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when push

Corporate pilots are strongly self-motivated to get the job done, and much more often than not they do the job safely. But there are times in every pilot's career when the risks are too great and only fools are flying. Killer thunderstorms that cannot be circumvented. Widespread severe icing. Critical equipment problems. A nonprecision circling approach at night to a remote airport in a nonradar environment in foul weather.

Whatever the reason, the pilot must break the news to the passengers, who are anxiously waiting to board the aircraft, eager to get under way. They have been doing their own risk analysis, and the consequences of not getting to that meeting at Point B on time are weighing heavily on their minds.

In the world of on-demand operations, the pilot is likely to be dealing with unfamiliar passengers who may have an even greater sense of entitlement in making decisions about the flight.

In these situations, facing bad weather might seem easier than coping with mad passengers. They may plead the importance of the trip and at least getting under way and taking a look at

comes to shove

How to say no when the boss says go.

BY MARK LACAGNINA

the situation in the air. They may subtly or bluntly question the pilot's judgment. Even worse, the lead passenger may be the type who does not take no for an answer.

Whether the pilot stands by the decision or caves in to pressure not only will affect safety but will reflect vividly on his or her professionalism.

"If you start making exceptions and say, 'Well, I can probably sneak by that cell that's two miles off the end of the runway,' or, 'I can't get a clearance and I'm in mountainous terrain, but I'm going to take off in marginal weather and get a clearance while I'm airborne because the boss wants to go,' … if you start doing things like that — making exceptions that make you uncomfortable and go against what you've been taught and against your basic value systems for safety — you're on a slippery slope," said John Sheehan, president of Professional Aviation, a corporate aviation consultancy.

That Indefinable Something

A specialist in corporate flight operations safety, Sheehan believes that the quality that makes true professionals stand out among professional pilots is their personal commitment to a well-defined set of standards. "They view their standards as living standards," he said. "They do not make exceptions or cut corners."

Dan Gurney, a member of the Flight Safety Foundation (FSF) CFIT/ALAR Action Group and European Advisory Committee, calls it *airmanship*. "Airmanship is a personal mindset, that indefinable something that separates the superior pilot from the average pilot," he said.

In a paper prepared for the Society of Experimental Test Pilots, Gurney wrote, "Pilots with good airmanship will politely but firmly decline and resist the urge to press on when the weather, equipment, crew health, mission demands, fuel supply and support services go sour. Even when every marginal condition is within limits, pilots who exercise airmanship will judge the cumulative effects, analyze the big picture and refuse to be pressured into a situation that reduces the overall margins of safety."

Keep Sheehan's and Gurney's thoughts in mind while reading the following summaries of recent reports to the U.S. National Aeronautics and Space Administration's Aviation Safety Reporting System:

- There were thunderstorms in the vicinity when the captain of a regional airliner observed failure indications for the radio altimeter, ground-proximity warning system and wind shear warning system while holding for departure. He radioed maintenance control and was told that because the flight had left the gate, it was considered to be en route and that he should record the malfunctions and have them dealt with at the destination. The captain refused, and the flight was canceled.

- A business jet remained on the ground for six hours while the captain and maintenance personnel debated minimum equipment list (MEL) provisions applicable to inoperative indicator lights for an unspecified switch on the first officer's panel. The captain maintained that the aircraft could be flown with one light inoperative, but not with both lights inoperative. Maintenance argued that the aircraft could be flown by meeting MEL provisions for the switch itself. Although he believed this was improper, the captain complied under protest after disciplinary action was threatened by the chief pilot and assistant director of operations.

Pilot-pushing is not a problem peculiar to the United States, of course. The following are summaries of reports submitted recently to the U.K. Confidential Human Factors Incident Reporting Programme:

- After conducting a walk-around inspection of the airplane during a turn-around, the captain returned to the flight deck to find the first officer, the pilot flying the next sector, "fiddling the figures" on the load sheet. Additional passengers had

been transferred to the flight, causing the maximum zero fuel weight to be exceeded by 1,400 kg (3,086 lb). Asked why he was amending baggage weights, the first officer replied, "That's what Operations want us to do." The captain then informed Operations that he would not conduct the flight unless the excess payload was offloaded. "Once my position was expressed, there was no argument," he said.

- The previous crew had pulled the circuit breaker for the inoperative cut-out button for the landing gear warning horn and noted on the technical log that the inoperative button was an acceptable deferred defect. The incoming captain found no reference to the button in the MEL and discussed the situation with the chief pilot, who ultimately told him to accept the aircraft or be relieved of his command. "Cowed and angry, both with him for applying such pressure and myself for failing to stand up and make my point for fear of my position/job, I went ahead and flew the aircraft," the captain said.

Hard to Prove

In a paper presented at the 2005 Corporate Aviation Safety Seminar, Robert Matthews, senior aviation safety analyst in the U.S. Federal Aviation Administration (FAA) Office of Accident Investigation, said, "Corporate operators have become very safe as a class but still have some issues remaining with crew performance, decision making, flight procedures, possible pressure on crews and the challenge of diverse destinations."

Accident analyst Robert Breiling of Robert Breiling Associates, said, "I think that pressure on pilots to fly is one of the most pressing issues in our industry. It's lessened over the years as companies have learned about the dangers, but you know darn well that pilots are still being pushed, or are pushing themselves, to go. Very few accident reports point directly to it — it's hard to prove — but if you read between the lines in a lot of them, real or perceived pressure is there."

One report that does point directly to pilot-pushing came from the U.S. National Transportation Safety Board (NTSB) investigation of the Gulfstream III accident in Aspen, Colorado, on March 29, 2001. The circumstances bear retelling.

The flight was chartered by a customer who needed transportation for himself and 14 other people from Los Angeles to a dinner party he was hosting in Aspen. The schedule gave the flight crew less than one hour after landing in Aspen to deplane the passengers, refuel the airplane and depart before the airport's nighttime noise curfew began.

However, two passengers, including the charter customer, had not arrived by the scheduled departure time from Los Angeles. During a conversation with some of the passengers who had arrived on time and had boarded the airplane, one of the pilots — the report does not say which — mentioned that if the other passengers did not arrive soon, they might not be able to land at Aspen because of the curfew.

"The charter customer, upon learning of this conversation, instructed his business assistant to call Avjet [the charter provider] and relay a message to the pilot that he should 'keep his

A charter customer pushed a G-III captain to land at the mountainous Aspen airport. The airplane was seen emerging from a snow shower and banking steeply left soon before it crashed.

U.S. National Transportation Safety Board

comments to himself,'" the report said. The business assistant said that his employer was irate about the possibility of not landing in Aspen. "He was told to call Avjet and tell the company that the airplane was not going to be redirected," the report said. "Specifically, he was told to say that his employer had flown into [Aspen] at night and was going to do it again."

Behind Schedule

The G-III departed from Los Angeles about 43 minutes later than scheduled. The forecast had called for visual meteorological conditions (VMC) at Aspen, and as the airplane neared the airport, the automatic terminal information system reported VMC at the airport.

The airport is at 7,815 ft and is surrounded by mountainous terrain. There was one instrument approach available, a VOR/DME (VHF omnidirectional radio/distance measuring equipment) approach with circling minimums only. Although the final approach course, 164 degrees, met alignment criteria for a straight-in approach to Runway 15, the required descent gradient exceeded the maximum authorized by the FAA. The minimum descent altitude (MDA) was 10,200 ft, 2,385 ft above airport elevation.

The captain told the first officer that they would conduct a visual approach if possible or the nonprecision approach if necessary. "We're not going to have a bunch of extra gas, so we only get to shoot it once and then we're going to Rifle," he said. The pilots did not brief the approach or missed approach procedures. Rifle, Colorado, the crew's alternate airport, is about 54 nm (100 km) from Aspen.

Weather conditions deteriorated as the G-III neared the airport. Three other airplanes, a Cessna Citation and two Canadair Challengers, were ahead of the G-III. The Citation crew gained visual contact with the airport at 10,400 ft and conducted a visual approach to Runway 15.

Are We Clear?

The G-III was being vectored to the final approach course for the VOR/DME approach when a passenger came forward and occupied the jump seat. Investigators were unable to determine if this passenger was the charter customer, but the report said, "The presence of a passenger on the jump seat, especially if it were the charter customer, most likely further heightened the pressure on the flight crew to land at [Aspen]."

A pilot in the lead Challenger reported a missed approach. Data from the G-III's cockpit voice recorder (CVR) indicated that the captain said, "The weather's gone down. They're not making it in." The passenger said, "Oh, really?" Soon thereafter, a pilot in the other Challenger reported a missed approach.

"Are we clear?" the passenger asked. "Not yet," the captain replied. "The guy in front of us didn't make it either." Again, the passenger said, "Oh, really?"

The report said that CVR data indicated that the pilots might have seen the runway briefly but that they did not have the runway in sight when the airplane descended below the MDA. They attempted to locate a highway to the right of the final approach course that leads to the airport. The first officer made none of the required callouts during the approach, and the airplane was deviating right of the final approach course and descending through 8,300 ft near the missed approach point.

The tower controller saw the G-III emerge from a snow shower and bank steeply left about five seconds before impact. The pilots, flight attendant and passengers were killed by blunt force trauma when the airplane struck sloping terrain about 2,400 ft (732 m) from the runway.

Aftermath

NTSB concluded that the probable cause of the G-III accident was "the flight crew's operation of the airplane below the [MDA] without an appropriate visual reference for the runway." Among the contributing factors was the charter customer's pressure on the captain to land.

In a memorandum issued after the accident, Avjet's director of operations told company pilots and charter schedulers that diversions to suitable alternate airports must be made if landings cannot be conducted before sunset at the Aspen airport or three other mountain airports — Eagle and Telluride, both in Colorado, and Haily, Idaho.

"All passengers for these destinations must be informed of this policy," the memo said. "Flight crewmembers must report any violation of this policy or pressure from passengers to violate this policy to the director of operations or chief pilot."

The company also revised its standard operating procedures (SOPs) to prohibit anyone other than an assigned crewmember, check airman or FAA observer from occupying a jump seat.

On Borrowed Time

Company pressure to continue flights in marginal weather was cited by NTSB as a factor in the crash of a Eurocopter AS 350BA in a mountain

pass near Juneau, Alaska, on June 9, 1999.

The pilot, who was not instrument-rated, became spatially disoriented and lost control of the helicopter after encountering adverse weather conditions during an air tour flight. All seven occupants were killed.

"The pilot had expressed to a previous employer and a previous instructor that he was uncomfortable with company pressure to fly tours in bad weather," the report said. The instructor told investigators that, a few days before the accident, the pilot had expressed the belief that he was "living on borrowed time" and had inquired about employment opportunities at the instructor's company.

My Way or the Highway

"There is no safety culture in some companies," said Roger Baker, president of the Safety Focus Group and a member of the FSF Corporate Advisory Committee (CAC). "The mindset is: It's my way or the highway." In other words: Do what I tell you to do or find another job.

"Unfortunately, I see more companies that profess to have safety as their core value but don't operate that way than companies that value safety as number one and operate that way," Baker said. "They do things safely when it's convenient, when it's cheap, when it's easy or when they're showing off for somebody. It's just not the first thing they think about."

During his 20 years as an aviation consultant, John Sheehan has seen improvement in the quality of aviation department managers and SOPs. "We have become more professional, but are pilots still being pressured to fly? Absolutely," he said. "We still have pilots doing improbable things that they would not normally do."

Sheehan warns of what he calls the "entrepreneurial boss" who has achieved success in the business world by bending and breaking the rules. "They made their fortune doing that, and the mindset is: Why shouldn't I do that with my airplane? That's the one you have to watch out for." That's the one who will launch you down the slippery slope if you let your professionalism slip.

"About 98 percent of the time, you and that entrepreneurial boss are going to get along just fine with how you operate the airplane, where you go and when you go," Sheehan said. "But maybe 2 percent of the time, you're going to play what I call 'you bet your job.' That's when there's a big squall line to the west — and guess which way you want to go? — or the visibility is down to 1,800 RVR [runway visual range] in blowing snow, and the boss wants to go."

He related the following incident: A blizzard was raging when the first officer arrived at the airport and found it closed for snow removal. Unable to contact the captain, who was stuck in a traffic jam, he took it upon himself to inform the lead passenger that the flight had to be canceled because of the weather. The captain and the aviation department manager concurred with his decision, but the vice president to whom the manager reported was furious. He told the captain, "I make all decisions about what goes and what doesn't." The captain later learned that the vice president had arranged a charter flight from a nearby airport to transport the company president and his party to the destination. The incident resulted in the dismissal of the first officer, an unpaid two-week vacation for the captain and early retirement of the department manager.

A Page of Protection

Edward (Ted) Mendenhall, vice chairman of the CAC and a member of the FSF aviation safety audits team, said that auditors look for indications of pilot-pushing during confidential interviews of company pilots. "From my perspective, there are some CEOs, some personalities, who think their decisions are irreversible," he said. "Despite what a pilot will tell them about safety, they'll say that they want to go."

The best way to protect flight crews from pressure exerted by these individuals is to have an introductory letter, signed by the CEO, in the aviation department's flight operations manual (FOM), Mendenhall said.

Darol Holsman, manager of FSF aviation safety audits, said, "The introductory letter to the FOM specifically mentions that undue pressure must not be exerted on the pilot-in-command and that his decision making is final with respect to cancellations, diversions, etc." Figure 1 shows the sample letter recommended by the audits team.

CEOs who sign such a letter typically are adamant in enforcing it. "I don't think we hear about pilot-pushing in more than one in maybe as many as 10 audits that we do," Holsman said. "In those cases, there's usually someone in senior management who is bringing pressure on pilots to go. When the CEO is made aware of it, either by the department manager or by us, that individual usually gets a stern lecture."

In at least one case, a pushy passenger's employment was terminated. "The airplane was in flight when the pilot informed the passengers that they would not be able to land at the destination airport but that arrangements had been made to have a car

waiting at the alternate airport to transport them to their meeting," said Roger Baker. "One passenger came forward and was irate in telling the pilot that ground transportation would take too long, etc. The pilot held his ground and said that there were safety reasons for not landing at the destination.

"Apparently, it was a very ugly exchange. But when that story got back to the executive of the company, he terminated the senior manager for trying to unduly influence the pilot against his better judgment. There could have been some extenuating circumstances, but that was certainly the straw that broke the camel's back."

Baker noted that some companies have published the policy on their passenger-safety-briefing cards. "It's another way to remind employees that the pilot-in-command always has the last say," he said. "When it's written down, it takes away a lot of those pressures."

Standards to Live By

Pilots can protect themselves from pressure by explaining the situation to the passengers, having written standards in the FOM to point to and offering alternatives, if possible.

"You can't just go into the lounge with a glum face and say, 'We can't go,'" said Sheehan. "You have to make sure they understand that the reason they're not going is for their safety more than anything else, and give them some alternatives — a limousine or a one- or two-hour delay for the storm to pass."

Decisions are far more easy to communicate and to defend when they are backed up by standards published in the FOM.

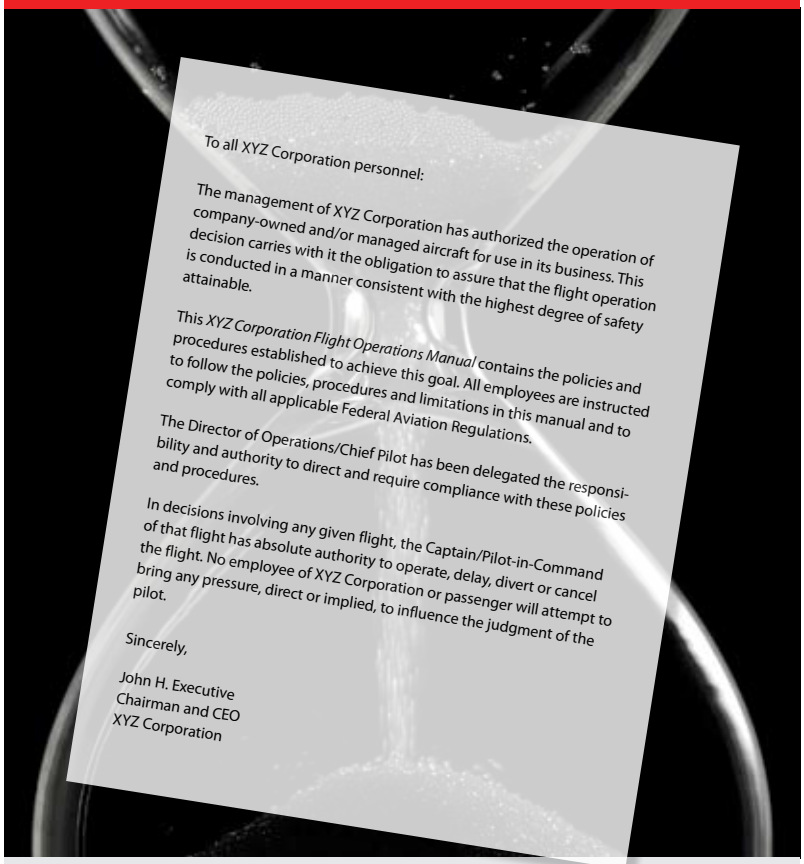
"You have to make the boss and your passengers aware, and keep reminding them, that you have these standards," Sheehan said. "You have to create the expectation in their minds that when we bump up against these standards, we don't go."

Development and review of FOM standards should be a collaborative effort involving everyone in the aviation department. The FSF audits team strongly recommends that they conform with IS-BAO standards, said Darol Holsman. IS-BAO, the *International Standard for Business Aviation Operations*, was developed in 2002 and is described by the International Business Aviation Council as a "code of best practices." IS-BAO includes a generic FOM.

Having written standards is effective in protecting pilots not only from passenger pressure but also from internal pressure.

"Documentation takes away the ambiguities," Roger Baker said. "Written standards and guidelines leave less to the discretion of the PIC and less to be questioned by passengers. If the PIC has followed the standards and guidelines in the FOM, he can defend himself when the Monday-morning quarterbacks come out and start asking why he did or didn't do something."●

Sample Flight Operations Manual Introductory Letter



Source: Darol Holsman, manager of FSF aviation safety audits

Figure 1