FAA
Aviation Safety

SPECIAL AIRWORTHINESS INFORMATION BULLETIN

SAIB: CE-11-40
SUBJ: Flight Controls: Rudder **Date:** June 10, 2011

This is information only. Recommendations aren't mandatory.

Introduction

This Special Airworthiness Information Bulletin (SAIB) informs owners, operators, and maintenance personnel of **Allied Ag Cat Productions, Inc. G-164, G-164A, G-164B, G-164B with 73" wing gap, G-164B-15T, G-164B-34T, G-164B-20T, G-164C, G-164D, G-164D with 73" wing gap** model airplanes (under Type Certificate Data Sheet **1A16**) about potential cracking in the rudder.

At this time, the airworthiness concern is not an unsafe condition that would warrant Airworthiness Directive (AD) action under Title 14 of the Code of Federal Regulations (14 CFR) part 39.

Background

FAA Flight Standards District Office, FSDO-21 Fargo, ND reported cracks being found on the rudder of the Allied Ag Cat G-164 airplanes. Cracking was located in the rudder main spar tube in the area immediately above the upper hinge attach point of "Tall Tail Conversions". Typically the cracks are discovered during aircraft inspection and/or when recovering the rudder.

The root cause of cracking has not been determined, but some contributing factors may be: high rudder operational loads, no gust lock during tie-down, "Tall Tail Conversions" (STC tail extensions), or various field repair scenarios.

Recommendations

Review of the Ag-Cat Maintenance Manual confirms 100-hour and annual inspections for breaks and damage in steel structure, but does not provide a detailed inspection that would identify this rudder cracking issue. This bulletin informs maintenance personnel of an inspection procedure that has been demonstrated successful in identifying cracks.

The FAA has had discussions with the type certificate holder who concurs with the following recommended procedure. Apply light hand pressure in both left and right lateral directions as shown in the Figure 1, Figure 2 and Figure 3 while looking for any deformation or wrinkling of the fabric in the noted area. If any deformation or wrinkling is noted, the rudder should be considered non-airworthy until it can be determined by further visual or other non-destructive inspection of the internal structure of the rudder that no cracking or failure of the structure has occurred.

For Further Information Contact

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Figure 1

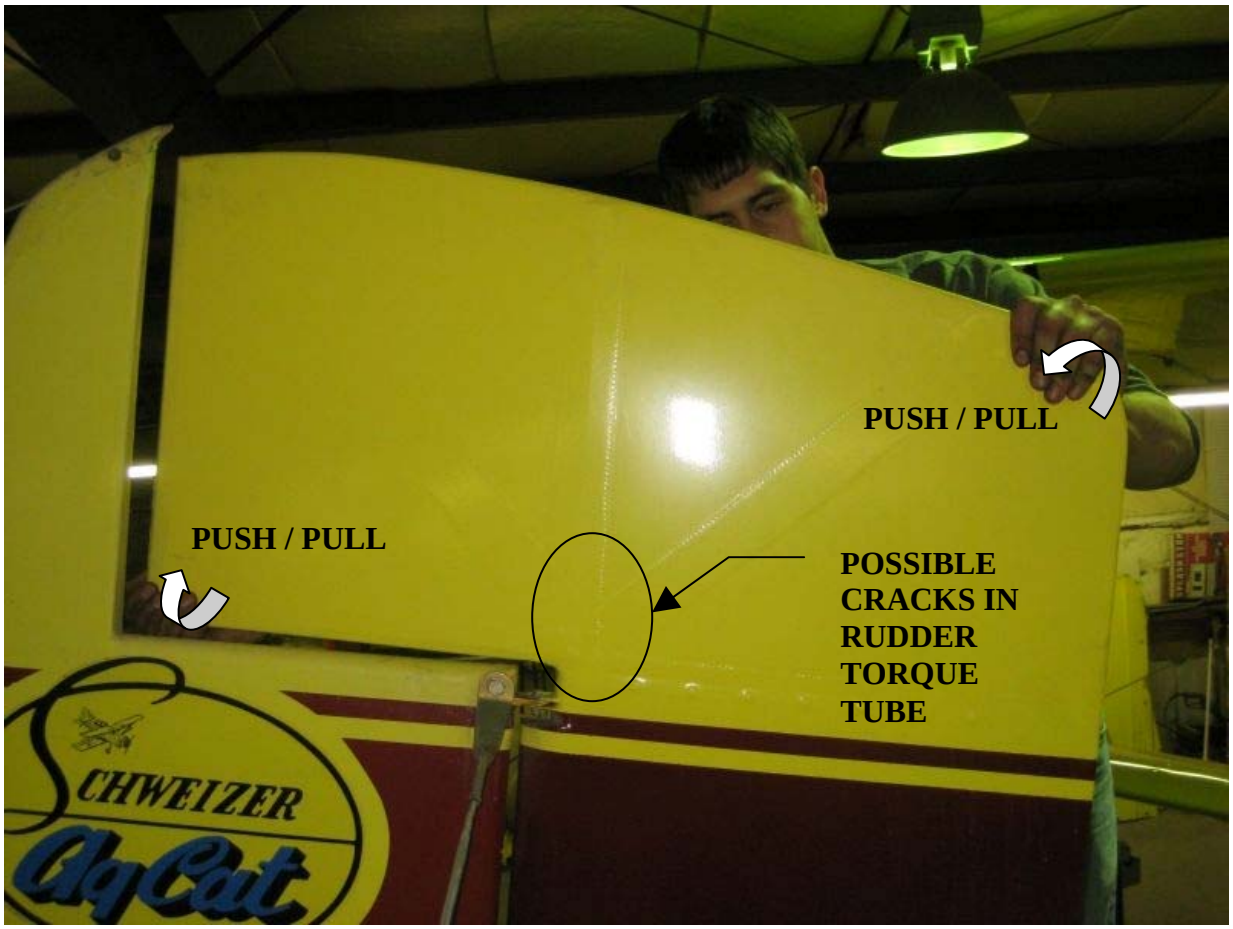


Figure 2

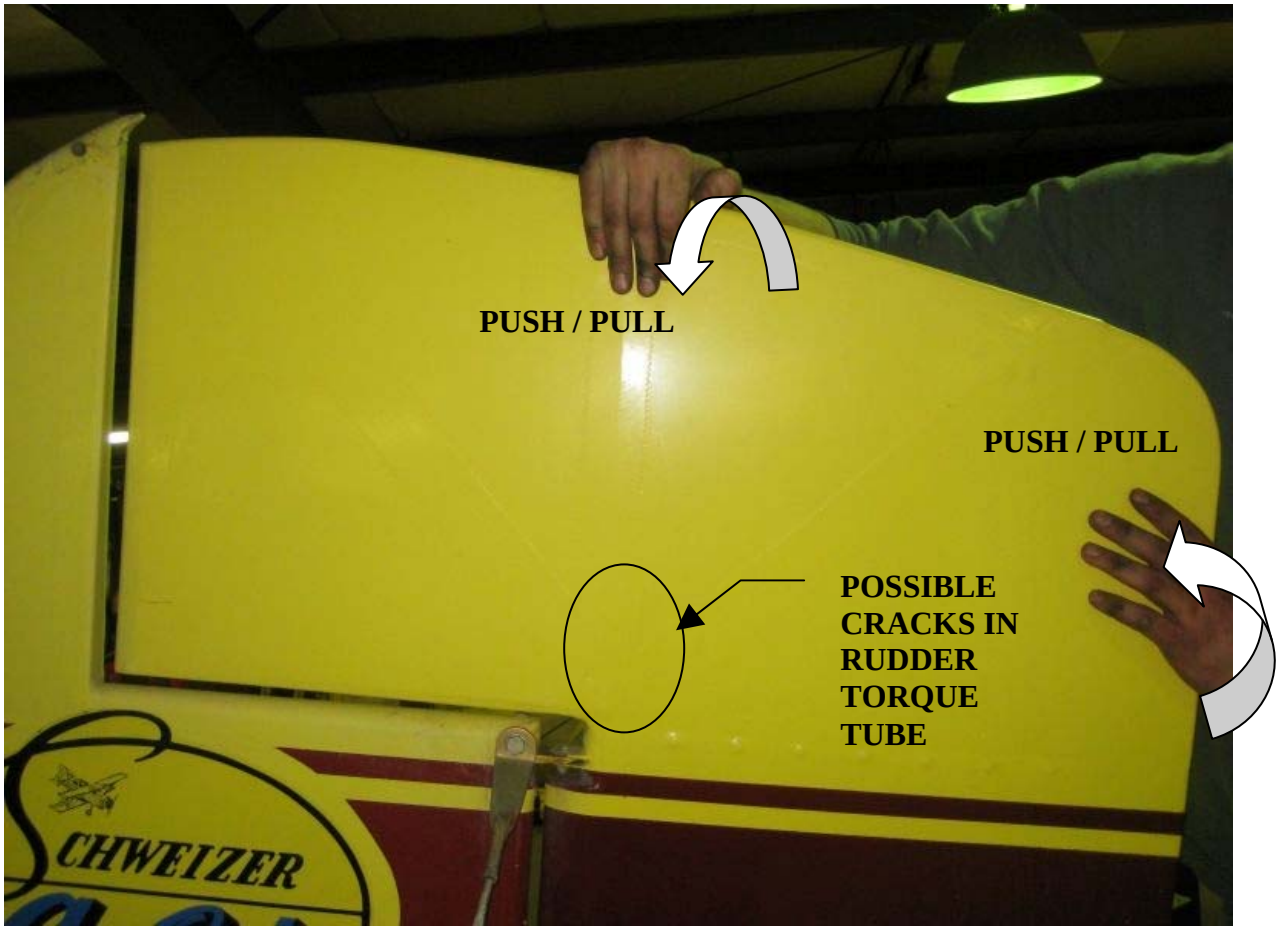
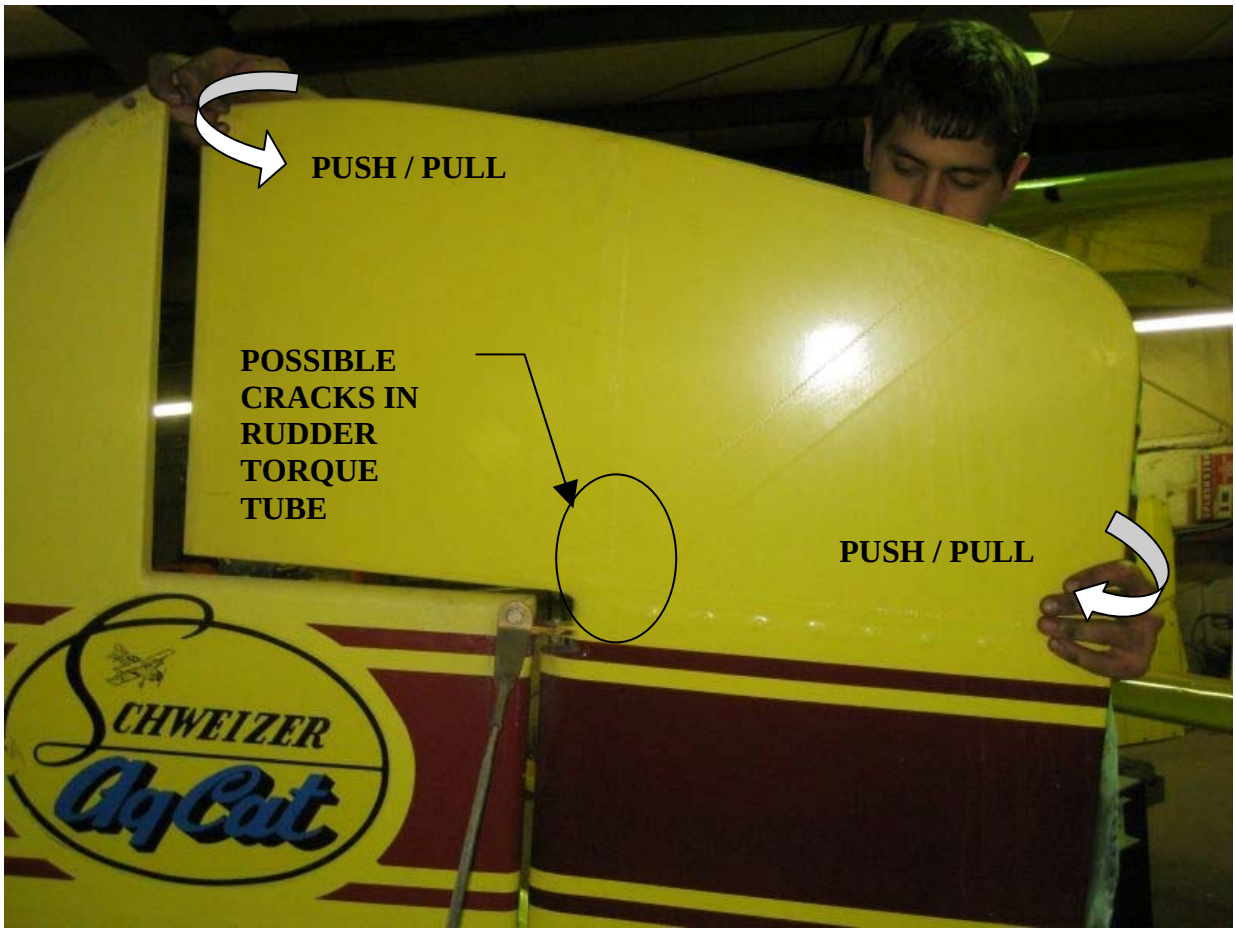

PUSH / PULL
PUSH / PULL
POSSIBLE CRACKS IN RUDDER TORQUE TUBE
CHWEIZER

Figure 3


PUSH / PULL
POSSIBLE CRACKS IN RUDDER TORQUE TUBE
PUSH / PULL
SCHWEIZER
AgCat