National Defence / Défense nationale

FLIGHT COMMENT

4/1997

Canada

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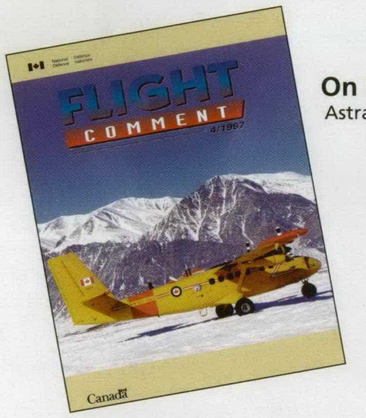

On the Cover: 440 Sqn CC138 near the Ad Astra ice cap. Photograph by Captain M. Evans

Editor's Comment:

The article *“SSSSSSSmokin’ **** Is Flight Safety Universal?”* printed on page 8 in issue 5&6/1996 has caused concern as it was taken by some to be a negative comment on the professionalism of the Portuguese Air Force. This was certainly not the intent of the article. Rather, it was intended to illustrate to Canadian Forces personnel that, when deployed, they should not always expect other countries to apply the same flight safety practices that we do in Canada and that constant vigilance is required to protect our valuable resources. Any possible embarrassment to the members of the Portuguese Air Force was unintentional and regrettable. ◆

FLIGHT COMMENT

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The Best Pilot Syndrome

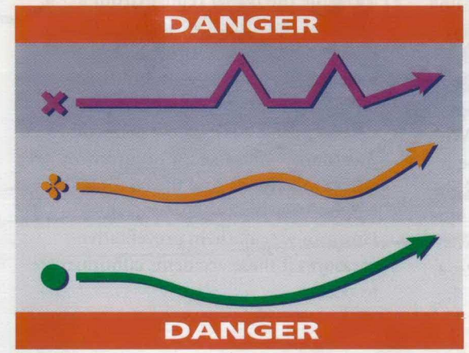
By Capt Pete Taylor and reproduced by the permission of “Approach” Magazine(issue November 1989). Capt Taylor was the Force Safety Officer, COMNAVAIRLANT, NAS Norfolk, VA. He previously was Aviation Safety Coordinator for OP-05F, Washington D.C. He’s an A-7 pilot and former LSO and Air Boss.

Many mishaps in Naval Aviation are attributed to pilot error. Most of the time we can relate this error to inexperience, lack of proficiency, lack of situational awareness (what an overused buzzword) or some other malaise that infects less-talented pilots (you know, the bone heads).

Much too often, the CO’s comments on his MIR endorsement will read, “This mishap is a travesty. LCdr. Sierra Hotel excels in all facets of airmanship. He is the most talented and best pilot in the squadron.”

If he’s so talented and SH, how come his name appears on the marquee as “the guy who dunnit”?

Here’s one scenario. Let’s start with a Vn diagram of pilot dynamics in a squadron at the beginning of the turnaround cycle. The “best pilot” or “his self” (X) starts way ahead of the pack. Skill-wise he’s already there; he just has to tweak and peak.



The average pilots, the “dust balls,” ✤ start somewhere in the middle. They’re weak in some areas, better in others. They change relative positions as training progresses and are watched to ensure no serious trouble spots occur.

The weak pilot (●) is identified quickly, and he is monitored very closely. He is given an extraordinary amount of attention. The weak pilot seems to run the greatest risk of having a major mishap...maybe! He’s selectively scheduled with a strong leader. We ensure that his admin burden isn’t too great so he can concentrate on flying; we fly him extra day traps before he has that night go, and so on. Most of the time he responds positively, and while he probably will never develop into the “ace of the base,” he becomes a productive squadron member.

The “dust ball” also progresses nicely. He may fall down in some areas, but with proper coaching, he picks himself up and becomes the soul of the squadron. These two pilot categories interrupt more sleep, ready room movies and slider times for COs than attack pilots shagging three wires over his stateroom.

Now we get to the “best pilot.” He never gets much attention “cause we’re worried about the other guys.” He’s the best. The squadron knows it, he knows it and he thrives on it!

As time passes, the rest of the squadron improves and climbs away from the lower danger zone. Boarding rates improve, the bolter pattern becomes a thing of the past, and more green is displayed on the “greenie board.” It’s tough to win an engagement off the new guys, and CEPs get tight. The JOs flash around newly won beer-bet chits with “his self’s” name on them — in public! The skill gap on the “best pilot” is closing; both his prominence and ego are threatened.

The “best pilot” has been flying at the narrow edge of the envelope throughout the training and doing it well. He’s been by himself at the top and is expertly familiar with all envelopes and just how far to press this marriage of man and machine.

To reestablish the perceived loss of prestige, “his self” begins to exceed these envelopes, spiking into the upper danger zone. He must keep the gap between himself and his buddies for ego’s sake. Pullouts on weapon runs are lower, pressing for that good hit, 200-foot low levels at 100 feet or less; the 500-foot bubble shrinks to the “dust-off” mode, the gear handle is up as soon as the indexers come on — maybe the flaps, too.

Possibly a canopy roll or two slip in there. The margin for error is decreasing. Most of the time, “his self” gets away with it. When he doesn’t, a Class A might happen.

COs, pay attention to the signals, ready room talk, Junior Officers Protective Association (JOPA) and other sources concerning “best pilots” and their endeavors. They need timely TLC as much as the weaker pilots, but their signals are much harder to detect. ◆

Preventative Measures: Are we there yet?

A moderately challenging day in May, 70 degree crosswind, 13 gusting 22 knots, and no.3 of a four plane formation rolls onto final approach after the pitch out from a normal cross country deployment to the United States. With less than ideal technique, the pilot lands his hornet with more crab into wind than recommended, and immediately feels a directional control problem with the aircraft pulling toward the left. With a master caution, and cockpit indications of a planing link failure, the pilot selects emergency brakes, and provides a smoke show for the locals as he skids through a few "S" turns and eventually stops 90 degrees off runway heading. With pilot-technique cause factors, the preventative measures debriefed the proper crosswind landing technique to the incident Hornet Pilot as well as the rest of the squadron pilots; a viable, but **reactive** solution for the incident squadron.

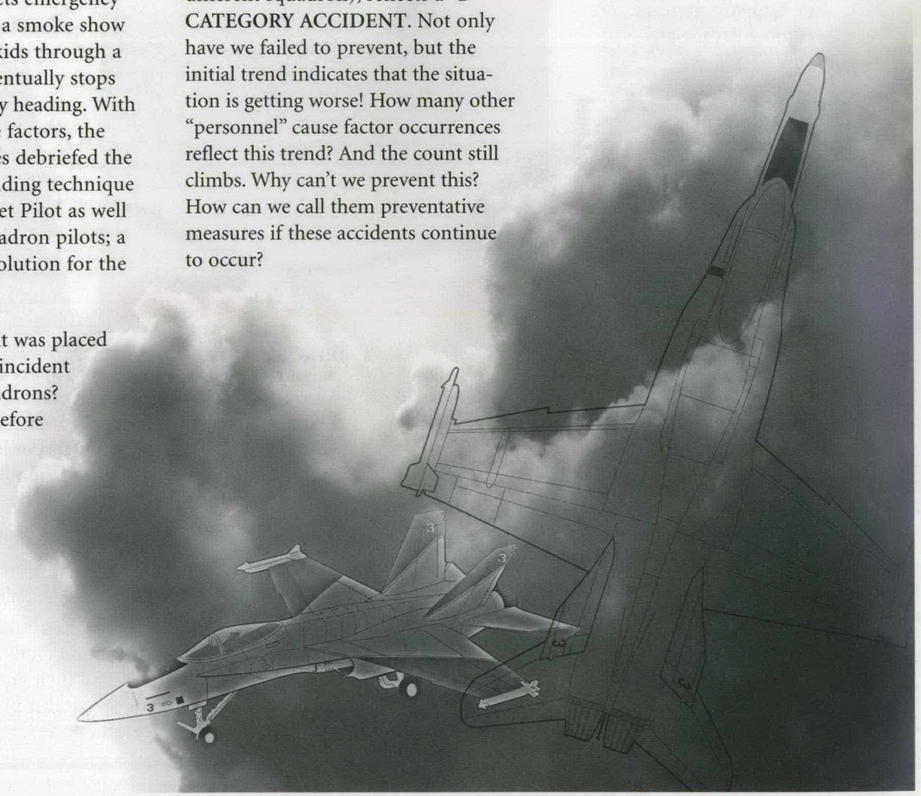
But how much weight was placed on this "D" category incident by sister Hornet squadrons? How long will it be before this happens again?

For that matter, how long has it been since the last time this happened? We say, — there are those that have, and those that will — but is this really the right attitude? Preventative measures will not stop accidents until we highlight them accordingly, and revisit them frequently.

Now, as this article is written, 5 months after the above occurrence, another hornet lands in the States, in a crosswind, and departs the runway; but this time the initial report (from a different squadron), reflects a "B" CATEGORY ACCIDENT. Not only have we failed to prevent, but the initial trend indicates that the situation is getting worse! How many other "personnel" cause factor occurrences reflect this trend? And the count still climbs. Why can't we prevent this? How can we call them preventative measures if these accidents continue to occur?

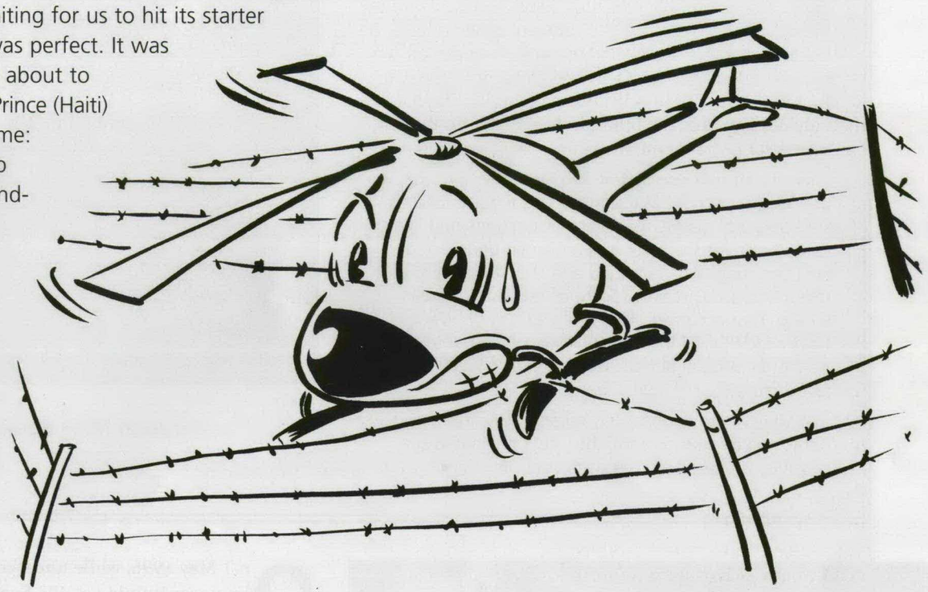
The truth is preventative measures are tools which must be used and re-used. Ironically, although they are at the end of the occurrence report, they are the beginning of a safe operation. Preventative measures are the most important part of any flight safety program. Regardless of our part in the flight safety process, we must hold them in the highest regard. When preventative measures are forgotten, accidents are remembered. ◆

anonymous



Expect the unexpected … Electrical Barb-Wire?

The crew and passengers were briefed, the weather was as good as it could be, the Twin-Huey was ready and waiting for us to hit its starter switch; everything was perfect. It was 1500h and we were about to go back to Port-au-Prince (Haiti) to our temporary home: United-Nations camp Canargus. After spending a few hours at one of the biggest orphanages in Haiti it was time to fly down that 9000 ft mountain and head her back.



So we took off, circled the camp twice to allow the camp photographer that we had onboard to take a few shots, and off we went. The camp was approximately 10 nm from our position, a very short trip. We elected to fly down the same valley that we took the day before on our recce trip. Altitude: 400 ft, Heading: east. ETA: less than 5 min, T's and P's in the green...then Bang!...What the heck was that? The aircraft captain replied: I think we just hit a wire...

He was right, we just did. Yes, at 400 ft AGL, in a valley that we were using for the past four months, a valley that was recced often, and once just the day before!

The aircraft was landed as soon as possible at the closest suitable area: the airfield at camp Canargus. After we shut down, we realized that it wasn't just a wire, but a 63 ft long segment of barb-wire (!) that was entangled around the rotor! It was later discovered that the local population of one side of the 600 ft wide valley were using this "wire" to steal electricity from one side to the other.

This is definitely not something that one would expect. Today, almost a year went by and as I analyze the situation, there was not much that we could have done to avoid this incident.

As a pilot, I know that it is common to think that accidents only happen to the other guy. This is not always true. Unfortunately, sometimes you become someone else's "other guy". Still, there is one thing common to all accidents; they always occur when you don't expect them. ◆

anonymous

Cpl Marcil, an Airframe Technician with 434 (CS) Squadron Greenwood, was performing a "B" check on a CC144 Challenger when he noticed a peculiarity in the main landing gear wheel well area.

He observed that the left main landing gear shock strut upper attachment pin was protruding outboard slightly. Upon further investigation in this very confined area, he discovered that the attachment pin locking clip on the inboard side of the strut was separated from the pin thus providing no safety value. Recognizing the seriousness of his finding, Cpl Marcil immediately notified his supervisors who raised an aircraft occurrence report.

This aircraft had flown over 100 hours since it's last periodic inspection. Throughout this time numerous servicing and quality assurance inspections had been carried out yet this fault had remained undetected. Had this condition continued and the attachment pin fallen out, catastrophic failure of the landing gear would have occurred. As a result of this discovery a fleet wide Special Inspection(SI) was initiated and several additional aircraft were found to have the same fault.

Cpl Marcil's professionalism, outstanding attention to detail and dedication to flight safety prevented the possible loss of an aircraft and crew. ◆

Corporal Mike Bernleithner

Corporal Paul Marcil

On 1 May 1996, while undergoing Flight Engineer training at 403 Squadron Gagetown, Cpl Bernleithner was tasked to pre-flight a Griffon helicopter. During the pre-flight he discovered that the number two tail rotor aft hangar bearing assembly retaining bolts were only finger tight.

The aircraft had recently undergone a 300 hour inspection at another squadron. Since this inspection the helicopter had flown several training missions with 403 Squadron and it is probable that during these missions the bolts worked themselves loose. The coupling was in danger of failure and would have led to immediate loss of tail rotor authority and damage to the combining gearbox compartment.

Cpl Bernleithner's professionalism and acute attention to detail prevented a possible catastrophic occurrence with the loss of a valuable aircraft and crew. ◆

The Pilot who Rode One In...

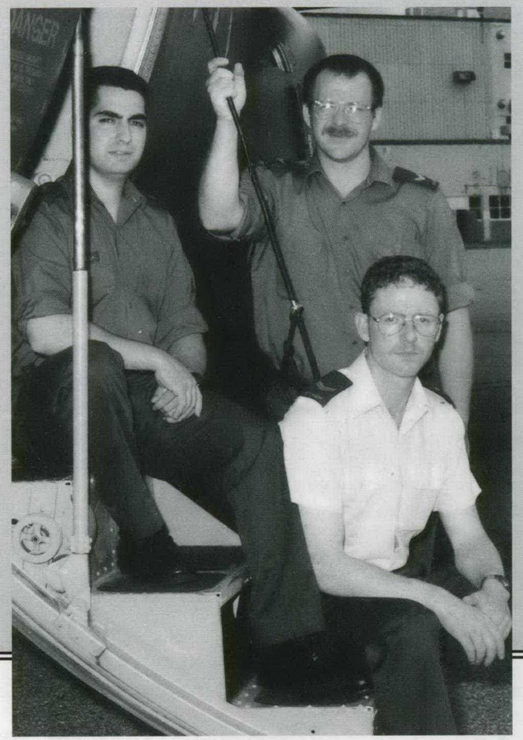
We should all bear one thing in mind when we talk about a pilot who "rode one in."

He called upon the sum of all of his knowledge and made a judgement. He believed in it so strongly that he knowingly bet his life on it.

That he was mistaken in his judgement is a tragedy, not stupidity.

Every supervisor and contemporary who ever spoke to him had an opportunity to influence his judgenment, and so a little bit of each of us goes with every pilot we lose. ◆

from Avaition Safety Vortex 1/97 –
Author Unknown

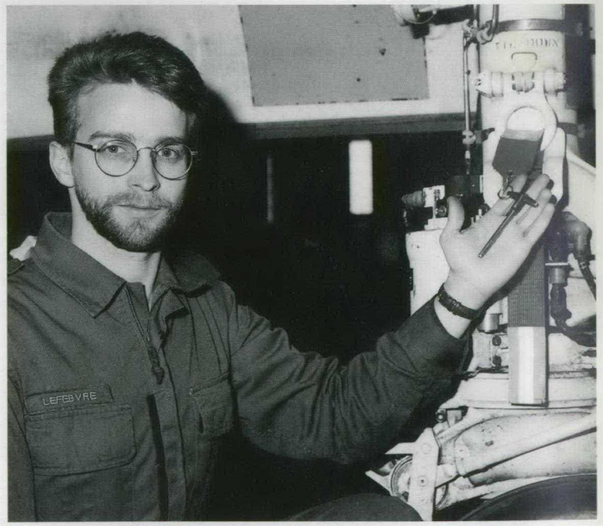


Corporal Tristan Grech
Corporal Serge Hamel
Corporal Peter Stryde

Cpl Grech, Cpl Hamel and Cpl Stryde were refuelling a CC130 Hercules when the refuelling hose broke completely soaking the fuel truck driver and spilling approximately 100 litres of fuel on the hot cement ramp.

When the hose broke the aircraft and external power were immediately shut down and the Wing Fire Department was notified. The technicians then worked to contain the fuel spill and take the fuel truck driver to the nearest shower facility. By adhering to all safety precautions laid out in Squadron Orders and 14 Wing's Emergency Response Plan the three technicians contained a serious situation.

Cpl Grech, Cpl Hamel and Cpl Stryde's professionalism, alertness and expeditious response prevented personal injury and averted a possible catastrophic occurrence. ◆



Corporal Richard Lefebvre

While carrying out an after flight check (A Check) on a CF18 Hornet, Cpl Lefebvre, an Instrument Electrical Technician at 3 Wing Bagotville, noticed something unusual on the nose wheel oleo of an adjacent CF18 that was pulling out of the line. He attracted the pilot's attention who brought the aircraft to a stop.

Inspection revealed two "wing lock pins" neatly rolled inside their red flag and positioned under the left nose gear oleo tie down ring. The pins had been incorrectly stored from a previous inspection and should have been detected during the pre-flight inspection and walk around. There was significant potential for damage to the aircraft from the two pins being dislodged due to airflow or cycling of the landing gear.

Cpl Lefebvre's outstanding vigilance and timely action prevented a potentially serious incident. ◆

Corporal Chris Connolly

Cpl Connolly, an Airframe Technician with the Canadian Contingent United Nations Mission in Haiti, was updating the service records of a CH135 Twin Huey when he noticed that the inspection time and the installation time of one of the engines were identical. After verifying the information, he discovered that in actuality the engine was 129.6 hours past it's #4 Periodic Inspection(PI).

Cpl Connolly immediately informed his superiors whereupon the aircraft was grounded and the inspection carried out.Cpl Connolly prepared the documentation for the unscheduled PI and because of the fact that the aircraft log sets were inconsistent he, on his own initiative, set up a data base to track lifed components to aid Servicing and Supply. Although primarily employed on the PI crew, he worked extensive overtime verifying aircraft log sets for correctness.

Additionally, he also acquired and actioned all outstanding CFTO amendments which were still being sent to Edmonton and not Haiti, initiated the disposal of a complete CH136 Kiowa library sent to Haiti and liaised directly with the US Air National Guard for spares thus expediting aircraft repairs.

Cpl Connolly's professionalism, dedication and attention to detail are indicative of an exceptionally high standard in his approach to flight safety. ◆

Corporal "Buff" Howard

Cpl Howard, an Armament Technician at 14 Wing Greenwood, was observing the sequence of events of co-workers who were conducting engine fire extinguisher functional check training on a CC130 Hercules aircraft.

Although all indications were normal and in accordance with the functional check list, Cpl Howard, through knowledge gained on his recent AVN OSS course, observed an anomaly with the position of the engine prop feather override switch which was not part of the functional check. Normally, when the fire handle is pulled, a circuit is completed that activates the feather pump which automatically feathers the propeller. In this case the switch failed to properly indicate this sequence had occurred. Following his observation he contacted his supervisor who referred this observation to a 413 Squadron trade specialist. The fault was isolated to the feather override switch.

Cpl Howard's professionalism, dedication and attention to detail prevented a potentially serious flight safety occurrence. ◆

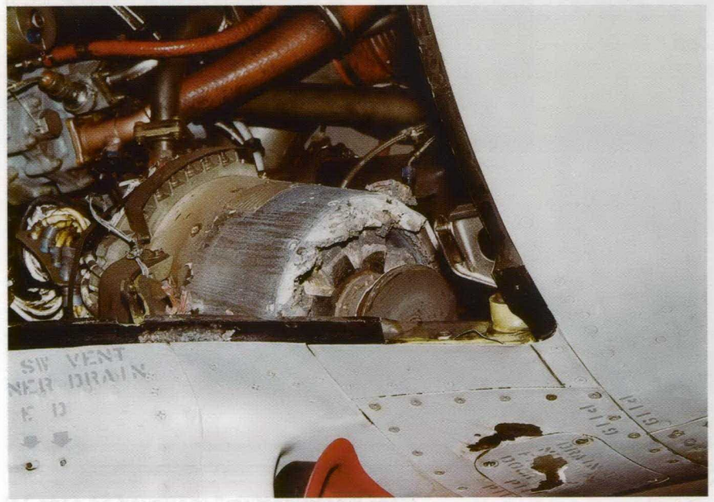
("For Professionalism" continued on page 14)

Going by the Book, Does Not Guarantee SUCCESS – Every Time

Paragraph 8 of the Incident message states: "No. 3 Generator Feeder Fault – No 3 Gen Off Light Illuminated. Reset procedures carried out which indicated a No. 3 generator feeder fault. Closely monitored as operation continued. (All by the book) During turn around in Winnipeg, an abnormal odour was detected using ground air conditioning. (Some 2 hours after the initial fault) This was rectified by dumping the Right Hand Engine Driven Compressor (EDC). Aircraft landed Comox without further incident. (Until they opened the No.3 engine cowling)

Here is the story told by the Aircraft Captain in the hope that others may learn from his experience.

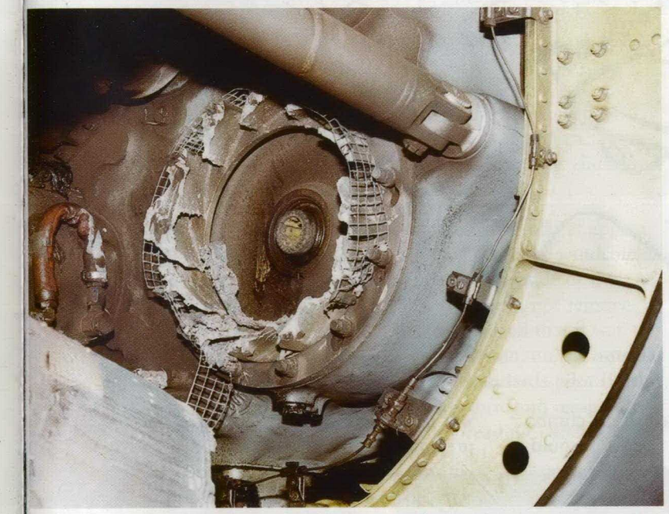
What appeared to be simply a non-threatening malfunction of a highly redundant aircraft system slowly developed into a serious failure with very ambiguous warning signs, the full danger of which was not apparent to us until after we arrived at our final destination several hours later. If the incident had been a Flight Deck Simulator scenario, scenario, schemed up by an overzealous instructor, I would have screamed "foul!" during the debrief. How plausible is a situation involving the severe disintegration of an aircraft component that has no history of doing this and gives no serious warnings in the cockpit, which in turn causes another malfunction of a totally unrelated system a few hours later, all of which remains unannounced by the appropriate fault detection system? Quite possible, as it turns out. Here is the emergency we didn't know we had:



We cleared the Maritime frontal system shortly after departure and the weather remained CAVOK thereafter to the West Coast. Not long after visually on-topping Quebec City the ELECTRICAL POWER master caution light illuminated. A quick scan revealed that the GEN 3 OFF caution light was the culprit. Not too serious. The Generator Reset Procedure was carried out which indicated a possible feeder fault on generator #3. Just to be certain, we reaffirmed the Reset Procedure with reference to the AOIs, Part 3. The feeder fault was confirmed shortly thereafter when the FE examined number 3 sup. panel in the MELC. The follow up for a feeder fault is "continue engine operation". Generator #4 had assumed the load, so the crew and I felt comfortable continuing; no problem unless another generator fell over. Still, I noted that the last time I had encountered a feeder fault, the procedure had been "Emergency shutdown unless a greater emergency exists": we had RTBed on three engines that time. I couldn't recall the background for the change in procedure.

We arrived at our enroute stop uneventfully in frigid clear Winnipeg weather to drop off our pax before continuing on to Comox. We only shut down engines #1 and #2 and started the APU to provide ground Air. We considered a complete shutdown to inspect #3 engine and generator, but after some discussion decided that this would be unproductive. What could be seen? We assumed the generator was mechanically sound as the GEN bearing light had not illuminated (it wasn't burned out either) and it was a punishing -35 degrees C outside with a windchill of -50 or lower.

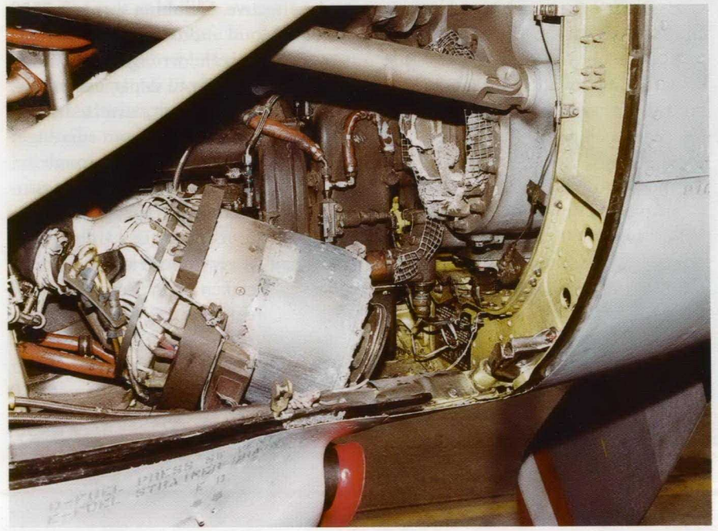
After restarting #1 and #2 we commenced the taxi to the active runway during which we detected an abnormal odour in the cabin. We started a search for the source which turned up nothing. The odour was not alarming, ie: not burning or electrical, but certainly not normal. It was finally isolated when the ground air conditioning was turned off, and abated. The EDCs showed no signs of malfunction, leading us to believe there was a possible heat exchanger or fan problem. If a fan had failed it would be replaced by ram air in flight in any case. To this point, nothing was serious enough to make us believe it might be hazardous to continue nor did the evidence correlate as a single problem. We had excellent weather, a light aircraft and a quiet airport, therefore the crew and I felt that if a serious failure manifested after take off, we could hastily recover in Winnipeg with minimal difficulty.



Unfortunately the odour returned on climbout. Levelling at 10,000 feet, we dumped each EDC individually in an attempt to isolate it, while backup planning for a return to Winnipeg began. Although the EDCs continued to indicate normal operation the odour dissipated rapidly after dumping EDC #3, which again we felt signified an air conditioning snag. We were not particularly concerned about single EDC operations, so we climbed and continued uneventfully to Comox, carefully monitoring the MEAs and GASAs in case the second EDC took a vacation.l

We were astonished to discover the amount of damage to #3 engine when the cowls were lifted on the A check, severe enough to require a QEC: the SR for this incident provides an excellent description of the gory details. Suffice it to say, it seems unbelievable that there was not a fire warning.

Although we believed that we were doing everything correctly, I have since asked myself a lot of questions regarding how we dealt with the situation. Were we lucky the outcome wasn't worse? Maybe. Were we negligent? No. Could we have been safer? Yes. At no time did I feel pressure that it was necessary to continue on to Comox, but neither did I feel compelled to accept the inconvenience of shutting down in Winnipeg for an inspection that seemed unwarranted based on the fault indications. What I didn't address and suppressed reaction to, was the uneasiness that these indications created while they remained unresolved. These types of previously unseen and seemingly implausible failures are appearing more frequently of late. What I learned as a result of this experience is that although there may not be lights and sirens going off in the cockpit, you may still want to listen to the ones in the back of your mind when the facts of the situation just don't add up".



One way of viewing AOIs is that they are an accumulation of lessons learned over the life of the aircraft. What this crew experienced was outside that experience databank. Their handling of the emergency IAW the established procedures did not achieve the expected result. When you are outside the experience databank and if things do not seem right, use the most conservative approach. The last line of the Captain's story sums up the situation very well. Our thanks to this AC for sharing his experience that we all can consider how we might react in similar situations. ◆

"VFR in IFR Conditions – Poor Risk Assessment"

A training flight on a VFR day had been planned from Cranbrook, B.C. to Abbottsford, BC. However an IFR clearance was required to execute a safe approach and departure at Cranbrook. An IFR flight plan had been filed well over an hour before departure. IFR airways were requested from the FSS after start-up. The FSS operator replied that they were expecting several scheduled commercial arrival and departures at Cranbrook. The crew was informed that up to an hour and one-half delay may be expected to accommodate the commercial traffic. A full day of training had been well planned and the entire crew was keen to start the day. The FSS was informed a VFR departure would be utilized followed by picking up the IFR clearance airborne.

After a VFR departure to 7000 feet MSL, ATC was contacted and the clearance was received: "Expect clearance overhead the Cranbrook VOR". The VOR was about 20 miles away and in mountainous terrain. A min safe altitude of 10000 feet MSL was required overhead the Cranbrook VOR (YXC). That safe altitude was over 3000 feet through an overcast layer. After the controller was explained the dilemma we were cleared to the YXC at 10000 feet. It was expected that the published departure procedure could be followed, however inbound IFR traffic conflicted with the procedure. The appropriate VFR map was consulted and it was determined that a climb while proceeding to the YXC would keep the aircraft clear of obstacles. The aircraft was placed in a good climb through the solid overcast layer. During the climb the validity and safety of this impromptu departure procedure was silently questioned by both the pilot and co-pilot. A mutual discussion about the MEA arouse and 14000 feet MSL was decided upon. As the aircraft climbed through 10400 feet the navigator queried our clearance altitude (which was 10000 feet) and an immediate descent to 10000 feet was commenced. After calling level the aircraft was cleared to 14000 feet and the remainder of the training was completed that day.

The departure did not have a disastrous outcome although a great risk was taken. There was an imagined pressure to continue the mission without delays. A departure procedure is sometimes complicated and takes time and planning to be safe and effective. Climbing through 7500 feet in cloud and near 10000 foot mountains is the wrong time to question an impromptu departure procedure. This uncertainty diverted the pilot's attention away from aviating, causing the aircraft to fly through an assigned IFR altitude. The entire procedure placed the crew at great risk and was unnecessary in a training scenario. A very poor risk assessment was undertaken by the Aircraft Commander resulting in a faulty decision to continue the flight into IMC conditions while training. ◆

anonymous

Tow Plane and Glider – Happy Landings

This story took place during the Air Cadet Gliding Program Spring Pilot Proficiency check-outs. The tow aircraft, a Cessna L-19 Birddog, was being flown by the region`s check pilot, who was receiving his Spring proficiency checks from a Standards pilot attached with the Regional Cadet Air Operations Officer`s staff.

The L-19 was flown the first hour doing air-work proficiency checks and touch-and-go circuits. The next phase was dual check-outs on towing gliders. The first glider tow to 2000 ft AGL proceeded normally.

It was on the second tow, shortly after take-off (at approx 100 ft AGL) that the tow pilot noticed that the windshield appeared to be fogging up. He wiped the inside of the windshield with his gloved hand, but could not remove the "fogging" — it was then that he realized that it was **OIL**, not fog, that was obscuring his vision, on the outside of the windshield. He informed the Standards pilot (in the rear seat) of this, checked the oil pressure and temperature instruments (normal, unfluctuating reading), and immediately informed ATC of his situation.

Since there was a glider in tow, at low altitude, and the area below and ahead were unsuitable for release and glider landing (parked aircraft, fence & trees), the towpilot informed ATC of his intention to continue climbing and initiate a right turn so as to position the glider for a downwind release. At approximately 600 ft AGL, the glider released on the downwind leg. The towpilot reduced throttle to idle and descended for a landing on the approved grass strip (used as the gliding operations area). After landing, he taxied onto the hard surface runway (so as to allow the glider to land) and shut down the engine. Airport emergency crews responded to the towplane, checked the situation, and departed when it was apparent that there was no further danger.

Investigation into the cause of the oil leak revealed that the front hub oil seal was a 2-part felt pack seal, and that half of the packing had become pulled out, allowing oil to escape under pressure, which was then thrown back onto the windshield. It was replaced locally by an AME using a one-piece rubber seal.

The towpilot`s actions of continuing to climb to a higher altitude, and safer glider release area, instead of releasing the glider immediately, resulted in the safe recovery of the glider and it`s two crew. There was no immediate danger of the engine experiencing oil starvation — as per monitoring the engine instruments — and the tow plane was also recovered safely. ◆

Aircraft Occurrence Summary

DFS 97/01

Type: CH11307

Location: Oyster River BC (16NM NW of Comox)

DATE: 13 Jan 97

Circumstances

CH11307 had been tasked by Victoria Rescue Coordination Centre (RCC) to search for a missing person in the vicinity of Mitlenatch Island, 16 nm north-west of Comox. At approximately 1240 hours (all times local) RCC stood down the mission when the missing person had been located. The Aircraft Commander (AC) elected to take advantage of the presence of the Coast Guard Vessel POINT RACE, also involved in the search, to conduct some boat hoist-training.

At 1306 hours as they circled above the POINT RACE setting up for the hoist, the lead Flight Engineer (FE) reported a strong smell in the cabin. He noticed that the smell was stronger towards the aft and went to investigate. The smell was getting stronger and it was accompanied by smoke. Immediately, the AC directed the First Officer (FO) to fly towards the nearest landfall. The FE opened the rear upper hatch to ventilate the cabin, but afraid that it was only feeding the fire he closed it again. The smoke became thicker so he re-opened the hatch. At that time massive smoke, sparks and flames were reported to the AC.

Upon hearing this, the AC ordered the crew to prepare to ditch. The FO began a distress call to Comox Tower as the generators and all unnecessary electrical equipment was being turned off. The AC then took control of the helicopter and slowed it down to land on the water at 1308 hours. After ditching the crew egressed the aircraft uninjured and climbed into a life raft which had been deployed by the SAR Techs. Fearing that the helicopter may roll over onto them or explode, they began to paddle away. they were almost immediately picked up by the POINT RACE.

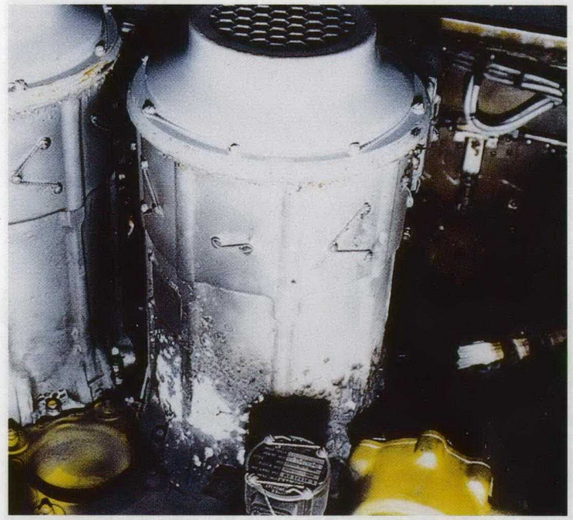
Investigation

The aircraft remained upright in the water and was towed to the shoreline where it was lifted onto a barge several hours later. It was then transported to 19 Wing Comox via the barge initially and then by road. The ditching caused no fuselage or structural impact damage but most of the other aircraft systems were damaged by salt water corrosion. Damage has been assessed as B Category and the aircraft has been shipped to Boeing Arnprior for repairs. Subsequent investigation by DFS and Quality Engineering and Test Establishment (QETE) revealed that the No 1 generator had sustained a catastrophic failure when the drive-end bearing failed.

DFS Comments

Records indicate that there have been 15 mechanical generator failures dating back to 1980. All the failures have involved the "dash 1" and "dash 2" versions of the generator. The last two incidents having occurred in Trenton and Comox in 1993 and 1994 respectively. All "dash 1" and "dash 2" generators have been removed from service and replaced with the "dash 3" version. It appears that although recommendations were made by QETE in 1980 and 1994, follow up action has been lacking. DAEPM (TH) is currently investigating the situation to determine where the problem exists. We were indeed fortunate that the outcome of this accident did not have more serious consequences. ◆

Maximum submersion point of CH11307



Generator area

CH11307 on barge

FLIGHT COMMENT

Flight Comment would like to hear from you !!!

We know there are some great experiences out there waiting to be told, so how about writing them down. How are you accomplishing your job or mission safely? Do you have a "Lessons Learned War Story" that others may benefit from? Any new technological advances or new equipment that makes your job or workplace safer? Anything else you can think of that will help "get the word out"! Pictures and/or slides with your submission are appreciated. Do any Wings/ Bases/ Units/ Squadrons/ Sections/ etc. to want be featured on the cover?

We can be reached by fax, mail or telephone as listed on the inside front cover.

Let's hear from you !!!

For Professionalism

Captain "Ingy" Ingram

Capt Ingram, a pilot on 434(CS) Squadron Greenwood, was participating in an ADEX mission off the coast of Nova Scotia. During his initial low level run he felt a slight vibration in the aircraft. He terminated the run and climbed to a safe altitude to assess the situation.

Although there was no visible indication in the cockpit of any problem, Capt Ingram elected to perform a controllability check. At 15,000 feet while selecting ancillaries, he experienced a complete flap failure on the starboard side, resulting in a severe asymmetric condition. The aircraft violently pitched forward and right. Immediate retraction of the functioning flap prevented the aircraft from going completely out of control, however, the aircraft lost several thousand feet before it was fully recovered. Had this event occurred on final approach, the flap failure would probably have caused the loss of both aircraft and crew.

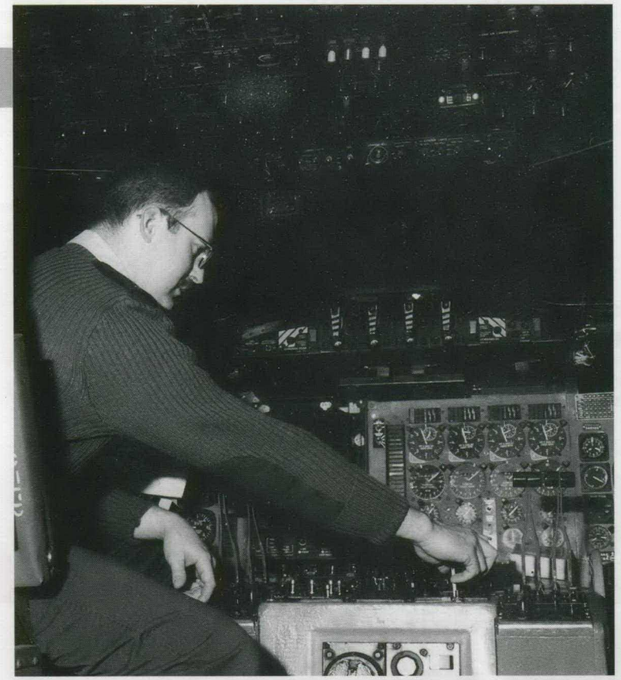
Capt Ingram's professionalism and superior airmanship prevented this serious malfunction from possibly developing into a tragic occurrence. ◆

Corporal Gilles J.V. Lemay

Cpl Lemay, an Airframe Technician with 410 Tactical Fighter (Operational Training) Squadron, was tasked to change a tire on a CF188 Hornet.

After changing the tire, Cpl Lemay noticed that there was excessive play between the crank assembly and the axle lever assembly. Through further investigation he determined that the gap was almost twice the maximum allowed. He also discovered that the retaining hardware for the axle lever had been improperly installed. His sound trouble shooting resulted in the rectification of a physically small discrepancy, but potentially catastrophic problem.

Cpl Lemay's professionalism, attention to detail and alertness in detecting a problem with the main landing gear axle lever assembly probably averted a serious flight safety occurrence. ◆



Corporal Yvon Fortin

Cpl Fortin, an Airframe Technician at 450 Squadron St. Hubert, was carrying out an "A" Check on a CH135 Twin Huey helicopter when he discovered a series of eight rivets loose on the left hand aft spar cap of the vertical fin.

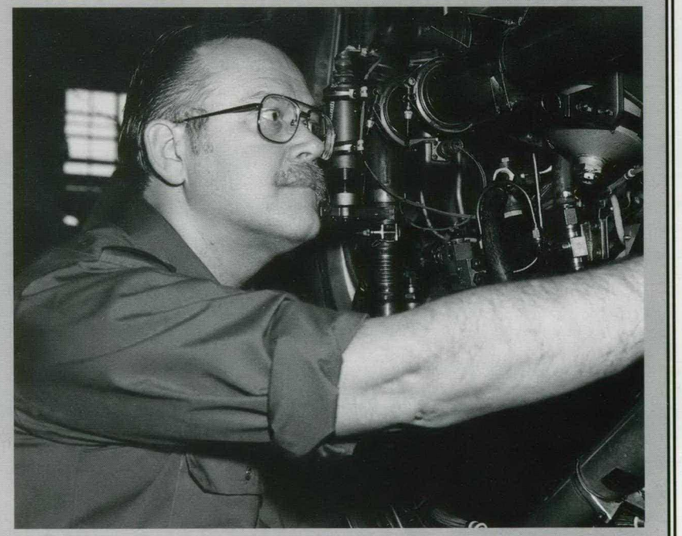
Upon further in-depth investigation and inspection of the entire tail section, Cpl Fortin discovered an additional twenty-nine rivets loose in the same area. He reported his findings to his supervisor who immediately informed the Aircraft Maintenance Officer. Had this situation gone undetected, the consequences could have been catastrophic as a major structural failure may have occurred.

Cpl Fortin's professionalism, initiative and attention to detail prevented a possible serious flight safety occurrence. ◆

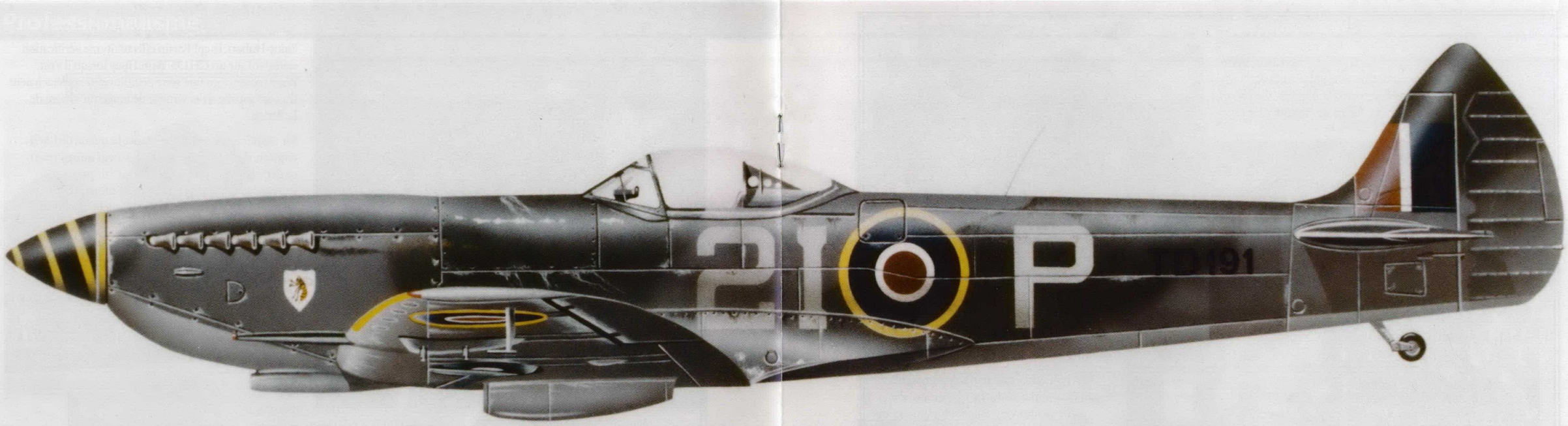
Sergeant Dale Frey

Sgt Frey, an Aero Engine Technician with 407(MP) Squadron Comox, was tasked to conduct a Quality Assurance(QA) check on an CP140 Aurora that had just completed a Periodic Inspection(PI).

Prior to the QA inspection Sgt Frey was acutely aware of an incident which had occurred recently in which an engine 14th stage bleed air duct had failed from possible metal fatigue and work hardening. With this in mind, he was very particular with his inspection of the bleed air ducts on this aircraft. During the inspection Sgt Frey noticed an unfamiliar accumulation of dust on and around the fuel lines and other engine components surrounding a 14th stage bleed air duct. In the course of his inspection in a difficult area to view, he discovered additional cracked bleed air ducts from the 14th stage compressor. Sgt Frey's findings led to a local survey in which 9 of 40 ducts were found to be cracked and resulted in a fleet-wide inspection in which additional ducts were found to be cracked.



Sgt Frey's professionalism, extraordinary efforts and perseverance identified a dangerous hazard which could have resulted in a very serious flight safety occurrence. ◆



artist/artiste : Ronald G. Lowry

Supermarine Spitfire MK.XVIE TD191

Supermarine Spitfire Mk. XVI E TD191 de L'Escadron n° 443 "Hornet" Aviation royale du Canada, janvier 1946.

Le Spitfire fait partie de la collection CANNAV, don de M. Larry Milberry au Commandement aerien. ◆

Supermarine Spitfire MK. XVI E TD191 of No. 443 "Hornet" Squadron Royal Canadian Air Force January 1946.

The Spitfire is part of the CANNAV collection donated to Air Command by Larry Milberry. ◆