CALLBACK

ASRS

From NASA's Aviation Safety Reporting System

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Preflight PROBLEMS

Preflight activities follow carefully scripted routines designed to prevent ground incidents and safety-of-flight issues. When pilots and supporting ramp personnel deviate from established procedures (or neglect to follow procedures at all), the result is often unwanted incidents. This month, we look at several types of incidents that occurred during the preflight phase, and might have been prevented by clearer communications and adherence to established operating procedures.

TOW BAR TRAUMAS

Air carrier pushback procedures involve clear, concise oral challenges and responses between ramp personnel and flight crews. While this script may vary from air carrier to air carrier, both ramp personnel and flight crews are required to follow pushback protocols. In this incident reported to ASRS, careless operation of tug equipment by ramp personnel led to an "impactful" experience.

■ *During passenger boarding...observed tug approach nose of aircraft in an attempt to hook up tow bar for pushback. Tow bar had already been installed and attached to nose gear. Tug did not stop, causing the tow bar to be forced below the tug...thus resulting in an excessive force being impacted upon the nose gear of the aircraft. Tug was still in forward motion and impacted the tow bar a second time, causing a second impact with the nose gear of the aircraft. A wheel attached to the bottom of the tow bar was broken off. Approximately 20 passengers were on board as well as 30 passengers in the jetway. All passengers felt or heard the aircraft move with an extreme double hit. A catering truck was at the aft galley door, and was very concerned with the aircraft movement as well. A maintenance logbook write-up was made, documenting the extreme double impact to the nose gear through the tow bar...*

For two General Aviation pilots, not stowing the tow bar before engine start resulted in a painful experience.

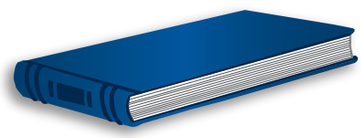
■ *My partner and I pulled our Beechcraft 35H straight out of the hangar in order to see if the engine would start. We believed the battery to be low and I had a planned flight in two days. We did not intend to do anything other than start the engine, shut it down, and return the aircraft to the hangar and so we left the tow bar attached to the nose wheel strut. My partner was in the left seat and started the engine. The engine turned over several times before it started and the propeller cleared the tow bar. As it started, the nose came down and the propeller struck the tow bar, sending it about thirty feet away. The engine was immediately shut down. We got our mechanic to come look at the propeller damage and then returned the aircraft to the hangar.*

DOCUMENTATION GLITCHES

A CFI was asked to perform a Biennial Flight Review – a seemingly straightforward request – until more details about the applicant's flying currency emerged.

■ *A pilot approached me to do a Biennial Flight Review in his Piper Saratoga. It was a spur-of-the-moment type flight review. Unaware of the pilot's credentials, I asked him about his flying currency, and he told me he just needed a flight review...This became an issue to me when he presented his logbook to me the next day (he didn't have his logbook with him the night before when we did the flight). His logbook showed that he hadn't flown in over two years. Since I didn't have much experience in high performance aircraft, or a high performance endorsement, I realized I wasn't legally pilot-in-command on that flight, either. It's an example of not being presented with the proper information by a student. I should have, looking back at it, not flown with him until I requested his logbook for careful examination.*

I've learned an important lesson about giving flight instruction: Even if you become rushed by someone, sit back and analyze your situation...because the solution... may be as simple as checking your applicant's past flying experience. On this day, a person with their own plane seemed very capable of flying it, when in actuality they couldn't act as pilot in command, because of recency of flight experience regulations 61.56 and 61.57.



Another pilot rented an airplane from an FBO, assuming that inspection and maintenance records were in order.

■ *I rented an airplane from the FBO. I received the dispatch slip and proceeded to preflight the aircraft. I flew 2.6 hours with a passenger. A week later, I rented the same plane. Again, I was dispatched – and with a passenger – logged 2 hours. Three days later, the FBO notified me that the airplane in question was overdue on its annual...Hence I had violated two standing FARs: 91.7(b) and 91.405 (a)...*

I wrongly assumed that an FBO had established processes that would preclude an airplane from being dispatched if it was overdue for any kind of inspection or maintenance. I will ensure that in all my future flying endeavors I check inspection and maintenance records. To assist in this, I have created a 'go/no-go checklist' that accounts for all pertinent sections of Part 91.

LOAD PLANNING MISCOMMUNICATIONS

Initial preflight weight and balance numbers are provided to flight crews, but these can be inaccurate by a significant margin due to increases/decreases in passenger and

ASRS Alerts Issued in February 2007	
Subject of Alert	**No. of Alerts**
Aircraft or aircraft equipment	1
Airport facility or procedure	6
ATC procedure or equipment	6
Chart, Publication, or Nav Database	1
TOTAL	**14**

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Air Carrier/Air Taxi Pilots	2436
General Aviation Pilots	784
Controllers	159
Cabin/Mechanics/Military/Other	172
TOTAL	**3551**

baggage loads, and other unanticipated changes such as late departures. This makes the communication of timely weight and balance information between baggage loaders and Operations Offices crucial to safe flight. Here's what happened to a B737 flight that was running late:

■ *...The flight pushed back 44 minutes behind schedule. During the engine start sequence, Operations sent the weight and balance numbers, which were loaded into the Flight Management Computer. On departure, the Captain, who was the flying pilot, mentioned how sluggish the climb was. Nineteen minutes later, Dispatch sent an ACARS message to the crew which read, 'Ops called with revised numbers...' There was a 1,500 pound difference in ZFW [Zero Fuel Weight] and actual takeoff weight, and a shift of 1.8 percent in the Center of Gravity...Communications between baggage loaders and Operations need to be improved to get reliable information relayed accurately to Operations. Operations then has an obligation to get the numbers calculated and passed on to the crew operating the flight in a timely manner.*

An MD-83 flight crew knew they were heavy on takeoff, but were unprepared for the controllability problems they experienced on landing.

■ *Taking off from ZZZ we were heavy, but within limits on the closeout. Takeoff roll seemed long, but not out of the ordinary for heavy weights. Rotation was very heavy, took more effort and time than in my past experience. On climbout, our minimum maneuvering speed should have been about 254 knots but was indicating 262 knots. We thought maybe we were heavier than indicated and flew conservatively to ZZZ1...On descent we planned for 130K pound speeds instead of the 124K indicated. Used 137 knot bug instead of 129 knot bug. Due to high/fast approach profiles into ZZZ1 didn't get much of a feel for it until relatively close in to landing. The last 20 feet, flying around 138-142 knots, sink rate was unarrestable, [we] ran out of elevator authority and landed firmly. Asked Operations to perform an audit of the cargo holds upon blocking in, then monitored the offload personally. By my math (based on crew chief's assessment), we had 3,960 pounds in forward, 1,870 pounds in mid, and 2,100 pounds in aft cargo. This comes to 7,930 pounds versus release of 6,150 pounds. The report at departure had a plan of 1,030 pounds forward, 2,423 pounds mid, and 2,600 pounds aft. This comes to about 3,000 pounds heavy in forward, and 500 pounds light in aft...The heavy rotation, and the lack of elevator authority on landing, as well as the high alpha speeds perhaps from additional tail-down force required, are all symptoms of an incorrectly loaded aircraft, with an incorrect Center of Gravity on closeout...*

Coffee Breaks

A Captain on an international flight had just gotten up from a rest break and poured a cup of coffee to speed his recovery from "sleep inertia." With coffee cup in hand, he decided that he might as well go up to the cockpit and take his seat:

■ *Can you guess where this story is going? As I am getting into the just vacated left seat, holding my just poured and still very full coffee cup, kaboom, coffee all over the center pedestal. As we rapidly tried to clean up the mess, the left and center audio panels, with their multitude of mike and receive buttons, begin to look like twinkle light Christmas trees. What we did not know at first was that we had gone hot mike to ATC. All of the ruckus and commotion in the cockpit was being intermediately transmitted. Well, shades of 9-11, they almost launched the fighters on us. We quickly got a text-message off to Dispatch through the Satcom having them advise ATC of our situation. We cleaned up and sorted out the mess and figured out that by shutting down the left VHF (we pulled its circuit breaker) and only using the right VHF through the right (co-pilot's) audio panel and with overhead speakers on, so I could listen, we could get into [destination] OK.*

Now, to the...moral of the story. Many of the reports you publish end with a mea culpa about how they will never make that mistake again. But we are human, so they may not make that mistake again, but someone else will. So, how much of the lesson is about how to handle the problem once it begins? Back to Pilot 101 Day One: analyze the situation, take the proper action, and land as soon as conditions permit.

I am sure the 'coffee' story will get spread around a little, and people will be more careful with their drinks, for a while. I hope how we handled the problem will be part of the story, too.

For an MD-80 flight crew, the discovery of a "mystery" coffee cup and cannon plug cover in the cockpit led to an extensive flight delay. More from a Captain's report to ASRS.

■ *While preflighting we discovered a coffee cup sitting in the cup holder by the cockpit jumpseat with 3 small screws in the bottom of the cup. Also we found a cannon plug cover on the cockpit floor under the Captain's rudder pedals. We entered this information into the maintenance log and requested that maintenance come out and remove the screws and cannon plug cover. Unfortunately, what appeared to be a simple issue turned into a major delay with what we thought was going to be a grounded airplane, since nobody could determine where the screws came from...In summary, it was determined that the screws and cannon plug cover were 'spare hardware' that was the result of an ACARS printer installation the night before. Apparently once the installation was done, the spare hardware was left behind and not removed from the airplane. This is of concern to me as it indicates...a general lack of care and due diligence in the way our airplanes are being maintained.*

This maintenance oversight may have occurred during a shift change, when one technician started the job and another finished it. It's good shop practice to account for all 'spare' parts used in a job.

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