter is installed (FCC Form 556).

To be carried in the aircraft at all times:

1. Weight and Balance, and associated papers (Latest copy of the Repair and Alteration Form, FAA Form 337, if applicable).
2. Aircraft Equipment List.

To be made available upon request:

1. Aircraft Log Book and Engine Log Book.

h. ENGINE RUN-UP.

Before beginning the step-by-step inspection, start, run-up and shut down the engine in accordance with instructions in the Owner's Manual. During the run-up, observe the following, making note of any discrepancies or abnormalities:

1. Engine temperatures and pressures.
2. Static rpm.
3. Magneto drop (refer to Owner's Manual).
4. Engine response to changes in power.
5. Any unusual engine noises.
6. Fuel selector and/or shutoff valve; operate engine(s) on each tank (or cell) position and OFF position long enough to ensure shutoff and/or selector valve functions properly.
7. Idling speed and mixture; proper idle cut-off.
8. Alternator and ammeter.
9. Suction gage.
10. Fuel flow indicator.

After the inspection has been completed, an engine run-up should again be performed to determine that any discrepancies or abnormalities have been corrected.

INSPECTION FREQUENCY

1 - First 100 hours check torque then every 100 hours check security and for working. DO NOT TORQUE
2 - First 100 hours and 200 hours thereafter
3 - Every 50 hours or sooner when local dust conditions exist
4 - Every 500 hours
5 - Daily
6 - Every 3 years
7 - Every 2 years
8 - Every 50 hours and at tire replacement
9 - Every 5 years

IMPORTANT	50	100	200	Spl Insp
Read all Inspection Requirements and Paragraphs prior to using this Chart.				
NOTE				
This Inspection Chart is to be used in conjunction with the Cleaning Inspection, Repair and Servicing paragraph immediately following the Overhaul and Replacement Chart.				
AIRFRAME				
1. Windshield and Windows - Check for cracks, scratches and cleanliness		★		
2. Cabin Door - Check for condition and operation		★		
3. Baggage Door - Check for condition and operation			★	
4. Wing Locker Door - Check for condition and operation			★	
5. Seats and Seat Belts - Check for condition and security			★	
6. Upholstery and carpet - Clean			★	
7. Wing - Check for loose rivets, cracks, loose mounting bolts and security (Ref. ME73-22)	★		★	
8. Wing Wheel Well - Check root rib and wheel well for fume proofing		★		
9. Wing Spar Fittings - Check bolts for torque and security				1
10. Empennage			★	
11. Vertical and Horizontal Stabilizers - Check bolts for security			★	
12. Fuselage			★	
13. Exterior and Interior Surfaces - Check paint, damaged skin			★	
14. Nose Ram Air - Check clamps and hose to heat and vent system for security			★	
15. Heater - Check		★		
16. Instruments - Check markings and condition		★		
17. Control Quadrant - Check for condition and security			★	
18. Placards and Decals - Check for presence and ligibility			★	
19. Nacelle Firewall - Check for condition and security (Refer to expanded paragraph)			★	
LANDING GEAR				
1. Main Landing Gear Actuator - Check for condition, security and proper operating times (Refer to expanded paragraph)	★			
2. Emergency Manual Extension System - Check for condition, operation and specification compliance			★	
3. Main and Nose Landing Gear Assemblies - Check for condition	★			
4. Rigging - Perform Landing Gear Rigging Inspection in accordance with Figure 2-8A.			★	
5. Torque Links - Check wear and condition			★	
6. Nose and Main Gear Retracting Linkage - Check for condition			★	
7. Shock Strut Servicing - Check for proper servicing			★	
8. Nose Gear Shimmy Damper - Check fluid and condition	★			
9. Nose Wheel Steering System - Check cable tension, travel and gimbal bolts for condition and torque			★	

Figure 2-7. Inspection Chart (Sheet 1 of 5)

	50	100	200	Spl Insp
LANDING GEAR (CONT.)				
10. Nose and Main Wheel and Tires - Check wear, pressure and condition				8
11. Wheel Bearings - Check and repack				2
12. Brake System Plumbing - Check for leaks, hoses for bulges and deterioration, parking brake for operation			★	
13. Brake Assemblies - Check wear of lining and disc warpage			★	
14. Master Cylinders - Check fluid level			★	
FLIGHT CONTROLS				
1. Control Column - Check for security, looseness, wear and proper rig			★	
2. Aileron - Check hinge, bellcrank, stop bolt for looseness and/or jamb nut for being tight, linkage, pulleys, and bolt for condition, operation and security, and travel			★	
3. Aileron Trim Tab - Check hinge for cracks, wear, bolt for proper safety and tab travel			★	
4. Aileron Trim Tab Actuator - Check travel linkage for condition and security			★	
5. Aileron and Aileron Trim Cables - Check for security and tension, fraying and turnbuckles for safety			★	
6. Elevator - Check hinges and hinge bolts, bellcranks and push rod connecting bolt, pulleys and stop bolts for security and condition			★	
7. Elevator Trim Tab - Check hinge for cracks, wear, bolt for proper safety and tab travel			★	
8. Elevator Trim Tab Actuator - Check travel, condition and security			★	
9. Elevator and Elevator Trim Tab Cables - Check security and tension, fraying and turnbuckles for safety			★	
10. Electric Elevator Trim - Check for security, condition and travel			★	
11. Rudder - Check hinge, bellcrank, stop bolts and jamb nut for looseness, torque tube, pulleys, and connector links for security and safety, check travel			★	
12. Rudder Trim Tab - Check security and condition, linkage and travel			★	
13. Rudder Trim Tab Actuator - Check travel, mountings for security			★	
14. Rudder and Rudder Trim Tab Cables - Check tension, security, fraying and turnbuckles for safety			★	
15. Flaps - Check linkage, bellcranks, pulleys and cables for condition, tension and security			★	
16. Flap Motor and Position Indicator - Check for travel, condition and security			★	
17. Flap Actuator Assembly - Check for condition, security, and proper operating times (Refer to expanded paragraph)			★	
18. Autopilot (Optional Equipment) - Check cables, attachments, pulleys and turnbuckles for tension, condition, operation and security			★	
ENGINE GROUP				
CAUTION Ground magneto primary circuit before working on the engine.				
1. Engine - Wash, check for security of accessories		★		
2. Cowling - Wash, check for cracks, evidence of abrasion and wear			★	
3. Induction Air Filter - Clean				3
4. Induction Manifold - Check connections for condition		★		
5. Engine Oil Pressure System - Check for leaks, bends, cracks and security		★		

Figure 2-7. Inspection Chart (Sheet 2)

			50	100	200	Spl Insp
ENGINE GROUP (CONT.)						
6.	Engine Oil - Change (See Service Chart)	310	★			
		Turbo 310		★		
7.	Oil Filter - Replace and inspect adapters (Refer to expanded paragraph)		★			
8.	Engine Oil Breather Separator - Clean					3
9.	Engine Compartment - Visually check for condition, oil leaks, fuel leaks, etc.			★		
10.	Engine Controls - Check travel and security			★		
11.	Engine Wire Bundle - Check for condition and security			★		
12.	Engine Mounts - Check for condition and security			★		
13.	Engine Compartment Hoses - Fuel, (Check fuel lines under pressure) oil vacuum, etc. - Check for deterioration, leaks, discoloration, bleaching and rubber hoses for stiffness		★			
14.	Cylinder Compression - Refer to manufacturers operators manual.			★		
15.	Engine Cylinders, Rocker Box Covers and Push-Rod Housings - Check for fin damage, cracks, oil leakage, security of attachment and general condition			★		
16.	Crankcase, Oil Sump and Accessory Section - Inspect for cracks and evidence of oil leakage. Check bolts and nuts for looseness and retorque as necessary			★		
17.	Plugs - Clean and rotate (top right to bottom left, top left to bottom right)			★		
18.	Ignition Cables - Check condition and security			★		
19.	Magneto - Check timing, breaker gap and security			★		
20.	Alternator - Check brushes, leads, bearings and slip rings					4
21.	Alternator - Check belt tension, cooling fan for cracks, mounting bolts for safety, security and cleanliness and electrical connectors for security and cleanliness		★			
22.	Propeller Governor - Check for oil leaks, condition and security				★	
23.	Pumps - Fuel, Vacuum and Autopilot - Check for leaks, condition and security			★		
24.	Turbocharger - Check for condition, bulges, warps and security			★		
25.	Engine Exhaust System - Check for security, cracks, bellows, spring tension and perform system leak check (Refer to expanded paragraph)		★			
26.	Engine Exhaust System - Check for security, cracks, slip joint, spring tension and perform system leak check - Visually inspect slip joint seals (Refer to expanded paragraph)				★	
27.	Exhaust Couplings - Check for cracks and deformation		★			
28.	Engine Compartment Fire Extinguisher - Check system, pressure, condition and security			★		
29.	Starter - Check brushes, commutator and electric connections				★	
30.	Waste Gate Valve and Controllers - Check condition and security, visually check springs and linkage				★	
31.	Manifold Pressure Relief Valve - Visually check for obstructions, condition, security and operation				★	
PROPELLERS						
1.	Propeller Spinner - Wash, check for cracks and fractures			★		
2.	Blades - Check for nicks, cracks, scratches and blade angles			★		
3.	Propeller Cylinder - Check allen screws for security			★		
4.	Spinner Bulkhead - Check for cracks and security on crankshaft				★	
5.	Propeller - Check for oil leaks				★	
6.	Propeller Mounting - Check nuts for security			★		
7.	Deice System Electrical Leads - Check for condition and security			★		
8.	Deice System Brushes - Check for wear and seating (See Section 13)			★		
9.	Propeller Unfeathering Accumulator - Check for leaks, condition and proper charge			★		
10.	Propeller Synchronizer - Check for condition and security			★		

Figure 2-7. Inspection Chart (Sheet 3)

	50	100	200	Spl Insp
FUEL SYSTEM				
1. Metering Unit Fuel Screen - Clean		★		
2. Injection and Manifold - Inspect for leaking		★		
3. Fuel Discharge Nozzles - Inspect orifices and clean		★		
4. Fuel Selector Valve - Perform operational check, feel for detents thru 270°, check linkage, bearings, pins for condition and security		★		
5. Selector Valve - Perform an operational check in accordance with Section 11				4
6. Sediment Bowl - Drain				5
7. Fuel Strainer - Clean		★		
8. Fuel System Main - Inspect for leaks, and operation				5
9. Fuel System Main - Inspect plumbing and component mountings for condition, security, system for leaks		★		
10. Tip Tanks - Inspect mounting bolts for security, tip tank for leaks, cracks and dents			★	
11. Boost Pumps (Auxiliary) - Inspect for leaks, operation, vent and overboard drain for obstruction			★	
12. Tip Tank Vent Lines - Inspect for obstruction and security				5
13. Auxiliary Tanks - Inspect system for leaks and security			★	
14. Heater Fuel Filter - Clean			★	
15. Main Tank Fuel Transfer Pump - Check security and mounting			★	
16. Main Tank Fuel Transfer Pump Filter - Clean			★	
17. Wing Locker Transfer Pump - Check for leaks and security of mounting			★	
OXYGEN SYSTEM				
1. Oxygen System - Check installation, mountings, and pressure				
2. Oxygen Regulator - Check pressure and rate of flow			★	
3. Oxygen Masks and Hoses - Check condition and clean			★	
4. Oxygen Cylinder - ICC-3HT/DOT-3HT - Inspect condition and Hydrostatic Test Date				6
5. Oxygen Cylinder - ICC-3AA/DOT-3AA - Inspect condition and Hydrostatic Test Date				9
VACUUM SYSTEM				
1. Filter - Clean			★	
2. Relief Valve - Check security and screen for obstruction			★	
3. Hoses - Inspect for hardness, deterioration, looseness and bulging			★	
DEICE SYSTEM				
1. Deice System - Check for leaks, condition and operation of controls, lines and clamps for security			★	
2. Deice Boots - Check for abrasions, cuts, nicks and security of mounting			★	
3. Deice Filter - Clean			★	
PITOT STATIC SYSTEM				
1. Sump - Check for cracks, dents, leaks and presence of water			★	
2. System - Leak check			★	
3. Altimeter - Inspect as required by FAR Part 91, paragraph 91.170 in accordance with FAR Part 43, Appendix E, by authorized repair station				7
4. Alternate Static Drain - Check			★	

Figure 2-7. Inspection Chart (Sheet 4)

	50	100	200	Spl Insp
ALCOHOL WINDSHIELD ANTI-ICE SYSTEM				
1. Check reservoir for proper service			★	
2. Check nozzles for security and obstructions			★	
3. Anti-ice System - Check for leaks, condition and operation of controls			★	
4. Pump - Check for condition and security			★	
ELECTRICAL SYSTEM				
1. Aircraft and Systems Wiring - Check for chafing, broken or loose terminals and general condition		★		
2. Junction Box - Check terminals for condition and security		★		
3. Circuit Breaker Panel - Check terminals, wiring and mountings		★		
4. Regulators - Check wiring, mounting, condition and wire routing			★	
5. Switches - Check operation, terminals, wiring and mounting		★		
6. Landing Gear Relay and Limit Switch - Check mounting and terminals			★	
7. Wing and Fuselage - Check wiring, routing, security and terminals			★	
8. Battery - Electrolyte specific gravity	★			
9. Battery Cables - Check for corrosion and terminals for security		★		
10. Instruments and Interior Lights - Check for operation and security		★		
11. Radio and Navigation System - Check for operation and condition			★	
12. Instrument Panel and Control Pedestal - Check mountings and terminals for security, check bonding between stationary panel and instrument panel for proper ground - resistance must be 0.010 ohms or less			★	
13. Emergency Locator Transmitter - Check for condition, security and battery pack for proper charge		★		
14. Flap Limit Switch and Motor - Check wiring and terminals for condition and security			★	
15. Warning Lamps - Check condition		★		
POST INSPECTION				
1. Correct all discrepancies, replace all fairings, doors and access covers				
2. Ground check engine, check ignition drop, alternator charging rate, oil pressure and general operation of components				
SERVICE LETTERS				
1. Check that all applicable Cessna Service Letters and Service Bulletins are complied with.				
2. Check that all applicable current airworthiness regulations are complied with.				

Figure 2-7. Inspection Chart (Sheet 5)