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THREE GREEN—OOPS?

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When events take an unexpected turn, how do we cope?

Second Officer's Log:
1975, B727, YQR (Regina) Final Approach

I'm still a rookie *second officer* but even I know it's not supposed to happen like this.

The captain called *"Before Landing Check."* *That's normal.* The *FO (first officer)* and I moved the appropriate switches, levers and buttons, and chanted the usual incantations. *That's normal.* The trusty old Boeing 727 responded with its arcane dialect of flashing lights and flickering needles. *That's normal.* And the all-important landing gear panel is now showing three green lights assuring us that the wheels are locked down. *That's normal.* But the landing gear control panel is also glowering at us with a trio of red lights, telling us that the green lights are not to be trusted. *That's not normal!*

The captain swings into action. "Now look what you've done!" he accuses the first officer. "Recycle it!" The first officer, looking rather peevish, does so. He reaches to the center panel and returns the heavy gear handle to the up position as we watch expectantly. All the usual bumps, thunks and whirs express themselves from the bowels of the plane as several hundred pounds of landing gear assemblies and bulky doors tuck themselves away again. When all the lights extinguish and the commotion dies down, he then returns the handle to the down position and the extension noises erupt throughout the aircraft again, especially just below our feet where the nose-wheel is located.

As we await the outcome I think about how recycling is a *"Pilot's Favorite Remedy."* It provides a two-pronged approach to any aircraft abnormality. First, it will often cause the problem to just go away. Second, and more importantly, it stalls for time as we recover from the confusion of this unwelcome break in the routine and wonder what to

do if the problem persists. Which it does. We stare sullenly at the bouquet of green and red lights glowing stubbornly from the landing gear panel.

The captain now turns to me: "Checklist?"

I have been frantically flipping through the manual. Let an engine quit, let a generator fail, let the gear not come down at all, that's okay. We've got a printed routine or a scripted procedure to follow. But nowhere in our extensive catalog of emergency and abnormal checklists can I find anything to help explain why all the red lights and all the green lights are on together, and which ones to believe.

"There's nothing here for that particular abnormality," I tell him, "therefore, this can't be happening."

He flashes me a look that suggests he is re-evaluating his belief in the relatively new concept of **Crew Resource Management**. He turns back to the flight controls, pushes climb power back into the three Pratt and Whitney turbojet engines and with gentle finesse born of experience, eases the heavy Boeing skyward again. "Go Around," he calls, triggering more actions from the first officer to reposition the wing flaps and alert **ATC (air traffic control)**, "but leave the gear down." He wants some time to sort this out before attempting to reattach a hundred tons of airplane to the earth at a hundred and fifty miles an hour. It's difficult to convince anyone that the touchdown was merely firm when the wheels collapse after landing.

Now the situation drastically departs from the day-to-day routine of **line flying**. It also departs from the routine scenarios of simulator training, where I've gained most of my experience with abnormal procedures. I begin to realize just how many things the simulator doesn't simulate—like other aircraft in the circuit or surprised air traffic controllers who wish you wouldn't do this as their pattern is full right now. It doesn't simulate company dispatchers and local airport agents who want a new **ETA (estimated time of arrival)**. It doesn't simulate **flight attendants** who want to know what's happening, and if they should inform the passengers or if you will tell them. Worst of all, neither line flying nor the simulator has prepared me for what I'm faced with next as we circle the airport and the captain says to me, "You'd better go back and check the viewing ports."

Now, wait a minute! I've only been on **the line** for two months,

and when I looked through those little ports during training nobody said I'd ever have to do it for real. Well, maybe they hinted there might be a small chance someday, but I'm really not up to it today. Besides, the first officer is more experienced. Wouldn't you rather trust him to do it? And where are those little windows located anyhow? And worst of all, that cabin is full of passengers, and the simulator definitely never simulated passengers.

"On my way."

I wonder why I'm having difficulty standing up. Have my knees gone so weak at the thought of facing our customers in the midst of this potential crisis? I remember to unfasten my seat-belt. Ah, much better. I'm about to swing the cabin door open then realize my mind has gone blank regarding the exact location of the viewing ports. I picture myself running breathlessly back to the front end after ripping out all the carpets to ask, "Hey guys! Just where are those little window-things anyway?" It's not a pretty picture. I fumble with one last glance into the 'Quick Reference Handbook.'

Then I take a deep breath before heading into the cabin pausing to assume what I hope is an air of calm authority that will reassure nervous passengers. Swinging open the door I brace myself expecting to confront one hundred and thirty anxious faces. Fortunately, there are only four. Unfortunately, they're the flight attendants. This shakes my confidence, wondering what they know that I don't. The passengers are too preoccupied with the view of the city or their newspapers to notice me.

My calm air of authority begins to waver as I collapse to my knees, clawing at the carpet. I'm pretty sure one of the junior attendants makes a move towards the first aid oxygen, but the steady hand of a more experienced colleague stops her. It's just a new second officer falling apart under pressure—no big deal.

"What's happening? Can we help?" they inquire, stepping closer.

Get off the carpet! "Er ... it's just a small problem with an indicator. No sweat. Could you step back a little please?"

I peel back the industrial-strength tapestry to expose the round wooden cover and pry it loose. Then, pressing my nose against the floor while my rear end waves reassuringly towards the assembled crowd, I am barely able to see the two properly-aligned indicators

through the dirty glass viewing port. The nose-wheel is locked down. Gathering what's left of my composure, I head further back into the cabin.

An elderly lady raises a hand to catch my attention and I prepare to calm her. "Excuse me, young man," she begins, "if this is going to take long, could I get another cup of coffee?" She's in much worse shape than she appears if she's prepared to drink another cup of airline coffee. I leave her in the capable hands of the flight attendant.

Then I'm on my knees excavating carpet again. The nearest seam is two rows away from the viewing ports and as I burrow along on my elbows, I suspect that my calm air of authority is lost forever. After confirming that the main wheels are also locked down, I retreat towards the sanctity of the cockpit exiting the cabin with a last graceful stumble—note for maintenance: get carpet fixed—and arrive back in my seat with a crash.

"All three gear are showing down and locked," I report.

The captain acknowledges this and as I slip my headset back on, I overhear the instructor of a military training jet which is sliding by along our left flank provide him with another confirmation. I wonder to myself briefly if the student is flying their jet while the instructor looks us over and just how good a student pilot he is and most of all—why is he flying so close to our airplane!

Meanwhile, the first officer is busy communicating with ATC as well as talking to our company maintenance personnel on the other radio. "Did you recycle it?" I hear them ask. Apparently, recycling is also a "Mechanic's Favorite Remedy." Grabbing my *QRH (quick reference handbook)*, I quickly work my way through the checklists ensuring that all is prepared once again for landing. I'm surprised at how quickly our low-level maneuvering is slurping up our contingency fuel. Landing with or without red lights is starting to seem like a very good idea.

As we roll out once again on the *final approach track*, ATC confirms that the crash vehicles have been called out. An unfortunate choice of terms, I think to myself as I crane my neck for a view out the front window. I see a station wagon and a jeep with a fire extinguisher in the back. It's comforting to think that if the *galley* catches fire at least the crew meals might be saved—if we don't mind our steaks well done.

Now the captain scans the cockpit one last time. I figure he is checking with his mind's eye the intricate schematic diagrams of the landing gear system, calling upon his thousands of hours of experience and profound technical knowledge to provide the missing piece to this puzzle. I'm certain that any moment he will turn to us lesser mortals and reveal in a captainly manner why all the red lights can be on if the gear is, in fact, down and locked. Instead, he leans across the center console and gives the landing gear lever a sound inward thump. The micro-switch which senses the gear-handle position makes contact. Presto—all the red lights go out.

"Stupid thing," he remarks.

I am reminded of another *Pilots Favorite Remedy*—thumping. Of course, I think to myself. How many times have I used the same technique on a recalcitrant television or vending machine? Why should a multi-million-dollar airplane be any different?

"You should have thought of that earlier," he growls at us, "and saved all this nonsense. Oh, it's lonely at the top."

We land smoothly—well, not that smoothly—the captain assures us he just wanted to make certain the gear was truly locked down.

That's normal.