



fly right

The Central Region Flight Safety Newsletter

"Rule one: No matter what else happens, fly the airplane."

-Skygod.com

Issue 8 – Winter 2007

LCol A.J.A. Appels-RC Air Ops O Central

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In this issue...

- FSO's Rant
- New 406 MHz ELT's
- CRM at 300' of Rope
- A Historical Perspective
- LCol Massier
- The Last Word

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Did You Check that ELT??

UNRSAR costs are UNREAL...

Which one is real?

An UNSAR is an unnecessary search and rescue alert. To prevent an UNSAR, immediately report any accidental ELT activation to the NAV CANADA National Operations Centre (NOC) by calling (toll-free) 1 866 651-9053.

NAV CANADA

Canada

Did You Know...?

According to information in the Transport Canada CADORS (Civil Aviation Daily Occurrence Reporting System) database. The ACGP had 4 ELT occurrences in 2007. Details are below:

**1-888-WARN-DFS
 (1-888-927-6337)**

**To report an Aircraft
 Accident or a Safety
 Concern, which
 requires IMMEDIATE
 attention.**

**A qualified DFS
 investigator will answer
 your call.**

- 27 Mar 07-The emergency locator transmitter (ELT) was activated by mistake during the maintenance of an aircraft belonging to the Air Cadets, at St-Jean (CYJN). The signal was heard from 1933Z until 1949Z.
- 14 Apr 07-A sudden, weakening emergency locator transmitter (ELT) signal was heard by two aircraft flying at high levels, west of the Montréal (YUL) VHF omnidirectional range (VOR). The pilot of an Air Cadets Cessna 305 reported that its ELT had gone off upon landing at Lachute (CSE4). The Trenton rescue coordination centre (TR RCC) was notified.
- 14 Apr 07 -J.R.C.C. Trenton staff reported that SARSAT had formed a case near C.F.B. Borden Airport (CYBN). The case was missed during a pass a short time later, however, the ELT signal returned later in the evening and a 424 Squadron Hercules aircraft (RESCUE332) homed it to C.F.B. Borden Airport. Technicians at the airport homed it to an Air Cadet League of Canada tow plane. No distress; case closed. Time: RESCUE332 - 1.3 hours.
- 31 Aug 07- The Air Cadet League of Canada Quebec Provincial Committee Cessna C-305C (O-1 Birddog) aircraft was concluding a VFR flight from Pendleton Airport (CNF3) to Smiths Falls-Montague (Russ Beach) Airport (CYSH). The pilot advised Québec F.I.C. staff that the aircraft's ELT activated on landing. It was shut off shortly thereafter. Ops. impact -- unknown.

FSO's Rant

By Capt Chris Toth –RC Air Ops FSO

“Do you feel lucky?”

I remember from my Basic Flight Safety Officers course in the heady days of the 90's a saying that has stuck with me. They told us (and I have since seen it in a lot of places)

“A pilot starts off with two very important things, a bag of luck and a bag of experience. He takes from one and fills the other.”

I was thinking about this in my porcelain reading room the other day and came to a revelation, flushed, and continued my thoughts. How many times have we been, seen or done something that afterwards we say, Holy S@%T that was close, or something similar.

I remember in my aviation college days deciding that strolling through to the local (read only, back then, prior to the scourge of Power Shopping Centres) shopping mall in the community would be something to kill the boredom of a Thunder Bay winter. Little did I know it could have potentially killed me.

For those of you who haven't had the pleasure, the residence at Confederation College sits in a beautiful

spot with rivers running through it. To get to the shopping mall, you could slog through the deep snow of the pedestrian path along the river or take the bus.

Being a student of problem solving, I decided to take a different approach. I resolved to work smarter I thought, not harder.

I saw that on the “frozen” surface of the river, the snow was less deep and flat. Hey, I thought, I'll just walk along there. Besides, since I was all dressed in *Northern Ontario Chic* (Toque, Scarf, Gloves, Parka, Mukluks etc) It had to be cold enough for the river to be safe.

Confident in my decision I began my stroll down the river. All was going great until I came to a point where another river merged to join the one I was walking on.

As an aside, those who are used to frozen rivers know that where they merge, Ice can be thinner. This kids is called experience.

I on the other hand possessed none of this knowledge and proceeded along admiring the pristine winter wonderland scene around me. (Read Fat, Dumb and Happy)

CRRRAAKK!

What the F&*K was that I said to myself. Next followed fear, anger, denial etc. The

ice was cracking, WITH ME ON IT.

Great, did I mention no one knew where I was going? I would possibly be reported missing and not be noticed until I was floating in Lake Superior.

I stepped gingerly to the shore and took stock of the stupid thing that almost got me killed. Deposit made (in my bag of experience, not my shorts!).

Ok Chris you say, you just told us a non-flying almost killed story. What does this have to do with me?

Well in short, everything. Think of all those times, flights where something strange, scary or even dangerous occurred. You learned from that. Yes YOU did.

As we move from a more experienced cadre to a less experienced cadre of staff, we need to pass on as much of our hard won experience to as many of our “newbies” as we can. The Luck account only holds so much. Let's add to the Experience account.

This is done through hangar flying, briefings and de-briefings and Flight Safety Reports.

Other ways to do it is to tell the story in a publication like Flight Comment or *fly right*. Basically, get the message out.

Just like I did here, lucky for you.

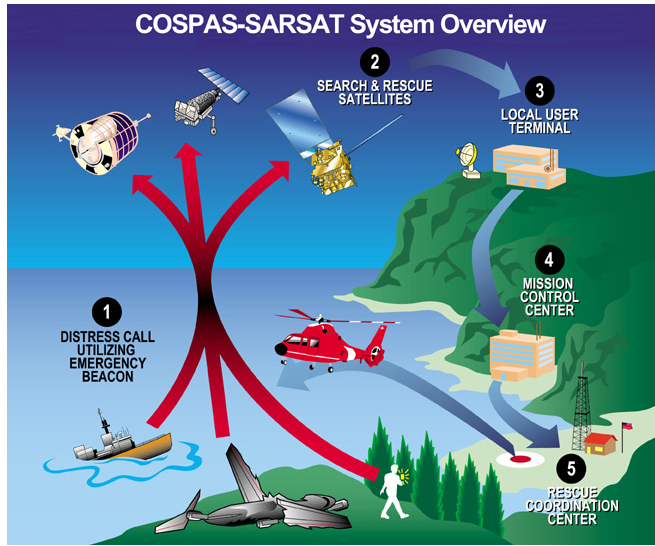
'nuff said.

NEW 406 MHz ELT

By Capt Chris Toth RC Air Ops Central FSO

Most of us have it as an article of faith that if we have a “bad” day, (pilot speak for taking trees down with an aircraft) our saving grace is a little box in the back. No folks, not the box of Tylenol, but our trusty Emergency Locator Transmitter or ELT.

This little gadget has been saving lives and aiding in searches for lost persons since 1982 when the original 4 countries of Canada, France, (the former) USSR and United States got together to form an organization known as COSPAS-SARSAT (*COmicheskaya Sistyema Poiska Avarinikh Sudov – Search And*



How COSPAS-SARSAT works. (NOAA)

military aviation as an emergency or GUARD channel.

So you say, sounds slick eh. Ok so how does it work?



Rescue Satellite Aided Tracking). This organization now comprises 40 countries and organizations with a near worldwide coverage area. (Don't fly over certain parts of Antarctica. Mind you if you can get the RC Air Ops O to sign off on that X-Country, count me in!)

COSPAS-SARSAT took on the task of monitoring ELT's on the frequencies 121.5 MHz (VHF) and 243.0 MHz (UHF). These frequencies were chosen since they wear already used in civil and



Pointer ELT Similar to that on some ACGP Scouts- (Pointer Electronics)

First, your ELT either goes off or you turn it on and it emits a signal on 121.5 and 243.0 MHz (this gets slicker with the 406 MHz but read on).

Second, a passing aircraft or satellite hears the signal and relays the approximate position to either a Mission Control Centre

(MCC) or by satellite to a Local User Terminal which relays the signal to the MCC. In our Canadian case this would be the CMCC (Canadian Mission Control Centre) which is co-located with the RCC (Rescue Coordination Centre) at 8 Wing Trenton.

Thirdly, the RCC sends out the Search and Rescue (SAR) resources to find you and

bring you home.

Well that sounds simple you say? It was, but much like a certain Majors vehicle, it's getting on in years and is becoming surpassed by newer technology.

COSPAS-SARSAT, in their 25th council session announced that as of 1 February 2009, satellite monitoring of 121.5/243.0 MHz will cease.

WHAT? Cease? What does that mean? Are we pooched here, who will save us now?

Relax folks; what we will see is a technology switch to the new 406 MHz beacons. You old timers may remember other technology switches like Beta to VHS or DVD to Blue Ray for the new kids.

So why the change then? Well as you saw in the previous paragraph, technology changes and marches on. New capabilities will enhance the system.

| | OLD 121.5/243.0 MHz (Analog) | NEW 406 MHz (Digital) |
|-----------------------------|--|--|
| SAR Delay | → -Can take up to 2 Hours to initiate search | → -Can initiate within 10 minutes of activation |
| False Alerts | → -ICAO Stats show 98.5% of ELT signals is false. These can be due to not only inadvertent activation but also spurious signals from cable TV sources. → -Since the signal is anonymous, SAR resources are tasked to check it out resulting in UNSAR's (Un Necessary Search and Rescue alert) | → -UNSAR's reduced as 7 out of 10 false alerts can be solved by contacting the owner of the aircraft right away → NOTE: Owner contact info and other info is <u>only</u> available <u>if</u> the info is located in the national beacon registry of the National SAR Secretariat |
| Information Provided | → -None, anonymous tone only | → -Each 406 MHz beacon transmits a code which in the national registry will provide the MCC with the owners name, aircraft type, base and contact info. → -A signal is also broadcast on 121.5/243.0 MHz for homing. |
| Transmission Power | → -0.1 Watts cannot penetrate well through trees and debris. | → -5 Watt pulse is much stronger and transmits well |
| Satellite | → -Needs a minimum of 2 satellite passes and can triangulate down to a 8 Km radius | → -Can be resolved in one satellite pass and can be as accurate as 5 Km to even 100 m with GPS encoding. |

Capt Paul Spaleta of the Joint Rescue Coordination Centre (JRCC) here at 8 Wing (who generously proofread this article for me) also indicated the following:

“Bottom line is I believe it’s a very good idea to switch to the new 406 beacons before SARSAT stops monitoring 121.5 and 243. Once they stop monitoring, unless another aircraft hears your ELT transmitting on 121.5 or 243(MHz), no one will know you’re out there until you’re reported overdue. Even then, the possible search area for your ELT that is heard briefly by a high flyer at 35,000 ft is over 98,000 square miles! It’s a big beautiful Country!”

As you can see, this should give an even warmer fuzzy should you find yourself *Down but not Out*.

Current plans for ACGP aircraft will be to select a suitable 406 MHz capable system for equipping all tow aircraft. This is currently planned for compliance with the 1 February 09 deadline.

At a possible cost of around \$1,700 CAD each, they’re not cheap. But hey, it beats walking.

References:

- www.cospas-sarsat.org
- www.icao.int/icao/imogwg/meetings/jwg14/docs/JWG_SAR14wp13.pdf
- www.en.wikipedia.org/wiki/Emergency_Position_Indicating_Radio_Beacon
- Special thanks to Capt Paul Spaleta and Capt Al Baldry of the JRCC at 8 Wg Trenton.



Artex 206 MHz ELT (Artex)

CRM AT 300 FEET OF ROPE

(Based on FS 126214)
By Capt Chris Toth

From the Ground Up tells us that a magneto (mag) in a dual ignition type system like that in our Scouts provides us with two very important things:

- Safety - If one system fails, the engine will still operate
- Performance - Improved combustion of the mixture increases the power output and gives better engine performance



Figure 1 -Slick Magneto (Slick)

It also goes on to tell us that a magneto failure will cause about a 75 RPM power loss at cruise and continued operation on one mag will result in a 3% power loss.

OK. That's what the book says. Here's my story.

As all good aviation yarns go, there I was...

We were tasked to ferry a Scout and glider to North Bay on a VFR April day. As I recall there was a cloud base at around 3500' to 4000' for the first part of our journey but would clear for the

latter part near YQA. Visibility was forecast as good throughout.

Off we flew and believe me it was great to be out of the office. Things were humming along and we had just left the YTR MTCA and I was about to radio YYZ Centre for flight following when I glanced at my tach. Hmmm, I thought, is the power creeping back?

Seeing our altitude and thinking icing might have been a player, I proceeded to select carb heat HOT. The expected roughness happened.

I waited, and waited and waited. Knowing that the carb heat can richen the mixture I leaned it out a bit. After about 10 minutes, I reselected carb heat cold.

More power loss and I was losing altitude. Ok, I've tried A and B. I then attempted to jockey various throttle, mixture, and primer locking and carb heat settings in an attempt to try to sort things out.

If I didn't get things figured out soon, we'd be on the ground whether we wanted to or not as we were mimicking the aerodynamics of a log. Luckily, I had Elmhurst's resort strip below me and YPQ about 7 NM away.

Well I tried everything I knew and was coming up short. Then I remembered a key thing. The guy who taught me how to fly the Scout is about 300' behind me (and probably wondering why the Scout is doing a funky chicken in front of him).

On the radio I went and described everything I saw, felt and done. We discussed other things to try to no avail.

I mentioned my worry of altitude loss and wanting to get on the ground. I suggested YPQ but the Maj indicated if we could RTB, our maintenance would be able to look at the aircraft right away.

We discussed our route and made a plan. First, I notified YTR tower of our situation and plan to return to Mountain View. Second, we considered a route which would steer us over several suitable landing fields and airports enroute.

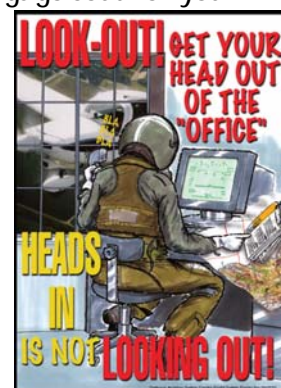
At any time, the BS flag could be raised by either of us and this was clearly understood.

Overhead Mountain View I released the glider and per our plan, I cause checked the mag and sure enough the RH mag failed.

NOTE: I caught holy hell from the RC Eng O on that one. Due to the detonation that can occur, this in turn can cause engine mount failure (THAT WOULD SUCK). We should never check mags airborne.

I landed WFI and found out the RH mag's points had stuck, causing the failure.

Lesson learned here is just because you are solo, don't discount the other resources that are available when things go South on you.



Who is my FSO?

AWGC – Capt J.M. Leclerc

COGC – Maj T. Lee

EOGC – Capt G. Kumpula

GTGC – Capt M. Semprie

MWOGC – Capt S. Murphy

NOGC – Capt H. Dielwart

SOGC – Capt D. Jean^{*NEW}

SWOGC – Capt Ron Bodnar

RC Air Ops – Capt Chris Toth



A HISTORICAL PERSPECTIVE

BY MAJ R.A. SENSABAUGH D/RC AIR OPS O

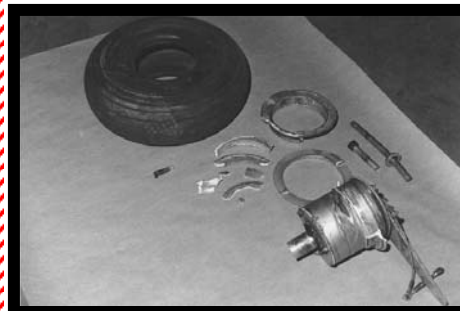
Have you ever wondered why we do things? Particularly why we do Field Inspections?

In 1983 C-FYLP had a “C” cat accident (FSIS #35) during a training flight at Mountain View. The flight was a simulated rope break at 400 ft with a down wind landing off of Rwy 34.

It was during the landing phase that things went wrong. The landing was long, probably due to trying to get back to the launch point. The glider impacted a then (now repaired) runway lip at the intersection of 24/06. The glider ended up with C Cat damage with a bent fuselage where the main wheel attaches. The hub assembly was pretty well gone and the axle through bolt was bent. Everyone walked away but long term injuries to the instructor’s back showed up later.

As part of the start up of each day of flying there is a field check to be completed. It is an important part of the pre-flying activity. This a compulsory exercise. It might not seem important at the time. When there is damage done or injuries to personnel and it could have been prevented it raises questions. Were the field inspections completed? Did people know of airfield conditions? If they did, why did the instructor allow the student to land long? This is only the beginning of many questions that follow.

WE CAN ALL LEARN FROM PAST EXPERIENCES



CFYLP Damaged parts



CFYLP Damaged Fuselage

UPCOMING BASIC FLIGHT SAFETY COURSES

| Future BFSC | Course Date |
|-------------|----------------------|
| 0801 | 22 - 30 Apr 2008 |
| 0802 | 10 - 18 Jun 2008 |
| 0803 | 22 - 30 Sep 2008 |
| 0804 | 25 Nov - 03 Dec 2008 |
| 0805 | 20 - 28 Jan 2009 |

<http://www.airforce.forces.gc.ca/dfs/training-entrainement/basic-base-eng.asp>

OBITUARY

LIEUTENANT-COLONEL ROBERT RAYMOND MASSIER

1923-2008

BY CAPT C.G. TOTH



It is with sadness we report the passing of a Legend in the Air Cadet Gliding Program, LCol (Ret'd) Robert Raymond Massier. LCol Massier was instrumental in providing the foundation for the ACGP program we see today.

LCol Massier was born in Bruno SK on 9 Jul 1923. He joined the Royal Canadian Airforce in 1941, training as a pilot and earning his wings at RCAF Centralia in 1945 and marrying the former Margaret Mary Rimmer the same year. He served initially as a flight instructor at RCAF Brandon and took his initial release in 1945.

Prior to his re-enlistment in 1948, LCol Massier served as a bush pilot and tugboat operator depending on season.

Upon re-enlistment, LCol Massier served in a variety of roles as a fighter pilot, senior flight instructor, staff officer and Base Commander. A highlight of his career occurred during the RCAF changeover to supersonic jet fighter aircraft where he served as one of the initial cadre of officers selected to fly the jets in 1961.

When he was promoted to LCol, Massier served as Base Commander at RCAF Yorkton. He served in this capacity until his release from the Regular Force in 1974.

Moving to Trenton ON, LCol Massier continued his service as the Commanding Officer of the Glider Pilot Training School (now CRGS) and TACSTC for nine years, finally retiring in 1983. During his tenure, much of the ground work in terms of regulation, standards and aircraft procurement was carried out. This work when combined with that of the other original staff continues to benefit all of us. The Lieutenant Colonel R.R. Massier Trophy continues his memory as awarded to the Best Pilot at the Central Region Gliding School.

LCol Massier passed away on 8 Jan 08 at Grace Hospital in Winnipeg MB. He was 75.

The Last Word

By LCol A.J.A. Appels - RC Air Ops O Central

SILENT BUT DEADLY

Having assumed the position of RC Air Ops O in October 2007, this is my first opportunity to talk to you about Flight Safety. While I may be new to this job, I am not new to the Air Cadet Gliding Program or the Flight Safety Program.

Throughout my career I have been a strong proponent of flight safety – whether it was as a maintenance supervisor, a flight test engineer, a flight instructor, or a technical investigator. Maintaining a vibrant and effective Flight Safety Program for the ACGP will be one of my primary objectives during my tenure as RC Air Ops O.

In anticipation of this edition, I considered several potential topics for my first safety dialogue with you – and while there are many worthy topics for discussion, I picked the subject “Silent but Deadly”. No, I’m not talking about “that”... I’m talking about communication – or perhaps more accurately the LACK of communication - about safety hazards.

The Flight Safety Program is a complex system with many elements and activities - training, education, awareness, response, reporting, and analysis - all focussed on accident prevention. The one common thread

observe potentially unsafe conditions are all critical activities that help us prevent accidents. My concern is that some very critical communication is not happening – too often we are being silent about what we see on and off the flight line.

All of us have experienced or observed circumstances on the flight line that just don’t seem right. How many of us have observed increasing winds on the airfield and wondered when the LCO was going to switch runways? How many of us have watched low cloud moving through the practice area? How many of us have seen somebody low in the circuit, waiting to see if they compensated for their situation?

Ever seen a tow rope starting to look a little frayed? And then there are the situations where somebody we work with may be doing something they shouldn’t be doing... pilots self-medicating, pilots flying “the morning after”, overly aggressive flying, flying approaches outside the established envelope, forward slips conducted unnecessarily low to the ground, a crew load



flight

throughout the entire program is communication. Dissemination of information, discussion of issues, sharing of concerns and ideas, and speaking up when we

that looks a little outside the weight and balance limits, penetration approaches...

Finally, what about our own actions? How many of us have made a mistake or done something “stupid” on the ground or in the air? And when we see any of these potentially unsafe conditions, how many of us speak up and say anything?

How many of us have been on the airfield faced with a situation that makes us uneasy, but the thought of speaking up makes us even more uneasy? I suspect that if you're truly honest with yourself, most of you will admit to having been there at sometime.

So why don't we say anything when we feel uneasy about something on the flight line? There are a multitude of reasons why we don't speak up.

We may feel embarrassed to ask a question we feel we should probably know the answer to. We may feel uncomfortable questioning or challenging the actions of a peer or a superior, fearing possible repercussions from our boss – or even worse, from our peers and friends.

Newcomers to the program may feel they lack the experience or credibility to question something they are unfamiliar with. We may feel that it's not our responsibility to take action – that's the supervisor's job, right? And all of us are embarrassed about admitting and discussing our own mistakes – you goof up, and the first thing you do is look around and see if anyone witnessed the gaff.

But each time we keep silent, each time we don't speak up is a missed opportunity to improve the safety of our operations – and potentially a missed opportunity to prevent an accident.

Some time ago when I was a fairly new flight instructor, I was brought on staff as a part-time instructor at a local school. The Chief Flight Instructor was a crusty old flier with thousands of hours of experience and I was looking forward to learning from him. However it quickly became evident that my CFI's experience could not compensate for his total lack of interpersonal skills, his disdain for his students, and his downright neglect of training records and paperwork.

When I raised my concerns with the CFI, they were merely laughed off and attributed to my “inexperience” as a “real-world instructor”. After a few months working for this man I had so many concerns about the way he conducted flight training that I elected to leave the school and reported my concerns to Transport Canada, who assured me that they would look into things during an upcoming base inspection.

Unfortunately the base inspection didn't come fast enough... three weeks later, a student flying at the school crashed on landing during his first solo flight. Thankfully the student was not seriously hurt, but the aircraft was a total write-off and the student's confidence totally shattered – he never flew again.

The subsequent investigation confirmed that the student had not been issued a Student Pilot Permit, his Pilot Training Record was months out of date, his training

was incomplete, and several critical pre-solo training requirements (including landing contingencies) had never been completed. In short, the checks and balances put in place to ensure readiness for first solo had been totally ignored by my old CFI, with predictable results.

So what did I learn from this? I raised my concerns with the CFI and with Transport Canada, right? What more should I have done? Hindsight being 20-20, I still ask myself whether I could have prevented that accident by being more insistent with the CFI, or being more insistent with the owner of the school, or by reporting my concerns sooner to Transport Canada. Maybe I didn't articulate the hazard well enough to Transport Canada...

The lesson for me was **never stay silent when safety is on the line.**

My goal as RC Air Ops O is to continue promoting a culture of open and honest reporting where **EACH ONE OF YOU** can speak up when you see something that makes you uneasy, and do so in a positive and constructive environment without recrimination or reproach – to encourage everyone to act as the professional aviators we all strive to be.

Questions not asked... suggestions not made... concerns not brought forward... mistakes not discussed... every one of them a missed opportunity to prevent a potential accident. So don't be the “silent but deadly” one in the crowd - the next time you feel the urge, “let it out – and SPEAK UP”!

HAVE YOU DONE ALL YOUR CHECKS?



Poster created from an idea by FSG Aaron Clarke, RAF 635 VGS Sarnesbury

Defence Aviation Safety Centre Poster No 200514