

RECOMMENDED SERVICE BULLETIN**SUBJECT: YOKE ANTI-ROTATION GUIDE WEAR PAD UPGRADE****REVISION: 00****DATE: 03/26/2015****EFFECTIVITY: KODIAK[®] 100 series airplane serial numbers 100-0001 thru 100-0149****SUMMARY**

The accompanying Field Service Instruction provides procedures for removing cushion edging, as installed from the factory or reinstalled in accordance with Quest[®] Aircraft Mandatory Service Bulletin SB14-07, *Elevator Control System – Cushion Edging Inspection*, and installing four wear pads on the pilot and co-pilot arms of the elevator bearing assemblies.

Document Number	Document Title
FSI-108	Yoke Anti-Rotation Guide Wear Pad Upgrade

COMPLIANCE

Compliance with this service bulletin is RECOMMENDED. Installation of the modified design as detailed in FSI-108 negates the need for the initial and recurring inspections required by SB14-07.

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


If complied with, this Service Bulletin supersedes SB14-07.

CREDIT AND WARRANTY INFORMATION

Quest will supply one service kit FSI-108 per airplane at no cost to owner, and for airplanes under factory warranty will reimburse up to three hours of labor costs associated with this Service Bulletin. Contact Quest Customer Service to order the kit. Refer to our web site at www.questaircraft.com for warranty reimbursement instructions.

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

Quest Aircraft Company, L.L.C., 1200 Turbine Drive, Sandpoint, ID 83864

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FIELD SERVICE INSTRUCTION

TITLE:

Yoke Anti-Rotation Guide Wear Pad Upgrade

SERIAL RANGE:

100-0001 thru 100-0149

JASC CODE: 2701

PAGE:

1 of 8

REPORT NO.:

FSI-108

REVISION:

00

SUBJECT

This Field Service Instruction provides procedures for removing cushion edging, as installed from the factory or re-installed in accordance with SB14-07, *Elevator Control System - Cushion Edging Inspection*, and installing four wear pads on the pilot and co-pilot link arms of the elevator bearing assemblies.

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: 3 hours

Minimum Persons: 1 person

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 log books
- Ensure the *KODIAK® 100 Pilot's Operating Handbook / Aircraft Flight Manual* is up-to-date with the current revision (Rev 15 or later)
- Ensure the *KODIAK® 100 Aircraft Maintenance Manual* is up-to-date with the current revision (Rev 16 or later)

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⚠ 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	100-619-0037	4	Wear Pad, FWD, Elevator Guide	N/A	N/A
2-1-2	CR3213-4-4	6	Rivet, Pulled	N/A	N/A
2-1-3	NAS1149FN532P	6	Washer	N/A	N/A
2-1-4	S100-619-4003	1	Link Arm Drill Guide, Elevator Bearing Assembly	N/A	N/A
2-1-5	MS24665-134	2	Cotter Pin	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

1: Consumables may be shipped separately from the primary kit.

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	Cherry MAX Riveting tools	1	Cherry MAX Riveting tools	N/A	N/A
2-4-2	Emery Cloth	AR	Emery Cloth or sandpaper, 220 grit or finer	N/A	N/A



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3. General

The instructions included in this document remove the existing Cushion Edging (P/N: M22529/3-2R-25) installed on the anti-rotation guide and install a total of four (4) new wear pads attached to the elevator bearing assembly link arm. This document supersedes Quest Mandatory Service Bulletin SB14-07 which included FSI-105, *Elevator Control System – Cushion Edging Inspection*.

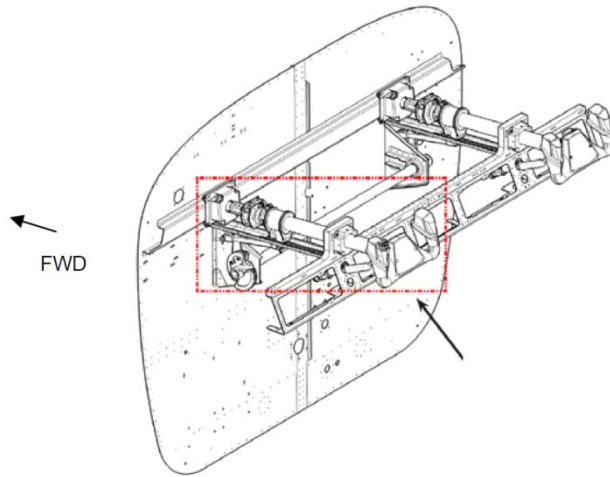


Figure 3-1: Overview

4. Preparation

1. Remove the crew seats in accordance with the *KODIAK® 100 Airplane Maintenance Manual*.
2. Protect the floor area under the control yoke with a drop cloth or equivalent to prevent debris from falling into the floor of the aircraft.

5. Instructions

Repeat these instructions for both the pilot and co-pilot yoke.

5.1 Remove the Cushion Edging

1. Detach the existing cushion edging (P/N M22529/2-3R-25), 2x on the pilot side and 2x on the co-pilot side, and remove from the aircraft.

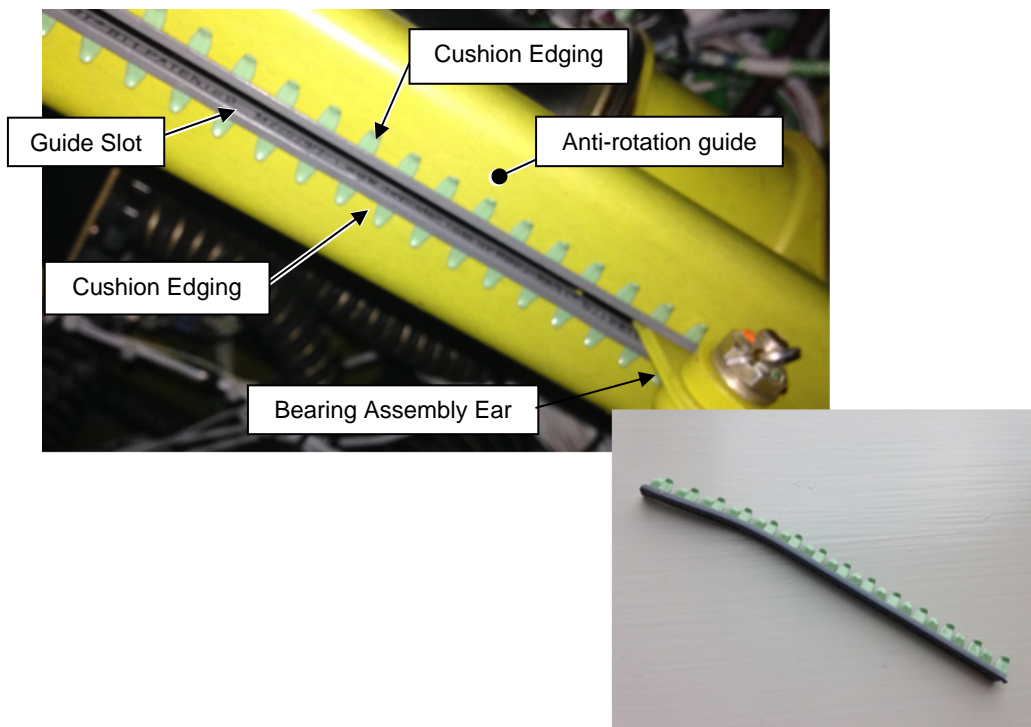


Figure 5-1: Remove cushion edging

2. Using a fine grit sandpaper or emery cloth, clean up the slot edge of the anti-rotation guide to remove any burrs or other sharp edges.
3. Remove the cotter pin; remove and retain the bolt, nut, and two (2) washers securing the bearing assembly to the control column elevator link. Discard the cotter pin. See **Figure 5-2**.

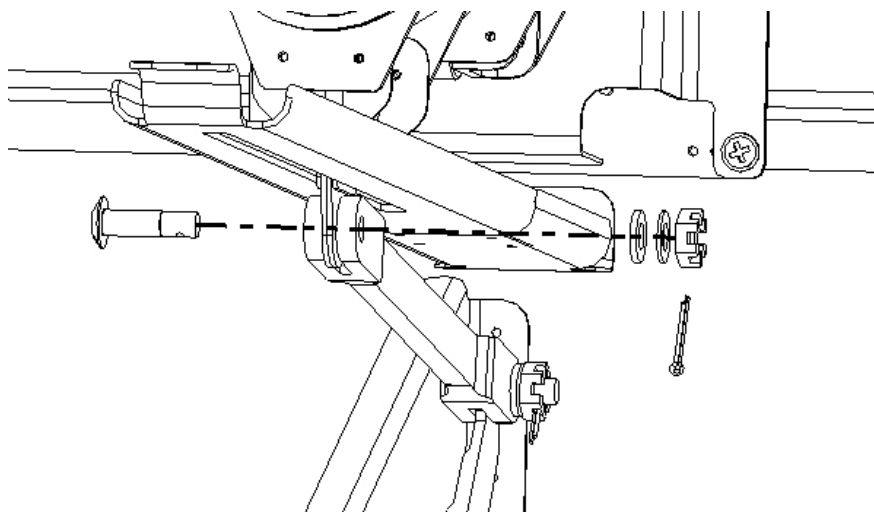


Figure 5-2: Detach Control Column Elevator Link

4. Move the elevator link down and away from control column elevator bearing assembly.

5.2 Prepare Holes for New Wear Pads

1. Position the link arm drill guide (P/N S100-619-4003) against the control column elevator bearing assembly, aligning the large bolt hole in the drill guide with the existing bolt hole in the bearing assembly. Align the lower edges of the drill guide with the outside edge of the bearing assembly ear.

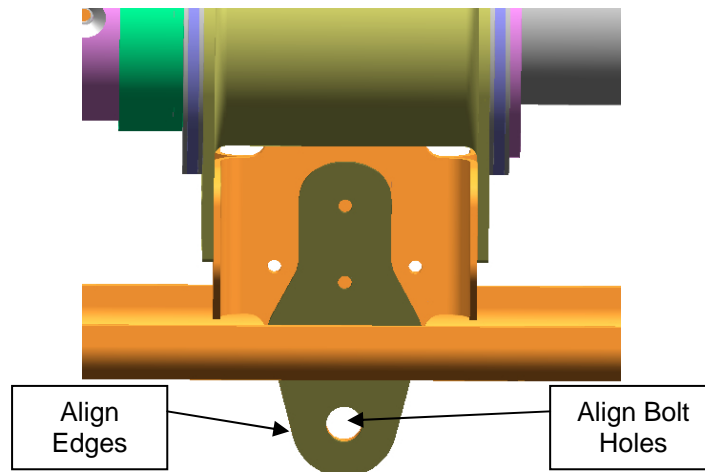


Figure 5-3: Correctly Positioned Drill Guide

2. Temporarily secure the drill guide to the bearing assembly ear with the nut and bolt removed previously. Stack sufficient washers on the bolt to provide a tight fit of the drill guide against the bearing assembly ear.
3. Match drill two (2) holes into the elevator bearing assembly ear with a #40 drill bit.
4. Remove the drill guide.
5. Deburr the newly drilled holes.

5.3 Install the Wear Pads

1. Position one (1) wear pad (P/N 100-619-0037) on each side of the bearing assembly ear aligning the two (2) holes in each wear pad with the holes just drilled through the bearing assembly ear.
2. Temporarily secure the wear pads in place with one (1) #40 cleco.
3. Upsize the open hole in the wear pads and bearing assembly ear with a #30 drill bit.
4. Temporarily secure the wear pads in place with a second #30 cleco and remove the first cleco.
5. Upsize the open hole in the wear pads and bearing assembly ear with a #30 drill bit.
6. Remove the cleco and wear pads from the bearing assembly ear.
7. Deburr the upsized holes in the bearing assembly ear and ensure the wear pads are free of any aluminum debris.
8. Position the wear pads on both sides of the bearing assembly aligning the mounting holes just prepared and secure them in place with one (1) #30 cleco.
9. Insert one (1) pulled rivet through the open mounting hole and place one (1) washer (P/N NAS1149FN532P) over the tail of the rivet.

10. Permanently secure the wear pads in place with the rivet and washer.
11. Remove the cleco and repeat the rivet and washer installation through the second hole in the wear pads and bearing assembly ear.

5.4 Reassemble the Control Column Elevator Link

1. Raise the elevator link into position and thread the bolt removed previously through the hole in the end of the link and the bearing assembly ear.
2. Secure the elevator link to the bearing assembly ear with the nut and washers removed previously, torque the nut to 5 in-lb and then back off one castellation.

▲ NOTE ▲

Ensure the nylon (self-locking) feature of the nut is in good condition. Replace the nut if needed.

3. Install a new cotter pin (P/N MS24665-134) through the nut and bolt.
4. Check the control yoke for smooth freedom of movement through the full range of normal motion and verify minimum wear pad extension beyond the anti-rotation guide. See **Figure 5-4**.

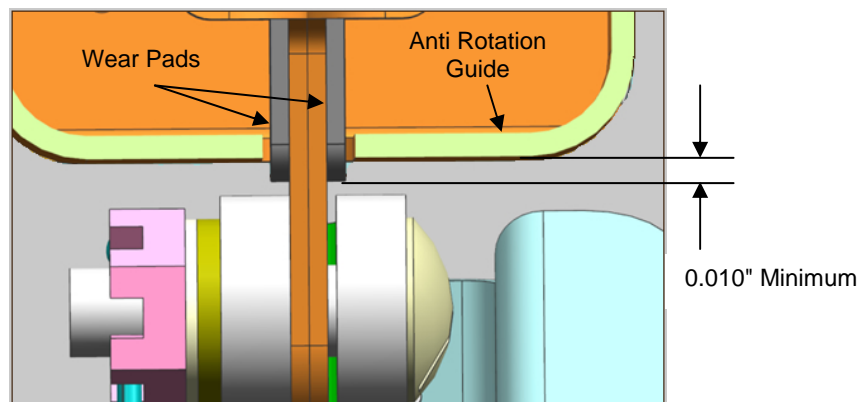


Figure 5-4: Final Installation

5. Repeat Section 5 for the opposite control yoke.

6. Completion

1. Clean up all chips and all other foreign object debris.
2. Reinstall the crew seats in accordance with the *KODIAK® 100 Airplane Maintenance Manual*.
3. Record all work performed in the appropriate maintenance records.

---END---