

ALERT BULLETIN

AB 2024:10/3-6

3/25/2024

2085081

TO: Textron Aviation (Cessna), FAA (AFS-100), Collins Aerospace

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

SUBJ: Cessna Citation / Collins Fusion Autoflight Issues

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 following:

ASRS received a report from a Cessna Citation Captain describing autoflight anomalies. Reporter stated the aircraft is equipped with a Collins Fusion panel that has been installed since 2018, and has had "occasional glitches." Reporter expressed concern with the reliability of the panel, and the support services available.

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.



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



ACN 2085081**DATE / TIME**

Date of Occurrence 202402
Local Time Of Day 1201 to 1800

PLACE

Locale SLC.Airport
State UT
Altitude - MSL 8000

ENVIRONMENT

Flight Conditions VMC

AIRCRAFT / EQUIPMENT X

ATC / Advisory - TRACON S56
Make Model Name Cessna Citation Undifferentiated or Other Model
Operating Under FAR Part 91

COMPONENT 1

Aircraft Component Navigational Equipment and Processing

PERSON 1

Function - Flight Crew Captain
Function - Flight Crew Single Pilot
ASRS Report Number 2085081

EVENTS

Anomaly Aircraft Equipment Problem - Less Severe
Anomaly Deviation - Track / Heading - All Types
Anomaly Deviation / Discrepancy - Procedural - Clearance
Anomaly Deviation / Discrepancy - Procedural - Published
Material / Policy
Detector - Automation Aircraft Other Automation
Detector - Person Flight Crew
Result - Flight Crew Overcame Equipment Problem
Result - Flight Crew Requested ATC Assistance / Clarification

NARRATIVE 1

On approach to Runway 34L I had a LOC/coupling failure. My instruments would not couple with LOC. I received vectors to LOC and needles did not indicate couple. I know the frequency was correct because I had glide slope indication. Then I was given a frequency change to Tower and got the wrong frequency (132.6 instead of 132.65, I believe this is what I read back). Prior to event I was on the NORDK6 arrival and was cleared direct to CARTR, deleting LHO crossing FL190. I was too close to comply. The frequency was busy and I tried to notify ATC that I was too close to make altitude. They gave me an alternative altitude and was told my runway would be 34L with Runway 35 on request. Normally going in there you almost always get 35 (accepted GA runway) landing north. Being prepared for both (either) is no easy task. I flew the arrival without incident and was prepared for 34L. Was cleared to intercept the LOC and it did not couple. I realized right away I was flying through the LOC and got vectors to the west. Heading 320. The computer does not respond to turns immediately and it was changing direction when I was asked again to make my turn immediately. It did not couple going the other way across the LOC. I had the incorrect frequency for tower and

went back to last assigned and was cleared to land. No further incident or direct conflict noted, normal landing.

I have noted intermittent issues with my LOC sensing. The panel is Collins Fusion and has occasional glitches. There is a new software/firmware package that is supposed to remedy some if not all noted issues. I have had this panel since 2018 and have adapted well. I have squawked this issue multiple times and have had it looked at twice. While in for diagnostics the facilities could not replicate the problem and they have indicated it is very hard to find an intermittent problem of this type. To the best of my knowledge they have not flown the plane to try to duplicate the issue and have used only ground equipment to diagnose. There is a new software/firmware available to install that should (according to Collins) remedy some problems and incorporate new features. As a quick side note, the Fusion division of Collins has been bought out since we installed our avionics package and the help has been moved substantially. I have lost my regional representative at least twice plus we had COVID make an influence. I have an appointment to have the software/hardware package installed. I also have documentation that I have inquired as to the nature of the LOC issue prior to this event. It is rare to happen and has never caused me to have a potential pilot deviation report. SLC with parallel runways is a difficult environment. If I were to change anything there I would not indicate to the pilots there is another runway "on request". Give the expected runway and do not change it. When we program our computers it is necessary to have a specific runway and "landing north" is not an option in our programming list. It MUST be to a certain runway. That runway should remain the landing runway unless you can make a visual approach. I know they're trying to make it easier but in effect, it makes it more difficult.

I do not believe this was caused by ATC/approach, nor do I believe I induced this problem. I also believe the event was handled professionally by ATC and the pilot. I have attended re-currency class.

SYNOPSIS

Cessna Citation pilot reported the aircraft's Collins Fusion system localizer sensing and coupling system failed, resulting in flying through the localizer. Reporter stated they have had ongoing issues with the system's localizer sensing and a lack of avionics support.