RFC Dallas, Inc.

AIRCRAFT QUESTIONNAIRE

Archer-III / N9279J

(Version 1.1; 12/16/2025)

Pilot Name: _____ Date: _____

Aircraft Registration#: **N9279J** Model: _____ Serial#: _____

Answer the following questions by using the information contained in this aircraft's Airplane Flight Manual, the current Weight and Balance supplement, placards affixed to the aircraft, the aircraft 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-360 series engine 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, the maximum time that may elapse before oil pressure must be indicated is _____ 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. Maximum difference between Left and Right mag 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 Weight	2400 lbs.
Runway Surface	Paved/Level/Dry
Wind	Calm

6. Minimum aircraft runway takeoff distance is _____feet.

7. Using the recommended flap setting, a total takeoff distance of _____ feet is required to clear a 50 foot obstacle.

8. Assuming a 50 foot obstacle at the approach end of the runway, the aircraft will use a minimum landing distance of _____ feet.

9. The expected (mixture full rich) climb rate is _____ feet per minute.

10. Using Figure 5-5 (page 5-13); What is the power off indicated stall speed, for the following conditions (aircraft weight = 2400 lbs.):

a) Flaps up, and 0° angle of bank? _____ KNOTS.
b) Flaps up, and 40° angle of bank? _____ KNOTS.

11. The V-Speeds for this aircraft in KNOTS are *(complete the chart below):*

(Conditions: Maximum gross weight @ sea level)

Vne		Vsi	
Vno		Vso	
Va		Maximum Glide (engine out)	
Vfe		Enroute Climb	
Vx		Final Approach (40 Deg Flaps)	
Vy		XXXXXXXXXXXXX	XXXXXX

12. The approximate true airspeed when using 65% power, standard temp, and at a pressure altitude of 6000 ft is: _____ KNOTS.

13. The maximum normal allowable gross weight for this actual aircraft is _____ lbs.

14. Specify the following Wt&Bal information for this actual aircraft:

Date on Wt&Bal	
Basic Empty Weight	
Arm (inches)	
Moment (lb inches)	

15. At maximum Gross Takeoff Weight, specify the following:

Forward CG Limit (inches)	
Rearward CG Limit (inches)	

16. With maximum fuel on board how much additional weight may be carried aboard the aircraft? _____ lbs.

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

*For questions 18 and 19 Sample questions, use the **following information**:*

Basic Empty Weight (lbs)	From Q-14
CG (inches)	From Q-14
Moment (lb-inches)	From Q-14
ARMS:	
Front Seats (inches)	80.5
Rear Seats (inches)	118.1
Fuel (inches)	95.0
Engine Oil (inches)	31.7
LOADING CRITERIA:	
Pilot (lbs)	185
Co-Pilot (lbs)	190
Rear Passengers (lbs)	105
Fuel (gals)	48

18. Results are:
    a) The Gross Takeoff Weight (lbs) is: _____
    b) The Takeoff C.G. (inches aft of datum) is: _____
    c) Is the aircraft loaded within allowable weight limits? (Yes / No)
    d) Is the aircraft loaded within allowable C.G. limits? (Yes / No)

19. Given the loading scenario from the previous question, adding 50 lbs. of weight in the baggage compartment (Arm = 142.8) will result in:

    a) Updated Gross Takeoff Weight (lbs): _____
    b) Updated Takeoff C.G. is (inches aft of datum): _____

    This added weight will cause *(circle all that apply)*:

    a) The aircraft's rearward C.G. limit to be exceeded
    b) The aircraft's forward C.G. limit to be exceeded.
    c) The aircraft's maximum gross weight to be exceeded.
    df) The aircraft to be within weight and C.G. limits.

20. Usable fuel capacity is: TOTAL _____ gals.

21. The rated BHP of the engine installed in this aircraft at maximum allowable RPM is _____BHP at _____ RPM.

22. Proper strut extension (inches) are: Mains: _____, Nose Wheel: _____.

23. Can the ELT be activated manually? (Yes / No)

24. This aircraft is equipped with a heated pitot tube? (Yes / No)

25. What type of stall warning indicator is installed in this aircraft *(circle all that apply)*?
(Horn / Buzzer / Light / Siren)

26. How do you test the stall warning system on the ground?

_____

27. The battery is (6 / 12 / 24) volts.

28. Which of the following axis can the pilot trim *(circle all that apply)*?
(Pitch / Roll / Yaw)

29. What initial actions should immediately be taken upon losing engine power during <u>cruise</u> flight?

a) _____

b) _____

c) _____

d) _____

e) _____

f) _____

g) _____

30. What are the prescribed aircraft control inputs to initiate a recovery from a developing spin?

Power _____

Ailerons _____

Rudder _____

Elevator _____

31. This aircraft is approved for flight into known icing conditions? (Yes / No)

32. The Garmin GTN 650 in this aircraft is certified for IFR operations? (Yes / No)

33. The maximum CHT temperature (economy cruise) is _____ F. RFC/Owner recommended target CHT temperatures should be at or below _____ F.

34. The autopilot can fly ILS and LPV approaches with vertical guidance? (Yes / No)

35. The Garmin G3Xi is equipped with Electronic Stability Protection (ESP):
    (circle all that apply)
    a. It is a system to prevent the pilot from putting the aircraft in abnormal attitudes.
    b. It is not active while the autopilot is engaged.
    c. Must be disabled when performing certain maneuvers such as stalls and steep turns.
    d. The ESP bank limits are displayed as green hash marks on the attitude indicator.

36. The pilot can program the Garmin G3Xi directly for approaches and is IFR Certified for such operations? (Yes / No).

37. If the VLOC (nav source) on the Garmin 530 GPS is selected, that signal will be presented on the Garmin G3Xi's HSI as a Green Needle? (Yes / No)

38. The Garmin G3Xi display layout can be modified by each pilot but will always default back to a standard system upon power up? (Yes / No)

39. All IFR programming (SIDs, STARs and Approaches) should be performed on the Garmin GTN 650 as that is the IFR Certified unit and has the updated IFR databases? (Yes / No)

40. According to FAR 91.7, the _____ is responsible for determining that the aircraft is a condition for safe and legal flight.

Pilots (Printed Name & Signature): _____

Reviewed by (Printed Name / Signature): _____ Date: _____