

<b>Jabiru Service Bulletin: Jabiru Control Surface Hinge Inspection.</b>			<b>JABIRU AIRCRAFT PTY LTD</b> P.O. Box 5792 Bundaberg West Queensland, Australia. Phone:+61 7 4155 1778 Fax:+61 7 4155 2669 Web: www.jabiru.net.au Email: info@jabiru.net.au		
JSB 044-1	Release Date: 8 <sup>th</sup> January 2021	Effective Date: 15 <sup>th</sup> January 2021	Affected Models: See Applicability	S/No. Range: See Applicability	Page 1 of 6

## SERVICE BULLETIN: JSB 044

**Issue: 1**

**Release Date: 8<sup>th</sup> January 2021**

**Effective Date: 15<sup>th</sup> January 2021**

**Subject: Jabiru Control Surface Hinge Inspection**

**Affected Models: All models**

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### 1 Applicability

All models of Jabiru aircraft **over 5 year since manufacture.**

**Note:** For aircraft in Light Sport Aircraft categories this Bulletin is equivalent to a Manufacturer's Safety Direction.

### 2 Background

- Jabiru Aircraft has been made aware of an aileron hinge failure detected during a preflight controls check on a 20 year old Jabiru SP4 aircraft. The aileron hinge failed in fatigue on the hinge leaf attached to the aileron. With no connection the leading edge of the aileron was able to droop down, if this occurred in flight, aileron control could have been lost or severely impaired. Figure 1 shows the failed aileron hinge, showing where the failure occurred. Note that the hinge pin securing screw and other hardware of the aircraft had visual signs of corrosion.
- The Jabiru Aircraft use piano hinge type hinges on the control surfaces. The hinge pin has a right angle bend at one end that is secured with a tab and a screw. This prevents the hinge pin from working out of the hinge leaves.
- On ailerons and rudder most aircraft have aluminum hinge leaves with a plated steel pin.
- Elevator hinges are stainless steel with a stainless steel pin.

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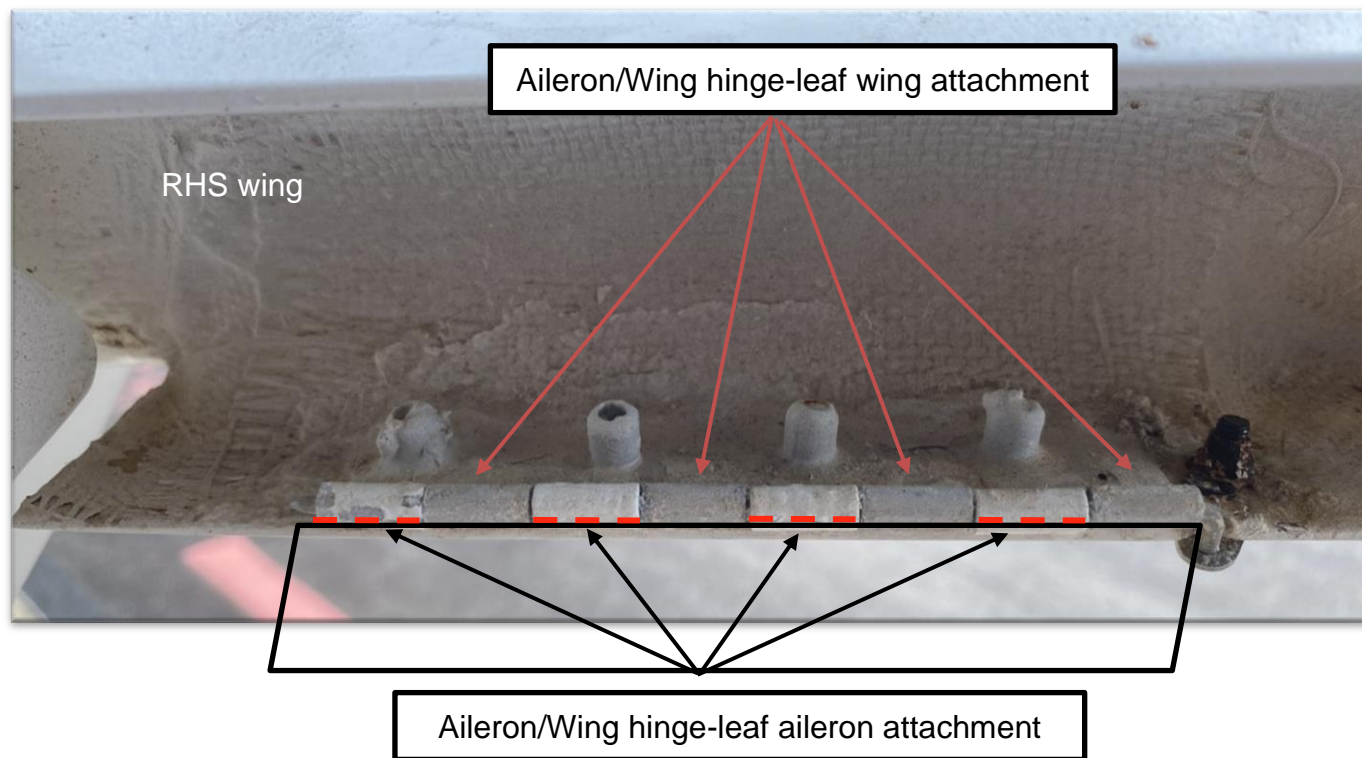


Figure 1: Failed hinge (leaf on wing detached from leaf on aileron)

- This service bulletin acts as a precautionary service message to inform maintainers and operators of this potential condition and prescribes an inspection to check that all control surface hinges are in serviceable condition.

### 3 Compliance – Implementation Schedule

- The inspection detailed in section 4 of this service bulletin must be conducted before the next flight until otherwise instructed by revision to this service bulletin (JSB044). This inspection will be incorporated into the routine maintenance requirements in the Jabiru Technical Manual (JTM001).
- The Time-In-Service for which service intervals are determined is the accumulated time the engine has been run, not Airswitch time. Jabiru Service letter JSL010 provides details on service time interval requirements.

### 4 Inspection procedure

The inspection detailed in this section is to be carried out **before the next flight for applicable aircraft.**

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- 1) Inspect each hinge visually from below and above, if possible. A torch is required. Note that paint can hide cracks or show false cracks so careful inspection is required. Parts should be free from corrosion. Corrective action must be taken for corroded parts. (Extensive corrosion is evident in Figure 2.)



**Figure 2: Aileron hinge from above**

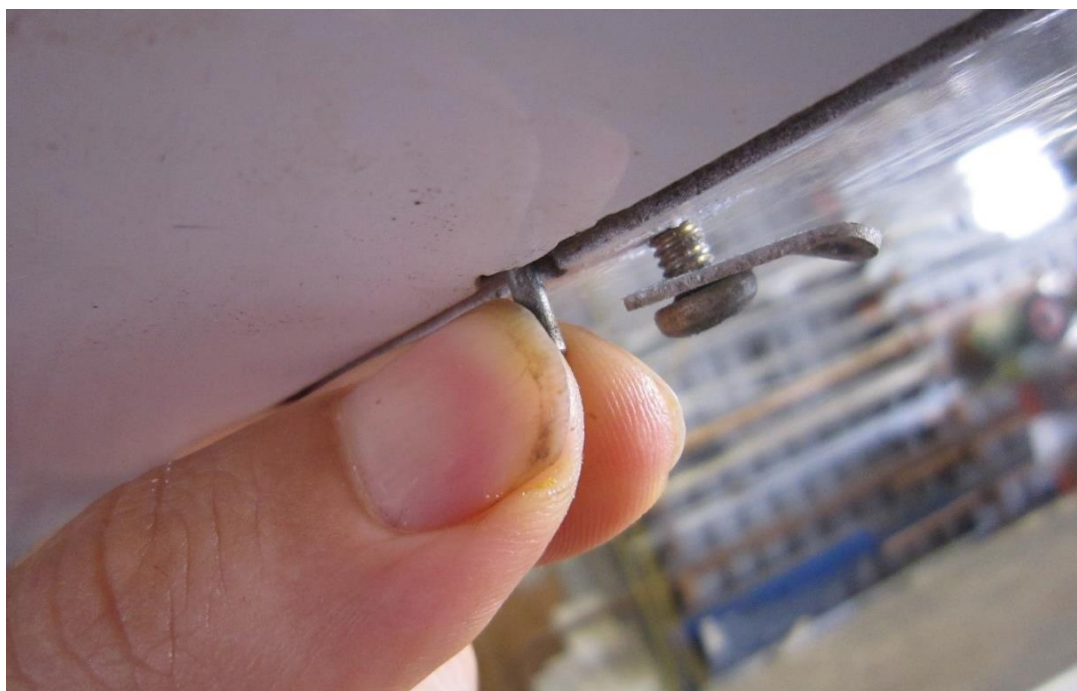
- 2) For each hinge – loosen the screw holding the locking tab so that the locking tab releases the end of the hinge pin. If the aircraft doesn't use this method of retaining the hinge pin, do what is necessary to release the pin so that it can be checked as described in step 3.



**Figure 3: Hinge pin unlocked**

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- 3) Now try to rotate the unlocked hinge pin radially in the hinge using your fingers. If it is stiff or can't be moved check if this is due to corrosion. If the hinge is corroded corrective action is required. If it is not corroded and the locking screw and tab are in satisfactory condition relock the hinge pin.



**Figure 4: Moving hinge pin**

- 4) Apply a firm pressure on the hinge joint (approximately 5kg) and check the hinge doesn't separate. Inspectors can "calibrate" their thumbs by pushing onto a set of scales to indicate how hard they need to push. ( JSB019 3.2 Inspection B is similar)
- 5) Repeat steps 1 to 4 until all control surface hinges have been inspected.

## 5 Corrective action

If a hinge pin is found to be seized from corrosion or a hinge leaf cracked, corrective action must be taken before any further flight. This will most likely involve replacing the hinge.

Contact Jabiru Aircraft if this situation is encountered by completing a Continued Operating Safety Reporting Form that can be found at the following web address:

[http://jabiru.net.au/images/Owner\\_Operator\\_Responsibilities.pdf](http://jabiru.net.au/images/Owner_Operator_Responsibilities.pdf)

## 6 Airworthiness Note

- All work called for by this Service Bulletin must be carried out by authorised personnel. For the aircraft detailed herein this may mean the owner, an RA-Aus Level 2 holder, a Licensed Aircraft Maintenance Engineer (LAME) or equivalent – as appropriate to the aircraft's registration.

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- On completion of the work prescribed, the authorised person must note the completion of the actions required by this bulletin in the aircraft's maintenance logbook. This note should include the date of the work, the service bulletin number (i.e. JSB044-1) and the identity (including license number where appropriate) of the person carrying out the work.

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## **LSA Service Bulletin: LSA JSB 044**

**Issue:** 1

**Release Date:** 8<sup>th</sup> January 2021

**Effective Date:** 15<sup>th</sup> January 2021

**Subject:** Jabiru Control Surface Hinge Inspection.

**Affected Models:** All models

### **Applicability:**

- The content of this directive is applicable to all Jabiru aircraft.

### **Requirement:**

- Operators of aircraft within Light Sport Aircraft categories must comply with the requirements of Jabiru Service Bulletin JSB 044-1

### **Compliance:**

- The compliance details given in JSB 044-1 must be met.

### **Background:**

- This Safety Directive has been prepared to make mandatory the requirements of JSB 044-1 for aircraft operating within Light Sport Aircraft Categories.