



Meet your Aircraft Quiz inside

*Winnipeg Area Chapter of RAA Canada*

*April 2011*

***Executive***

***President: Jim Oke: – 344-5396***

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**NEWSLETTER:**

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## ***CALENDAR OF EVENTS***

**April 21**

Project tour – details inside

**May 19**

Tire Kick – Summer Plans – Lyncrest Airport



Thanks to Ben Toenders for stepping in with only a few hours notice and presenting the Survival briefing at the March RAA meeting. Just a few hours before our meeting Chuck Wilson, the CARASA representative who was going to give the briefing was involved in an accident and unable to make our meeting. Fortunately Chuck did not suffer any serious injuries. He sent Ben his presentation and Ben gave a great presentation. Ben is the CASARA Liaison Officer with DND and is the liaison person between DND and CASARA

## **Project tour – Thursday April 21.**

Project tours have been planned to look at Steven Sadler's Pietenpol and John Grodzki's RV9A. Steven's address is 7 DeVos Drive Lasalle and his phone number is (204) 736-3138. John Grodzki's address is 77 Bergman Cres. in Charleswood and his phone number is 895-0385. If your last name begins with the letter **A to M** go to Steven's for 7:30pm and **N to Z** will start at John's at 7:30pm. Spend approximately 45 minutes at each location and plan on about a 30 minute drive between Steven and John's.

### **Directions to Steve's in Lasalle**

- from the south perimeter, turn on Hwy 330 (sign for Lasalle) and drive into the town.
- Turn left on 2<sup>nd</sup> Ave.
- Turn right on the second street to DeVos Drive.

### **Directions to John's place**

- from Roblin Blvd turn left on Harstone Rd
- take the first right onto Rannock Ave.
- turn left at Bergman Cres.

## **RAA Tire Kick – May 19**

The RAA has just purchased a set of weight and balance scales for use by club members. The scales will be free for club members and \$50 for use by non-club members. The scales will have to be booked as they are not going to be kept in the RAA Hangar until a secure storage cabinet can be constructed. The scales will have to be used in the RAA hangar and will not be loaned out. At our May "tire-kick" meeting at Lyncrest, we will have a demonstration on how to use the scales. Also there will be a discussion on your summer flying plans. This will be our last meeting until September.

## **Champ Recovering Project**

The club has been approached to see if there is any interest in recovering the fuselage of a Champ aircraft next fall/winter. This will include the removal of the old fabric, inspection of the airframe, recovering the fuselage, doping and finishing up to but not painting. The project may take 8 to 10 sessions. If you are interested in being a part of this project and learning about fabricating an aircraft– no experience necessary, please contact Bob Stewart at 853-7776 or e-mail me at [stewart8@highspeedcrow.ca](mailto:stewart8@highspeedcrow.ca) We are also looking for someone who may be interested in leading this project.

## **Hello friends and fellow aviators,**

A farewell BBQ is being planned in honour of Jack and Lianne Neima at the Lyncrest Flight Center on Saturday, May 28, 2011 at 5:00 p.m. Jack and Lianne have retired and will be moving back to Nova Scotia this summer to enjoy their new home and their grandchildren. This is a rain or shine

event so please bring a lawn chair and b.y.o.b.

We will keep this simple because we want to enjoy our visit with Jack and Lianne. We will be serving burgers and smokies and we are asking people to bring a salad or dessert. In order to buy enough food we need a head count so please r.s.v.p. to Joyce Stoyka (tstoyka@mymts.net) by May 15th. There will be a small donation to cover the cost of food.

Everyone is welcome to join us in wishing Jack and Lianne a happy retirement.

The following was a small booklet produced by the FAA that I came across while in Florida this winter. I felt it was good refresher for those who own an aircraft. Thanks to Joyce Stoyka for converting the booklet into a format that I could use in this newsletter. While the booklet has not been "Canadianized", the content of the quiz is applicable to both the US and Canada.

## MEET YOUR AIRCRAFT QUIZ

**PURPOSE** This quiz is designed to help a pilot meet his or her aircraft. Although no attempt is made to cover in depth all of the information contained in the typical Pilot's Operating Handbook (POH), Owner's Manual (OM), or Aircraft Flight Manual (AFM), the quiz will provide a review of some of the basic information a pilot should know before taking off on any flight and especially on a long cross-country flight with passengers. The quiz will also help a transitioning pilot better understand his or her new aircraft.

Since this is an open book quiz, there is no minimum passing score. It is assumed that a certificated pilot will be able to answer every question. Since different pilots will use different aircraft data to complete the quiz, no "stock" answers are provided. It is assumed that each pilot will research and answer every question that is appropriate to the make and model aircraft used in the quiz. Pilots are reminded they should periodically review the flight manual of their aircraft to maintain the knowledge gained by taking this quiz.

**INSTRUCTIONS** You may use any book or device that will help you determine the correct answers. The aircraft manual for the specific aircraft you plan to use is required. The FAA Aeronautical Information Manual (AIM) (the former Airman's Information Manual) and the Federal Aviation Regulations (FAR) will also help. All answers concerning aircraft performance and limitations should be obtained from the aircraft's approved manual. You should use the aircraft's actual weight and balance data to answer any question dealing with weight and balance, rather than the sample data usually given in an aircraft manual to demonstrate how to compute weight and balance. If you fly more than one type aircraft, you should test your knowledge of each type aircraft. You should skip any question that is not applicable to your type of aircraft. If you are unable to answer a question, you should discuss the question with a certificated flight instructor or other experienced

**FOREWORD** The purpose of this series of Federal Aviation Administration (FAA) Aviation Safety Program publications is to provide the aviation community with safety information that is informative, handy, and easy to review. Many of the publications in this series summarize material published in various FAA advisory circulars, handbooks, other publications, and various audiovisual products produced by the FAA and used in its Aviation Safety Program. Some of the ideas and materials in this series were developed by the aviation industry. FAA acknowledges the support of the aviation industry and its various trade and membership groups in the production of this series.

Comments regarding these publications should be directed to the National Aviation Safety Program Manager, Federal Aviation Administration, Flight Standards Service, General Aviation and Commercial Division, Aviation Safety Program Branch, AFS-810, 800 Independence Avenue, SW, Washington, DC 20591.  
Attn: H. Dean Chamberlain, Editor.

**ACKNOWLEDGMENT** Many of the ideas contained in this pamphlet and an earlier version originally appeared years ago in a pamphlet published by the Insurance Company of North America. The material has been updated to reflect operational and airspace changes that have occurred since the material was first printed.

The Federal Aviation Administration (FAA) appreciates the cooperation of INA in granting permission for use of their material in the FAA's Flight Standards Service Aviation Safety Program.

## ARE YOU LEGAL TO FLY?

Name \_\_\_\_\_ Date \_\_\_\_\_

Ratings \_\_\_\_\_

Medical: Type \_\_\_\_\_ Expiration date \_\_\_\_\_

Date of last Flight Review \_\_\_\_\_ Date next one due \_\_\_\_\_

Flight time in category/class in the last 90 days \_\_\_\_\_

Number of takeoffs and landings in category/class last 90 days \_\_\_\_\_

Number of night takeoffs and landings in category/class in the last 90 days \_\_\_\_\_

Do you meet the FAR requirements to be PIC of this aircraft and carry passengers?

**Day:** Yes \_\_\_\_\_ No; \_\_\_\_\_ **Night:** Yes \_\_\_\_\_ No \_\_\_\_\_

IFR hours (actual/simulated) flown in the last 6 months \_\_\_\_\_

Number of IFR approaches flown in the last 6 months \_\_\_\_\_

Are you IFR current to be PIC: Yes \_\_\_\_\_ No \_\_\_\_\_

If applicable, do you have the required CFI endorsements to fly this aircraft? \_\_\_\_\_

## QUIZ BASED UPON FOLLOWING MAKE AND MODEL AIRCRAFT

Make \_\_\_\_\_ Model \_\_\_\_\_ Year \_\_\_\_\_

## AIRCRAFT OPERATING SPEEDS

What is the normal rotation speed ( $V_r$ )? \_\_\_\_\_

What is the normal climb-out speed? \_\_\_\_\_

What is the best rate of climb speed ( $V_y$ )? \_\_\_\_\_

What is the best angle of climb speed ( $V_x$ )? \_\_\_\_\_

What is the normal cruise speed? \_\_\_\_\_

What is the maximum flap extended speed ( $V_{fe}$ )? \_\_\_\_\_

What is the maximum landing gear operating speed ( $V_{lo}$ )? \_\_\_\_\_

What is the maximum landing gear extended speed ( $V_{le}$ )? \_\_\_\_\_

What is the approach-to-landing speed? \_\_\_\_\_

What is the stalling speed in the landing configuration ( $V_{so}$ )? \_\_\_\_\_

What is the clean, gear-up stall speed? \_\_\_\_\_

What is the stall speed in a 60 degree bank with full flaps? \_\_\_\_\_

What is the stall speed in a 60 degree bank with 0 flaps? \_\_\_\_\_

What is the design maneuvering speed ( $V_a$ )? \_\_\_\_\_

What is the never-exceed speed ( $V_{ne}$ )? \_\_\_\_\_

What is the normal operating speed range? \_\_\_\_\_

What is the maximum structural cruising speed ( $V_{n0}$ )? \_\_\_\_\_

What engine-off glide speed will give you the maximum glide range? \_\_\_\_\_

What is the maximum demonstrated crosswind component for the aircraft?

Is this an operating limitation? Yes \_\_\_\_\_ No \_\_\_\_\_

Twin-engine aircraft only:

What is the minimum control speed with the critical engine inoperative ( $V_{mc}$ )? \_\_\_\_\_

What is the safe single-engine speed ( $V_{sse}$ )? \_\_\_\_\_

What is the best rate of climb speed—single engine ( $V_{yse}$ )? \_\_\_\_\_

What is the best angle of climb speed—single engine ( $V_{xse}$ )? \_\_\_\_\_

What is the single-engine service ceiling? \_\_\_\_\_

Can the aircraft maintain altitude on one engine? \_\_\_\_\_

Use the following data to answer the following questions: OAT 90 degrees; PA 4,000 feet; gross weight; winds 090 degrees at 10 mph; grass runway:

What is the accelerate-stop distance? \_\_\_\_\_

What is the accelerate-go distance? \_\_\_\_\_

What is the takeoff distance to clear a 50 foot obstacle? \_\_\_\_\_

What is the landing distance to clear a 50 foot obstacle? \_\_\_\_\_

## GENERAL AIRCRAFT INFORMATION

Does the aircraft have a current and original airworthiness certificate? \_\_\_\_\_

Does the aircraft have a current registration certificate? \_\_\_\_\_

If required, does the aircraft have a current radio station license? \_\_\_\_\_

Does the aircraft have a current weight and balance date sheet? \_\_\_\_\_

Have all airworthiness directives been complied with? \_\_\_\_\_

What is the type, make, and model of the engine/s? \_\_\_\_\_

Is the propeller fixed pitch or variable? \_\_\_\_\_

What is the power output of the engine/s? \_\_\_\_\_

Type of fuel control—carburetor, fuel injection, other? \_\_\_\_\_

If carburetor, when do you use carburetor heat? \_\_\_\_\_

Describe how the heater functions. \_\_\_\_\_

Is there an alternate air source? \_\_\_\_\_ When is it used? \_\_\_\_\_

Describe the electrical system \_\_\_\_\_

Do you know the location of the critical fuses or circuit breakers for the landing gear, flaps, landing lights, and generator/alternator? \_\_\_\_\_

What is the proper tire pressure for the nose gear or tailwheel? \_\_\_\_\_

What is the proper tire pressure for the main gear? \_\_\_\_\_

**FUEL AND OIL**

Describe the fuel system. \_\_\_\_\_

What type of fuel is used? \_\_\_\_\_ What is its colour? \_\_\_\_\_

If there is an approved alternate fuel, what is it? \_\_\_\_\_

What is the number, location, and capacity of the fuel tank/s?

	Location	Total Gallons	Useable Gallons
Main tank	_____	_____	_____
Other	_____	_____	_____
Other	_____	_____	_____
Other	_____	_____	_____
Other	_____	_____	_____
Other/s	_____	_____	_____

What is the total number of gallons of usable fuel? \_\_\_\_\_  
(Multi-engine aircraft only) In the event an engine fails, can all on-board usable fuel be fed to the operating engine/s?

If yes, explain how: \_\_\_\_\_  
\_\_\_\_\_

How many fuel sumps are there and where are they located?

Number \_\_\_\_\_ Location/s \_\_\_\_\_

How do you drain the fuel sumps? \_\_\_\_\_

Describe the oil system. \_\_\_\_\_

What is the type and weight of oil used? \_\_\_\_\_

What are the minimum and maximum oil requirements for each engine?  
Min. \_\_\_\_\_ Max. \_\_\_\_\_

Does the aircraft have an inverted fuel/oil system? Yes \_\_\_\_\_ No \_\_\_\_\_

If yes, how long can the aircraft fly inverted? \_\_\_\_\_

### LANDING GEAR SYSTEM

Is the landing gear fixed, manual, hydraulic, or electric? \_\_\_\_\_  
\_\_\_\_\_

If retractable, what is the alternative procedure for lowering the gear? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### AIRCRAFT WEIGHTS

What is the aircraft's gross weight? \_\_\_\_\_

What is the aircraft's empty weight? \_\_\_\_\_

What is the aircraft's Zero Fuel weight? \_\_\_\_\_

What is the aircraft's useful load? \_\_\_\_\_

What is the aircraft's gross takeoff weight? \_\_\_\_\_

What is the aircraft's gross landing weight? \_\_\_\_\_

What is the maximum allowable weight the aircraft can carry in its baggage compartment/s?

Rear \_\_\_\_\_ lbs. Left engine nacelle \_\_\_\_\_ lbs.

Front \_\_\_\_\_ lbs. Right engine nacelle \_\_\_\_\_ lbs.

Belly \_\_\_\_\_ lbs. Other locations \_\_\_\_\_ lbs.

**PERFORMANCE PLANNING**

How much useful load can the aircraft carry with full fuel? \_\_\_\_\_

How many pounds of baggage can this aircraft carry with full fuel and each seat occupied by a 190 pound passenger? \_\_\_\_\_

Solve the following weight and balance problem for a maximum range flight with yourself and a 200 pound passenger in each remaining seat.

What is the gross weight? \_\_\_\_\_

What is the center of gravity? \_\_\_\_\_

Is the flight within the weight and balance envelope? \_\_\_\_\_

How much fuel can you carry with no baggage? \_\_\_\_\_

Where must the fuel be loaded? \_\_\_\_\_

How long can you fly? \_\_\_\_\_

With full fuel and allowing for a 45 minute fuel reserve, what is the maximum fuel endurance in hours at 65% power at 5,000 ft. PA, standard conditions, lean mixture, zero wind, 2,500 RPM and gross weight?

What is the TAS at 5,000 ft. PA and 65% power? \_\_\_\_\_

What RPM or combination of RPM and Manifold Pressure yields 75% power at 8,000' PA with standard conditions? RPM \_\_\_\_\_ MP \_\_\_\_\_

What is the fuel flow per hour at 75% power at 10,000 ft. PA with standard conditions?

What takeoff distance is required to clear a 50 ft. obstacle at gross weight at a pressure altitude of 8,000 ft. and 75 degrees Fahrenheit? (Assume no wind and a hard surface runway.)

What would the answer be if the takeoff was made at a sea-level pressure altitude grass surface runway?

Would high humidity increase or decrease this distance? \_\_\_\_\_

Why? \_\_\_\_\_

**2011 Membership Form**

**Winnipeg Area Chapter RAA**

Trial (\$25)

Student (\$25)

Full (\$50)

**Required Information**

<b>Name</b>		<b>OFFICE USE ONLY</b>	
<b>Mailing Address</b>		Renewal Date	
<b>Phone(s)</b>		Chq. Other	Cash
<b>E-mail</b>		Initials	
Are you an RAA national member? <sup>(1)</sup>		<input type="checkbox"/> Yes	<input type="checkbox"/> No
Do you give permission for your information to be made available to other Winnipeg RAA members?		<input type="checkbox"/> Yes	<input type="checkbox"/> No

**Optional Information**

<b>Do you own an aircraft?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No Make/model: Registration:	<b>Are you a member of other aviation groups?</b>	EAA: <input type="checkbox"/> COPA: <input type="checkbox"/> Others:
<b>Are you building or restoring an aircraft?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No Make and model of project(s):	<b>What Pilots licences and ratings do you hold?</b>	

Please make cheques payable to: RAA - Winnipeg Chapter  
Mailing Address: RAA c/o Steven Sadler PO Box 703 LaSalle Mb. R0G 1B0

**Notes:**

- 1) RAA Winnipeg contributes \$15 per member towards the insurance program maintained by RAA national. This program provides liability insurance to cover local chapter events. The \$15 does not provide membership in RAAC.