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TEL:(705) 526-2871 - FAX:(705)526-8022**

SERVICE LETTER / NOTIFICATION – NOV 18 2020

Issue Date

NOV 18, 2020

Subject/Purpose

Piano Hinges and flight controls

Affected Models

Chris Heintz (CH) All designs

Compliance Time

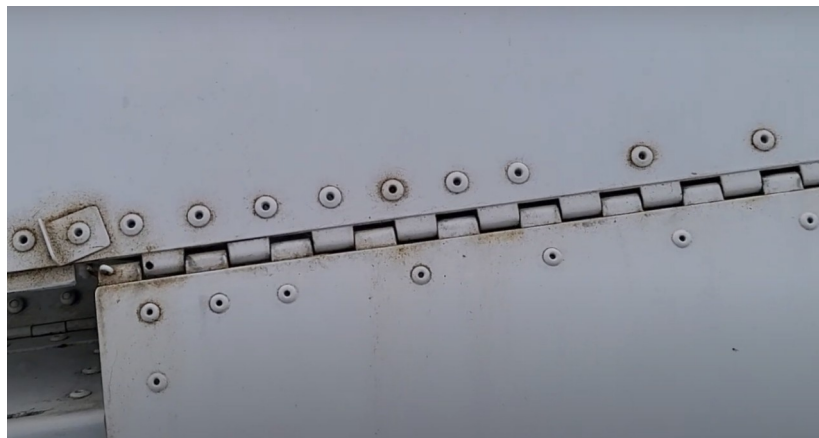
Pre-Flight Inspection and Annual Inspection

Inspection Frequency

On-going

Background

A builder noticed that his aircraft Zodiac 650 had sloppy ailerons. After inspection, it was concluded that his piano hinges were damaged.



Possible cause is [loose controls when the aircraft is parked outside](http://www.newplane.com/Service_Letters_Bulletines/NOTICE%20January%207%202009.pdf). A Service Letter was issued in 2009 regarding this. http://www.newplane.com/Service_Letters_Bulletines/NOTICE%20January%207%202009.pdf

What to do

Inspect your aileron, flaps and elevator piano hinges. Move the flight surfaces with your hands close to the piano hinges and see if there is slop/play in them. If the piano hinge pin diameter seems too small, that means that the piano hinge housing has opened up.

Solution is to replace the piano hinge. Use the tolerances and rivets etc. as specified in the aircraft Construction Standards Manual and aircraft blue prints. Once replaced, check that your flight surfaces have no excessive play. Check that both ends of each piano hinge has a safety wire installed so that the pin cannot come out over time. Check your deflections once installation is complete. During each annual inspection, oil all the hinges and other moving parts of the aircraft. When your aircraft is parked outside, lock the flight controls so that the wind cannot damage them.

Details of piano hinge when replacing. Pin should be stainless steel 304 or similar with diameter 0.090" to 0.100". Hinge aluminum material should be 5052 or similar with thickness from 0.035" to 0.051". For the open width length, you need enough edge distance for the rivets on installation.



Typical hinge used on the CH designs, riveted to the control surfaces. CH designs use piano hinges spanning the full length of the control surfaces.

Also see [Advanced Preflight After Maintenance Service Letter of April 2020](http://www.newplane.com/Service_Letters_Bulletines/SERVICE_LETTER_APRIL_02_2020_pre-flight-Inspection.pdf).

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Remember to check www.newplane.com for all the latest service documentation.
For additional information contact Zenair Ltd.