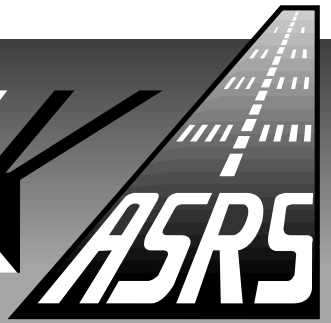


CALLBACK

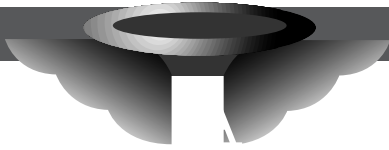


From NASA's Aviation Safety Reporting System

Number 187

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In Search of...



Aviangles

Guardian Angels: 1, Demons: 0

The charter pilot who submitted the following report to ASRS noted at the end of her narrative, "Guardian Angels: 1, Demons: 0." Here's her story of how a seeming misfortune was transformed into a stroke of luck:

■ *When taxiing for takeoff [at night], I lost sight of visual references for taxiway and struck a taxiway light with the prop. I returned to ramp for damage check. Purely coincidentally—after the front passenger and I exited the aircraft, I observed fuel flowing freely from the aircraft's belly drain. I evacuated remaining passengers and determined that the belly drain actuator, which in the Cherokee Six is located on the front of the passenger seat behind the co-pilot position, was stuck open. Apparently the middle seat passenger must have, while boarding, caught a shoe on the drain actuator cover, as the plastic cover was half ripped off (one screw attached, one screw out) and the cover had caught on and pulled open the handle. If I had not hit a light and returned to check the prop, I would have flown my trip with a wide-open fuel drain!*

Contributing factors to the belly drain being kicked open: It is poor design to have the drain's actuator in a passenger area. No one would suspect this freakish occurrence, leastwise a passenger, who was unaware her seat housed an aircraft fuel drain. It was dark and she wouldn't have seen an open cover. This drain should be actuated from outside the plane, like the four-tank drains are.

Pilot acted properly in checking for damage after striking taxiway light. Several pilots have mentioned that they might have "just kept going as long as there wasn't any vibration." Prop damage in this case required prop overhaul. And if I hadn't checked for damage, I might have run a tank dry on an overwater flight, due to unrelated open drain.

We can suggest several possible preventives for this unusual type of drain actuator incident. One is to install a metal cover plate less susceptible to damage by passengers. An interim solution is to brief passengers on the location of the drain actuator, and conduct careful preflight and post-flight inspections of the drain actuator area.

Wisdom Consists of Being Wise in Time

Flamboyant attempts to impress passengers with piloting skills—known as "showboating" and "grandstanding"—are rarely in the best interests of safety, as discovered by a contrite reporter to ASRS:

■ *I invited some friends to go for airplane rides...a total of two rides with five friends in the airplane on each ride. When they arrived they asked to take some pictures of the airplane in flight. I informed them that if they stood on the ramp I would fly over the runway at a low altitude so they could get the pictures. I took off [with passengers] into the wind on Runway 26, climbed to 500 feet AGL and turned the aircraft around and lined up on final for Runway 08. I flew the length of the runway at a low altitude. When I reached the end I made an abrupt pull-up and climbed 600 feet. We next did some sight-seeing and returned to the airport and landed on Runway 26. Then I turned the airplane around and lined up on final for Runway 08 for another low pass. On this pass, when I was half way down the runway, a Cessna 172*

announced that he would be departing Runway 26. I saw the airplane and asked him to hold until I was clear of the runway. The Cessna moved into position and held on Runway 26. I ascended slightly to approximately 75 feet AGL and passed over the stationary Cessna. After the pass we did some sightseeing and returned for landing.

I believe what caused this problem was a pilot [me] giving in to others' requests to impress them with his flying ability through show boating. This in actuality shows very poor judgment. This event went without an accident...only due to pure luck...I have learned a valuable lesson about maturity...

What I will do to correct this situation in the future is to say what my flight instructor would say when friends requested him to showboat: "I don't need to take that risk to prove my flying abilities, I just need to show you the certificates and ratings in my wallet."

"Providence Is on the Side of Clear Heads"

An air carrier crew describes how the quick thinking of a cargo handler prevented an aircraft fire, and possibly even greater disaster:

■ *A passenger placed a large number of matches in a suitcase along with a phone book and numerous other flammable materials. The matches rubbed together and caught fire as the suitcase was being handled into the cargo bay. Appar-*

ently the suitcase did not show visible signs of fire, but felt warm as it was being loaded. It could have been dismissed...but cargo handler chose to investigate. It's a good thing he did, because not only did his actions save damage to other cargo, other passenger luggage, and the aircraft, but I feel that he may have saved the lives of the passengers and crew...Our grateful and heartfelt thanks... ▲

ASRS Recently Issued Alerts On...

Smoke from electrical wiring in a Beech 1900C cockpit
Hard landing of an Airbus A320 attributed to dust devils
Recurring coverage problems with an ATC ASR-9 radar
A near midair collision of a turbojet with a weather balloon
Uncommanded roll of B747-200F with autopilot in INS mode

A Monthly Safety Bulletin
from
**The Office of the NASA
Aviation Safety Reporting
System,**
P.O. Box 189,
Moffett Field, CA
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October 1994 Report Intake

Air Carrier Pilots	1874
General Aviation Pilots	752
Controllers	75
Cabin/Mechanics/Military/Other	32
TOTAL	2733

GUMP Not Chump

Most pilots are intimately familiar with G-U-M-P, a mental “checklist” standing for Gas-Undercarriage-Mixture-Prop that is used on final approach to prevent gear-up landings, fuel starvation, and other mishaps. But not even “GUMP” can save the day if prior checks of flight-critical items—and good judgment—are suspended. An ASRS report illustrates:

■ *We had just completed an extensive annual inspection on this aircraft. I was proud to certify its airworthiness. I had promised to fly an acquaintance’s son (age about 25) previously and today he showed up for the flight. This was to be the son’s first airplane ride ever. I spent an extra amount of time going over the pre-flight with him. The right fuel tank was nearly empty (about 5 gallons) but the left side had plenty of fuel. When we boarded the plane for flight I made the error which would result in this incident. I had the fuel in the “off” position for maintenance and in a rare case of disorientation selected the right tank for the flight...*

Returning to the airport traffic pattern I entered upwind and as I was completing the cross-wind leg, about to start my landing checklist, the engine quit. I immediately set the airplane up for best glide and started going through

“The Pattern Serves a Purpose”

Our next reporter learned not only about the proper use of “GUMP,” but also that there’s more than one reason for flying a standard traffic pattern.

■ *It was...near the end of a very long day. I was completing a three-hour flight on an aircraft with a total of 6 hours since major overhaul and 3 hours since annual inspection. The last 1.5 hours...was at night and over rough terrain. There was no moon out, and therefore it was very dark. Although the weather was VMC, I had to keep a close eye on the gauges due to the lack of horizon. Needless to say, the last leg of this trip was very stressful...*

When I finally saw my destination airport...I noticed that my descent from cruise was going to leave me too high and fast for a straight-in approach. Therefore, I slowed the aircraft down to flap extension speed, and lowered the gear and flaps nearly simultaneously. Knowing I needed to lose altitude quickly, I immediately side-slipped the aircraft until short final... Once there, I initiated my flare for landing. The next thing I heard was the ticking of the prop and the scratching of the airplane fuselage on concrete. My initial thought was that I did not put my gear down. However, I remembered doing so [because] I needed the drag. I checked the gear selector. It was in the down position. Then I remembered that I had never verified that the gear had actually come down.

How could this have happened? I realized that three systems must have failed for this incident to have occurred.

First, the actual gear system must fail. This mechanical sys-

temy procedures. I checked everything but the fuel selector because I did not consider that I was out of fuel (believing I was on the fuller tank). My next mistake was in extending my downwind too much while going through the procedures, and when I did finally turn base I was short of altitude. I landed in the corn less than a hundred feet short of the grassy approach to the runway. I didn’t realize I was on the empty tank until after we landed and heard the electric fuel pump clicking away.

I showed the young man the fuel selector before we started up, and I’m sure I’ll always wish I’d asked him to change the tanks...I [also] wish I had concentrated more on landing the airplane on the runway while it was right there for me...

It was our reporter’s apparent practice to check and set the fuel selector only once. Sound procedures call for manual and visual checks during preflight, before takeoff, and before landing. Also highly questionable was the decision to carry a passenger on the first flight following extensive maintenance. Finally, the entire incident might have been prevented by the simple expedient of refueling the aircraft prior to flight.

tem is not foolproof. Indeed, on this night, the electric motor which drives the hydraulic pump did fail. Therefore the gear was only partly extended.

Second, the pilot must fail...It was a long day, I was tired, stressed, and hungry (I had not taken the time to eat), and I was trying to salvage a poorly planned approach...

And finally, the gear warning system must fail. This is another mechanical system which is prone to failure. This final system failed along with the previous system, on the same approach.

As a pilot, and not a mechanic, I can only improve on the second system. I’ve determined that the most important element which could have avoided the human error, was to have flown a complete landing pattern. To fly a pattern appropriately and successfully, I would have lost altitude before...descending into the pattern...Before this incident, I flew the pattern only if other traffic was in the area. However, I now realize that the pattern serves a purpose other than keeping aircraft sequenced; it helps to distribute and organize tasks required for landing. Each element has its proper place...

Also, I did not mention the checklists. I did complete the “GUMP” checklist. However, I rushed through the list. Instead of verifying each action, I performed the task almost simultaneously. A checklist is no good if performed in this manner. It is not only important to perform the actions, but the actions must be accomplished correctly and verified. ▲