



Skywriter



Monthly Newsletter of the Calgary Ultralight Flying Club

November 1991

View From Above

by Paul Hemingson



At the October 2, 1991 CUFC meeting we had a surprise guest, Gary Kneir. Gary entertained us with some of his soaring and mountain flying experiences in an ultralight. Many of you have seen Gary flying his Falcon BYY, especially west of Calgary where he likes to play in the mountain lift. Or maybe you read about some of his exploits in KITPLANES about a year ago. As an experienced glider pilot, Gary knows the whims and ways of the westwind and kindly volunteered to lead one or more of us into a "mountain experience". It would be nice to go with Gary as Flightleader, and maybe we can get a few guys together to take him up on his offer.

A bit of Club business. Our hat sales are going well. The bright red cap with the CUFC logo has the appropriate Christmas colours. Get yours now!

Thanks to Bev Befus and his volunteers for stepping forward to organize our efforts in the November 2-3 Hobby Show.

The Booby Prize was awarded to Tony for his Parasail experience. You've got to talk to him yourself to believe his story. The door prize was won appropriately by Buzz Mawdsley. Buzz is off to semi-retire in beautiful BC, and promised to stay in touch with the club. Good Luck Buzz.

Videos of the Red Deer and Oshkosh Airshows were shown. My first impression was the variety and number of ultralight aircraft at Oshkosh. Something for everyone. The factory rep pilots wring maximum performance from their machines to demonstrate their capabilities. This

does not mean we should try this stuff at home.

I attended the CARES annual BBQ at the Smith Engineering strip on October 5, 1991. I flew my biplane in and attracted a bit of attention. I met and spoke with Ken Smith. He is constructing an Avid Flyer (on floats) for recreational flying from his lakeside cottage in BC. I also spoke with several pilots who flew in from Banff, and picked their brains for a few tips on mountain flying. These humble pilots know the vagaries of the wind and rocks and I was honoured to be in their circle of conversation. We also discussed the trials and tribulations they are having with the National Parks service who are committed to closing the Banff strip to all but emergency traffic. It's the same old story. Aviators only make up less than one percent of the population and the 99% of the non-flying public are not necessarily on our side. Democracy in its finest form prevails with "Rep by Pop". Now that the constitutional debate is on, we should hold ourselves out for special "distinct" status, since other groups are doing the same, arguing that ethnic, cultural or sexual differences make them distinct, why not add avocation to the list. I love this country and want to keep it together and equal. Might even get a Mapleleaf flag and fly it to remind people that we got it good, except for politicians and lawyers.

Club elections for President, Treasurer and one Director will be held in December. Nominate, run or get included. Christmas Party in December, watch for details.

Coming Events

November 16 - Warbird Restoration Society's Movie Night BATTLE OF BRITAIN, 633 Squadron. Public is invited. 1900 hrs. sharp, U of C, Craigie Hall, Rm C105. \$12.00 per person. Call Barry Woods 293-7579.

November 26 - CARES general meeting, 1900 hrs., SAIT, Rm 210/212, Colonel James Walker Bldg.

December 4 - December meeting of the CUFC, 1930 hrs., RCAF Association. Election night!

Notes from a 1930 Stewardess manual.

- *Keep the clock wound up*
- *Carry a railroad timetable in case the plane is grounded*
- *Warn the passengers against throwing cigars and cigarettes out the windows*
- *Keep an eye on passengers when they go to the lavatory to be sure they do not mistakenly go out the emergency exit.*

ELECTIONS

December 4 is election night. Three positions are open so please consider volunteering or appointing someone. The club can't survive without volunteers.



ROTAX SERVICE INFORMATION

3 UL 91-E

April 1991

MAINTENANCE PLAN

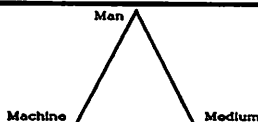
	checks and work	every														
		2 h	10 h	12.5 h	25 h	50 h	75 h	100 h	125 h	150 h	175 h	200 h	225 h	250 h	275 h	300 h
1	retorque cylinder head nuts (only air-cooled engines) 1)	x														
2	retorque exhaust manifold screws 1)	x														
3	check rewind starter rope			x												
4	check electric starter gear					x		x		x		x		x		
5	inspect spark plugs			x												
6	replace spark plugs				x	x	x	x	x	x	x	x	x	x	x	x
7	check and clean inside spark plug caps			x												
8	check ignition timing (only breaker ignition)		x 2)				x						x			
9	check contact breaker gap		x 2)				x						x			
10	check ignition damping box						x				x		x			
11	replace contact breakers and condenser										x					
12	check V-belt tension		x		x	x	x	x	x	x	x	x	x	x	x	x
13	grease ball joints				x	x	x	x	x	x	x	x	x	x	x	x
14	replace exhaust muffler springs						x				x		x			
15	oil control cables				x	x	x	x	x	x	x	x	x	x	x	x
16	check propeller balance and tracking 3)				x	x	x	x	x	x	x	x	x	x	x	x
17	inspect propeller mounting bolts 4)															
18	clean and oil air filter				x	x	x	x	x	x	x	x	x	x	x	x
19	check fuel filter				x	x	x		x	x	x		x	x	x	
20	replace fuel filter							x				x				
21	check carburetor(s) and re-adjust (idle speed, cable tension, ...)	x			x		x		x		x		x		x	
22	clean carburetor(s) and check for wear					x		x		x		x		x		
23	replace jet needle and needle jet									x						
24	clean and check fuel pump						x			x			x			
25	check gearbox oil level				x	x	x		x	x	x		x	x	x	
26	replace gearbox oil		x					x				x				
27	check and adjust gearbox shock absorber preload (type A + B gearboxes)							x				x				
28	check gearbox backplate screws (type A)							x				x				
29	replace rotary valve lubrication oil							x				x				
30	inspect cylinder head and piston crowns 5)					x		x		x		x		x		
31	inspect piston ring grooves 6)					x		x		x		x		x		
32	check piston diameter 8)					x 7)		x 7)		x		x 7)		x 7)		
33	piston ring: check gap 8)					x 7)		x 7)		x		x 7)		x 7)		
34	piston ring: check axial play (rectang. ring) 8)					x 7)		x 7)		x		x 7)		x 7)		
35	check cylinder diameter 8)					x 7)		x 7)		x		x 7)		x 7)		
36	cylinder: check for roundness 8)					x 7)		x 7)		x		x 7)		x 7)		
37	replace cylinder head-, cylinder base- and exhaust-gasket 9)					x		x		x		x		x		
38	inspect piston pin and bearing									x						
39	inspect crankshaft and replace outer seals									x						
40	general overhaul of engine 10)															x

- 1) and after every replacement of gasket(s)
- 2) and after every replacement of contact breakers
- 3) also after any damage
- 4) according to instructions of manufacturer
- 5) if carbon layer is more than 0.5 mm thick, decarbonize

- 6) if piston rings stick, clean and replace if necessary
- 7) if used in very dusty atmosphere
- 8) wear limit see Service Information 5 UL / 91
- 9) if cylinders get dismantled
- 10) contact authorized ROTAX distributors or service centers

Safety Corner

by Paul Hemingson



Maintenance Schedules

It's been said a used car is good, as far as it goes. The same thing goes for your aircraft powerplant. A Rotax motor is as good as the maintenance it gets.

Various improvements have been made in the past few years to make them more reliable. Along with the hardware improvements, a history of failure and analysis has identified those items requiring special attention. Millions (?) of hours of cumulative time in a variety of operating conditions has allowed for an estimate of average component life and critical items requiring checkout.

Rotax has recently released a suggested maintenance schedule (see page 3). Use it as a guide. Remember, the actual repair/replacement depends on the kinds of demands the owner places on his engine.

For example, a trainer type aircraft with numerous zero to full power cycles puts mode demand on a Rotax than just cruising around. Think of the hundreds or thousands of throttle movements of a trainer machine that's in the circuit for hours on end. In this case, the maintenance schedule might be adjusted to reflect this kind of use.

Similarly, the item labelled number 20 "replace the fuel filter" suggests a time of 100 hours. This may be fine for the trainer aircraft that runs every day. For most of us, the 100 hours would take several years of flying. I have a vision of gas going gummy in that period of time, and more time for contaminants to get into the fuel system. Accordingly, I change my filter more often than the schedule.

Conversely, we have all heard of the guy who gets 100 hours on the same set of spark plugs. It happens. Or the guy who has changed his muffler springs in 200 hours. The maintenance schedule shows check/replace at 75 hours, but we have seen these fail in as little as 40 hours.

The message is clear. Use this schedule as a guide. Check those items on your machine against this list, and repair or replace as required.

Many of us pay lip service to maintenance. Agreeing with it in principle but not following through in practice. Maybe we "just assume" that everything is OK or should be OK. Be careful, a man's assumptions can get him in trouble. Like one sage old pilot

once said, "it ain't the things a man knows that get him into trouble, but the things a man knows that just ain't so".

Corrective Measures for the Beaver RX550

Beaver RX550's that have been issued an exemption to Air Regulation 210(1)(a) to qualify as an Advanced Ultralight Aeroplane (TP10141) must incorporate the following "Mandatory Action" to maintain a valid Certificate of Registration (C of R).

The upper elevator control cable may show sign of premature fatigue due to cable routing and over tension by the assembler/owner.

The 1.25 inch diameter pulleys located at the leading edge of the horizontal stabilizer are to be replaced by 2.5 inch diameter pulleys. It is important to inspect these cables for signs of wear and fatigue, especially at the pulley locations. (continued on page 4)



EXECUTIVE

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Skywriter is the official publication of the Calgary Ultralight Flying Club and is published 12 times per year. Opinions expressed by our writers are not necessarily those of the club. Articles and letters to the editor are very welcome from any readers. Address correspondence to: Bob Kirkby, RR 7, Calgary, AB T2P 2G7

Meetings of the Calgary Ultralight Flying Club are held the first Wednesday of every month at 7:30pm at

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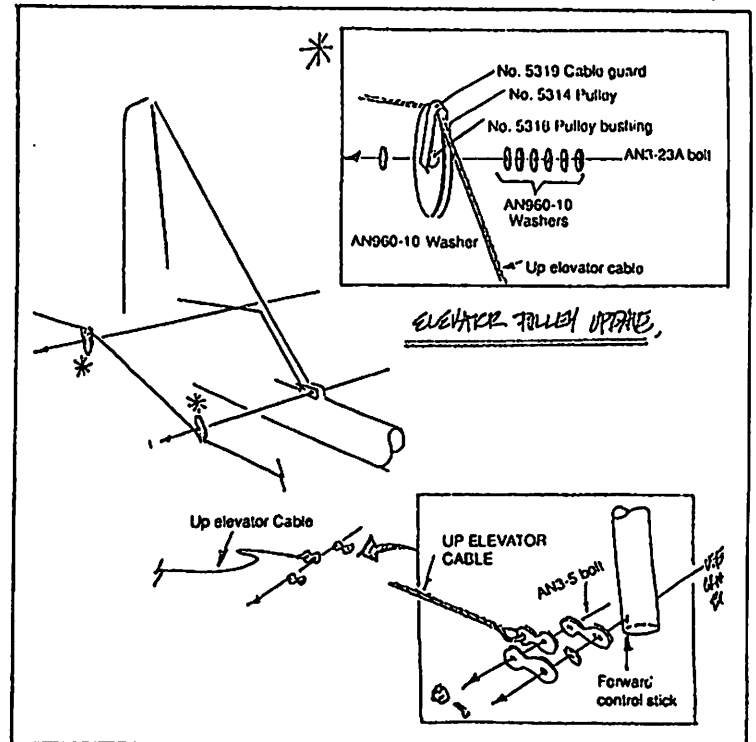
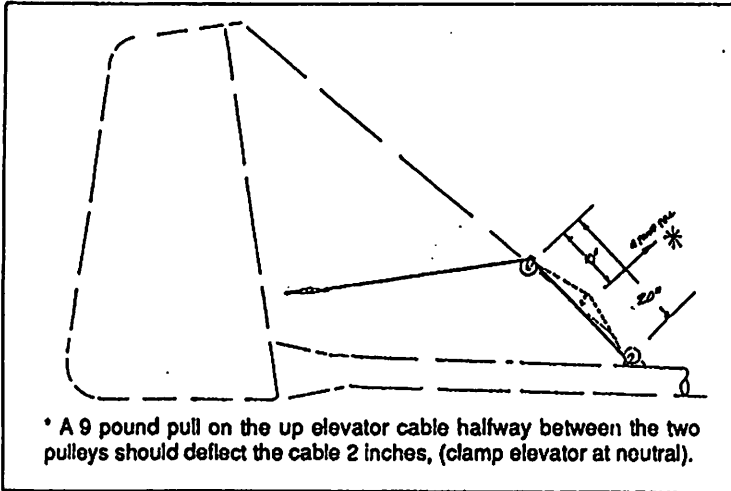
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(RX550 continued from page 2)

Inspection criteria for cables and pulleys can be found in Chapter 4 of FAA Advisory Circular (AC) 43.13-1A.

The diagrams indicate how the elevator cable length is adjusted and an acceptable cable tension is established and maintained. The owner may install a dual or auxiliary upper elevator control cable, providing the pulleys are no smaller than 2.5 inches in diameter and the proper cable tension is maintained. Elevator Cable Update Kits and Auxiliary Elevator Control Cable Kits are available from Beaver RX Enterprises Ltd.



For further information please contact Beaver RX Enterprises Ltd. at 3-9531 192nd Street, Surrey, BC, V3T 4W2. Telephone 604-888-2322, FAX 604-888-2842 or call toll-free at 1-800-663-0095.

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Ritz Standard A - completed and ready for covering, includes covering materials, Zenoah engine, \$2000.00. Jim Creasser 226-0180.

Lazair - Estate sale. Needs recovering but selling for parts. \$1000. OBO. 262-3959.

Classified ads are free to CUFC members. Call Bob Kirkby, 569-9541 to place your ad.

Book Review

by Stu Simpson



The time is January 1991. The Americans are still cleaning up the mess after the Gulf war and now Iran is trying to capitalize on Saddam's loss of face. The Iranian government has resurrected the notorious fanatic Iranian Revolutionary Guard (IRG) to begin wreaking havoc on the other Persian Gulf states. The goal is total domination of mideast oil supplies.

Not surprisingly, the only ones who are willing to do anything about the Iranians are the Americans, in particular the US Navy.

That's the backdrop for Mike Dunn's first novel entitled "Sidewinder".

The book is about fighter pilots: the goodguys - the pilots and Radar Intercept Officers (RIO's) of VF-141 of the aircraft carrier USS Enterprise, and the badguys - the pilots and RIO's of the IRG based in Iran and once again carrying out wanton acts of international terrorism.

The author knows of which he speaks, insofar as he deals with the hardware and procedures of flying the F-14 Tomcat, which is the mount of VF-141. Mike Dunn is himself a former Tomcat pilot. He now flies the F-16N as an air combat instructor at Miramar, California. In short, he is a real-life TOP GUN.

So it's not surprising that the lead character in "Sidewinder", Lt. Dirk Buzzell, is also an F-14 pilot. Buzzell loves nothing more than his Tomcats, the guys in his squadron, and flying. Dunn has made Buzzell a typical bachelor-fighter pilot. We see some interesting, although not surprising, side to Buzzell. He is, of course, afraid of committing to marrying his girlfriend of six years. He is, of course, compassionate and tries to help the enlisted men in his squadron. And he is, of course, fed up with the way the US government is dealing with the Iranian terrorist problem. Buzzell is, in fact, strikingly similar in both substance and function to Stephen Coonts' hero, Jake Grafton in "Flight of the Intruder".

The other good guys, Buzzell's squadron buddies, come complete with catchy nicknames like Notso, Coke, Wrongway and Spanky. These characters serve only to shore up Buzzell and support the story line. Dunn does go a long way, though, to explain the job of the backseat RIO in the F-14, who is not merely a failed pilot. He is instead, a highly trained specialist requiring just as much talent as his "stick", or pilot. But, if you've seen the movie "Top Gun", you've

already met these guys.

On the other side is Ali Abdul Rajani, an Iranian fighter pilot who also flies Tomcats, which the Shah bought from the US in the mid-seventies. Rajani is one of the baddest bad guys I've seen in a long while. He is a megalomaniac to best all megalomaniacs. He is Iran's leading ace with 7 kills to his credit. As far as he is concerned, he is the Iranian Air Force. The aspect of his character that makes him so bad is that he is so likable. Most bad guys you immediately hate. But with Rajani, you start out only disliking him, then gradually move to hating him.

As the book progresses it becomes obvious Buzzell and Rajani are bound to meet in mortal air-to-air combat. The Iranians are stepping up terrorism in the Gulf and Rajani is a big part of the antagonism, shooting down a disabled US F-14 in international airspace.

Buzzell's ship is ordered into the area to counter the growing threat. While the Enterprise is enroute to the Gulf, Dunn shows us what life aboard a super-carrier is like for a Tomcat squadron.

Despite being somewhat boring characters, Buzzell and his squadron mates are excellent vehicles for Dunn to give us a glimpse of what carrier flying is about. Dunn puts us in the cockpit for rocket-like catapult take-offs, gut wrenching dogfights and absolutely terrifying night landings. We also get to see the world's most dangerous ballet stage, a carrier flight deck.

The air combat scenes in "Sidewinder" are as realistic as any I have read. But this is the first time I got an impression of the lightning pace of a modern dogfight. I enjoyed reading "Sidewinder", but found the story jumped around too much inside itself. Dunn moved too quickly from sub-plot to sub-plot in an attempt to create suspense. All the sub-plots eventually come together as they should, but it's still an awkward patchwork.

The most interesting aspect of the book is how we get a look at life on an aircraft carrier and inside the carrier fighter squadron. Dunn does an excellent job of explaining the intricacies of carrier flying, but unfortunately makes a missed approach with the development of his characters.

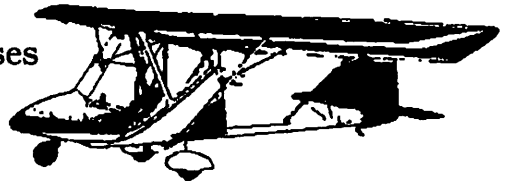
I expect we'll be seeing more from Mike Dunn, and Dirk Buzzell. And I'm willing to bet we'll see Buzzell flying the F-16 just as Dunn is now.

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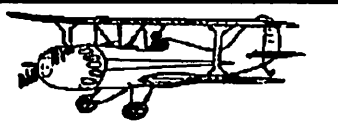
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One Pilot's Opinion

by Bob Kirkby



What Freedom, Flight?

Why do we fly? If I asked a dozen ultralight pilots this question, I suspect I would get a dozen different answers. On the surface maybe. Anything from, "to get away from the kids on weekends" to, "to dance with the clouds".

If I delved into the question further, trying to get to the deep down reason, I believe I would only come up with variations on the same theme. Ultralight pilots don't fly to get from A to B, or for a living, or because we really prefer building aeroplanes and it's a good idea to fly them when we're done.

I believe most of us fly because flying releases the Free Spirit within us. When we become airborne, when our aircraft enters its domain and loses the awkwardness it displays on the ground, we are overcome by an incredible sense of freedom. A freedom to choose our direction, go where we want (within reason), fly high, fly low, fly over a Canola field in bloom and marvel at the sweet smell rising up from that yellow sea of blossoms. It's a freedom we haven't experienced since we were five years old, rolling and tumbling down a grassy slope on a warm summers day. At peace with ourselves and in harmony with nature.

Why are non-flyers always trying to take this away from us? It is jealousy? No, it can't be, for they have never experienced the freedom of flight. They have no idea how fascinating it is to fly beside a soaring hawk, to see him dare us to follow as he tucks his wings and dives earthward. What is it then? Perhaps fear. Fear of the unknown, the incomprehensible. I do not smile readily, yet I have always been told by my friends and family that I exhibit a beaming smile after I return to earth, and they cannot understand why. Perhaps that's it. They think, "What has that fellow with the mischievous grin been up to? Obviously, no good!"

That must be it! How could anyone be so excited after flying in "one of those contraptions", unless he was on some sort of conspiratorial mission to wreak havoc and mayhem on innocent women and children? That's how they think, these self-appointed Lords of the Sky.

How can you tell I have recently had a run-in with yet another bureaucrat whose mission it is to ground pilots whoever they may be. As you may know I fly my Renegade from my own property east of town. It so happens that my property is along Highway 1. I have been told that the Alberta Department of Highways has the authority to allow or disallow any development within one half mile on either side of a highway. Naturally they are now hasselling me about flying from my property because I am within one half mile of the highway. It seems I am now responsible for the attentiveness of drivers as they pass my place. An ultralight landing or taking off is considered to be too much of a distraction for these poor sods.

They have even suggested that I should apply for a development permit for my "Private Strip" so that they can officially turn me down, thereby preventing me from flying. Or so they think. My response was something to the effect that it will be a pretty cold day before I will apply for a permit to cut my grass. Aside from sticking a sock on top of a pole, cutting the grass is the total extent of my "Private Strip" development.

Thank God the majority of people (with any authority) working for Transport Canada are pilots. Can you imagine

what a pilot's life would be like if the authorities controlling the use of Canadian Airspace had never experienced the Freedom of Flight?

See you up there, where the air is rare, and people even rarer.

Plastic Knives Next?

I recently went through airport security on my way to catch a flight on Canadian and noticed a security guard inspecting a passenger's pocket knife. Out of curiosity I asked another guard what the rules were regarding knives. He told me that they will not let a passenger carry on a knife longer than 5 inches. I puzzled for a moment over the relative lethality of a 5 inch knife versus a 10 inch knife, and then rambled on down to board my plane.

The puzzlement over knife rules came back to me an hour later when dinner was being served. Taking my cutlery out of the paper envelope it comes in, I noticed that the knife in the package was a normal stainless steel table knife. It was, however, 7 inches long, with a relatively sharp point and a very sharp serrated edge. It did a great job of cutting my steak.

As I munched on my steak I wondered if the security guards back at the gate realized there were already over 300 7-inch knives on board the DC-10 when they were busy confiscating that fellow's pocket knife. If Transport Canada realizes this we'll be back to eating with plastic cutlery again, just like the good old days.

Figure 4.1 - Standard Left-Hand Traffic Circuit

