# Airworthiness Concern Sheet

**Date: 2/14/02**


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**Make, Model, Series, Serial No.:**

Cessna Models 402C, 414A, 421C

**Reason for Airworthiness Concern:**

Possibility of jammed rudder

**FAA Description of Airworthiness Concern** (Who, What, Where, When, How? Attachments: RA and appropriate data) *and* **Request for Information** (Proposed Alternate Inspection/Repair Procedures, **Cost Impact**, Etc. Note: Any comments or replies to the FAA need to be as specific as possible. Please provide specific examples to illustrate your comments/concerns.)**:**

**It has come to the attention of this office that operators of Cessna Model 402C's may experience a rudder jam due to deformation of the rudder gust lock mechanism. An incident occurred on April 10, 2001 in which a Model 402C experienced rudder lock just after takeoff. Through manipulation of the rudder pedals and elevator the system was unlocked. Releasing the rudder lock by pulling back on the yoke, while having a right rudder/nose wheel input apparently causes the deformation in the mechanism. This action apparently causes the mechanism to load up consequently bending the tab on the cam. Once the tab on the cam is bent it can now jam the rudder by engaging the locking pin instead of the release trigger. It is also possible for the bent cam to limit elevator travel by interfering with the gust lock mechanism. This is due to the fact that the cam is attached to the elevator torque tube.**

**It should be noted that the Model 414A and 421C are susceptible to this problem since they have the same rudder gust lock design. This office is considering action in the form of an SAIB or an AD to address this problem. However, the FAA would like to solicit the following input from the user community:**

1) **How common is this type of occurrence (bent rudder gust lock cam)?**
2) **If an incident did occur, what were the specific circumstances surrounding the incident (locked rudder, limited elevator travel, etc...)?**
3) **What is the most common method of disengaging the rudder gust lock?**

**According to Cessna and FAA records this is the only known occurrence of this problem on a 402C. There have been two reports related to the rudder gust lock mechanism on the 414A. Assuming the FAA does go forward with action what potential solutions does the user community recommend and why?**

**Attachments: *SDR(s) ☐ *A/IDS ☐ *SL(s) ☐ *SAIB ☐ *FAASR/NTSBSR ☐ *AD ☐ *AMOC ☐ *RA ☐**

**Notification: FAA ☒ *AOPA ☒ *EAA ☒ Type Club ☒ *TC Holder ☒ Other:**

**Response Requested _5/10/02: Emergency (10 days) ☐ Alert (30 days) ☐ Information (90 days) ☒**

**(Word 97 Version: Manually Check Appropriate Boxes)**

*Service Difficulty Reports (SDRs); Accident/Incident Data System (A/IDS); Service Letter (SL); Special Airworthiness Information Bulletin (SAIB); Federal Aviation Administration (FAA)/National Transportation Safety Board (NTSB) Safety Recommendation (FAASR/NTSBSR); Airworthiness Directive (AD); Alternate Method of Compliance (AMOC); Risk Assessment (RA); Aircraft Owners & Pilots Association (AOPA); Experimental Aircraft Association (EAA); Type Certificate (TC)