

MANDATORY SERVICE BULLETIN**SUBJECT:** AILERON LEADING EDGE SKIN AND NOSE RIB INSPECTION**REVISION:** 01**DATE:** 01/27/2016**EFFECTIVITY:** KODIAK® 100 Series airplanes equipped with aileron P/N 100-345-0100 (Left) or P/N 100-345-0200 (Right) that have not performed FSI-045 or FSI-053.**SUMMARY**

The accompanying Field Service Instruction provides guidance for inspecting the aileron leading edge skin and nose ribs.

Document Number	Document Title
FSI-069	Aileron Leading Edge Skin and Nose Rib Inspection

COMPLIANCE

For Aileron Time in Service (TIS) less than 500 hours, the initial inspection, as defined in FSI-069 sections 5.1 through 5.4, must be complied with on or before the next 100 Hour TIS or Annual Inspection, whichever comes first. For aileron TIS with more than 500 hours, the initial inspection must be complied with within the next 25 hours TIS. Continued inspections, as defined in FSI-069 Section 5.5, must be repeated every 100 hours TIS.

FAA APPROVAL STATUS

The instructions attached to this Service Bulletin have demonstrated compliance with all applicable Federal Aviation Regulations and are approved by the Federal Aviation Administration.

SPECIAL INSTRUCTIONS

Continued inspections as defined in FSI-069 Section 5.5 must be repeated at a 100 hour interval until FSI-045 or FSI-053 is performed on the specific aileron.

New aileron part numbers 100-345-0110 (Left) and 100-345-0210 (Right) were installed beginning on KODIAK 100 Series Airplane Serial Number 100-0147, and this Mandatory Service Bulletin does not apply to these part number ailerons.

CREDIT AND WARRANTY INFORMATION

Credit and warranty for this Service Bulletin have now expired, based on the original issue date.

Quest Customer Service**Phone:** (208) 263-1111 **Toll Free:** 1 (866) 263-1112**Email:** customerservice@questaircraft.com

Quest Aircraft Company LLC, 1200 Turbine Drive, Sandpoint, ID 83864



FIELD SERVICE INSTRUCTION

TITLE: Aileron Leading Edge Skin and Nose Rib Inspection Procedures

SERIAL RANGE: 100-0001 and Up

JASC CODE: 5751

PAGE: 1 of 8
REPORT NO.: FSI-069
REVISION: 00

SUBJECT

This Field Service Instruction provides guidance for conducting a detailed inspection of specific areas of the aileron.

AFFECTED MANUALS AND PUBLICATIONS

None

INDUSTRY REFERENCES

None

WEIGHT AND BALANCE

Negligible

MANPOWER

The estimated man-hours and minimum number of persons required to perform this Field Service Instruction are listed below. The "Minimum Persons" refers only to maintenance personnel or installers, and unless otherwise specified within this instruction does not include additional personnel that may be needed solely to comply with safety requirements (for example, safety observers that are not performing tasks within this instruction). It is the responsibility of maintenance personnel to comply with safety requirements, including having a safety observer available as needed.

Estimated Man-hours: 1.5 hours

Minimum Persons: 1 persons

If more than the minimum personnel perform this instruction, the actual man-hours required may be reduced due to increased efficiencies. As appropriate, Quest encourages the use of additional personnel; man-hour estimates are based on the minimum personnel required.

RECORD OF COMPLETION

- Update the appropriate maintenance records
- Ensure the *KODIAK® 100 Aircraft Maintenance Manual* is up-to-date with the current revision (Rev 13 or later)
- Complete Attachment A1, Aileron Leading Edge Skin and Nose Rib Inspection Procedures, and submit to Quest Aircraft Company.

QUEST® Aircraft Company, LLC
1200 Turbine Drive
Sandpoint, ID 83864

⚠ DISCLAIMER ⚠

The instructions / procedures presented herein are based upon the systems and components of the aircraft when it was delivered from the factory, or as modified by Quest Service Bulletins. Third-party modifications that have affected any component, system, or operating characteristic discussed by this document may invalidate the instructions / procedures provided. Before performing the instructions / procedures herein, examine all Supplemental Type Certificate (STC), Supplemental Type Authority (STA), or equivalently authorized modifications to verify that the instructions/procedures presented in this document can be properly completed. If an aircraft has an STC, STA, or equivalently authorized modification that affects any component, system, or operating characteristic also affected by this document, the operator is responsible for obtaining appropriate regulatory approval before performing the instructions / procedures herein. Quest Aircraft Company cannot be responsible for the quality of work performed in accomplishing the requirements of this document.

If you have any questions as to the applicability of this document to your specific aircraft, contact Quest Customer Service by telephone at (208) 263-1111, toll-free at (866) 263-1112, or via email at CustomerService@QuestAircraft.com



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REVISION RECORD

REV	PAGE	CHANGE DESCRIPTION
00	All	Initial Release



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1. Special Safety Instructions

1.1 Warnings

Failure to comply with “Warnings” contained in this instruction may result in financial loss, significant delay in the completion time, and/or serious injury to personnel.

1.2 Cautions

Failure to comply with “Cautions” contained in this instruction may result in the destruction of components, unnecessary complications, the need to reverse completed work, and/or delays in the completion time.

1.3 Notes

“Notes” are provided when additional information may lead to an increase in efficiency.

2. Parts, Tools, and Equipment

The following tables describe the parts, tools, and equipment necessary to successfully complete this instruction. Where applicable, reference to drawings provided with this instruction is provided.

Table 2-1: Parts and Tools Included in the Service Kit

Item #	Part No.	Qty	Description	Drawing No.	Dwg Item #
2-1-1	N/A	-	N/A	N/A	N/A

Table 2-2: Consumables Included in the Service Kit

Item #	Part No.	Qty	Description	Drawing No.	Dwg Item #
2-2-1	N/A	-	N/A	N/A	N/A

Table 2-3: Serial-Number-Specific Parts Included in the Service Kit

Item #	Part No.	Qty	Description	Drawing No.	Dwg Item #
2-3-1	N/A	-	N/A	N/A	N/A

Table 2-4: Parts and Tools NOT Included in the Service Kit

Item #	Part No.	Qty	Description	Drawing No.	Dwg Item #
2-4-1	Commercially Available	AR	Flashlight	N/A	N/A
2-4-2	Commercially Available	AR	Inspection Mirror	N/A	N/A
2-4-3	Commercially Available	AR	Screw Driver, Phillips #2	N/A	N/A
2-4-4	Commercially Available	AR	Step Ladder, 4' to 8'	N/A	N/A

3. General

Perform the following instructions to determine if cracks are present in the nose ribs or leading edge skins.

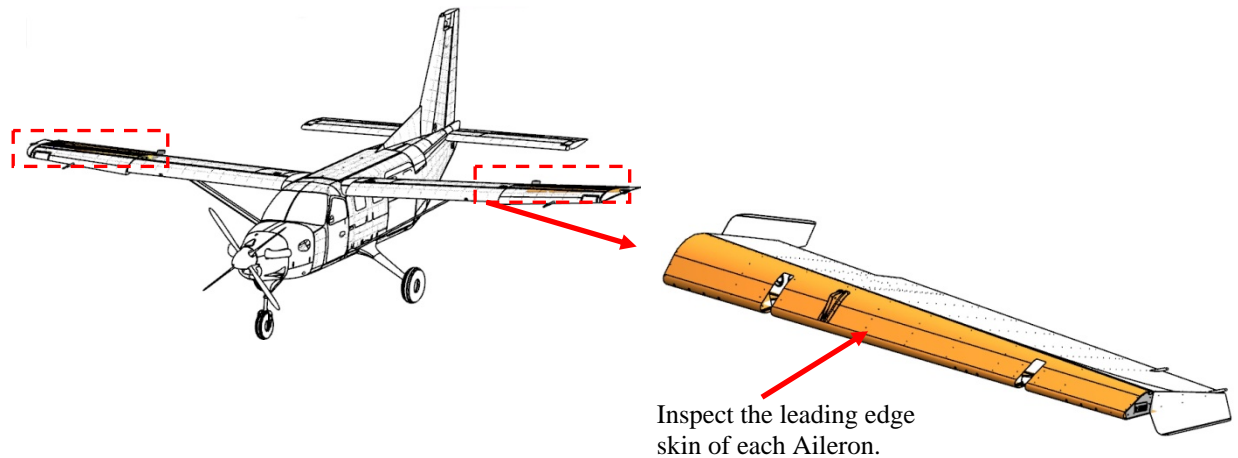


Figure 3-1: Aircraft Overview

4. Preparation

1. Remove all aileron access covers to perform rib inspection.
2. Clean leading edge skin, interior and exterior, in accordance with **AC43.13-1B Chapter 5, Section 2, Paragraph 5-18(g)** to ensure all dirt, debris, and grease is removed.

NOTE

All inspections shall be in accordance with AC43.13-1B Chapter 5, Section 2, Paragraph 5-18 (h).

5. Instructions

5.1 Aileron Hinge Point and Bracket Inspection

Inspect the hinge points and actuator brackets on each aileron for excessive wear or damage. If damage or cracks are found, contact Quest Customer Service.

5.2 Aircraft Aileron Hinge Inspection

Inspect the aileron hinge assemblies and aileron pushrod assembly on each wing for excessive wear or damage. If damage or cracks are found, contact Quest Customer Service.

5.3 Aileron Rib and Skin Inspection

Conduct the following inspection on the top and bottom leading edge skin at each nose rib position, on both ailerons.

1. Inspect the rib flanges for cracks and general condition. Refer to **Figure 5-1** for examples of structural damage.

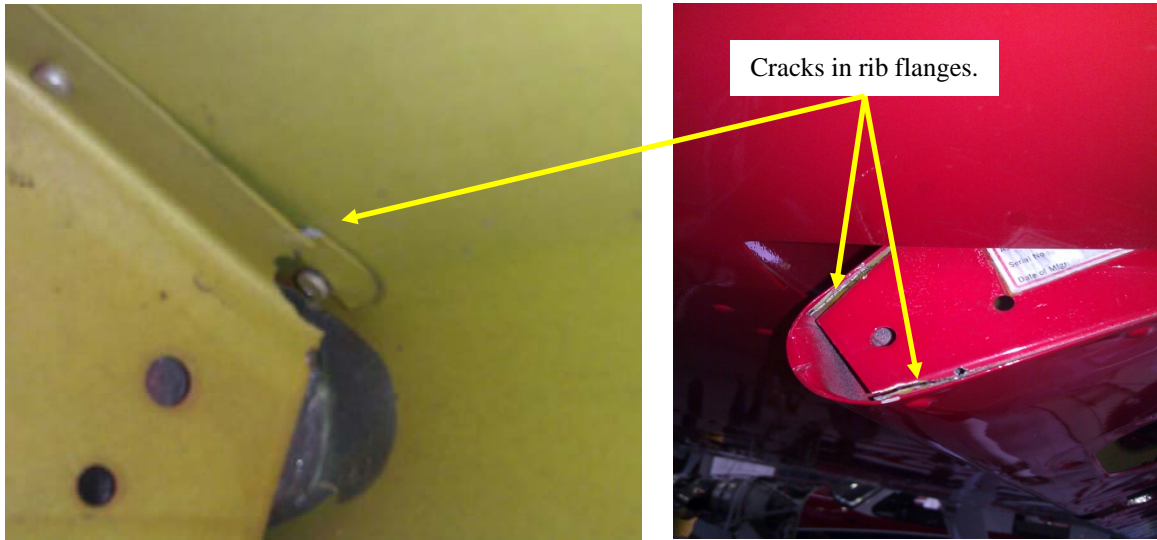


Figure 5-1: Example of Rib Flange Crack

2. Inspect the leading edge skin around the ribs, on the inside and outside, for cracks, chips, and general condition. Refer to **Figure 5-2**.

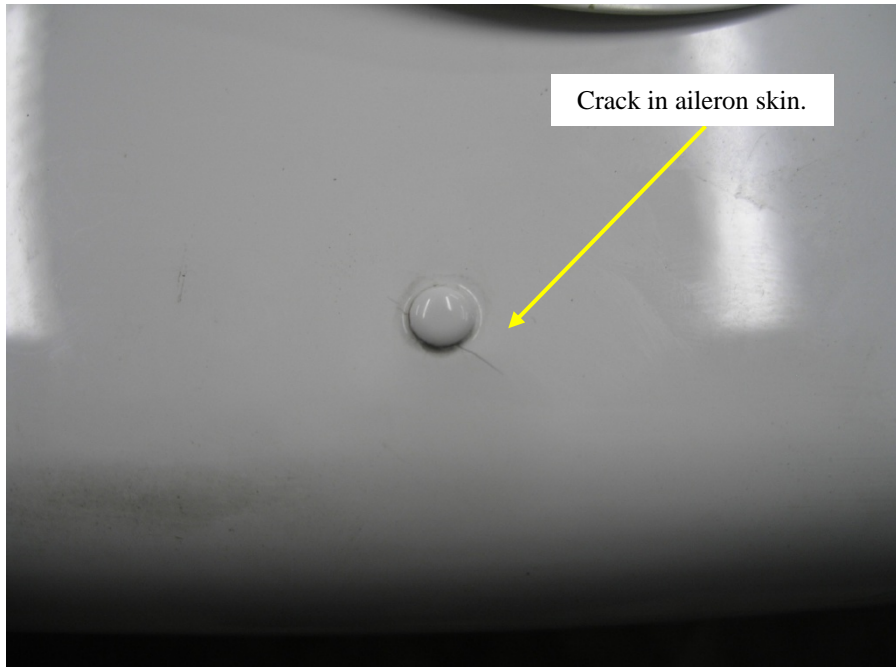


Figure 5-2: Example of Leading Edge Skin Crack



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5.3.1 If Cracks Found

1. Cracks may be stop drilled with a #40 (0.098 inch) to #30 (0.128 inch) diameter hole only if the following limitations are met:
 - Maximum crack lengths, including stop drills, shall be 0.50 inch individually and 2.00 inch combined for all cracks in an aileron.
 - The maximum combined crack length in any given rivet row or rib flange shall be 0.50 inch.
2. If cracks present exceed the limitations of Step 1, they cannot be stop drilled. Contact Quest Customer Service to receive Field Service Instructions to replace specific ribs and/or leading edge skins, or to request a replacement aileron.

▲ NOTE ▲

The maximum acceptable crack length limitations provided in Section 5.3.1 must be met for continued safe flight.

5.3.2 If Other Damage Found

Contact Quest Customer Service to receive Field Service Instructions to replace specific ribs, and/or leading edge skins, or to request a replacement aileron.

5.4 Reinstall Access Covers

Install access covers that were previously removed. Tighten access cover screws until snug but do not strip the screw or nutplate. No specific torque applies.

5.5 Continued Inspections

If cracks are found and stop drilled the repaired area must be inspected every 25 hours for changes in repaired cracks or additional cracks. If additional crack growth is found, refer back to Section 5.3.1.

The following inspection shall be performed on a periodic basis as defined for “Ailerons” in the *KODIAK[®] 100 Aircraft Maintenance Manual*, Chapter 5 (100 hr interval).

1. Perform inspection as outlined in steps 5.1 through 5.4 of this FSI.

-OR-

2. Perform inspection as detailed in the *KODIAK[®] 100 Aircraft Maintenance Manual*, Chapter 27, Revision 14 or higher.



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6. Completion

1. Upon completion update the appropriate maintenance records. Make specific note in maintenance records for recurring inspection in accordance with this FSI.
2. Fill out the attached inspection report form, and return to Quest Aircraft Company upon initial inspection. Fill out and return the inspection report form upon subsequent inspection if damage is found.

---END---



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Date: _____ Aircraft Serial Number: _____

Aircraft Total Time: _____ Aircraft Total Cycles: _____

Aileron		Inspection Notes
Left	Ribs	
	Skin	
Right	Ribs	
	Skin	

Table A-1: Aileron Inspection Table

Notes:

Electronic Copies

Send by e-mail to Customerservice@questaircraft.com

Paper Copies

Send to Quest Aircraft Company
1200 Turbine Dr.
Sandpoint, ID 83864
Att. Customer Service