

1/9/2025

**FOR YOUR INFORMATION**

2025-4/3-1

To: Textron Aviation (Cessna), FAA (AFS-100)

2185441

Info: FAA (AVP-1, AVP-200, AFS-260, AFS-800, AFS-200, AIR-360, AIR-780, MKC-AEG, ANM-100), AMFA, AOPA, ASAP, ATSG, GAMA, IAM, IBT, ICASS, NBAA, NTSB, PAMA, TWU

From: Becky L. Hooey, Director  
NASA Aviation Safety Reporting System

Re: CE-550 Aileron Trim Indexing

We recently received ASRS reports describing a safety concern that may involve your area of operational responsibility. We do not have sufficient details to assess either the factual accuracy or possible gravity of the report. It is our policy to relay the reported information to the appropriate authority for evaluation and any necessary follow-up. We feel you should be aware of the enclosed deidentified report.

To properly assess the usefulness of our alert message service, we would appreciate it if you would take the time to give us your feedback on the value of the information that we have provided. Please contact Dr. Becky Hooey at (408) 541-2854 or email at [becky.l.hooey@nasa.gov](mailto:becky.l.hooey@nasa.gov).



Aviation Safety Reporting System  
P.O. Box 189 | Moffett Field, CA | 94035-0189



## ACN 2185441

### DATE / TIME

Date of Occurrence 202411  
Local Time Of Day 0601 to 1200

### PLACE

Locale ZZZ.Airport  
State US  
Altitude - AGL 400

### ENVIRONMENT

Flight Conditions Marginal

### AIRCRAFT / EQUIPMENT X

ATC / Advisory - TRACON ZZZ  
Make Model Name Citation II S2/Bravo (C550)  
Operating Under FAR Part 135

### COMPONENT 1

Aircraft Component Aileron Trim System

### PERSON 1

Function - Flight Crew First Officer  
Function - Flight Crew Pilot Flying  
ASRS Report Number 2185441

### PERSON 2

Function - Flight Crew Captain  
Function - Flight Crew Pilot Not Flying  
ASRS Report Number 2185442

### EVENTS

Anomaly Aircraft Equipment Problem - Critical  
Anomaly Inflight Event / Encounter - Loss Of Aircraft Control  
Detector - Person Flight Crew  
Result - General Flight Cancelled / Delayed  
Result - Flight Crew Landed As Precaution  
Result - Flight Crew Overcame Equipment Problem  
Result - Flight Crew Regained Aircraft Control  
Result - Flight Crew Returned To Departure Airport

### NARRATIVE 1

Performed all preflight checklist and inspections of the aircraft to include the Before Taxi Checklist, Taxi Checklist, and Before Takeoff Checklist. Everything was operational including the flight control check. The CA was the PM and the First Officer was PF. Upon finishing the Before Takeoff Checklist, the CA transferred flight controls to the FO. Just after rotation, I noticed the aircraft yawed to the right and immediately looked at the turn coordinator to find the aircraft coordinated. PM called for positive rate and gear came up. 400 ft., the flaps were raised to 0°. We were flying runway heading and assigned to fly 040° heading on departure. As soon as I started making my left turn to 040, I could tell the aircraft's flight controls were not normal. I was having to put excessive input to make my left turn. CA then told me I was banking 45° so corrected and that is when I felt like the aircraft was mis-trimmed. I called for autopilot to reduce workload and I remembered checking my PFD (Primary Flight Display) as well as the autopilot button. It felt like the autopilot did connect

so I disengaged it with elevator trim on the yoke because we were reaching our assigned altitude of 3000 ft. and had not been cleared higher yet. I was still struggling to maintain directional control so I asked for the autopilot again and shortly after, the autopilot disconnect chimed again, but this time, the PFD said autopilot failure. CA asked for flight controls and I gave the controls to him, swapping PM and PF duties. We were cleared to 5000 ft., but still struggling to maintain our assigned heading. We did have Aircraft Y traffic in the area above us. I made all the radio calls to Departure and asked to come back to ZZZ and requested vectors for the ILS. PF did not know if we were going to be able to maintain positive controls of the aircraft so we requested lower for the visual to Runway XX. We dropped down to 2500 ft. and popped out of the clouds and pointed the field out to the CA. We flew the visual in, ran the appropriate checklists, and landed the aircraft normally. It was a normal shutdown and the CA talked to passengers post shutdown. They seemed happy/relieved to be back and understood what was happening. CA explained that the aircraft was behaving in a way that he did not like. I opened the exit door for the passengers and they thanked me as well although they did seem a little shook up.

## **NARRATIVE 2**

Severe partial loss of control. Performed Before Taxi and Taxi Checklists in detail. Got released by ATC, performed Takeoff Checklist. First Officer was PF, Captain PM. Transferred controls to PF. Upon rotation, there was a noticeable yaw to the right. Positive rate, gear up. 400 ft., flaps up, recce lights, synchronizer to FAN. At this moment, I saw PF PFD (Primary Flight Display) at 45 degrees of bank. I said “bank” and pointed. FO reacted to correct. He called for autopilot on and I engaged autopilot. A few seconds later, there was the autopilot disconnect chime and PF requested a second time autopilot on. I engaged autopilot and immediately noticed autopilot FAIL. PF was struggling to maintain directional control. I requested the aircraft and we exchanged controls. Somewhere before I took controls, I had contacted Departure and was radar contact. Was instructed to climb to 5000 and informed Aircraft Y was nearby. We were IMC at around 2200 ft. and therefore made no visual contact. I immediately recognized that plane was banking to the right and had to exert considerable force to keep wings level. I myself corrected the aircraft from going past 45-degree bank angle. Before reaching 5000, I requested return to ZZZ. ATC asked if they could be of assistance and I said no and wanted the ILS since we were IMC. At this time, things were happening very fast and we were still trying to figure out what was taking place. After what seemed to be 20 – 30 seconds of flying, I requested cancelling ILS and to have vectors for a visual. I was unsure if we could fly an entire ILS and wanted to get the aircraft to the ground as soon as possible. We were given vectors which I tried to follow. Recognizing that we were approaching ZZZ, I asked for 2500 hoping to pop out of IMC. It was granted. We popped in and out of clouds and FO found the airport, at which time I declared “field in sight” and flew a visual to the field. Landing was uneventful, smooth and centerline. We taxied back to FBO, shut down engines, and I informed passengers that the plane was not responding as I wanted and decided to return. Everyone on board said “good choice” and “thank you.” FO opened door and as passengers left, they each said thank you again. They were very happy to be on the ground as it was probably not a very pleasant flight for them. For myself, there was a moment that I thought if this loss of control continued, we would not make it back.

## **CALLBACK 1**

Reporter stated that postflight inspection revealed that the aircraft, which had just come back from Maintenance, had an aileron trim issue. Apparently the aileron trim was mis-indexed to a false zero point. With the aileron trim at zero, there was actually considerable right wing down trim present. The trim has since been properly indexed and the aircraft returned to service.

## **SYNOPSIS**

CE-550 flight crew reported that the aileron trim was mis-indexed after maintenance, resulting in partial loss of aircraft control that occurred right after takeoff. The flight crew performed an air turnback and safely landed.