



Holloman Aero Club

CT-210 Turbo Centurion Open Book Aircraft Test

Use the Cessna Owners Manual and CT-210K checklist for aircraft N8237M to answer the questions below:

1. Maximum gross weight of this aircraft is _____ pounds.
 - A. 3,400
 - B. 3,800
 - C. 3,812
 - D. None of the Above

2. Before engine start, the landing gear switch should be positioned _____.
 - A. Down, with three green lights
 - B. Down, with one green light
 - C. Neutral, with three green lights
 - D. Neutral, with one green light

3. For takeoff, the Auxiliary Fuel Pump should be in the _____ position.

- A. HI
- B. LO
- C. OFF
- D. BOTH

4. Recommended flap setting for normal takeoff in this modified aircraft (Robertson Aircraft R/STOL High Lift System) is:

- A. 0°
- B. 10°
- C. 20°
- D. 0° to 10°

5. The fuel consumption for a maximum performance takeoff (full throttle and 2700 RPM) should be adjusted to _____ using the _____.

- A. 20 gallons/hour, Flow Indicator
- B. 28 gallons/hour, EGT
- C. 20 gallons/hour, Tachometer
- D. 28 gallons/hour, Flow Indicator

6. Gear and flaps should be raised on a short field take off when _____.

- A. VSI and altimeter show climb
- B. over the obstacle
- C. past the obstacle and above 90 mph
- D. normal climb power is set

7. The power setting for a 75% (normal cruise climb) is 27.5 "hg, 2,500 RPM and 20 gallons per hour. The recommended cruise speed is:

- A. 120 – 130 mph
- B. 100 – 110 mph
- C. 82 mph
- D. 110 mph

8. The fuel system in this aircraft is not standard, there are two main fuel bays and two tip tanks. The maximum total useable fuel is _____ gallons:

- A. 117
- B. 59
- C. 89
- D. 64

9. The Cowl Flaps should be in the full open position for _____.

- A. Taxi
- B. Climb
- C. Both Climb and Taxi
- D. Climb only

10. The CT-210K electrical system uses a _____ volt battery, and an engine driven _____ to charge the battery.

- A. 24, alternator
- B. 12, generator
- C. 28, generator
- D. 12, alternator

11. The landing gear is powered by a hydraulic pump. This pump is powered by _____.

- A. an electric motor
- B. the aircraft engine
- C. the aircraft engine driven electric motor
- D. none of the above

12. The landing gear-down position indicator has two test positions. When the indicator light is pushed half-way in (with throttled pulled out) you get _____.

- A. intermittent gear warning horn
- B. amber light illuminated
- C. green light illuminated
- D. intermittent green light

13. When starting, the auxiliary fuel pump, when set to low, doesn't run until ____.

- A. the engine reaches 1000 RPM
- B. ignition-starter switch is in start
- C. master switch is turned on
- D. throttle is above idle

14. If the landing gear fails to extend after moving the handle firmly from “UP” to “DOWN” with a firm action several times, you should place the gear handle in the _____ position, extend the emergency hand pump and operate the hand pump up and down until _____.

- A. down, green light illuminates
- B. neutral, gear handle goes down
- C. down, gear handle returns to neutral
- D. neutral, green light illuminates steady

15. At maximum gross weight, the best glide speed, with engine out is _____.

- A. 85 – 95 mph
- B. 95 mph
- C. 95 – 105 mph
- D. 120 mph

16. Maneuvering speed at gross weight is _____. This goes _____ as the aircraft weight decreases.

- A. 135 mph, down
- B. 135 mph, up
- C. 190 mph, down
- D. 160 mph, down

17. Using the loading chart from the checklist below (not the sample from the owner's manual) to determine if the aircraft is within weight and balance limits for takeoff.

Assume fuel loaded at 32 gals in each main, 14 gals in each wing tip tank. Pilot and front seat passenger are 200 lbs each, one mid seat passenger at 180 lbs, and 120 lbs of baggage in the baggage area.

- A. Within weight and balance
- B. Over max gross takeoff weight
- C. Within weight, out of forward CG
- D. Within weight, out of rear CG

LOADING PROBLEM		N8237M Airplane Weight and Balance		
		Weight (lbs)	ARM	Moment
Licensed Empty Weight		2519.0	37.87	95,407.2
Oil		21.0	-	-300.0
Main Tanks (89.0 gal useable)			43.0	
Tip Tanks (28.0 gal useable)			49.5	
Pilot/Front Pax (400 lbs max)			37.0	
Mid Seat Pax (400 lbs max)			71.0	
Rear Seat Pax (340 lbs max)			101.0	
Baggage Area (120 lbs max)			138.0	
Total Weight	Moment			
Total Weight	Tot Moment/1000			

Maximum Gross Wt. = 3,800. If tip tanks have at least 7 gallons in each and mains are at least 2/3 full (30 gallons in each) otherwise, maximum Gross Wt. = 3,530.

18. Assuming the aircraft is loaded as described in the previous question, determine the takeoff distance under the following conditions: Flaps at 20°, short field takeoff procedure, temperature 79°F, Sea Level, 29.92" hg, 10 knot headwind component (remember this is a Robertson equipped aircraft).

- A. 1,771 feet
- B. 1,150 feet
- C. 1,318 feet
- D. 1,045 feet

19. Using the aircraft weight and loading from the previous question and assuming a "standard day" a climb to 10,000 at cruise climb, flying for 2 hours at 2300 RPM, 26" M.P. Also, assume 4 gallons of fuel to descend and land. The total fuel gallons consumed will be:

- A. 25.6
- B. 31.2
- C. 43.6
- D. 39.2

20. Assuming you are accomplishing a short field landing under the following conditions: Over a 50 foot obstacle, gross weight of 3,000 lbs, 5000' density altitude, 5 knot headwind, no gusts or crosswind, hard dry, level runway. The total distance from over the 50 foot obstacle to a full stop will be:

- A. 846 feet
- B. Insufficient information given
- C. 760.5 feet
- D. 1,085.2 feet

21. The maximum flap extended speed for more than 10° of flaps in this aircraft is:

- A. 110 mph CAS**
- B. 100 mph CAS**
- C. 160 mph CAS**
- D. 160 mph IAS**

22. It is extremely important to allow the turbo charger to slow down and to cool down after engine run or flight. The minimum recommended time to accomplish this is _____, with the engine at _____ RPM. Failure to allow cool down and lubrication will result in turbocharger failure.

- A. 3 minutes, 1000**
- B. 30 seconds, idle**
- C. 2 minutes, more than 1000**
- D. 5 minutes, 1000**