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Flight Comment



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Canada 

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How Long Should It Take?

In March, we were planning a Transport and Rescue Standardization and Evaluation Team (TRSET) check-ride for one of our CH-146 Griffon pilots. Our crew of four met in the squadron briefing room for our aircraft commander's (AC's) briefing. The plan was to conduct a navigation flight along the Saguenay River and then to make our way back. On our return leg, we intended to conduct a search and rescue (SAR) sequence consisting of two hoists and a stokes-litter hoist, followed by two confined-area hoists. The temperature was three degrees on the ground, and the meteorology report was calling for rain throughout the evening with strong (20-30 knot) winds.

We departed from Bagotville airport without incident and started our training. The crew was on night

vision goggles and it was ten minutes into the flight when the AC realized that the left wiper was not functioning. We decided to continue and shortly after, we encountered some snow showers. The temperature gauge on the aircraft indicated -1 degrees. The flying pilot, who was doing the TRSET check-ride, was getting fog in the windshield and requested the heat to be turned on. The flight engineer (FE) and the SAR technician also noticed that the rear windows were fogging as well. At this point, we started to encounter marginal weather conditions. The ceiling was lowering as well, but we were still able to see the ground and the mountain features, so we decided to continue with the mission. Attempts were made to rectify the wiper problem but to no avail. Again the pilot asked for more heat, as the windshield fogging was getting

worse. The FE proceeded to turn the heat up, and then reached for a flashlight, pulled his NVG's up, and had a look at the rear right window.

It hit us all at the same time — the fogging was actually icing! When I looked at my window, I saw that one third of the surface was covered with ice. An immediate right turn was initiated and we returned to the base. As we were getting back to the base, we discussed the events that led to our inability to identify the problem right away. It was obvious that being on NVG's was the main factor. Other causes were that the FE and the AC were too busy trouble-shooting the wiper and the weather. Despite the reasons, my thoughts are that I cannot believe that it took us fifteen minutes to identify the problem. ♦

Master Corporal Michaud

After being an instructor and a solo display pilot in the Alfa jet for five years, I decided I wanted to do something different. I thought that the idea of creating a duo team to perform aerobatics would be new and challenging for our Belgian Air Force and I knew that thousands of spectators would enjoy the acts. Finding another pilot to help develop this idea and to fly with me was not a big problem, and soon we started to develop a display program. The main idea was to fly as much as possible in close formation. We decided that splitting up would be limited because it was both difficult and time-consuming.

Finally, after being approved by many people in the chain of command, we could start our airborne training. Initially, we did this by flying the whole sequence together in one aircraft. Next, we followed each other and finally, we progressed to close formation. As we practiced, we would slowly descend in altitude.

Late one afternoon, just prior to the official presentation of our performance, the unexpected occurred.

We departed in close formation and followed this by a 270° turn with #2 abreast me; I was the lead aircraft. Our intent was to roll out heading towards the crowd and start a loop. After coming out of the loop, we did a cloverleaf move to the right and #2 went into close formation astern. We were once again lined up with the runway centreline and we did a barrel roll to the right. After this,

the aim was to start a gentle, high turn to the right in order to realign, but it never came that far. After coming out of the barrel roll, I tried to start my next figure but my control inputs had no effect.

The next thing I saw was something I will never forget — the other aircraft was literally glued to mine. I could see my teammate sitting in his cockpit, only five feet away and 45° to my right. The canopy was still nicely closed. My first thought was “what the heck is he doing here?”

TWO


This was directly replaced by the thought that this was a very unusual and hopeless situation. I tried to get rid of the other aircraft by shaking all the controls, reducing the power, and selecting the air brakes but it didn't change a thing. Very quickly, I decided to bail out and, after a glance around to see where we were and a radio call, I pulled the handle of my Martin-Baker Mk-10. The ejection was uneventful and later, much later, I saw a second chute deploying which meant that my teammate made it also.

Now...what happened? While coming out of the cloverleaf, my wingman got out of position backwards. He tried to reassume his position by increasing the power in order to catch up. At that moment, I had already started my gentle, high turn, which decreased my speed. Unfortunately, #2 came into a position where there was a "mutual aerodynamic interference." This happens when two wing profiles are situated above each other and the speed of the air stream in between the wings increases. This increase

caused the pressure to drop and then suction occurred. The closer the wings get to each other, the stronger the phenomena will be. No warning is given and the effect increases.

I am happy that we tried close formation flying and I am happier that we can still talk about it. Close formation flying is great and a lot of fun, but there is only one close. Closer than that, you cannot go! ♦

Captain Deschrijver



How Close is CLOSE?

You're On Vancouver Island, Dude!



As I stood in the parking lot, staring at the night sky and waiting for some form of transportation, I couldn't help but laugh to myself. "You're on Vancouver Island, dude!" was the response that brought me back to reality this night.

The day had begun as normal as any other day with the crew of the Rescue Labrador planning to fly around the northern part of the island for an area familiarization flight and some Search and Rescue (SAR) training. Shortly after starting

engines, we received a tasking from the Rescue Center to instead proceed south, towards a heli-logging S-61 Sikorsky helicopter that had just crashed in Howe Sound. We arrived on scene in just under an hour and proceeded to survey the site. There was no communication with anybody on the ground, so we lowered two SAR Technicians to the site to investigate while we flew circles nearby. The SAR-techs quickly radioed back that the pilots had already been evacuated to a parking lot at the bottom of the mountain. Once again, we positioned the helicopter over the crash site to hoist up the SAR-techs. Rescue Center called again and asked us to medevac the pilots from the parking lot to a helipad in Vancouver that was near the hospital.

Shortly after picking up the patients, en route to Vancouver, the Aircraft Commander (AC) very calmly stated "I think we have a problem here..." The number one engine was slowly rolling back to idle and was unresponsive to any control inputs. We quickly decided to head straight for Vancouver International Airport where emergency services and several runways were available. Everything seemed to work like clockwork. The SAR-techs were informed of the situation and

prepared the patients in the back. After the immediate responses, the AC flew the airplane while the engineer troubleshooted the engine problem. I was informing the Rescue Center of the problem, declaring an emergency with Vancouver Air Traffic Control and helping navigate through the congested airspace. Upon landing, the patients were transferred to ambulance and taken to hospital without further incident. However, that was not to be the end of our day.

After an entire day of repair, we donned our Night Vision Goggles (NVG's) and started for home. It was a quiet and pleasant flight back across the strait towards Comox until, once again, the AC said "I think we have a problem here..." This time, the rear transmission pressure gauge was indicating zero! We very quickly pointed ourselves towards shore and started down. Once again, each crewmember did their specific job while scanning the shoreline for any place to land. We managed to find a small parking lot near the shore, landed and shut-down without any incident. I got out of the helicopter to ask the occupants of a parked car exactly where we were. The driver very enthusiastically replied "Vancouver Island, dude!"

The emergency drills and crew coordination that we practice time and again really do work. Both emergencies could have ended up very differently had someone paused, hesitated, or been unsure of what their role in the situation was. By knowing the basic drill by heart, it leaves your brain time to figure out anything in the situation that isn't standard. Two critical emergencies in the same day: unusual. Being alive to learn that you're on Vancouver Island: priceless! ♦

Captain Irvine

LABRADOR HISTORY

On Tuesday, 21st October 2003, all the helicopter crews of 424 Squadron, ground and aircrew, assembled to fly all of their Labradors (six) at the same time. They couldn't have done that without instrumental support from Transport and Rescue Standardization and Evaluation Team (TRSET.) As Lieutenant Colonel Lalumiere, Commanding Officer of 424 Transport and Rescue Squadron, said, "After having "probed" all the available historical corporate knowledge at large, we are quite confident in stating that this has been the **first opportunity ever** where six Labrador helicopters found themselves in one location, in flyable status. It has, as you also know, been the last opportunity this could ever be accomplished, as three of these helicopters will now be put in permanent storage. All six Labradors started together and taxied to the runway, accompanied by one Cormorant who supported the Wing photographers.

The magazine cover photo and this one both show how they all took off to the hover and, one by one, departed to join into one common circuit around the airfield. Upon completion of the mission, all aircraft were serviceable."

"It was a perfect opportunity to acknowledge to ourselves that, although we are continuing to operate the Labrador fleet under all the constraint and pressures of its upcoming retirement, the common Squadron focus on the job to be performed is not decreasing. Quite the opposite, it is being maintained at its highest level, with exceptional pride. All the resources of the Squadron and the 8 Wing units pulled together to execute the task, and all should now be commended for its great success. These pictures are in recognition of all the members that have ever worked on the CH113 and 113/A Labrador helicopter or flown it over the years." ♦





Keep The AIR PICTURE

While on my Basic Flying Training Course in Moose Jaw, I was involved in an incident which opened my eyes to what can happen if you don't maintain a good air picture while flying. I was on a daytime solo trip in the Tutor, practicing circuits on the outer pattern, using runway 28L. As usual on a good weather day, traffic was busy and both patterns were congested. Coming in on a straight-in approach, I requested and was cleared for a touch-and-go. Pertinent traffic for me to keep an eye out for was a pair of Snowbirds doing a low approach between the runways, and a third Tutor above and behind me doing a

fly-through from initial because of the congestion below. I had the two Snowbird Tutors on low approach in sight, and knew from experience that they would be well ahead of me as I accelerated after my touch-and-go and climbed up to circuit altitude. I could not see the third Tutor, though, and the tower informed me that it was at my six-o'clock high. As I accelerated and climbed after my touch and go, I checked visually for the aircraft several times, but could not see it due to the bulkhead blocking my vision behind my seat. The aircraft on fly through at circuit altitude was informed of my position, but the pilot within could not see

my aircraft as I was almost directly below, and slightly ahead of him.

The premise of VFR flying is "see and be seen." This is hard to do when you can't see the conflicting traffic in the first place. The tower could see us both and judged that we would be able to see each other, and avoid each other. I was expecting to see the fly-through traffic pass above and ahead of me, as he was already at circuit speed. My course mate, in the fly-through Tutor, was expecting me to be behind him as I reached circuit altitude, because of the time required for me to accelerate and climb.



I approached circuit altitude and levelled off, curiously surprised that I hadn't seen the fly through traffic through any portion of my climb out. At the required distance upwind, I turned left crosswind, and continued my circuit. As far as I was concerned, there had been no conflict, and I continued my circuit-training trip without further incident.

All had not been so calm for my course mate, though. He finally picked me up visually as I levelled off at circuit altitude, his altitude, less than 100 feet directly in front of him. At the same moment he say me, he flew into my jet-wash, and instinctively went IDLE-BOARDS to

regain some separation and fly out of my jet-wash. He was somewhat shaken up, but managed to finish his circuit and land without further incident.

I never realized how close we had been to colliding until we debriefed after our flights! This one really made me stop and think. Avoidance of this situation would have been simple for someone with a better air picture. The fact was that neither of us could see each other until it was too late for avoidance. In light of the situation we were faced with, a couple of things could have been done. If I had levelled off 200 feet low and/or if my course-mate had

climbed 200 feet higher than the standard circuit altitude, the occurrence would never have happened with the close-quarter results that we experienced. The thought never even crossed my mind while the situation was unfolding.

In my operational flying these days, I keep this incident in the back of my mind, and try to maintain a good air picture of the surrounding traffic to avoid conflicts like this. It is an important lesson for me to remember, even in the relatively slow moving Labrador helicopter world that I am in today. ♦

Capt. Stelfox

I Learned About Flying FROM THAT!

The briefed mission was a student two-plane formation-training mission. Due to the typical bad winter flying weather we'd been experiencing at "the Jaw," we had decided to try and get the trip done on a Sunday afternoon. Arriving at the base, the weather didn't look so great but according to the met observer we were dealing with a scattered layer at 400 feet and another at 10,000 feet. The forecast, which came all the way from Trenton on the weekends, was calling for the same conditions. Looking out the window it seeded worse, but if the met office says...

My gut instinct said, "Why bother going?" but with the perceived pressure to get the "X" we decided to press. After starting up and calling for taxi, tower told us that the ceiling was now 300 feet broken. I called my wingman and re-formulated the plan. Since the only valid alternate was Saskatoon, which required that we hold about 1000 lbs of gas on the overshoot, I decided that we could continue with the trip as briefed until our scheduled "JOKER" fuel of 1400 lbs where there was a planned lead change. At this point, I figured

that if the weather hadn't improved, we could knock off the trip and RTB with more than sufficient alternate fuel. I didn't realize that my wingman held a restricted ticket.

We departed on the SID uneventfully and broke out of cloud at approximately 1000' AGL. The local flying area was wide open. After completing the first half of the briefed sortie we had reached our JOKER fuel. Just prior to passing the lead over to my wingman, I contacted tower for an update of the weather. They told me that it was "scattering out" over the base and appeared to be "clearing up." Satisfied that the weather was not going to be a problem anymore, we continued.

Just prior to BINGO fuel we started heading for home. The planned recovery was via the PAR approach to runway 11. Upon initial contact with the terminal controller, the weather, based on information that was 23 minutes old, was passed as 300' broken with 10 miles visibility. Imagine our surprise when we thought that all we would encounter on the way home was a low scattered layer. It got worse from there; the

weather was in fact down to minimums. Fortunately, we were able to land off the approach albeit with a fuel level below that required to get to a suitable alternate.

So...what did I learn? Firstly, sometimes the decision to get in the trip clouds over our common sense. Secondly, it is the responsibility of every formation lead to realize the qualifications of his wingman (i.e. a restricted ticket) and it is the wingman's responsibility to ensure that his lead receives this information. In this case, we never should have taken off with the 300' ceiling. Remember, the formation is only as qualified as it's lowest common denominator. Thirdly, if the weather does look questionable, especially in those low, scattered conditions, even if you think that an alternate is not required, hold one anyway. Finally, for those people on the ground, passing old weather information in rapidly deteriorating weather conditions is a risky practice and could make the difference between the aircrews successful diversion to a suitable alternate or getting caught out of gas and ideas. ♦





Engine FIRE?

The sudden glare of an “engine fire” warning light in your face will send a chill up your spine, especially if you have never seen one before. This is what happened to our Sea King crew as we were conducting a hoisting evolution over our Canadian Warship during a NATO deployment. Our immediate actions were to cease the hoist evolution as soon as possible, clear the flight deck of all personnel, and land the aircraft. That all seemed like a pretty easy decision to make at the time and was handled well by everyone involved. When we landed however, that same fire warning light extinguished, leaving us somewhat confused as to whether or not we had a real problem, so the aircraft was shut down. Our technicians conducted a check of the engine and engine compartment but found nothing to indicate a problem.

Over the next several weeks, this same fire warning light came on a number of times for each crew. The difference now was that we had become comfortable seeing it come

on. Why? For starters, our maintainers searched regularly for the cause of the problem and always indicated that the engine was operating fine. Secondly, the first fire warning light that we experienced had come on when the outside air temperature increased significantly, as we sailed into warmer temperatures. Finally, the fire warning light only came on while we were in the hover and would extinguish as soon as we got airflow through the engine compartment. As a crew, we agreed that we would be comfortable continuing on with the mission so long as there were no secondary indications of fire. As well, we were still confident that there was nothing wrong with the aircraft itself but merely the sensing system, and we would have it fixed as soon as parts were available.

Several months after this deployment, I was conducting another wet hoisting evolution less than half a mile from our home airfield when that same engine fire warning light came on. No problem, I had seen it before, right? Wrong! This time, while it was the same light, it was a different aircraft. I did not know this aircraft as well as I had the previous one.

Secondly, while operating ashore, our crew is constantly changing with every mission we fly; therefore I didn’t know the rest of the crew’s comfort level with situations like this. My first reaction was to check for secondary indications, of which there were none. Next, I called for the hoist operator to continue raising the hoistee and then cease the evolution once the hoistee was up. The next sequence would be to land at the airport, which is thirty seconds away and figure out the problem on the ground, which is what eventually happened.

After the flight, looking back at what had just happened as well as over the past six months, I realized that I had become too comfortable with this particular incident. While the actions were correct, the speed at which I had made the decision to land was a lot slower than what I was used to. My first thought was to fly out of it and see if the light stayed on. From this incident, I had to remind myself that every emergency is different, even if I had seen it before many times. ♦

Home SAFELY!



The mission was super simple — all we had to do was to get home from the squadron reunion. We were part of a multi-ship, same day, same way gaggle of Griffon helicopters, working our way across eastern Ontario, Quebec, and northern Maine. Our crew was the last to depart, roughly an hour behind the pack. It was going to be a cinch; we were expecting good visual flight rules (VFR) weather and light winds all the way.

Perhaps it was foreboding that we had to return to our start point with a rotor brake caution light, because the pucks weren't pressing the micro-switches firmly enough to close the circuit. With a few well-placed curses of the same micro-switches and a skillfully applied calibration, we were soon on our way once more.

The going was easy through Ottawa and we landed at St Hubert for gas. We made a quick weather check for our northern route through Quebec City and Riviere du Loup, and we were off again. We were not quite to Quebec when we got a radio call asking us to try and tee up with one of our scattered flock that had landed outside of Sherbrooke with a slightly more serious, but still bothersome, malfunction. Our home base operations cell had some information they wanted to pass to the crew of the sick bird, but air traffic control (ATC) wasn't able to get hold of them. A quick check of the amount of gas we carried gave us an acceptable reserve to get into Sherbrooke after our visit, so, as a crew, we agreed and headed off to find our comrades. We were easing into

mid-afternoon by now, with a solid three or four hours of flight until we got home.

We found the sick Griffon with only a little searching around, rearranging the supplied grid reference to one that worked for their actual location. However, our extra tour of the countryside cost us enough gas that we could only make enough passes to determine that the crew had already vacated the plane for better populated surroundings. We had to depart quickly in order to reach Sherbrooke with our VFR reserves. The clock was steadily ticking away toward dinnertime by this point.

While the flight engineer (FE) gassed up and turned the plane around, the pilots conducted a quick phone search of the more familiar accommodations in Sherbrooke, finally locating the crew and passing the info from Operations. Feeling sufficiently satisfied with ourselves, we then turned to getting our own butts home for the night. This is where it all started to break down for us...

Meteorologists were reporting a thin layer at 3000', which was overhead us now, and ending along the Maine/New Brunswick border. There was a lot of icing being reported, so it was pretty clear that instrument flight (IFR) was out. That left VFR flight as our only option. Notice here that we didn't even consider calling Operations ourselves to say "see ya tomorrow." Sick kids, anxious wives, and a full flying schedule tomorrow were the items that crossed our minds.

The whole crew was comprised of instructors, all intimately familiar with

night ops, and with considerable night hours between us. Night flying? No problem! Except... we didn't bring any night vision goggles (NVGs) with us for the trip. Wasn't it supposed to be a day, VFR transit? There is only one word to describe northern Maine after sundown — BLACK! We wouldn't be seeing a whole lot of the countryside enroute, particularly the 2000-4000' hills scattered along our intended route. As long as we stuck to our well-planned and programmed track, they shouldn't be a problem. A couple of instructors should never stray from track, right?? Well, it's a sound theory, anyway.

And so, off we went, into the wild, black, and subliminally rocky yonder. Pretty uneventful, save the odd comment on how bleeding dark it was. All we heard was a couple of pings on the radar altimeter (radalt) as we cleared the hills by 1000' or so. We kept a close eye on our radalt to make sure we actually gained height as the hill dropped away. No big deal, we should be home within a couple hours of our original plan.

It was no big deal until we finally found the hill that pinged our radalt and didn't drop away again immediately like the others. We both watched as this one came up to 800', 600', 500'(!). I don't recall exactly what was said, but I am sure it was suitably expletive as I took control of the aircraft and started a climbing turn to my side, using a very small and dimly lit town-site as a target out my window. I told the crew that I had had enough, and that I was climbing to an IFR altitude to continue. As I spit this out, disgusted with myself for letting us go on this long, I was chilled

to see the radalt wobble at 200' before finally starting to increase again as I put our tail to the hill.

True to the meteorologist's word, we did indeed encounter that cloud layer at 3000'. As I was already hard on the dials from our turn away from the black hole, the transition was seamless. Much to everyone's surprise, we broke out into a bright, full moon lit starscape a mere 500' higher. On the horizon was our extremely well lit and easy to see destination.

Needless to say, the rest of the trip was pretty quiet. I have no doubt that everyone was thinking along the same lines — why did we even consider doing what we just did? "Get-home-itis" at its worst! Judgement, expectancy, JUDGEMENT! We did indeed make it home from there without further heart failure, and carried out an intensive debrief amongst the crew.

I took away innumerable lessons from our little adventure and it changed the way I do business in a few ways. Now, I will not accept a surprise task until I completely understand the effect it will have on my crew and our ability to complete our current mission. Given the same circumstances today, I would have NO hesitation telling Operations that we would be staying in Sherbrooke as well. They had added to our intended flight time, after all. I would much rather explain a night's hotel bill to the boss than a controlled flight into terrain because we pressured ourselves into pressing on. I now carry NVGs as part of my fly away kit, and insist that the rest of the crew have them as well. I think of how invaluable even a single set would have been around those hills in Maine. And I have forced myself to regard non-critical arrival times as entirely flexible. I won't be caught again endangering the crew and the aircraft trying to make a timing that isn't critical. My wife and kids understand completely. Even if it means Dad won't be home for another day. At least he'll be home safely. ♦

FINGER PROBLEMS?

The night was dark with no horizon or lights visible from the mountains seven thousand feet below. It was the late 1990s and I was a Griffon instructor pilot at 403 Squadron. I was flying the last leg of an instrument cross-country training trip that was a scheduled instructional trip for my previously experienced student. Suddenly, the number two engine chip light illuminated. Nuisance chip lights were common, but still needed to be treated as though the component was about to fail. Since it was routine, I closed the throttle on engine two and instructed my student to complete the checklist procedure. I listened as he went through the steps and then froze as the flight engineer (FE) screamed "WRONG SWITCH, WRONG SWITCH!" I glanced down to see the student's fingers on the fuel valve switch for the wrong engine. Our FE had just prevented us from doing an unaided night autorotation into the mountains, likely saving our lives.

When I wrote up the initial report, I was tempted to include some description of the switch proximity hazard. However, considering that "nothing happened," I was hesitant to write a report on a finger problem. I filed the standard report and returned to my duties.

Approximately one week later, the 1 Wing standards officer was flying tactically with a load of people when he had



an engine chip light. They handled the emergency quickly and promptly flipped the fuel valve switch for the wrong engine, flaming it out immediately. From fifteen feet, the pilot carried out a low-level turning autorotation and saved the aircraft. When I read the report, I realized that maybe this could have been prevented if I had properly reported my own incident. Following the standards officer's incident, Griffon procedures were amended such that one crewmember identified critical switches but, before moving it, has it confirmed as the proper switch by another crewmember.

This is not just another great "There I was..." story for the bar; it is also a chance to reflect on the importance of good reporting. Maybe nothing would have been done if I had reported my incident, as people likely would not have grasped its seriousness. Maybe, though, it would have provided a catalyst that could have prevented the really close call of the standards officer. We will never know — because it was never properly submitted. ♦

Major Eaton

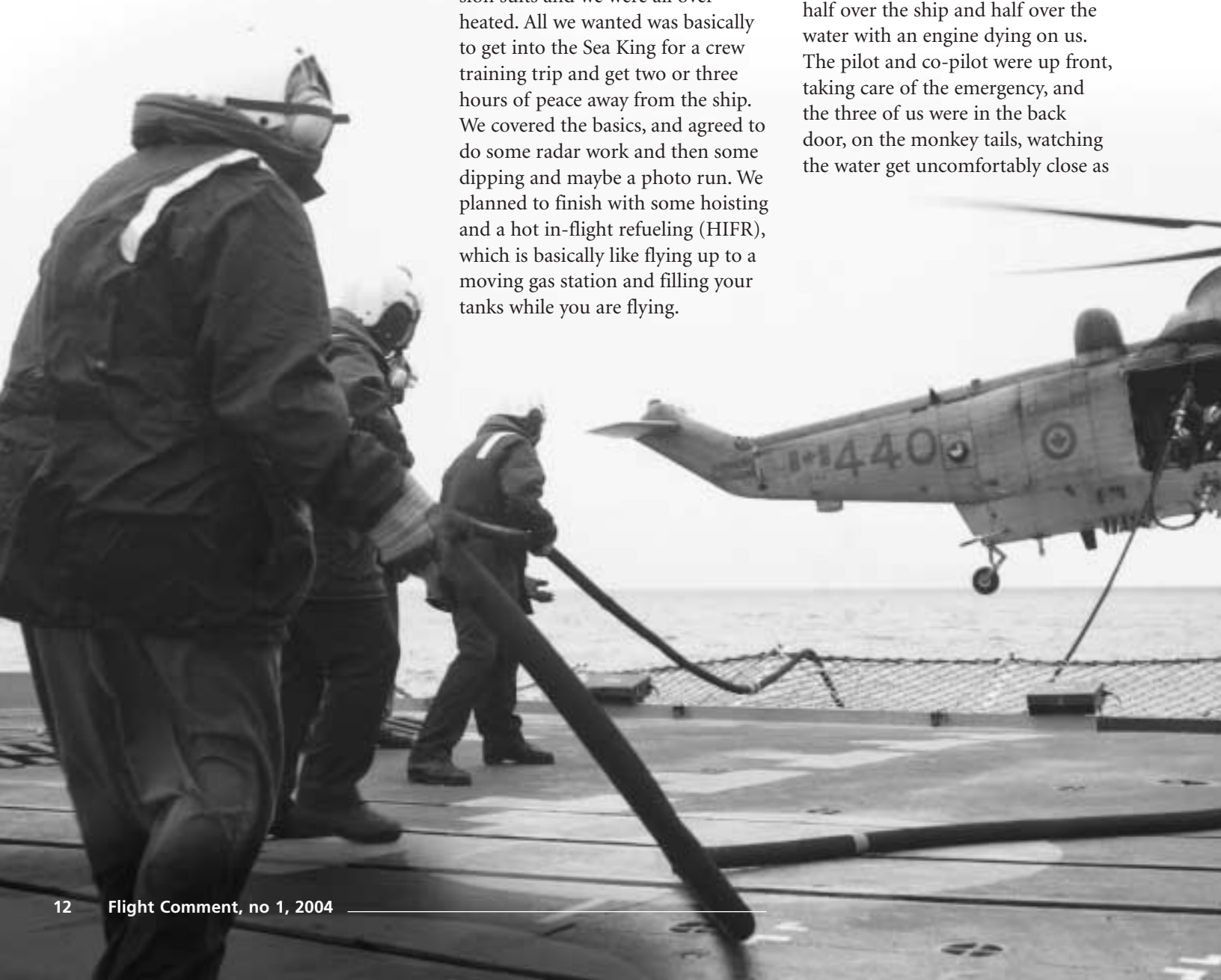
How To Increase Your PAPERWORK!

Several years ago I was flying with a crew on the HMCS Provider. We were a worked-up crew that had flown together for the better part of three months. On this particular trip, we were extremely busy and, I'm sure, sleep was on everyone's minds. (For those of you who have never had the enjoyment of this type

of exercise, find someone that has and you will understand what it is like simply by the expression on their face.)

Anyway here we were, five of us crammed into a small office for the weather brief. We were on our way to Florida, fully dressed with immersion suits and we were all overheated. All we wanted was basically to get into the Sea King for a crew training trip and get two or three hours of peace away from the ship. We covered the basics, and agreed to do some radar work and then some dipping and maybe a photo run. We planned to finish with some hoisting and a hot in-flight refueling (HIFR), which is basically like flying up to a moving gas station and filling your tanks while you are flying.

The trip itself went off without a hitch...at least until just after we had put the fuel hose back down on the ship. At that point, all we heard in the back door was an engine start to wind down. This was instantly recognized as being a BAD THING! Over the intercom we heard "**full power both!**" At this point we were half over the ship and half over the water with an engine dying on us. The pilot and co-pilot were up front, taking care of the emergency, and the three of us were in the back door, on the monkey tails, watching the water get uncomfortably close as





we dove for speed. The co-pilot handled the emergency flawlessly, right out of the red pages. Just as everything came under control we heard the engine spring back to life and the pilot congratulate the co-pilot on a well-handled “SIMULATED” emergency.

For a few brief minutes, all of us in the back of the helicopter had been wondering if we were going swimming. A simulated emergency had not been briefed and, if it had have been, I’m sure that none of us would have agreed to it. The lesson here is to always be sure to brief the entire mission, **including** any practice emergency procedures. A lot of paperwork is generated by a flight safety incident or, worse yet, accident. If you don’t brief the entire mission, then the paperwork could increase. ♦

Sergeant Moffitt



WEATHER SIGNS

Look for cloud and unsettled weather when:

- The barometer is falling.
- The temperature at night is higher than usual.
- Clouds move in different directions at different levels.
- High, thin clouds (cirrus) increase. A large ring may appear around the sun or moon and remain there until overcast clouds thicken and obscure it.
- Clouds darken on a summer afternoon.

Look for steady precipitation when there have been signs of unsettled weather, and:

- The wind is south or southeast, with pressure falling. If the pressure falls slowly, rain or snow will occur within a day; if it falls rapidly, it will rain soon, with increasing wind speeds.
- The wind is southeast to northeast, with pressure falling — it will rain or snow soon.
- Thunderclouds develop against a south or southeast wind.

Look for showers when:

- Thunderclouds develop in a westerly wind.
- Cumulus clouds develop rapidly in the spring or summer during early afternoon.

Look for clearing weather when:

- The barometer is rising.
- The wind shifts into the west or northwest.
- Temperature falls fairly rapidly, especially during the afternoon.

Look for continued bright weather when:

- You can look directly at the sun whenever it sets like a ball of fire.
- The barometer is steady or slowly rising.
- Cloudiness decreases after 3 or 4 p.m.
- Morning fog breaks within two hours after sunrise.
- A light breeze blows from the west or northwest.
- A red sunset occurs.

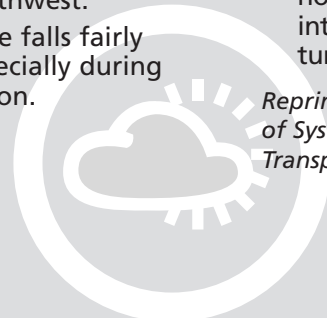
Look for higher temperatures when:

- The barometer is falling. In summer, a falling barometer may indicate cloudy weather, which will be cooler than clear weather.
- The wind swings away from the north or west into the southwest or south.
- The morning sky is clear, except when the barometer is high or rising in wintertime, or if the wind is strong from the north or west.

Look for lower temperatures when:

- The wind swings from the southwest into the west, or from the west into the northwest or north.
- Skies are clearing. Clearing skies in the morning will likely mean warmer weather by afternoon, particularly in summer.
- Snow flurries occur with a west or north wind.
- The barometer is low and falling rapidly, wind east or northeast and backing slowly into north (the fall in temperature will be gradual). ♦

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MAINTAINER'S

QUALIFIED/AUTHORIZED — WHAT'S THE DIFFERENCE?

Judging from some of the incidents we see in the Flight Safety Information System (FSIS), it would appear that there is some confusion about the difference between the words "qualification" and "authorization". Put simply, you cannot be authorized without being qualified although you can be qualified but not authorized. So, in order to dispel any confusion that may exist, this article will explain what it means to be qualified and/or authorized.

To become qualified, the process is straightforward. The person has to receive formal basic trade training as well as specialty training courses and/or pertinent experience on an aircraft, engine, component or system. The technician will be qualified when deemed technically competent to perform the maintenance tasks associated with the training.¹ So, when you go on an engine course, for example, once you have passed all theory and practical tests you would receive the qualification for that particular engine. You complete the formal training, either a course or on-job training (OJT), and then you are qualified. You can do the job as long as you are supervised while you do it. Understand that you cannot sign for the job – a qualification does not give you the authority to do so. However, a qualification is the first step in becoming an authorized technician.

An authorized technician "is qualified on an aircraft, engine, equipment or system, and is authorized through formal documentation, to sign specific aircraft maintenance records for specific maintenance tasks."²

Formal documentation refers to the Technical Authorization Record Set (TARS), which will be discussed later. It is important to note that a technician can receive an authorization to sign for a task carried out on a system, sub-system or component, or can be granted an authorization for a skill-set.³ A skill-set is not specific to any weapon system and can be used for a wide array of maintenance activities on any weapon system.⁴ Examples of skill-sets are NDT techniques, metal work, high reliability soldering, painting, etc.

As an authorized technician, you should:

- know exactly what you are authorized to do and sign for. Know which weapons systems, sub-systems or components you are authorized to work on and the task you are authorized to carry out. In other words, know what system and task the authorization code refers to; and
- ensure that your abilities reflect the authorizations you have been given. If you feel that you cannot carry out any of the tasks for which you have been recommended for authorization, then do not

accept the authorization. Voice your concerns to your supervisors, remembering that you are accountable for the work you sign for.

Supervisors also have responsibilities in the authorization process. They should:

- know exactly what each member of the crew is qualified for and authorized to do. WOs or Sgts may not be able to know what each person can do on a large crew; however, MCpls should be thoroughly aware of what the corporals and privates they supervise are authorized to do;
- review the technicians' TARS regularly. This is especially important if the supervisor is new to the crew or has been away for a while (course, TD, sick leave, etc.); and
- review the technicians' TARS before going on TD. TD's quite often include technicians from other crews or even from another squadron or unit. Since the supervisor may not be familiar with these technicians, it is vital to review their TARS to know exactly what each is authorized to do. It is the only way to avoid unpleasant surprises while on TD.

CORNER

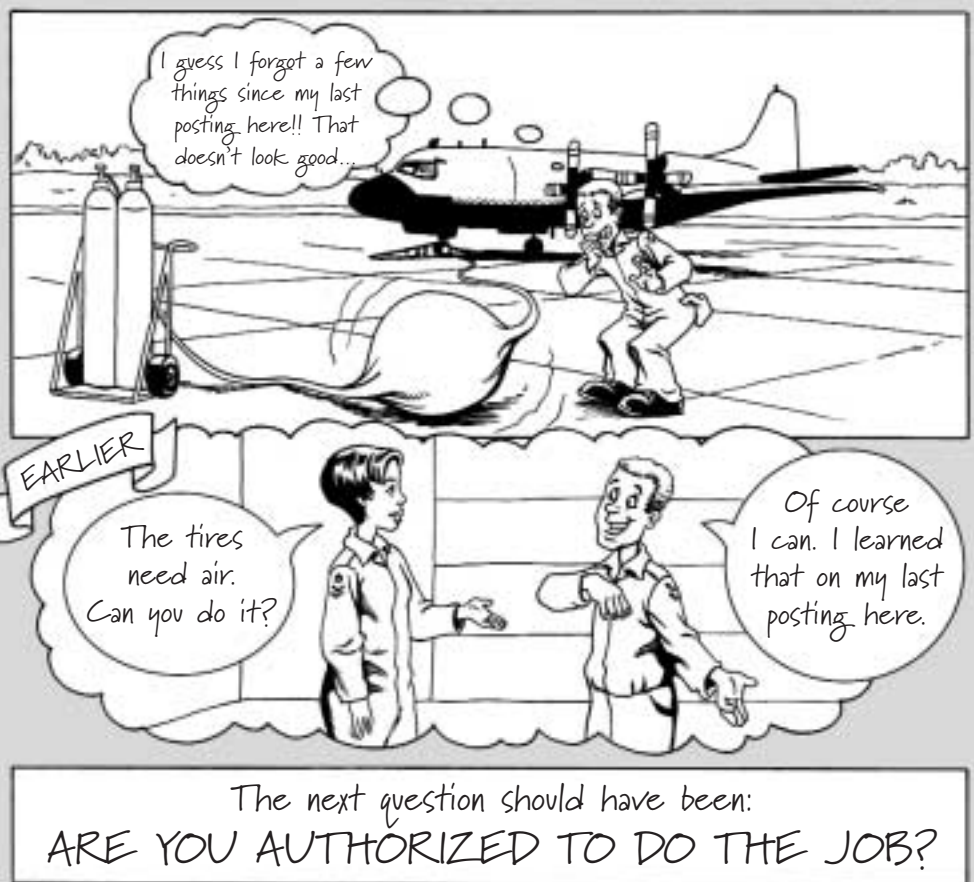
The TARS is an important document, and you should be aware of the airworthiness implications it carries. When technicians sign to certify and date the authorization record, they acknowledge that they understand their responsibilities and **accept accountability** for their performance related to the authorization granted.⁵ This should not be taken lightly. Your signature on a CF 349, for example, certifies that you have completed and documented the task in accordance with approved orders and procedures, and that the serviceability status of the system, sub-system or component has been recorded accurately. Not ensuring these requirements have been met when signing an aircraft record is a serious offence under the *National Defence Act*.⁶ (For an article on airworthiness fundamentals, please refer to the **Maintainer's Corner** in *Flight Comment*, no 4, 2002 or to DFS website at the following address: [http://www.airforce.forces.gc.ca/dfs/pdf/Flight Comment/Fall 2002/fall2002.pdf](http://www.airforce.forces.gc.ca/dfs/pdf/Flight%20Comment/Fall%202002/fall2002.pdf))

The Flight Safety system is non-punitive in principle, and the goal is to ensure people learn, through a reporting system, from others' mistakes. However, it is erroneous to think that because an incident has been entered in the Flight Safety

system that personnel involved in the incident are "safe" from punitive action. Personnel are still responsible and accountable for their actions, especially in cases of serious damage and injury. A separate investigation, independent of the Flight Safety system, would have to be carried out to assign blame and take punitive action as required.

So, now you know the difference. Qualified means you completed formal training; authorized means that you can sign for the tasks you have been qualified to do. You also know about the responsibilities and accountability an authorization brings. Hopefully, this article will re-emphasize the significance of your signature on an aircraft record. ♦

Sgt Anne Gale
DFS 2-5-2-2



¹ C-05-005-P01/AM-001, Glossary

² C-05-005-P01/AM-001, Glossary

³ C-05-005-P03/AM-001, page 1-15, paragraph 23

⁴ C-05-005-P03/AM-001, page 5-1, paragraph 3

⁵ C-05-005-P03/AM-001, page 7-12, paragraph 22

⁶ C-05-005-P02/AM-001, page 5-2, paragraph 5



"HOW'S THE RIDE?"

I am a German co-pilot on the NATO E-3A AWACS based in Geilenkirchen, Germany. The following story happened to me. I was on a flight from Geilenkirchen to Tinker Air Force Base in Oklahoma, together with a Belgian aircraft commander (AC), a Turkish navigator, and an Italian flight engineer. The AC was flying and I had control of the radios when, after six hours of flight, we entered US airspace. We were transferred from Gander Air Traffic Control (ATC) to Boston Centre ATC. I checked in with Boston Centre (BC).

Me: "BC, this is NATO 10, at flight level 330; good afternoon."

BC replied, "Good afternoon NATO 10; you're in radar contact." After a little while, the following conversation was going on:

BC: "NATO 10, Boston Centre."

Me: "Go ahead for NATO 10"

BC: "How's the ride, NATO 10?"

I stared at my AC with big eyes and asked, "did you get that?" "Negative," he replied.

Me: "BC, say again for NATO 10."

BC: "How's the ride, NATO 10?"

Again I looked at my AC, annoyed, begging for help.

"What does he want," I asked. The Belgian replied, "I have no idea, ask again!" Then the Turkish navigator shouted from the back, "he said 'hard right' so break right, he might have opposite traffic!" But, in my opinion, that was not the intention of BC so I asked again.

Me: "Say again. Speak slowly for NATO 10."

BC: "Oh sorry; NATO 10, do you report any turbulence at flight level 330?"

Finally I understood what Boston ATC wanted and I answered: "Negative for NATO 10, we have no turbulence and are in visual meteorological (VMC) flight conditions."

There is no similar phraseology in Europe for that question and it made me realize that when flying to another country or continent, I must be prepared for different procedures or phraseology. Now, I won't hesitate to ask for clarification until I understand clearly what ATC wants from me. ♦

Captain Schauer
German Air Force



Hey...

They Modified the Airplane!!

After a long winter break, everyone was looking forward to the beginning of the Spring Glider Familiarization Training season. Open book and closed book exams had been written, marked, and debriefed. The weather was VFR. An annual proficiency check for the staff was the only item on the schedule for the afternoon. There was nothing left to do but fly. What could go wrong?

The glider had just been ferried to the airport without incident. Certainly the cross-country pilot had done a thorough daily inspection (DI). A glider instructor had already flown the aircraft from the rear cockpit twice. Everything seemed in order.

On the fourth flight since coming out of maintenance, the standards pilot noticed that the left hand rudder cable, which normally ran along the inside of the rear cockpit liner from the rear left rudder peddle to a guide bushing passing through the rear seat bulkhead, was behind the plastic cockpit liner. The aircraft was landed without further incident and was grounded.

The two pilots who had conducted the preflight inspections “thought that the rudder cable had been modified so that only one cable was visible.” Even though the cable was sawing into the plastic liner, there was no obvious increase in friction.

During winter maintenance, in order to upgrade radio wiring, the liner had been removed. Unfortunately, it was improperly installed. The rudder cable should have been in front of the liner.

Even though this was a relatively minor incident and “probably nothing would have happened anyway,” I think this shows how easily we can become complacent with the little details. Who knows which little detail may have a very profound effect on the rest of the afternoon? ♦

Captain Bodnar



Untouchable!

The summer was about to begin. This was to be a year of big events! I had successfully completed my pilot training, earned my wings and was well on my way to starting an aviation career. However, due to unforeseen events, my subsequent operational training was delayed for an extended period of time. Wanting to make the most of the summer and motivated to avoid supervising a desk, I decided to volunteer with one of the Cadet Regional Gliding School (RGS). I had spent a few years prior working with the cadet program while waiting for pilot courses, and one of the schools was short of instructors with experience.


With my past experience, I was gainfully employed as a standards officer and, therefore, tasked with teaching instructor candidates on the Qualified Glider Instructor (QGI) course. Within a few days of arriving at the school, I met an older gentleman who conducted maintenance on the tow planes and also helped pilot them throughout the summer. It would be an understatement to say that my first impression of him was nothing more than poor. He was a grumpy individual and never seemed to have anything positive to contribute. Determined to make the most of my summer, I simply tried to go about my business and avoid him when necessary.

Shortly after ground school finished for the instructor candidates, we began the flying phase. Briefing time on the flight line is very limited and often, we find ourselves briefing as we strap into the glider. During one particular flight, this very process

was taking place and, as I was concluding my brief, the tow plane taxied up in front of the glider, signalling that he was available for another launch. Two minutes later, I finished my brief only to witness the tow plane drop the tow-line, power up, and fly off. I inquired with the launch control officer if an engine problem was responsible for this display, and he informed me that this particular tow pilot refused to wait for glider pilots and would often depart if he felt his time was being wasted.

The next day, the same situation presented itself; only this time the tow plane taxied several meters in front of the glider and ran his engine at high power. Needless to say, prop wash and loose gravel flew violently in our direction. Furious with this poor display of professionalism, I approached the individual with the hopes of educating him on the danger of his actions. I had hardly begun my explanation, when he walked away and refused to hear what I had to say. I spoke to several supervisors, only to be told that this was just the way he operated and I should make every effort to avoid encouraging him.

Within a couple of days, the same event occurred and, this time, my student took a rock in the eye and was unable to fly the mission as a result. I spoke to the field supervisor, informed him of the repeat occurrence, and expressed my interest in filing a flight safety report. I had hoped that with the filing of a report, this individual might be



confronted by his supervisor to rectify this poor example of flying behaviour. To my surprise, I found myself in the boss's office having to explain why I felt the need to file a flight safety report. He told me that such an effort would only create more work for his small staff and the individual in question wouldn't change his ways anyways. At this point, I felt powerless to do anything more but make an attempt to keep my students and myself out of this individual's way. Shortly thereafter, I was assigned to one flight and this person to another. We went the rest of the summer without seeing each other and, to my knowledge, the summer went without further incidents, though with the supervisory attitude I'd seen, I couldn't help but wonder if more incidents did occur.

Shortly after the summer concluded, I was back at my unit and often spoke of the events of that summer. I was informed that my favourite character was a distinguished member with vast experience and lots of credibility. People within the unit who had served with him in the past mentioned that they didn't agree with his behaviour, but were in no way surprised. Not only was I shocked, but I also couldn't comprehend how such a well-respected individual could conduct himself in such an irresponsible manner.



Many times throughout the course of a career, we encounter individuals so highly regarded and respected that we are inhibited from reminding them of flying orders and regulations. Although from time to time these icons may contravene the occasional rule, we often conclude that it must be OK because of their vast experience. We let this experience give them “carte blanche” and grant them more latitude than the new

guys, who only have procedures to fall back on when the going gets tough.

The argument against such a mindset is raised when such icons continuously violate regulations and, at times, make decisions that endanger their peers. When this “untouchable” mentality has set in, and is well known, across the organization, the ability to change it becomes exponentially difficult. Sometimes, the only

event capable of stimulating such change is a grave air accident that often claims lives. No Air Force in the world can afford such a price, can it? Don’t such events represent a failure in leadership? When our leaders choose not to enforce the regulations and policies of our organization, how can they expect us to follow them? ♦

DFS Responds:

I was very concerned when I read this article. I was even more surprised when I learned the identity of the individual implicated because, as the article indicates, he is an exceptional pilot with an outstanding reputation. However, factors such as reputation and seniority carry absolutely no weight from a flight safety perspective. We are all human and even high-ranking, experienced personnel blessed with exceptional skills are capable of making mistakes. The disturbing part of this article is that one of these individuals apparently started working under their own set of rules and, in doing so, fostered a poor flight safety culture.

*In this instance, supervisors have a **responsibility** to intervene as soon as they become aware of the circumstances. As the actions reported in this article also had flight safety implications, flight safety professionals also have a responsibility to become involved. In this situation, the Unit Flight Safety Officer (UFSO) may be placed in an awkward position. However, if you believe that safety is at risk, then you or the UFSO or both can raise the issue up the flight safety chain to the Wing FSO, the 1 CAD FSO or to me. In this case, I have spoken with people in a position to address the particular situation and have reason to believe it has been rectified. ♦*

Colonel Hunter



“Just a Quick Trip Around The Block!”

I've been a flight engineer (FE) for a number of years and, to me, it always seemed as if it was easy to “fly” an aircraft. Was I about to learn a lesson or two?! Nearing the end of a session in the flight simulator, the aircraft commander (AC) asked me whether or not I would be interested in a flying lesson. Being fairly coordinated (and even more confident), I accepted the challenge. It didn't take me long to realize that it wasn't as easy as it looked!

After a very challenging take-off, we were barely airborne when a sudden feeling of uneasiness was upon me. I was unable to focus beyond the ‘hands and feet coordination’ that it took to stay airborne. As I regained partial situational awareness, a voice from the back said, “Would you like for me to do a post take-off check?” My only thought was “whatever!” Then came the downwind leg...and more checks. I completed the circuit and an uneventful landing.

During the informal debrief, the AC asked me if I recalled doing any of the pre-landing checks. To my amazement, my answer was “NO!” He explained that he had seen that I was over-tasked and unable to handle any more inputs, so he just carried them out. I was in total agreement as I recalled having difficulty just to stay on the glide path. I learned a valuable lesson that day. Now I realize that we all have a job to do and that teamwork is paramount. ♦

Sergeant Bonner

ASSUMPTIONS

Our unit had just stood up in Baden, West Germany. We were the first squadron overseas to have the, then, new CF-18 aircraft and our chests swelled with pride over this accomplishment. It was with this squadron, and shortly after standing up, that I was to learn one of the most valuable lessons of my career. My story begins during a routine winching operation whereby you pull an aircraft into a Hardened Aircraft Shelter (HAS). Normally, this was not a difficult job, even knowing that a HAS was originally built for a CF-104 aircraft, somewhat smaller than a Hornet.

The process was carried out with three people; one to steer the nose wheel, one to ride the brakes, and one who operated the winch controls, ensuring clearance as well as accepting responsibility as tow crew chief. On the particular day in question I was to be the brakeman, something I had never done on the Hornet aircraft. I let my inexperience be known and asked the simple question “Do I just step on the rudder pedals to apply the brakes?” The answer that I received was “yes.” After hooking up the steering bar and winch cable, I climbed into the cockpit to carry out my brakeman tasks.

The slack was taken up on the winch; the chocks were removed, at which time I was told to take off the park brake. As soon as the park brake was

released and, before the crew chief could start the winching process, the aircraft started rolling back on its own. The scream for “brakes” came immediately from the crew chief and I reacted, quickly jamming my feet onto the rudder pedals. Nothing happened; we were still rolling backwards! Thanks to the always prepared and quick-thinking crew chief, using speed I have never seen before, he threw a chock under the nose wheel. The aircraft came to a jarring halt. Not hearing any grinding or crunching noises, relief fell over us. Boy, that was close! The wing was mere inches from hitting the HAS. We had saved the aircraft, or so we thought, until we looked down by the left-hand main tire and saw hydraulic fluid pouring all over the ground. As a result of the plane rolling backward and the cable not being taken up, the towing bridle ended up wrapping around the wheel and it sheared the brake line.

We were lucky in the fact that no one was hurt and only minor damage occurred, but all could have been avoided had the

three of us that day not made assumptions. In that lies the lesson learned from this story — never assume. On that day, all of us made assumptions. For me, I assumed I knew how to work the brakes. The crew chief assumed the same and all of us surmised that we knew the area and conditions around us. If nothing else, please be reminded that the word assume is often said to make an “ASS” out of “U” and “ME.” On one embarrassing day, that epitomized the three of us. ♦

WO Tony Pettipas



FLYING DOESN'T START IN THE COCKPIT

Knock, knock. "You're late." Definitely not a good way to wake up. Check the watch... oops, should have been up thirty minutes ago. Well, no help for it; just enough time to shave. I'll skip the shower and breakfast. Hmm...morning briefing too from the looks of things. No problems, out to the airfield, find my student, and strap in to the airplane. What are we doing? Um, not too sure... What flight are we on? Lemme think, oh yeah, I got it! This student's pretty good. He's got working stuff between his ears. OK, lined up, ready to go. This flight should be done early, not going to miss tee-off time. Very nice take-off. Good band playing at the local bar I understand; maybe tonight... Through 1,000' uh oh...bad sound...lotsa quiet now! Let's see how the student's

emergency procedures are. Seems a little slow, I'm gonna ask what's up. Oh...haven't taught you this one yet? Well, my turn, should have taken over a little earlier...ah, there's the airport again, looks like I might make it. Might not. Good, there's the crash trucks; can almost hear them.

BZZZT. BZZZT. I hate the alarm clock! Another one of those weird dreams. Probably the UFO's fault. Hmm...I've got a while before I go flying, I think I'll try what the UFO suggested. I'm going to check the student's records, and find out where he is. Maybe I'll give him a good briefing, and go over some emergency procedures. That will make our time in the air more effective. Hmm...this is good; maybe they're right — flying doesn't start in the cockpit. ♦



In A

Dis ist ein Kanadischer Snowball Alarm!" Sound Familiar? It was day one of a new NATO tactical evaluation (tac-eval) season. Those were the days when day two and three followed directly after. It was a hard-fought war. We ran the gamut of air attacks, nuclear fallout, intruders overrunning the Canadian Air Group (CAG), and the eventual mass launch ("flush") of whatever serviceable CF-104's we had left to live to fight another day.

Three days later, all we were thinking about was slipping back into the comfortable routine of a week of day shifts followed by a week of night shifts in the cozy confines of #1 Hangar at 1 CAG Snags. I was ready to go home, after augmenting the flying squadrons as our war-tasked assigned place of duty, when I was reminded that now that the "war" was over and the flying was done, it was time to put things in order for the next day's peace-time missions.

Since both shifts were together, it seemed like a good time to meet at the mess for an all-around debrief. There were just a couple of tow jobs left and everyone was pitching in to get it done quicker. Putting two CF-104 aircraft in one hardened air shelter (HAS) was known as double-HAS'ing and it was done quite regularly as we had more jets than floor space. It was also a relatively simple task if you had a qualified tow driver and the back airplane was

Hurry?

positioned just right. We had one, but not quite the other. It looked close though, and the other guys had already left for the mess.

We inched the front aircraft back ever so slowly. The wing walkers, tail guard, and tow crew were in constant communication. It looked perfect. The airplane looked like it was in. The front jet's left-hand tip tank cleared the back jet's right wing leading edge by a whole inch or so. If you eyeballed it right, the pitot tube of the front aircraft was definitely inside. The HAS door closed very slowly. "Let's lock it up," someone said, "we're outta here!" In a sudden fit of professionalism, the crew chief took another look around. It didn't seem right to him. He decided to reposition both of the jets with the correct clearances, just to be sure.

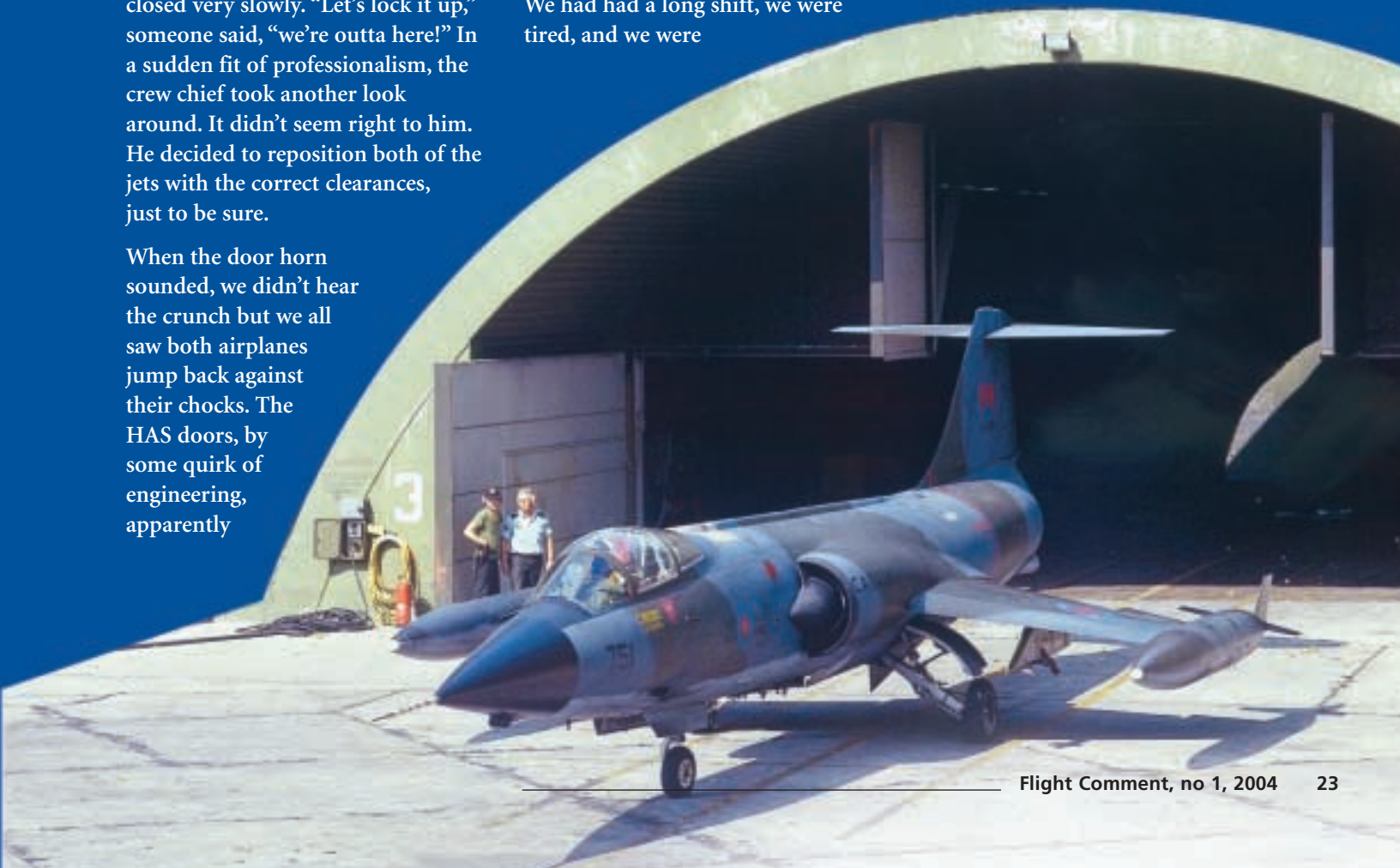
When the door horn sounded, we didn't hear the crunch but we all saw both airplanes jump back against their chocks. The HAS doors, by some quirk of engineering, apparently

kicked inwards three to four inches before travelling in the advertised direction. I'm sure you can imagine the chain of events that took place next. The door struck the pitot tube of the front aircraft, bending it and pushing it into the radome, cracking that beyond repair. The rear fin of the left tip tank of the front jet struck the right leading edge flap of the back jet, damaging both enough to require replacement. Thankfully, no one was hurt.

I'm sure we all see the lesson here, but it never hurts to say it again. We had had a long shift, we were tired, and we were

hurrying. Someone did have the presence of mind to put things in order, but it was too late. If we had taken the time to think this one through, we would have taken the time to reshuffle the HAS in the first place and we would have been able to enjoy the debrief with the rest of the crew. ♦

Master Warrant Officer Sabad





Picture : Cpl Levesque, DSV 3-3-2

APPROVED

OVER-THE COUNTER (OTC) MEDICATIONS

Aircrew may use approved OTC medications **only** when a Flight Surgeon is **not** available and only for short-term use. A primary concern with frequent or chronic use of any of these medications is that their use may mask serious underlying problems, or even cause problems, such as overuse of aspirin causing an ulcer. A Flight Surgeon must be consulted if using the following OTC medications frequently.

- Antacids (Gastrifom™, Diovol™, etc.): Permitted when used occasionally or infrequently.
- Artificial tears (saline or other lubricating solution only): Vasocon A™, or other vasoconstrictor agents is **prohibited** for aviation duty.
- Aspirin/acetaminophen: Permitted when used infrequently or in low dosage.
- Cough syrup or cough lozenges (Benlyn™): Many OTC cough syrups contain sedating antihistamine or dextromethorphan and are **prohibited** for aviation duty.
- Decongestant Pseudoephedrine (Sudafed™): Permitted when used for mild nasal congestion in the presence of normal ventilation of the sinuses and middle ears (normal valsalva). However, If you have nasal/sinus congestion, you should check with your Flight Surgeon prior to returning to flying duties — minor congestion on the ground can turn into major sinus/ear trauma during ascent and descent.
- Kaolin and Pectin (Kaopectate™): Permitted when used for minor diarrhea conditions and free of side effects for twenty-four hours.
- Multiple vitamins: Permitted when used in normal supplemental doses. Prescriptions or individual vitamin preparations are **prohibited**.
- Nasal sprays: Saline nasal sprays are acceptable without restriction. Phenylephrine HCL may be used for a maximum of three days. Long-acting nasal sprays (oxymetazoline (Dristan)) are restricted to **no more than three days**. Use of neosynephrine or oxymetazoline for longer than the above time must be validated and approved by a Flight Surgeon. Recurrent need for nasal sprays must be evaluated by the Flight Surgeon. Use requires the aircrew member to be free of side effects.
- Psyllium Mucilloid (Metamucil™): Permitted when used to treat occasional constipation or as a fibre source for dietary reasons. Long-term use (over one week) must be coordinated with the Flight Surgeon due to possible side effects such as oesophageal/bowel obstructions.
- Throat lozenges: Acceptable provided the lozenge contains no prohibited medication. Benzocaine (or similar analgesic) containing throat spray or lozenge is acceptable. Long-term use (more than three days) must be approved by the local Flight Surgeon.

Should you have any questions please contact your local Flight Surgeon to discuss your specific situation. ♦

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Seconds

If you're ever tempted to take off in marginal weather and have no instrument training, read this article first before you go. If you decide to go anyway and lose visual contact, start counting down from 178 seconds.

How long can a pilot who has no instrument training expect to live after he flies into bad weather and loses visual contact? Researchers at the University of Illinois found the answer to this question. Twenty student "guinea pigs" flew into simulated instrument weather, and all went into graveyard spirals or roller coasters. The outcome differed in only one respect; the time required until control was lost. The interval ranged from 480 seconds to 20 seconds. The average time was 178 seconds — two seconds short of three minutes.

Here's the fatal scenario...The sky is overcast and the visibility poor. That reported 5-mile visibility looks more like two, and you can't judge the height of the overcast. Your altimeter says you're at 1500-feet but your map tells you there's local terrain as high as 1200-feet. There might even be a tower nearby because you're not sure just how

far off course you are. But you've flown into worse weather than this, so you press on.

You find yourself unconsciously easing back just a bit on the controls to clear those none-too-imaginary towers. With no warning, you're in the soup. You peer so hard into the milky white mist that your eyes hurt. You fight the feeling in your stomach. You swallow, only to find your mouth dry. Now you realize you should have waited for better weather. The appointment was important — but not that important. Somewhere, a voice is saying, "You've had it — it's all over!"

You now have 178 seconds to live. Your aircraft feels in an even keel but your compass turns slowly. You push a little rudder and add a little pressure on the controls to stop the turn but this feels unnatural and you return the controls to their original position. This feels better, but your compass is now turning a little faster and your airspeed is increasing slightly. You scan your instrument panel for help, but what you see looks somewhat unfamiliar. You're sure this is just a bad spot. You'll break out in a



few minutes. (But you don't have several minutes left...)

You now have 100 seconds to live. You glance at your altimeter and are shocked to see it unwinding. You're already down to 1200 feet. Instinctively, you pull back on the controls but the altimeter still unwinds. The engine is into the red — and the airspeed, nearly so.



You have 45 seconds to live. Now you're sweating and shaking. There must be something wrong with the controls; pulling back only moves that airspeed indicator further into the red. You can hear the wind tearing at the aircraft.



You have 10 seconds to live. Suddenly, you see the ground. The trees rush up at you. You can see the horizon if you turn your head far enough but it's at an unusual angle — you're almost inverted. You open your mouth to scream but...you have no seconds left! ♦



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FROM THE INVESTIGATOR

Aircraft Occurrence Summary

TYPE: CH12419 Sea King
**LOCATION: HMCS CALGARY,
Straits of Hormuz**
DATE: 27 August 2003

The incident aircrew were conducting a main rotor blade-smoothing maintenance test flight from the flight deck of HMCS CALGARY, which was operating in support of Operation APOLLO. Upon completion of the first in-flight profile, the aircraft returned to the flight deck so that minor adjustments could be effected. The aircraft then re-launched for a second in-flight profile. Additional adjustments were subsequently required and, while manoeuvring in preparation to land, the aircraft flew down CALGARY's starboard side from stern to bow. Once abeam the bridge, the aircraft commenced a left climbing turn across the bow. As the aircraft passed in front of the bridge, the main rotor blades contacted the starboard top-part bridge. Simultaneously, bridge personnel heard a loud bang just as the



aircrew heard and felt two thumps in rapid succession. While the aircrew performed an in-flight controllability check, the ship came to Emergency Flying Stations. With no adverse handling characteristics evident, the aircraft then landed without further incident.

The ship suffered minor damage to bridge-top guardrails and an antenna; two of the aircraft's main rotor blades were damaged. The aircraft suffered "D" category damage.

The investigation is focusing on the pilots' airmanship and decision-making process. ♦

TYPE: Schweizer 2-33A Glider C-FYLP
LOCATION: Mountainview, ON
DATE: 18 August 2003

The solo student was conducting a training flight in the Central Region Air Cadet Gliding Scholarship Program when the glider landed hard and short of the intended landing strip. The student was uninjured. The glider sustained "C" category damage.

The student completed the launch and upper air sequences prior to joining the circuit. Once established on final for the glider landing strip adjacent to runway 34, the student felt she was low on approach. In an effort to stretch the glide, she pulled back on the control column until such time that the airspeed bled off and the glider stalled at approximately 10' above the ground. The aircraft then landed hard on an unseen rock in the glider landing strip undershoot area.



The glider bounced back into the air and landed again 20' further down track before it skidded to a halt in the grassy undershoot area. A preliminary maintenance inspection revealed buckling of the left hand aileron and wing skin, a cracked wheel rim, and a flat tire.

The investigation is focusing on the technique and decision-making processes involved with the landing phase of flight. ♦

FROM THE INVESTIGATOR

Aircraft Occurrence Summary

TYPE: Cessna 172 C-GTHL

LOCATION: Fredericton, NB

DATE: 14 August 2003

The solo Air Cadet student-pilot was participating in the Atlantic Region's Powered Flying Scholarship program through Moncton Flying College (MFC) when the aircraft landed hard at Fredericton airport, bounced several times, and finally came to rest on the runway. The cadet received minor injuries while the aircraft received "B" category damage.

The student was conducting a solo cross-country flight from Moncton-Fredericton-St John-Moncton. Upon arrival at Fredericton, she set up for a straight-in normal approach to runway 27 while a Cessna 414 was circling to runway 33 from an ILS approach to runway 15. The Fredericton FSS specialist was quite busy at the time managing numerous other aircraft within the Fredericton area. Just as both aircraft were on short final for their respective runways, the student acknowledged a request by FSS to hold short of the intersection of 27/33 to allow the Cessna 414 to conduct its landing. As a result, the student then had to reconfigure the aircraft for a short field landing. A skilled pilot can land the Cessna 172 in approximately 500'. With the student's intended touchdown point being the 1000'- to-go marker, the remaining length of runway 27 before the 27/33 intersection was only 900'. The aircraft touched down hard and up to 30 knots faster than the normal 40 knot touch down speed of a short field landing. The Cessna 172 bounced back into the air before it again hit very hard, this time on the nose wheel; this was followed by a porpoising action that oscillated between nose wheel and main wheel contact. The student carried out an emergency shutdown, finally coming to rest on the runway but past the 27/33 intersection. Anticipating a possible conflict, the Cessna 414 overshot its approach and landed once it was safe to do so. After the student egressed on her own, local maintenance personnel immediately towed the aircraft off the runway.



Damage to the Cessna 172's front end, although not seemingly evident, was significant. The nose wheel tire was blown, the edges of the rim shattered on runway contact, the oleo end-cap was pushed off after a retaining bolt failed, and the firewall and cabin floorboard panelling was warped. The propeller and engine were undamaged. Initial classification of the Cessna 172 indicates that likely "B" category damage was suffered.

The investigation is focusing on pilot decision-making, pilot technique, and the FSS request. ♦

FROM THE INVESTIGATOR

Aircraft Occurrence Summary

TYPE: Schweizer 2-33A Glider C-GBZG

LOCATION: Summerside, PEI

DATE: 27 September 2003

The instructor pilot (IP) and passenger were conducting a familiarization flight in support of the Air Cadet Fall Glider Familiarization Program at Summerside Airport, PEI, when the glider landed hard after aborting the launch procedure. The aircrew were uninjured. The glider sustained "B" category damage.

The auto-tow launch on runway 24 began normally. After the "all out" signal was given, the glider was observed to accelerate slowly by the signal cadet who was monitoring the launch and providing signals to the tow vehicle. Believing that something was wrong with this unusually long take off run, the cadet gave the stop signal to the tow vehicle. Simultaneously, the glider became airborne and climbed to approximately 50 ft AGL. The signal person, doubting his decision, attempted to cancel his stop signal but by then the tow vehicle had already responded to the original signal and began to decelerate.

The IP noted the poor acceleration on takeoff. Once airborne, the IP then observed the airspeed decaying from 50 MPH to 45 MPH and released the towrope. With insufficient altitude to regain the 50 MPH approach speed, the glider descended rapidly and rounded out at approximately 3-5' with insufficient airspeed to flare and arrest the descent. The



glider struck the runway in a level attitude approximately 2000' from the threshold. After the glider came to rest, the occupants egressed and assisted in moving the glider off the runway. It was then that damage to the glider was noticed.

Damage was initially assessed on-site as "D" category. However after detailed examination at 14 Wing Greenwood, further damage was noted: the wheel axle was bent; the fuselage tubing surrounding the axle frame was deformed, broken, and compressed; and the tire sidewall was compressed against the rim, causing a visible scrape and scoring. The damage was subsequently upgraded to "B" cat.

The investigation is focusing on the signal cadet's decision to stop the launch and the tow-vehicle's serviceability/ability to accelerate. ♦



FROM THE INVESTIGATOR

Aircraft Occurrence Summary

TYPE: CC130 Near-Controlled Flight Into Terrain (CFIT)

LOCATION: 20 NM SW of Kabul

DATE: 29 July 2003

The incident crew consisted of an Aircraft Commander in the left seat, the First Officer in the right seat, a Navigator, a Flight Engineer, and two Loadmasters. The incident flight took off from Kabul International Airport (OAKB) on 29 July 2003 at 0505Z (0935L) via a planned low-level tactical departure. The crew planned to transit from OAKB at 200 feet MSD in order to avoid any potential threat from MANPADs (man portable anti-aircraft devices).

The crew passed turn point #1 without incident. A 75° turn to the right was commenced when the crew passed turn point #2 in order to place the aircraft on the proper track towards turn point #3.

The First Officer (FO) voiced his concerns about the aircraft's position after about 120° of turn. The Aircraft Commander (AC) rolled the aircraft level after approximately 180° of turn, by which time the aircraft was heading back towards Kabul.

At this point the crew planned to regain track by entering a valley on their left and climbing to a minimum safe altitude of at least 12000 feet ASL in order to cross the ridge at the end of the valley. The crew soon realized that that they would be unable to climb to the minimum safe altitude, or even to clear the ridge. The AC decided to carry out a right 180° turn to exit the valley.



The crew became aware of a previously unseen finger ridge approximately 60° into the turn around manoeuvre. This ridge immediately became a controlling obstacle, effectively reducing the valley's width by 50%.

The AC increased the bank angle and the G load until the stall buffet was encountered, at which time backpressure and bank angle were reduced. The aircraft cleared the ridge and exited the valley. The aircraft's flaps remained retracted throughout the turn around.

The crew carried out a climbing right turn over the lowlands West of Kabul before proceeding on course. There were no further incidents on the return leg to Camp Mirage.

The incident is under investigation by DFS due to accident potential and possible human factors implications. ♦



Good Show



CORPORAL WAYNE BEATON

In April 2002, Corporal Beaton was an apprentice aviation technician carrying out his apprentice level training at 12 Air Maintenance Squadron (AMS). While performing a before-flight ("B") check on Sea King CH12404, Corporal Beaton discovered what appeared to be a frayed cable on the main probe haul-down system. Upon further inspection and close examination of the cable assembly, it became evident

that, over time, the cable had become worn and fractured beyond allowable limits. Corporal Beaton immediately initiated corrective maintenance where, once the haul-down cable assembly was removed from the aircraft, it was determined that the internal cable strands were indeed failing. Further broken cable strands were also discovered in an area of cable hidden by the messenger upper threaded end. The cable reel assembly was replaced and the aircraft was returned to service.

Realizing the effect of this cables' failure during sea-borne operation and the difficulty in discovering

similar failures in this obscure area of the cable, Corporal Beaton initiated a local survey of unit aircraft that led to the discovery of a similar failure on another aircraft. As a result of this, it was decided to extend the survey to the tail probe haul-down system cables, where three additional failures were identified. Concurrent to the survey, Corporal Beaton also identified a shortage of replacement assemblies and identified a lack of direction for specific inspection of this high wear area for these cables, which he then addressed through an aircraft inspection change proposal (AICP) and a supporting unsatisfactory condition report (UCR.) Furthermore, on that same morning, while completing the "B" check on the same aircraft, Corporal Beaton identified and rectified a fuel leak that resulted from a hairline crack in a fitting for the combustor drain line.

In both these instances, the discrepancies were very difficult to see and Corporal Beaton's dedication to safety, and willingness to go above and beyond the requirement of a normal visual inspection resulted in the prevention of two potentially hazardous situations. Corporal Beaton's diligence and consistent efforts in ensuring the airworthiness and safety of unit resources are noteworthy, while his attention for detail in performing his maintenance duties goes beyond that expected of his rank. ♦



PRIVATE NATHAN HOLDER

Private Holder is an apprentice level 514 aviation technician, employed in the 12 Air Maintenance Squadron (AMS) component shop. He was tasked to carry out installation of the rigid line assemblies on a CH-124 Sea King main gear-box (MGB). While carrying out critical torque checks and before achieving the required minimum torque, Private Holder heard an unfamiliar click

coming from the fitting. Private Holder made an initial visual inspection of the torque wrench and fitting and found no obvious discrepancies. He continued with the task but, once again, heard another unusual noise. Acknowledging that this was abnormal, Private Holder requested the assistance of an experienced technician. The two technicians discussed whether the click noise was coming from the line seating on the component fitting or some further problem. A number of suspect fittings were removed for

inspection but no apparent faults were identified. Torque wrench serviceability was also confirmed.

As torque checks were commenced for the third time, an accompanying noise prompted the removal of several lines. An in-depth inspection by Private Holder revealed hairline cracks that had developed along the collars of the suspect fittings. He immediately contacted 12 AMS Flight Safety and the lines were shipped to Quality Engineering Test Establishment (QETE) for investigation. QETE consequently identified that the suspect collars failed due to material deficiencies. Had the cracked collars gone undetected, the possibility exists that the lines could have leaked, resulting in the loss of MGB lubrication and potential catastrophic failure.

Pte Holder's positive attitude and prompt actions in bringing this discrepancy to light had multi-fleet and international implications, requiring local contractors to revise their procedures and application of certain types of steel. His attention to detail and his diligence in carrying out his duties were instrumental in the discovery of an unserviceable batch of collars and the elimination of a flight safety hazard. ♦

For Professionalism



MASTER CORPORAL PHILLIP LEWKOSKI

Master Corporal Lewkoski is an aviation technician, working on long-range patrol maintenance flights. On 28 June 2002, while on "B" Crew for an Op Apollo mission, he was conducting an after flight ("A") check on Aurora # 140113. During the "A"

check, he discovered that the forward coordinator control rod on #1 engine was loose with lateral play. Further investigation led to the discovery that the locking wire on the control rod jam nut was broken and the nut was backed off half a turn.

The servicing level inspection schedule requires the technician conducting the "A" check to visually inspect the area. Master Corporal Lewkoski's *physical* check of the control linkage led to the finding of this critical failure. Had it not been for Master Corporal Lewkoski's thoroughness and acute attention to detail, there was a real potential for loss of power lever control. The superior professional attitude and unmatched dedication displayed by Master Corporal Lewkoski eliminated the potential for a serious incident. ♦

**CORPORAL EVEALENA RIOUX
CORPORAL JOEY BAKER**

On 23 May 2003, Corporal Rioux, an experienced precision radar approach (PAR) controller, was conducting a PAR approach on a Shorts 360 to Runway 11 at Comox. The local weather was visual flight rules (VFR) with scattered low-level cloud. When the Shorts 360 reached five nautical miles on final approach, Corporal Rioux requested and received a landing clearance from the aerodrome controller and subsequently relayed it to the aircraft. While the aircraft continued with the approach, the recently qualified ground controller, Corporal Baker, issued a clearance for a Buffalo to taxi for a VFR departure from Runway 11. When the Buffalo pilot requested a take-off clearance, the aerodrome controller did a visual scan of the final approach area and the surface of Runway 11 and, seeing it was clear, issued the clearance and continued with other duties. The Shorts 360 was hidden by cloud and was not visible.

As the Buffalo commenced the take-off roll, the ground controller did a visual scan of the aerodrome and observed the Shorts 360 break out of a low layer of cloud approximately one-half mile from the button of the runway. Immediately, Corporal Baker alerted the aerodrome controller by shouting the term "Overshoot." The aerodrome controller quickly instructed Corporal Rioux to



overshoot the Shorts 360 due to the aircraft on the runway. Instantly sensing the gravity of the situation, Corporal Rioux passed the traffic and instructed the Shorts 360 to commence an overshoot before the Tower controller had finished verbalizing his instructions. The aircraft discontinued the approach and rejoined the circuit to a safe landing without further incident.

Corporal's Baker and Rioux displayed exemplary poise and conduct under a high stress situation and, in so doing, prevented a rapidly deteriorating situation from developing into a potentially dangerous state. ♦



For Professionalism

MASTER CORPORAL PATRICK MCCAFFERTY



Master Corporal McCafferty is an aviation technician employed in the Aircraft Repair Organization at 12 Air Maintenance Squadron (AMS). On 10 April 2002, he was tasked to carry out a fuel system independent check on Sea King #12426. While conducting the inspection, his attention was drawn to the fuel dump intake fitting

located in the #3 fuel cell. Close examination of this assembly by Master Corporal McCafferty revealed that the overall length of the fitting appeared to be excessively long, resulting in the fuel dump intake being closer to the bottom of the fuel cell than intended.

Further inspection and part number verification by Master Corporal McCafferty confirmed his concerns. The part number on the assembly was not referenced in the aircraft system parts list and

should not have been installed in the aircraft. He immediately informed 12 AMS Flight Safety and the Engineering and Projects Organization (EPO) of his findings. The resultant flight safety occurrence investigation (#107842) revealed the subject fitting was an unmodified version of the elbow that is not normally available through the CF Supply System. It could only be cross-referred to the installed item through technical diagrams.

If this fitting discrepancy had gone unnoticed and had the aircraft been in an emergency situation where fuel jettison was selected, the resultant fuel level remaining in the aircraft would have been significantly less than that required to provide the fifteen-minute flight time stated in the aircraft operating instructions. Master Corporal McCafferty is commended for his keen eye for detail, his vigilance in conducting thorough inspections, and his immediate actions in correcting this discrepancy. His professional attitude was instrumental in averting a situation where an air emergency could have degraded and resulted in an air accident. ♦

CORPORAL CHRIS WHEATON

Corporal Chris Wheaton is an aviation technician who works in 12 Air Maintenance Squadron (AMS) aircraft maintenance. On 17 February 2002, he was walking past a cart filled with unidentified equipment that had been removed from a condemned building and was being temporarily stored inside the maintenance hangar. Amongst the old MK 8 torpedo racks, he spotted an SUS MK 411 marked with a yellow band around the bottom circumference of the store. Although Corporal Wheaton is not qualified on the Sea King armament systems and his only armament training was during initial occupation conversion, he realized this would denote a high explosive. Corporal Wheaton carefully approached the cart and positioned himself for closer inspection of the item. Upon careful examination, he noted the store had been cut away and all explosive components had been removed.

Corporal Wheaton immediately brought the situation to the attention of both the senior armament technician and the armament safety officer, who took control of the inert MK 411 for remarking and raised an armament safety alert to highlight the importance of properly marked stores. Corporal Wheaton is commended for his actions in identifying, isolating, and expediting the removal of this potentially dangerous and improperly marked armament. This was an exceptional observation on the part of Corporal Wheaton and his immediate action regarding this improperly marked armament should be an example to all personnel. ♦



MASTER CORPORAL BILL ANGLIN



On 29 May 2002, Master Corporal Anglin was demonstrating a CC-138 Twin Otter pre-flight inspection to an untrained flight engineer (FE). During the autopilot portion of the check, Master Corporal Anglin removed an aircraft fuselage access panel, which is not typically part of the normal pre-flight check. He did this so the FE under training could observe the interaction of the autopilot servo and the elevator control cables. As a result of this act, it was discovered that the autopilot servo was abnormally interfering with the elevator control cable, causing it to lodge and chafe against a component of the servo.

Master Corporal Anglin's professional and thorough commitment to training discovered a hazardous anomaly in the aircraft elevator control rigging. If this danger had not been discovered, it could have resulted in a critical disruption in the aircraft elevator control. Master Corporal Anglin's thoroughness and dedication to duty averted a potentially serious occurrence. ♦

CORPORAL FRANÇOIS HAMEL CORPORAL SYLVAIN FRANK PRIVATE HUGO BOUCHARD

Corporal Hamel, Corporal Frank, and Private Bouchard are aviation technicians working at 433 Tactical Fighter Squadron (TFS) second line maintenance (snags). On 4th March 2003, they were tasked to replace all the shielded mild detonating cord (SMDC) lines in Hornet #188917. At the end of their second day changing SMDC lines, a small clang was heard while closing the aircraft canopy. Despite a long working day, Corporal Hamel, Corporal Frank, and Private Bouchard decided to investigate this anomaly.

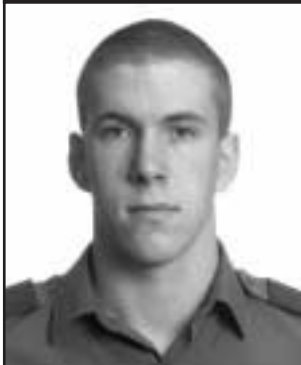
After close inspection, Private Bouchard and Corporal Hamel noticed that the lower portion of the canopy actuator support bracket was cracked and broken. Parts were also missing from this bracket. They immediately initiated and carried out a foreign object damage (FOD) check for the missing parts. Four sheared bolts and four rivets were found behind the left and right kick panels. It is likely these parts migrated to this position over time. The main beam upper mounting-point bolt for the rear seat was the only connection holding the canopy actuator and bracket in place. The snags supervisor was informed of the situation and a flight safety investigation (FSIS # 111425) was initiated. The main beam was sent to the seat shop for further investigation.



Without the professional approach and perseverance of these technicians, this problem could have gone undetected because of the visually awkward location of the support bracket. Since the main beam is not designed to withstand the stress that is normally borne by the canopy support bracket, a structural failure was inevitable. Careful attention to detail, vigilance and quick reaction to the situation certainly contributed to eliminating a serious threat to the safety of the aircraft. It is highly probable that a significant flight incident was prevented because of the diligence of Corporal Hamel, Corporal Frank and Private Bouchard. ♦

For Professionalism

PRIVATE CHRISTOPHER DUNBAR



On 10 December 2001, Private Dunbar, an aviation technician at 12 Air Maintenance Squadron (AMS), was a member of the start crew for the launch of Sea King aircraft CH12414. The start-up sequence was normal and, during the blade spread and landing gear pin removal sequences, the ground crew carried out a detailed external

check of the aircraft. Private Dunbar elected to give a final once-over before pulling the chock as the aircraft prepared to taxi. It was at this time that he noticed a tiny trickle of fluid coming from a compartment drain hole between #2 engine and the main gear box (MGB) fairing. Although drainage from water accumulation in this area is not uncommon, he noted the higher viscosity and brought the matter to the attention of a more senior member of the start crew. The #2 engine and main rotor were secured to investigate and an oil leak was identified from the #2 torque meter assembly on the starboard side of the MGB. The aircraft was shut down to repair the problem.

Initial inspection pointed to a pressure inlet fitting on the #2 torque meter housing, but further investigation revealed that the oil inlet pressure line was cracked through two-thirds of the flares circumference. The line was replaced and the leak check was carried out serviceable. Had this gone undetected and the aircraft continued with the mission, the crack might well have continued to propagate around the tube, resulting in complete failure of the line. The resultant massive loss of MGB oil would have led to a rapid decrease in MGB oil pressure, leaving the aircrew with minimal time to find a suitable landing area and carry out a safe recovery. A similar incident resulted in the loss of twenty litres of MGB oil and, due to the design of the system, no corresponding cockpit indications.

Private Dunbar's keen attention to detail and his immediate recognition of a possible hazard were instrumental in averting what could have developed into an emergency situation. Despite his limited experience on the aircraft, Private Dunbar displayed a timely sense of judgment that was critical in dealing with this unusual situation. He is commended for his decisive actions. ♦

MASTER CORPORAL PAUL TUFF

Master Corporal Tuff was tasked to carry out a routine before flight ("B") check on Labrador helicopter # CH113306. During his checks, he noticed that there was excessive play in one of the forward blade pitch links. Knowing that this was not normal, he decided to assess further. His detailed inspection revealed that the wrong bearing had been installed in the lower end of the pitch link, where it connects to the swash plate. This situation had gone undetected through several quality, aircraft, and flight engineer pre-flight checks.

Master Corporal Tuff consulted technical orders, which confirmed that the bearing actually belonged to the slide scissors, which is also part of the swash plate. Master Corporal Tuff went further by checking all other pitch link bearings on the aircraft for proper bearing installation. His actions prompted a unit flight safety maintenance alert

to be published to ensure that all aviation technicians were aware that a wrong bearing could be installed in the blade pitch link.

The results of this error could potentially have caused catastrophic damage to the aircraft. Master Corporal Tuff's initiative, diligence, and superior technical knowledge prevented a potentially serious flight safety occurrence. His actions exemplify an outstanding attitude toward the flight safety program. ♦



CAPTAIN BRIAN OLSVIK

On June 3, 2003, Captain Olsvik was the duty air traffic controller at 12 Wing Shearwater. He was providing control instructions to a recently qualified civilian Cessna pilot, who was conducting left-hand circuits to runway 28. At the same time, Halifax Air Traffic Control (ATC) advised Captain Olsvik that two German Air Force MRCs, which had departed Halifax International Airport enroute to Goose Bay, were requesting to over fly the city of Halifax at 1500 feet. Halifax ATC also advised Captain Olsvik that the two fighter jets would be skirting the Shearwater control zone to the west and assured him that he would be advised if/when the aircraft would enter Shearwater's control zone.

As the Cessna 172 departed runway 28 for a 1200-foot circuit, the inexperienced pilot noticed what she thought were large birds at the same altitude in the left crosswind. Captain Olsvik, already trying to ascertain the location of the MRC jets, quickly realized that they were well within the Shearwater control zone without approval and on a potential collision course with the Cessna, who was about to

turn left crosswind. As Captain Olsvik did not have radio communication with the MRCs, he promptly and calmly instructed the Cessna to commence a right turn to a right crosswind.

The MRCs passed within 1000 feet laterally and with an estimated 300 feet vertical separation from the Cessna.

Had the Cessna continued with the standard left-hand circuit, the potential for a mid-air collision would have been amplified. Captain Olsvik's acute ability to quickly assess the situation and provide excellent conflict resolution ensured the safety of both the civilian and MRC pilots. Captain Olsvik's keen situational analysis, his swift reaction to the situation, and his calm demeanor averted what could have been a tragic air incident. ♦



CORPORAL KEVIN ROWAN

On 5 March 2003, Corporal Rowan was monitoring a trainee in the ground control position at the 4 Wing Cold Lake air traffic control (ATC) section. The weather was marginal, with snow on the ground, and snow removal was in progress on the aerodrome. At the time of the incident, the snow and ice control (SNIC) foreman was on the button of runway 04 waiting to do a James Brake index (JBI) test of the runway. The JBI test would involve driving down the length of the runway and making ten stops enroute, in order to determine a coefficient of friction value. This run had to be made without interruption.

Two aircraft were on IFR approach to runway 31R, which intersects with runway 04. The aerodrome controller intended to have the ground controller approve foreman's crossing of the intersection,



once the first aircraft passed. As the aircraft approached the threshold, the aerodrome controller told the ground controller trainee to start foreman on his JBI run on runway 04. Unfortunately, he failed to indicate that he wished the foreman to hold short of the inner runway. The trainee, following the order of the aerodrome controller, complied. Corporal Rowan, knowing that the aircraft was still on approach, and realizing the requirements of the SNIC foreman, recognized the potential for conflict, intervened and queried the aerodrome controller as to the clearance. Realizing that he had told the ground trainee to start the foreman's run without a "Hold short of runway 31R" restriction, the aerodrome controller revised his instruction and had the foreman hold short.

Although responsible for ground traffic on the aerodrome, Corporal Rowan also maintained an awareness of the traffic being controlled by the aerodrome controller. In so doing, he was able to recognize a confliction and take the appropriate steps to avoid a potentially serious flight safety incident. His attention to detail and his professionalism highlight the crew concept of ATC operations. ♦



Letter from the Editor

In the summer 2003 issue, in an article titled "Air Force Flight Safety Training," there was a reference made to Group Commander "Dutch" Schultz. As editor, I should have verified his nickname and his title, which I didn't do. After it was brought to my attention, I made an attempt to locate the source of the nickname and I found no such reference. I would like to set the record straight and let the readers know that the use of both the title "Group Commander" and the nickname "Dutch" was inaccurate. I apologize to both you, Group Captain Schultz, and to the readers. ♦

*Captain T.C. Newman
Editor*



from the Flight Surgeon

All eligible CF members may now receive progressive bifocal glasses as part of their entitlements. Progressive lenses are still *not authorized for use by pilots in flying duties*, as there are significant visual distortions in the transition zone of the lens. While pilots are entitled to wear these progressive glasses off duty, it is not recommended, as the transition from progressive lenses at home to bifocal lenses at work is significant as the human visual system is not able to adapt instantly. This process could take several weeks. As well, should pilots opt for progressive glasses at CF expense, they would be individually responsible for the costs associated with obtaining bifocal lenses for their flying duties. Should you have any questions, please contact your Flight Surgeon. ♦

