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## **SERVICE BULLETIN    February 2011**

### **Issue Date**

February 2011, Rev 0

### **Subject/Purpose**

Inspection of Nose Gear Strut weld for possible cracks at the welds. Zenair has been made aware of the weld at the nose gear cracking on an aircraft CH2000. Zenair is recommending that all CH2000 owners inspect the weld area within the next 50 hours, following each hard landing, and annually after.

It is assumed that the weld is cracking due to excessive hard nose wheel landing exceeding the design limits. Not straightening the aircraft before landing may result in large side loads on the wheel area. The nose wheel fork may flex and bend the square steel plate welded to the strut tube resulting in possible metal fatigue and eventual cracking.

### **Preventative Measures**

Avoid landing on all three wheels at the same time by keeping the nose wheel up. This is easily accomplished when landing at the proper speeds. The CH2000 has a very effective elevator, even at low speeds. Cross wind landings; Approach with one wing low, or use crabbing technique, or a combination of both. Straighten the aircraft out just before touchdown. For more information, please see the aircraft's Flight Manual.

### **Affected Models**

All

### **Compliance Time**

Next 50 hour inspection.

### **Inspection Frequency**

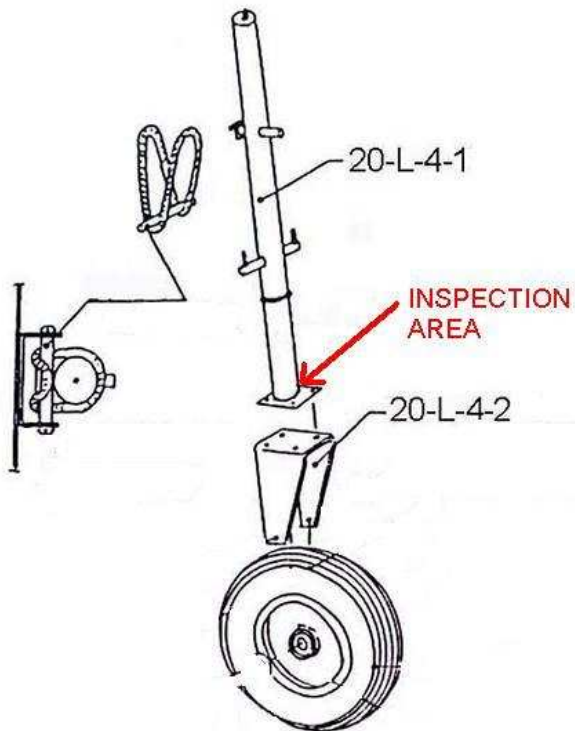
Every annual and after every hard nose landing per Service Manual section 3-2. Also see Service Manual section 3-7 item #9 for nose gear area inspection frequency.

### **Maintenance**

As per AC 43.13 and CH2000 Service Manual.

## Inspection

Inspect the weld area at the bottom of the nose gear strut plate. If the area is getting stressed, the plate attaching the nose wheel fork may start to bend. This is a good indication that the weld area may be cracking. If a good visible inspection confirms that there is no cracking, the inspection is complete. If one is not sure, use the following to inspect:



### **Fluorescent Liquid Penetrant Inspection:**

Inspect the weld at the bottom of the nose gear strut for cracks using the outline in FAA AC No. 43.13-1B when performing the inspection by using the Fluorescent Liquid penetrant method. There is no need to remove the nose gear strut for this test.

If any cracks are found, prior to further flight, replace the strut or repair the strut. If no cracks are found, the inspection is complete.

When replacing the nose gear, follow the removal and installation in the Service Manual, section 5 and in accordance with FAA AC No. 43.13-1A.

For re-welding of the nose gear bottom plate, do this in accordance with FAA AC No. 43.13-1A. Both the strut tube and plate are made of 4130N steel.

**Required Items:**

If replacing the nose gear strut, it is recommended the nose wheel bungee also be replaced.

20-L-4-1	Nose gear strut assembly	1
20-L-6-1	Nose wheel bungee	1

Once the inspection is complete, report your findings to Zenair Ltd by faxing your findings to 705-526-8022

For additional information contact Zenair Ltd.

**ZENAIR LTD, HURONIA AIRPORT, MIDLAND, ONTARIO, CANADA L4R 4K8  
TEL:(705) 526-2871 - FAX:(705)526-8022**