

RFC Dallas, Inc.

AIRCRAFT QUESTIONNAIRE

Version 1.3 8/15/09

Name: _____

Date: _____

Aircraft: Cherokee 180 Model: PA-28-180

Registration Number: N4746L

Answer the following questions by using the information contained in this aircraft's Airplane Flight Manual (Serial No. 28-4074), the current Weight and Balance supplement, placards affixed to the aircraft, the RFC Cherokee 180 Checklist, and the FARS/AIM. After being reviewed by a Club Checkout Instructor, this questionnaire must be submitted to the RFC Dallas Inc. Safety Officer before solo flights may be conducted.

1. How many fuel drains must be checked during preflight? _____
2. The Airplane Flight Manual states that the oil capacity of the O-320 series engine is _____ quarts and the minimum safe quantity is _____ quarts. However, RFC recommends adding a quart of oil when the level on the dipstick indicates less than 6 quarts.
3. After starting the engine, what is the maximum time that may elapse before oil pressure must be indicated? _____ Seconds
4. During the pre-takeoff engine run-up, the power should be set to _____ RPM. As each magneto is individually selected, the maximum allowable drop is _____ RPM.
5. To shorten takeoff distance, a flap setting of _____ degrees may be used.

For questions 6 thru 10 below, use the following criteria, and the performance charts in the AFM, to answer the subsequent questions pertaining to the aircraft's performance.

Conditions

Preflight Pressure Altitude	1600 ft.
Temperature	30° C
Aircraft Gross Wt	2400 lbs.
Runway Surface	Paved/Level/Dry
Wind	Calm

6. The aircraft will use a minimum distance of _____ ft. of the runway's length prior to liftoff.
7. A total distance of _____ ft. is required prior to clearing a 50 foot obstacle, using the recommended flap setting.

8. Assuming that there is a 50ft. obstacle at the approach end of the runway, the aircraft will use a minimum distance of _____ ft. of the runway's length during landing.

9. What is the power off stall speed, with flaps up, and 0° angle of bank? _____ MPH.

10. What is the power off stall speed, with flaps up, and a 45° angle of bank? _____ MPH.

11. What are the V-Speeds for this aircraft in MPH? (Conditions: Maximum gross weight @ sea level)

Vne _____	Maximum Glide _____
Vno _____	Enroute climb _____
Va _____	
Vfe _____	Final Approach with _____
Vx _____	40° flaps _____
Vy _____	Balked landing _____
Vsi _____	(w/full flaps) _____
Vso _____	

12. What is the approximate true airspeed when using 2400 RPM at a density altitude of 6000 ft? _____ MPH.

13. What is the maximum allowable gross weight for this aircraft? _____ lbs.

14. What are the current licensed empty weight, arm, and moment for this actual aircraft? _____ lbs., _____ inches., _____ lb inches.

15. How much additional weight can be carried with maximum fuel and oil on board? _____ lbs.

16. At maximum gross weight, what is the forward C. G. limit? _____ inches.

17. At maximum gross weight, what is the rearward C. G. limit? _____ inches.

18. What is the maximum weight for the baggage area? _____ lbs.

Use the following sample information while completing questions 19 & 20:

Aircraft Licensed Empty Weight = 1,394.35 lbs

Aircraft CG = 84.95 inches

Aircraft Moment = 118,455.29 lb inches

Arms:

Front Seats = 85.5 inches

Rear Seats = 118.1 inches

Fuel = 95.0 inches

Engine Oil = 32.5 inches

19. Given the following aircraft loading criteria:

Pilot	185 lbs
Copilot	190 lbs
Rear Pax	105 lbs
Fuel (Full)	48 gals
Oil	6 quarts

The Gross Weight is _____ lbs.

The C.G. is _____ inches aft of datum.

Is the aircraft loaded within allowable weight limits? _____

Is the aircraft loaded within allowable C.G. limits? _____

20. Given the loading scenario from the previous question, adding 50 lbs. of weight in the baggage compartment will cause:

- The aircraft's rearward C.G. limit to be exceeded
- The aircraft's forward C.G. limit to be exceeded.
- The aircraft's maximum gross weight to be exceeded.
- The aircraft to be within weight and C.G. limits.

21. What is the total usable fuel capacity in gallons and the minimum grade permitted? _____ gals., _____ octane.
22. What is the recommended viscosity of oil (ashless dispersant) to be used when operating in temperatures between 30°F & 90°F? _____
23. What is the rated BHP of the engine installed in this aircraft at maximum allowable RPM? _____ BHP _____ RPM
24. Where is the ELT located? _____
25. Can it be activated manually? _____. Explain how _____

26. Is this aircraft equipped with a heated pitot tube? _____
27. What type of stall warning indicator is installed in this aircraft? (Horn, Buzzer, Light, Siren) _____
28. How do you test the stall warning system on the ground?

29. The battery is (6, 12, 24) volts? _____
30. Which of the following axis can the pilot manually trim?
- Pitch _____
- Roll _____
- Yaw _____
31. What initial actions should immediately be taken upon losing engine power during flight?
- a. _____
- b. _____
- c. _____
- d. _____

- e. _____
- f. _____
- g. _____

32. What are the prescribed aircraft control inputs to initiate a recovery from a fully developed spin?

- Power _____
- Ailerons _____
- Rudder _____
- Elevator _____

33. This aircraft is approved for flight into known icing conditions?

- a. True
- b. False

34. Is the GPS in this aircraft certified for use in instrument conditions?

- a. Yes
- b. No

According to FAR 91.7, who is responsible for determining whether the aircraft is in condition for safe & legal flight?

REVIEWED BY: _____

DATE: _____