

OUT OF THE BLUE AVIATION

AIRCRAFT SYSTEMS AND PERFORMANCE REVIEW

Name _____ H. Phone _____
Address _____ C. Phone _____
_____ Email _____

Pilot Ratings _____ Certificate Number _____
Medical class _____ Date _____ Last Flight Review _____
Medical Examiner _____ Instructor _____

Aircraft N number _____ Today's Date _____ Chck'd by Instructor _____

Copies of : Pilot Certificate Medical Certificate Driver's License Credit Card

ENGINE AND OIL SYSTEMS

Engine Manufacturer _____ Oil Grade (Summer) _____ (Winter) _____
Engine Model _____ Min Oil Capacity _____
Rated Horsepower _____ @ _____ RPM Max Oil Capacity _____

Where is oil added to the engine? _____

Minimum oil pressure? _____ Maximum oil temperature? _____
Magneto checked at _____ RPM. Maximum allowable drop? _____

Describe the **Air Induction System**

Describe the **Alternate Air Source/Carburetor Heat System**

When is the carburetor heat system used?

How is the fuel/air mixture controlled? Why?

When should the fuel/air mixture be leaned?

How should the EGT gauge be used?

IGNITION SYSTEM

Briefly describe the aircraft ignition system

Why is there a dual ignition system?

What is the purpose of the magneto check before takeoff?

What is the maximum RPM drop allowed per magneto?

What is the maximum RPM differential allowed between magnetos?

ELECTRICAL SYSTEM

The electrical system is _____volts/The alternator/gen is rated at _____amps.

The battery is _____volts

Why is the battery voltage less than the electrical system?

What is the purpose of the **Master Switch**?

Why a split **Master Switch**?

What is the purpose of a separate **Avionics Power Switch**?

How is the alternator output checked before flight?

What is the procedure for starting the engine using the **Ground Service Plug**?

Describe the procedure for responding to an alternator failure in flight.

AIRCRAFT OPERATIONS

Describe the steps in a normal engine start.

Describe how to start a flooded engine.

What is the minimum acceptable thickness for brake pads?

What is the maximum acceptable size of a “ding” or “nick” in the propeller?

For how long can the pilot heat be “on” during ground operations?

When should carburetor heat be used?

How does carburetor heat effect the operation of the engine?

What effect do flaps have on the aircraft in flight?

Describe flap settings and airspeeds for a short field takeoff.

When should fuel/mixture be leaned for takeoff? In climb?

How should shock cooling be prevented in descent from cruise altitude

What airspeed and flap settings can be used in each leg of the traffic pattern:

Downwind _____ Base _____ Final _____

Where is the **Emergency Locator Transmitter** located?

AIRSPEEDS AND LIMITATIONS

Provide the proper airspeeds:

V_{so} _____ V_y _____
V_{s1} _____ V_a _____
V_r _____ V_{no} _____
V_x _____ V_{ne} _____

WEIGHT AND BALANCE

Calculate the following:

Aircraft empty weight _____ Maximum gross weight _____

Useful load _____ Max. gross takeoff weight _____

Full fuel payload _____ Maximum landing weight _____

Maximum weight in baggage area _____

What is the C.G. range (in inches) at maximum gross weight? _____ to _____

Given:

Pilot and front passenger 380 lbs

Rear passengers 330 lbs

Baggage 130lbs

Full Fuel

Calculate:

Gross weight _____ Total moment _____ in-lbs

Center of Gravity _____ in

Is the aircraft legal?

What adjustments are required to be legal?

AIRCRAFT PERFORMANCE

1. Given: PA=4000 feet; Temp=86 F; Runway 27, paved, level and dry; Wind=320 @ 14 kts; aircraft at gross takeoff weight. What is the takeoff distance to clear a 50 ft obstacle?

2. Given: PA=6000 feet; Temp= 68 F; Runway 9, wet grass, Wind=calm, aircraft at maximum landing weight. What is the total landing distance to clear a 50 ft obstacle?

3. Given: Landing runway 22; wind 190 @ 22 gusting to 30 kts. Will the maximum demonstrated crosswind component be exceeded?

AIRSPACE

Class A

General Dimensions

Aircraft Equipment Required

Clearance required?

Class B

General Dimensions

Aircraft Equipment Required

How depicted on VFR charts?

Class C

General Dimensions

Aircraft Equipment Required

How depicted on VFR charts?

Class D

General Dimensions

Aircraft Equipment Required

How depicted on VFR charts?

Class E

General Dimensions

Aircraft Equipment Required

How Depicted on VFR charts?

FAR's

What is the VFR fuel requirement for flights during the day?

At night?

How is night flight defined?

How is **Minimum Flight Altitude** defined?

What is the **Minimum Flight Altitude** over congested areas? Over non-congested areas?

What are the recent flight requirements for carrying passengers during the day? At night?

What aircraft and equipment inspections are required prior to conducting a flight?

How do you determine that an aircraft is airworthy for flight?

What documents are required to be on board the aircraft when flying in the U.S.?

What documents are required to be in the pilot's possession when exercising the privileges of an airman?

OTHER

When are Customs Services required in the U.S.?

In Canada?

How do you arrange for Customs Services in the U.S.?

In Canada?

What documents are required for Customs Clearance?

When are flight plans required in Canada?

Is VFR flight at night allowed under Canadian Flight Regulations?

NON-TOWERED AIRPORT VFR PROCEDURES

Describe how to approach the airport and enter the traffic pattern.

Describe how to depart the airport environment.