

# CALLBACK

From NASA's Aviation Safety Reporting System



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## What Would You Have Done?



This “interactive” issue of *CALLBACK*, presents three in-flight situations that involve General Aviation Pilots and one takeoff scenario that involves an Air Carrier Flight Crew. In “The First Half of the Story” you will find report excerpts describing the situation up to the decision point. It is up to the reader to determine the possible courses of action and make a decision (preferably within the same time frame that was available to the reporter).

The selected ASRS reports may not give all the information you want and you may not be experienced in the type of aircraft involved, but each incident should give you a chance to exercise your aviation decision-making skills. In “The Rest of the Story” you will find the actions actually taken by reporters in response to each situation. Bear in mind that their decisions may not necessarily represent the best course of action. Our intent is to stimulate thought, discussion, and training related to the type of incidents that were reported.

### The First Half of the Story

#### Situation #1 (C172RG Pilot's Report)

■ On departure, the gear retracted normally. However, immediately after retraction I heard a loud “POP” followed by a call from Tower indicating that my left main gear had retracted then fallen down again. Another aircraft behind me confirmed seeing the same thing.

The aircraft has a gear mirror installed on the right wing which allowed me to view all three gear. The left main was in a trailing position. The nose and right main were retracted. I cycled the gear. The left main didn't move from its in-trail position.

I advised Tower that I would troubleshoot the gear and tried yawing the aircraft and maneuvering so as to swing the gear with inertia into the locked position.... Unable to retract or extend the gear, I made a call...to an A&P to confirm my suspicion that it was most likely the gear actuator that had broken loose from the pivot point.... I could land with the right main and nose gear down and locked or fully retracted. I could also land under power or secure the engine and try to save the engine and prop.

#### What Would You Have Done?

#### Situation #2 (PA-31 Pilot's Report)

■ I had planned to leave at 0730, but the weather was 500 foot ceiling and 2 miles visibility. The lowest approach minimum at [my destination] was 1 mile visibility and 800 foot ceiling. The runway was short (2,000 feet) and there were no approach lights. I waited over two hours for the weather to improve, but it didn't. I decided to request a Special VFR clearance after phoning the destination FBO. They told me the visibility there was at least 3-4 miles and the ceiling was definitely 500 feet or better. I assumed the ceiling would be at least 500 feet all the way on the 4-5 minute flight. When I got a few miles east of the airport the ceiling suddenly dropped and I had to decide whether to stay at 500 feet AGL and pop into the clouds or descend to remain clear.

#### What Would You Have Done?

#### Situation #3 (SR22 Pilot's Report)

■ When I had flown the route IFR earlier in the day the ceilings were about 3,500 to 4,000 feet. I decided to make the return trip VFR with flight following and stay under the 3,000 foot floor of the...Bravo airspace since that is what ATC would have had me do had I filed IFR. All was well until I reached the shoreline. I was at 2,700 feet and I was cleared by Approach through the Class D at or above 2,500 feet, but I had to stay below the Bravo airspace at 3,000 feet. As I reached land, the ceiling dropped to just about 2,700 feet so I descended to 2,500 feet, but that still put me in the base of the clouds. Then ATC warned me about traffic ahead on a missed approach and suddenly I found myself trapped in and out of the clouds, unable to descend without busting the Delta airspace. Meanwhile I could not see the traffic which was being called out straight ahead by the traffic warning system.

#### What Would You Have Done?

#### Situation #4 (B737 Captain's Report)

■ On takeoff roll approaching 80 knots, the Tower Controller called us and said in a very slow, unsure voice, “[Callsign 1...2...3...4...] (pause).” He sounded as if he had something to tell us, but did not know what to say. We both

noted a tone of concern and hesitation in his voice as if he was still unsure of something at that moment. We were light weight and had 13,000 feet of runway ahead of us. We had to make an immediate decision.

### What Would You Have Done?

## The Rest of the Story

### Situation #1 (C172RG Pilot's Report)

#### The Reporter's Action

■ At the cost of an engine and prop, but with significant risk reduction, I elected to land under power with right main and nose retracted. I contacted Tower, advised of our situation... and our intention to land gear up.... We landed uneventfully on the centerline with a soft, controlled, low energy touchdown; no fuel leaks, no hydraulic leaks, no oil leaks, no fire, and no injuries. The damage to the airframe was pretty minimal, however the propeller was obviously destroyed and therefore the engine will require teardown.

I felt it appropriate to make a report to document the decision-making on landing under power which I would highly recommend rather than making the error of "trying to save the engine and prop" and reducing options on landing. Because the sink was greater than I anticipated, I did need to add additional power just prior to touchdown. Should I have tried to "save" the engine, it would have made for a solid impact with the runway increasing damage to the airframe and possibly resulting in injury. Leaving the engine running, I was able to make a gentle, low energy touchdown. The resulting sensation in the cockpit was like a normal landing (louder, but normal forces), zero injuries, and a happy outcome. Again, I would highly recommend a low total energy touchdown under power for anyone finding they need to make a forced gear-up landing. The aircraft, engine, propeller can all be replaced and it's not worth "trying to save" a machine at the cost of possible injury.

Thank you for providing the Aviation Safety Reporting System. As a long-time pilot, I find this open sharing of information valuable to aviation safety.

### Situation #2 (PA-31 Pilot's Report)

#### The Reporter's Action

■ I decided to descend and went down to what I estimated to be about 350 feet AGL. Even though it was a sparsely

populated area, I flew over two housing developments below 500 feet AGL. At three miles out, I saw the airport and runway, and the ceiling increased. I made an uneventful landing and it wasn't till after I got out of the plane that I realized that I had busted the regulation for minimum altitude over a structure or vehicle. The basic cause was that I had made a false assumption that the ceiling would be at least 500 feet all the way since the two airports were only 10-11 miles apart. This was definitely a case of poor judgment on my part. In the future, I will not assume that the ceiling will remain uniform and give myself more margin for error. I should have waited until the ceiling was at least 800 to 1,000 feet. My desire to get an annual underway ASAP at [my destination] also played a role similar to the old "get-home-itis."

### Situation #3 (SR22 Pilot's Report)

#### The Reporter's Action

■ I was able to turn into clear weather over the airport, away from the traffic, but busted VFR minimums and descended into the top 100 feet of the Delta airspace. I should have monitored the ATIS while I was over the ocean and asked for a clearance when it was clear I could not maintain VFR minimums (although it turned out to be mostly clear directly over the airport) or circled when the weather closed in and asked for a clearance. Next time I will get the clearance first and cancel if the weather accommodates.

### Situation #4 (B737 Captain's Report)

#### The Reporter's Action

■ I elected to initiate rejected takeoff procedures. During deceleration the Tower Controller said, "Disregard."

The sound of one's voice, the tone and force, all convey a message. I did not like the message I was receiving and could not gamble that he was trying, but unable, to warn us of something ahead. I would take the same action again.

(From the First Officer's report on the same incident)

I believe the rejected takeoff was the right thing to do. When you get a call from Tower at that point in the takeoff roll, the first thing that pops into your mind is "something's wrong." In the few seconds before he finished his thought, we were left to guess what the call was about. We were still relatively slow speed on the roll, so the Captain did what was prudent and safe by rejecting.

ASRS Alerts Issued in November 2012	
Subject of Alert	No. of Alerts
Aircraft or Aircraft Equipment	1
Airport Facility or Procedure	7
ATC Equipment or Procedure	4
Maintenance Procedure	1
Company Policy	1
<b>TOTAL</b>	<b>14</b>

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November 2012 Report Intake	
Air Carrier/Air Taxi Pilots	3498
General Aviation Pilots	1064
Controllers	654
Cabin	275
Mechanics	130
Dispatcher	77
Military/Other	17
<b>TOTAL</b>	<b>5715</b>