



*Winnipeg Area Chapter of RAA Canada*

*February 2011*

***Executive***

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***Past President: Ben Toenders – 895-8779***

***Memberships: Steven Sadler – 736-3138***

***Secretary: still looking for a volunteer***

***Treasurer: Don Hutchison – 895-1005***

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***Bert Elam – 955-2448***

***Ken Podaima – 257-1275***

***Jill Oakes - 261-1007***

***Gilbert Bourrier – 254-1912***

***Bob Stewart – 853-7776***

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## ***CALENDAR OF EVENTS***

- February 24** Tour of Aero Recip/Air Parts (**one week later than normal**)
- March 17** Still up in the air
- April 21** Planning a project tour
- May 19** Tire Kick – Summer Plans – Lyncrest Airport

## Tour of Aero Recip/Air Parts

A tour of Aero Recip and Air Parts has been planned for Thursday February 24. The tour will begin at 7:30pm. Aero Recip is located 540 Marjorie St. Marjorie runs between Ness and Ellice and approximately ½ km west of Century. If you require further information, please contact Steven Sadler at 736-3138. **Please note that is one week later than our regularly scheduled meeting.**

Unfortunately due to travelling I haven't been able to spend much time on this month's newsletter. Thanks to Steven Smart and Jill Oakes for the following aviation related websites that I hope you find useful and interesting.

FAA safety briefing magazine.

[http://www.faa.gov/news/safety\\_briefing/](http://www.faa.gov/news/safety_briefing/)

AOPA interactive safety courses.

[http://www.aopa.org/asf/online\\_courses/](http://www.aopa.org/asf/online_courses/)

Navigation Simulator and aviation calculators.

<http://www.luizmonteiro.com/>

Aviation World pilot shop.

<http://www.aviationworld.net/index.php>

Aviation Podcasts are most conveniently available through Apples iTunes store. You need to install iTunes 10 to access. For those with an iPhone, iPod or iPad, you can easily have your favourite (aviation?) podcast synched to your device.

<http://www.apple.com/itunes/>

Transport Canada CARs, fun for every insomniac.

<http://www.apple.com/itunes/>

Transport Canada Aeronautical Information Manual (TC-AIM)

<http://www.tc.gc.ca/eng/civilaviation/publications/tp14371-menu-3092.htm>

EAA's video blog about learning to fly. Follow along as Brady Lane earns his Sport Pilot license.

<http://www.eaa.org/apps/blog/learntofly/Default.aspx>

Use StumbleUpon's website to take you to aviation websites which others have recommended. Hit the Orange "Stumble" button to be taken to the next site.

<http://www.stumbleupon.com/discover/aerospace/>

Search Canada's Aviation Museums image bank of scanned images. Lots photos of Hawker Hurricane's being built in Canada during WWII.

[http://www.aviation.technomuses.ca/collections/image\\_bank/](http://www.aviation.technomuses.ca/collections/image_bank/)

My favourite Hawker Hurricane restoration site. Follow along in wonderful detail as AM274 is restored and on target for its 2013 completion.

<http://www.jneaircraftrestoration.com/AM274/AM274.html>

YouTube video series on the Fluid Dynamic's of Drag

<http://www.youtube.com/watch?v=Lp3OHZnt7Iw>

How to build an airplane

Interesting!!! The process used for the paint job is also amazing, but don't try this at home.

[http://www.youtube.com/watch\\_popup?v=zKnsyYbfC60&feature=popular](http://www.youtube.com/watch_popup?v=zKnsyYbfC60&feature=popular)

Best Weather Map Yet

<http://www.wrh.noaa.gov/zoa/mwmap3.php?map=usa>

By playing around with it one may be able to expand on it limitations,

TC's main video page

<http://www.tc.gc.ca/eng/civilaviation/standards/systemsafety-videos-menu-742.htm>

Click on the small check mark to watch the specific topic.

## TP 14185 - Through the Overcast

The Through the Overcast videoclips (TP 14185) are available to purchase on CD-ROM and VHS (NTSC) from Transport Canada's Online Publications Storefront or internally via iProcurement.

© Transport Canada. All rights reserved. Users may view the videos on this Web site for personal use only. No part of this information may be reproduced, modified, or redistributed in any form or by any means, for any purpose other than those noted without the prior written permission of the Minister of Public Works and Government Services, Ottawa, Ontario, K1A 0S5 Canada or [copyright.droitdauteur@pwgsc.gc.ca](mailto:copyright.droitdauteur@pwgsc.gc.ca).

	
1. Passengers	✓
2. Exploring the Envelope	✓
3. Search and Rescue	✓
4. Professional Pilot	✓
5. See and Avoid	✓
6. Weather	✓
7. Float Flying	✓
8. Decision Making	✓
9. Human Factors	✓
10. Risk Management	✓
11. Summary	✓

TC Aviation safety posters

<http://www.tc.gc.ca/eng/civilaviation/standards/systemsafety-posters-menu-723.htm>

Hello, folks:

The February issue of the Vernon Flying Club newsletter can be found at the updated VFC website at [www.vernonflyingclub.com](http://www.vernonflyingclub.com); when on the Homepage, select "Newsletters" from the menu on the left side of any page. Then select the second "read more", then the newsletter. While you're there, peruse the entire website and let me know what you think via the imbedded link.

*John Swallow*

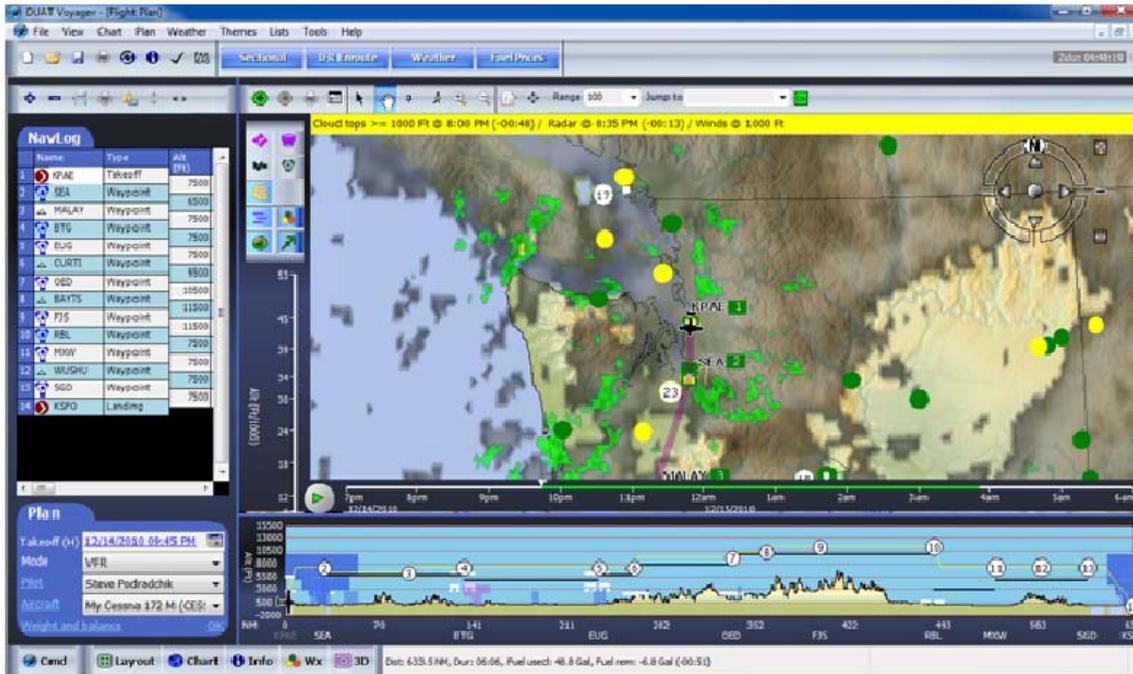
Vernon Flying Club

## Flight Software

DTC DUAT and Seattle Avionics, Inc., announced the new DUAT Voyager, a 100% free flight planner that makes it quick and easy to plan flights, obtain weather briefings, and file flight plans. While it downloads weather and TFR information from the Internet, it is not an Internet-based flight planner, and is not subject to the recently publicized FlightPrep patent. It's based on the powerful Voyager Flight Software System that consistently wins Best Flight Planner from Aviation Consumer. You can read the story on AOPA's Web site.

DUAT Voyager is a streamlined version of the full Voyager Flight Software System that retains many of the award-winning features of the full Voyager product but is faster and even easier to

use. These features include both Victor and GPS Direct auto routing, a profile view that shows your flight over terrain, automatic background weather downloads, various weather overlays including NexRad radar and altitude-sensitive cloud tops (satellite images), full DUAT briefings, automatic TFR download and overlay, keyboard printouts, electronic flight plan filing, and much more. Users can use Voyager's unique WebSynch feature to instantly transfer flight plans between multiple computers. Flight plans can be exported to Google Earth for realistic, 3D flight previews and exported to the Bendix/King AV8OR or AV8OR ACE.



<ftp://seattleavionics.fileburst.com/pub/DUATVoyagerSetup.exe>  
<ftp://downloads.seattleavionics.com/DUATVoyagerSetup.exe>  
<http://seattleavionics.fileburst.com/DUATVoyagerSetup.exe>  
<http://www.seattleavionics.com/Downloads/DUATVoyagerSetup.exe>

## Aircraft Design Loads

Aircraft are designed to be able to take a number of loads from standstill to very high speeds at low level and high altitudes with ambient temperatures of +30°C to -56°C. These loads take the form of manoeuvring, gusts from turbulence, fuel and cargo weight and last but not least pilot induced control surface loads.

### Bending and stretching

All these various loads have their effects on the aircraft. They will try to bend, stretch (tensile), twist (torsional) or shear parts or even the whole aircraft. The construction must handle all these loads safely during the life expectancy of the structure.

Below a list of the most common loads encountered in and on a structure of an aircraft. Note that propeller loads are discussed in the homebuilt section, read here about [propeller aerodynamics](#).

### Control surface loads

Deflection of control surfaces induces a load on the wings and tail planes of the aircraft. More so when the pilot must compensate for turbulence or is manoeuvring the aircraft around.

## Manoeuvring loads

When in straight and level flight the lift generated of an aircraft is equal to its weight. But when the aircraft is turning or otherwise manoeuvring the lift increases, sometimes more than twice as high. Especially in 60° banked level turns were generated lift must be twice the weight for the aircraft not to loose altitude.

## Gust loads

Air turbulence causes changes in direction and speed (velocity) and these will create gust loads on the aircraft, within a short duration of time. These rapid loads can exceed the maximum load factor an aircraft is certified for and cause buckled skin or worse.

## Landing loads

Sometimes a landing is not as smooth as we would want too, intentionally or not. But the aircraft needs to take care of that too without falling apart.

## Fuel and Cargo

Apart from the above mentioned loads there are also fuel and cargo loads the aircraft structure must handle. Where cargo is held in the fuselage the fuel sits normally in the wings and with increasing fuel load the wings will bend and place a limit on the maximum an aircraft can carry, think about maximum zero fuel weight.

Copied from: <http://www.experimentalaircraft.info/articles/aircraft-construction.php>

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## 10 WAYS TO PREVENT RUNWAY INCURSIONS

**1. See the "Big Picture"** – Monitor both ground and tower communications when possible.

**2. Transmit Clearly** – Make your instructions and read backs complete and easy to understand.

**3. Listen Carefully** – Listen to your clearance. Listen to what you read back. Do not let communications become automatic.

**4. Copy Clearances** – Clearances can change. Keep a note pad and copy your clearance. If needed refer to your notes.

**5. Situational Awareness** – Know your location. If unfamiliar with an airport, keep a current airport diagram available for easy reference.

**6. Admit When Lost** – If you get lost

on an airport ask ATC for help. Better to damage your pride than your airplane.

**7. Sterile Cockpit** – Maintain a sterile cockpit until reaching cruising altitude. Explain to your passengers that talking should be kept to a minimum.

**8. Understand Signs, Lights, and Markings** – Keep current with airport signs, lights and markings. Know what they mean and what action to take.

**9. Never Assume** – Do not take clearances for granted. Look both ways before entering or crossing taxiways and runways.

**10. Follow Procedures** – Establish safe procedures for airport operations. Then follow them.

**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.      Cash Other
<b>E-mail</b>		Initials
<b>Are you an RAA national member? <sup>(1)</sup></b>		<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Do you give permission for your information to be made available to other Winnipeg RAA members?</b>		<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.