
American Champion Aircraft Service Manual

Citabria Models, 7ECA, 7GCAA & 7GCBC

SECTION III

INSPECTION

3-1 INTRODUCTION

This section provides instructions for conducting inspections. These inspections are described in paragraphs 3-3 and 3-4. 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 REQUIREMENTS

The required inspection procedures are listed in Table III-1. The inspection procedure is broken down into major groups which are Engine run-up, Propeller, Engine, Cabin, Fuselage and Empennage, Wing, Landing Gear, Operational Inspection and General. The first column in each group lists the inspection of 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 an (X). 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.

3-4 PREFLIGHT INSPECTION

This inspection is for the pilot and should become part of the airplane operator's operational routine and/or preflight inspection before each flight.

- a. The propeller blades are free of nicks and the spinner and hub are free of cracks or damage.
- b. There are no grease or oil leaks around the propeller.
- c. The engine oil is at the proper level.
- d. There are no obvious oil leaks.
- e. The cowling is clean. There are no loose or missing fasteners and all inspection covers are secured.
- f. There are no foreign objects in the engine nacelles or obstructions in any air intakes.
- g. The tires are properly inflated and not excessively worn or cut.
- h. The brakes are working and there are no visible leaks in the hydraulic lines.
- i. The fuel cells are full or at a safe level of proper fuel.
- j. There are no visible leaks in the fuel system.
- k. The fuel cell caps are secure and vent system is open.
- l. The fuel cells and sediment bowls, strainers and lines are free of water and sediment by draining sumps and strainers.
- m. There is no external damage, cracks or operational interference to the control surfaces, wings or fuselage.
- n. The windshield and windows are free of defects and clean.
- o. The latch and hinges of the cabin entrance door are free of damage and operate properly.
- p. The seats and seat belts are securely fastened.

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- q. The landing, navigation, cabin and instrument lights are all operating.
- r. The fuel selector valve is operating properly.
- s. The throttle, carb heat and mixture operate properly.
- t. All systems are operating properly.

3-5 OVERLIMITS INSPECTION

If the airplane has been operated such that any of its components have exceeded their maximum operational limits, check with the appropriate manufacturer.

3-6 SPECIAL INSPECTIONS

The special inspections given in the following paragraphs, supplement the scheduled inspections as outlines in the Inspection Report, Table III-1, to include inspection of items which are required to be examined at intervals not compatible with airframe inspection intervals. Typical of this type are:

- a. Inspection is 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.

INSPECTION AND OVERHAUL REPORT

The recommended inspection procedures are listed in Table III-1, which indicates the operations to be performed and the inspection time intervals of 50, 100, 500, or 1000 hours. Where necessary, detailed inspection instructions are given in the applicable sections of this manual.

Both the annual and the 100 hour inspections are complete inspections of the aircraft, identical in scope. Inspections must be accomplished by persons authorized by the FAA.

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TABLE III-1 (cont)
INSPECTION REPORT

		INSPECTION TIME			
		50	100	500	1000
D.	<u>CABIN GROUP</u>				
1.	Inspect cabin entrance, doors and windows for damage and operation.	X	X	X	X
2.	Check upholstery for tears.		X	X	X
3.	Check seat and seat belt attachments.	X	X	X	X
4.	Inspect seat belts for chafing and condition.	X	X	X	X
5.	Check trim tab operation.	X	X	X	X
6.	Check rudder pedals, springs & cables for security and condition.		X	X	X
7.	Check parking brake operation.		X	X	X
8.	Check control sticks for security and blockage at stick boots.	X	X	X	X
9.	Inspect rudder cables and pulleys in baggage compartment for free operation and wear.		X	X	X
10.	Check all lights for proper operation.	X	X	X	X
11.	Check instruments, lines and attachments.		X	X	X
12.	Check altimeter and pitot system.		X	X	X
13.	Check operation of fuel valve.		X	X	X
14.	Check operation of cabin heaters.		X	X	X
15.	Check condition and operation of air vents.		X	X	X
16.	Check fuel lines for chafing, cracks, or leaks.		X	X	X
17.	Check all fuel line fittings for leaks and security.		X	X	X
18.	Lubricate per Figure 2-6.		X	X	X
E.	<u>FUSELAGE AND EMPENNAGE GROUP</u>				
1.	Remove all inspection covers.		X	X	X
2.	Remove elevator horn access cover.		X	X	X
3.	Remove belly pan.		X	X	X
4.	Remove aft baggage compartment panel.	X	X	X	X
5.	Check security of battery and cables.		X	X	X
6.	Check for signs of acid leakage.	X	X	X	X
7.	Service battery (see Section 2-16).	X	X	X	X
8.	Check bulkheads and stringers for damage.		X	X	X
9.	Check antenna mounts and electric wiring.		X	X	X
10.	Drain rear fuel drain and check attaching lines for security and leakage.		X	X	X
11.	Check vertical fin and rudder surfaces for damage.		X	X	X
12.	Check rudder hinges, horn, stops and attachments for damage and operation.		X	X	X
13.	Check rudder hinge bolts and bushings for excessive wear, replace as necessary.		X	X	X
14.	Check elevator and stabilizer surfaces for damage.		X	X	X
15.	Check elevator hinges, horn, stops and attachments for damage and operation.		X	X	X

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TABLE III-1 (cont)
INSPECTION REPORT

	INSPECTION TIME			
	50	100	500	1000
16. Check elevator hinge bolts and bushings for excessive wear, replace as necessary.		X	X	X
17. Check stabilizer attach bolts for security.		X	X	X
18. Check tail brace wires for condition, tension and security.		X	X	X
19. Check elevator trim mechanism.		X	X	X
20. Check rudder, elevator and elevator trim cables, turnbuckles, guides and pulleys for security, wear and operation.		X	X	X
21. Check rudder, elevator and trim tab cables for proper tension.		X	X	X
22. Check brake cylinders for security and operation.		X	X	X
23. Check brake reservoir and lines for chafing, cracks and leaks.		X	X	X
24. Check security of stick sockets, torque tube and cable attachments.		X	X	X
25. Inspect aileron cable bellcranks and links for security and operation.		X	X	X
26. Lubricate per Figure 2-6.		X	X	X
27. Check fuselage and tail surfaces for condition of fabric and paint.		X	X	X
28. Check fuselage frame for bent or corroded structural members.		X	X	X
29. Check fuselage and tail surface drain holes for opening.		X	X	X
30. Check rudder trim tab for security.		X	X	X
F. <u>WING GROUP</u>				
1. Remove all inspection covers on wings.		X	X	X
2. Remove front and bottom wing gap fairings.		X	X	X
3. Check wings, ailerons and struts for damage.		X	X	X
4. Check ailerons, wings for condition of fabric and paint.		X	X	X
5. Check condition and security of hinge bolts, aileron & flap.		X	X	X
6. Check condition and security of front and rear strut attach bolts. (See Note III)		X	X	X
7. Check fuel tank outlet lines for security and leaks.		X	X	X
8. Drain wing tanks.		X	X	X
9. Check fuel gauge for leakage.		X	X	X
10. Check fuel tank for leaks and security.		X	X	X
11. Check fuel tank cap and gaskets for sealing and condition.		X	X	X
12. Check wings for fuel capacity and octane markings.		X	X	X
13. Check security of rear strut, adjust jam nuts.		X	X	X
14. Check rear strut drain holes for opening and corrosion.		X	X	X
15. Check wing and aileron trailing edge drain holes for opening.		X	X	X
16. Check aileron movement for signs of chafing on adjacent parts.		X	X	X
17. Check aileron cables, pulley guides and turnbuckles for security, wear and operation.		X	X	X