

Fire Bomber Into Hell is the story of Fire Bombing as told by the author who flew bomber aircraft both in the United States and Canada for a total of 37 years. A must read for the person curious about what it takes for a pilot to fly daily into the dangerous boundary layer of air seething with rotor winds, downdrafts, severe turbulence and walls of fire.

## **Fire Bomber Into Hell**

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**FIRE  
BOMBER  
INTO HELL**

*A Story of Survival in a Deadly  
Occupation*

*Linc W. Alexander*

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# **Chapter One**

## **Permanently Flying at the Edges**

**When in doubt, hold on to your altitude.**

**No one has ever collided with the sky.**

**Fighter control to pilot**

When I'm asked what kind of flying is involved in fire fighting with an airplane, I'm never quite sure how to answer that question. When I tell people I'm a Tanker Pilot, it's a euphemism for someone who's a few clowns short of a circus, someone who flies an airplane at low level loaded with retardant to drop on a fire in variable mountain air currents. They say: "What's that? Is that like dropping supplies by parachute down to men fighting the fire? Do you go over the fire and drop your water?"

Wouldn't it be nice if I could say, "Yes, that's how it is. We fly safely high above the mountains and drop from way up there. Then we go back for another load and keep doing that until the fire is out." What a delightful way to fly: deliver retardant from a tanker staying up high in our big, pig of a performing airplane. Big, heavy multi-engined aircraft were never designed for that kind of flying; they were built to carry cargo and passengers.

Of course, everybody knows that air tankers are cargo airplanes carrying fuel bladders for delivery to some remote mining site. In the stuff of movies, they're the Air Force tankers flying high in the middle of the sky delivering fuel to thirsty fighters on a ferry trip or topping off after a combat mission. Calling us Tanker Pilots and our airplanes Air Tankers opportunely takes the sting out of the job. Tankers are safe; they carry and dispense their load like any other cargo airplane. Tankers aren't bombers; conversion to a tanker is just another freight job for an airplane. The name suggests that we simply carry retardant from one place to another. No one in their right mind would take a heavy transport aircraft down among the peaks and downdrafts to drop their load close to the ground.

Should I be honest? Do I tell the truth and say that I'm engaged in a dangerous occupation that has killed dozens of my friends and on every trip there are a myriad of elements conspiring to do the same thing to me? Do I say that I would often fly my machine into a firestorm, or get smashed around the cockpit in turbulence so violent, I thought my airplane would come apart? Do I tell people that on some of my drops I'll be exceeding the performance limitations of my airplane? Is that clever, an adventure or just plain stupid?

Calling Fire Bombers "Air Tankers" is a disarming, innocuous term that makes the dangers go away. The forest services that contract these airplanes and pilots don't want to admit that Fire Bombing is a dangerous occupation. If they did, they would have to acknowledge the fact that the pilots continue to be grossly underpaid. Few have insurance or pension plans. Widows and families are just out of luck. Recognizing the occupation for what it is would necessitate a radical re-evaluation of pay, perks and pensions for these pilots: they would have to be paid for what they're worth.

Early in my Air Force flying career I read the words of a Royal Air Force Air Marshall: "Aviation in itself is not inherently dangerous. But to an even greater degree than the sea, it is terribly unforgiving of any carelessness, incapacity or neglect."

We know what the words mean: get serious if you're going to be a pilot or sailor, or you can get your butt into real trouble very quickly. The reality, however, is that these words – carelessness, incapacity, neglect and ignorance – are relative. On a gorgeous, calm, sunny day, a rookie pilot or sailor can go out and enjoy a flight or a cruise in ideal conditions and have a pleasant, safe day. He has no real hazards to contend with; the untested greenhorn goes merrily on his way. It's a very different story when the air is turbulent and stormy and the ocean is standing on edge. Suddenly all of the Air Marshall's admonitions about things we must not be come into play: safe flying or sailing becomes Survival-of-the-Fittest.

Everyone who wants to sail the ocean of air or water will have to be at least reasonably proficient and not be deliberately careless or

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neglectful. Professionalism also demands that we have the self knowledge and humility to know and keep certain of our human frailties in check: it takes effort to set an ego aside and follow the rules. Some adjuncts to the Air Marshall's words would encompass the very human pilots that we are:

On a calm day the air, just like the sea, is not inherently dangerous, but on a turbulent and stormy day it can be terribly unforgiving not only of any carelessness, incapacity and neglect but also of arrogance, overconfidence and inflated ego. We all make mistakes; in a single-pilot environment, we can only hope our mistakes are little ones. In a crew environment, we can hope that the captain wants crew input and his ego doesn't persuade him into thinking he's flying a one-man airplane.

I tested myself against the Air Marshall's admonitions every day of my flying career both in the RCAF and as a Fire Bomber Pilot. How did I stack up against these inviolate commands for staying alive in aviation? Safe flying demands the highest degree of flying knowledge, but equally importantly an understanding of one's strengths and weaknesses. "Know your and the airplane's limits" was the way it was put to us in the RCAF.

We take flying seriously, but we often describe our profession with black humour, or talk to each other as if we were a raging gang of simpletons (which many will agree we are). We have given ourselves some simple rules for safe flying, applicable to all pilots who can read:

### **Basic Flying Rules**

1. Try to stay in the middle of the air.
2. Do not go near the edges of it.
3. The edges of the air can be recognized by the appearance of ground, buildings, sea, trees and interstellar space. It is much more difficult to fly in the edges.

It sounds silly to talk about flying in the middle of the air and avoiding the edges of it. Doesn't everybody do that? Everybody should, except those who are unbalanced enough to go to the edges every day.

Airline flying, like most other types of flying, is dedicated to flying in the middle of the air. After takeoff, airplanes climb to safe altitudes where the air is smooth and the edges are far away. The flight is pleasant and an army of controllers assures safe passage over land or sea to guide the flight to its destination. A vast array of beacons, radar and flight aids assure a safe approach leading to a safe landing. If we can define safe flying, this is it.

But why even bother to give one type of flying the definition of safe flying? Isn't all non-military flying supposed to be safe? Would we consider that there is a lack of sanity to anyone deliberately flying into unsafe conditions? Don't all sane and safe pilots avoid conditions that are hazardous to flight at best and that could be lethal at worst?

The avoidance of deadly meteorological hazards is for everybody else; their flying must be as safe as our current knowledge about flying safety permits. But the safety standards for others don't apply to the Fire Bomber. I have never once seen an action on a fire be called off because of turbulence. Bombing fires during the fall gales of the Santa Ana winds in California is an experience that is dreaded and never forgotten. At one particular action, turbulence twisted an airplane so severely it was rendered into a piece of junk. The pilot was lucky. He was able to fly it home. Actions are called off for restricted visibility, which makes sense, as well as for not being able to find the target, people don't want to run into each other. But turbulence and unpredictable winds are another matter. If we didn't fly in these conditions, we would rarely be dispatched to a fire.

## **Fire Bombing Protocol**

In the world of Fire Bombing, we fly into unsafe conditions almost every day; it is simply expected. The roughest rides in moderate to severe turbulence happen to fairly light airplanes like the TBM

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(Avenger), the F7F (Tigercat), or the S2-F (Tracker). I think of the many times where only my helmet saved me from being knocked unconscious when my head was smashed against the sides of the cockpit by the violent gyrations of my airplane. Severe turbulence throws an airplane around like a dog shaking a rag doll. Updrafts throw your head and shoulders down to snap against your shoulder harness and downdrafts lift the years of debris on the floor into your face. These violent up-and-down gyrations occur only split seconds apart. When you know you're in for an extremely rough ride, you haul down on the seat and shoulder harness straps tightly enough to mummify your lower body. You have to stay put in the seat to be able to reach the controls, otherwise your head would be smashing against the top of the canopy as well as the sides.

Everything that isn't fastened down flies around the cockpit, and the turbulence takes total control. You're not in charge of the airplane; you only hang on to the controls until it's over. I've heard loud, sharp cracks like the sound of a Karate Master smashing a stack of boards with his fist. Was that just the sound of the airplane flexing or did something break? Did structural bolts or rivets snap? Did I hear something crack like the wing spar or some other critical structure in the wing or fuselage? Many times have I wondered how the airplane stayed together. In the worst cases, airplanes are tumbled or cartwheeled or literally torn apart. Every bout of bone-jarring turbulence gave me a new respect for the strength and resilience of my airplane. That marvelous bird took me safely through it again. How could the airplane take these primordial beatings and not come apart?

Heavier airplanes like the DC-6, DC-7, CY-P4Y, FA-119C, L P2V and the C-130E are still thrown around the sky, but the wings soften the blows to the crew in the cabin. They flex and groan and disapprove of their beating with the same frightening sounds. Big wings carrying heavy loads just weren't meant for this kind of punishment. But what of all those terrifying noises? Will the airplane one day say, "I've taken all I can, my friend. My body is tired. I have suffered the final

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overstress and fatigue. Don't punish me anymore or I will die. If I die, I will take you too in my death."

Will all of those sharp cracks and bangs one day conspire to cause massive airframe or wing failure? The unfortunate and sad truth is it has happened to all too many Fire Bombers. The limits of their bombing overstresses and fatigue had expired. The airplanes and their crews had run out of time.

I really learned about flying in the Royal Canadian Air Force (RCAF). NATO was sufficiently impressed with the proficiency and professionalism of the RCAF to select it to train all of the NATO pilots with the exception of the Americans. We were good, our standards were exceptionally high and we turned out the best. I remember the bloodletting of my own pilot intake. Eighty-seven of us started boot camp but only five got our wings. Thereafter, years of instructing and mutual training with the best A-1 instructors taught me how to fly. I took flying seriously. I learned how to evaluate and safely and effectively fly any airplane to its limits. I learned about what all airplanes had in common as well as the differences. High-speed wings were vastly different than low-speed wings: each was to be treated with deserved respect. Every airplane configuration had its own special quirks and personality. I thoroughly "wrung out" every airplane I ever flew so we were cooperative partners in flight. I made sure that the airplane would never have a dirty trick to spring on me. I did not suffer from flying incapacity. I knew how to fly.

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Flying the T-33, Royal Canadian Air Force.

But I was totally ignorant of the type of flying I was getting myself into when I began Fire Bombing. I was guilty of the indiscretion of “ignorance” before I even started. Rotor winds, wind shear, downdrafts, severe turbulence and downbursts were terms I had yet to become familiar with. Furthermore, I had not done any flying in the mountains. There was no comprehensive study of rotor winds around mountains; wind shear and downburst were terms still to be coined. There was no precedent to follow, for no aircraft routinely operated in a close mountain environment.

I discovered what mountain air currents would do to me as I experienced them. I flew blindly into dangerous conditions completely unprepared. I learned by experience, the toughest taskmaster, where the test came before the lesson. The new occupation of Fire Bombing would necessitate writing a manual on what to do in treacherous mountain air currents, and little did I know I would have to write it.



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The early pilots would make all of the mistakes, and for years learned everything the hard way. Tragically, even in spite of what we know today, the fatalities continue.

No one knew the demands of the job would be so severe as to cause massive structural failure of aircraft wings. Airplanes were shedding wings. Was it the fault of the pilot or the aircraft? No one knew Fire Bombing aircraft fatigued 5.7 times more quickly than normal-category aircraft. There was no firefighting manual for pilots. There was no firefighting manual for Fire Control Officers. No one even suspected that we needed them.

I entered this business in its infancy. I was eager and innocent and little did I suspect I would get so many surprises about what Fire Bombing in the mountains held for me. Flying was my passion and I was a quick learner. Happily, every “close shave” was a lesson I never forgot. Yet, in spite of my flying professionalism, studied approach to every aspect of bombing, allowance for the capricious nature of mountain winds and execution of my bombing runs only after meticulous planning for any eventuality, on a number of occasions I experienced what I never thought could happen to me: I was out of control in an aircraft plunging toward the trees and only seconds away from certain death.

Fire Bomber Into Hell is the story of Fire Bombing as told by the author who flew bomber aircraft both in the United States and Canada for a total of 37 years. A must read for the person curious about what it takes for a pilot to fly daily into the dangerous boundary layer of air seething with rotor winds, downdrafts, severe turbulence and walls of fire.

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