

Edmonton Flying Club

Diamond DA20-C1 Open Book Exam

Member Name: _____

Member Number: _____

General Information

1. What Type of Engine is used in the Katana C1?
2. Max horsepower at what RPM?
3. Type and diameter of propeller?
4. Recommended tire pressure:

Nose	Main
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5. Fuel Type and Quantity
6. Max Gross Take Off Weight?
7. Airframe
 - a) Fuselage Material
 - b) Wing
 - c) Spar

8. Comm/Nav Equipment

- a) GPS Antenna Location –
- b) VOR Antenna –
- c) VHF Radio

9. Oil Capacity

Approved Grades

Normal Operations

1. Structural Temperature Indicator

- a) Where is it located?
- b) Explain indications

Within Limits

Out of Limits

2. Braking System

- a) If the Co-pilot experiences a brake failure, what happens to the pilot's braking ability?

3. Mixture Control

- a) List the maneuvers/operations that require the mixture to be set full rich:

4. Electric Fuel Pump

- a) The main reason for installation:

- b) When is it to be used (Normal Operations)?

5. Pre-Flight Inspection
 - a) Fuel Drains (Normal)
 - b) Location
 - c) Purpose

6. Glide Ratio
 - a) Speed
 - b) Distance from 8000 ft

Operating Limitations

1. Maximum Demonstrated Crosswind Component
2. Flaps
 - a) Three Positions (degrees)

 - b) Speed range
3. Airspeeds

Vr	Vfe
Vx (T/O flaps)	Va
Vx (Flaps 0)	Vno
Vs	Vne
Vso	Vy (Flaps 0)
	Vy (T/O Flaps)

4. Engine Operation
 - a) Max T/O power duration
 - b) Max continuous RPM
 - c) Normal operating oil pressure range
5. Centre of Gravity Range
 - a) forward limit
 - b) rearward limit
 - c) Reference datum
6. Flight Control Mechanisms
 - a) Rudder
 - b) Elevator
 - c) Aileron
7. Electrical System
 - a) Battery Voltage
 - b) Generator Strength

Aircraft Performance

1. Fuel consumption and TAS under the following conditions:

- a) Pressure Altitude: 5000 ASL
 Power setting: 2500 rpm %BHP KTAS GPH
 Temperature: -15°C

2. Stall Speeds

- a) Flaps at Cruise/ 45° bank
 b) Flaps at cruise/ 0° Angle of Bank

3. Fuel and max durations under the following conditions:

- a) Pilot and passenger: 350 lbs
 Baggage 40 lbs
 Pressure Alt 9500 ft
 Temperature -4°C
 Power Setting 2600 rpm

Aircraft	1207
Pilot & Psngr	350
Baggage	40
Fuel	173
Ramp Weight	1770
Taxi and Run-up	-6
MTOW	1764
Fuel Available	167 s (27.83 USG)

- a) Fuel available
 b) Flight Time

4. Crosswind Chart

- a) Winds are at 220M at 15 gusting 26. Active runway is 27.
- i) Head wind component
 ii) Cross wind component
 iii) Can we take off?

- d) Engine Fire on ground (start up)

- e) Electrical Fire – in flight

- f) Trim system failure – runaway trim motor