

FOCUS ON SAFETY

ALAN PEAFFORD REPORTS FROM THE WAR ON ERROR SAFETY STANDDOWN

Bombardier puts safety first

Bob Agostino is a man with passion and is on a "crusade". As director of flight operations at Bombardier Learjet, you would think that he would be driven to demonstrate how much safer his aircraft are than any others. Not so.

Agostino is inspired by a belief that all aircraft are inherently safe and that the weakest link in the cockpit is wearing a headset.

"Eighty per cent of all aviation accidents are put down to human factors," he says.

Agostino began the idea of a safety standdown within Learjet 10 years ago.

The cynicism and arrogance with which pilots are (self-confessedly) attributed were swept aside as they admitted to some lapses in concentration or competency. Word spread and Bombardier opened doors to its safety standdown seminars.

In Wichita last week almost 500 pilots from civil and military backgrounds, flight operations professionals and safety managers – out of almost 1,000 who had applied to attend – took part in the 10th anniversary Standdown dubbed "The war on error".



Bob Agostino: mission

Thousands more watched via the internet thanks to a partnership with the FAA and NBAA.

Only half the attendees were Bombardier aircraft customers. "This is about a lot more than product demarcation," says Agostino. "This is an industry matter. A global industry matter. I'm proud and delighted that Bombardier continues to invest in this event. It has to be done!"

The Canadian company has now committed to a further 10 years of the event, which is music to the ears of the FAA, whose associate administrator Nick Sabatini spoke at the event and urged pilots to make the best decision for safety's sake. "Learn to say NO," he said. "You know the importance of having the

right tools and knowing your options. It's up to you to weigh the risks and make the best decision for safety's sake."

Corporate aviation went through the year without a single fatality according to the latest FAA figures. Aviation in general is still the safest form of transport. "Some 43,443 people died on the roads last year, 789 on the railways and 769 in marine accidents. There were 616 aviation fatalities," Agostino said. "A lot has been done on technology to make aircraft safer, but development of the human half of the man-machine equation has not kept pace in either formal training programs or regulatory oversight. We must ask are we over-reliant on technology? Are we failing to fully understand when and how to use our automation and technology?"

The Safety Standdown recognizes that knowledge-based training must supplement skill-based training. "Train like your life depends on it, study like your life depends on it, fly like your life depends on it," says Agostino, "Remember, experience is something you get after you need it."

Crash captain relives the horror of Tenerife runway incursion

Capt Robert Bragg will never forget 27 March 1977. Bragg was in the right-hand seat on a Pan Am flight that had been diverted to Tenerife in Spain's Canary Islands because of a terrorist incident at its destination of Las Palmas.

Departing Tenerife's Los Rodeos some hours later, Pan Am's famous Clipper Victor followed air traffic control instructions to backtrack on runway 30 behind a KLM Boeing 747 and turn off on a runway exit to follow the taxiway to the holding point. The runway was shrouded in fog and Bragg heard the KLM pilot announce he had begun his take-off roll while the Pan Am aircraft was still on the runway. The result was the worst accident in aviation history, with 583 dead.

Earlier this month Bragg told delegates at Bombardier's Safety Standdown in Wichita about the moment he saw the lights of the KLM aircraft hurtling towards him, of his attempt to power his aircraft and turn off the runway and the KLM pilot's attempt to take-off early and avoid them. The horrific pictures of the crash and Bragg's emotive testimony brought home the reality of runway incursions.

"Anyone, no matter how qualified, can make serious mistakes," Bragg says. "Communications must be effective and clear. When in doubt check. Check again. There must be a consistent emphasis on cockpit resource management."

Piloting the KLM aircraft on that day was chief 747 training captain Jacob Veldhuyzen van Zantent, the company's most senior pilot, who had been featured in KLM advertising. The US National Transportation Safety Board (NTSB) report said that a co-pilot inexperienced on 747s was flying with one of the airline's most prestigious pilots, who was, moreover, KLM's chief flying instructor and who had certified him fit to be a crew member for this type of aeroplane.

Questions

"These circumstances could have induced the co-pilot not to ask any questions and to assume that this captain was always right," the report said.

The US Federal Aviation Administration's Dennis Lawson urged pilots at the Safety Standdown to focus more on issues. He said that runway incursions at US airports are reported almost every day – more than 50% of these are pilot induced, 19% by ground vehicles and 26% from ATC. Nearly three-quarters of all pilot-induced runway incursions involve general aviation.

Delegates at Standdown were advised by Lawson to think "Think Highway!" He said, "The same rules apply with solid and dashed lines. You must hold at a solid line and dash across the dashed line. Also if you see a red sign, stop! A black square you're there, a yellow array points the way.

"Something as simple as this could save your life," he said.

Lawson also reminded pilots to think reciprocal runways. A chilling recording of an ATC tape heard a controller give take-off clearance for runway 23 to a US Airways flight while a United Aircraft was crossing 05. The US Airways pilot refused the clearance. His decision to overrule ATC was met with applause by the Standdown delegates.

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Steps to survival: From a smoke-filled cabin to an underwater experience...

"Brace. Brace. Brace." The co-pilot who just minutes before had rushed into the cabin to tell us there was a problem was now yelling on the PA system.

You could hear the tension in his voice.

In the cabin there was no need to tell us there was a problem. The hint was in the fact you couldn't see any of the other seven passengers through the smoke that was now billowing through the aircraft.

We braced. Those aft-facing, clutching the armrests and pushing back into the seat as instructed by our first officer; those facing us were – presumably – getting their heads down low between their knees with their hands tucked under their thighs.

The crunching sound of metal connecting with ground, then the disembodied voice over the PA said: "Stay seated. Stay put. Stay in your seats."

You've got to be kidding, I thought, but obeyed. "EZVictor" yelled the co-pilot "Evacuate, let's go. Out of the window. Step up. Leg. Body. Leg."

Being just the portlier side of trim and with legs shorter than I would have wanted, clambering through a Gulfstream IV window is a bit of a trial. But then fresh air.

We had survived – and now for the next disaster!

Emergencies

This is what the practical workshops of the Bombardier Safety Standdown are all about. Experiencing the emergencies and questioning actions to help coach all of us.

Our instructor turned on the co-pilot. "Did you check that the able-bodied passenger by the emergency exit knew how to open it? You must show them. And if there's smoke get them to touch it so they know what it feels like. The same goes for the main exits. You couldn't see a thing in there.

"And what about advising the passengers to breathe through some cloth?"

The co-pilot nodded. "Shouldn't we have crawled along the floor like they tell you to in hotel fires?" asks one fellow passenger. "No way," says the instructor. You are in a pressurized cabin – it won't help. Nor will breathing through the oxygen masks."

THIS IS THE DUNKER... DON'T PANIC!

Alan Peaford braces himself for a lesson in survival



...and finally the relief of a liferaft – all in a day's work on the Bombardier Safety Standdown.

We practise wheels-up landings and fast evacuation, we do a water evacuation. "More on that later," says our instructor gleefully. We fumble with lifejackets and we test the oxygen masks that suddenly fall on depressurization. Our co-pilot is told he would not have been any use because when the masks came down he walked back to the flightdeck. "You would never have made it. Grab one of the masks even if it is from a passenger. You know the emergency drills and will save lives. If the passenger collapses you can

revive them. If you collapse nobody knows what to do."

In the water, the training team from FACTS looks like the experienced firefighters and rescue experts that they are. The rest of us, a motley crew of pilots, operations staff and media look apprehensive... and cold.

This may be the Wichita Hyatt pool, but it seems to have been chilled for the occasion. "This is warm compared to ditching in the ocean or even a lake," we are told.

The focus of our attention is a bizarre contraption floating in the centre of the pool. "This is the dunker.

It lets you experience inversion in water. Don't panic. We are under the water and there to help. We haven't lost anybody". Then he pauses for effect. "Well, not today at any rate."

A Challenger pilot from Colorado offers to go first. He looks ex-military. Sharp eyes. Muscles. Fit. He pulls himself into the seat of the tiny cabin. "You could be in a light aircraft, a helicopter, even an automobile. Learning how to do this could save your life," says our instructor.

The Challenger pilot gives a thumbs-up. The dunker rocks gently on the swell and then

suddenly turns over. There is a frothing commotion in the water and our pilot emerges gasping for air having escaped through the floor. He is ashen. "That was harder than I thought," he says. "You are disoriented, the water is rushing up your nose. You know there is a window there but it is not where it was when you first get in."

Thanks for the advice, I thought.

It was worse than he said.

The rushing sound as the dunker tips, the water forcing itself at pressure. The instructor's last words: "Don't rush. Wait till it comes to a complete stop. Feel for the window then – and only then – undo the seatbelt and push out. Go too early and you will only float to the floor."

Welcome

Air has never felt so welcome. We do the exercise several times, wearing blacked out goggles with the instructors rocking the device, banging the metal sides and spraying the victim with cold water from a power hose. It never feels comfortable.

And then into the life rafts.

We learn about tying the raft to the aircraft before deploying it ("it can tie on to a seat belt clip or anything. Just make sure it is tied.") and look through the emergency supplies – a fishing line ("be careful of the hook, you don't want to puncture the raft"), a fresh water-maker: pump hard for 20 minutes and get half a pint of water. That could save your life. And the most important thing of all – seasickness tablets.

"No matter you don't normally get seasick, take them," says the instructor. "If one person gets seasick it will spread. If you are sick then you dehydrate and you lose the will to survive. Seasickness in this situation is a killer."

For many of us it is the first time we have inflated a lifejacket, have tried to clamber into a liferaft, have climbed out of an aircraft window, had worked out how to get to the "lifejacket that's under your seat".

We come away with drills, mnemonics and background notes and a belief that if the unlikely ever does happen then we are that little bit more prepared than we were before.