

# CALLBACK

From NASA's Aviation Safety Reporting System



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## Troubleshooting In Flight

This month, *CALLBACK* continues its informal survey of ASRS Human Factors with a brief look at troubleshooting in flight as a critical and defining skill, often needed and practiced by aviation professionals and enthusiasts alike. Good troubleshooting demands keen observation, accurate perception, anticipation, sound judgment, and timely decision-making that breeds effective action. Other human factors, a bit of creativity, and the ability to adapt or improvise may also influence results. In short, troubleshooting aims at continually improving the safety and outcome of an evolving situation. The principle is cemented in aviation's Safety Management System (SMS) philosophy and is reflected in every checklist, Quick Reference Handbook procedure, and immediate action item.

In this issue, we feature incident reports that recount serious aircraft challenges in which troubleshooting was paramount to resolving each problem. Note the many facets that troubleshooting takes on and the human factors at play.

### Part 91 – The Audio Connection

While IFR in IMC, this Cirrus SR22 pilot experienced a situation that deteriorated as troubleshooting was attempted. Priorities were reestablished, and the flight landed safely.

■ *Cleared for takeoff.... Given right turn to 120 at about 1000 ft. Entered clouds. Solid IMC. Flying with autopilot, heading bug, and altitude step-ups. At that moment, the audio panel went out, reverting to backup level functionality. No noise canceling. Low audio volume. Instructions from ATC difficult to hear well in that environment, but I did hear. Was given turn to 140. Heading bug moved to 140. I advised that I was having audio difficulties and began to troubleshoot the audio. Subsequently, it was evident that the autopilot was also nonfunctional. I was nose high in a shallow left turn with airspeed about 90 kts. Momentarily I regained control from the unusual attitude and began to correct course. Once basic control had been reestablished, troubleshooting checklist led to the breaker panel, where I could feel two breakers out. These were reset and the audio and autopilot returned to normal, and normal operations were again possible. The flight then proceeded normally to the destination.*

### Part 135 – A Troublesome Curiosity

An air taxi Citation jet Captain experienced a surprise while troubleshooting and managing a critical system failure. The problem resolved, and the aircraft landed safely.

■ *Filed altitude FL 410. Incident occurred while descending from FL 410 to join...arrival. We had leveled off at FL 370 prior with no issue, then flameout at FL 330. ... Aircraft X experienced a #1 (left engine) flameout. From the best of both of our recollections, it occurred as we leveled off at FL 330 and were pushing thrust levers forward to maintain airspeed (no icing condition). First indication of an issue was the #1 Generator Off light and associated Warning/Caution light. Second, left engine Oil Pressure warning came on prompting us to look at the N1, N2, and ITT (Interstage Turbine Temperature) gauges showing 0 ITT and turbine spin-down. We requested priority handling immediately due to the need to get to our driftdown altitude and began looking for the closest suitable airfield to land and requested ZZZ. Once established on a vectors and descent profile, PM broke out the checklist and began running it. At an altitude neither of us remembers, we opened the checklist to the next section and began discussing the procedures and next steps. PF began slowing the aircraft to get within the 200 KIAS limit for restart. We then ran through the checklist to attempt to restart Engine No. 1, which was unsuccessful, and start did not occur, so we aborted the start. PM was distracted for what seemed like no more than one minute, and before I could go back to the first checklist section, the engine re-lit on its own at an altitude we don't remember, and it appeared to be functioning normally; we didn't increase power as we were in a continuous descent. We continued descent for Runway XX at ZZZ, descending through icing conditions at 12,000 MSL, when we turned engines and wings [anti-icing] on... until clear. No. 1 Engine continued to appear normal all the way to final, and we made the decision to make a two-engine approach with PM ready to adjust flaps in the event the engine failed again. Due to the strong gusting winds at ZZZ, we determined a dual engine approach would be safest in these conditions with the PM closely monitoring engine function to touchdown. Landing was uneventful...we taxied to the FBO without further incident.*

## Part 121 – Pursuing the Root Cause

This air carrier Aviation Maintenance Technician described troubleshooting events while investigating the root cause of an oxygen leak that became extremely hazardous.

■ *My partner and I were assigned an ETOPS [inspection] on Aircraft X. During our inspection, we found the crew O<sub>2</sub> bottle was reading 1300 psi. We then replaced the bottle, no leaks noted, sitting in the cockpit and completed the ETOPS check, and went to sign off paperwork. We received a gate call, from the flight crew, that the Captain's mask was leaking after he tested it. When we arrived at the cockpit, the Captain had disconnected the mask from the box and explained to us that it wouldn't stop leaking. We then connected the mask and saw that the mask was leaking, and disconnected it again, due to safety reasons and not wanting to leave the mask connected and leaking. We went and ordered a mask and replaced the mask, and no help. At that point we decided to change the stowage box, and at that point, I went downstairs, turned off the bottle, went back, replaced the box and mask, and when I turned the bottle back on to leak check, all the other masks started leaking as well. My partner told me to turn the bottle off, which I did. At that point, we contacted our Lead Technician, to let him know what was going on. He came out, and I went back downstairs to the O<sub>2</sub> bottle, saw smoke in the E&E area, and called our Crew Chief. At that point I called upstairs, and found out that there was an issue there. After the flashover, I then removed the O<sub>2</sub> bottle from the plane.*

## Part 121 – “I’ll Get the Doors”

An air carrier Flight Attendant (FA) noted communication and confusion issues that impacted troubleshooting efforts to resolve a flight deck cabin door configuration indication.

■ *About 5 minutes after arming the doors and doing the “all call,” I received a call from the cockpit stating that their indicator light said that 4R was not armed. I tried to call back to 4R and 4L but the interphone was not working at those doors (the interphone needed to be reset or hung up properly). So, I walked back to 4R and saw 4R was not armed. I asked whose door was 4R. FA A said it was his. At the same time FA B came over to the door. I said, “The door isn’t armed.” I also shared that both the cockpit and I tried calling 4R & 4L but could not get through. FA A immediately armed the door and FA C began to explain what happened. FA C...had accidentally armed 4R. He said he thought it was his door since he had been flying that position all month. Apparently, FA A, not realizing the door was already armed, ...then accidentally disarmed the door. It was not clear why the crosschecks did not prevent this mistake.*

| ASRS Alerts Issued in July 2026 |               |
|---------------------------------|---------------|
| Subject of Alert                | No. of Alerts |
| Aircraft or Aircraft Equipment  | 6             |
| Airport Facility or Procedure   | 16            |
| ATC Equipment or Procedure      | 17            |
| Hazard to Flight                | 1             |
| Other                           | 6             |
| <b>TOTAL</b>                    | <b>46</b>     |

560  
A Monthly Safety  
Newsletter from  
**The NASA  
Aviation Safety  
Reporting System**  
P.O. Box 189  
Moffett Field, CA  
94035-0189  
<https://asrs.arc.nasa.gov>

## Part 121 – Ambiguous Indications

A B737 Captain described troubleshooting details during a serious landing gear situation. Good judgment and decisions were applied, and the best outcome prevailed.

■ *During walk-around, found NLG strut completely compressed (bottomed-out). Contract Maintenance serviced it to in-range extension with N<sub>2</sub>. Taxi and takeoff were uneventful until gear retracted. NLG green down and locked extinguished, red unlocked light illuminated and remained illuminated. Pilots ran Gear Disagree Checklist. Noise level and vibration seemed nearly normal on climb out and fuel flow was nominal for phase of flight. After weighing options, Captain decided to continue to ZZZ1 and continue troubleshooting on way to ZZZ1. Manual Landing Gear Extension Checklist was reviewed just in case it would be needed. Contacted Dispatch and Maintenance Control to determine any other possible action. Maintenance Control informed us that the maintenance tech in ZZZ left his flashlight in the NLG compartment. This was the most likely cause of the problem. Pilots agreed to extend the landing gear early for landing since fuel state was not a concern. During approach, when the gear handle was moved to the down position, the NLG red unlocked light remained illuminated. The green down and locked light remained extinguished. Overhead panel NLG green light also was extinguished. Both MLG lights indicated down and locked. PM (at this point it was the Captain) referred to the Manual Landing Gear Checklist and attempted a manual extension. This was unsuccessful. NLG indications did not change. PF abandoned the approach and called for the go-around. ZZZ [TRACON] vectored us northwest of the airport at 12,000. Crew referred to the Landing with Partial Landing Gear Checklist. Dispatch and Maintenance Control were consulted. Briefing with brace instructions was provided to the flight attendants. After running all applicable checklists, the Captain performed a normal approach and light landing while reducing loads on the nose gear for as long as possible. The nose settled onto the extended NLG. Ops and Airport Rescue and Firefighting inspected the aircraft, pinned all landing gear before exiting runway. The flashlight was located in the NLG compartment. A normal taxi to the arrival gate occurred without further incident.*

The reports featured in CALLBACK are offered in the spirit of stimulating thought and discussion. While NASA ASRS does not verify or validate reports, we encourage you, our readers, to explore them and draw your own conclusions.

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| July 2026 Report Intake     |               |
|-----------------------------|---------------|
| Air Carrier/Air Taxi Pilots | 6,172         |
| Flight Attendants           | 2,406         |
| General Aviation Pilots     | 1,733         |
| Military/Other              | 1,297         |
| Controllers                 | 407           |
| Dispatchers                 | 263           |
| Mechanics                   | 252           |
| <b>TOTAL</b>                | <b>12,530</b> |