Cessna 172
100 Hour Inspection Forms

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 aircraft inspection every 100 hours of operation.

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

Therefore, the Cessna Aircraft Company recommends PROGRESSIVE CARE for aircraft that are being flown 200 hours or more per year, and the 100 HOUR inspection for all other aircraft.

II INSPECTION CHARTS.

The following 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. An inspection conducted at 200 hour intervals would likewise include the 50 hour items and 100 hour items in addition to those at EACH 200 HOURS.

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 operating in this category must have a complete aircraft inspection each 100 hours and each 12 calendar months of operation. 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 (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. (Also refer to Section 11 or 11A of this Manual.)
3. Magneto drop. (Also refer to Section 11 or 11A of this Manual.)
4. Engine response to changes in power.
5. Any unusual engine noises.
6. Fuel selector and/or shut-off valve; operate engine(s) on each tank (or cell) position and OFF position long enough to ensure shut-off 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.

SHOP NOTES:

IMPORTANT

READ ALL INSPECTION REQUIREMENTS PARAGRAPHS PRIOR TO USING THESE CHARTS.

	EACH 50 HOURS	EACH 100 HOURS	EACH 200 HOURS	SPECIAL INSPECTION ITEM
PROPELLER				
1. Spinner	●			
2. Spinner bulkhead			●	
3. Blades	●			15
4. Bolts and/or nuts			●	
5. Hub			●	
ENGINE COMPARTMENT				
Check for evidence of oil and fuel leaks, then clean entire engine and compartment, if needed, prior to inspection.				
1. Engine oil, screen, filler cap, dipstick, drain plug and external filter element	●			1
2. Oil cooler		●		
3. Induction air filter	●			2
4. Induction airbox, air valves, doors and controls		●		
5. Cold and hot air hoses			●	
6. Engine baffles	●			
7. Cylinders, rocker box covers and push rod housing		●		
8. Crankcase, oil sump, accessory section and front crankshaft seal		●		
9. Hoses, metal lines and fittings	●			3
10. Intake and exhaust systems	●			4
11. Ignition harness		●		
12. Spark plugs		●		
13. Compression check			●	
14. Crankcase and vacuum system breather lines			●	
15. Electrical wiring		●		
16. Vacuum pump and oil separator		●		
17. Vacuum relief valve filter (cabin area)			●	5
18. Engine controls and linkage	●			6
19. Engine shockmounts, mount structure and ground straps			●	
20. Cabin heat valves, doors and controls			●	
21. Starter, solenoid and electrical connections		●		

	SPECIAL INSPECTION ITEM	EACH 200 HOURS	EACH 100 HOURS	EACH 50 HOURS
22. Starter brushes, brush leads and commutator			●	
23. Alternator and electrical connections				●
24. Alternator brushes, brush leads, commutator or slip rings			7	
25. Voltage regulator mounting and electrical leads				●
26. Magnetos (externally) and electrical connections				●
27. Magneto timing			8	
28. Carburetor and drain plug				●
29. Firewall			●	
30. Engine cowling		●		
FUEL SYSTEM				
1. Fuel strainer, drain valve and control		●		
2. Fuel strainer screen and bowl				●
3. Fuel tank vents, caps and placards		●		
4. Fuel tanks, sump drains and fuel line drains			●	
5. Drain fuel and check tank interior, attachment and outlet screens			5	
6. Fuel vent valves			●	
7. Fuel vent line drain			●	
8. Fuel selector valve and placards		●		
9. Fuel valve drain plug			●	
10. Engine primer				●
LANDING GEAR				
1. Main gear wheels and fairings		●		
2. Nose gear wheel, torque links, steering rods, boots and fairing		●		
3. Wheel bearings			9	
4. Nose gear strut and shimmy dampener (service as required)		●		
5. Tires		●		
6. Brake fluid, lines and hoses, linings, discs, brake assemblies and master cylinders			●	
7. Parking brake system			●	

		SPECIAL INSPECTION ITEM	EACH 200 HOURS	EACH 100 HOURS	EACH 50 HOURS
8.	Main gear springs			●	
9.	Steering arm lubrication				●
10.	Torque link lubrication				●
11.	Park brake and toe brakes - operational check				●
AIRFRAME					
1.	Aircraft exterior				●
2.	Aircraft structure			●	
3.	Windows, windshield, doors and seals				●
4.	Seat belts and shoulder harnesses				●
5.	Seat stops, seat rails, upholstery, structure and mounting			●	
6.	Control "U" bearings, sprockets, pulleys, cables, chains and turnbuckles			●	
7.	Control lock, control wheel and control "U" mechanism			●	
8.	Instruments and markings				●
9.	Gyros central air filter			●	10
10.	Magnetic compass compensation				5
11.	Instrument wiring and plumbing			●	
12.	Instrument panel, shockmounts, ground straps, cover, decals and labeling			●	
13.	Defrosting, heating and ventilating systems and controls				●
14.	Cabin upholstery, trim, sunvisors and ash trays			●	
15.	Area beneath floor, lines, hoses, wires and control cables			●	
16.	Lights, switches, circuit breakers, fuses and spare fuses				●
17.	Exterior lights				●
18.	Pitot and static systems			●	
19.	Stall warning system			●	
20.	Radios, radio controls, avionics and flight instruments				●
21.	Antennas and cables			●	
22.	Battery, battery box and battery cables				●
23.	Battery electrolyte				11
24.	Emergency locator transmitter		●		12

CONTROL SYSTEMS

In addition to the items listed below, always check for correct direction of movement, correct travel and correct cable tension.

		SPECIAL INSPECTION ITEM	EACH 200 HOURS	EACH 100 HOURS	EACH 50 HOURS
1.	Cables, terminals, pulleys, pulley brackets, cable guards, turnbuckles and fairleads			●	
2.	Chains, terminals, sprockets and chain guards			●	
3.	Trim control wheels, indicators, actuator and bungee				●
4.	Travel stops			●	
5.	Decals and labeling			●	
6.	Flap control switch, flap rollers and tracks and flap indicator				●
7.	Flap motor, transmission, limit switches, structure, linkage, bellcranks, etc.			●	
8.	Elevator and trim tab hinges, tips and control rods				●
9.	Elevator trim tab actuator lubrication and tab free-play inspection.	13			
10.	Rudder pedal assemblies and linkage			●	
11.	Skins (external) of control surfaces and tabs				●
12.	Internal structure of control surfaces			●	
13.	Balance weight attachment			●	
14.	Flap actuator jack screw threads	14			

SPECIAL INSPECTION ITEMS

1 First 25 hours: Refill with straight mineral oil (non-detergent) and use until a total of 50 hours have accumulated or oil consumption has stabilized, then change to ashless dispersant oil. Change oil each 50 hours if engine is NOT equipped with external oil filter; if equipped with external oil filter, change filter element each 50 hours and oil at each 100 hours; or every 6 months.

2 Clean filters per paragraph 2-22. Replace as required.

3 Replace hoses at engine overhaul or after 5 years, whichever comes first.

4 General inspection every 50 hours. Refer to Section 11 or 11A for 100 hour inspection.

5 Each 1000 hours, or to coincide with engine overhauls.

6 Each 50 hours for general condition and freedom of movement. These controls are not repairable. Replace as required at each engine overhaul.

7 Each 500 hours

8 (LYCOMING "BLUE STREAK")
INTERNAL TIMING: These magnetos cannot be overhauled in the field. The coil, capacitor and breaker assembly are non-replaceable. As a good maintenance practice, and to have the benefit of good ignition at all times, it is recommended that the magnetos be removed at 900 hours of magneto time, and install new exchange magnetos.

MAGNETO-TO-ENGINE TIMING: First 50 hours, first 100 hours and each 200 hours thereafter.

ROLLS/ROYCE CONTINENTAL
INTERNAL TIMING: As long as internal timing and magneto-to-engine timing are within the prescribed limits, it is recommended that magneto be checked internally only at 500 hour intervals.

MAGNETO-TO-ENGINE TIMING: Each 100 hours.

9 First 100 hours and each 500 hours thereafter. More often if operated under prevailing wet or dusty conditions.

10 Replace each 500 hours.

11 Check electrolyte level and clean battery compartment each 50 hours or each 30 days.

12 Refer to Section 16 of this Manual.

13 Lubrication is required of the actuator each 1000 hours and/or 3 years, whichever comes first. Refer to figure 2-5 for grease specification.

Refer to Section 9 of this Manual for free-play limits, inspection, replacement and/or repair.

14 Refer to paragraph 2-43 for detailed instructions for various serial ranges.

15 A "one-time" dye penetrant inspection of blades of Model 1C172/MTM7653 propellers should be performed in accordance with Service Letter SE 70-31 (supplement #1). This inspection should be accomplished within the next 25 hours of operation if this Service Letter has not been complied with.

NOTE

A high-time inspection is merely a 100-hour inspection with the addition of an engine overhaul. Continental recommends engine overhaul at 1800 hours for the O-300-series engine, except as stipulated in Continental aircraft engine Service Bulletin #M74-20 and supplements thereto. Lycoming recommends engine overhaul at 2000 hours for the O-320-series engine except as stipulated in Avco Lycoming Service Instruction No. 1009 and revisions thereto. At the time of overhaul, engine accessories should be overhauled.