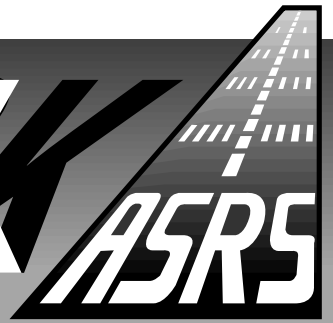


CALLBACK



From NASA's Aviation Safety Reporting System

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Improving Ramp Safety



Airport Ramp Safety will be one of the topics discussed at the Flight Safety Foundation's 48th International Air Safety Seminar, in Seattle, Washington, in November. The subject is an important one. The annual cost of equipment damage during ramp operations has been estimated as the dollar equivalent of a fleet of widebody jets. The true cost of injury to personnel is incalculable.

Because of the hazard that jet blast poses to ramp ground personnel and equipment, many air carriers prohibit or severely restrict single-engine taxi, instead requiring use of a tug to position the aircraft. An ASRS report provides graphic illustration of the jet blast damage that can occur on a tight ramp:

■ *As I was approaching gate I shut down the #2 engine (per our Ops Manual). I was momentarily distracted inside the cockpit. There was enough room to make a turn...to gate. I added power on the #1 engine. During the left turn, the jet blast from the #1 engine blew a mechanic off a maintenance stand. It also blew part of an engine cowling off the stand. In future situations, I will...shut down and use a tug to reposition if there is any doubt about jet blast.*

Is This the Party to Whom I Am Speaking?

Lack of adequate communication—verbal or visual—among flight crew and ground crew, is at the heart of many ramp incidents reported to ASRS. Good communication is especially important during night ramp operations, as shown by the following eye-opening (and costly) encounter:

■ *I had just confirmed with the headset operator [the tug driver] that all doors were closed and we were cleared to push back. About twenty feet back, we encountered a firm object. The lav truck driver [had returned] to the aircraft to empty "the blue room," and had ignored the beacon lights or not realized that aircraft movement was imminent. Just prior to impact, the driver bailed out of the truck. The wingwalkers on both wings failed to notice this vehicle behind us.*

The aircraft had to be jacked up to facilitate removal of the truck. The aircraft sustained extensive damage, a 7-foot gash in the belly, and was down for four days.

Good cockpit communication is equally important. The next report, from a Commuter First Officer, illustrates how easily CRM skills can be lost, even during routine tasks like a departure checklist:

■ *I began my duties of computing weight and balance and bug speeds. I saw the Captain advance the condition levers... [and] I sensed the aircraft began to roll forward. We both*

fully depressed the toe brakes. However, there is no hydraulic power at low RPM settings. The aircraft rolled forward enough to strike a ground power unit, tearing a hole on the right side, below the First Officer's window. The parking brake had not been set, [even though it] was called out by me and the Captain confirmed it was set.

The Road Home

In another ASRS report, an Air Carrier Captain was confronted with several roadblocks to his attempts to park his aircraft for the night:

■ *[We were] cleared to the gate and advised to power in to the gate. Guide-in man had no lights or wands, but was standing in bright lights from the terminal. He brought us 12 feet too far forward of the stop line, and the left engine cowl hit the jetway. When the jetway driver tried to move the jetway, he pushed the aircraft, causing more damage. The stop lines were marked, but were hard to read because they had oil and grease on them. The jetway was not parked in the normal spot and was unlit.*

The reporter makes several suggestions for these problems: taxi and parking lines should be clean and visible; jetways should be manned by qualified personnel and parked in proper position; and supervisors should be at any gate where aircraft are being moved. Equipping guide-in personnel with lights or wands is another safety recommendation.

Sudden Disappearance

Perhaps the most frightening sort of incident is the sudden disappearance of a passenger on the ramp. A number of factors led to this GA pilot's nerve-wracking experience while taxiing a tail-dragger aircraft:

■ *While I was taxiing for takeoff, a [charter airplane] in front of me stopped on the taxiway. The pilot was not using the radio, so I decided to taxi around the plane in the ramp area to his right. A passenger deplaned and began walking toward the ramp—this put his path in front of mine. I stopped and looked to see if any additional passengers were deplaning. I then looked back...and assumed the passenger was with [a group of people off to the side]. Again I started around the plane. I leaned forward ...and stopped immediately when I saw the passenger crouching on the ground in front of me. He had apparently tripped on a tie-down cable and was picking up papers he had dropped.* ▲

ASRS Recently Issued Alerts On...
Reports of malfunctioning pilot seat locks on B737s
Tree obstructions on approach to an Illinois airport
Frequency interference between two Arizona ATIS's
Similar-sounding intersection names on a Texas STAR
Inadequate back-up power systems at several TRACONS

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August 1995 Report Intake	
Air Carrier Pilots	1914
General Aviation Pilots	833
Controllers	113
Cabin/Mechanics/Military/Other	38
TOTAL	2898

Aeronautical Gremlins

A gremlin is an imaginary gnome-like creature to whom mechanical problems in military aircraft were frequently attributed during World War II; hence, any mischief-maker. The ASRS reporters quoted this month may not consider these aeronautical gremlins imaginary.

First up, a GA pilot's "chilling" experience:

■ *Temperature on the ground was 35°F. Takeoff normal and first power reduction went smoothly. At second power reduction, throttle would not move in ANY direction. Tower was notified and we returned for landing. At 400 feet, throttle unfroze. Normal landing accomplished.*

The previous day, the engine compartment had been cleaned with a biodegradable cleaner, which had a water base. Evidently water entered the cable housing and froze at altitude. After the throttle cable was cleaned and re-lubricated, it functioned normally.

This problem could occur anytime an aircraft climbs into cold temperatures, even when the surface weather is balmy. The solution: alcohol- or glycol-based cleaners, or solvents, used sparingly and disposed of properly.

Six-legged Gremlins

A general aviation pilot flying in IMC experienced repeated errors with his Directional Gyro while trying to maintain headings given by ATC. Other vacuum instruments continued to perform normally. He managed to climb to VFR by his magnetic compass, and the rest of the flight was uneventful. Back on the ground...

■ *Upon arrival...I explained the problem to an A & P [mechanic], and after some trouble-shooting, he removed the instrument panel cover and found a large wad of mud adhering to the racks of some of the instruments, the Directional Gyro included. He said that this was sufficient to affect the input side of the DG and cause the malfunction.*

The mud was put there by a wasp-like insect called a "mud-dauber." The week prior to this flight I had left the side vent window open. It was during this time the mud nests were built. When I returned [home], I went around the hangar and located a number of these nests. I have since disposed of these, as well as all the insects I could find.

For pilots who must leave their aircraft outside a hangar, we suggest the following for avoiding visits from six-legged gremlins: install screen material over any open vents and windows; and, if possible, periodically remove the instrument panel cover to check for insect nests, as well as cocoons, spider webs, and general dust and debris.

Cabin Fever

Although it's nice to know that passengers are listening to the emergency procedures briefings, flight crews must ensure that passengers do not react inappropriately to a perceived emergency. In the following report, better communication could have nipped the passengers' misperceptions in the bud:

■ *While parked on the ramp after a lengthy delay, exhaust smoke from the aircraft being used to run our air conditioning was ingested into the airplane. The flight attendant called to say that passengers had smelled the exhaust and yelled "fire." A passenger next to the overwing exit immediately opened the exit. I used the PA [system] to reassure the passengers and request that they not deplane.*

Since we now brief passengers in the exit rows to be ready to open the exits, we must be quick to explain any activity which might not be understood [by those passengers].

A Real Load of "Bull"



Finally, a commuter airline First Officer shares his "ribbiting" story of some unusual stowaways.

■ *While flying... I felt something land on my right foot. Reaching down with my right hand, I was surprised to feel something cold and damp, which moved. I looked down and saw a large bullfrog hop off my foot and behind the rudder pedals, where it sat looking at me. We landed without incident, and could no longer see the frog. As the passengers deplaned, one told me we had a stowaway frog in the cabin. Later, we found 8 large bullfrogs hiding under the seats. We never found out where they came from.*

Kudos to our reporter for avoiding a panic reaction—a frog in the cockpit can look (and feel) like a snake. ▲

We Goofed

In our article last month, "The Magic Words," we goofed by saying that the words "cleared for..." apply to taxi instructions. The FAA Air Traffic Control Handbook instructs controllers **not** to use the word "cleared" in conjunction with taxi authorization. The instructions "taxi" or "proceed" are the appropriate magic words for taxiing aircraft. Thanks to the readers who brought this error to our attention. ▲

