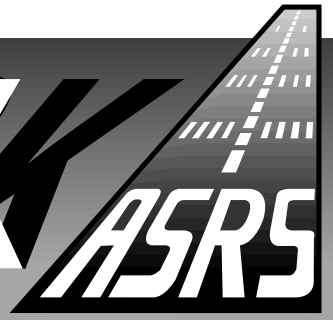


CALLBACK

From NASA's Aviation Safety Reporting System



Number 214

April 1997

Memorable Flying "Firsts"

There are a lot of "firsts" in a pilot's career, most of which come and go without much fanfare. In our first "first" report, however, a student pilot's first solo cross-country flight provided more excitement than planned.

■ *The first incident happened after I landed at XYZ. I couldn't refuel there because [the FBO] was closed. I didn't have enough fuel to reach my home airport. So I got permission to land at an intermediate destination to refuel. I didn't have a logbook endorsement for landing at that airport.*

The next incident happened while enroute home. I saw that the route ahead had a thick fog covering. I looked for a place to get under the cloud cover, because night was falling fast and I wasn't cleared for night flight. To the right of my flight path, I could see a break big enough to get under the clouds. Before I knew it, I was disoriented as to exactly where I was. By that time, night had fallen. I saw an airport, but I didn't know the frequency because I didn't know where I was. I squawked 7700, then looked for traffic in the pattern and didn't see any, so I landed. I transmitted on 121.5 what I was doing before I did it.

As part of pre-flight planning, the student should have verified the destination airport's hours of operation and availability of fuel in the *Airport Facility Directory* (AFD). The instructor should also have ensured that the student start the long flight earlier in the day.

Students aren't the only ones facing challenges the first time out. A newly-rated instrument pilot met unexpected poor weather while testing the ink on that new "ticket."

■ *It was my first IMC flight since receiving my instrument rating. Conditions at departure and arrival airports were VMC. Enroute, I tuned in to my destination ATIS and was shocked to hear "300 overcast and one mile in fog." My personal minimums were written down in advance and an attempt of this low IMC was out of the question—particularly since a missed approach would require holding over the ocean in a single-engine aircraft.*

I informed ATC that I wanted to go to the alternate (800 feet broken and two miles). Approach gave us vectors for the VOR approach. I intercepted the approach and started the descent... We broke out of the clouds to find 800 feet broken around the airport, and landed safely. It wasn't until later that I realized I had descended to MDA [Minimum Descent Altitude] before the final approach fix.

The reporter admits, "I made a major mistake" with the altitude bust. Still, some kudos are in order: the reporter stuck with the pre-determined personal minimums and made the decision to divert early, rather than getting into a potentially inextricable situation at the original destination. ▲

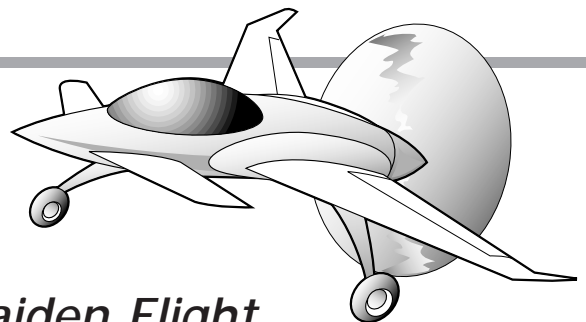
Double Trouble

Nor are air carrier pilots immune from hazards associated with "first" flights, as this Check Pilot/Captain reports:

■ *I was giving IOE [Initial Operating Experience] to a new Captain-upgrade. There was also a Check Engineer giving IOE training to a new Engineer. ATC gave us a clearance to cross 30 miles [from the VOR] at 13,000 feet. We were about 65 miles out at the time. We were very busy trying to brief the approach. We started down, but realized it would be close. We crossed the 30-mile fix [at about 13,800 feet].*

Contributing factors were workload—with two students...brief and preparation for the approach take longer—and weather: it was night and we were in icing conditions and moderate turbulence for most of the flight. These factors add to mental stress. In the future, an ATC clearance must take precedence over briefings. In other words, "fly the airplane first."

Some companies have a policy that prohibits the training of two crew members at the same time. The distractions of providing training can create an excessive workload on instructor crew members. This, in turn, may compromise the safety of the flight.



Maiden Flight

The pilot of a homebuilt airplane discovered during a taxi test that "crow-hopping" at high speeds can be hazardous to aircraft health:

■ *High speed taxi testing and "crow hopping" of recently completed kitplane... Was able to maintain good directional control at speeds of 65 mph. Attempted to lift nose off ground to determine elevator sensitivity... Plane ballooned up. While trying to stabilize attitude and maintain airspeed, plane settled to ground and bounced. Upon resettle, plane went to left and ran off side of runway, striking a runway light... [and] breaking prop and damaging runway light. Able to recover control and stop plane without further incident.*

The reporter attributed the incident to a narrow, crowned runway that amplified cross-winds, and to unfamiliarity with the kitplane's sensitive handling characteristics. ▲

ASRS Recently Issued Alerts On...
Jamming of aileron controls on a BE-02
Excessive rubber build-up on an Illinois airport runway
False fire warning indications attributed to anti-icing fluid
An uncharted tower obstruction near a New York airport
Airframe structural damage induced by evasive maneuvers

A Monthly Safety Bulletin
from
The Office of the NASA
Aviation Safety Reporting
System,
P.O. Box 189,
Moffett Field, CA
94035-0189

February 1997 Report Intake	
Air Carrier Pilots	1681
General Aviation Pilots	677
Controllers	55
Cabin/Mechanics/Military/Other	29
TOTAL	2442

Out of the Loop During Crossing Restrictions

ASRS receives many reports of pilots missing crossing restrictions or failing to meet assigned altitudes at the appropriate time or location. A common factor exists in many of these reports: one pilot is out of the communications loop. The result is a *de facto* single-pilot operation.

In our first report, the Captain was left to fly “solo” while the non-flying First Officer was attending to another routine matter.

■ *I was off the ATC frequency giving passengers the descent P.A. While I was off, the Captain received clearance to descend to FL270, then cross the VOR at FL240. He set the MCP [Mode Control Panel] to 270 and line-selected 270 to the cruise altitude page and executed. At FL270, the airplane went to ALT HOLD. He set FL240 at the VOR on the legs page and the MCP, but failed to select VNAV. I came back on the radio and was briefed on the clearance just as we were crossing the VOR at FL270, not at FL240 as cleared.*

Some pilots try to spread the arrival workload over a longer period of time—for example, by giving the descent announcement earlier in the approach. An added bonus of the earlier announcement is that the cabin attendants have more time to prepare the cabin for arrival.

The cross-monitoring capability of a two-person cockpit is particularly important in the busy approach environment, and even more so when the weather causes route deviations or diversion to an alternate airport. A Captain tells this single-pilot story:

■ *Very busy radio with deviation for weather. Received instructions at the last moment to hold as published at the VOR. I programmed the FMS very fast and did not notice the left-hand pattern. I reported entering the holding pattern and was asked which way we were turning. I said right, and was told it was a left pattern.*

At the time this was happening, the First Officer was out of the loop, getting arrival ATIS and talking with company.

In another weather-related incident, an air carrier crew, struggling to meet a crossing restriction in turbulent air, missed resetting the altimeter at FL180:

■ *The descent checklist was not executed while passing through 18,000 feet because priority had been given to obtaining ATIS and sending a company report.*

Relevant to both of the previous incidents, a technique for maintaining a “two-pilot cockpit” is to have the non-flying pilot continue to monitor the ATC frequency while

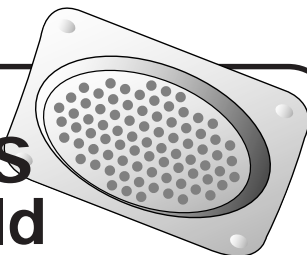
obtaining ATIS or talking with company. If an ATC communication is heard, other frequencies can be disregarded momentarily. When the necessary ATC and navigation tasks have been accomplished and confirmed by both pilots, the non-flying pilot can return to the non-ATC frequency to continue the announcement or report.

Although the ATIS and company reports are on the list of important arrival duties, the priority of these tasks needs to be balanced against the advantage of having a second pilot actively “in the loop.”

A Captain’s bottom line sums it up:

■ *We need to back each other up, even when things are very busy like they were. Easy to say, but hard to do at times.* ▲

Digital ATIS Put On Hold



In 1996, synthesized-voice (digital) ATIS broadcast systems were installed at several major U.S. airports. The new ATIS systems use computerized data entry and a synthesized computer “voice” to broadcast airport information, instead of a human operator.

ASRS began receiving reports about the new ATIS system immediately after its installation. Pilots reported that the system’s poor voice quality rendered the ATIS information nearly unintelligible, and that they needed two or even three repetitions of the broadcast for the crew to be able to understand the ATIS information. They also noted that being off the ATC frequency during this period of time caused some crews to miss ATC instructions.

ASRS forwarded these comments to the FAA in the form of a “For Your Information” alerting notice. The FAA also heard from pilots through local ATC facilities and the FAA-Hotline (800-255-1111).

As a result of pilot input through ASRS and the FAA’s own reporting channels, the FAA has temporarily suspended additional installations of synthesized-voice ATIS systems until software changes are made to improve the voice quality of the broadcasts. ▲