

CALLBACK



From NASA's Aviation Safety Reporting System

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ASRS

Ramp Safety Incidents



Over the past year, ASRS has received many reports of damage to aircraft and occasional injury to ramp personnel during airport ramp operations.

Whether a ramp incident occurs during taxi-in to the gate (this month's front page), or during pushback (see our back page), ASRS reporting reveals that several human factors repeatedly recur – failure to follow procedures, communications breakdowns, and lack of training. It is evident that safe ramp operations are a shared responsibility among flight crews, ramp personnel, and airlines.

This month's selection of incident excerpts provides a review of some of the factors that can contribute to ramp incidents – and to the "saves" as well.

"Stop the Show"

A B747-400 flight crew found it necessary to instruct ground supervisors about proper aircraft arrival procedures.

■ ...Passengers were still deplaning [while] we were preparing to secure the aircraft...and I released the brakes and sensed the aircraft moving. I stopped the aircraft with light brakes and stopped the deplaning. Maintenance technicians checked the aircraft and we repositioned with a tug 2-3 feet back to the '400' spot. Jetbridge was realigned and deplaning continued. No injuries or damage. I held a full debrief with contract and company ramp managers on the need to use standard hand signals and follow arrival procedures exactly. Through our debrief I discovered on block-in the aircraft marshaller gave what I perceived to be a chock signal (which I now realized he was simply waving his wands at another ground crew man)...We reviewed the priorities of the arriving aircraft: clear the area, proper signals, chock, external power, positive eye contact with the crew, and then baggage and aircraft servicing. Ensure all ground safety procedures are compliant. If not, stop the show.

"Automation" Surprises

A B737 Captain confessed to being mentally "on autopilot" while taxiing-in to the gate.

■ ...We taxied to gate... and proceeded to park the aircraft. The only problem was that I was completely running on autopilot and got complacent, no thinking involved... We parked the plane without guide man guidance. Completely against SOP. Normal SOP is, if there is no guide man

waiting to park the aircraft, stop the plane at the top of the lead-in line and proceed no further. This is important for a couple of reasons: to make sure the parking area is clear of obstacles, to ensure that we use the proper lead-in line, and the proper spot to stop the aircraft to bring up the loading bridge and service the aircraft...I did not wait for the guide man, proceeded to park, and stopped the aircraft only when I realized what we had done and were in imminent danger of hitting the jetbridge with the #1 engine.

In another incident, an alert ramp agent saved a B737 flight crew from a malfunctioning automated parking system.

■ ...Taxied in to gate. Automated parking system showed 737 and to proceed. Parking system showed us on the taxi line and prompted us to continue. Parking system never showed us approaching the stop position or commanded us to stop. It just commanded that we continue. The ramp agent then banged on the side of the airplane and I stopped. I estimate that we had gone at least 10 feet beyond where we were supposed to stop and stopped within 4 or 5 feet of the jetway. If the ramp agent had not hit the side of the airplane, I very well may have made contact with the jetway...The agent on the ground this time did an outstanding job, and all agents need to be aware that this could happen.

NMAC (Near Miss Abeam Catering)

■ During taxi-in to gate, our ground crew began to give me hand signals with lighted wands to proceed in on the lead-in line. This requires a 90-degree turn to the right. During the turn, I stopped the aircraft, as there were two catering trucks off to the left side and I was not sure that I would clear them with the left wing. I flashed all of my landing and taxi lights at the guide man, who apparently did not think there was any problem [and] continued to give me the come forward signal. I refused to move and flashed the lights at him again. A second guide man came out and told the drivers of the catering trucks to move out of the way. Only when I felt it was clear and was also receiving hand signals from the guide man, did I move forward to the final parking stop position. Ground crews need to be reminded that they need to visually clear the ramp before giving the signal to advance on the line...If I had blindly followed this guy's signals, I would have hit the catering truck with the left wing....

Engine Indigestion

■ Captain turned [aircraft] onto the lead-in line...A ground crewman...picked up wands from the tractor, signaled that the ramp was clear and proceeded to guide aircraft to parking spot. First Officer and Captain visually cleared their respective sides of the parking area and noted no obstructions, the area looked clear/normal and ground equipment was behind 'foul lines' from what we could see from the cockpit. As the guide man signaled for the Captain to slowly apply the brakes, the cockpit crew felt a 'thump'

ASRS Alerts Issued in July 2007	
Subject of Alert	No. of Alerts
Aircraft or aircraft equipment	6
Airport facility or procedure	11
ATC procedure or equipment	6
Total	23

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

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July 2007 Report Intake	
Air Carrier/Air Taxi Pilots	2624
General Aviation Pilots	920
Controllers	107
Cabin/Mechanics/Military/Other	259
TOTAL	3910

followed by some airframe vibration. The APU was online running electrical and AC, the Captain directed that we shut down the left engine. (The right was secured prior to turning onto the lead-in line.) The Captain said he thought something must have happened to the left engine [but] there were no abnormal engine indications in the cockpit. The Captain called for the parking checklist, which the crew completed. The Flight Attendant called from the back and informed the Captain that the yellow hose had been sucked into the left engine as the aircraft came to a stop. As per procedure, the ground crew signaled he had control of the aircraft. He had full responsibility for ground clearance and avoidance.



“Where Is This Guy Taking Us?”

A communications breakdown between the cockpit and a tug driver at a foreign location led to a pushback with no one in positive control of the aircraft – and to some soul-searching afterwards by the involved flight crew.

■ *The pushback began in a normal fashion. Engine start was uneventful until the after start flows were accomplished. At that point we experienced a problem with the left bleed air valve...The MEL showed this as a return to gate item. At this point, I told the mechanic we needed to be tugged back in. His response sounded like he was asking us to release the parking brake, however, neither of us quite understood what he had said about the brakes. I asked him if he was asking us to release the parking brake, to which he responded, ‘Release parking brake.’ I released the parking brake and the tug operation commenced. With the tug operation underway, I turned my attention to the logbook, thinking about how I was going to write up this problem. The First Officer put away the QRH and then was looking over the MEL, which listed restrictions about flying in icing conditions. What to me seemed like a few seconds after we began to be tugged, the First Officer rhetorically asked, ‘Where is this guy taking us?’ As I looked up I saw the end of the paved ramp approaching rapidly and heard the First Officer say something about stopping the aircraft. At that point we were both simultaneously on the brakes... After leaving about 20 feet of skid marks on the ramp, the aircraft came to a stop with the nosewheel approximately 8 feet from the end of the paved surface...and without the tug connected!!*

After stopping the aircraft and shutting down the engines and trying to comprehend what had just happened, my next concern was the location of the mechanic and if he was okay. He was okay. Although this mechanic speaks fairly good English, I was truly surprised at the level of communications breakdown that had just occurred...He told me he thought I was telling him I was releasing the parking brake. Once we started rolling he did not tell us to stop, but instead simply unplugged his headset and got out of the way.

What lessons can be learned or relearned from all of this? First of all, this is a reminder of something we all know, that being tugged is an operation which requires someone to be monitoring the aircraft. Secondly, never assume

anything. Since we never saw the tug pull away (it pulled away while we were in the books), and we were told to release the parking brake, we thought we were under tow... Also, next time I have determined I need to do a return to gate, I will shut down the engines sooner...We were so distracted by what was going on that neither of us thought of shutting down the engines, nor did it seem critical at the moment since we thought we were under tow...

Thank goodness no one was hurt, no metal was bent, and no careers were put in jeopardy, but we sure came darn close.

Ask Before You Pull the Plug

In another pushback incident, a Captain educated a ramp manager about power cord operation and the law of probabilities.

■ *Ramp pulled the power cord without asking or checking power light. Blanked Captain’s MCDU temporarily and lost a couple of odd bits of data. We had to recheck all the programming, nearly causing a delay. I went down and talked to the ramp man. My exact words were, ‘You have to ask us before you pull the power.’ I then told him it sometimes dumps computers, but more importantly went on to explain how badly it could injure him under the wrong circumstances. I was a military aircraft mechanic and gave him an example of how an arc jumped 3 feet and injured my friend badly. I don’t think it sunk in...Because I didn’t think he understood the ramifications of what could happen to him, I stopped and talked to a ramp manager and told him I thought his ground people could use some extra training on when and how to safely pull the power cord. I reiterated to him how you could get away with it 500 times and all of a sudden it could arc and kill. There can be no acceptable loss limits.*

Regrettable Rendezvous

Here’s a First Officer’s account of two tails that met during an inadequately monitored pushback procedure.

■ *Just after pushback and following the start of both engines...the Captain let our ramp personnel know we were ready for taxi by quickly flashing the nose taxi light. The aircraft marshaller gave us the signal to begin a left turn to leave the gate area. Shortly after we began to move, we felt a jolt inside the cockpit. The Captain set the brake and we began to investigate what might have happened. I opened my side window and stood up out of it to see behind the aircraft...It became immediately clear that our tail section had been positioned too close to an aircraft that was pushed back slightly from its gate. During the turn out the right elevator had struck an elevator of the other aircraft, doing damage to both aircraft...This was poor judgement by ramp personnel to have pushed our aircraft into a position where a collision might occur and very poor monitoring of aircraft clearances once they began to guide us out. What was most disturbing to us was the ground crews of both planes seemed to have no idea the two airplanes had contacted each other. We were relieved that neither aircraft attempted a takeoff with damage to vital control surfaces! More and better training of ramp personnel is clearly in need....*